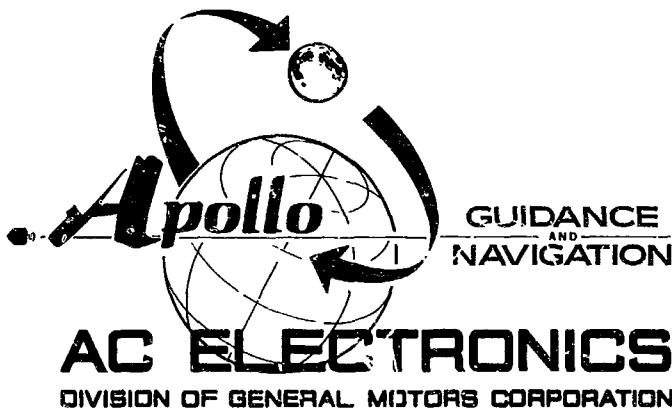


APOLLO

PRIMARY GUIDANCE NAVIGATION AND CONTROL SYSTEM (PGNCS)

FINAL REPORT CONTRACT NAS9-497



FACILITY FORM 602

N70-24304
(ACCESSION NUMBER) (THRU)

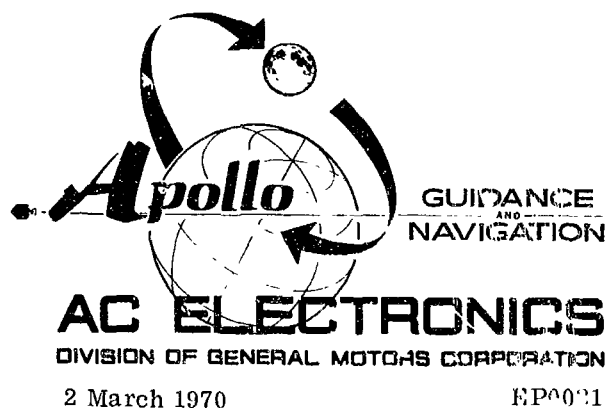
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21
(CATEGORY)

APOLLO
PRIMARY GUIDANCE NAVIGATION
AND CONTROL SYSTEM
(PGNCS)

FINAL REPORT
CONTRACT NAS9-497



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FOREWORD

To provide the most useful data for technical reference and contract compliance records, this Apollo final report, called for in Paragraph 4.2 of Exhibit D of the Statement of Work, is bibliographic in nature, as proposed by AC Electronics in AP-M-22738-N3994 and approved by NASA in EG14-69-256-PP7-202. This format will provide access to the pertinent information in a more useful manner than a narrative restatement of program accomplishments.

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TABLE OF CONTENTS

SECTION	TITLE	PAGE
I	SUMMARY STATEMENT OF COMPLIANCE AND COMPLETION	1-1
	1.1 General	1-1
	1.2 Organization	1-1
	1.3 Statement of Work Objectives and Work Category Descriptions	1-1
	1.4 Engineering and Management	1-2
	1.5 Documentation	1-3
	1.6 Reliability and Quality Assurance	1-4
	1.7 Hardware	
II	ENGINEERING AND MANAGLMENT	2-1
	2.1 General	2-1
	2.2 Technical Directives	2-1
	2.3 Technical Reports	2-17
	2.4 Engineering Change Proposals	2-117
	2.5 Contract Change Authorizations	2-259
	2.6 Software	2-291
	2.7 Listing of Hardware DD-250's	2-301
III	RELIABILITY AND QUALITY ASSURANCE	3-1
	3.1 General	3-1
	3.2 Qualification Test Reports	3-3
	3.3 Parts and Materials Evaluation Test Reports	3-11
	3.4 Overstress Analysis Reports	3-31
	3.5 Technical Manuals and Job Description Cards	3-39
	3.6 NASA G & N Training	3-45
	3.7 Operating Hours	3-53
	3.8 Airborne Equipment Repairs (Other Than Gyros)	3-61
	3.9 Failure Analysis Reports	3-63

APPENDED REPORTS (UNDER SEPARATE COVER)

1. Optics Subsystem
2. Computer Subsystem

SECTION I

SUMMARY STATEMENT OF COMPLIANCE AND COMPLETION

1.1 GENERAL

This section provides an abstracted view of the effort expended in completion of NASA Contract NAS9-497 and follows the organization of that contract. Data supporting this summary statement will be found in those sections of the report referenced here.

1.2 ORGANIZATION

The organization of the major sections of the report generally follows that of the Statement of Work, and the material within these sections is organized chronologically. Because a major objective of work effort required by Exhibits A and B (the Command Module and LM) of the Statement of Work was to utilize applicable effort already completed for use in Exhibit C (Block I) as much as possible, the records of this effort are combined.

The complete reports on the Computer and Optics Subsystems are included in this report as appendices by reference, under separate cover.

1.3 STATEMENT OF WORK OBJECTIVES AND WORK CATEGORY DESCRIPTIONS

The Guidance and Navigation (G&N) System Industrial Contractor and directed Subcontractors fabricated the deliverable hardware for the Apollo Primary Guidance, Navigation, and Control System (PGNCS) and assisted the Massachusetts Institute of Technology Instrumentation Laboratory (MIT/IL) in the design and development of the G&N and its Ground Support Equipment (GSE).

Efforts were directed initially by MIT/IL through Technical Directives. (See Paragraph 2.2.) As the program matured and design effort was completed, this direction channel was used less and the more direct controls of the Engineering Change Procedure (Paragraph 2.4) and Contract Change Authorization (Paragraph 2.5) became prominent.

The task of the G&N System Contractor, AC Electronics, has been to fabricate the Inertial Subsystem, to assemble it with the Computer (Raytheon) and the Optics (Kollsman) Subsystems, to test the completed system, and to support that system in the field. Demonstration of the successful completion of these tasks, including GSE efforts, is the subject of this report and the appended documents.

Descriptions of the hardware involved can be found in Section III of Exhibits A, B, and C, to the Statement of Work and are not included in this report.

1.4 ENGINEERING AND MANAGEMENT

The following discussion is a brief summary of the tasks required to assist MIT/IL in the design and development of the Apollo G&N System, the associated GSE, and the simulation equipment. Pertinent documentation demonstrating the completion of these tasks is listed in Paragraph 2.3.

1.4.1 ENGINEERING

The major engineering tasks performed were design analysis, detail design, G&N System assembly and test, and preparation of the necessary software for support of the PGNCSS.

The design analysis effort entailed the determination of design parameters and performance and environmental requirements for the system. Studies were conducted to optimize each item of hardware, and breadboards were constructed to permit testing wherever necessary. Ground support requirements were developed on the basis of G&N analyses. The GSE was prepared in much the same manner as airborne equipment and was developed with the added complications of interconnect and station layout considerations to provide optimum test and rework conditions. Design analyses were also performed on the system level to convert performance requirements into terms of tolerance levels for test parameters and to establish an error budget that was applied to the generation of test specifications and procedures. The results of these tests and analyses were successfully applied in the completion of detail design, G&N System test, and software efforts. See Paragraph 2.3 for relevant documentation.

Detail design required engineering and technical talents to carry the requirements stipulated by design analysis into the hardware. Engineering models of assemblies, parts, and components were developed to aid production operations. Where necessary, breadboard units were constructed to check and test developments. This effort resulted in the completion of required specifications and drawings and was carried into the production phases by close engineering support to manufacturing.

Assembly and test effort fell into two major areas. Procedures and equipment were prepared and used to accept the completed G&N System and to demonstrate its ability to perform in accordance with the stipulated requirements. Also, an Inertial Subsystem (ISS) Bench Test program was carried out with the threefold purpose of establishing airborne and GSE functional compatibility, providing trained personnel for in-plant and field work, and providing engineering investigations of proposed procedural improvements and design changes.

Software was developed to support ground testing of the PGNCSS. Specifications were prepared for PGNCSS testing before and after Spacecraft installation and for integrated testing with the Spacecraft. The necessary K-Start Tapes were prepared and checked out and Automatic Checkout Equipment/Spacecraft effort was supported. This effort is further discussed in Paragraph 2.6.

Throughout the program competent personnel were provided to MIT/IL for assignment to a variety of engineering tasks. The efforts of the MIT/IL personnel filled a program need and promoted close liaison between MIT/IL and AC Electronics during the periods and in specific areas when such communication was invaluable.

1.4.2 MANAGEMENT

Program management has been an important element in the fulfillment of the obligations stipulated by the Statement of Work. The documentation pertinent to demonstrating the successful fulfillment of contractual obligations is summarized in the following sections and in the appended reports.

Program financial control was accomplished successfully and has been reported separately.

AC managed this program successfully in accordance with NASA/MIT Technical Directives, Engineering Change Proposals, and Contract Change Authorizations. Comprehensive listings of these documents are included in Paragraphs 2.2, 2.4, and 2.5.

1.5 DOCUMENTATION

Program documentation falls into the following three major categories.

1. Administrative documentation, which includes the major planning documents, business correspondence, and documents conveying or requesting direction,
2. Technical documentation, consisting of technical data and reports,
3. Configuration documentation, represented by the drawing and specification structure and recording documentation and reports.

Documentation responsibilities have been discharged through the AC Electronics Apollo Program Office in accordance with the required procedures established by the applicable controlling documents. A comprehensive review of documentation records has been made and the resulting bibliographic material is presented in Section II of this report.

Administrative documentation is summarized by reference to the submittal of required documentation and to directive documentation indicating compliance with the direction given.

A bibliography of technical documents has been included which represents a listing of significant technical reports and data. This listing is a result of careful editing to remove redundant and less important material.

Configuration documentation has not been included in this report. Extensive records and reports are prepared, updated, and forwarded regularly in accordance with the required procedures of configuration control documentation. A complete set of these records is retained at NASA/MSD and a brief review of this data will demonstrate compliance with requirements.

1.6 RELIABILITY AND QUALITY ASSURANCE

Reliability and Quality Assurance efforts were among the first to be initiated on the Apollo Program. These efforts have been carried out in accordance with the applicable documentation and direction by a management group specifically established for this purpose.

Early Reliability efforts were directed toward design review to assure compliance with quality requirements. As the design matured and the program proceeded, were expanded to include detailed failure reporting, analyses, and corrective action followup on all elements of system testing. Qualification testing was accomplished from the parts and materials level through the system level and included extended performance and overstress tests. Throughout the program the manufacturing operations were strongly supported by means of a training program and thorough control of sub-contractors and suppliers.

Quality Assurance functions were carried out throughout the program to assure proper acceptance of all parts and materials as well as to enforce the required level of quality in the finished product. These efforts entailed establishment of strong controls actively enforced.

A more comprehensive discussion of these activities and a bibliography of supporting documentation are presented in Section III of this report.

1.7 HARDWARE

During the course of the program AC Electronics delivered breadboard, prototype, engineering model, and flight configured hardware for use in simulation, test, and development programs. This hardware was delivered in accordance with the Statement of Work as revised to include contract changes.

A comprehensive listing of this deliverable material will be found in the last paragraph of Section II.

SECTION II
ENGINEERING AND MANAGEMENT

2.1 GENERAL

The summary statements in this section have been prepared to provide the most useful data for technical reference and to compile all significant contract compliance records. In preparation of this material, the intent has been to provide access to all pertinent information without presenting a redundant restatement of program accomplishments that would be encyclopedic in volume.

Basically, this information is bibliographic in nature and represents an exhaustive review of program records. The available information has been edited to remove irrelevant and redundant material and to include cross references wherever possible and advantageous. Specific information on the meaning of symbols and the definition of terms is included in the opening statements to each of the primary paragraphs in this section.

Most of the documents referenced, particularly in the management areas, have been submitted to NASA through the Project Officer (PP7).

2.2 TECHNICAL DIRECTIVES

Technical Directives (TD's) authorized the G&N Industrial Contractor and directed Subcontractors to perform specific design, development, and support work tasks to assist MIT/IL.

The Technical Directives issued in accordance with Paragraph 1.2 of Exhibits A and B and Section I of Exhibit C are presented in the following listings. Completion or cancellation dates are tabulated. The date on which completion was confirmed by MIT/IL is also given to demonstrate satisfactory completion of the effort.

Attention is directed to the gaps in the numerical sequence of technical directives issued to the Directed Subcontractors. The Technical Directives not included in this tabulation were either cancelled by MIT/IL or completed by the respective contractors prior to the inception of the Apollo Contract in 1964. The records on these items were cleared at that time.

The Technical Directive listings are presented in the alphabetical order of the firm accomplishing the work. Each listing provides the Technical Directive number, its title, the cancellation or completion date, and the MIT/IL confirmation of completion date.

SUMMARY OF TECHNICAL DIRECTIVES				
AC ELECTRONICS				
TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
1	Technical and Administrative Management, Operational Procedures	11/19/64		11/19/64
2	Development Plan		2/25/64	3/9/64
3	Prepare Detailed Procedures, Methods, and Directives for Reliability Program		2/25/64	3/9/64
4	Prepare Detailed Procedures, Methods, and Directives for Quality Assurance Program		2/25/64	3/9/64
5	Welding Techniques, Coordination with Subcontractors		1/28/64	2/7/64
6	Documentation Plan		9/24/62	9/25/62
7	Equipment Laboratory at Wakefield		4/3/63	4/9/63
8	IMU Electronics, Resident Effort		8/1/63	10/8/63
9	Resident Effort		11/14/62	2/1/63
10	Resident Effort		1/21/65	3/1/65
11	Resident Effort		5/27/65	7/19/65
12	PERT	10/21/64		10/21/64
13	Resident Effort		8/27/63	9/30/63
14	Resident Effort		6/2/65	6/14/65
15	Resident Effort		8/1/63	8/22/63
16	Resident Effort		8/1/63	8/22/63
17	Reliability Resident Effort		6/1/65	7/1/65
18	Reliability Resident Effort	11/8/62		11/8/62
19	Reliability Resident Effort		10/9/63	11/12/63
20	Procurement of four sets IMU-CDU Resolvers and two sets of Spares	8/30/62		8/30/62
21	Evaluation of Duffers Meter and Comparison Tests with Raytheon Weldpower		1/14/63	2/21/63
22	Resident Effort		11/6/62	11/14/62
23	Three Working Models of AGE Identical to MIT Model		8/14/62	8/31/62
24	Error Analysis of Fine Alignment Accuracy of IMU Stable Member		4/9/63	4/29/63
25	Resident Effort		8/14/62	8/31/62
26	Resident Effort		11/4/62	11/28/62
27	Procure three Servo Sticks and three PIPA's Sticks for Mechanical Mockup		1/16/63	1/14/63
28	Resident Effort		2/10/64	2/25/64
29	Resident Effort		6/2/65	7/19/65
30	Resident Effort		9/12/63	10/8/63
31	Resident Effort		12/5/62	12/10/62

SUMMARY OF TECHNICAL DIRECTIVES

AC ELECTRONICS

TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
32	IMU Oxygen Atmosphere Investi- gation		1/9/62	1/11/63
33	Resident Effort		11/21/63	12/ /63
34	Resident Effort		11/22/63	12/4/63
35	Resident Effort		11/22/63	12/4/63
36	IMU Gimbal Simulator		4/28/65	6/17/65
37	Resident Effort		11/15/62	11/19/62
38	CDU Drawings and Build	9/12/62		
39	Resident Effort		6/2/65	6/2/65
40	Vendor Reliability and Quality Control		3/21/69	5/5/69
41	Breadboard Adapter	7/25/62		
42	(Not Issued)			
43	D&C System Integration		5/13/65	7/19/65
44	Resident Effort		2/10/64	2/25/64
45	Additional GSE Support		9/27/62	10/17/62
46	Resident Effort		5/27/65	5/29/65
47	Resident Effort		5/13/65	7/19/65
48	B/B Servo Amplifier Fabrication		2/25/64	3/9/64
49	IMU Electronic Evaluation, Wakefield		9/26/62	11/7/62
50	(Not Issued)			
51	(Not Issued)			
52	(Not Issued)			
53	Resident Effort		7/11/63	7/22/63
54	Resident Effort	2/12/63		2/12/63
55	Resident Effort	3/12/63		3/12/63
56	Resident Effort		6/1/65	6/14/65
57	Resident Effort		10/20/65	12/4/65
58	System Design of Inertial Sub- system GSE and G&N System Test GSE		10/31/62	11/5/62
59	To Plan and Coordinate a Failure Reporting System		4/14/67	5/27/67
60	Design Review		3/21/69	5/5/69
61	Apollo Failure Reporting System		10/22/62	11/1/62
62	Process Specifications		1/26/62	2/8/63
63	Program Progress and Status Reporting Directive	10/26/64		10/26/64
64	IMU Electronic Evaluation		1/26/64	1/28/64
65	Resident Effort		10/20/65	11/3/65
66	Resident Effort		10/20/65	11/3/65
67	Navigation Base Fabrication		12/6/63	12/23/63
68	Reliability Analysis		6/23/64	7/1/64
69	Resident Effort		7/2/64	7/24/64
70	Resident Effort		7/13/65	7/17/65

SUMMARY OF TECHNICAL DIRECTIVES				
AC ELECTRONICS				
TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
71	Pulse Torque Circuit Optimization		1/13/64	2/3/64
72	GSE System Design		4/5/63	4/12/63
73	Resident Effort		4/26/63	5/7/63
74	Resident Effort		11/21/63	12/9/63
75	CDU Electronics Optimization		1/13/64	1/24/64
76	Fabrication of Nonflight D&C		12/18/64	7/17/65
77	Resident Effort		6/2/65	7/17/65
78	Capital Equipment, Apollo GSE Breadboard		4/5/63	4/25/63
79	Level of Effort Assignment, Reliability		11/27/63	12/16/63
80	Welding Evaluation	12/5/62		12/5/62
81	Resident Effort	11/29/62		4/17/67
82	D&C Drawing Preparation		11/27/63	4/26/65
83	GSE System Design, Portable Temperature Controller		1/26/63	3/12/63
84	IMU Production	10/21/64		10/21/64
85	Space Study Team, Resident Effort		5/1/63	5/13/63
86	Universal Gearbox, Resident Effort		8/27/63	9/10/63
87	Support Engineering for Field Maintenance Procedure and Planning		9/14/62	2/15/63
88	Resident Effort, Design Analysis and Liaison		12/21/67	1/28/68
89	Resident Effort, IUA Breadboard IUA Test		4/26/63	5/8/63
90	D&C Fabrication		12/9/63	12/26/63
91	Resident Effort		8/17/64	8/31/64
92	Reliability Management	10/27/64		10/27/64
93	Manufacturing Support		4/14/67	5/27/67
94	Failure Reporting and Corrective Action		4/14/67	5/27/67
95	D&C Preparation of Documentation		9/15/64	9/16/65
96	CDU Geartrain Fabrication		4/30/63	5/7/63
97	Documentation Coordination		4/3/63	4/8/63
98	Optical Subsystem Analysis	2/20/64		2/20/64
99	Resident Effort		8/5/63	9/23/63
100	Logistic Support for Field Operations		1/2/65	2/1/65
101	Resident Effort		11/22/63	12/4/63
102	(Not Issued)			
103	Design Drawings for AGE Interconnect Wiring		11/27/63	4/26/65
104	Resident Effort		9/13/63	10/8/63
105	Resident Effort		11/4/63	11/18/63

SUMMARY OF TECHNICAL DIRECTIVES

AC ELECTRONICS

TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
106	Design Analysis, IMU Fixture Pad Alignment Monitor		4/15/63	4/24/63
107	Design Evaluation and Qualification Test Program		11/22/68	12/10/68
108	Optical Electronics Analysis		2/20/64	9/7/67
109	AGE-5 GME	11/7/63	11/7/63	
110	Detailed Design of Apollo GSE		8/2/64	9/7/65
111	Special Tooling and Test Equipment for GSE	11/2/64		11/2/64
112	PSA Block I Hardware and Learning Model	10/12/64		10/21/64
113	PSA Hardware: AGE's 1, VM, 2nd 5a		10/29/63	11/19/63
114	Navigation Base Fabrication	10/21/64		10/21/64
115	Optical Electronics		3/25/64	4/7/64
116	CDU Manufacture	10/28/64		10/28/64
117	CDU Manufacture	7/16/63		7/16/63
118	PSA Packaging Engineering		3/25/64	4/7/64
119	D&C Analysis		9/4/64	4/20/65
120	Resident Effort		5/3/64	7/19/65
121	D&C Manufacture	4/2/65		8/9/65
122	Procurement of Rotary Table	10/21/64		10/21/64
123	Failure Effects Analysis		11/21/63	12/5/63
124	Navigation Base Testing		3/12/64	3/30/64
125	Manufacture of Deliverable Breadboard		5/19/64	5/25/64
126	Resident Effort		11/12/63	11/27/63
127	G&N System Analysis and Liaison		10/15/65	11/1/65
128	Resident Effort		11/21/63	12/4/63
129	Specification Control Drawings		11/27/63	12/16/63
130	Optics Electronics Manufacture, AGE 3B		4/1/64	4/17/64
131	D&C Prototype Fabrication		1/7/64	1/22/64
132	Familiarization Manual		4/1/64	5/20/64
133	D&C Manufacture		8/28/64	4/26/65
134	Resident Effort, GSE		10/12/64	6/21/64
135	Procurement and Fabrication of Apollo SCOE and GCE	10/21/64		10/21/64
136	Maintenance and Repair Manuals	6/3/63		6/3/63
137	Resident Effort, Postinstallation Testing		6/23/64	7/6/64
138	40 Second Time Delay Optimization		5/8/63	5/16/63
139	Design Fabrication of Apollo SCOE Breadboard		10/28/64	12/19/64
140	AGE Harness Manufacture		8/15/63	4/26/65
141	Maintenance and Repair Manuals	12/26/63		12/26/63

SUMMARY OF TECHNICAL DIRECTIVES				
AC ELECTRONICS				
TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
142	Resident Effort		6/2/65	7/19/65
143	Auxiliary GSE		10/17/64	12/19/64
144	Temperature Control Electronics Analysis		9/1/64	9/8/64
145	Documentation, Factory Test Plans		2/25/64	3/23/64
146	Retrofit of Apollo 16 PIPA Test Console at AC Electronics		1/22/63	12/9/63
147	CDU Manufacture		3/11/64	3/20/64
148	Optical Target Alignment Pro- cedure		2/18/64	2/23/64
149	GSE Load and Signal Simulation		10/17/64	12/19/64
150	Welding Process Specification Implementation		8/31/65	9/25/65
151	Resident Effort		7/14/65	8/13/65
152	Fabricate D&C, Three CDU's, and Associated Electronics for Simulation		9/8/65	10/21/65
153	Cross Training Program	10/4/64		10/2/64
154	Field Operations Management	10/22/64		10/22/64
155	Materials and Spares Integration	10/22/64		10/22/64
156	Resident Effort		10/20/65	11/3/65
157	Procurement Specification	2/19/65		9/7/67
158	Familiarization Training		12/7/64	1/4/65
159	Special Test Equipment	10/22/64		10/22/64
160	Spares Procurement	10/22/64		10/22/64
161	(Not Issued)			
162	(Not Issued)			
163	Systems Assembly and Test	10/22/64		10/22/64
164	Resident Effort	8/3/64		8/3/64
165	Portable PIP Demagnetizers		5/25/64	8/7/64
166	Facilities, Field Operations	10/22/64		10/22/64
167	Resident Effort	10/15/63		10/15/63
168	Redesign of Resilient Mounts for Navigation Base		9/8/64	9/21/64
169	Coolant Hose Procurement	5/13/65		5/13/65
170	AGE Harness Handling and Shipping Fixture	5/12/65		5/12/65
171	Implementation of PACE and STU System Test Activity		10/20/65	11/3/65
172	Maintenance and Repair Manuals	5/13/65		5/13/65
173	D&C Environmental Testing		5/6/65	7/17/65
174	PSA Tray Extenders		6/29/64	7/6/64
175	Block I AGE Harness and PSA End Connector Assembly	10/22/64		10/22/64
176	Rotary Table Calibration Kit		2/9/65	3/1/65

SUMMARY OF TECHNICAL DIRECTIVES

AC ELECTRONICS

TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
177	Navigation Base, Optics Assembly Handling and Installation Fixture		12/4/64	12/17/64
178	Motion Picture Progress Report	9/18/63		9/18/63
179	(Not Issued)			
130	Specification Control Drawings		3/21/69	5/5/69
181	Design and Fabrication of Navigation Base Lockout Pins and Clamps		4/25/65	5/3/65
182	Failure Effects Analysis	1/9/64	1/9/64	
183	Alignment Bars		9/3/64	9/21/64
184	Development of Field Test and Operations Personnel		10/ /63	10/ /63
185	Vicinity Equipment, GSE-PSA Adapter		2/8/65	4/20/65
186	Inertial Subsystem Design Analysis for Block II G&N		12/21/62	1/28/68
187	Transfer Switch and Adapter Cable		2/9/65	3/1/65
188	CDU Manufacture for D&C Simulation		8/12/64	8/28/64
189	Navigation Base Testings		12/13/64	1/4/
190	Navigation Base Reduction Program (Not Issued)			
191	PIP Test Fixture		2/3/64	2/25/64
192	Resident Effort		4/1/64	4/15/64
193	Data Reduction and Analysis Planning		4/14/67	5/27/67
194	Test Cables for Breadboard		5/19/64	6/12/64
195	Specification Control Drawing		3/21/69	5/5/69
196	PSA Fabrication of Tray Harness		5/19/64	6/10/64
197	Resident Effort		5/12/65	6/14/65
198	Optical Subsystem Analysis		4/18/65	5/19/65
199	Resident Effort		5/13/65	6/14/65
200	(Not Issued)			
201	Resident Effort		8/17/64	8/27/64
202	Redesign Navigation Base, Block II		7/3/67	7/31/67
203	Encapsulation of AGE 5 Harness and PSA End Connector Assembly		6/15/67	7/31/67
204	Failure Effects Analysis Effort and Reliability Mathematical Simulation		1/29/65	2/24/65
205	(Not Issued)			
206	(Not Issued)			
207	Optical Subsystem Analysis, Block II		6/8/67	7/31/67
208	CDU Environmental Testing		7/3/67	7/31/67
209	Apollo PIPA Test Console		5/25/67	6/13/67

SUMMARY OF TECHNICAL DIRECTIVES				
AC ELECTRONICS				
TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
210	(Not Issued)			
211	GSE Installation Team	10/22/64		10/22/64
212	System Mother			9/7/67
213	(Not Issued)			
214	16 PIPA Test Console Master			
215	Grouted Surface Plates		3/19/64	7/7/64
216	Resident Effort		10/25/66	11/16/66
217	(Not Issued)			
218	Field Operations, Quality Control Plan	1/7/65		1/7/65
219	Block I Drawing Maintenance	5/12/65		5/12/65
220	Breadboard GSE for Block II ISS Testing		3/25/65	4/7/65
221	Resident Effort, Block II		8/17/64	8/28/64
222	(Not Issued)			
223	G&N Harness Environmental Testing		10/8/65	10/22/65
224	Part Qualification Program		12/21/67	1/13/68
225	Reliability Program Plan	10/27/64		10/27/64
226	Updating of Program Planning	5/13/65		5/13/65
227	(Not Issued)			
228	Component Failure Analysis, Block I, Block II, and GSE		4/14/67	5/27/67
229	Reliability Design Support, CM Block II	3/21/69		5/5/69
230	G&N System Analysis and Liaison for Block II		7/3/67	7/31/67
231	Air Frame 8 Thermal Instru- mentation		5/27/65	6/14/67
232	Manufacturing Support, Block II PSA-CDU Design		10/26/67	11/14/67
233	Resident Effort		2/14/66	3/10/66
234	Parts Qualification Program		4/14/67	5/27/67
235	(Not Issued)			
236	(Not Issued)			
237	(Not Issued)			
238	(Not Issued)			
239	Resident Effort, Block II		5/13/65	6/14/67
240	(Not Issued)			
241	Apollo Gyro Test Program		5/25/67	6/13/67
242	Analysis and Design of Compatible Block I, Block II, and LEM GSE (Not Issued)		10/26/67	11/14/67
243	(Not Issued)			
244	D&C Hardware Qualification Block I/100 Series (Not Issued)			

SUMMARY OF TECHNICAL DIRECTIVES

AC ELECTRONICS

TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
245	IMU Production Block I/100 Series (Cancelled)	10/2/64		10/2/64
246	CDU Production Block I/100 Series (Cancelled)	10/2/64		10/2/64
247	(Not Issued)			
248	Resident Effort		5/13/65	6/13/65
249	(Not Issued)			
250	PSA Production Block I/100 Series (Cancelled)	10/5/64		10/5/64
251	Navigation Base Production, Block I/100 Series (Cancelled)	10/2/64		10/2/64
252	Block I F (Modified) GSE Changes		10/26/67	11/14/67
253	Optics Electronics Production I/100 Series (Cancelled)	10/5/64		10/5/64
254	Postqualification Program		10/15/65	10/31/65
255	D&C Manufacture (Cancelled)	10/5/64		10/5/64
256	Harness Design Engineering Support, Block I/100 Series		9/21/65	11/3/65
257	Retrofit GSE BB No. 3		10/26/67	11/14/67
258	(Not Issued)			
259	(Not Issued)			
260	Block II Long Lead Procurement (GSE)	5/12/65		5/12/65
261	Engineering Specialist	10/22/64		10/22/64
262	Block II Navigation Base Bread- board		7/3/67	7/31/67
263	CM Block II, PSA, and CDU Thermal and Vibration Model		10/25/66	11/17/66
264	Command Module Master Tooling Gages	6/1/64		6/1/64
265	Modification to G&N Mounting Fixture, Block I	5/12/65	5/12/65	
266	Modification to G&N Transport Cart, Block I		10/7/65	10/26/65
267	(Not Issued)			
268	Signal Conditioner Hardware and Engineering Support, Block I		10/26/67	11/13/67
269	Site Activation Office			9/7/67
270	(Not Issued)			
271	Block I/100 Series D&C Environmental		7/3/67	7/31/67
272	D&C Humidity Sealing		6/29/65	7/16/65
273	Resident Effort		5/3/65	6/1/65
274	G&N Glossary of Terms (Cancelled)	6/1/64		6/1/64
275	Block II Optimization, Coordinated CDU Program		10/26/67	11/14/67

SUMMARY OF TECHNICAL DIRECTIVES				
AC ELECTRONICS				
TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
276	Block I/100 Series Electronics, Engineering Support		10/26/67	11/14/67
277	G&N 20 Thermocouple Harness		10/26/67	7/10/65
278	PSA New 100 Series Drawings		4/28/65	5/14/65
279	(Not Issued)			
280	(Not Issued)			
281	Engineering Evaluation of Mercury Thermostats for Block II	4/23/65		4/23/65
282	(Not Issued)			
283	40 Seconds Time Delay Optimi- zation		2/18/65	3/3/65
284	Special GSE for G&N 17 and 12	5/12/65		5/12/65
285	Maintenance Analysis, Black Box, Block I and 100	8/16/65		8/16/65
286	Maintainability Program, C/M		4/14/67	5/27/67
287	D&C Panel Breadboards (Cancelled)	9/17/64		9/2/64
288	Optical Electronics Analysis (Cancelled)	12/4/64		12/4/64
289	G&N, Four PIP's, Engineering Support		2/18/65	3/3/65
290	Change Package Preparation		4/14/67	5/27/67
291	Evaluation of New Material for PSA Tray Harnesses, 100 Series		10/26/67	11/13/67
292	Inertial Components Spare Procedure (Cancelled)	10/22/64		10/22/64
293	Resident Effort		5/12/65	6/14/65
294	Resident Effort		5/13/65	6/14/67
295	D&C Detail Design, Series 50 and 100		8/19/65	9/16/65
296	CDU Detail Design, Series 50 and 100		3/30/65	4/12/65
297	Optics Electronics Production, Block I/100 Series		4/14/67	5/26/67
298	(Not Issued)			
299	IMU 2, Mechanical Integration Tests		6/3/65	6/14/65
300	Failure Effects Analysis		3/11/66	4/18/66
301	LEM PSA Thermal and Vibration Models		10/25/66	11/17/66
302	Resident Effort		1/12/66	2/4/66
303	Resident Effort		2/14/66	3/10/66
304	(Not Issued)		8/16/67	8/20/67
305	(Not Issued)		8/9/67	8/20/67
306	Resident Effort		7/3/67	8/3/67
307	Navigation Base Block II		10/25/66	11/15/66

SUMMARY OF TECHNICAL DIRECTIVES

AC ELECTRONICS

TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
308	Resident Effort		10/26/66	11/15/66
309	Breadboard 2 Update		10/26/67	11/19/67
310	Drawing Preparation, PSA Horizontal Photometer		10/26/67	11/13/67
311	OSS Electronics, Block II Preproduction		10/26/66	11/15/66
312	D&C Nonfunctional Parts		10/26/66	11/25/66
313	D&C Detail Design		10/27/67	11/14/67
314	D&C Design Analysis, Block II		10/27/67	11/14/67
315	D&C Environmental		7/3/67	7/31/67
316	D&C Prototype Fabrication		10/26/66	3/3/67
317	LEM GSE Design		10/26/67	11/14/67
318	LEM Navigation Base		10/26/66	2/13/67
319	LEM Navigation Base, Pre- production		10/27/66	11/15/66
320	Design Analysis Block II PSA GME		10/26/67	11/14/67
321	Postinstallation Test Support		5/25/67	6/12/67
322	Resident Effort, ISS		11/25/66	12/30/66
323	Resident Effort, ISS		10/26/66	11/17/66
324	PSA Header Package		10/26/67	11/14/67
325	PSA CDU Header, Block II		10/26/67	11/14/67
326	Resident Effort, OSS		1/12/66	2/3/67
327	Resident Effort, Reliability		3/30/67	4/1/67
328	Navigation Base, MIT Model Block II		10/27/66	11/15/66
329	IMU Detail Design, Block II		10/27/67	11/14/67
330	IMU Design Analysis, Block II		10/27/67	11/14/67
331	(Not Issued)			
332	(Not Issued)			
333	(Not Issued)			
334	Signal Optimization	12/3/65		12/3/65
335	Parts Qualification, Block II		12/21/67	1/13/68
336	(Not Issued)			
337	Guidance Qualification Resident Effort		9/20/66	10/24/66
338	CCRD, Preproduction		12/22/66	1/10/67

SUMMARY OF TECHNICAL DIRECTIVES				
KOLLSMAN INSTRUMENT CORPORATION				
TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
1	Program Office	1/5/66		1/17/66
7	PERT		1/13/65	1/13/65
10	Reliability		1/13/65	1/13/65
11	Vendor and Quality Assurance		6/3/65	6/15/65
12	Internal Engineering Support		6/3/65	6/15/65
14	Manufacturing Plan		6/3/65	6/15/65
23	Documentation Administration		6/3/65	6/15/65
26	Program Progress Reports	5/12/67		6/23/67
28	Reliability Analysis		6/3/65	6/15/65
30	Reliability Training		6/3/65	6/15/65
31	Preparation of Documents		6/3/65	6/15/65
42	Reliability Test Program		7/3/67	7/20/67
49	Optics Manufacturing		4/23/65	6/14/65
54	MDV, Block I		6/8/65	6/14/65
55	Optics Design Analysis		5/16/67	6/23/67
60	Thermal Analysis		9/30/64	5/21/67
61	AGE 2 Mechanical Integration Test		1/10/66	2/18/66
62	Stress Analysis, AGE 2		6/8/65	6/14/65
67	Field Operation Training	1/5/66		1/17/66
68	Field Operations Management	1/5/66		1/17/66
69	Material and Spares Integration	1/5/66		1/17/66
70	Field Operations Resident Effort		11/20/65	12/2/65
71	Procurement Specifications	1/5/66		1/17/66
72	Maintenance Analysis	1/5/66		1/17/66
73	Special Test Equipment	1/5/66		1/7/66
74	Procure 5-inch Autocollimator		8/3/65	10/5/65
75	Design GSE		8/3/65	10/5/65
76	Failure Reporting System		6/8/65	6/15/65
77	Spares Procurement	5/12/67		6/23/67
79	AGE 1 and 2 MDV Test		1/10/66	2/28/66
80	Parts Qualification		12/20/67	1/16/68
81	Design Shipping Container		1/10/66	2/21/66
83	AGE I Thermal Vacuum Test		1/10/66	2/18/66
86	AGE Postinstallation		4/6/66	4/29/66
87	MDV for NR		8/3/65	9/16/65
88	Fabricate Five OSS's and MDV's		6/8/65	6/14/65
92	Provide Nine 2-1/2-inch Autocollimators		8/3/65	10/5/65
94	GSE Optical Wedge		7/16/65	10/5/65
100	Long Eye Relief Equipment		1/10/66	12/16/66
101	Failure Efforts Analysis		8/8/65	6/15/65
108	Design and Procure 1-1/2-inch Autocollimators		8/3/65	10/5/65
111	Condition Light Assembly		1/10/66	2/24/66
112	Motion Picture Progress Report		7/23/64	9/4/64

SUMMARY OF TECHNICAL DIRECTIVES

KOLLSMAN INSTRUMENT CORPORATION

TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
114	SCD's		1/15/68	2/27/68
116	Design Analysis		6/8/65	6/14/65
121	GSE Installation	1/5/66		1/17/66
124	Block I Drawing Maintenance	5/12/67		6/23/67
127	Block I Reliability Program	5/12/67		6/23/67
130	Reliability Design Support	3/21/69		5/5/69
131	GSE Documentation		8/3/65	8/13/65
132	Retroreflecting Prisms		4/6/66	4/27/66
133	Resident Effort		8/3/65	9/15/65
134	Project Office		8/3/65	8/17/65
135	Long Lead Block II Parts		8/3/65	8/17/65
137	Thermal Instrumentation Requirements		8/3/65	9/8/65
138	Design Evaluation		8/3/65	5/24/67
139	Block II GSE Planning		8/3/65	8/13/65
140	Star Horizon Modes		8/3/65	6/28/65
141	GSE Fixture Design		8/3/65	8/13/65
143	Portable Light		8/3/65	10/5/65
145	Postinstallation Test Fixture		8/3/65	8/13/65
146	Functional Tester		8/3/65	10/25/65
149	Resident Effort		8/3/65	7/15/65
153	LER Design Analysis		5/16/67	5/24/67
157	Block II Engineering Bread- Boards		7/3/67	7/20/67
158	Resident Effort		7/3/67	9/20/67

SUMMARY OF TECHNICAL DIRECTIVES				
RAYTHEON CORPORATION				
TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
1	Project Office	4/26/68		5/20/68
8	Core Rope Tester		4/26/68	5/20/68
9	PERT	4/26/68		5/20/68
11	FTM's		4/26/68	5/20/68
16	Reliability Program		4/26/68	5/20/68
21	Progress Reports	4/26/68		5/20/68
26	Documentation Administration	4/26/68	5/20/68	
39	Special Process and Material Specifications		4/26/68	5/20/68
43	Program Progress and Status		7/30/65	9/5/67
49	Thermal Interface		9/5/67	9/20/67
57	Erase Memory Tester		4/26/68	5/20/68
58	Module Tester		4/26/68	5/20/68
63	Micrologic Evaluation and Qualification		4/26/68	5/20/68
66	AGC Interface Specification		4/26/68	5/20/68
67	GSE Module and Drawer Fabrication		4/26/68	5/20/68
79	Test Equipment		4/26/68	5/20/68
82	Fabrication of Computer Simulators		4/26/68	5/20/68
83	Design Evaluation and Quality Test Program		4/26/68	5/20/68
86	AGC Calibration Equipment		4/26/68	5/20/68
91	Interface Specification		4/26/68	5/20/68
95	AGC Tooling	4/26/68		5/20/68
102	Computer Test Set Production		4/26/68	5/20/68
107	Field Operations Training	4/26/68		5/20/68
108	AGC Fixture and Shipping Containers	4/26/68		5/20/68
109	Field Operations Management	4/26/68		5/20/68
110	Material and Spares Integration	4/26/68		5/20/68
112	Procurement Specifications		4/26/68	5/20/68
113	Maintenance Analysis		4/26/68	5/20/68
116	Spares Procurement	4/26/68		5/20/68
122	Fabrication Block I AGC	4/26/68		5/20/68
125	Parts Qualification		12/21/67	1/13/68
129	PACE System Test Activity	4/26/68		5/20/68
131	Maintenance and Repair Manuals	4/26/68		5/20/68
132	Block I AGC Ropes		4/26/68	5/20/68
134	AGC Simulation Computers (Three)		4/26/68	5/20/68
135	AGC Simulation Computer Core Ropes		4/26/68	5/20/68
136	AGC Power Supply Tester		7/25/64	8/26/64
137	Failure Effects Analysis		4/26/68	5/20/68
140	AGC 4B Core Ropes		4/26/68	5/20/68

SUMMARY OF TECHNICAL DIRECTIVES

RAYTHEON CORPORATION

TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
141	Deploy Field Operations Personnel	4/26/68		5/20/68
145	Data Analysis		4/26/68	5/20/68
147	Block II SCD's		4/26/68	5/20/68
148	AGC Rope Simulator	4/26/68		5/20/68
150	Block I G&N Drawing Maintenance	4/26/68		5/18/68
152	GSE Installation Team		4/26/68	5/20/68
153	Block II AGC Dual Micro Norgate		4/26/68	5/20/68
154	AGC Program Documentation		4/26/68	5/20/68
155	STU Main DSKY		4/26/68	5/20/68
158	Power supply Redesign		5/16/68	6/10/68
160	AGC OSC Redesign		4/26/68	5/20/68
161	Reliability Program Plan		4/26/68	5/20/68
162	Reliability Design Support	3/21/69		5/5/69
163	Failure Analysis	4/26/68		5/20/68
164	Failure Reporting Corrective Action	4/26/68		5/20/68
165	Reliability Analysis	4/26/68		5/20/68
166	Main DSKY Test Standard		4/26/68	5/20/68
167	AGC Production Effort Engineering		4/26/68	5/20/68
169	Block I GSE Support Engineering		4/26/68	5/20/68
181	Block II Fabrication of AGC Prototypes		4/26/68	5/20/68
182	Block II Fabrication of Bits and Pieces		4/26/68	5/20/68
183	Block II Resident Effort		7/27/67	9/5/67
184	Block II Core Rope	4/26/68		5/20/68
191	Block II Prototype CDE Digital Modules		4/26/68	5/20/68
193	Block I Design, Engineering Support DSKY's		4/26/68	5/20/68
197	Block I Tooling	4/26/68		5/20/68
198	Block I AGC	4/26/68		5/20/68
199	Core Ropes Block I 100		4/26/68	5/20/68
200	Block I 100 DSKY	4/26/68		5/20/68
201	AGC Electrical/Mechanical Design, I/100		4/26/68	5/20/68
202	AGC Test Equipment and Tooling, I/100		4/26/68	5/20/68
203	Block I/100 AGC Retrofit	4/26/68		5/20/68
205	Block I/100 AGC/GSE Design and Retrofit Program		7/27/67	9/5/67
207	Navigation DSKY Mounting Fixture		4/26/68	5/20/68
211	AGC Field Test Documentation		4/26/68	5/20/68
216	Inhibit Wire Jumper Assembly		11/22/68	12/10/68
219	Thermal Analysis		9/5/67	9/20/67
220	Block II Prototype Core Ropes		11/12/68	12/10/68
221	OSS CDU's, Block II Preproduction		4/26/68	5/20/68

SUMMARY OF TECHNICAL DIRECTIVES				
RAYTHEON CORPORATION				
TD NO.	TITLE	MIT CANCELLED	AC COMPLETED	MIT CONFIRMED
223	Block II AGC LEM Field Verification		11/10/67	11/20/67
225	Qualification Test, Block II		11/22/68	12/10/68
226	Resident Effort		7/27/67	9/5/67
227	Resident Effort		7/27/67	9/5/67
228	Resident Effort		7/27/67	9/5/67
229	Resident Effort		7/27/67	9/5/67
230	Resident Effort, GSE		7/27/67	9/5/67
231	Fixed Memory Modules			
232	Block II Parts Qualification		12/27/67	1/16/68
233	Resident Effort		7/27/67	9/5/67

2.3 TECHNICAL REPORTS

The extremely large volume of technical documentation precludes the preparation of a document providing sufficient technological discussion and data to comprehensively explain the results achieved under Contract NAS9-497.

Program results are generally well known and a restatement of accomplishments would be redundant to material previously presented. To document and summarize the contract scope of work, document records were carefully reviewed and a bibliography of relevant documents prepared. In the review effort all pertinent documentation was included and an effort was made to avoid redundancy with other sections of this report.

This bibliographical material is presented in 16 major categories. The initial 11 categories are strictly hardware-oriented and are presented in the order in which they appear in the Statement of Work. The remaining five categories deal with the broader and nonhardware aspects of the program. In some areas, notably Reliability and Quality Assurance, documentation has been excluded to avoid redundancy with comprehensive listings published elsewhere in this report.

The categories used are as follows.

1. Inertial Measurement Unit including electronics
2. Navigation Base
3. Power Servo Assembly
4. Control Display Unit
5. Displays and Controls
6. Ground Support Equipment
7. System Assembly and Test
8. Inertial Subsystem
9. Optical Subsystem
10. Computer Subsystem
11. Astromerit: Passive Thermal Protective System
12. Software
13. Field Operations, Training, and Manuals
14. Reliability and Quality Assurance
15. General Program Aspects
16. Administrative Factors

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SUMMARY OF TECHNICAL REPORTS		
INERTIAL MEASUREMENT UNIT (IMU, PEA, PTA)(GROUP 010)		
NUMBER	DATE	TITLE
AP-B-00052	9-25-62	IMU Electronic Evaluation Plan
00097	11-08-62	Report on ADA Preamplifier Optimization
00149	12-14-62	Report on IRIG Preamplifier Optimization
00150	12-14-62	Report on PIP Preamplifier Optimization
00193	1-14-63	Report on IMU Gimbal Servo
00300	3-21-63	Report on AC Differential Amplifier, G/S Output Circuit, and Interrogator
00351	4-22-63	Report on Aging and Qualification System and Procedure for IN 825 PVR Diodes
00420	5-23-63	Report on 3, 200 Hz 2V Power Supply
00422	5-24-63	Implementation of Stability Tests of DC Differential Amplifier, Precision Voltage Reference, and Precision Reference Diode

SUMMARY OF TECHNICAL REPORTS

INERTIAL MEASUREMENT UNIT (IMU, PEA, PTA) (GROUP 010)

NUMBER	DATE	TITLE
AP-M-		
00094	08-31-62	ADVANCED PLANNING DISTRIBUTION OF IMU DESIGN (REV.1)
00148	10-17-62	REPORT OF CHARACTERISTICS OF IRRADIATE POLYETHYLENE VS POLYVINYL CHLORIDE WIRE INSULATION
00172	10-31-62	ADA PREAMP OPTIMIZATION
00182	11-02-62	TRANSMITTAL CF IMU OXYGEN ATMOSPHERE STUDY MONTHLY PROGRESS REPORT LETTER CONTRACT NAS-9-497
00210	11-29-62	CHARACTERISTICS OF IRRADIATED POLYETHYLENE INSULATED WIRE, ADDITIONAL INFORMATION
00244	12-17-62	TECHNICAL DIRECTIVE A-62 PROCESS SPECIFICATIONS
00335	02-01-63	PROPOSED DESIGN CHANGE OF APOLLO IMU CASE COVERS 1000139 AND 100001 TO ACSP P/N SK 44402 & SK 44031
00349	02-05-63	ELECTRICAL TEST INVOLVING THE IN825 DIODE IN DC DIFFERENTIAL AMPLIFIER AND PRECISION VOLTAGE REF MODULE
00408	03-05-63	PROJECT REPORT, IMU TEMPERATURE CONTROLLER
00424	03-11-63	APOLLO IMU RESOLVER ACCEPTANCE TESTS
00499	04-04-63	OUTLINE OF TESTS PIP PREAMPLIFIER (SCHEMATIC 1010006A)
00500	04-04-63	OUTLINE OF TESTS AC DIFFERENTIAL AMPLIFIER G/S OUTPUT (SCHEMATIC 1010032)
00566	04-24-63	OUTLINE OF TESTS, IRIG PREAMPLIFIER
00655	05-17-63	SELECTION OF APOLLO PSA IMU & CDU LOAD COMP. MODULES
00717	06-04-63	OUTLINE OF TESTS, ADA PREAMPLIFIER (SCHEMATIC 1010022)
00719	06-04-63	OUTLINE OF TESTS, PRECISION RESOLVER ALIGNMENT ASSEMBLY (SCHEMATIC 1010031)
00720	06-04-63	OUTLINE OF TESTS, EMERGENCY HEATERS CONTROL MODULE (SCHEMATIC 1010019)
00724	06-C5-63	MOTOR DRIVE PREAMP TESTS (MODULE 1015113)
00741	06-07-63	COSECANT GENERATOR (1015148) TESTS
00766	06-14-63	OUTLINE OF SELECTION & TEST PROCEDURES DC DIFFERENTIAL AMPLIFIER & PVR
00772	06-17-63	OUTLINE OF TESTS, PULSE TORQUE POWER SUPPLY (SCHEMATIC 1010052)
00808	06-27-63	OUTLINE OF SELECTION AND TEST PROCEDURE DC DIFFERENTIAL AMPLIFIER & PVR (SCHEMATIC 1010008)
00884	07-12-63	OPTIMIZATION OF -28 VDC POWER SUPPLY
00889	07-15-63	OUTLINE OF TESTS, IMU TEMPERATURE CONTROLLER MODULE (SCHEMATIC 1010058)
00890	07-15-63	OUTLINE OF TESTS, IMU TEMPERATURE INDICATOR-ALARM & BACKUP CONTROLLER MODULE (SCHEMATIC 1010059)
00938	07-23-63	WORKMANSHIP VIBRATION TEST-IMU-PSA SIGNALS MONITORED
00940	07-23-63	PARTIAL OPTIMIZATION OF IMU TEMP. CONTROL LOOP
01004	08-01-63	PARTIAL OPTIMIZATION OF IMU TEMP. CONTROL LOOP
01022	08-05-63	OUTLINE OF TESTS IMU CDU LOAD COMPENSATION MODULE
01033	08-05-63	TEMPERATURE MONITOR & CONTROL
01176	09-03-63	FAILURE INDICATOR CIRCUIT OPTIMIZATION
01250	09-11-63	PRELIMINARY FAMILIARIZATION MANUAL
01428	10-08-63	RESOLUTION TESTS, 16 PIPA
01843	11-27-63	PIP TEST CONSOLE REQUIREMENTS
01927	12-07-63	BRAZED CASE ASSY.
01952	12-17-63	800 LPS PIP SUPPLY OPTIMIZATION REPORT
02076	12-26-63	TESTS PERFORMED ON CASE, CENTER BRAZING
02150	01-09-64	AGE 8 - PRELIMINARY CONSIDERATION OF THERMOCOUPLE INSTALLATION
02205	01-15-64	FAILURE OF CLIFTON RESOLVERS
02220	01-16-64	CONNECTOR PINS INVESTIGATION & SURGE CURRENT CAPACITY OF PSA DIODE CIRCUIT
02294	01-24-64	SPARE INERTIAL MEASUREMENT UNIT (IMU) TESTING PHILOSOPHY
02363	02-03-64	POSSIBLE FAILURE OF BELLCWS IN PIP DUE TO EXCESSIVE OVERHEAT CONDITIONS
02595	03-02-64	PIP ALIGNMENT RING CHANGE
02682	03-11-64	IMU SNAP ON BELLOWS
02722	03-19-64	RETEST INSTRUCTIONS ON APOLLO IMU

SUMMARY OF TECHNICAL REPORTS

INERTIAL MEASUREMENT UNIT (IMU, PEA, PTA) (GROUP 010)

NUMBER	DATE	TITLE
AP-M-		
02889	04-02-64	UTILIZATION OF MOUNTING RING PROTECTOR
02900	04-02-64	BRAZED CASE ASSEMBLY
02974	04-09-64	16 PIPA LOUP COMPENSATION
03076	04-13-64	G&N 6 STABLE MEMBER Z PIP LOCATING PIN MISALIGNMENTS
03035	04-16-64	THE EFFECT OF THE GSE GIMBAL DUMP CIRCUIT IN GIMBAL ROTATION
03063	04-20-64	REWORK AND RETEST OF APOLLO G&N #6 IMU
03133	05-01-64	EFFECT OF ALLOWABLE IMU PRESSURE SEAL TESTER LEAK RATE ON IMU PRESSURE SEAL TEST
03154	04-29-64	PULSE TORQUE POWER SUPPLY
03181	04-30-64	BRAZED IMU CASE ASSEMBLIES
03281	05-11-64	FIELD REMOVAL OF SET (+) CAGE PIN 11 AND SET (-) CAGE PIN 10 FROM TERNARY CURRENT SWITCH MODULE 1007016
03378	05-22-64	IMU CASE ASSEMBLIES
03387	05-21-64	ENGINEERING EVALUATION OF APOLLO IMU #6 WORKMANSHIP VIBRATION
03402	04-22-64	CRACKS IN TACK WELDS ON GIMBAL SHIELDS
03495	05-29-64	PROBLEM REVIEW ON PACKING OF RESOLVER
03669	06-22-64	REVISION OF -28 VDC SUPPLY TOLERANCE
03698	06-24-64	CHANGES IN GIMBAL INERTIAS
03849	07-13-64	FAILED ROLL-SCNDED HEAT EXCHANGER MATERIAL
03909	07-20-64	16X RESOLVERS
03999	07-30-64	LEXAN CASE CRACKING PROBLEM ON G&N NO. 7 APOLLO IMU
04096	08-12-64	USAGE OF PIP MOUNTING RING PROTECTOR
04297	09-01-64	AN ANALOGUE INVESTIGATION OF THE BLOCK II IMU TEMPERATURE CONTROL SYSTEMS
04301	09-01-64	AN ANALOGUE STUDY OF TEMPERATURE CONTROL METHODS FOR THE BLOCK II IMU
04440	09-18-64	16X RESOLVER ERROR AFTER VIBRATION
04696	10-15-64	PULSE TORQUING FOR RETEST PROGRAM ON 25 APOLLO IRIG'S
04750	10-22-64	INSULATOR, PHOTOGRAPHIC MASTER, PIPA CALIBRATION MODULE PART NUMBER 1008018-2 REV. 8
04936	11-13-64	IRIG COEFFICIENT SIGN CONVENTIONS
05088	12-04-64	INVESTIGATION OF IRIG CALIBRATION MODULES FOR G&N 6
05202	12-27-64	IMU BALANCE WEIGHT REPORT FOR IMU 8, 20, AND THE SPARE
05269	12-21-64	RETEST OF ADA FROM OUTER AXIS OF G&N #8 IMU
05583	01-29-65	IMU BLOWER QUALIFICATION FAILURE
05612	02-02-65	IMU WORKMANSHIP VIBRATION TESTING
05882	02-25-65	EVALUATION OF PREPRESSED PIP AND RESOLVER ALIGNMENT TESTS
06021	03-08-65	ENGINEERING EVALUATION OF APOLLO IMU 17/50 WORKMANSHIP VIBRATION
06088	03-12-65	PTC CAPABILITIES DURING IMU STORAGE
06293	03-30-65	PARAMETRIC STABILITY DATA
06301	03-31-65	STORAGE OF IMU'S IN SHIPPING CONTAINERS
06390	04-01-65	SUMMARY OF IMU CONTINENTAL CONNECTOR SCREW LOCK HARDWARE PROBLEM
06355	04-02-65	REWORK OF AN INERTIAL MEASUREMENT UNIT, INCORPORATE STABLE MEMBER HEATERS
06458	04-13-65	IMU TEMPERATURE CONTROL DURING QUALIFICATION EXPOSURES
06559	04-21-65	CENTRIFUGE OPERATION OF IMU
06713	05-06-65	TEMPERATURE TESTING OF "SPARE" IMU
06830	05-19-65	CAPACITOR NETWORK
07063	05-04-65	IMU COOLANT INTERFACE
07137	06-10-65	PROPORTIONAL CONTROL MAG AMP EVALUATION
07213	06-16-65	IMU LEVEL TEMPERATURE TEST RESULTS G&N 121

SUMMARY OF TECHNICAL REPORTS	
INERTIAL MEASUREMENT UNIT (IMU, PEA, PTA) (GROUP 010)	
NUMBER	DATE
TITLE	

AP-M-

07239	06-17-65	ANALOG SIMULATION OF QUALIFICATION VIBRATION AND SHOCK AND OVERSTRESS VIBRATION ON THE APOLLO IMU
07372	06-29-65	ENGINEERING EVALUATION OF APOLLO IMU 110 WORKMANSHIP VIBRATION
07536	07-08-65	BLOWER PART NUMBER 2018644
07597	07-12-65	EVAL. OF APOLLO MU 12/50 STICK SHAFT VIBRATION'S DAMPERS
07772	07-27-65	ACCELEROMETER INPUT AXIS MISALIGNMENT SPECIFICATION
07799	07-29-65	ENGINEERING EVALUATION OF IMU 121 WORKMANSHIP VIBRATION
08000	08-13-65	ENGINEERING EVALUATION OF IMU 111 WORKMANSHIP VIBRATION
08016	08-16-65	IMU & ASSOCIATED COMPONENT TEST FLOWGRAM - BLOCK II & LEM
08084	08-23-65	FATIGUE DAMAGE TO APOLLO BLOCK I-100 IMU DURING VIBRATION
08442	09-21-65	GIMBAL FRICTION TEST FAILURE OF IMU 110
08443	09-21-65	PIPA INDICATING SENSOR CHANGE DUE TO FLIGHT SHOCK OF IMU
08444	09-21-65	INTERMITTENT OPERATION OF THE MERCURY THERMOSTAT DURING XNB LAUNCH ABORT VIBRATION OF IMU 110
08454	09-21-65	OQ DRIFT DURING ZNB LAUNCH FOR 2 IRIG (ZA26) ON QUAL TEST OF ISS 110
08455	09-21-65	ERRONEOUS NBDZ INDICATION FOR PI-3, PI-4, AND LEARNER IMU'S
08702	10-06-65	PIPA QUADRATURE PROBLEM ON PI-3
08868	10-14-65	ENGINEERING EVALUATION OF IMU 122 WORKMANSHIP VIBRATION
08879	10-11-65	PIPA QUADRATURE PROBLEM ON PI-3
09014	10-25-65	GIMBAL ONE-SPEED RESOLVER CABLE PROGRAM
09366	11-15-65	PIP TESTING
09589	11-29-65	ADA MASS UNBALANCE
09594	11-29-65	SUBSYSTEM IIG ADA INVESTIGATION
09595	11-29-65	DISCOLORATION OF PIN #6 ON CCNECTOR J-3 OF IMU
09703	12-03-65	SUMMARY STATUS OF THE ADA MASS UNBALANCE CONDITION
10057	12-21-65	IMU TEMPERATURE CONTROL DURING QUALIFICATION EXPOSURES
10527	01-20-66	ENGINEERING EVALUATION OF APOLLO IMU 601 WORKMANSHIP VIBRATION
10583	01-20-66	S/N 03 - 3 - 39
10571	01-24-66	QUALIFICATION TESTING OF APOLLO PANCAK RESOLVER
10610	01-26-66	RESOLVER, P/N 2018632
10961	02-15-66	BLOCK I IMU TEMPERATURE CONTROL UNDER QUALIFICATION EXPOSURES
11089	02-23-66	IMU MEASUREMENT ERRORS DUE TO FLOAT UNBALANCE
11932	04-14-66	GEN 603 PIP TEMPERATURE FAILURE PROBLEM
12050	04-22-66	BLOWER CYCLING PROBLEM ON IMU-203
12211	05-03-66	EVALUATION OF METHOD USED TO MEASURE IMU GIMBAL TRANSMISSIBILITY
12283	05-09-66	ENGR EVALUATION OF APOLLO IMU 201 AND 202 WORKMANSHIP VIBRATION
12456	05-20-66	REQUESTED LIST OF BLOCK II IMU PIECE PART TOLERANCES WHICH ARE DIFFICULT TO MEET FOR POSSIBLE RELAXATION
12854	06-17-66	QUALIFICATION TESTING OF SAFETY THERMOSTAT
12962	06-29-66	TEMPERATURE ALARM PROBLEMS ON BLK II AND LEM IMUS
13164	07-21-66	VIBRATION DESIGN CRITERIA FOR AIR-BEARING GYRO FOR THE BLOCK II IMU
14158	11-02-66	REPAIR REPORT FOR IMU S/N 8 AND PEA S/N 4
14313	11-17-66	EFFECTS OF REQUESTED BLOCK II IMU PIECE PART TOLERANCE CHANGES ON SYSTEM PERFORMANCE
14683	01-03-67	QUAL TEST AGREEMENTS ON THERMAL VACUUM AND GROUND TEMPERATURE TESTING OF THE LEM 604 PTA
14738	01-06-67	CONTAMINATION OF THE IMU BY PARTICLES GENERATED FROM SCREEN FASTENERS
14828	01-17-67	ANALYSIS OF THE EFFECTS OF IMU CONTAMINATION ON MISSION SUCCESS
14864	01-19-67	THERMOCOUPLE MOUNTING ON BLOCK II VIBRATION MODEL IMU
14880	01-23-67	

SUMMARY OF TECHNICAL REPORTS

INERTIAL MEASUREMENT UNIT (IMU, PEA, PTA) (GROUP 010)

NUMBER	DATE	TITLE
AP-M-		
14896	01-23-67	POTENTIAL SHORTING PATHS WITHIN THE APOLLO IMU - BLOCK I
14906	01-24-67	BLOWERS IN IMU 604
14924	01-25-67	RELAXATION OF ADDITIONAL BLOCK II IMU PIECE PART TOLERANCES
14956	01-30-67	208 SLIP RING FAILURE
15005	02-02-67	BLOCK II IMU CONTAMINATION
15347	03-14-67	SUMMARY OF IMU PRESSURE TEST CN GEN 206
15431	03-23-67	INVESTIGATION OF IMU MOUNTING PROCEDURE
15433	03-23-67	CULLANT SUPPLY FLOW RATE
15590	04-13-67	SHORT BETWEEN IRIG SENSOR CIRCUIT & IRIG WHEEL EXCITATION ON IMU ACSK-21
15788	05-04-67	IMU COOLANT DOWN AND HEAT UP
15894	05-16-67	TEMPERATURE ALARM PROBLEM CN GEN 610 (IMU ACSK-26)
15919	05-17-67	IMU HEATER CURRENT DISCRETE/SCA FALSE INDICATION PROBLEM AT GAEC
15948	05-22-67	BLOCK II AND LEM IMU CURRENT OVERLOAD STUDY - IN RESPONSE TO FIRE DRILL NO. 3
15968	05-24-67	IMU A610 CLEANLINESS LEVEL REVIEW
16057	06-05-67	REPAIR AND RETEST REPORT FOR LEM IMU-PTA 9 (GEN 605)
16110	06-09-67	GLITCHES (NOISE SPIKES) CN IMU STANDBY LINE, LM-1 AND L4-2
16186	06-16-67	BLOCK II AND LEM IMU HEATER BLANKET REMOVAL
16658	08-14-67	IMU MANUFACTURING PROCEDURES
16713	08-18-67	REMOVAL OF IMU THERMAL BLANKETS
16754	08-25-67	REMOVAL OF IMU THERMAL BLANKETS
16920	09-13-67	BLOCK II/LEM IMU SOLDERING
16929	09-14-67	SUMMARY OF TEST PERFORMED IN THE APOLLO GYRO LAB GYRO PREAMP INDUCTANCE SUSCEPTIBILITY
16964	09-18-67	BLOCK II IMU COOLANT HOSES, P/N 2018821
17050	09-29-67	IMU COOLANT HOSE STRESSES DUE TO 78G SHOCK LOADING
17090	10-04-67	ANAL. TO DETERMINE IF THE IMU STABLE MEMBER IRIG CLAMP WILL PREVENT MOVEMENT OF THE IMU
17098	10-06-67	EMERGENCY IMU HEAT MODE PROBLEM CN GEN 122, S/C 017, AS-501
17112	10-09-67	PIP ALIGNMENT SHIFTS
17135	10-10-67	PIP ALIGNMENT SHIFT ACROSS EVEN STORAGE
17189	10-16-67	FLOAT FREEDOM PROBLEM ON GYRO 7A-90 IN IMU 22-Z
17190	10-16-67	ADSR A SHIFT CN GYRO 7A-199 IN IMU 22-X
17257	10-20-67	16 PIP MOD D DESIGN PARAMETERS
17266	10-23-67	GAUSSING TESTS PERFORMED ON A MODIFIED BLOCK II PIPA
17355	10-30-67	CHANGES IN SCALE FACTOR WITH TIME & ACROSS DEGAUSS OF PIPAS
17366	10-30-67	RESOLUTION OF BIAS COMPENSATION RESISTORS 2 PIP S/N 2AP-184
17404	11-02-67	PERFORMANCE AND RELIABILITY IMPLICATIONS FOR A GAUSSING PIP
17699	12-07-67	EVALUATION OF FAIL WRAPPED HARNESES,
17701	12-07-67	OVERSIZE JACK SCREW ON GEN HARNESS CONNECTORS
18025	01-22-68	IRIG PREAMPLIFIER OSCILLATION
18067	01-31-68	EVALUATION OF ELECTRICAL TEST METHOD FOR DETECTION OF BROKEN STRANDS IN IMU WIRE
18170	02-13-68	IMU AUDIO TRANSMIT SUSCEPTIBILITY
18229	02-19-68	GIMBAL TORQUE MOTOR VOLTAGE NOISE
18399	03-11-68	IMU TEMP - CONTROL EVALUATION WITH A KNOWN BLOWER MALFUNCTION
18414	03-13-68	LOOSE INSERTS IN LM IMU COVERS
18465	04-10-68	IMU COOLANT TEMP. DURING OPERATION AT HIGH AMBIENT TEMPERATURES
18685	04-15-68	RESULTS OF IMU TEMPERATURE EVALUATION WITH AN KNOWN BLOWER MALFUNCTION

SUMMARY OF TECHNICAL REPORTS	
INERTIAL MEASUREMENT UNIT (IMU, PEA, PTA) (GROUP 010)	
NUMBER	DATE

TITLE

NUMBER	DATE	TITLE
AP-M-		
19395	07-18-68	PIP MOUNTING SCREW INSTALLATION TECHNIQUE
19396	07-18-68	IMU HEAT SUPPORT PROBLEM
19464	07-26-68	IRIG END COVERS TOLERANCE BUILD UP PROBLEM
19465	07-26-68	IMU 28-GAGE WIRE TERMINATION STUDY
19483	07-30-68	EVALUATION OF SCREWS COATED WITH A NEW TYPE LOCKING CEMENT UC-3
19648	08-22-68	IMU INNER AXIS CAPTIVE SCREW PROBLEM
19681	08-28-68	VERIFICATION OF IMU S/N 27 AND 31 MOUNTING SCREW TORQUE ON IA SUBASSEMBLIES
19710	09-03-68	SUMMARY OF THE IMU W/M-HARNESSES CHANGES
19812	09-17-68	IRIG TEMPERATURE INDICATION SHIFT ON IMU 27 @ KSC (LM-3 SPARE)
19915	10-01-68	IMU RETEST PHILOSOPHY
20060	10-24-68	PTA SHOCK LEVEL DURING LM DCKING - LATCHING TEST
21397	12-18-68	IMU SNAP-ON BELLOWS
21626	02-10-69	EFFECT OF INTERNAL PRESSURE LOSS ON IMU PERFORMANCE
21682	02-19-69	OVERPRESSURIZATION OF IMU COG' NI PASSAGES AND IMU HOSES
21702	02-25-69	EVALUATION OF 7C168 FROM 104 IMU
22045	05-05-69	MOTOR TACH LUBRICANT EVALUATION
22249	06-13-69	IMU COOLANT HOSE INSPECTION AND INSTALLATION PROCEDURE
22282	06-19-69	BLOWER DATA SPECIAL EXTENDED TEST RESULTS
22285	06-23-69	IMU LEVEL BLOWER TEST AND VISUAL MECHANICAL INSPECTION CRITERIA
22354	07-07-69	APOLLO II IMU BLOWER MOTORS
22358	07-07-69	ANALYSIS OF THE INDICATED DRIFT OF THE IMU STABLE MEMBER IN LM 4 DURING APOLLO 10 MISSION
22365	07-07-69	IMU IN LM-6
22590	09-03-69	LM 6 IMU QUICK DISCONNECT COUPLING FAILURES
22644	09-18-69	LM-6 IMU QUICK DISCONNECT COUPLING FAILURE
22684	09-30-69	IMU BLOWER OPERATION - IMU 15 - IN LM-6
22700	10-03-69	IMU BLOWER MOTORS
22709	10-03-69	LM-6 IMU QUICK DISCONNECT COUPLING INVESTIGATION FINAL REPORT
22737	10-13-69	APOLLO IMU BLOWER
22826	11-04-69	INVESTIGATION OF KEARFOTT ACCELEROMETER INTERFACE WITH IMU

SUMMARY OF TECHNICAL REPORTS	
NAVIGATION BASE (NVB) (GROUP 020)	
NUMBER	DATE
TITLE	

AP-M-	NUMBER	DATE	TITLE
	00494	14-03-63	BRUSH BERYLLIUM TENSILE TESTS ON BRAZE SAMPLES USING .010 & .005 SILVER - LITHIUM FOIL
	00673	05-22-63	APOLLO NAVIGATION BASE ALIGNMENT INSPECTION FIXTURES
	00753	06-13-63	STATUS REPORT OF ZINC NAVIGATION BASE BRAZE
	00898	07-13-63	APOLLO NAVIGATION BASE CRADLE LAYOUT
	00966	07-25-63	LETTER OF TRANSMITTAL, STRESS & DEFINITION ANALYSIS OF NAVIGATION BASE.
	01013	08-02-63	NAV. BASE SOLID CONSTRUCTION
	01097	08-16-63	NVB BRAZING
	01310	09-19-63	APOLLO NAV. BASE OPTICAL TOOLING
	01522	10-21-63	TRANSMITTAL OF TEST REPORTS
	02057	12-23-63	APOLLO NAVIGATION BASE VIBRATION TEST
	02777	12-25-63	EVALUATION OF APOLLO NAV. BASE ASSEMBLY PHASE I TESTING
	03732	06-25-64	NAVIGATION BASE ALIGNMENTS STABILITY AFTER REMACHINING OF FRONT ISOLATOR MOUNTING SURFACE
	03830	07-09-64	ASSEMBLY OF NAVIGATION BASE AND OPTICAL UNIT (189995) GSN 6
	04210	08-24-64	OPTICS-TO NAVIGATION BASE ALIGNMENT CHECK
	04950	11-17-64	PHASE II EVALUATION FINAL TEST REPORT FOR THE BLOCK I NAVIGATION BASE
	06063	03-11-65	PRELIMINARY SIGNAL REQUIREMENTS FOR IMU NAVIGATION BASE VIBRATION AND FLIGHT SHOCK
	06082	03-12-65	BLOCK II NVB ENGINEERING PARTS
	06304	03-13-65	LEM NAVIGATION BASE ENGINEERING PARTS
	06550	04-21-65	ANGULAR MISALIGNMENTS AND STRESS ANALYSIS FOR BLOCK II NB WITH OPTICS
	06551	04-21-65	BLOCK II OPTICS/NAVIGATION BASE FIXTURE DESIGN CRITERIA
	06981	05-27-65	FINAL REPORT OF EVALUATION TEST ON IMU-2 (BLK I) NAVIGATION BASE ASSY WITH DUMMY OPTICS
	07240	06-17-65	EFFECT OF A 20G PRELOAD ON THE APOLLO NAVIGATION BASE ISOLATORS DURING LAUNCH ABORT VIBRATION
	07265	06-18-65	TRANSMITTAL (NAVIGATION BASE) TEST REQUEST N. 34.006 REV. A. BLOCK II
	09463	11-13-65	TRANSMISSIBILITIES & STRAIN GAGE DATA FOR LEM AND NAV. BASE
	11518	03-13-66	EVALUATION OF URETHANE SEALS FOR OPTICS TO S/C SEAL ASSEMBLY.
	12126	04-27-66	LEM NAVIGATION BASE MOMENT OF INERTIA
	12207	05-03-66	VIBRATION PLOTS PERTINENT TO THE LEM NAVIGATION BASE EVALUATION PROGRAM
	12325	05-11-66	USE OF ADA QUALIFICATION TEST SAMPLES FOR INSTRUMENTATION ON LEM NAVIGATION BASE EVALUATION TEST PROGRAM
	12423	05-13-66	EVALUATION TESTING OF S/C SEAL, PRESSURE, STRAIN ISOLATION
	12431	05-13-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAVIGATION BASE EVALUATION PROGRAM (TEST # 34-057)
	12450	05-23-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAVIGATION BASE EVALUATION PROGRAM (TEST NO. 34-057)
	12451	05-23-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAVIGATION BASE EVALUATION PROGRAM (TEST NO. 34-057)
	12604	05-31-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAV. BASE EVAL. PROG. (TEST #34-057)
	12630	05-01-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAV BASE EVAL. PROG. (TEST #34-057)
	12632	06-01-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAV BASE EVAL. PROG. (TEST #34-057)
	12642	05-02-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAV BASE EVAL. PROG. (TEST #4-057)
	12643	06-02-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAV BASE EVAL. PROG. (TEST #34-057)
	12651	06-02-66	COARSE ALIGN AND CDJ TEST RESULTS - GSN SYSTEM 602
	12891	06-22-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAVIGATION BASE EVALUATION PROGRAM (TEST NO. 34-057)
	12895	06-22-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAVIGATION BASE EVALUATION PROGRAM (TEST NO. 34-057)
	13000	07-05-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAVIGATION PROGRAM (TEST #34-057)
	13094	07-15-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAVIGATION PROGRAM (TEST #34-057)
	13273	08-02-66	ADDITIONAL VIBRATION PLOTS FROM LEM NAVIGATION BASE EVALUATION PROGRAM
	13273	08-02-66	FLANKING DYE MARKINGS ON BOLTS
	13318	08-09-66	METAL BELLOWS WATER LEAK TEST EVALUATION
	14700	01-04-67	LEM NAVIGATION BASE - MISALIGNMENT BETWEEN THE IMU AND ACT MOUNTING PADS

SUMMARY OF TECHNICAL REPORTS		
NAVIGATION BASE (N/B) (GROUP 020)		
NUMBER	DATE	TITLE

AP-M-

14760	01-10-67	LEM NAV BASE EVALUATION TEST REPORT AETR 66-5225 AND THE RANDOM OPERATIONAL LEVEL VIB PLOTS
15161	02-21-67	BRAZING OF LEM N/B
17418	11-03-67	EVALUATION PROGRAMS FOR DETERMINING THE FLIGHT WORTHINESS OF EXISTING LEM N/B IN THE FIELD
17583	11-22-67	TEST PROGRAM OF LEM NAV. BASE
17697	12-07-67	LMU BRAZED JOINT VERIFICATION
17884	01-05-68	LINE RUN PHEOPENS IN LEM N/B BRAZED AREA
18202	02-16-68	RE-EVALUATION OF THE STRUCTURAL INTEGRITY OF THE LEM NAV BASE

SUMMARY OF TECHNICAL REPORTS

POWER SERVO ASSEMBLY (PSA) (GROUP 030)

NUMBER	DATE	TITLE
AP-B-00110	11-26-62	Report on Experimental Data and Evaluation of Sextant Servo Amplifier R-860, Breadboards 1 through 6

SUMMARY OF TECHNICAL REPORTS

POWER SERVO ASSEMBLY (PSA) (GROUP 030)

NUMBER	DATE	TITLE
A.P-M-		
00225	12-04-62	MANUFACTURING PSA ALUMINUM HEAT SINK FOR APOLLO
00474	03-28-63	PSA & GME BONDING SPECS FOR USE WITH SPACEBORNE ELECTRONIC MODULE ASSEMBLIES
00530	04-12-63	PSA VM DESIGN RECOMMENDATIONS
00655	05-17-63	SELECTION OF APOLLO PSA IMU & CDU LOAD COMP. MODULES
00663	05-27-63	OUTLINE OF TESTS, BINARY CURRENT SWITCH (SCHEMATIC 1010043)
J0670	05-21-63	OUTLINE OF TEST, GIMBAL COARSE ALIGN AMPLIFIER (1007041)
00708	06-03-63	BUFFER CIRCUIT TESTS (SCHEMATIC 1015126)
00709	06-03-63	RESOLVER DRIVE AMPLIFIER TESTS (SCHEMATIC 1015120)
00719	06-04-63	OUTLINE OF TESTS, 28 VOLT DC REGULATOR ASSY (SCHEMATIC 1010003)
00728	06-05-63	MOTOR DRIVE AMPLIFIER (1015116) TESTS
00743	06-10-63	OUTLINE OF TESTS; AAC, FILTER & MULTIVIBRATOR 3200 CPS MODULE ASSY (1007043)
00756	07-12-63	ADDITIONS AND REV TO OUTLINE OF TESTS, CDU MOTOR DRIVE AMP, SELECTOR & FINE ALIGN RELAY (1010035C)
00757	06-12-63	ADDITIONS AND REV TO OUTLINE OF TESTS, ENCODER ELECTRONICS (SCHEMATIC 1010034B)
5.58	07-24-63	OUTLINE OF TESTS, FAILURE INDICATOR (SCHEMATIC 1010033A)
00784	06-19-63	OUTLINE OF TESTS, GIMBAL SERVO AMPLIFIER (1007040)
00789	06-21-63	MOTOR DRIVE PREAMP TESTS (MODULE 1015149)
00790	06-21-63	OUTLINE OF TESTS, BACKUP MODE ELECTRONICS (SCHEMATIC 1010051)
00801	06-25-63	OUTLINE OF TESTS; AAC, FILTER, AND MULTIVIBRATOR 800 CPS MODULE ASSEMBLY (1007046)
00806	06-27-63	OPTIMIZATION OF -28 VDC SUPPLY
00818	07-12-63	OUTLINE OF TESTS, AMPLIFIER IN 800 CPS, 1007047
00840	07-03-63	TWO SPEED SWITCH TESTS (MODULE 1015104)
00849	07-05-63	RESISTOR & CAPACITOR MODULE TESTS (MODULE 1015155)
00885	07-12-63	OPTIMIZATION REPORT & RECOMMENDATION -28 VDC POWER SUPPLY
00891	07-15-63	OPTIMIZATION REPORT, TERNARY CURRENT SWITCH
00938	07-23-63	WORKMANSHIP VIBRATION TEST-IMU-PSA SIGNALS MONITORED
00975	07-29-63	BUFFER CIRCUIT OPTIMIZATION
00981	07-29-63	FAILURE INDICATOR CIRCUIT OPTIMIZATION
01014	08-02-63	OUTLINE OF TESTS, AMPLIFIER IN 800 CPS MODULE ASS. (1007048)
01016	08-05-63	COSECANT GENERATOR REPORT
01046	08-09-63	OUTLINE OF TESTS, DIODE & FILTER ASSEMBLY
01056	08-13-63	HEATSINK -28 VDC POWER SUPPLY 10156
01067	08-14-63	PROTOTYPE PRECISION ALIGNMENT SERVO AMPLIFIER
01137	08-27-63	BUFFER CIRCUIT OPTIMIZATION REPORT
01139	08-27-63	3200 CPS 2V POWER SUPPLY
01172	08-30-63	COSECANT GENERATOR AMBIXING REPORT
01311	09-10-63	RESOLVER DRIVE AMPLIFIERS
01432	10-19-63	800 CPS AAC, FILTER AND MULTIVIBRATOR - 800 CPS, 1% AMPLIFIER, -800 CPS, 5% AMPLIFIER
01446	10-10-63	RESOLVER DRIVE AMPLIFIER OPTIMIZATION
01540	10-28-63	OUTLINE OF TESTS AND COMPONENT SELECTION PROCEDURE-PULSE TORQUE GYRO CALIBRATION MODULE
01589	10-29-63	IMU TEMPERATURE CONTROL ELECTRONICS CIRCUIT OPTIMIZATION
01612	10-31-63	800 CPS COMPENSATION MODULE OPTICS ASSEMBLY
01833	11-29-63	25.6 KC ENCODER EXCITATION POWER SUPPLY
01959	12-10-63	POTTING OF PSA TRAYS FOR AGE 6 AND LEARNER
02046	12-20-63	WIRE FOR LEARNER PSA END CONNECTOR
02253	01-21-64	BREAKAGE OF MODULE JACK SCREENS

SUMMARY OF TECHNICAL REPORTS	
POWER SERVO ASSEMBLY (PSA) (GROUP 030)	
NUMBER	DATE
TITLE	

AP-M-

02304	01-24-64	APOLLO TRAY HARNESES
02429	02-17-64	OPTIMIZATION REPORT, JETICS MOTOR DRIVE AMPLIFIER
02510	02-19-64	ENGINEERING ACTION TAKEN WITH RESPECT TO REF. DIODE
02533	03-05-64	TRAY WIRING FOR PSA FOR AGE #7
02720	03-13-64	CRACKING OF LEXAN HOUSINGS
02723	03-16-64	APOLLO PVR DIODE
02767	03-23-64	FRAME ASSEMBLY CONTINUITY CHECKS
02963	04-09-64	3200 CPS AAC & 1% AMPLIFIER
02966	04-13-64	FOAM POTTING MATERIAL COMPATIBILITY
03546	05-05-64	FAST SWITCHING BINARY CURRENT SWITCH
03778	07-02-64	800 CYCLE POWER SUPPLY
03873	07-15-64	800 CPS, 1%, POWER SUPPLY
03883	07-16-64	CURING OPTIONS IN NC 1002004 AND 1002009
03956	07-24-64	R25 RESISTORS FOR THE DC DIFF. AMP. ASSY (P/N 1007007)
03957	07-24-64	800 CPS, 5% AMPLIFIER STABILITY
04193	08-20-64	CURRENT SWITCH BIAS NORMALIZATION
04214	08-24-64	THERMAL EVALUATION OF THE APOLLO PSA
04245	08-26-64	TESTS FOR CRACKING IN NEW LEXAN HOUSINGS WITH BONDED FERRULES
04257	08-27-64	OPTIMIZATION AND ANALYSIS OF TEMPERATURE CONTROL ELECT.
04375	09-10-64	PRODUCTION DATA ON TRANSISTORS USED IN THE 800 CPS 5% AMPLIFIER MODULES (1007048)
04426	09-16-64	AGE HARNESS & PSA END CONNECTOR WORKMANSHIP AND TEST PROBLEMS
04505	09-25-64	AAC DETECTION CIRCUITS
04645	10-09-64	FAILURE ANALYSIS REPORT ON WIRE BURNS IN GEN 6 HARNESS AND TRAYS
04781	10-26-64	DESIGN MARGIN TEST REQUIREMENTS
04870	11-05-64	TEMPERATURE ALTITUDE TEST ON POTTED PSA END CONNECTOR
04924	11-13-64	BLOCK II GIMBAL SERVO AMPLIFIER
05329	01-05-65	EFFECTS OF DC BETA AND STORAGE TIME UPON FORWARD BACKWARD COUNTER FLIP-FLOP TRIGGERING AND CIRCUIT PERFORM
05412	01-13-65	TOE CAP SCREWS
05503	01-21-65	TRANSMITTAL OF 40-SECOND TIME DELAY OPTIMIZATION REPORT
05599	01-29-65	OVERLOAD PROTECTION FOR PULSE TCRQUIING POWER SUPPLY MODULES
05603	02-01-65	ENVIRONMENTAL QUALIFICATION OF THE HICK I-100 OSS MODULES IN THE PSA
05605	02-01-65	GIMBAL MOUNTED ELECTRONICS
05637	02-03-65	G/S OUTPUT CIRCUIT AC DIFFERENTIAL AMPLIFIER
05746	02-15-65	GSE PSA TOE CAP DEFLECTION INVESTIGATION
05881	02-26-65	USCILLATION PROBLEM ON BINARY CURRENT SWITCH
06277	03-29-65	AIRBORNE MODULE FOAM SEPARATION
06542	04-21-65	AIRBORNE MODULE FOAM SEPARATION
06560	04-22-65	GEN HARNESS AND PSA END CONNECTOR LOW TEMPERATURE TESTS
06561	04-22-65	INVESTIGATION OF ENCAPSULATION SEPARATION
06674	05-03-65	VIBRATION AND ACCELERATION TEMP. REQUIREMENTS FOR PSA COLOPLATE
06942	05-26-65	SATURABLE REACTOR, IC10890
06883	05-28-65	BLOCK I GEN HARNESS AND PSA END CONNECTOR ENVIRONMENTAL TEST
07029	06-02-65	RESOLVER TRIM MODULE
07031	06-03-65	RESOLVER TRIM MODULE ADJUSTMENT
07073	06-07-65	

POWER SERVO ASSEMBLY (PSA) (GROUP 030)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE		TITLE

AP-M-

07184	06-14-65		LOAD SIMULATION FOR THE LEM PSA
07345	06-25-65		+ - 30 VDC POWER SUPPLY LOADS (BLOCK II AND LEM)
07424	06-30-65		INPUT REQUIREMENTS FOR TESTING THE LEM POWER & SERVO ASSEMBLY
07619	07-14-65		PWR DFLAY MODULE
07689	07-13-65		INPUT REQUIREMENTS FOR TESTING THE BLK II COMMON MODULE POWER AND SERVO ASSEMBLY
07747	07-26-65		QUALIFICATION OF PSA USING LOAD AND SIGNAL SIMULATORS
07914	08-06-65		PULSE TORQUE ASSEMBLY AND PIPA ELECTRONICS ASSEMBLY TESTS
08050	08-19-65		TERNARY CURRENT SWITCH SPORT CIRCUIT PROBLEM
08118	08-24-65		BLOCK II PIP PREAMPLIFIER
08263	09-07-65		PSA QUALIFICATION USING LOAD & SIGNAL SIMULATORS
08315	09-17-65		AC DIFF/AMP/INTERCATOR, BLOCK II
08436	09-21-65		FINAL REPORT OF EVALUATION TEST ON GEN HARNESS & PSA
08600	09-29-65		ANTI-CREEP ASSEMBLY DESIGN OPTIMIZATION REPORT
08638	10-01-65		STRENGTH ON THREE INCH THICK HK 31A-H24 MAGNESIUM ALLOY USED ON THE PSA C/M PREPRODUCTION HEADERS
08729	10-07-65		GIMBAL DRIFT DURING PSA 2 AXIS LAUNCH VIBRATION
09013	10-23-65		DUMMY ADJUST CAPABILITY OF THE SERIES 100 TERNARY CURRENT SWITCHES
09039	10-26-65		BLOCK II 3.2 KC/S POWER SUPPLY OPTIMIZATION REPORT
09586	11-09-65		PSA END CONNECTOR MATERIALS
09597	11-29-65		BLOCK I-G SIGNAL CONDITIONER PROBLEM
09841	12-10-65		FINAL REPORT ON APCLO BLOCK II PSA-CDU DESIGN
09918	12-15-65		SUMMARY OF VIBRATION TESTS RUN ON VARIOUS CONFIGURATIONS OF PSA RELAY MODULES
10010	12-20-65		LEM AND BLK II CM PSA ADAPTER MODULE DEF.
10104	12-27-65		BLOCK II 800 CPS - 1% SUPPLY OPTIMIZATION REPORT.
10105	12-27-65		OPTIMIZATION REPORT - BLOCK II 800 5% G/S POWER SUPPLY.
10116	12-27-65		SCS NOISE PICK-UP FROM TEMPERATURE CONTROLLER AMPLIFIER OUTPUT SIGNAL IN TRAY 7 - BLOCK I.
10283	01-06-66		COSECANT GENERATOR NOISE REQUIREMENT
10284	01-07-66		G&N 110 PORTING SEPARATION
10352	01-11-66		LEM & BLK II CM PSA ADAPTER MODULE DEFINITION
10376	01-12-66		OPTIMIZATION REPORTS - BLOCK II 800 C/S 170 POWER SUPPLY AND BLOCK 800 C/S PERCENT POWER SUPPLY
10501	01-27-66		ACCELERATION QUALIFICATION OF THE RELAY AND DIODE MODULE
11091	02-23-66		VIBRATION AND GROUND TEMPERATURE EXPOSURE OF TSS 110'S PSA
11137	02-25-66		QUALIFICATION FAILURE OF PSA MODULES
11235	03-03-66		+4 VDC COMPUTER FAIL TEST (ACE BIAS. 1)
11356	03-10-66		SELECTION OF OPERABLE TERNARY CURRENT SWITCH AT HIGH BUS LEVEL
11492	03-13-66		VIB & GROUND TEMP REQUIREMENT ON 110'S PSA (NEW)
11504	03-18-66		PSA/PEA CHANGES RESULTING FROM BLK II PIPA CURRENT MODULE RELEASE
11690	03-30-66		BINARY CURRENT SWITCH SHIFT PROBLEMS PIPA NULL
11903	04-13-66		BINARY CURRENT SWITCH, PIPA NULL SHIFT PROBLEMS
12083	04-25-66		ANTI-CREEP MECHANIZATIONS FOR BLOCK I & BLOCK II
12693	06-08-66		C/M PSA HEADERS, CASTINGS VERSUS WROUGHT
13161	07-21-66		SIGNAL CONDITIONER AND PSA ADAPTOR MODULE
13204	07-26-66		HISTORY OF BLK I/100 AGE HARNESS & END CONNECTOR AT FIELD SITES
13229	07-29-66		800CPS 1 PERCENT POWER SUPPLY MALFUNCTION
13609	07-28-66		RELAY CONTACT LOADS IN RELAY MODULE (BABCOCK)
13626	09-09-66		REPLACEMENT OF BABCOCK RELAYS FOR G&N 121

SUMMARY OF TECHNICAL REPORTS		
POWER SERVO ASSEMBLY (PSA) (GROUP 030)		
NUMBER	DATE	TITLE

AP-M-

14618	12-20-66	BLOCK II PSA FAILURE ANALYSIS FOR HUMIDITY PROBLEM
14740	01-06-67	MEASUREMENT OF THE ONE PERCENT AIRBORNE POWER SUPPLIES DURING GEN TESTING
15614	04-17-67	BLOCK II STAB APP
15706	04-25-67	ANALYSIS AND TEST SUMMARY OF PIP PREAMP 317 CAPACITOR PROBLEM PIPA ENGINEERING TEST STATION
15905	05-16-67	BLOCK II PULSE TORQUE POWER SUPPLY FAILURES
15923	05-19-67	BLOCK II, 5 % AMPLIFIER FAILURE INVESTIGATION
16104	06-08-67	REMOVAL OF ANTI-CREEP PROTECTION
16200	06-20-67	TEST PLAN FOR COMPARISON OF PRESENT PROPOSED PSA C/M GASKETS
17100	10-06-67	ANAL. OF TRANS. REVERSAL IN ERROR AMP. SCHMIT TRIGGER QUAD. REJ. CIRCUITS OF MSA MOD.
17232	10-19-67	POWER SERVO ASSEMBLY OPERATION WITHOUT COLDPLATE COOLANT FLOW
17265	10-20-67	APPARENT TOLERANCE DISCREPANCIES FOR +4 & +14 VOLT POWER SUPPLIES
17503	11-13-67	SYSTEM SCALE FACTORS FOR THE BLOCK II SIGNAL CONDITIONER ASSEMBLY
17772	12-15-67	PSA/M GAIN
17850	01-02-68	SUMMARY REPORT - MODULE DEBITTING
18111	02-06-68	VIB. TESTING OF A LEM PSA HEADER WITH CERTAIN TYPES OF MECHANICAL PIN FAILURES
18392	03-08-68	INVESTIGATION OF THE -28 V DC POWER SUPPLY FAILURE IN SYSTEM 210
18393	03-08-68	PSA S/N 17 VIBRATION FAILURE
18610	04-02-68	BINARY CURRENT SWITCH FAILURE GEN 212
18877	05-07-68	MIT DESIGN EVALUATION VIBRATION DATA ON LM-PSA
19406	07-19-68	POSSIBLE OVERSTRESS OF GYRO CALIB. MODULE IN PSA8
19425	07-23-68	SPECIAL VIBRATION TEST OF A BLOCK II PSA @ 4.56GRMS
19730	09-03-68	RELATIVE BOND STRENGTH OF VARIOUS ADHESIVES FOR MINIATURE WRAPOST CONTACT REPAIRS
21300	12-04-68	BLOCK II PSA/M PSD LOW GAIN (3200 HZ)
21311	12-05-68	POTENTIAL OVERSTRESS OF CM GEN DUE TO REVERSE BIAS ON THE PSA
21994	02-05-69	-28V DC FAIL INDICATIONS DURING GEN TESTING
22467	07-30-69	C/M PSA COLD PLATE MOUNTING INTERFERENCE EVALUATION
22652	09-22-69	

SUMMARY OF TECHNICAL REPORTS

CONTROL DISPLAY UNIT(CDU) (GROUP 040)	
NUMBER	DATE
TITLE	

AP-M-

00655	05-17-63	SELECTION OF APOLLO PSA, IMU & CDU LOAD COMP. MODULES
00698	05-31-63	OUTLINE OF TESTS, CDU D-TO-A CONVERTER (SCHEMATIC 1010041)
00703	06-03-63	OUTLINE OF TESTS, CDU MOTOR DRIVE AMPLIFIER SELECTOR CIRCUIT & FINE ALIGN RELAY (SCHEMATIC 1010035C)
00828	07-02-63	OUTLINE OF TESTS, CDU ZEROING & LOCK RELAYS (SCHEMATIC 1010054, GWO 980085)
00829	07-02-63	OUTLINE OF TESTS, CDU ZEROING TRANSFORMER, RELAYS & ENTRY RELAYS (SCHEMATIC 1010056, GWO 980085)
03886	07-12-63	OPTIMIZATION OF CDU SELECTOR CIRCUIT
31022	08-05-63	OUTLINE OF TESTS, IMU CDU LOAD COMPENSATION MODULE
01044	08-08-63	OPTIMIZATION, CDU ELECTRONICS
01110	08-19-63	PERFORMANCE REQUIREMENTS - OPTICS CDU SERVO
01211	09-06-63	OUTLINE OF TESTS FOR THE CDU FIXED RESOLUTION TRANSFORMATION & ENTRY MODE
01212	09-06-63	OUTLINE OF TESTS FOR THE CDU RESOLVER LOADS MODULE
01236	09-11-63	CDU ELECTRONICS OPTIMIZATION
01240	09-11-63	APOLLO LOAD & SIGNAL SIMULATOR BOX INFORMATION
01630	11-01-63	CDU MODULE PART SELECTIONS
02337	01-31-64	ACCURACY OF CDU MEASUREMENTS WHEN DETERMINING IRIG COEFFICIENTS
03325	05-15-64	CDU GEAR ASSEMBLY
03433	05-26-64	CDU GEAR FAILURE
03444	05-26-64	ANALYSIS OF CDU GEAR TRAIN FAILURES
03599	06-12-64	EVALUATION OF CDU ASSEMBLY
03898	07-17-64	CDU MOTOR JOB TEST FAILURE
04403	09-14-64	THE EFFECTS OF LOW SELECTED CIRCUIT SWITCHING LEVELS ON THE ACCURACY OF CDU'S IN THE FINE ALIGN MODE
04427	09-16-64	TEST RESULTS OF FORWARD-BACKWARD COUNTER ASSEMBLIES
04457	09-25-64	HUMIDITY TEST OF CDU ACSSK-25
04544	09-30-64	THE COARSE SYSTEM OF THE ELECTRONIC CDU (PAPER III)
04636	10-08-64	THE POWER SUPPLY AND COMMON CIRCUITS OF THE ELECTRONIC CDU
04718	10-15-64	FORWARD-BACKWARD COUNTER
04850	11-03-64	THE FINE SYSTEM OF THE ELECTRONIC COUPLING DATA UNIT
04927	11-13-64	THE FINE SYSTEM OF THE ELECTRONIC COUPLING DATA UNIT
05009	11-27-64	THE QUADRATURE REJECTION NETWORK OF THE ELECTRONIC COUPLING DATA UNIT
05041	12-01-64	THE DIGITAL TO ANALOG CONVERTER OF THE ELECTRONIC COUPLING DATA UNIT
05406	01-13-65	CDU ENVIRONMENTAL TESTING
05436	01-15-65	FAILURE EFFECTS ANALYSIS OF CDU INNER LOOP
05451	01-18-65	GIMBAL POSITION CONTROL COUNTER REPEAT OF GIMBAL ANGLE IN COARSE MODE SELECTED
05487	01-20-65	BLOCK II ECDU ANGULAR DISPLAY
05667	02-05-65	FCDU TESTING GENERATOR DISC OF RESOLVER STD. RESOLVER BRIDGES
05792	02-18-65	THE DIGITAL SYSTEM OF THE ELECTRONIC COUPLING DATA UNIT
05995	03-04-65	AMBIGUITY AND THE ELECTRONIC COUPLING DATA UNIT
06101	03-16-65	PRELIMINARY SIGNAL REQUIREMENTS FOR CDU VIBRATION/FLIGHT SHOCK
06517	04-20-65	BLOCK II CDU TESTING
06629	04-28-65	THE COARSE ALIGN LOOP USING THE ELECTRONIC COUPLING DATA UNIT
06652	01-27-65	PRELIMINARY INTERFACE LIST BETWEEN THE ANALOG AND DIGITAL SYSTEMS OF THE ELECTRONIC COUPLING DATA UNIT
06790	05-12-65	ERROR OF THE ELECTRONIC COUPLING DATA UNIT PRELIMINARY BLOCK II/LEM MODING FOR THE IMU AND PSA
06957	05-26-65	REPEATABILITY OF CDU ONE-SPEED RESOLVER ZEROING
07108	06-08-65	APPARENT CUTTER GIMBAL CDU FAILURE ON G&N SYSTEM 12/50
07125	06-09-65	CDU D/A CONVERTER AC RATE LIMITED OUTPUT

SUMMARY OF TECHNICAL REPORTS

CONTROL DISPLAY UNIT (CDU) (GROUP 040)

NUMBER	DATE	TITLE
AP-M-		
07235	06-16-65	INVESTIGATION OF APPARENT FAILURE OF J.C.G. CDU 16X RESOLVER SIGNAL IN THE MDA-SYSTEM 12/50
07361	06-28-65	BLOCK II COSECANT GENERATOR PROCUREMENT SPEC.
07370	06-28-65	G&N TEST PLAN AND PROCEDURES FOR ENGINEERING EVALUATION OF COUPLING DISPLAY UNIT (CDU)
07564	07-09-65	CURING TEMPERATURE FOR CDU MOISTURE PROOFING POTTING MATERIAL
07591	07-12-65	BREADBOARD CDU - LEARNER ISS TESTING RESULTS
07887	08-04-65	CDU FAILURE DETECTION CIRCUIT TESTING
08195	08-31-65	OPTICS CDU LOAD & SIG. SIM. CHANGES REQUIRED TO SUPP. VIBRATION TESTING
08216	09-01-65	ENG. EVALUATION TEST OF CDU
08239	09-03-65	ANALYSIS OF CDU COMMON-REPEATED MODULE INTERFACE SIGNALS
08405	09-17-65	THE EFFECT OF ENCODER NULL ON CDU 4 - PULSE ACCURACY
08567	09-28-65	HUMIDITY TEST OF CDU ASSEMBLY
08617	09-30-65	USE OF THE OPTICS CDU LOAD & SIGNAL SIMULATOR
08656	10-04-65	FINAL REPORT OF EVALUATION TEST ON COUPLING DISPLAY ASSEMBLY
08816	10-12-65	LEM CDU HEADER
08872	10-15-65	CORROSION PROTECTION FOR CDU AND CDU FRAME ASSEMBLY EXPRESSED
09065	10-28-65	ADDITIONAL MOISTURE PROOFING FOR TERMINAL BOARD ASSY
09126	11-01-65	INVESTIGATION OF QUALIFICATION TEST FAILURE OF CDU PANEL
09509	11-22-65	BLOCK II OPTICAL SUBSYSTEM-ECDU LOOP ANALYSIS
09515	11-22-65	BLOCK II OPTICAL SUBSYSTEM - ECDU LOOP ANALYSIS
09841	12-10-65	FINAL REPORT ON APCLD BLOCK II PSA-CDU DESIGN
10154	12-29-65	CDU IX RESOLVER INPUT VOLTAGE REQUIREMENT
10399	01-13-66	CDU BACKLASH EFFECTS ON ATTITUDE HOLD AND THRUST VECTOR CONTROL
10631	01-27-66	CDU TV FAILURES AND RELATED CORRECTIVE ACTION
10686	02-01-66	ECDU PARTIAL PROTOTYPE SUBSYSTEM TEST PHILOSOPHY
10729	02-03-66	VIBRATION AND FLIGHT SHOCK QUALIFICATION OF THE ISS CDU'S AND CASE AND PANEL ASSEMBLY
10743	02-03-66	BLOCK I CDU ENCODER PULSE CENTERING
11768	04-03-66	ENGINEERING ENVIRONMENTAL EVALUATION OF CDU'S
11918	04-14-66	ENVIRONMENTAL EVALUATION OF COUPLING DISPLAY UNITS (CDU)
12589	05-31-66	DIFFERENCES BETWEEN LEM AND CM ECDU'S
12637	06-01-66	INERTIAL CDU MOTOR - TACH BEARING LUBRICANT TEST #20-P-243
12843	06-16-66	QUALIFICATION TESTING OF CDU IX RESOLVER
12955	06-28-66	LIGHTWEIGHT POTTING OF CDU IX RESOLVER
13064	07-12-66	USE OF TURBO WRAP WIRE IN ECDU AND AGC HEADERS
13458	08-23-66	CONNECTOR MATING PROBLEM CDU
13702	09-13-66	RELAY CONTACT LCADS IN CDU RESOLVER LOAD MODULES
13727	09-23-66	ANALYSIS OF STRESS OF TRANSFORMER IN CDU RESOLVER ASSEMBLY
14059	10-24-66	ADDITIONAL DISCUSSION ON WIRE INSULATION USED IN ECDU HEADERS
14257	11-17-66	PERFORM DIFF BETWEEN CDU'S CONTAIN SOLVERE MTRS & CDU'S CONTAINKEARFOTT MOTORS IN BLK 1-100 OPTIC SUBSYTM
14606	12-19-66	ECDU FAILURE ANALYSIS AND CORRECTIVE ACTION
14822	01-16-67	CDU DAMPER PLATE CONFORMANCE TO VARYING MODULE HEIGHTS
15314	03-09-67	ECDU COARSE SYSTEM ELECTRONICS TESTED 2007236 FOR FRACTURES OF CORNING GLASS RESISTORS, 1006750
15441	03-23-67	VIBRATION LEVELS FOR TESTING ECDU WITH DAMPER PLATE
16008	05-29-67	G&N 603 S/N 12 ECDU DISCREPANCY AT GAEC
16238	06-23-67	1010317-4 CAPACITOR FAILURES IN THE MSA AND QUAL REJECT MODULES 2007238 IN THE ECU
16286	06-29-67	DISCREPANCY REPORT 17935 CN CDU P/N 2007222, S/N 15

CONTROL DISPLAY UNIT (CDU) (GROUP 040)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE		TITLE

AP-M-

16357	07-07-67	ERROR ANGLE COUNTER S/N 172	
17052	09-09-67	EFFECT OF INSUL. BREAK ON RSA ECDU TRANS. HEAT SINKING	
17088	10-14-67	INSTALLATION OF 1010957-CC8 INSERTS IN TRAY X OF ECDU	
17133	10-13-67	EFFECT OF ECDU SWITCHING TRANSIENTS	
17329	10-26-67	NOTES ON THE BLCK II ECDU	
17359	10-30-67	A) ECDU MODULES SUBJECTED TO UNSTRAINED BAKING	
17387	11-01-67	PART FAILURE REVIEW, ECDU MSA MODULES, UNCONTROLLED GROUP	
18216	02-16-68	CHANGES IN HEAT TRANSFER DUE TO .050 REDUCTION IN RIB THICKNESS OF THE CDU X TRAY,	
18298	02-27-68	ECDU NOISE SUSCEPTIBILITY PROBLEM	
18350	03-05-68	VIBRATION OF BLK-II LM CDU ASSY.	
18424	03-13-68	SUMMARY: ECDU NOISE SUSCEPTIBILITY	
18515	03-25-68	ECDU NOISE DETECTORS	
18774	04-23-68	ECDU WIRING CHANGES	
18849	05-02-68	ECDU S/N 21, (SYS 207) HISTORY WHILE UTILIZED IN APOLLO ENG. LAB	
18922	05-14-68	DEPOTTING OF ECDU ASSY. TRAYS FOR INSTALLATION OF NOISE SUPPRESSION MODIFICATION	
19059	05-31-68	POTENTIAL OVERSTRESS OF ECDU	
19098	06-06-68	POTENTIAL OVERSTRESS OF ECDU 39	
19336	06-27-68	ECDU WIRING CHANGES	
19376	07-16-68	MODIFICATION OF ECDU TO REDUCE NOISE SUSCEPTIBILITY	
19386	07-17-68	MODIFICATION OF ECDU TO REDUCE NOISE SUSCEPTIBILITY	
19772	09-12-68	POTENTIAL OF AN ECDU 4V DC POWER SUPPLY OUTPUT FLUCTUATIONS BEYOND 200 M VPP	
19817	09-18-68	SCREENING OF RAYTHEON ECDU MODULES FOR FLATPACK CONTAMINATION	
21313	12-05-68	ECDU -11/ 1/4 DEG. OFFSET PHENOMENA: NOISE SUSCEPTIBILITY	
21411	12-20-68	INVESTIGATION OF LM ECDU VIBRATION PROBLEM	
21755	03-05-69	ERASABLE CDU LEAST-SQUARES FIT PROGRAM	
21846	03-26-69	ECDU MOUNTING BELTS	
21999	04-29-69	ECDU SUSCEPTIBILITY TO GROUND NOISE TRANSIENT VOLTAGE	
22026	05-02-69	CM CDU MOUNTING HARDWARE	
22218	06-05-69	GSE NULL OFFSET DUE TO REDUCED HFE OF Q-2	
22734	10-05-69	ECDU THERMAL CHARACTERISTICS EVALUATION	
22832	11-06-69	ECDU S/N 32 FAILURE ANALYSIS WITH RESPECT TO LM-6 COARSE ALIGN PROBLEM	

DISPLAYS AND CONTROLS (D & C) (GROUP 050)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE		TITLE

AP-M-

00214	11-23-62	REPORT OF TEST ON DEMODULATOR ATTITUDE ERROR METER (REV.)	
00513	04-03-63	TRANSMITTAL OF REPORT ON PANEL IMU CONTROL STRENGTH ANALYSIS	
00589	04-03-63	OPTIMIZATION OF 40 SEC. DELAY CIRCUIT	
01606	05-02-63	ENGINEERING REPORT OPTIMIZATION OF 40 SECOND TIME DELAY CIRCUIT	
00754	06-11-63	DESIGN REVIEW ON APCLLD IMU CONTROL PANEL WIRING HARNESS "A"	
00791	06-21-63	LETTER OF TRANSMITTAL G & N INDICATOR CONTROL PANEL	
01096	08-16-63	OUTLINE OF TESTS, LAMPS, BACKUP MODE ASSEMBLY	
01173	08-30-63	TEST REPORT FOR DIMENSIONAL CHANGES OF ALUMINUM	
01439	10-09-63	FINAL REPORT D & C PANEL (INC. 2)	
01440	10-07-63	PROTOTYPE D & C PANEL, VIBRATION AND PUL. TESTS	
01677	11-07-63	D & C HARDWARE GROUP TEST PLAN	
01835	12-02-63	PROTECTIVE GREY FINISH FOR APCLLD G & N PANELS	
02154	01-09-64	D & C ENVIRONMENTAL TEST	
02215	01-16-64	D & C VIBRATION PROBLEM SUMMARY	
02222	01-21-64	DESIGN ANALYSIS OF 40 SECOND TIME DELAY CIRCUIT	
02232	01-17-64	PEEL TEST OF HCNEYCCMB SAMPLE	
02252	01-21-64	INSULATION RESISTANCE FAILURE	
02302	01-29-64	STRENGTH ANALYSIS OF OPTICS SHROUD; SHROUD COVER	
02408	02-07-64	VIBRATION TEST FAILURE	
02494	02-18-64	POST-VIBRATION VISUAL INSPECTION	
02520	02-23-64	RELAY AND DIODE MODULE AND CONNECTOR	
02579	02-23-64	ATTITUDE ERROR DEMODULATOR ANALYSIS	
02588	03-02-64	APOLLO STATUS REVIEW MEETING CN 6 MARCH 1964	
02727	03-16-64	VIBRATION TEST OF THE AGE ELECTRONICS	
02740	03-19-64	ATTITUDE IMPULSE SWITCH ACTIVATOR SHAFT STRENGTH ANALYSIS REPORT	
02758	03-13-64	FURTHER COMMENTS ON FAILURE INDICATOR	
02793	03-23-64	D&C ELECTRONICS AND IMU PANEL ACoustICAL FAILURES	
02874	03-31-64	REMGTE TEMPERATURE ALARM CAPABILITIES	
02921	04-06-64	RELAY & DIODE MODULE P/N 10C7035 ANALYSIS REPORT	
02936	04-03-64	TEST RESULTS OF NICKEL PLATED MAGNESIUM	
02976	04-09-64	G&N INDICATOR CONTROL PANEL SWITCH PROBLEMS	
02977	04-09-64	ADDITUE ERROR DEMODULATOR HOUSING	
03012	04-14-64	D&C AIRBORNE SWITCH ASSEMBLY FAILURE	
03062	04-27-64	RESULTS OF DESIGN REVIEW CN D&C CONTROL ELECTRONICS	
03155	04-29-64	IMU CONTROL PANEL REPORT	
03184	05-05-64	MAGNETIC AMPLIFIER ILLUMINATION CONTROL	
03714	06-25-64	SWITCH DEVELOPMENT FOR D&C EQUIPMENT	
03976	07-26-64	PANEL LIGHTING (ARRANGE CONFIGURATION)	
04044	03-05-64	SWITCH CONTACT RESISTANCE, ZERO AND GAIN BUTTONS G&N PANEL	
04046	08-05-64	EFFECT OF GSE CABLING ON HAND CONTROLLER QUADRATURE MEASUREMENT	
04195	08-23-64	VIBRATION EVALUATION OF IMU CONTROL PANEL ASSEMBLY P/N 1014526	
04224	08-23-64	TRANSMITTAL OF A D & C ELECTRONIC WEIGHT ANALYSIS	
04258	08-27-64	TD A-119 D&C PANEL SWITCH CONTACT RESISTANCE STUDY	
04633	10-08-64	DETAILED DESCRIPTION OF MINIATURIZED SEXTANT HAND CONTROLLER	
04747	10-22-64	VIBRATION TEST TO DETERMINE OPERATIONAL EFFECT OF IMU PANEL SWITCH CHATTER	

DISPLAYS AND CONTROLS (D & C) (GROUP 050)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE		TITLE

AP-M-

04874	11-05-64	LOOSE THREADED INSERTS FOUND DURING POST VIBRATION VISUAL-MECHANICAL INSPECTION
05811	02-19-65	D&C ENVIRONMENTAL TEST STATUS
05954	03-03-65	D&C ENVIRONMENTAL TEST STATUS
06002	03-05-65	VIBRATION EVALUATION OF A SPECIAL IMU CONTROL PANEL ASSEMBLY WITH POTTED-IN-PANEL MOUNTING INSERTS
07111	06-08-65	D&C ENGINEERING ENVIRONMENTAL TEST
07369	06-28-65	GUIDANCE AND NAVIGATION SYSTEM MOISTURE SEALING OF D & C EQUIPMENT, TEST REPORT
08229	09-02-65	STRENGTH ANALYSIS OF G&N INDICATOR CONTROL PANEL
08490	09-23-65	D&C ENGINEERING ENVIRONMENTAL TEST
09142	11-02-65	ATTITUDE IMPULSE SWITCH ASSEMBLY CHANGES TO REPLACE ROLL PINS WITH A SOLID PIN
09493	11-19-65	RESULTS OF INVESTIGATION OF SWITCH ACTUATING CAM SLIPPAGE
09580	11-26-65	RLOCK II HAND CONTROLLER OPERATE MODE
09614	11-30-65	RETICLE LIGHT DIMMER ASSEMBLY ACCEPTANCE TEST REQUIREMENTS
09769	12-07-65	MEASUREMENT OF GROUNDING PIN RESISTANCE
09972	12-16-65	ATTITUDE IMPULSE SWITCH PIN BREAKAGE TORQUE
10402	01-13-66	REQUALIFICATION OF ISS 110 D&C ELECTRONICS
11100	02-24-66	D&C ENGINEERING ENVIRONMENTAL EVALUATION STATUS
11568	03-23-66	D&C ENGINEERING ENVIRONMENTAL EVALUATION STATUS
12459	05-20-66	D&C ENGINEERING ENVIRONMENTAL TESTING
18247	02-21-68	MODIFICATIONS OF THE OPTICS CONTROLLER COUPLING SWITCH & ALTITUDE IMPLUSE CONTROLLER SWITCH
21325	12-06-68	CRITERIA ON REPLACEABLE GNIC PANELS
21680	02-19-69	VIBRATION AND EARTH LANDING SHOCK EVALUATION TESTS OF GNIC MODIFIED WITH REMOVABLE OVERLAY
21926	04-10-69	REMOVAL OF THE VERB/NOUN LIST PLACARD FROM THE GNIC PANEL ON APOLLO 9 FLIGHT
21956	04-17-69	POST FLIGHT ANALYSIS OF GNIC PANEL REPLACEABLE OVERLAYS (APOLLO 9)

SUMMARY OF TECHNICAL REPORTS

GROUND SUPPORT EQUIPMENT (GSE) (GROUP 060)

NUMBER	DATE	TITLE
AP-B-00107	11-19-62	Definition of GSE Breadboard Consigned to MIT for IUA Testing
00108	11-19-62	GSE Design
00184	01-09-63	Proposed Optics Subsystem Test Area Configuration and Requirements
00333	04-10-63	Report on IMU Transportation Cart
00390	05-08-63	Recorder Preamplifier Selection Scheme for Optical Inertial Analyzer

SUMMARY OF TECHNICAL REPORTS

GROUND SUPPORT EQUIPMENT (GSE) (GROUP 060)

NUMBER	DATE	TITLE
00123	09-19-62	INVESTIGATION OF INTERNATIONAL MACHINE AND TOOL CORP. ROTATING TABLE (IMTCU) MODEL #1678 SIZE 6
00134	10-01-62	CONSOLE AND MECHANICAL DESIGN CRITERIA
00149	10-10-62	SHEFFIELD "ACCUSTRON" ELECTRONIC INDICATOR LINEARITY AND INSTRUMENTATION ERROR TEST
00193	11-15-62	GENERAL DESIGN SPECIFICATION FOR GSE
00196	11-15-62	POWER RECEPTACLES, STANDARD FOR
00216	11-29-62	PROPOSED PROGRAM TO ALLOW THE DETERMINATION OF THE FLOOR AND PAD STABILITY IN VIBRATION LEVEL ENCOUNTERED
00270	01-03-63	COMMON CONNECTIONS IN COMMERCIAL PROTOTYPE EQUIPMENT
00272	01-04-63	CHASSIS SLIDES
00273	01-07-63	TEST REQUIREMENTS FOR GSE
00274	01-07-63	DIFFERENCE BETWEEN FIRST BREADBOARD AND ANTICIPATED PROTOTYPE COMMERCIAL TEST EQUIPMENT
00278	01-09-63	PORTABLE TEMPERATURE CONTROLLER UTILIZATION SURVEY & REQUIREMENTS REPORT
00283	01-10-63	APOLLO INSERT- OPTICS MOUNTING GUIDE
00292	01-14-63	REPORT OF LITERATURE RESEARCH OF COMMERCIAL EQUIPMENT
00320	01-25-63	PULSE DETERIORATION AT THE GSE CONSOLE
00344	02-05-63	ALIGNMENT OF THE IMU FIXTURE ROTARY TABLE
00348	02-05-63	ALIGNMENT OF THE IMU FIXTURE TO THE ROTARY TABLE
00373	02-18-63	IMU SHIPPING CONTAINER - ADAPTATION OF POLARIS CONTAINER
00381	02-26-63	IMU SHIPPING CONTAINER - ADAPTATION OF POLARIS CONTAINERS
00389	02-27-63	PIPA TEST CONSOLE CABLES
00390	02-27-63	IMU SHIPPING CONTAINER - ADAPTATION OF POLARIS CONTAINERS
00391	02-28-63	APOLLO ROTARY TURNABLE REQUIREMENTS
00446	03-18-63	CHASSIS HANDLES FOR APOLLO GSE
00451	03-20-63	CHASSIS RECEPTABLE DESIGNATION & DESIGNATION LOCATION
00461	03-22-63	STANDARD PARTS SELECTION FOR APOLLO GSE
00504	04-04-63	GSE SIGNAL SWITCHING SCHEME
00505	04-15-63	DESIGN ANALYSIS IMU FIXTURE PAD ALIGNMENT MONITOR
00518	04-10-63	INERTIAL COMPONENT TEMPERATURE CONTROLLER
00524	04-12-63	OPERATIONS AND TESTS, PIPA CALIBRATION ASSEMBLY
00534	04-12-63	IVA SIGNAL & DISTRIBUTION LIST
00535	04-12-63	DISCUSSION OF REQUIREMENTS FOR AN ELECTRONIC COUNTER FOR GSE
00548	04-18-63	MAXIMUM CABLE ESTIMATES
00552	04-18-63	BACK PANEL BRACKET MOUNTING HOLE
00612	05-07-63	PULSE TORQUE CALIBRATE ASSEMBLY (1007021)
00631	05-10-63	PIPA TEST CONSOLE
00683	05-27-63	ASSIGNMENT OF SYMBOL NUMBERS FOR CONNECTORS USED IN OPTICS & INERTIAL ANALYZER CONSOLE
00702	06-03-63	OUTLINE OF TESTS, ENCODER ELECTRONICS (SCHEMATIC 10100348)
00714	06-03-63	OUTLINE OF TESTS, TEMPERATURE CONTROLLER POWER SUPPLY (1007045)
00744	06-10-63	PERFORMANCE REQUIREMENTS FOR APOLLO GSE CIRCUIT DESIGN
00746	06-11-63	GSE THERMAL MOUNTING REQUIREMENTS
00748	06-11-63	IMU FIXTURE ALIGNMENT BAR
00756	06-11-63	PORTABLE INERTIAL COMPONENT TEMP. CONTROLLER
00778	06-18-63	GSE MECHANIZATION CHANGES
00781	06-18-63	PROPORTIONAL TEMP. CONTROL BRIDGE SENSITORY
00810	06-27-63	IMU FIXTURE ALIGNMENT BAR
00811	06-28-63	RECORDER AND CROSSBAR SIGNAL SELECT INFORMATION

AP-M-

SUMMARY OF TECHNICAL REPORTS	
GROUND SUPPORT EQUIPMENT (GSE) (GROUP 060)	
NUMBER	DATE
TITLE	

AP-M-

03834	07-02-63	IMU FIXTURE ALIGNMENT BAR	
03845	07-03-63	GSE PANEL CONFIGURATION	
03846	07-03-63	6V 400 CPS POWER SUPPLY REQUIREMENTS FOR GSF	
03877	07-12-63	PORTABLE TEMPERATURE CONTROLLER	
03893	07-13-63	DATA REQUIRED FOR GSE J-BOX DESIGN	
00951	07-24-63	GSE 6V 400 CPS POWER SUPPLY	
03960	07-26-63	3200 CPS SWITCH-OVER TIME TO GSE BACKUP SUPPLY	
07282	07-30-63	OPTIC INERTIAL ANALYZER (OIA) MECHANIZATION REVIEW	
07992	07-31-63	PORTABLE TEMPERATURE CONTROLLER	
00993	07-30-63	APOLLO GSE TEMPERATURE MONITOR & CONTROL	
01001	08-01-63	PSE PANEL CONFIGURATION	
01052	08-12-63	COMPARISON BETWEEN AUTOCOLLIMATOR AND AUTOCOLLIMATING THEODOLITE.	
01070	08-14-63	COOLANT SUPPLY - CABINET INTERFACE	
01071	08-14-63	GSE DUMMY LOADS	
01074	08-14-63	COMPUTER SIMULATOR INTERCONNECT WITH THE A/B PSA.	
01116	09-22-63	OSCILLOSCOPE ISOLATION TRANSFORMER	
01129	08-26-63	OITS TEST REQUIREMENTS AND TESTER DEFINITION	
01155	08-29-63	MAGNETIC AMPLIFIER TEST REQUIREMENTS	
01215	09-09-63	DESIGN INFORMATION REQUIRED FOR THE BATTERY POWER PACK	
01216	09-09-63	COMPUTER SIMULATOR & OIA CONSOL. INTERFACE	
01228	09-17-63	INFORMATION REQUIRED FOR G & N GSE HARNESS DESIGN	
01349	09-26-63	OPTICAL TARGET ORIENTATIONS FOR AGE TESTING	
01364	10-03-63	LIMITS FOR ROTARY TABLE STORAGE & TEST TEMP. CONDITIONS	
01383	10-01-63	EQUIPMENT REQUIREMENTS FOR SELECTION OF IMU HEATER CONTROL RESISTORS	
01426	10-08-63	SPECIFICATIONS OF AUXILIARY GROUND SUPPORT EQUIPMENT	
01429	10-08-63	DCU PROTECTIVE PADS	
01494	10-17-63	FURTHER DISCUSSION ON SELECTION OF IMU HEATER CONTROL RESISTORS	
01528	10-22-63	COOLANT FOR THE APOLLO GSE COOLANT SUPPLY	
01773	01-13-63	OIA HARNESSES BASELINE	
01889	12-04-63	GSE BREADBOARD #4 CHECKOUT GROUND RULES	
01907	12-05-63	PSA TEST POINT ADAPTER	
01510	12-09-63	BB 2 G & N FIXTURE COLDOPLATES	
02115	11-27-64	G & N FIXTURE INSTALLATION & ALIGNMENT	
02269	01-21-64	ADAPTERS FOR CALIBRATION OF GSE COMMERCIAL EQUIPMENT DRAWER	
02269	01-22-64	APOLLO TEST STATION OPTICS PEDESTAL	
07431	02-11-64	TRAY EXTENDER SETS	
02489	02-17-64	MECHANICAL INTERFERENCE CONDITICNED AT UNIVERSAL TEST STATIONS	
02498	02-19-64	PROVISIONS FOR REMOTE TEMPERATURE ALARM INDICATOR	
02511	02-19-64	EVALUATION OF STABILITY TEST FIXTURE	
02516	02-19-64	ENG REP PROTOTYPE CONTAINER IMU REVISABLE SHIPPING CONTAINER	
02625	03-10-64	GSE TRANSPORTATION CART	
02745	03-11-64	CALIBRATION OF CURRENT SOURCE MONITOR	
02747	03-23-64	SUGGESTED CABLE SUSPENSION FOR ISS AND UNIVERSAL TEST STATIONS	
02820	03-30-64	TEMPERATURE ANALYSIS OF GSE X-RAY CONSOLE	

SUMMARY OF TECHNICAL REPORTS

GROUND SUPPORT EQUIPMENT (GSE) (GROUP 060)

NUMBER	DATE	TITLE
AP-M-		
02891	04 J2-64	LENGTH OF 1020114" CABLE ASSEMBLY
02895	04-02-64	MUCH INTERFERENCE CONDITIONS AT UNIVERSAL TEST STATIONS
02956	04-10-64	MODIFICATIONS TO GSN MOUNTING FIXTURE
02957	04-10-64	GEN TRANSPORT CART
02981	04-06-64	RESULTS OF TEST ON ICIC OPERATION
02982	04-11-64	APOLLO COOLANT SUPPLY (P-5) WITH NEW THERMAL SWITCH
02983	04-14-64	OPERATING TEMPERATURE CHARACTERISTICS OF THE SINGLE BAY CONSOLE
02984	04-16-64	ISOLATION OF GSE CONSOLES AND D/C PANEL FIXTURE
02985	04-10-64	ALIGNMENT AND LEVELING OF ULTRA-PRECISION ROTARY CABLE
03042	04-24-64	APOLLO COLLANT SUPPLY QUALIFICATION TEST REPORT
03048	04 17-64	COMMENTS REGARDING OPTICS/NAV BASE : CLING CONTAINER INTERFACE WITH GEN TRANSPORTATION CART
03120	04-23-64	IMU COOLANT SUPPLY PCSE
03161	04-29-64	COOLANT SUPPLY TEST REPORT
3172	04-30-64	ROTARY TABLE CALIBRATION
3812	07-08-64	PROCEDURE FOR VERIFICATION OF ROTARY TABLE FLATNESS REQUIREMENT
34128	08-14-64	BLOCK II TEMPERATURE MONITOR AND CONTROL
04206	08-24-64	GSE COLDPLATE ADAPTER
04274	08-28-64	COOLANT INVESTIGATION
04509	09-23-64	COOLANT SUPPLY FILTER CONTAMINATION TEST
05146	12-10-64	FUTURE USE OF STEEL IN DRAWER DESIGN
05147	12-11-64	GROUND STRAPS AND POWER CABLES, MIT/IL MEMO AG 1202-64
05256	12-23-64	FLOOR STABILITY REQUIREMENTS FOR APOLLO FIELD SITES
05616	02-02-65	ACSP INSPECTION OF "MASTER STAND"
05624	02-02-65	SERIES 50 GSE COMPATIBILITY
05706	02-10-65	APOLLO GSE CONFIGURATION PHILOSOPHY
05755	02-16-65	FEATURE DIFFERENCES OF THE EI 850, AUTO DATA 2640 AND DANA DVM'S WITH THEIR RESPECTIVE AC CONNECTIONS
05757	02-16-65	GSE HANDLING, INSTALLATION, ALIGNMENT, AND CHECKOUT INSTRUCTIONS
05766	02-17-65	APOLLO GSE CONFIGURATION PHILOSOPHY
05777	02-17-65	SELECTION OF DVM FOR BLOCK II GSE EQUIPMENT
05906	03-01-65	GSE/PSA JUNCTION BOX SERIES "100"
05990	03-04-65	GSE PSA TOE CAP P/N 1900874 DEFLECTION INVESTIGATION
06008	03-05-65	ALTERATIONS TO THE PURGE/FILL FIXTURE
06047	03-10-65	OVERVOLTAGE PROTECTION FOR GSE RELAY AND LAMP POWER SUPPLY
06129	03-17-65	PRELIMINARY DESIGN MEMO FOR BLOCK II GSE
06139	03-18-65	OVERVOLTAGE PROTECTION FOR GROUND SUPPORT EQUIPMENT RELAY & LAMP POWER SUPPLY
06196	03-22-65	GSE MODIFICATIONS REQUIRED TO SUPPORT A SIMULTANEOUS ISS/OSS ENVIRONMENTAL TEST
06286	03-30-65	ICIC REQUIREMENTS FOR FIELD USE
06352	04-02-65	OPERATIONAL CAPABILITIES OF THE OPTICS CDU LOAD AND SIGNAL SIMULATOR SERIES 100
06390	04-06-65	RECOMMENDATION OF POP PRISM FOR FIELD SITE GEN LABORATORY AZIMUTH REFERENCE
06518	04-20-65	BLOCK II OPTICS/NAV ICN BASE FIXTURE DESIGN CRITERIA
06547	04-21-65	MECHANICAL INTERFERENCE OF THE STAR AND HORIZON SIMULATOR AND SERIES 100 CONFIGURATION GEN FIXTURE CABLES
06633	04-28-65	LEM GSE CONFIGURATION
06634	04-28-65	DESIGN OF PORRO PRISM
06643	04-30-65	REQUIREMENT FOR ADDITIONAL REFLECTIVE SURFACE IN ALIGNMENT TOOL
06705	05-06-65	DESIGN OF PORRO PRISM

SUMMARY OF TECHNICAL REPORTS

GROUND SUPPORT EQUIPMENT (GSE) (GROUP 060)

NUMBER	DATE	TITLE
AP-M-		
06789	05-12-65	GSE PIPA FAIL INDICATOR MONITOR PROBLEM
06835	05-14-65	DUMMY LOAD REQUIREMENTS FOR GSE DESIGN
06852	05-17-65	ITC BATTERY POWER PACK REMOTE ALARM PROVISIONS
06861	05-13-65	AUTOMATIC RESET FOR PORTABLE TEMPERATURE CONTROLLER
06873	05-13-65	REQUIREMENTS FOR ADDITIONAL REFLECTIVE SURFACE ON ALIGNMENT TOOL
07158	06-11-65	ADAPTER PLATE TO GEN FIXTURE INTERFACE
07234	06-16-65	GROUNDING ARRANGEMENT FOR AGC OPERATION CONSOLE
07309	06-23-65	REQUIREMENTS ANALYSIS OF TOTAL PROGRAM REQUIREMENTS FOR IMU SHIPPING CONTAINER, INERTIAL COMPONENT
07313	06-23-65	USE OF LUBRICANT CIL ON THE CDU VIBRATION TEST FIXTURE
07458	07-02-65	CERT OF COMPATIBILITY & FIT OF GEN FIX STAND, STAR & HDR SIM & STAR HDR CERT FIXTURE ON GEN
07483	07-03-65	PTC AND LTC CABLES - DEFINITION OF
07502	07-07-65	ANNUNCIATOR PANEL BLOCK BY SERIES 100
07593	07-13-65	JUSTIFICATION FOR THE PRECISION SURFACE PLATE AND STAND #3047 (COMM. TEST EQUIPMENT)
07586	07-17-65	GSE DISTRIBUTION BOX (GSE) LOGIC MECHANIZATION DRAWING
07695	07-20-65	INSTALLATION AND CHECKOUT OF THE OPTICS GSE
07741	07-23-65	115V 6C POWER REQUIREMENTS FOR THE CIA WITH A BLOCK I SERIES 100 ISS
07781	07-28-65	GSE CABLE PIN LIST FOR LEM AND BLOCK II
07787	07-28-65	R&I TESTING REQUIREMENTS FOR THE FIRST ARTICLE OF GSE AND EP/GSE DELIVERED BY KIC
07798	07-29-65	USE OF COMMERCIAL TEST EQUIPMENT IN SIGNAL CONDITIONING MODULE, PSA ADAPTER MODULE CALIBRATION UNIT & SPCU
07834	08-02-65	PTA/PEA MOUNTING FIXTURE
07994	08-13-65	LIFTING TEMPERATURE CONTROLLER (LTC) REQUIREMENTS
08014	08-15-65	DECADE ERROR BRIDGE
08157	08-27-65	CALIBRATION OF THE OPTICS SERIES 100 STAR HORIZON SIMULATOR
08160	08-27-65	GSE DEFICIENCIES AND PROBLEM AREAS
08215	09-01-65	COMPUTER PCI AND PC 2 CONFIG. INCLUDING DUST COVERS FOR TALL HEADERS
08396	09-17-65	GEN HARNESS FOLDING FIXTURE
08505	09-24-65	FIELD CALIBRATION OF ANA AZIMUTH LINE OF SIGHT USING QUARTZ BAR & CUBE
08782	10-11-65	OVERWEIGHT REPORT, ACT TESTER
08834	10-13-65	USE OF THE OPTICS CDU LOAD AND SIGNAL SIMULATOR TO SUPPORT VIBRATION TESTING OF OPTICS PSA
08931	10-13-65	OPTICS GSE MECHANIZATION
09004	10-20-65	GROUNDING A/B EQUIPMENT DURING GSE TESTING
09005	10-25-65	GROUNDING A/B EQUIPMENT DURING GSE TESTING
09042	10-26-65	STAR & HORIZON SIMULATOR
09043	10-26-65	GEN AUXILIARY GSE REQUIRED FOR SPACECRAFT INSTALLATION
09072	10-28-65	REPAIR OF CABLE #1 S/N 9 AND POWER SWITCH MODULE TESTING S/N9
09367	11-15-65	IMU LIFE" AND HANDLING FIXTURE
09444	11-17-65	MERCURY POOL STUDY - FINAL REPORT
09748	12-07-65	FAILURE OF FREQUENCY STANCARD IN OPTICS CDU LOAD AND SIG. SIM.
09790	12-09-65	BUCKET 11/LEM LOAD AND SIGNAL SIMULATOR SET
10130	12-29-65	CALIBRATION OF APCDD DIGITAL VOLTMETERS
10281	01-09-66	SHOCK RECORDERS - SHIPPING CONTAINERS.
10334	01-10-66	AGC & DSKY SHIPPING CONTAINERS
10447	01-17-66	PRE-INSTALLATION AND POST-INSTALLATION TESTING OF THE GEN AND SUBSYSTEMS WITH THE CABLE BREAK-OUT ADAPTER
10464	01-18-66	FINAL REPORT (LA 65211) LEM ACT TESTER AIR ANALYSIS 12-20-65
		MAINTAINABILITY PREDICTION REPORT SHAFT ACCURACY TESTER.

SUMMARY OF TECHNICAL REPORTS		
GROUND SUPPORT EQUIPMENT (GSE) (GROUP 060)		
NUMBER	DATE	TITLE

AP-M-

10524	01-23-66	ACCEPT. & FIRST ARTICLE TEST OF THE ALIGNMENT OPTICAL TELESCOPE YESTER
10531	01-20-66	GSE QUALITY SYSTEM REQUIREMENTS
10535	01-21-66	THE RETROFIT OF P-6 GSE FROM BLK I SERIES 0 CONFIGURATION TO BLOCK II CONFIGURATION
10540	01-21-66	NEW & MODIFIED SPECIAL TEST EQUIPMENT REQUIREMENT FOR CHECKOUT OF APOLLO BLK II/LEM EQUIPMENT
10557	01-24-66	KIC TEST REPORT LEM EGT SHIPPING CONTAINER
10559	01-24-66	FIRST ARTICLE TEST (FAT) OF HAC & GSE
10680	01-31-66	GSE VALEDATION PLAN FOR KSC
10683	01-31-66	TEMPERATURE TESTS ON PTC
10752	02-04-66	TEMPERATURE TESTS ON PORTABLE TEMPERATURE CONTROLLER (PTC) IN IGNITION - PROOF BOX
10761	02-05-66	ACCEPTANCE AND FIRST ARTICLE TEST OF THE ALIGNMENT OPTICAL TELESCOPE TESTER
10916	02-14-66	APOLLO FIELD FABRICATOR ADAPTERS
10968	02-15-66	GSE CHANGES TO ACCOMMODATE REVISED LEM MAXIMUM BUSS VOLTAGE TESTS
10970	02-15-66	DIGITAL VOLTMETER MODIFICATION
11019	02-18-66	SPECIAL TEST FIXTURES FOR LORS DESIGN EVALUATION
11068	02-22-66	FIRST ARTICLE TEST REQUIREMENTS FOR RAYTHEON GSE
11069	02-22-66	LORS COLDPLATES, AC DESIGN
11141	02-25-66	KIT II CHANGE ANALYSIS
11170	03-01-66	GIMBAL POSITIONER CONTROL REPEAT CAPABILITY AND ASSOCIATED MIT/IL PROBLEMS
11203	03-02-66	PIPA TEST CONSOLE MODIFICATION
11396	03-14-66	PIPA TEST CONSOLE COOLING
11407	03-14-66	NEW & MODIFIED SPECIAL TEST EQUIPMENT REQUIREMENTS FOR CHECKOUT OF APOLLO BLK II LEM EQUIPMENT
11607	03-25-66	CABLE BREAKOUT ADAPTER SET-USE OF
11696	03-31-66	PRECISION TEST FIXTURE-TRUNNION MIRROR ASSY
11698	03-31-66	LORS/GSE ACCEPT TEST OF EM-2
11774	04-05-66	ROTARY TABLES, S/M'S 1-11
11811	04-06-66	AC ELECTRONICS POSITION PURGE VALVE ADAPTER
12037	04-23-66	USE OF THE IMU PRESSURE SEAL TESTER (IMU PST) FOR LEAK TESTING THE LORS BEACON
12088	04-26-66	EMERGENCY POWER SWITCH-OVER PROBLEM AT KSC
12163	04-29-66	MIT/IL LETTER AG 1087-65, DATED 21 DEC. 1965, ROTARY TABLE PENDANT(GSED-33)
12396	05-17-66	NEW AND MODIFIED SPECIAL TEST EQUIPMENT REQUIREMENT FOR CHECKOUT OF APOLLO BLK II/LEM EQUIPMENT
12440	05-19-66	IN-PLACE VERIFICATION CONCEPTS FOR APOLLO GSE
12500	05-24-66	EVALUATION OF THE LEM NAVIGATION BASE ASSEMBLY VIBRATION FIXTURE
12658	05-02-66	GSE CABLING CONFIGURATION FOR IMU CHECKOUT OF BLOCK II AND LEM AIRBORNE EQUIPMENT
12970	06-20-66	TEMPERATURE CONTROL OF IMU DURING AIR TRANSPORT OF SPACECRAFT
13030	07-07-66	MK 305, PIP AND IRIG SHIPPING CONTAINER PROBLEM
13174	07-25-66	PSAAM/SCA TESTER MARRIAGE
13261	08-01-66	OPERATION OF PTC AT TEMPERATURES NORMAL FOR 10,000 FEET
13382	08-15-66	INSTALLATION OF SHIMS INTO ESU
13674	09-14-66	SCAP/PSAAM TESTER MARRIAGE CHECKOUT
13812	09-29-66	USE OF GASKETS AT MALCO CONNECTOR INTERFACES WITH GSE CABLES
14238	11-10-66	SIGNAL CONDITIONER-PORTABLE TEMPERATURE CONTROLLER SYSTEM LEVEL INTERACTION
14252	11-21-66	CHECKOUT AND/OR CALIBRATION OF GPC, TMC, AND IMU BUFFER AND GAIN AMPLIFIER IN GDB
14357	11-22-66	GSE MALCO CONNECTORS
14541	12-13-66	NEW AND MODIFIED SPECIAL TEST EQUIPMENT REQUIREMENT FOR CHECKOUT OF APOLLO BLOCK I/LEM EQUIPMENT
14603	12-19-66	AUTOMATIC CHECKOUT EQUIPMENT, SPACECRAFT (ACE/SC) SUPPORT

GROUND SUPPORT EQUIPM INT (GSE) (GROUP 060)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-			
14612	12-20-66	USE OF CONNECTOR COVER, AND RECEPACLE	
14757	01-09-67	CYF PROBLEMS	
14779	01-11-67	INVESTIGATION OF BLOCK II PTC AURAL ALARM CAPABILITY	
14955	01-30-67	IMU SHIPPING CONTAINER - TEMPERATURE TESTS	
15070	02-10-67	ENGINEERING EVALUATION OF IMPACTOGRAPH	
15115	02-22-67	DISCREPANT GSE BREAKOUT CABLE CONNECTIONS (GSEUTSCH)	
15294	03-08-67	APPLICATION OF DC-4 GREASE TO COMPUTER TRAY CONN.	
15420	03-22-67	LEM PSAAM MODIFICATION	
16029	06-01-67	SUMMARY OF THE RELIABILITY EXPERIENCE OF THE PORTABLE TEMPERATURE CONTROLLER PTC II	
16320	07-06-67	SPECIAL TEST EQUIPMENT FOR AIRBORNE AND GROUND SUPPORT EQUIPMENT	
16401	07-13-67	AGC FRASABLE MEMORY (B-12 MODULE) TESTER	
16415	07-14-67	MODIFICATION OF EQUIPMENT FOR MATERIALS TESTING	
16464	07-21-67	MODIFICATION OF EQUIP. FOR MATERIALS TESTING	
16589	08-07-67	LOGIC MODULE TEST STATIONS, OVERVOLTAGE PROTECTION	
16628	08-10-67	APOLLO AGC PRODUCTION AND ENG. TEST COMPUTER	
16725	08-21-67	AGC ERASABLE MEMORY VIBRATION PAD	
16755	08-25-67	SPECIAL TEST EQUIPMENT FOR AIRBORNE & GROUP SUPPORT EQUIPMENT	
18500	03-22-68	IRIG RUNDOWN & MILLIMATT ANALYZER (IRMA)	
19565	03-28-68	PSAAM GLITCH DETECTOR	
19966	05-17-68	AUTHORIZATION FOR UPDATING ISSC TEST STATIONS #1 FOR SPARES	
19567	08-12-68	REQUESTED DOCUMENTATION FOR DYNAMOMETER REPAIR OVERHAUL, AND CONNECT TO MOD. II STATOR CONFIGURATION	
19819	09-18-68	JACK SCREW USED ON GSE MALCC CONNECTOR	
19861	09-26-68	QUA STORAGE CONTAINER	
20059	10-23-68	RECOMMENDED CLEANING & REPAIR OF SEATON-WILSON FLUID COUPLINGS	
20061	10-24-68	QUA VIBRATION TEST FIXTURE EVALUATION	
21650	12-12-69	IRIG CLAMPING FORCES IN THE STABLE MEMBER AND VIBRATION FIXTURE	
1785	03-11-69	II5VAC STRESS PROBLEM EXPERIENCES	
21803	03-17-69	OIA BACKWALL HARNESS	
21804	03-17-69	BLOWER CONTROL OPERATION TOLERANCES	
22195	06-04-69	GSE QUICK DISCONNECT COUPLINGS	
22244	06-12-69	DEFLECTION TEST OF IMU'S SHIPPING CONTAINER POLYETHER BASE VS. POLYESTER BASE FOAM CUSHION	
22299	06-24-69	CONNECTOR JACK SCREENS	
22653	09-22-69	BLOCK II PTC/BPP CONFIGURATION	

SUMMARY OF TECHNICAL REPORTS	
SYSTEM ASSEMBLY AND TEST (SAT) (GROUP 070)	
NUMBER	DATE
TITLE	

AP-M-		
00232	12-07-62	FLOOR STABILITY TESTS
00245	12-19-62	FLOOR STABILITY REQUIREMENTS FOR THE APOLLO ASSEMBLY AND TEST AREAS
00256	12-27-62	FLOOR & PAD STABILITY & VIB LEVELS ENCOUNTERED IN PRODUCTION & ENGINEERING SYSTEM AREAS
00312	01-25-63	RECOMMENDATIONS FOR PAD INSTALLATION IN THE APOLLO ASSEMBLY AND TEST AREA
00353	02-06-63	FINAL REPORT FLOOR STABILITY TEST PROGRAM
00636	05-14-63	STATUS OF OPTICS PIERS REQUIREMENTS
00705	06-03-63	PIPA TEST STATION - SURFACE PLATE
00952	07-24-63	OPTICAL EQUIPMENT FOR FIELD CALIBRATION OF ROTARY TABLE
01411	10-04-63	XDE 34-S-528 ENTITLED INTERFACE SIGNAL APOLLO G&N CM
01546	10-23-63	OPTICAL REQUIREMENT G & N POST INSTALLATION TESTING OF MIDCOURSE ALIGNMENT - ANGLE BETWEEN TWO TARGETS
01778	11-13-63	ACCEPTANCE TEST VIBRATION TESTS
01744	11-14-63	MANUFACTURING VIBRATION TESTS
01875	12-03-63	ALIGNMENT PROCEDURES & EQUIPMENT FOR ISS TESTS
02001	12-16-63	OPTICAL TARGETS STANDS
02129	01-06-64	LEARNER RETEST SUBSEQUENT TO SHIELDING CHANGE
02218	01-16-64	ACCURACY OF DETERMINING IRIG COEFFICIENTS
02249	01-20-64	REQUEST FOR WORKMANSHIP VIBRATION CRITERIA
02292	01-24-64	USING PIPAS TO MEASURE IRIG COEFFICIENTS ON THE PAD
02319	02-02-64	XDE 34-A-101
02346	02-03-64	SAT PROBLEMS
02394	02-06-64	RETEST OF APOLLO AGE 6 IMU AFTER REQORR
02735	03-17-64	AUTOCOLLIMATOR SUPPORT FOR ISS TESTING
02816	03-25-64	IMU ROTARY TABLE LEVELING VERIFICATION CALIBRATION
02910	04-03-64	REWORK AND RETEST OF APOLLO G&N 6 IMU FOR SM HARNESS REPLACEMENT
03187	05-06-64	EFFECT OF THE COS ROTARY TABLE SURFACE ON ISS TESTING
03244	05-07-64	INITIAL G&N #6 TEST WORK VIA USE OF THE AGC SIMULATOR
03255	05-15-64	THE EFFECT OF COMPUTER TRUNCATION ON VERTICAL ERECT AND GYROCOMPASSING
03624	06-15-64	AGE HARNESS AND PSA END CONNECTOR ASSEMBLY CONTINUITY TEST DURING DYNAMIC ENVIRONMENTAL TESTS
03639	06-16-64	AGC TEST SET (P/N 1014156) DESCRIPTION AND USE AT G&N SYSTEM TEST LEVEL
03775	07-02-64	THERMOCOUPLE INSTRUMENTATION OF G&N SYSTEM
04046	08-05-64	EFFECT OF GSE CABLING ON HAND CONTROLLER QUADRATURE MEASUREMENT
04152	08-18-64	OPERATING PROCEDURES FOR OPTICS/CDU LOAD AND SIGNAL SIMULATOR AND 1 MU/CDU LOAD AND SIGNAL SIMULATOR
04168	08-19-64	COMPUTATIONAL PROCEDURE FOR FINDING BEST-FIT CIRCLES
04403	09-14-64	THE EFFECTS OF LOW SELECTED CIRCUIT SWITCHING LEVELS ON THE ACCURACY OF CDU'S IN THE FINE ALIGN MODE
04594	10-06-64	G&N SCALE FACTOR TEST
04597	10-06-64	G&N SYSTEM ALIGNMENT ACCURACY AND ERROR ALLOCATION - BLOCK I,
04740	10-22-64	BLOCK I-100 CSS G&N INDICATOR CONTROL PANEL SWITCHING (FEA)
04375	11-06-64	PIPA LOOP MODULE TEMPERATURE DISCREPANCIES AND RESULTING PIPA LOOP SCALE FACTOR ERRORS
04882	11-09-64	FAIL INDICATOR OUTPUT PULSES
04893	11-10-64	TOLERANCES USED IN GYROCOMPASSING
04987	11-24-64	EQUATIONS FOR IRIG COEFFICIENTS IN G&N TEST
05266	12-28-64	BLOCK I SERIES 50 AGE HARNESS TESTING IN G&N CONFIGURATION MINUS AGC
05274	12-28-64	PROPOSED RETEST PLAN FOR APOLLO BLOCK I G&N SYSTEMS AFTER REPLACEMENT OF MALFUNCTIONING COMPONENTS
05557	01-27-65	GYROCOMPASSING TEST PROBLEM RESULTS
05726	02-11-65	ISS, GSS, AND G&N SAT TESTING DATA REVIEW

SUMMARY OF TECHNICAL REPORTS

SYSTEM ASSEMBLY AND TEST (SAT) (GROUP 070)

NUMBER	DATE	TITLE
AP-M-		
7-122	03-14-65	DESCRIPTION OF PIPA BIAS AND SCALE FACTOR TEST
064	04-03-65	TEST PLAN FOR EVALUATION OF BLOCK I-100 SERIES D&C, G&N HARNESS & PSA END CONNECTOR
	04-05-65	EVALUATION OF APOLLO IMU 12/50 WORKMANSHIP VIBRATION
	05-18-65	BLOCK II CDU TESTING AT G&N LEVEL
	05-18-65	GYRO DRIFT DURING CENTRIFUGE TESTING OF APOLLO IMU
	05-18-65	DEGRADED E O AB ERROR SIGNAL ON ISS 12/50,
	05-18-65	PIPA G/S, CEU, & IRIG FAILURE INDICATOR TRIP LEVELS
	05-28-65	INTERFACE DEFINITION BETWEEN MSFC GE235 COMPUTER AND PIPA AND IMU SIMULATORS
	06-23-65	GFP REQUIRED AIRBORNE COPIES FOR SUBSYSTEM AND SYSTEM QUALIFICATION TESTING
	07-01-65	OBJECTIVES OF ENGR. TESTS IC OF RUM ON G&N SYSTEM 7
	06-01-65	PROPOSAL TO INITIATE DIGITAL SIMULATION OF G&N STABLE MEMBER DRIFT IN JDC 10080 IRIG COEFFICIENT TEST
	07-07-65	GIMBAL DUMP ON SYSTEM 12-50 DURING G&N TESTING
	07-15-65	SUMMARY OF BLOCK I POST INSTALLATION G&N TESTING
	08-21-65	RESOLVER TRIP MODULES ADJUSTMENT
	09-29-65	HISTORY OF THE Y IRIG FAILURE INVESTIGATION DURING QUALIFICATION TESTING OF ISS 110
08830	10-13-65	CALCULATION OF THE CRIZON PHOTOMETE OUTPUT
08839	10-13-65	ANALYSIS PROPORTIONAL, BACKUP AND EMERGENCY ISS OPERATION TEMPERATURE CONTROL DATA
09074	10-29-65	G&N 122 BINARY CURRENT LISTING SWITCH BIAS
C9100	10-29-65	INERTIAL PERFORMANCE & ALIGNMENT DATA AND G S W HISTORICAL EVENTS DATA
09191	11-04-65	RETEST OF PI-3 PIP'S AND PRODUCTION ELECTRONICS AT PIPA TEST STATION
C9248	11-08-65	DESIGN EVALUATION FAILURE, AGE 101
09411	11-15-65	ENGINEERING EVALUATION OF APOLLO IMU 109 WORKMANSHIP VIBRATION
09412	11-16-65	PLK II/LEM IMU & OPTICS/RENDEVUS RAJAR CDU FAIL TESTING AT ISS/OSS LEVEL
09940	12-15-65	SIGNAL CONDITIONER MODULE (SCM) MARRIAGE TO G&N SYSTEM FOR BLK II AND LEM.
09987	12-17-65	DISCUSSION OF FAILURE REPORTS DURING THE PRE-THERMAL VACUUM BASELINE AND THERMAL VACUUM TESTING OF G&N SY
10487	01-13-66	G&N TESTING OF LCRS TRACKER PCLE PASSAGE
10510	01-20-66	LORS G&N TEST SIGNALS
10868	02-10-66	ENGINEERING INVESTIGATION OF QUALIFICATION ACCELERATION PROBLEM ON G&N 111
11107	02-24-66	G&N FINE ALIGNMENT TEST
11166	02-23-66	ANALOG VIBRATION SIMULATION OF APOLLO LEM NAV BASE MOUNTED G&N EQUIPMENT
11305	03-03-66	RECOMMENDED TABLE POSITIONING FOR LEM FINE ALIGNMENT
11331	03-09-66	ANALYSIS OF APPARENT PIPA LOOP BIAS DURING ISS 110 & G&N 111 CENTRIFUGE TESTING
11443	03-15-66	STATUS REPORT ON THE AURORA COMPUTER PROGRAM REQUIREMENTS
11546	03-17-66	APPARENT RECTIFICATION IN PIP LOOP DURING ISS 110 & G&N 111 CENTRIFUGE TESTING
11737	04-01-66	G&N 012 GYRO COMPASSING & IRIG COEFFICIENT SUMMARY
11968	04-19-66	SENSITIVITY OF ORBITAL PARAMETERS TO G&N ERROR SOURCE
12021	04-20-66	RESULTS OF SUSCEPTABILITY TESTING OF G&N 111
12278	05-03-66	RESULTS OF RADIATED AND CONDUCTED INTERFERENCE TESTS ON G&N 111
12319	05-11-66	RESULTS OF ABBREVIATED SUSCEPTABILITY TESTING ON LEM G&N SYSTEM 602
12524	05-25-66	P&I TESTING OF BLOCK II
12529	05-25-66	FINAL REPORT RESULTS OF SUSCEPTABILITY TESTING OF LEM G&N SYSTEM 602
12810	06-14-66	DESCRIPTION OF IRIG GUEF PIPA SCALE FACTOR & GYROCOMPASSING TEST IN PROGRAMS AURORA 85 & SUNDIAL C
12990	07-01-66	ADDITIONAL ANALYSIS OF THE CUTEY GIMBAL FINE ALIGN NULL PROBLEM ON G&N 017 S/C011
13014	07-05-66	EFFECT OF UGA/CCU FINE ALIGN OPERATION OF MISSICN 202 PERFORMANCE
13054	07-11-66	PROBLEM AREAS ON SYST 4 TEST OF G&N SYSTEM 603

SYSTEM ASSEMBLY AND TEST (SAT) (GROUP 070)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-

13079	07-13-66	GIMBAL DUMP CN LEM ISS 605	
13101	07-15-66	C/M GEN SYSTEM QUALIFICATION FINAL REPORT, ISS 110-VIBRATION & FLIGHT SHOCK TEST, TR 1402-1 THRU 7	
13135	07-19-66	GEN 7 ZERO ENCODE PROBLEM	
13203	07-26-66	SINUSOIDAL VIBRATION DESIGN CRITERIA FOR AIRBORNE GEN VIBRATION	
13700	09-19-66	EFFECTS OF RELAY CONTAMINATION FAILURES ON SYSTEM & MISSION	
13743	09-22-66	ANALOG AND DIGITAL SIMULATION OF THRUST VECTOR CONTROL SYSTEM	
13781	09-27-66	PRELAUNCH ALIGNMENT OF APOLLO PGNC	
14075	10-25-66	REPORT ON AGC #17 POST FLIGHT TESTING AND ANALYSIS	
14119	10-29-66	CALIBRATION OF 5-INCH AUTOCLIMATOR FOR OSS AND GEN TESTING	
14440	12-01-66	BALL TORQUE REQUIRED FOR ATTACHMENT OF THE OPTICAL UNIT TO THE COMMAND MODULE	
14498	12-07-66	METHOD OF REDUCING THE CYCLING OF THE GYRO TORQUE ENABLE RELAY DURING GEN TESTING	
14504	12-12-66	GEN SYSTEM VIBRATION AND OPTICS CDU'S AND MAIN AND NAVIGATION DISPLAY AND KEYBOARD FLIGHT SHOCK, 11/30/66	
14773	01-11-67	E FLANGE Z ERRORS ATTRIBUTABLE TO IMU MOUNTING FIXTURE S/N ACCK 8	
14781	01-11-67	JDC 12625C LEM FINE ALIGNMENT TEST ERROR IN CORRECTION FACTOR	
14909	01-24-67	RESULTS OF THE FINE ALIGNMENT TEST ON GEN SYSTEM 204 AT NAA	
14959	01-30-67	IRIG COEFFICIENT MEASUREMENT AT THE GEN TEST LEVEL	
15014	02-03-67	ECDU COARSE/FINE CHANNEL MIX OSCILLATION AND GEN TESTING	
15171	02-22-67	PLAN FOR ENGINEERING INVESTIGATION OF GEN 206	
15202	02-24-67	LEARNER ACTIVITY SCHEDULE	
15222	03-01-67	ACCEPTANCE TEST REPORT FOR GEN SYSTEM 607	
15346	03-14-67	GEN JDC 12218 IMU FINE ALIGNMENT TEST PROGRAM ERRORS	
15362	03-16-67	ACCEPTANCE TEST REPORT FOR GEN SYSTEM 605	
15390	03-20-67	FINE ALIGNMENT TEST (JDC 12218) PROBLEMS EXPERIENCED ON GEN 206	
15473	03-30-67	FINE ALIGNMENT TEST (JDC 12218) PROBLEMS EXPERIENCED ON GEN 206	
15603	04-13-67	STANDARDIZATION OF GEN ACE S/C STATION CONFIGURATION	
15620	04-17-67	ACCEPTANCE TEST REPORT FOR GEN SYSTEM 606	
15628	04-17-67	APOLLO GEN SYSTEM PERFORMANCE SUMMARY FOR MISSION 501 USING GEN SYS. 122	
15828	05-09-67	TEST PROG. TO DETERMINE CAUSES OF ELECTROMAGNETIC INTERFACE GENERATED BY THE BLOCK II GEN SYSTEM	
15862	05-11-67	GYROCOMPASSING RESTARTS CN S/C 398 AND 101	
15868	05-12-67	PIP TROUBLESHOOTING PROCEDURES FOR THE ISS LEVEL TESTING	
15910	05-17-67	APOLLO PRELAUNCH STEADY STATE ALIGNMENT ERROR SENSITIVITIES	
15949	05-22-67	SYSTEM 608 IRIG ALIGNMENT CHECKS	
16114	06-09-67	RESULTS OF IMU PERFORMANCE TEST PER ETR-N-095 USING GEN 201 LOCATED AT NAA G&C LAB	
16218	06-21-67	GYROCOMPASSING REQUIREMENTS	
16234	06-23-67	GEN DLD 206 FINE ALIGN ACCEPTANCE PROBLEM (FR 180361)	
16249	06-26-67	ADDA EFFECTS ON BLK II/LM IMU PERFORMANCE TEST RESULTS	
16265	06-28-67	BLK I GEN ADGA EQUATIONS	
16283	06-29-67	BLK II INERTIAL INSTRUMENT ADDA CALCULATION	
16320	07-05-67	SPECIAL PROCEDURE FOR AURORA 88 IMU PERFORM TEST SUCH THAT OA UP&CA DOWN EFFECTS ON NBD MAY BE EVALUATED	
16351	07-07-67	SUBSTITUTE DCRALISTS FOR BLCK II, GEN TESTING	
16360	07-10-67	ACCEPTANCE TEST REPORT FOR GEN SYSTEM 608	
16426	07-18-67	ADDA SUMMARY OF BLK II AND LEM ISS IN-PLANT TEST	
16585	08-15-67	BLK I AND II INERTIAL INSTRUMENT ADDA CALCULATIONS - FIELD SITE ISS TESTS	
16704	08-17-67	L4 LEARNER COARSE ALIGN ACCURACY (USING AURORA 88 ROPES)	
16729	08-22-67	PROCEDURE TO MAINTAIN GYROCOMPASSING DURING OPTICAL VERIFICATION	

SYSTEM ASSEMBLY AND TEST (SAT) (GROUP 070)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-

16762	08-25-67	PRESENTATION OF DOWNLINK DATA RECORDED DURING GEN ACCEPTANCE TESTING
16781	09-29-67	ACCEPTANCE AND REPAIR/RETEST REPORT FOR BLOCK II SPARE I (IMU/PEA 5)
16800	08-30-67	COLD TRANSIENT TEST RESULTS - BLOCK II AND LEM
16847	10-05-67	OPTICAL VERIFICATION FOR BLOCK II GEN LEVEL GYROCOMPASSING
16949	09-15-67	NOTES ON THE BLOCK II COARSE ALIGN LOOP
16972	09-14-67	EFFECT OF GYRO PREAMP GAIN ON STABILIZATION LOOP PERFORMANCE
17092	10-05-67	5-INCH AUTOCLIMINATION ALIGNMENT FOR SXT LOS PARALLISIAM,
17391	11-01-67	PIPA TEST STAND CORRELATION USING 3AP-303
17694	12-06-67	OPERATIONAL READINESS TESTS VS. SYSTEM OPERATING HOURS
18370	04-07-68	TIME ALIGN TEST PROBLEMS DURING S/C 101, G&I 204, C/O
18441	03-17-68	EMI INVESTIGATION OF APOLLO SYSTEM ASSEMBLY AND TEST AREA
18455	03-18-68	PERFORMANCE OF THE GEN SYSTEM ASSIGNED TO APOLLO 6 MISSION
18486	03-20-68	GYROCOMPASSING FOR AS-502 (PRELAUNCH ALIGNMENT FOR SOLRUM 55 FLIGHT ROPES REV. 0)
18557	03-28-68	GEN SYSTEM 610 TEST SUMMARY
18576	03-29-68	GEN SYSTEM PERFORMANCE SUMMARY FOR APOLLO 6 MISSION USING GEN 123 (U)
18660	04-09-68	GEN SYSTEM 211 TEST SUMMARY
18749	04-10-68	GEN SYSTEM 212 TEST SUMMARY
18709	04-17-68	GEN SYSTEM 612 TEST SUMMARY
18716	04-17-68	GEN SYSTEM 611 TEST SUMMARY
18817	04-29-68	CHANGES REQUIRED TO JDC'S FOR CMC/LGC INTERRUPTS TESTING
18834	05-01-68	NOTES ON GEN JDC'S 12220 & 12619 - THE GIMBAL RESPONSE TEST
18847	05-02-68	GEN SYSTEM 210 TEST SUMMARY
19034	05-27-68	GEN SYSTEM 213 TEST SUMMARY
19055	05-31-68	APOLLO GYRO LAB TEST RESULTS ON GYRO S/N 7C-63 FROM IMU S/N 28X
19084	06-04-68	APOLLO GYRO LAB RESULTS ON GYRO 7A-25 FROM IMU S/N 3X
19216	06-25-68	SPECIAL TELEMETRY CHANNEL LIST FOR JDC 12624 (IMU PERFORMANCE LIST - AURORA85)
19220	06-25-68	Y PIPA CHANNEL PROBLEMS - GEN 214
19235	06-27-68	SPECIAL TELEMETRY CHANNEL LIST FOR JDC 12624 (IMU PERFORMANCE TEST - AURORA88)
19287	07-17-68	DATA FOR LM MISSION MODULAR DATA BOOK
19401	07-19-68	NOTES ON THE ATRIG SCALE FACTOR TEST GEN JDC'S 12219 & 12627
19420	07-22-68	REDUCTION OF TELEMCAS TAPE
19442	07-24-68	REVISION OF AP-M19420. "REDUCTION OF TELMONS'S TAPES", 22 JULY 1968
19512	08-05-68	GEN SYSTEM 212 COARSE ALIGN PROBLEM AT NR
19542	08-07-68	REVIEW OF GEN SYSTEMS TESTING AT KSC
19546	08-03-68	POST-FLIGHT TESTING OF GEN 122
19703	08-29-68	NOTES ON FINE ALIGNMENT TEST (JDC 12218)
19707	09-30-68	GEN SYSTEM 614 TEST SUMMARY
19726	09-05-68	SUMMARY OF ENGR. TESTS PERFORMED ON IMU S/N 34
19767	09-11-68	GEN SYSTEM 613 TEST SUMMARY
19832	09-20-68	GEN SYSTEM 215 TEST SUMMARY
19833	09-20-68	GEN SYSTEM 214 TEST SUMMARY
19843	09-23-68	S/C 101 ADSRAX, ADSRAZ AND ADIAY PROBLEM ANALYSIS
19920	10-01-68	TRIG SENSOR PROBLEM AT MSC CN LTA-8, IMU-2
19944	10-04-68	PROGRAM ALARM & RETEST DURING IMU PERFORMANCE TEST ON GEN 605, IMU S/N 15 (LM-3), AT KSC
19949	10-04-68	FURTHER INVE. CSM 101 PROBLEMS

SUMMARY OF TECHNICAL REPORTS

SYSTEM ASSEMBLY AND TEST (SAT) (GROUP 070)

NUMBER	DATE	TITLE
AP-M-		
21569	01-27-69	POST-FLIGHT TESTING OF IMU AND PEA USED ON APOLLO 7 FLIGHT
21584	01-29-69	IMPROVEMENT IN SHORTED IRIG WHEEL RUNDOWN TIME DETERMINATION
21650	02-12-69	IRIG CLAMPING FORCES IN THE STABLE MEMBER AND VIBRATION FIXTURE
21897	04-03-69	OCCURRENCE OF "-28VDC FAIL INDICATION
22003	04-29-69	FINE ERRCR TRANSIENT (F.E.T.) & CMC-ICDUZ INDICATED OFFSET NOTED DURING IMU PERF. TESTS
22047	05-05-69	LEAK RATE FAILURES OF APOLLO EQUIPMENT
22246	06-12-69	APOLLO 10 DATA FROM G&N SYSTEMS
22308	06-25-69	G&N 219 TEST SUMMARY
22375	07-08-69	APOLLO 11 PRE-LAUNCH GYRO & PIPA DATA COMPENSATION
22412	07-15-69	IRIG BALL BEAT FREQUENCY MEASUREMENT
22426	07-18-69	TEST ISS CONFIGURATION NULL COINCIDENCE CHANGES FROM PIP
22495	08-06-69	APOLLO 11 DATA FROM G&N SYSTEMS
22544	08-19-69	G&N 220 TEST SUMMARY
22549	08-19-69	SUMMARY OF NULL COINCIDENCE CHECKS AT ISS TEST
22682	10-01-69	S/C 108 GYROCOMPASSING PROBLEM: SUMMARY OF INVESTIGATION & ANALYSES
22795	10-28-69	G&N 221 TEST SUMMARY
22881	11-24-69	APOLLO 12 LAUNCH, PGNS ANCHALIES
22944	12-12-69	APOLLO 12 DATA FROM G&N SYSTEMS

SUMMARY OF TECHNICAL REPORTS

INERTIAL SUBSYSTEM (ISS) (GROUP 071)		TITLE	
NUMBER	DATE		
AP-M			
01261	09-12-63	PRECISION HOLD - GIMBAL POSITIONER LOOP PHASING	
01393	10-02-63	PERFORMANCE SPECIFICATION APCLLC STABILIZATION LOOP	
01519	10-13-63	TRANSITIONAL XOE 34-S-529	
C-807	11-21-63	PRELIMINARY ENVIRONMENTAL DESIGN SPECIFICATION FOR APOLLO LEM GUIDANCE	
01937	12-09-63	WORKMANSHIP VIBRATION CRITERIA	
01932	12-09-63	EXCELLEROMETER INPUT AXIS MECHANICAL MISALIGNMENT	
02747	12-20-63	IX RESOLVER NULL POSITION	
02258	01-21-64	SAT PROBLEMS LM-BB 3	
02802	03-24-64	SYSTEM AND SUBSYSTEM COOLANT REQUIREMENTS	
02823	03-25-64	SYSTEM AND SUBSYSTEM COOLANT REQUIREMENT	
03010	04-14-64	PROJECTED BLOCK II SUBSYSTEM MODING AND MODE SEQUENCING	
03011	04-14-64	IMU TEMPERATURE CONTROL REQUIREMENTS AT ISS TEST LEVEL	
3072	04-21-64	APOLLO 16 PIPA LOOP FREQUENCY RESPONSE PROGRAM DOCUMENTATION REPORT #10	
03149	04-28-64	APOLLO 16 PIPA LOOP BIAS SENSITIVITY TO SWITCHING TIME DIFFERENTIAL	
03170	04-29-64	BLOCK I SUBSYSTEM MODING DURING OPERATING FUNCTIONS	
03263	05-08-64	CDU FAILURE EFFECTS ANALYSIS CONSIDERING DEGRADED 800 CPS EXCITATIONS AND OPEN GIMBAL RESOLVER WINDINGS	
03320	05-18-64	APOLLO 16 PIPA SCALE FACTOR CHANGE AT ISS LEVEL	
03396	05-22-64	EFFECT OF BINARY CURRENT SWITCH FLIP-FLOP DELAY ON PIPA BIAS AND NULL COINCIDENCE	
03397	05-22-64	EFFECTS ON PIPA BIAS AND NULL COINCIDENCE OF 3.2 KC DUCOSYN EXCITATION PHASE	
03487	06-02-64	INVESTIGATION OF PIPA LOOP TRAY WIRING	
03498	06-03-64	TOTAL ATTITUDE AND ATTITUDE ERROR REQUIREMENTS	
03665	06-19-64	16 PIPA LOOP SCALE FACTOR MEASUREMENT CONFIDENTIAL	
03807	07-07-64	EFFECTS OF TRAY WIRING ON PIPA SCALE FACTOR	
03847	07-13-64	DOCUMENTATION PERTINENT TO GSE FOR INERTIAL CH SUBSYSTEM TESTING	
03851	07-13-64	TESTS OF THE IMU TEMPERATURE INDICATOR ALARM AND BACKUP CONTROLLER ASSEMBLY	
04012	07-31-64	BLOW THE BLOCK II TEMPERATURE CONTROL SYSTEM	
04103	08-12-64	EFFECTS OF MOTOR DRIVE AMPLIFIER QUADRATURE CONVERSION ON CDU LOOP PERFORMANCE	
04119	08-14-64	PIPA LOOP SCALE FACTOR MEASUREMENT OF BLOCK II ISS ATP CONFIDENTIAL	
04154	08-19-64	FAILURE EFFECTS ANALYSIS OF STABILIZATION LOOP MODULES ON LOOP OPERATION	
04156	08-19-64	PANEL LIGHTING (ISS TEST CONFIGURATION)	
04157	08-19-64	PROPOSED ETHYLENE GLYCOL/WATER CONTAMINATION INVESTIGATIONS	
04167	08-19-64	TEST DATA CORRELATION OF POWER SUPPLY DATA ON APOLLO ISS 6 AND 7	
04227	08-24-64	IMU-CDU DIFFERENCE METER NULL READING IN THE FINE ALIGN	
04297	09-01-64	AN ANALOGUE STUDY OF TEMPERATURE CONTROL METHODS FOR THE BLOCK II IMU	
04301	09-01-64	AN ANALOGUE STUDY OF TEMPERATURE CONTROL METHODS FOR THE BLOCK II IMU	
04343	09-04-64	WATER/GLYCOL SOLUTION USED FOR APOLLO PROGRAM	
04359	09-09-64	EFFECTS OF A BLEWER FAILURE ON THE APOLLO TEMPERATURE CONTROL SYSTEM	
04366	09-09-64	LEARNER ISS PIP AND IRIG INDIVIDUAL TEMPERATURE TESTS TO DETERMINE EFFECTS ON LOOP PARAMETERS	
04383	09-17-64	IMU TEMPERATURE CONTROL SYSTEM USING MERCURY THERMOSTAT WITH A 13 DEGREE DEAD ZONE	
04407	09-14-64	RESULTS OF THE (IRIG) ALIGNMENT TESTS PERFORMED ON SYSTEMS (6 & 7)	
04425	09-16-64	3200 CPS DUCOSYN EXCITATION ANALYSIS FOR A GEN CONFIGURATION	
04444	09-14-64	APOLLO 16 PIPA LOOP COMPENSATION CAPABLE OF PROVIDING ONLY ONE STABLE LIMIT CYCLE MODE	
04541	09-30-64	DIGITAL TORQUE GENERATOR SCALE FACTOR ADJUSTMENT	
04629	10-07-64	INVESTIGATION OF THE GEN IRIG SCALE FACTOR TEST	
04613	10-07-64	PIPA LOOP FAILURE EFFECTS ANALYSIS	

SUMMARY OF TECHNICAL REPORTS

INERTIAL SUBSYSTEM (ISS) (GAGC/P 071)

NUMBER	DATE	TITLE
AP-M-		
04649	10-09-64	GYRO TEST STATION SUBSYSTEM CORRELATION OF ACCELERATION 'INSENSITIVE AND SENSITIVE DRIFT RATE COEFFICIENTS
04792	10-28-64	BLOCK I TEMPERATURE CONTROL - ISS TESTING
04793	10-28-64	16 PIPA SCALE FACTOR CORRELATION BETWEEN TEST CONSOLE AND ISS FOR IMU 20
04817	10-30-64	EVALUATION OF GYRO COMPASSING TEST PROCEDURE AND TEST RESULTS
04855	11-04-64	ERROR SOURCES IN APOLLO SYSTEM IRIG COEFFICIENT DETERMINATION
04931	11-13-64	TRANSMITTAL OF TEST PLAN FOR PERIODIC RETESTING OF 25 INERTIAL REFERENCE INTEGRATING GYRO
04940	11-16-64	IRIG SCALE FACTOR DETERMINATION
04955	11-17-64	ENGINEERING EVALUATION OF APOLLO ISS #8 IMU WORKMANSHIP VIBRATION
04995	11-25-64	3200 CPS 24 SUSPENSION POWER FOR BLOCK I SERIES 100 SYSTEMS DURING OFF TIME
05073	12-03-64	THE EFFECT OF IRIG MISALIGNMENTS ON PRELAUNCH ALIGNMENT
05084	12-04-64	PIPA LOOP SCALE FACTOR ERROR SUMMARY
05138	12-09-64	IRIG PULSE TORQUING FAILURE EFFECTS ANALYSIS
05139	12-10-64	THE EFFECT OF IRIG MISALIGNMENTS ON SYSTEM IRIG COEFFICIENT TESTS
05236	12-21-64	PROPOSED PIP AND RESOLVER ALIGNMENT TESTS
05278	12-29-64	SERIES 100 'ISS' SERIES 100 GSE COMPATIBILITY
05292	12-30-64	ANALYTIC DESCRIPTION OF APOLLO STABLE MEMBER VIBRATION INDUCED BY FLIGHT
05311	01-04-65	INVESTIGATIONS OF THE PIPA LOOPS OF GEN 7
05403	01-13-65	INVESTIGATION OF X IRIG (3A-14) FOR THE SPARE IMU
05432	01-15-65	AFFECTS OF ROOM TEMPERATURE CYCLING UPON INERTIAL COMPONENT PERFORMANCE
05499	01-20-65	VIBRATION ANALYSIS OF APOLLO STABLE MEMBER RESPONSE TO RANDOM FLIGHT VIBRATION
05527	01-25-65	ENGINEERING MEGGER CHECK OF PIP 2AP-63
05569	01-28-65	STABILIZATION LOOP INSTABILITY DURING VIBRATION TESTING
05577	01-28-65	ENGINEERING EVALUATION OF APOLLO ISS NO. 20 VIBRATION WORKMANSHIP
05577	01-28-65	ENGINEERING EVALUATION OF APOLLO ISS NO. 8 WORKMANSHIP VIBRATION
05601	02-01-65	RETEST OF APOLLO 25 IRIG'S S/A'S 2A-1, 2A-3, AND 1A-5
05628	02-03-65	PULSE TORQUE POWER SUPPLY NOISE-ISS VS MODULE LEVEL
05642	02-04-65	CDU END TO END CHECK
05753	02-15-65	THE EFFECTS OF APPROXIMATING U HOGA BY 240 DEG. ON THE MEASUREMENT OF THE IRIG COEFFICIENTS
06044	03-09-65	PROPOSED METHOD OF DETERMINING IRIG PULSE TORQUING SCALE FACTOR FOR BLOCK II
06091	03-12-65	METHOD OF DETERMINING IRIG PULSE TORQUING SCALE FACTOR FOR BLOCK II
06151	03-18-65	BUFFER, ISS P&N COUNT
06351	04-02-65	PROPOSED METHOD OF DETERMINING IRIG COEFFICIENTS FOR BLOCK II
06400	04-07-65	IRIG WHEEL CHECKOUT UNIT (IMCU) TEST CONFIGURATION
06571	04-22-65	ANALYSIS TECHNIQUE FOR APOLLO STABLE MEMBER RESPONSE TO NAVIGATION BASE VIBRATION
06664	05-03-65	ANALOG SIMULATION OF RANDOM VIBRATION OF THE APOLLO INERTIAL MEASUREMENT UNIT
06791	05-12-65	WORKMANSHIP - VIBRATION TEST
06951	05-25-65	DEGRADED E O ERROR SIGNAL ON ISS 12/50,
04987	05-28-65	CONTINUOUS GYRO TORQUING FOR BLOCK II AND LEM
07068	06-04-65	APOLLO BLOCK I-100 STAR TRACKER AUTOMATIC GAIN CONTROL (AGC) ANALYSIS AND ANALOG SIMULATION
07126	06-09-65	MEANS OF EXTENDING TIME IN COARSE ALIGN AFTER INITIAL IMU TURN-ON
07152	06-10-65	INTERMITTENT FAILURE OF Y-PIP (2AP-39) ISS 7 PEV. A
07236	06-17-65	FINAL LEARNER INERTIAL SUBSYSTEM BENCH TEST REPORT
07287	06-22-65	CALCULATION OF Y PIPA CONNECTOR 3200 CPS SUSPENSION VOLTAGE
07400	06-29-65	EFFECTS OF IRIG SCALE FACTOR 'NACCURACY
07524	07-07-65	16 PIPA BIAS AND SCALE FACTOR CORRELATION BETWEEN TEST STATION AND ISS, GEN 121

SUMMARY OF TECHNICAL REPORTS	
INERTIAL SUBSYSTEM (ISS) (GROUP 071)	
NUMBER	DATE
TITLE	

AT-M-			
0770	07-27-65	RESULTS OF REPACKING THE PIP INDICATING SENSORS IN G&N 121	
0780	07-29-65	ENGINEERING EVALUATION OF VIBRATION MOUNTING FIXTURES DURING SUBSYSTEM QUALIFICATION TESTING	
0783	08-02-65	IRIG NEGATIVE SCALE FACTOR SHIFTS CN ISS 110	
0787	08-03-65	ISS 110 AND PIPA NULL PROBLEM	
0788	08-04-65	BLOCK I-100 ISS CDU FAIL DETECT EVALUATION	
0789	08-05-65	G&N 012 INERTIAL COMPONENT DATA SUMMARY	
0790	08-06-65	G&N 017 INERTIAL COMPONENT DATA SUMMARY	
0793	08-07-65	ISS BACKUP OPERATE TEMPERATURE CONTROL JDC LIMITS	
0794	08-10-65	ENGINEERING PIPA LCCP	
0799	08-13-65	PIPA QUADRATURE PROBLEM CN ISS 111	
0802	08-17-65	CALIBRATION OF ALIGN. MIRROR ASSY FOR OPT. SUBSYSTEM TESTING	
08026	08-17-65	G&N 008 INERTIAL COMPONENT DATA SUMMARY	
08046	08-18-65	QUADRATURE PROBLEM CN 2 PIPA (2 AP-117) ISS 122	
08102	08-24-65	HISTORY OF 25 IRIG S/N 444	
08174	08-30-65	JUSTIFICATION FOR THE INCREASE IN THE PIPA ERROR SIG. QUADRATURE RQMT.	
08286	09-08-65	MONITORING OF QUADRATURE VOLTAGE	
08311	09-09-65	GYRO VIBRATIONAL LEVELS CURING WORKMANSHIP & SYSTEM QUAL. TESTING	
08353	10-04-65	TEST RESULTS ON APOLLO 25 IRIG S/N 2A-27 AFTER REMOVAL FROM QUAL. TEST SYSTEM, IMU S/N LLOY	
08382	10-05-65	APOLLO 12 IRIG COEFFICIENTS VERSUS STORAGE TIME	
08415	10-06-65	RESULTS OF IRIG ISS PREPOT TESTING OF PI-3	
08438	10-13-65	REPACKING OF APOLLO II GYROS FOR SCALE FACTOR	
09070	10-28-65	ANALYSIS OF G&N 12 IRIG COEFFICIENT AND GYROCOMPASSING TEST RESULTS	
09073	10-28-65	MEASUREMENT OF OPEN LOOP PIPA QUADRATURE OF IMU LEVEL OF TEST	
09236	11-08-65	RESULTS OF TESTING A SINGLE AXIS CDU WITH LEM SYSTEM P13	
09389	11-15-65	BLOCK II CDU REPEATING LCCP ERROR	
09413	11-30-65	TESTING METHODS BLK II GIMBAL SERVO / P	
09710	12-03-65	IRIG ALIGNMENT TEST RESULTS	
09716	12-06-65	16 PIPA TEMPERATURE SENSOR CHECK	
09852	12-13-65	COSECANT AMPLIFIER OPERATIONS DURING ISS GROUND TEMPERATURE QUAL.	
09942	12-15-65	LEM G&N SYSTEM TEST PGN'S CAUTION LAMP PROBLEM.	
09932	12-17-65	SUMMARY OF PROBLEMS ENCOUNTERED DURING GROUND TEMP. ENVIRONMENTAL TESTING OF ISS 110.	
10057	12-22-65	APOLLO PLATFORM PRE-LAUNCH ALIGNMENT ACCURACY.	
10100	12-27-65	GYRO FAILURES IN SYSTEM PI-2	
10168	12-29-65	PROBLEMS ENCOUNTERED DURING GROUND TEMPERATURE QUALIFICATION TESTS WITH G&N	
10196	01-04-66	SUMMARY OF PROBLEMS ENCOUNTERED DURING OXYGEN-OVERPRESSURE QUALIFICATION TESTS	
10249	01-04-66	CLARIFICATION OF SIGNALS GENERATED BY DIA FOR IMC. SELECTION & TORQUE CN, TORQUE OFF COMMANDS TO GYROS	
10295	01-07-66	GSE/G&N TEST COMPATIBILITY WITH AN INTEGRATED SIGNAL CONDITIONING MODULE	
10398	01-12-66	DRIFT RATE TOLERANCES FOR LEM/BLOCK II FIRG. TORQUE SCALE FACTOR TESTS	
10475	01-18-66	CLARIFICATION OF FINAL 3IAS & SCALE FACTOR MEASUREMENT IN PS 2010603 & PS 2010607	
10526	01-20-66	CHECKOUT OF PIP 2AP-49 (V PIP G&N 111) ON THE PIPA TEST STATION	
10640	01-27-66	CAPACITOR MEASUREMENTS IN GYRC CAL. MODULE S/N 20 (FOR 2A5A IN 122)	
10683	02-01-66	PIPA PROBLEM DURING IMU CENTRIFUGE TESTING	
10691	02-03-66	TEMPERATURE CONTROL PROBLEM CN G&N 111 AFTER REPLACING 4 PIPA (FR 9238)	
10787	02-07-66	GYRO FAILURES IN SYSTEMS GCI (U)	
10870	02-10-66	WAVE ANALYSIS OF GYRO SIGNALS ON G&N SYSTEM 111	

INERTIAL SUBSYSTEM (ISS) (GROUP 071)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-			
NUMBER	DATE	TITLE	
10985	02-16-66	TESTING TO BE PERFORMED ON THE ENGINEERING PIPA TEST STATION	
11017	02-18-66	OPERATIONS OF XPIPA FAILURE DETECT CIRCUITRY DURING THE ACCELERATION BASELINE (FR 6028) OF INERTIAL SUBSY	
11018	02-19-66	PROBLEMS ENCOUNTERED DURING VIB & FLIGHT SHOCK QUAL RETEST OF ISS CDU CASE PANEL (110) PLUS ASSY 111 PSA	
11130	02-25-66	SPECIFICATION LIMITS ON PS 2010604 - App 3.2	
11327	03-09-66	PULSE TORQUING TRANSIENT ERRORS	
11360	03-10-66	FAILURE OF IMU & CDU RESOLVER SIGNALS DURING OVERSTRESS VIBRATION (FB 6173) OF THE 110 SIGNAL CONDITIONER	
11454	03-15-66	APPARENT FAILURES OF PIP'S ZAP-17Y AND 172 DURING 1&A TESTING	
11464	03-16-66	PROBLEMS ENCOUNTERED DURING THERMAL VAC QUAL RETEST OF ISS CDU'S CASE & PANEL ASSY PER TPA 1502-14	
11493	03-18-66	PROCEDURE FOR THE REPLACEMENT OF THE SG PRIMARY RESISTORS ON PIP'S	
11733	04-01-66	INERTIAL COMPONENT PERFORMANCE TESTING AT HIGH AND LOW BUS VOLTAGE BLOCK II & LEM	
11844	04-11-66	PROPOSED SYSTEM RESOLUTION TEST FOR PIPA'S	
11868	04-12-66	DRIFT COEFFICIENT ORIENTATION ANGLES FOR ACCURACY IMPROVEMENTS IN MEASURING BLK II/LEM GYROS	
12034	04-22-66	PIP SENSOR RECHECK	
12156	04-29-66	CHANGES TO ISS 110 VIBRATION OVERSTRESS	
12206	05-03-66	PIPA SCALE FACTOR CALCULATIONS	
12277	05-09-66	MODIFICATION OF IRIG ALIGNMENT PROCEDURE TO ELIMINATE REDUNDANT TESTS IN JDC'S 15179 AND 16179	
12585	05-27-66	25 IRIG APOLLO II GYRO RETEST PROGRAM	
12664	06-02-66	IMU 124 VERSUS Y IRIG S/N 4A28	
12739	06-09-66	IMU 124 - Y IRIG DATA	
12950	06-28-66	ENGINEERING INVESTIGATION REPORT ON GRYD 7A10 FROM SYSTEM LEM SPARE	
12957	06-28-66	ENGINEERING INVESTIGATION REPORT ON 25 IRIG F/N 7X37	
12983	06-30-66	PERFORMANCE ANALYSIS MEMORANDUM #7 CALCULATIONS OF GIMBAL ANGLES	
13063	07-12-66	QUALIFICATION OF MCE II GYROS WITH SUSPECTED PIVOT CEMENT PROBLEMS	
13327	08-09-66	Y PIPA LOOP FAILURE GEN 605	
13353	08-11-66	EFFECTS OF SHIFT OF IRIG SCALE FACTORS ON GYROCOMPASSING	
13431	08-17-66	EXPECTED INERTIAL INSTRUMENT PARAMETERS FOR MISSION 202	
13442	08-17-66	INVESTIGATION OF UNSTABLE X PIP BIAS GEN 604	
13425	08-19-66	RESULTS OF SIMULATION OF IRIG TORQUE SCALE FACTOR ERRORS & EFFECT ON GYROCOMPASSING	
13452	08-23-66	ADIA DETERMINATION OF IRIG TORQUE SCALE FACTOR ERROR	
13489	08-26-66	RESOLUTION OF VOLTAGE MARGIN TEST PROBLEM	
13512	08-29-66	IMU PERFORMANCE TEST IRIG COEFFICIENT SIGN DETERMINATION	
13643	09-09-66	BLOCK II GEN PANEL ASSY & SXT HAND CONTROLLER ASSEMBLY	
13875	10-05-66	INVESTIGATION OF X PIP BIAS INSTABILITY ON GEN 604	
13937	10-12-66	OM IMU-NB/AOT Z AXIS PHASE VIBRATION	
14049	10-24-66	OUTER GIMBAL DRIFT AND Y PIPA BIAS SHIFT IN LM LUNAR ASCENT-DESCENT VIBRATION	
14065	10-25-66	ABNORMAL CUTER GIMBAL STAB LOOP & Y PIPA LOOP OPERATION ENCOUNTERED DURING Y AXIS RANDOM VIB EXPOSURE	
14108	10-27-66	STATUS REPORT OF TESTING FOR FAILED PIP PREAMP CAPACITORS	
14112	10-28-66	BLOCK II/LEM +2.5 VDC T/M BIAS DURING 13S TURN-ON	
14162	11-02-66	WHEEL SUPPLY TURN-ON TRANSIENT	
14207	11-08-66	OUT-OF-SPECIFICATION QUADRATURE VALUES OBTAINED ON THE ISS LEVEL OF TESTING	
14257	11-10-66	TEMPERATURE CYCLING OF PIP'S	
14365	11-22-66	ADIA STABILITY CHECK ON QUAL TEST SYSTEM 604 X GYRO 7A-25	
14403	11-29-66	FAILURE OF THE Z PIP (ZAP-229) IN SYSTEM ISS 206	
14467	12-05-66	REVIEW OF IRIG PREAMP DESIGN RE: EFFECTS OF P/N 1010431 PARAMETER DRIFT	
14468	12-05-66	PIPA BIAS AND SCALE FACTOR CHECKS DURING ISS TESTING	

SUMMARY OF TECHNICAL REPORTS

INERTIAL SUBSYSTEM (ISS) (GROUP 071)

NUMBER	DATE	TITLE
AP-M-		
14493	12-07-66	ACED RETEST OF SPECIFIED BLCK I 25 IRIG GYROS
14508	12-08-66	PIPA HISTORIC SUMMARY FOR SYSTEM 606
14523	12-12-66	VERIFICATION OF THE FAILURE OF PIPA S/N 2AP-96
14534	12-13-66	RETEST OF G&N 206 AFTER REPLACEMENT OF PIPA PREAMPS
14548	12-14-66	PEAK TRANSIENT TEST
14607	12-19-66	PIPA STATUS
14629	12-21-66	STATUS OF PIPA DEGAUSSING
14739	01-06-67	STATUS REPORT ON PIP PROBLEMS FOR BLOCK II AND LEM
14743	01-06-67	APOLLO 25 IRIG INVESTIGATION
14838	01-17-67	PIPA FAILURE VERIFICATION, PIP'S 2AP-141, IAP-207, IAP-244
14839	01-17-67	DEGAUSS TESTS ON 2AP-154, PIPA ENGINEERING TEST STATION
14903	01-23-67	PIPA TEST DATA
14930	01-27-67	FAILURE OF THE X PIPA LOCP, SYSTEM 608
14992	02-02-67	IMU 604 PIPA ALIGNMENT CHANGES DURING VIBRATION
14993	02-02-67	GAUSSING EFFECTS ON IRIG SCALE FACTOR AND COEFFICIENTS (RESULTS OF TESTS ON LM IMU S/N 12)
15004	02-02-67	STABILITY OF ISS BLCK I/LEM IRIG SCALE FACTOR WITH SUPPLY VOLTAGE
15052	02-08-67	NARRATIVE SUMMARY REPORT FOR ISS TESTING OF BLOCK II PI-4
15125	02-16-67	ADDITIONAL DEGAUSS TESTS ON 2AP-154 (LEM) AND 2AP-179 (C/M) AT THE PIPA ENGINEERING TEST STATION
15258	03-03-67	G&N 17/50 POST-FLIGHT ISS TEST
15298	03-08-67	PIPA G/S OUTPUT PHASE ANGLES IN IMU S/N 12 (SYSTEM 604 SPARE)
15927	03-13-67	PIPA FAILURES
15982	03-20-67	FLOAT FREEDOM FAILURE OF GYRO 7A-168 IN SYSTEM 210X (IMU S/N 24)
15402	03-21-67	IRIG COEFFICIENT & PIPA SCALE FACTOR RETEST PROCEDURE FOR NON-CONFORMING UNITS,
15404	03-21-67	FLOAT FREEDOM FAILURE OF GYRO 7A-180 IN SYSTEM 210 (IMUSON24)
15432	03-23-67	IMU S/N 12 Z PIPA NULL
15446	03-27-67	IA ALIGNMENT PROBLEM ON GYRO S/N 7A-144 IN IMU 608X
15448	03-27-67	FURTHER ELABORATION OF THE IMU PERFORMANCE TEST PROBLEM
15459	03-28-67	PIPA STATUS
15533	04-05-67	FAILURE HISTORY OF PIP S/N 2AP-244 FROM SYSTEM 207
15535	04-05-67	REPLACEMENT OF INERTIAL COMPONENTS AT THE FIELD SITES
15615	04-17-67	Y IRIG FAILURE, T451, DURING ELECTRO MAGNETIC INTERFERENCE TESTING
15646	04-19-67	PROPOSED INVESTIGATION OF PARAMETERS CAPABLE OF PREDICTING 25 IRIG WHEEL LIFE
15995	05-25-67	ISS DATA SUMMARY
16018	05-31-67	ADDITIONAL PROCEDURES FOR JCC 12093 SUCH THAT THE OA UP AND OA DOWN EFFECTS ON NBD MAY BE EVALUATED
16037	06-01-67	1.0 CM/SEC 2 BIAS SHIFT ON THREE PIP'S OF IMU S/N 22 G&N 206
16039	06-01-67	REVIEW OF APOLLO 25 IRIG ALIGN SHIFTS PROBLEM
16042	06-02-67	STATUS OF GYROS PULLED FROM IMU S/N 9 (204 SPARE) Z POSITION
16171	06-15-67	BLK I INERTIAL INSTRUMENT ADOA CALIBRATION
16199	06-16-67	SPECIAL PROCEDURE FOR AURORA 85 IMU PERFORMANCE TEST SUCH THAT OA UP AND OA DOWN EFFECTS ON NBD
16195	06-19-67	ADIAJ TEST CONFIGURATION DIFFERENCES
16690	08-15-67	ISS 100 VERIFICATION TEST
16722	08-21-67	NONDESTRUCTIVE TESTING OF SUSPENSION MODULE FROM PIP 2AP 106.
16744	08-24-67	SUMMARY OF LEARNER SYSTEM IMU PERFORMANCE TESTS
16915	09-01-67	IRIG PREAMP GAIN PROBLEMS INCURRED DURING ISS TESTING
16893	09-11-67	IMU S/N 1 REFURBISHMENT ISS RETEST REPORT

INERTIAL SUBSYSTEM (ISS) (GROUP 071)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-			
16930	09-14-67		ENGINEERING INVESTIGATION ON GYRO 3A-26, IMU S/N 4
16934	09-14-67		BIAS SHIFT BLOCK I IMU S/N 1 Y PIP
16938	09-14-67		PIPA BIAS & SCALE FACTOR SHIFT BETWEEN PIPA BUILD UP & ISS TEST
16940	09-15-67		IRIG DIAGNOSTIC TEST CAPABILITY
16955	09-18-67		ENGINEERING INVESTIGATION ON GYRO 5A-6 IMU S/N 11
16962	09-18-67		ENGINEERING INVESTIGATION OF Y-PIPA (ZAP-105) ON IMU S/N 11
16977	09-19-67		INVESTIGATION OF PREAMP INDUCTANCE SUSCEPTIBILITY ON GYRO 7A-158
16984	09-20-67		EVAL. OF IMU HARNESS MOD. WHICH REDUCES LINE INDUCTANCE ASSOC. WITH IRIG PREAMP OSCILLATIONS
17089	10-04-67		ANAL. OF BLK II IMU LOCATION & TOL. RELATIVE TO SPACECRAFT COORDINATES
17148	10-05-67		SUMMARY OF LEM LEARNER GYROCOMPASSING TESTS
17223	10-11-67		IRIG TEMPERATURE CIRCUIT IN BLOCK II PSAAM,
17233	10-17-67		CHANGES IN SCALE FACTOR WITH TIME AND ACROSS DEGAUSS OF IM PIPAS
17491	10-18-67		-3.3 CM/SEC ² BIAS SHIFT-CN THE Y PIP OF IMU S/N 26 LEM 5
17504	11-10-67		MOISTURE SEALING CAPABILITY OF THE PROPOSED PSAC/M CONN:GYRO MOUNTING SCREWS GROMMETS
17526	11-13-67		GAUSSING TESTS PERFORMED ON BLOCK II AND LEM PIPAS
17549	11-15-67		SUMMARY OF BLOCK I TEST TOLERANCE CORRELATION DOCUMENTATION
17558	11-16-67		MIDDLE GIMBAL II 1/4 OFFSET PROBLEM,
17608	11-20-67		IRIG WHEEL RUNDOWN TIME - SYSTEM VS TEST STAND
17659	11-27-67		GEN OPERATING TIME IN THE SPACECRAFT, MAR
17714	12-04-67		EQUATION USED IN REFERENCE (1) FOR GYROCOMPASSING AZIMUTH ERROR DETERMINATION
17782	12-11-67		NOTES ON THE BLOCK II & LEM PIPA
17795	12-11-67		II 1/4 OFFSET PROBLEM
17867	12-12-67		IN-FLIGHT AND GROUND MONITORING OF TORQUE MOTOR CURRENT IN THE LM & CSM VEHICLES
17940	12-19-67		SUMMARY OF GAUSSING - DEGAUSSING TESTS PERFORMED ON LEM, BLOCK II & BLOCK PIPA'S
17959	01-03-68		SPECIAL TESTS TO DETERMINE VARIATION IN SUSPENSION CENTERING RATIO VS AXIAL POSITION
17967	01-31-68		CM VIBRATION LEVELS FROM THE FIRST SATURN V FLIGHT (AS-501)
18024	01-16-68		ISS DATE SUMMARY - RESOLVER ALIGNMENTS
18046	01-17-68		IRIG PERFORMANCE EVALUATION WITH CAPACITANCE ACROSS PRE-AMPLIFIER INPUT
18099	01-18-68		THERMAL ANALYSIS TO DETERMINE EFFECT OF IMU BLANKET REMOVAL
18094	01-23-68		GIMBAL MOTION DURING WORKMANSHIP VIBRATION
18221	01-26-68		PIPA TEMPERATURE VERSUS IMU RESTER CURRENT DUTY CYCLE
18253	02-02-68		INVESTIGATION OF FOAI BONDING EFFECTS ON GEN -II 1/4 OFFSET PHENSOMENIS
18308	02-02-68		ENGINEERING INVESTIGATION OF IMU PERFORMANCE, -874 MERU X IRIG DRIFT
18315	02-19-68		OPERATIONS CHARACTERISTICS OF NOMINAL PIPA BEHAVIOR IN A ZERO ACCELERATION FIELD
18351	02-21-68		5-INCH AUTOCOLLEMAICR ALIGNMENT FOR SXT LOS PARALLELISM
18373	02-23-68		PIPA NULL TRACKING TEST - PIPA STABILITY IN NEAR ZERO ACCELERATION
18412	02-29-68		REQUIREMENTS FOR USE OF FREON FOR FLUSHING & CLEANING CLOSED LOOP SYSTEMS
18415	03-01-68		RESOLUTION OF POST VIB. A/B FAILURE (IMU S/N 17, PSA S/N 14, PEA, SON 8)
18417	03-05-68		USE OF BARDEN RETAINERS CN FORWARD PROGRAM APOLLO II
18463	03-07-68		HORIZONTAL DRIFT TEST RESPONSE TO PIPA BEHAVIOR
18484	03-12-68		EFFECT OF DUAL MODING & NULL COINCIDENCE ON NEAR NULL PIPA BEHAVIOR
	03-13-68		TEST RESULTS CN GYRO 7C-203 FROM IMU S/N 25
	03-13-68		PIPA TEST STATION REPEATABILITY STUDY
	03-19-68		COMPARISON OF IRIG DRIFT RATE AS MEASURED BY THE COMPUTER & BY THE CDU METHOD
	03-20-68		PROPOSED ENGR INVESTIGATION INTO CAUSE OF OUT-OF-SPEC PIPA PHASE SHIFT IN IMU S/N 10 & 28

SUMMARY OF TECHNICAL REPORTS

INERTIAL SUBSYSTEM (ISS) (GROUP 071)

NUMBER	DATE	TITLE
AP-M-		
18510	03-22-68	RESULTS OF ENGR. EVALUATION OF GYRO 7A-175
18521	03-25-68	STATUS SUMMARY OF CATEGORY III FLOATS @ AC ELECTRONICS
18529	03-26-68	PIPA PHASE SHIFT MEASUREMENTS AT ISS TEST
18532	03-26-68	ADDITIONAL ERROR ANALYSIS OF BLACK I GYRO DRIFT TEST
18574	03-29-68	VIBRATION EFFECT ON A SINGLE DEGREE OF FREEDOM GYRO
18582	03-29-68	APOLLO II IRIG PREAMP. SCHEMATIC P/N 2010150
18651	04-08-68	VERTICAL DRIFT TEST RESPONSE TO PIPA BEHAVIOR-LEM (JDC 12624 - IMU PERFORMANCE TEST)
18707	04-17-68	ADDITIONAL GAUSSING TESTS
18753	04-22-68	THE EFFECT OF LOW BUS VOLTAGE ON THE BLOCK I-100 ISS
18776	04-23-68	RETEST RESULTS CF GYROS 4A6 & 5A7 FROM G&N 122 (FLIGHT 501)
18790	04-24-68	25 IRIG RETAINER MATERIAL
18855	05-03-68	TEST RESULTS CN GYRO 7A-160
18864	05-06-68	GYRO LAB. TEST RESULTS ON UNIT 7A-199
18882	05-07-68	ABBREVIATED IMU ALIGNMENT TESTS AFTER GYRO REPLACEMENT
18884	05-07-68	STATUS REPORT OF APOLLO II IRIG'S IN THE APOLLO GYRO LAB.
18926	05-14-68	ENG. TEST OF IRIG'S IMU #9
19128	06-11-68	IRIG
19137	06-12-68	TEST ORIENTATIONS FOR IRIG WHEEL DIAGNOSTIC CHECKS AT THE SYSTEM LEVEL
19147	06-13-68	PIP & IRIG TEMPERATURES MONITORING DURING IMU WORKMANSHIP VIBRATION
19160	06-14-68	STATUS OF MIT/IL PIPA GAUSSING INVESTIGATION
19187	06-20-68	SPECIAL TELEMETRY DCMLIST FOR JDC 12217 (IMU PERFORMANCE TEST)
19272	07-01-68	FLIGHTWORTHINESS OF 25 IRIG & MOD. II INSTRUMENTS
19403	07-19-68	PIP 3AP-330 FAILURE VERIFICATION TESTS
19410	07-22-68	BEARING SURVEY INVENTORY FROM SUBMITTAL
19443	07-24-68	BEARING SURVEY INVENTORY FROM SUBMITTAL
19472	07-29-68	DETERMINATION CF IMU STABLE MEMBER
19541	08-07-68	PERFORMANCE STATUS CF IMU S/N 29, X-IRIG
19565	08-12-68	PIP REQUIREMENTS
19612	08-15-68	INERTIAL ELEMENT AND BEARING ASSEMBLY CONTINGENCIES
19613	08-15-68	TRANSMITTAL OF V-78 GIL DATA
19643	08-22-68	ECCENTRIC BELLETS LOADING EFFECTS ON OPTICS TO IMU ALIGNMENT
19660	08-23-68	APOLLO II IRIG ASSIGNMENTS AND ENGINEERING DIRECTIVES
19664	08-26-68	NORMALIZATION CF BENDIX GYROS
19826	09-19-68	STATUS OF GYROS REMOVED FROM IMU'S REQUIRING STABLE MEMBER HARNESS REPLACEMENT
19827	09-19-68	PIPA TEST STATION REPEATABILITY TESTS
19854	09-24-68	IMU AUDIO SUSCEPTIBILITY & INDUCTANCE MARGIN OF THE MIT REDESIGN IIRG
19861	09-25-68	CROSS AXIS TRANSMISSIBILITY OF THE EARLY BLOCK II IMU - PEA/PTA WORKMANSHIP VIB. TESTS
19862	09-25-68	GYRO LAB RESULTS CN GYRO 7C-75
19952	10-04-68	BEARING SURVEY INVENTORY FROM SUBMITTAL
20133	10-18-68	INSULATION RESISTANCE CHECK OF 2 IRIG TORQUE CIRCUIT ON IMU-18
20155	11-06-68	SNEAK PATH INVESTIGATIONS
20158	11-06-68	GUIDANCE & CONTROL ALTITUDE REFERENCE INTERFACE MECHANIZATION OF LM
21186	11-14-68	COLOSSUS GYROCOMPASS
21229	11-21-68	TYPICAL SPECTRE OF 25 IRIG STAB LOOP ERROR SIGNAL
21249	11-19-68	LM TRANSLUNAR ISOLATION BUSS CAUSING GEN REVERSE BIAS

SUMMARY OF TECHNICAL REPORTS

INERTIAL SUBSYSTEM (ISS) (GROUP 071)

NUMBER	DATE	TITLE
AP-M-		
21288	12-03-68	LINEARITY OF PIPA DLAL MCDING
21310	12-04-68	CM & LM DISASTIMETER
21404	12-18-68	FINAL REPORT - IMU PERFORMANCE TEST INERTIAL INSTRUMENT PERTURBATION ANALYSIS
21551	01-22-69	IMU PERFORMANCE TEST SENSITIVITY TO JOGGING GYROS
21566	01-24-69	PIPA PERFORMANCE VERSUS IMU BLOWERS OR TEMPERATURE CONTROL MODULE FAILURE
21587	01-30-69	PIPA GAUSSING TEST RESULTS CN LEARNER IMU
21590	01-31-69	IRIG BALL & RETAINER BEAT FREQUENCY FILTERS
21603	02-06-69	ORBITAL INSERTION NAVIGATION MEASUREMENT UNCERTAINTIES - APOLLO 9
21628	02-10-69	LM STANDBY CURRENT NOISE TEST
21629	02-10-69	IMU PERFORMANCE TEST INERTIAL INSTRUMENT PERTURBATION ANALYSIS
21653	02-13-69	APOLLO 9 GYRO COMPASS
21810	03-17-69	TEST REPORT 4 VOLT NOISE TEST ON ENTRY MONITOR SYSTEM @ AUTONETICS
21852	03-26-69	CRACKED INSULATORS ON APOLLO HARNESSSES
21927	04-10-69	TEA/GEN CM BUS NOISE EVALUATION
21937	04-15-69	ELECTRONIC OVERSTRESS TESTS OF WIRING
21991	04-29-69	X-PIPA G/S OUTPUT SATURATION
22083	05-12-69	TEST RESULTS & ANALYSIS OF 400 HZ WHEEL NOISE
22089	05-12-69	PRE-LAUNCH GYRG & PIPA DATA COMPENSATION
22162	05-28-69	TORQUE REQUIREMENT FOR JACK SCREWS INTERCONNECT HARNESS NATIONAL CONNECTORS
22289	06-20-69	PIPA SUSPENSION MODULE PADDING RESISTOR REQUIREMENTS
22359	07-07-69	PICTURE OF FAILED BEARINGS FROM 7A SERIES APOLLO IRIG INSTRUMENTS
22418	07-16-69	SYSTEMS REQ. FOR 400 HZ MODULATION ON THE APOLLO IRIG PRE-AMP. OUTPUT
22562	08-25-69	APOLLO CE STATUS REPORT
22613	09-09-69	DIAGNOSTIC TESTING RESULTS CN APOLLO 9 X-Y PIPA LOOPS
22662	09-23-69	S/C IRIG BEARING BEAT FREQUENCY MEASUREMENT
22674	09-26-69	IRIG INSTALLATION PROCEDURE EVALUATION
22696	10-01-69	RESULTS OF TESTING APOLLO 9 COMMAND MODULE PIPA'S
22698	10-02-69	TEST OF KEARFOTT ALT. PIP 30 SEPT. 1969
22756	10-17-69	PIP WEIGHT & CENTER OF GRAVITY LOCATION
22770	10-21-69	MORTONICS RESULT. CN TR BEARING WHEEL BUILDS
22813	11-03-69	APOLLO 12 PRE-LAUNCH GYRG & PIPA DATA COMP.
22877	11-24-69	ALTERNATE ACCELEROMETER EVAL. PROG. REP. #2

SUMMARY OF TECHNICAL REPORTS

OPTICAL SUBSYSTEM (OSS) (GROUP 080)

NUMBER	DATE	TITLE
AP-M-		
00967	07-10-63	ZERO OPTICS MODULE ASSY 1015154 ELECTRICAL TESTS
01110	09-19-63	PERFORMANCE REQUIREMENTS - OPTICS CDU SERVO
01840	11-27-63	STATISTICAL STUDY OF SEXTANT ACCURACY
02000	12-27-63	COMPARISON OF ORBITAL TRACKING REQUIREMENTS WITH OPTICS RESOLVED MODE PERFORMANCE
02276	01-22-64	REVIEW OF THE LOS BENCH TEST PLAN
02501	02-18-64	ALIGNMENT MIRROR ASSEMBLY
02562	03-02-64	IMU SNAP-ON BELLOWS
02592	03-02-64	OPTICS SERVOS BUFFER TEST POINT DATA
02659	03-10-64	AUTO CORRELATION IN POWER SPECTRAL STUDY OF SEXTANT ACCURACY
03141	04-28-64	EFFECT OF VIBRATION ON OPTICAL EQUIPMENT
03230	05-06-64	EFFECT OF POLYCARBONATE MISALIGNMENT OF ANGLE MEASUREMENT ERROR
03335	05-19-64	RETROREFLECTING PRISM FOR SCT SHAFT ACCURACY TEST
03351	05-17-64	TEST FOR BLOCK I-F AND BLOCK II STAR TRACKER AND HORIZON PHOTOMETER
03830	07-09-64	ASSEMBLY OF NAVIGATION BASE AND OPTICAL UNIT (1899950) GEN 6
03941	07-23-64	SCT TRUNNION BALANCING RESISTOR
04078	08-07-64	LOW DRIVE RATE SMOOTHNESS REQUIREMENT FOR OPTICS SERVO
04210	08-24-64	OPTICS TO NAVIGATION BASE ALIGNMENT CHECK
04221	08-24-64	STATISTICAL ANALYSIS OF ERRORS IN SXT TRUNNION AND SHAFT RESOLVERS,
04466	09-22-64	SEXTANT SHAFT DRIVE SERVO STABILITY NON-LINEAR ANALYSIS
04513	09-23-64	ALIGNMENT MIRROR ASSEMBLY, 1016951
04537	09-30-64	CHAMPFERRING OF OPTICAL BASE
04604	10-07-64	CORRELATION OF CSS 6 AND GEN 6 TRUNNION ACCURACY
04807	10-23-64	THE EFFECT OF DUST ON THE MIRROR SYSTEM OF THE SEXTANT
04812	10-29-64	VELOCITY ERROR OF THE SCANNING TELESCOPE FOR BLOCK I SERIES 50
04815	10-30-64	SCT TRUNNION BALANCING RESISTOR
05153	12-11-64	GEN TEST MECHANIZATION REQUIREMENTS FOR BLOCK I-100 STAR TRACKER AND HORIZON PHOTOMETER
05159	12-11-64	TRANSMITTAL OF THE OPTICS SUBSYSTEM ERROR ESTIMATE BLOCK I-100 XDE 34-A-110
05332	01-06-65	PROPOSED RETEST PLAN FOR BLK I OPTICAL SUBSYSTEM AFTER REPLACEMENT OF A MALFUNCTIONING COMPONENT
05444	01-15-65	SUPPORTING DEVICE FOR RETROREFLECTING PRISM
05454	01-17-65	TESTING OF MAP & DATA VIEWER S/A 1 & 2 (AGE 7, 8; RESPECTIVELY)
05670	02-05-65	BLOCK I OPTICS MODULE CIRCUIT MODIFICATIONS
05739	02-12-65	MISALIGNMENT OF SXT LENS AND ST LOS IN TRUNNION
05751	02-15-65	RANDOM ERROR EFFECTS IN THE CSS SUBSYSTEM
05903	02-17-65	SXT TRUNNION 64X RESOLVER TRIM POT ADJUSTMENT ON GEN NO. 20
06071	03-11-65	MAP AND DATA VIEWER AGE 17
06189	03-17-65	PRELIMINARY APCLLC LOCK I-100 STAR TRACKER ANALYSIS
06247	03-24-65	REPLACEMENT OF RESOLVER TRIMMING MODULE ON OUA GEN 20
06324	03-31-65	OPTICS SUBSYSTEM ERROR ESTIMATE
06341	04-01-65	EVALUATION OF FIBERGLASS OPTICS SHROUD
06644	04-30-65	BLOCK II OPTICS/NAVIGATION BASE FIXTURE DESIGN CRITERIA
06705	05-12-65	LF4 OPTICAL TRACKER
06836	05-14-65	GEAR LIFE TEST REPORT
06903	05-20-65	QUALIFICATION TEST ON SCANNING TELESCOPE AND SEXTANT BELLOWS ASSEMBLY
07051	06-03-65	A.M.A. FIXTURE AZIMUTH LINE OF SIGHT (LOS) CALIBRATION FOR FIELD MARRIAGE OF OPTICS
07257	06-18-65	OSS MANUAL RESOLVED MODE CROSS-COUPLING

SUMMARY OF TECHNICAL REPORTS

OPTICAL SUBSYSTEM (OSS) (GROUP 080)

NUMBER	DATE	TITLE
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AP-M-		
07371	06-29-65	SCT POSITIONING ERROR
07453	07-01-65	APOLLO LEM OPTICAL TRACKER PROGRAM
07467	07-02-65	LEM OPTICAL TRACKER PROGRAM
07523	07-07-65	AIR VACUUM FOCLS REPCRT
07525	07-07-65	LEM OPTICAL TRACKER PROGRAM
07545	07-08-65	AGT AND GLYD DLMY WEIGHT AND CG REDUCT ON FROM 5 TO 3
07576	07-03-65	OPTICAL TRACKER PROGRAM
07679	07-16-65	RETICLE MCUNT AND DRIVE ASSEMBLY K-D-2140
07719	07-22-65	TRANSMITTAL OF TECHNICAL REPORT ON THE LEM ALIGNMENT OPTICAL TELESCOPE (VACUUM TEST FACTORS & SUPPLEMENT
07868	03-03-65	FTF MOTOR DRIVE AMPLIFIERS
07882	08-05-65	LEM OPTICAL TRACKER
07959	08-10-65	R AND I TESTING OF THE OUA LEARNER MODULE
07976	08-11-65	KOLLSMAN INVESTIGATION AND ANALYSIS OF THE SEXTANT INDEX MIRROR FLATNESS AND HARPAGE PROBLEM
08043	08-18-65	BLOCK I-50 (AGE 2 AND 17) CDU - TACH FORWARD TO SEXTANT TO MINIMIZE VELOCITY ERROR
08139	08-26-65	DAC SENSITIVITY TEST OF THE BLOCK I SERIES 100 OPTICAL SUBSYSTEM
08292	09-09-65	REISSE I, TABULAR LISTING OUA 121 RECEIVING-INSPECTION TEST RESULTS COMPARED TO KOLLSMAN FINAL ACCEP DATA
08700	10-06-65	LEM ACT TESTER FIRST ARTICLE TEST
08866	10-15-65	OPTICS DAC OPERATE LOOPS
08875	10-15-65	KIC PRELIMINARY REPORT ON EXUDATE AND HORIZON PROBLEM
08928	10-19-65	COMMENTS ON AET-5-452 KIC PROPOSAL FOR STAR HORIZON CALIBRATION
09068	10-20-65	TABULAR LISTING OUA 121 AND III OSS TEST RESULTS
09253	11-08-65	OPTICAL UNIT ASSY, CYGEN CVERPRESSURE TEMP TEST,
09338	11-12-65	OPTICS DESIGN EVALUATION INERTIA REPORT
09407	11-16-65	FINAL REPORT ON EXUDATE
09569	11-24-65	AZIMUTH REFERENCE FIXTURE MCD. & OUA/NB SHIPPING CONT. MOD.
09612	11-30-65	WINTERIM REPORT. MISSION CYCLING TEST, OPTICAL UNIT ASSEMBLY, AGE 120"
09633	12-01-65	FINAL REPORT LEM FACTORY TEST FIXTURES ERROR ANALYSIS REPORT LA-65-208
09702	12-03-65	INTERIM REPORT OPTICAL UNIT ASSEMBLY AGC 102 MISSION CYCLING TEST
09969	12-16-65	TRUNION AND SHAFT DRIVE ACCURACY TESTING ON SERIES 100 SYSTEMS.
10188	01-03-66	DESIGN CRITERIA OUA ELECTRONICS
10462	01-18-66	KOLLSMAN FINAL REPORT DESIGN EVAL OUA AGE 102 THERMAL VAC CYCLING & SIMULATED MISSION CYCLE TESTS
10465	01-18-66	REPORT ON ASSEMBLY OF NVPS STAR TRACKER (AA 64-260, DATED 16 DECEMBER 1965) KIC
10513	01-20-66	KOLLSMAN FINAL REPORT LEF, ACT TESTER ERROR ANALYSIS
10666	01-31-66	MECHANICAL DESIGN REVIEW OF TRACKER ASSY, BEACON ASSY, SERVO HEAD & SIGNAL PROCESS
10667	01-31-66	PROGRESS REPORT EM-I TRACKER AND S.T.E. STATION JANUARY 21-27, 1965
10709	02-02-66	KOLLSMAN REPORT - ENTITLED VIBRATION OVER-STRESS TESTS, OUA, AGE 101, DATED 12-31-65
10778	02-07-66	FINAL REPORT OF QUALIF TEST ON SCANNING TELESCOPE & SEXTANT BELLOW ASSEMBLY
10953	02-15-66	STATUS OF LOCKTITE TECHNICAL INTEGRATEY OF THE OUA AND AGT
10975	02-15-66	ALIGNMENT OPTICAL TELESCOPE
10998	02-17-66	AMENDMENT TO KOLLSMAN REPORT ENTITLED VIBRATION OVERSTRESS TESTS, OUA AGE 101 DECEMBER 31, 1965
11077	02-22-66	BLANKET MATERIAL FOR EYEPieces
11188	03-01-66	FAT TESTING OF ACTI AT GAEC
11196	03-01-66	KIC ENG ANAL OF POT PRISM MFG, STUDY OF MFG TOL ON ERROR GRADIENT, ANAL OF PHOTOMULTIPLIER DARK NOISE
11222	03-02-66	OUA OPTICAL ELEMENTS
11439	03-15-66	OSS TESTING CERTIFICATION OF THE 5 INCH COLLIMATOR

SUMMARY OF TECHNICAL REPORTS

OPTICAL SUBSYSTEM (OSS) (GROUP 080)

NUMBER	DATE	TITLE
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AP-M-		
11471	03-17-66	QUA LOCKING TEST RESULTS PER ED 3332
11529	03-21-66	KOLLSMAN REPORT ENTITLED "ENGINEERING ANALYSIS EVALUATION PROGRAM OPTICAL UNIT ASSY."
11604	03-25-66	SXT TDA ZERO CUA 201 (S/N 012)
11681	03-30-66	TRACKER ERROR SIGNAL LINEARITY INVESTIGATION (AA-66-306)
11707	03-31-66	APOLLO SCANNING TELESCOPE SHAFT DRIVE NON LINEAR ANALYSIS
11701	03-31-66	THE ALIGNMENT ERROR BETWEEN THE SXT STLS AND SCT LOS IN TRUNNION OF OPTICAL SUBSYSTEM 121
11763	04-04-66	BLK II SEXTANT ALIGNMENT BAR REQUIREMENTS
11820	04-07-66	DERIVATION OF ADT QUALIFICATION VIBRATION TEST
11850	04-11-66	VIBRATION INPUTS TO THE ADT
11900	04-13-66	KOLLSMAN REPORT ENTITLED "DESIGN EVALUATION MECHANICAL INTEGRITY AGE101 (AA66-307)
11947	04-15-66	LEAK TESTING OF OPTICAL UNIT A. EMBLIES AT AC ELECTRONICS
12003	04-17-66	SEXTANT SPEED CONTROL PROBLEM
12001	04-19-66	TABULAR LISTING OF CSS TEST RESULTS FOR BLK II SYSTEMS
12092	04-26-66	INVESTIGATION OF ALC TRUNNION AND SHAFT AXIS SHIFTS
12397	04-26-66	CALIBRATION OF STAR TARGETS
12448	05-19-66	MODIFICATION OF SCT AND SCT MCA'S IN FUNCTIONAL TESTS EP-1
12474	05-20-66	DEFINITION OF THE RANDOM TRACKING ACCURACY OF THE LEM OPTICAL TRACKER
12857	06-17-66	REPAIR OF QUA S/N C15 (AGE 203)
12865	06-20-66	PLAN FOR INCCRP. OF STAINLESS STEEL BELLOWS IN BLOCK II
12871	06-20-66	AUGMENT OF SXT STAR LINE-OF-SIGHT ABOUT SHAFT AXIS, KIC S/N 012, 014, 015, 016 (GEN 202, SPARE, 203 & 204)
12884	06-22-66	REQUIRED RETEST OF QUA S/N C16, GEN 203
13024	07-07-66	HEATER BLANKET CN EYEPieces
13082	07-14-66	QUA 201A BEARING FAILURE ANALYSIS
13112	07-18-66	CLEARANCE FOR BLOCK I CN OPTICS IN S/C 011
13145	07-07-66	HEATER BLANKETS CN EYEPieces
13190	07-25-66	OPTICAL UNIT EYEPiece
13287	08-03-66	EFFECTS OF OPTICAL UNIT THERMAL TESTING
13580	09-07-66	BLOCK I/100 CSS COMPATIBILITY TO BLK II GSE
13646	09-12-66	BLK I/100 OPTICS OPERATION OF TRUNNION LOOP IN COMPUTER MODE
13654	09-12-66	EFFECTS OF OPTICS AXIS ERROR SHIFTS ON MISSION 205 PERFORMANCE OBJECTIVES
13688	09-16-66	BLK I/50 OPTICAL SUBSYSTEM MOTOR FAILURE
13721	09-20-66	BLK I/50 OPTICAL SUBSYSTEM MOTOR FAILURES
13795	09-28-66	OPTICAL SUBSYSTEM TESTS S/C 12
13820	09-27-66	PERFORMANCE OF CSS WITH 800CPS 19V POWER SUPPLY INSTEAD OF 28V
13824	09-30-66	EYEPiece FAILURES CN QUA S/N-10
13852	10-03-66	PERFORMANCE OF CSS WITH 800CPS 19V POWER SUPPLY INSTEAD OF 28V
13858	10-04-66	QUA ENGINEERING EVALUATION TEST WITH APTPS MOUNTED
14002	10-18-66	MEASURING SXT 16X ARC 64X RESOLVER ALIGNMENTS FOR BLK II QUA
14011	10-19-66	MOTOR-TACK BEARING LUBRICATION
14012	10-19-66	MOTOR-TACK LUBRICATION EVALUATION TESTING
14070	10-25-66	PERFORMANCE OF A BLOCK I SERIES 100 OPTICAL SUBSYSTEM WITH 800 CPS -90 DEGREE POWER SUPPLY
14097	10-27-66	REDUCED POWER LEVEL OF THE OPTICS MOTOR TACH
14141	11-01-66	QUA 201A ACCURACIES REQUIRED FOR EMI TESTING
14318	11-17-66	THERMAL VACUUM TESTING OF A BLOCK II QUA
14376	11-23-66	FINE ALIGNMENT AND ADT FUNCTIONAL ACCURACY REQUIREMENTS

SUMMARY OF TECHNICAL REPORTS

OPTICAL SUBSYSTEM (OSS) (GROUP 080)

NUMBER	DATE	TITLE
AP-M-		
14477	12-06-66	G&N 205 (QUA S/N 16) POSSIBLE MISALIGNMENT BETWEEN SXT STLOS AND LLOS IN TRUNNION AT ZERO
14492	12-06-66	OBSERVATIONS OF ADT AT KIC
14685	01-03-67	SPECIAL THERMAL VACUUM TESTING OF QUAS S/N 017, 018 AND 020
14692	01-03-67	ANALYSIS OF DEPOSIT TAKEN FROM THE SEXTANT INDEX MIRROR OF G&N 17 OPTICAL UNIT
14697	01-04-67	PERFORMANCE OF THE ALIGNMENT OPTICAL TELESCOPE (ADT)
14747	01-06-67	CLEANING OF QUA S/N 2 (ORIGINALLY G&N 121) AND POSSIBLE CORROSION OF QUA BASES
14785	01-11-67	ADT 608 PERFORMANCE
14904	01-24-67	OPTICAL SUBSYSTEM 207 (QUA S/N 18) PROBLEMS
14977	02-01-67	INVESTIGATION INTO THE SXT SHAFT RESIDUAL IMAGE MOVEMENT OF QUA'S S/N 18 AND 20 ON 12/6/67
14984	02-01-67	CHANGES IN OPTICS TESTING FROM R&I TO G&N
15048	02-08-67	QUA SPRING BACK INVESTIGATION
15074	02-10-67	QUA SPRING BACK PROBLEM
15100	02-14-67	WEIGHT AND CENTER OF GRAVITY OF THE QUA
15115	02-15-67	QUA S/N 6 (G&N 111) REMOVED FOR USE IN OPER QUAL TEST OF BLK I CONFIG APTPS & REJECTABLE DUST COVERS
15130	02-17-67	QUA 209 SELL-OFF HISTORY
15391	03-20-67	POSSIBLE ELECTRICAL SOLUTIONS TO THE "SXT SHAFT RESIDUAL MOVEMENT" PROBLEM
15464	03-28-67	TRUNNION DRAG PROBLEM
15489	03-31-67	REFURBISHMENT OF QUA 201A (QUALIFICATION UNIT)
15538	04-05-67	SXT TRUNNION CREEP OF QUA S/N 024 (OSS 208)
15592	04-13-67	INSTALLATION OF TRUNNION SPRING FIX
15598	04-13-67	G&N 123 OPTICS PROBLEMS
15605	04-14-67	QUA TRUNNION "CRAG"
15624	04-14-67	OPTICS SUBSYSTEM MID-COURSE OPERATIONAL REQUIREMENTS
15634	04-18-67	SINGLE PHASING METRIC QUA S/N 024 (OSS 208)
15650	04-19-67	TEST PLAN FOR OPTICS BIAS PROBLEMS - G&N SYSTEM 206
15660	04-20-67	EYEPIECE PROBLEM AREAS
15696	04-25-67	POSSIBLE ELECTRICAL SOLUTIONS TO THE OPERATIONAL DEFICIENCIES OF THE BLOCK II OPTICAL SUBSYSTEM
15711	04-25-67	QUA PROBLEMS
15747	05-01-67	CLEANING OF ADT RETICLES AT GAEC
15748	05-01-67	QUA S/N 029 PROBLEMS IN AC R&I
15803	05-05-67	THERMAL ANALYSIS OF BLOCK II OPTICS SYSTEM USING NEW ABLATIVE COVERS
15869	05-12-67	REMECHANIZATION OF THE G&N IC PANEL FOR NASA SUGGESTED OPTICS CHANGES
16111	06-09-67	REPLACEMENT OF ADT PRESSURE SEAL 6011143
16146	06-14-67	OPEN FAILURES ON QUA S/N 014
16255	06-27-67	RECOMMENDED SOLUTION TO BLK II OPTICAL SUBSYSTEM OPERATIONS DEFICIENCIES
16702	08-16-67	OPEN FAILURES ON QUA S/N 014
16710	08-18-67	NON-METALLIC MATERIALS OPTICS SUBCONTRACT
16736	08-23-67	MATERIAL FOR OLA AND ADT EYEPIECE BLANKET
16741	08-23-67	QUA BERYLLIUM CORROSION PROTECTION
16822	09-05-67	ADT CORROSION PROTECTION
16917	09-13-67	CORROSION PROTECTION OF QUA'S
16922	09-13-67	ADT HEATER BLANKETS
17091	10-05-67	OPTICAL UNIT ASSEMBLY TRUNNION DRIVE AXIS ZERO (SXT TDA ZERO)
17460	11-08-67	INSULATION BLANKET REPLACEMENT OF EYEPIECES
17479	11-09-67	UTILIZATION OF EYEPIECES & FLAMMABILITY FIXES

SUMMARY OF TECHNICAL REPORTS

OPTICAL SUBSYSTEM (OSS) (GROUP 080)

NUMBER	DATE	TITLE
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AP-M-		
17715	12-11-67	REFLOWS TYPE SEAL GLARDS
17770	12-15-67	THERMAL VACUUM TEST OF EYEPIECE STORAGE UNIT COVER
17854	01-02-68	NOTES ON THE BLOCK II OPTICAL SUBSYSTEM
17886	01-25-68	- GUA - EYEPIECE - MATERIAL REPORT
18362	03-06-68	SXT PUNNIC OPERATIONS IN ZERO OPTICS MODE
18367	03-07-68	AGC S/N 14 - E-MEMORY CONTENTS (MISSION 501 AGC)
18368	03-07-68	SUBMITTAL OF OPTICS FIELD CF VIEW INFORMATION
18497	03-21-68	DISCREPANCY MATRIALS PHOTOGRAPHY SUBMISSION, OUA, AGC205/ S/N 017 OPTICAL BASE INTERIOR & COMPONENTS
18603	04-02-68	MISALIGNMENT OF GUA TO N/B, GEN 204
18733	04-18-68	GUA S/N 21 CORRECTIVE ACTION
18754	04-22-68	ADJUSTABLE EYECUPS & SCT PRISM HSG. QUICK DISCONNECT CORREC. ACTION FOR THE SCT
18777	04-23-68	PROBLEM SUMMARY CF GUA S/N 25 AT NR
188CC	04-25-68	SPACECRAFT TEST TO VERIFY SXT TRUNNION LIMIT STOP SPRING INSTALLATION
18911	05-10-68	GUA STOP MECHANICAL
18974	05-20-68	GUA - SXT & SCT WINDOW COVERS
19178	06-19-68	GUA S/N 18 TELESCOPE SHAFT DRIVE CONDITION
19278	07-01-68	PROBLEMS ASSOCIATED WITH THE LOOSE PIN IN THE LIMIT STOP MECHANISM
19292	07-02-68	UNBALANCE OF OUA SXT DUE TO APTPS
19318	07-05-68	STRESS ANALYSIS OF GUA SXT TRUNNION LIMIT STOP PIN MOUNTING
19624	08-19-68	GUA S/N 013 SCT TRUNNION OSCILLATIONS
19640	08-21-68	POST FLIGHT LEAK TEST OF GUA & BELLOWS ASSEMBLY S/C 020, G/N 123
19790	09-13-68	GUA BELLOWS
19820	09-19-68	OPTICS SUPPORT FOR THE APOLLO NAVIGATION TASK SIMULATOR
19869	09-25-68	ENGINEERING REVIEW CF GUA S/N 32 OVERVIBRATION
19914	10-01-68	OPTICS OPERATIONAL LIMITATIONS DURING LANDMARK TRACK
20093	10-23-68	GUA SERIAL NUMBER 32 EVALUATION/RECOMMENDATIONS
21554	01-22-69	SXT & SCT ASSEMBLY TEMPERATURE RISE
21623	02-07-69	AUT USAGE DURING LM OPERATIONS ON THE APOLLO 9 MISSION
21654	02-13-69	APOLLO 8 SEXTANT MIRROR TRUNNION OFFSET CAUSED BY THE ANTIBACKLASH SPRING
21673	02-19-69	PROPER ORIENTATION CF EYEPIECE STORAGE UNIT RETAINER SPRING & RETENTION CRITERIA
21688	02-20-69	OPTICS LIMITATIONS DURING LANDMARK TRACKING ON THE APOLLO 9 MISSION
21825	03-19-69	SEXTANT MIRROR HOUSING DOUBLET LENS ASSY.
21920	04-03-69	GUA 27 TELESCOPE SHAFT BIND INVESTIGATION
21946	04-16-69	VACUUM TEST OF DESSICANT FILLED BASKETS USED IN THE OUA ENVIRONMENTS PROTECTIVE COVER SET.
22081	05-06-69	SXT TRUNNION AXIS OFFSET PROBLEM
22098	05-14-69	EYEGUARD LOCKING RING INVESTIGATION
22101	05-14-69	POST FLIGHT OUA MOTOR TACHOMETER LUBRICATION ANALYSIS
22205	06-05-69	FORCE REQUIRED TO MOVE SPHERICAL SHELL ON SHAFT
22240	06-11-69	ORIENTATION OF TELESCOPE APTPS ON TELESCOPE HEAD
22377	07-08-69	GUA COUNTER PIN PROBLEM AND CORRECTIVE ACTION SUMMARY
22439	07-24-69	REFURBISHMENT CF EYEPIECES AND FILTERS
22548	08-20-69	GUA LUB. CHEMICAL ANALYSIS
22753	10-16-69	GUA MOTOR - TACH LUBRICATION INVESTIGATION REPORT
22880	11-24-69	OPTICS ZERO POSE DRIFT
22961	12-17-69	GUA BEARING LUBRICATION STUDY

SUMMARY OF TECHNICAL REPORTS		
COMPUTER SUBSYSTEM (CSS) (GROUP 090)		
NUMBER	DATE	TITLE
AEM-0012A	8/17/67	Interface Circuits for Telemetry Monitor
0045	10/23/67	Micrologic Failures, Welding Techniques
0064	12/11/67	Low Temperature Environment, Block II and LEM Rope Modules
0121	9/23/68	AGC Cable Connections
0127	9/27/68	Engineering Test on AGC, S/N 54, and A-Harness, S/N 23
0136	12/2/68	Acceptance Test Procedures and Performance Boundaries for SDS Hybrid Coupler Unit

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
AP-M-		
01249	19-11-63	AGC CLOCK WARMUP TIME
01583	10-28-63	AGC K INTERFACE CIRCUITS
01722	11-12-63	DISCREPANCIES IN DELTA PULSES RECEIVED BY AGC
02008	12-17-63	PROGRAM DOCUMENTATION REPT #1 PRE-LAUNCH ALIGNMENT
02178	01-10-64	PROGRAM DOCUMENTATION REPT #5, INTERPRETER (ECLIPSE AGC & PROGRAM COLLECTION)
02207	01-15-64	PRELIMINARY STU REPORT
02305	01-24-64	COMMAND MODULE & LEM G & A MEASUREMENTS REQUIREMENT
02352	02-03-64	INVESTIGATION OF THE CAUSES OF TRANSFORMER FAILURE
02848	03-30-64	REQUEST FOR INFORMATION ON CTS OPERATION IN GEN SYSTEM TEST
02938	04-07-64	AGC CALIBRATION CONSOLE OPERATION
03034	04-16-64	FINE ALIGN COMPUTER (FAC)
03339	05-13-64	FINE ALIGN COMPUTER (FAC) SPECIFICATION
03534	06-04-64	ILLUMINATION OF APOLLO LAMP 1010268-2
04029	08-04-64	STU DATA CONVERSION
04417	09-16-64	INVESTIGATION OF FRESH START PROBLEM
04723	10-20-64	AGC POWER SUPPLY INVESTIGATION
04744	10-22-64	AGC ACCEPTANCE TESTS
04844	11-03-64	BLOCK I AGC DIGITALS
05109	12-07-64	APPROXIMATIONS MADE IN THE GYRO COMPASSING TEST TO FACILITATE AGC PROGRAMMING
05155	12-11-64	BACKGROUND INFORMATION TO SUPPLEMENT FAILURE ANALYSIS OF AGC 6 MODULES
05174	12-11-64	AGC TELEMETRY FAIL ALARM
05254	12-23-64	ROPE MODULES-COMPUTER PROGRAM CORRELATION
05330	01-06-65	RECOMMENDATION FOR IMPROVING CAPABILITY FOR ANALYSIS OF COMPUTER RELATED SYSTEM PROBLEMS AT ACSP
05381	01-11-65	CHANGE OF CTS USAGE
05675	02-08-65	AGC SLED TEST COMPUTER PROGRAM
05686	02-09-65	AGC GYRO PULSING
06089	03-12-65	NAS 9-497 TRANSMITTAL OF RAYTHEON FINAL REPORT APOLLO GUIDANCE COMPUTER THERMAL MODEL TEST
06348	04-02-65	PROPOSED BLOCK II DIVIDER CIRCUIT
06601	04-25-65	BLOCK I SERIES 100 AGC STRUCTURE GROUND
06669	05-03-65	THRUST VECTOR CONTROL FOR LUNAR MISSION AND FLIGHT 202-GENERAL DESCRIPTION (BLOCK I)
06834	05-14-65	INTERMITTENT FAILURES DURING R & D TESTING OF AGC-112
07040	06-03-65	GROUNDING ARRANGEMENT FOR AGC OPERATION CONSOLE
07083	06-07-65	ENGINEERING INVESTIGATION OF "GCJAM" PROBLEM ON G&N SYSTEM 12/50
07295	06-22-65	AGC STANDBY OPERATION
07441	07-01-65	GOJAM INVESTIGATION
07442	07-01-65	INVESTIGATION OF UNVERIFIED FAILURE INVOLVING MOMENTARY ILLUMINATION OF ALL NAV. DSKY FAILURE INDICATOR
07567	07-09-65	STL BEACON FOR LEM OPTICAL TRACKER
07572	07-09-65	RAYTHEON BLOCK I-100 DSKY ELEC. LUMINESCENT .GHT
07583	07-12-65	PURPLE PLAGUE 6752 TRANSISTORS
07708	07-21-65	GUIDANCE COMPUTER SIMULATION EFFORT
08339	09-14-65	INADEQUATE ACCEPTANCE TESTING OF THE AGC SUBSYSTEM AT RAY.
08354	09-14-65	UNIQUE CONFIGURATION OF PROTOTYPE COMPUTERS PC1 & PC2
08953	10-14-65	BLOCK II COMPUTER CHECKOUT AT MIT BREADBOARD STAGE
09054	10-27-65	TEST PLAN FOR PARITY FAIL INVESTIGATION
09056	10-27-65	BLOCK II COMPUTER LOGIC EQUATION & INTERNAL SIGNAL LISTING

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
AP-M-		
09226	11-09-65	A PROPOSED AGC CHANGE TO CORRECT TRANSIENT PARITY FAILS FROM FIXED MEMORY RESULTS OF PARITY FAIL INVESTIGATIONS
09227	11-08-65	BLOCK II AGC COUNTERS
09259	11-09-65	REDESIGN TRAP CIRCUIT - A- 37 LOGIC MODULE
09357	11-12-65	ACCEPTANCE & FIELD TESTING OF DSKY ELECTROLUMINESCENT LIGHTS
09543	11-23-65	GEN 109 NAV DSKY OPERATION
09709	12-03-65	MICROLOGIC TIME RISE PROBLEM
09721	12-06-65	MAIN DSKY - NIGHT WATCHMAN INTERMITTANT FAILURE
10201	01-04-66	FAILURE ANALYSIS OF ROPE MEMORY MODULE
10255	01-05-66	MODIFIED FLAT PACK MICROLOGIC UNITS
10315	01-07-66	BLOCK II CMC/LGC DOWNLINK
10404	01-14-66	GOJAM INVESTIGATION ON BLOCK 100 COMPUTERS
10618	01-26-66	STATUS REPORT OF EQUATION LEVEL BLOCK 100 IMU DIGITAL SIMULATION
10633	01-27-66	MECHANIZATION OF A REAL TIME INTERRUPT FACILITY IN THE BLOCK I-100 APOLLO GUIDANCE COMPUTER SIMULATION
11178	03-01-66	BLK II RING COUNTER PROBLEM
11279	03-07-66	SECOND STATUS REPORT OF EQUATION LEVEL BLOCK 100 IMU DIGITAL SIMULATION
11342	03-10-66	BLOCK II COMPUTER COUNTER INCREMENT PROBLEM
11401	03-14-66	INSTRUCTION MANUAL FOR PCWER SUPPLY MODEL PH30-8.5 BOV S1723
11438	03-15-66	BLK II COMPUTER INTERRUPT PROBLEM
11513	03-18-66	BREADBOARD BESTING OF BLOCK II ROPE DRIVER
11580	03-24-66	RAYTHEON SUBCONTRACT MANAGEMENT OFFICE RESPONSE TO INVESTIGATION OF AIRBORNE COMPONENTS PRESSURIZATION
11783	04-05-66	VULNERABILITY OF BLK I-100 COMPUTERS TO CHANGES IN ERASABLE MEMORY
11907	04-13-66	FIELD VERIFICATION OF BLOCK II COMPUTERS
12345	05-12-66	EMI TESTING ON LGC 602
12363	05-13-66	APOLLO BLOCK II AND LEM COMPUTER DESIGN REVIEW REPORT DATED 5/9/66 (REVISED 5/23/66)
12682	06-03-66	PROGRAMMING FIX FOR THE BLOCK 100 COMPUTER DOUBLE ENTRY PROBLEM
12829	06-15-66	FOAM POTTING OF MAGNESIUM A/B TRAYS
13015	07-06-66	MODIFICATION TO AGC DOWNLINK EDIT PROGRAM (GEN 010)
13084	07-14-66	RELAY NONCLOSURE CONTAMINATION EFFECTS
13195	07-26-66	EXPANSION OF THE FIXED MEMORY IN THE BLOCK II COMPUTER
13232	07-29-66	SUGGESTIONS FOR SAVING COMPUTER MEMORY SPACE IN FLIGHT ROPES
13461	08-23-66	THERMAL VACUUM OVERSTRESS TESTING OF THE AGC SUBSYSTEM
13644	09-09-66	DSKY HUMIDITY RETEST HISTORY GEN 111
13782	09-27-66	EARTH LANDING SHOCK TEST OF DSKY WITH INSULATORS
13821	09-29-66	AGE S/C CSS RENDEZVUS RADAR SHAFT & TRUNNION ANGLE CONVERTER
13989	10-18-66	BLK II ELECTROLUMINESCENT LIGHTS
14016	10-19-66	AGC ROPE DRIVER MODULE TEMPERATURE MARGIN
14071	10-25-66	LGC WARNING EVENT DISPLAY, CG 9001
14268	11-14-66	FLAT PACK GRCS LEAK DETECTION AT RAYTHEON
14341	11-21-66	EXPANDED COMPUTER MEMORY
14411	11-29-66	REVIEW OF ALARM MODULE
14524	12-12-66	STATUS OF PIN CORROSION INVESTIGATION
14587	12-16-66	APOLLO AGC OFL-1006399 DIODE (TIL)
14620	12-20-66	GUIDANCE COMPUTER ICC6395
14621	12-20-66	I/L ALARM INDICATORS
14654	12-27-66	

COMPUTER SUBSYSTEM (CSS) (GROUP 090)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

NUMBER	DATE	TITLE
AP-M-		
14729	01-05-67	MALCO PIN CORROSION - APOLLO GUIDANCE COMPUTER
14765	01-10-67	PROPOSAL FOR USING ACE COMPUTER DRIVEN EVENT CAPABILITY FOR LEM 2 AT KSC
14769	01-11-67	INVESTIGATION OF TRANSIENT FAILURE OF AGC 123
14820	01-16-67	STATUS OF C04 AGC FAILURE INVESTIGATION
14882	01-20-67	DISPLAY AND KEYBOARD ILLUMINATION
14892	01-23-67	UNCONFIRMED FAILURE IN D-3 DSKY
14931	01-27-67	APOLLO COMPUTER RELAYS 1005001 AND 1005003
15055	02-08-67	CM AND LEM COMPUTER PROGRAMS
15148	02-21-67	STATUS OF CORE ROPE MODULES, BLOCK 1
15481	03-30-67	PREVENTION OF DAMAGE TO THE ELECTRO-LUMINESCENT ELEMENT IN THE DSKY PANELS
15498	04-03-67	COMPUTER DSKY STORAGE AND SHIPMENT
15523	04-03-67	EFFECT OF BARCOCK RELAYS ON LM-1 MISSIONS DSKY/VEHICLE INTERFACE
15715	04-03-67	APOLLO AGC VIBRATION LIMITATIONS
15727	04-27-67	SOLID STATE DSKY IDM'S
15814	05-04-67	KNOWN PROGRAM PROBLEMS AND ERROR EXISTING IN THE SUNDIAL SYSTEM TEST ROPES
15817	05-08-67	MULTILAYER BOARDS ACS
15880	05-15-67	RETROFIT OF S/N 17 C-3 AGC
15959	05-24-67	CONDENSATION ON BLOCK II/IM COMPUTER S/N RAY 8
15972	05-24-67	APOLLO COMPUTER TRANSISTOR SCD-1006323
15987	05-26-67	DISPOSITION OF D-5 DSKY S/N 38
15998	05-26-67	STILL & MOTIC PICTURE MAT'L OF RAYTHEON COMPUTER TESTING
16022	05-31-67	CSM SUBSYSTEM MECHANICAL MAT'L TEST READINESS STATEMENT - GEN
16059	06-05-67	AGC WORST CASE DESIGN APPLICATION
16078	06-06-67	USE OF 1006377 TRANSISTOR FOR INDICATING DRIVER MODULES (IDM)
16094	06-08-67	RESTARTS
16136	06-12-67	APOLLO GUIDANCE COMPUTER MODULE MANUFACTURE AND TEST
16148	06-13-67	AGC ERASABLE MEMORY MODULES
16149	06-14-67	CM AND LEM COMPUTER PROGRAMS
16150	06-14-67	TXM PERFORMANCE IN THE AREA OF DSKY RELAYS
16155	06-14-67	LEAK TESTING OF APOLLO COMPUTER INTEGRATED CIRCUITS
16182	06-16-67	APOLLO GUIDANCE COMPUTER ERASABLE MEMORY MODULES
16201	06-23-67	COMPUTER DIODES, GDC AND FAIRCHILD
16235	06-23-67	GUIDANCE COMPUTER DIODE, 1006399
16245	06-23-67	USE OF NCN-CLASS A DSKY'S FOR AGC SALES
16341	07-07-67	INTEGRATED CIRCUIT FLATPACK LEAK TESTING
16342	07-07-67	6323 TRANSISTORS FOR AGC APPLICATION
16367	07-11-67	5001/5003 DSKY RELAY
16369	07-11-67	AGC FAIRCHILD 6323 TRANSISTOR
16371	07-11-67	ERASABLE MEMORY CORE BASE MATERIAL AT SPRAGUE
16378	07-12-67	TXM COMPUTER DSKY RELAY 1
16379	07-12-67	AGC DSKY 12.5 VOLT RELAYS
		R&QA MEETING ACTION ITEM RAYTHEON AGC SYSTEM TEST PROBLEMS
		DSKY IDM FAILURE VERIFICATION
		AGC NEWSPEAK RCPE RESTRICTIONS

COMPUTER SUBSYSTEM		JSS) (C OUP 090)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE				TITLE
AP-M-					
16380	07-12-67				ROPE CORE PROBLEMS
16513	07-28-67				RETROFIT OF DSKY D5, D9 AND D10
16514	07-28-67				TROUBLE SHOOTING OF C-2
16539	08-02-67				AGC KEMET CAPACITOR P/N 1006755
16554	08-04-67				AGC 4V NOISE TEST CONDUCTED AT MIT ON 10-11 JULY 1967
16556	08-04-67				TWX HIGH VOLTAGE DSKY RELAYS
16565	08-04-67				APOLLO COMPUTER FLATPACKS
16572	08-04-67				LAMESH SETS
16576	08-07-67				ANALYTICAL STUDY OF TRAY A COVER OF BLK II/LEM AGC
16580	08-07-67				LEM AGC MOUNTING BCLTS
16587	08-07-67				APOLLO COMPUTER TRAY A COVER
16588	08-07-67				COMPUTER DSKY TROUBLESHOOTING
16647	08-11-67				COMPUTER TRAY "A" COVER ANALYSIS
16649	08-11-67				AGC CRITICAL PARTS
16650	08-11-67				AGC FINAL TEST ROPES
16659	08-14-67				APOLLO GUIDANCE COMPUTER NAMEPLATE
16695	08-16-67				COMPUTER LEAK TESTING
16726	08-21-67				COMPUTER C-16 (SCN RAY 32) TRAY A COVER DEFLECTION TEST
16810	09-01-67				FELTORS RELAYS
16811	09-01-67				FLATPACK CONTAMINATION
16857	09-07-67				GUIDANCE COMPUTER PIN CORROSION
17030	09-25-67				DSKY ELECTROLUMINESCENT PANEL
17060	10-02-67				ASSESSMENT OF FILTER RELAYS
17113	10-06-67				CM AND LEM COMPUTER TESTING AND PAC TAPES, MAGNETIC TAPES
17124	10-10-67				FLAMMABILITY PROTECTION FOR DSKY CM/LM
17332	10-26-67				SPRING FAILURE DSKY PUSHBUTTON ACTUATION SPRING
17356	10-30-67				DSKY PUSHBUTTON CAP HOUSE ASSY.
17357	10-30-67				APOLLO DSKY FIRE FIX
17362	10-30-67				EXPLANATION OF LM-1 RESTARTS AT KSC,
17386	11-01-67				LM ALT-ALT RATE METER TEST
17500	11-10-67				AGC E-MEMORY ENCAPSULANT INVESTIGATION
17515	11-14-67				SUMMARY REPORT ON PROTOTYPES OF A RETROFIT OF FIRE FIX FOR THE ALARM INDICATOR OF THE DSKY
17711	12-09-67				- LM-LGC RESTARTS
17753	12-12-67				ASSESSMENT OF FILTER'S RELAY "OPEN" CONTACT PROBLEM
17819	12-21-67				DSKY IDM VIB CORRELATION AND EVALUATION
17865	01-03-68				LM DSKY - STRENGTH IN REDUCED SECTION OF FRONT FRSM
17939	01-13-68				NOTCHED ACCEPTANCE VIBRATION PROFILE FOR COMPUTER.
18215	02-16-68				DELAMINATION OF DSKY EL CHIPS
18281	02-26-68				ECDU COMPUTER OPERATE OPTICS
18333	03-04-68				APOLLO COMPUTER FIXED MEMORY CORES
18344	03-05-68				DSKY IL PRODUCTION
18404	03-12-68				ENGINEERING REPORT A/S 206 B-6 S/N RAY 106 - MODULE
18461	03-13-68				NDR GATES
18495	03-21-68				FIXED MEMORY MODULE SET AS-205 FOR CM-101
18511	03-22-68				APOLLO GUIDANCE COMPUTER (AGC) MEMORY ORGANIZATION & MACHINE INSTRUCTION ENCODING

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
AP-M-		
18536	03-26-68	TRANSMITTAL OF ENG. REPORT ON CCRE ROPES "LOW ONE" PROBLEM (GPT-68-50)
18538	03-26-68	STICKY PUSHBUTTON SWITCHES, BLOCK II/LM DSKY
18545	03-26-68	FLIGHTWORTHINESS OF COMPUTERS IN RETROFIT RECYCLE PROGRAM
18553	03-27-68	BREAKIN OF SYLGARD E-MEMORY MODULES
18600	04-02-68	CORE ROPE WIRE RELEASE
18629	04-04-68	MULTI-LAYER BOARD PROBLEM IN GUIDANCE COMPUTER AT RAYTHEON
18711	04-17-68	RELAY - IDM'S DSKY SCREENS
18962	05-17-68	CURE ROPE PLANNING
19087	06-05-68	FIXED MEMORY MODULE SENSE WIRE RELEASE
19091	06-05-68	REPLACEMENT LOGIC MODULES FOR AGCC7
19154	06-14-68	CHICAGO MINIATURE LAMPS FOR DSKY IL PANEL
19277	07-01-68	INTEGRATED CIRCUIT FLATPACKS
19336	07-09-68	FIXED MEMORY CCRES, P/N 1006320
19407	07-19-68	FLATPACK CONTAMINATION STUDY
19434	08-07-68	AGC FLAT PACK CONTAMINATION
19440	07-24-68	FIXED MEMORY MODULES
19631	08-17-68	TRANSMITTAL OF IL AND EL TEST REPORTS
19766	09-11-68	AGC FIXED MEMORY MODULE PROGRAM
19894	09-27-68	AGC ALUMINUM METALIZATION FRACTURES OF FLATPACKS FROM SUBLOT ID 863S01
19901	09-27-68	COMPUTER EFFORT FOR PERIOD 1 APRIL THRU 31 JUNE 1968
21210	11-18-68	AGC LOGIC MODULE VIBRATION
21342	12-17-68	DSKY MOUNTING SURFACE
21376	12-16-68	FORCES ACTING ON E/L ASSY.
21822	03-19-69	INTERPRETIVE COMPUTER SIMULATION (JCS) DEVELOPMENT FINAL REPORT
22009	04-30-69	AGC DSKY ELECTRO-LUMINESCENT DISPLAY SAFETY GLASS REPORT
22057	05-06-69	FIXED MEMORY CCRES
22099	05-14-69	CHECKOUT OF DSKY "ALT" AND "VEL" CAUTION LIGHTS
22152	05-26-69	Z DELTA THETA PROBLEM
22178	06-03-69	LOSS OF NEGATIVE Z DELTA THETA PULSES
22290	06-20-69	DSKY EL SAFETY GLASS SEPARATION PROBLEM - LM6
22474	08-01-69	E/L GLASS BONDING TESTS
22627	09-15-69	PROCUREMENT OF CCRES FOR FIXED MEMORY MODULES
22804	10-31-69	RESTART MONITOR
22875	11-21-69	EVALUATION OF THE USE OF A GASKET SEAL FOR INDICATOR, DIGITAL, E/L
22949	12-12-69	VACUUM TEST OF APOLLO 10 DSKY'S

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0001	7/14/66	Development of a Protective Finish for Apollo Guidance Computer
0002	7/15/66	C-1 Counter Fail Alarm Waiver (CW 970)
0003	7/15/66	Double Entry, Block I-100 Computers
0004	7/15/66	Screw Inserts
0005	7/20/66	Integration of PAC System with Block 100 AGC
0007	8/3/66	Checkout and Design Changes in C Series Computers
0009	8/25/66	Production of Core Rope Modules
0011	9/6/66	Solid State EL Drivers
0012	9/6/66	Apollo Relay 1006772-7, Revision M
0013	9/13/66	Apollo Relays 1005001-2 and 1005003-2
0014	9/14/66	Apollo Relay 1005001-2
0015	9/28/66	Status Review, Apollo Relays 1005001-2 and 1005003-2
0017	10/5/66	Review of Master End Item Detail Specification
0018	10/5/66	Block II AGC Acceptance Test Briefing to Bellcomm
0019	10/14/66	Block II Rope Driver Modules
0020	10/17/66	Apollo Guidance Computer +4 Volt Noise Injection Test
0021	11/2/66	Evaluation of Block II Apollo Relay Changes
0022	11/8/66	AGC +4 Volt Noise Injection Study, 20 October 1966

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0023	11/10/66	Bonding Continuity Measurements, Block II/LEM AGC
0024	11/29/66	+ 4 Volt Noise Injection Study, 21 November 1966
0025	11/29/66	Clear, Set, and Reset Circuit Modification in Block II Rope Drivers
0026	11/30/66	Request for Evaluation: (1) DSKY Adapter Cable, (2) Special AGC and DSKY Vibration Test, (3) AGC Power Supply Modules A30 and A30 Modification, (4) Flight Confidence Vibration Test
0027	12/5/66	Apollo Transistors 1006310 and 1006323
0030	12/7/66	+4 Volt Noise Injection Module Schematic
0033	1/4/67	SSPI, 400 Volt SCR Evaluation
0034	1/5/67	Command Module Flight Ropes, Apollo Mission 504
0036	1/6/67	12.5 Volt Relay Screen, Block II/LEM
0041	1/31/67	Redesign of Block II Flat Packs to All Metal Configuration
0042	2/1/67	Radiated Environment Using Spark Gap Generator and Spacecraft Environment
0046	2/6/67	Redesign of Block II Flat Packs
0052	2/10/67	Apollo Computer Module Vibration
0053	2/13/67	4 Volt Noise Testing on Computer C-1
0055	2/16/67	Test Conditions and Equipment at Raytheon
0059	2/20/67	4 Volt Noise Test
0061	2/21/67	4 Volt Noise Tester Under Development at PSL
0065	2/27/67	Block II/LEM Relay Usage

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0066	2/28/67	Noise Test on C-Series Computers
0067	2/28/67	Isolation of Block II DSKY Digital Display Faults
0078	3/17/67	Hermetically Sealed Block II AGC Procurement
0083	3/27/67	Dynamic Noise Margin Testing of Block II AGC's
0087	3/31/67	G&N 206 Problems, Their Relation to AGC C-3, and Suggested Course of Action
0089	4/4/67	DSKY Power Supply Output Overvoltage
0091	4/6/67	Electroluminescent Light Protection
0094	4/6/67	Apollo AGC Retest Procedures
0096	4/6/67	Current Field Problems
0097	4/7/67	Computer Subsystem Problems and Possible Solutions
0101	4/18/67	LEM and Block II Command Module DSKY Relay Assignments
0108	4/17/67	Computerized Block II DSKY Digital Display Failure Model
0112	4/24/67	Current Field Problems
0114	4/27/67	Distribution of Block II and LEM Computer and DSKY Change History
0115	4/28/67	NASA Letter EG44-89-67-179
0116	4/28/67	Test Plan for Investigation of TC-Tray Failure in G&N 123 at NAA
0117	5/1/67	Software Personnel Availability
0120	5/1/67	Review of Computer Failure Diagnosis and Analysis Capabilities
0122	5/2/67	Apollo Fire Drill

SUMMARY OF TECHNICAL REPORTS		
COMPUTER SUBSYSTEM (CSS) (GROUP 090)		
NUMBER	DATE	TITLE
EM-0123	5/3/67	Apollo System Support Improvement
Addendum 1	5/10/67	
0124	5/4/67	Excessive Vibration of IDM S/N 297
0126	5/4/67	Electroluminescent Light Life Extension
0130	5/5/67	IDM Recycle Result Summary
Revision 1	5/16/67	
0131	5/9/67	AGC and DSKY Retest Criteria
0132	5/9/67	Reprogramming of Aurora and Sundial Ropes
0134	5/10/67	Fire Drill Information
0136	5/11/67	IDM Recycle
0140	5/15/67	C-3 4 Volt Noise Test
0141	5/15/67	Capability for Monitoring Computer Downlink Data
0145	5/18/67	Use of 6377 Transistors in DSKY's
0147	5/19/67	Review of Rope and Cable Intermediate Inspection and Qualification (Certification) Documents
0149	5/19/67	Possible Existence of Marginal Logic Pulses Within AGC
0150	5/19/67	IDM Recycle Result Summary
0152	5/22/67	AP's/AFR's Based on AGC Restarts During Gyrocompassing on G&N 206 (New 207)

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0153	5/23/67	Block II Computer Bit by Bit Simulator
0154	5/23/67	Module Depotting
0157	5/24/67	Special Testing to Evaluate Marginal Pulse Problem in C-Series Computers
0158	5/25/67	IDM Vibration Screen
0159	5/26/67	Special Test Request for G&N System 208
0160	5/29/67	Block II DSKY Pushbutton Switch
0162	6/2/67	IDM Recycle Result Summary
0173	6/2/67	IDM Screen Test
0176	6/2/67	IDM Test Results
0178	6/6/67	Monitoring Core Rope Memory Module Vibration Testing, Block II/LEM
0179	6/7/67	Raytheon Module Vibration Levels
0180	6/7/67	Review of Interim ECDU Vibration Station and Recommendations
0182	6/7/67	E-Memory (B12) Module Failure Summary
0183	6/8/67	IDM Recycle Result Summary
0185	6/9/67	Additional Testing of Block I-100 AGC S/N 13
0186	6/15/67	Restarts and Program Failures in C-Series Apollo Guidance Computers
0187	6/12/67	Vibration Screen Test
0188	6/13/67	Vibration in Index Test in Newspeak

SUMMARY OF TECHNICAL REPORTS		
COMPUTER SUBSYSTEM (CSS) (GROUP 090)		
NUMBER	DATE	TITLE
EM-0190	6/14/67	12.5 Volt Relay Screen
0191	6/15/67	C-3/C-11 Noise Measurement Summary
0192	6/15/67	4 Volt Noise Test
0200	6/16/67	Downlink Rupt Priority
0201	6/19/67	Retest of Six Relays (P/N 1005001)
0202	6/19/67	IDM Vibration Screen History for S/N 292
0203	6/19/67	Minimum Caution Lamp Current
0209	5/23/67	DSKY Potential Fire Hazard
0210	6/23/67	Suitability of DSKY D4 for Unmanned Flight
0211		
0212	6/26/67	Review of New Diagnostic Test Program
0213	6/28/67	1006323 Transistor Adjustment Factor, Lunar Mission Failure Estimate
0215	6/27/67	IDM Vibration Module History, 2003952-031, S/N 271
0216	6/27/67	IDM Vibration Module History, 2003952-031, S/N 304
0217	6/27/67	IDM Vibration Module History, 2003952-031, S/N 352
0218	6/27/67	IDM Vibration Module History, 2003952-031, S/N 312
0219	6/29/67	Vibration Failure History of IDM Module P/N 2003952, S/N 214
0220	6/29/67	Vibration Failure History of IDM Module P/N 2003952, S/N 272

SUMMARY OF TECHNICAL REPORTS		
COMPUTER SUBSYSTEM (CSS) (GROUP 090)		
NUMBER	DATE	TITLE
EM-		
0221	6/29/67	Vibration Failure History of IDM Module P/N 2003952, S/N 314
0227	6/30/67	Depotting Techniques
0229	6/30/67	Review of Rope Module Certification Procedure, Revision 1
0232	7/3/67	IDM 2003952-031, S/N 310 Vibration History
0233	7/3/67	Reply to Data Fax 10928, Utilization of Rope Modules and Rope Jumpers
	7/3/67	IDM 2003952-031, S/N 305, Vibration History
	7/5/67	Revised Vibration Requirements for IDM Modules as Specified by PS 2016009 and PS 2003952
0240	7/6/67	System Level Frequency Stability Requirements
0242	7/6/67	DSKY for LEM Burn Test at MSC
0244	7/7/67	Opens on DSKY Relays
0245	7/10/67	LEM and BLOCK II Command Module DSKY Critical Relays
0253	7/11/67	DSKY Potential Fire Hazard
0256	7/12/67	IDM Recycle Result Summary
0258	7/12/67	Erasable Memory (B-12 Module) Tester
0261	7/13/67	4 V Noise Test Conducted at MIT on July 10 and 11, 1967
0262	7/13/67	Relay Loads, 1005001 and 1005003

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0263	7/13/67	Parity Failure Occurring During G&N Testing of System 209
0265	7/17/67	System Temperature Requirements
0268	7/18/67	System Impact of Failure of Gimbal Lock Light on DSKY to Illuminate
0269	7/18/67	IDM Screen Test
0270	7/18/67	IDM Vibration Module History, 2003952-031, S/N 309
0271	7/18/67	Status of Computer Related Failures in System 207 (Originally 206)
0278	7/25/67	IDM Vibration Module History P/N 2003952-031, S/N 318
0279	7/25/67	C-12 Restart/GAEC
0280	7/27/67	Kennedy Incremental Recorder
0280A	7/26/67	IDM Vibration History S/N 282
0281	7/26/67	IDM Vibration Screen
0282	7/26/67	Relay Usage Block II IDM
0282	7/27/67	Bowing of Block II/LEM AGC's
0288	7/31/67	Restart Failure on AGC C13 in G&N System 204, AFR 19362
0289	8/1/67	Vibration Screen History of IDM S/N 321
0294	8/1/67	Vibration Screen History of IDM S/N 281
0297	8/3/67	Investigation of C-15 Failure During Worst Case-Add-Testing
0298	8/3/67	IDM Screen Test Current Change

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0302	8/7/67	Effect on Open Kemet Capacitors
0303	8/7/67	Test Plan for Troubleshooting AGC C2
0304	8/7/67	Jumper Modules -011
0305	8/7/67	Corrective Action Plan for Spacecraft Level Computer Failures in 123 and SP-1
0306	8/7/67	Use of CTS in G&N Testing
0307	8/8/67	Telcon on Testing of PAC-1 and PAC-5 and Mechanization of Bus-Box Test
0308	8/8/67	Transfer of IDM Vibration Test Equipment to Raytheon
0309	8/9/67	IDM Recycle Result Summary
0313	8/11/67	IDM Vibration Screen, Module S/N 264
0314	8/14/67	Status of AFR's on C-3 Computer
0316	8/14/67	AFR-13857 on C-1 AGC
0317	8/15/67	IDM Vibration Module History S/N 214
0318	8/15/67	IDM Vibration Module History S/N 216
0319	8/15/67	IDM Vibration Module History S/N 317
0320	8/16/67	Test Plan for Investigation of Transient Failure Causes in Block II AGC's
0323	8/18/67	AFR 13871 DSKY D6 (28 April 1967)
0324	8/18/67	DSKY Aging Requirements
0325	8/18/67	Vibration of Spare Modules

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0328	8/21/67	AFR-13857, AGC S/N 16 (C-1)
0331	8/22/67	Apollo Computer /DSKY Troubleshooting
0333	8/22/67	Summary of C-2 Clear Rope Driver Problems
0334	8/23/67	Vibration Test of Spare AGC Modules
0335	8/23/67	Clear Rope Driver Verification
0336	8/23/67	E-Memory Test Station
0337	8/24/67	Restart Monitor, Channel 77 Alarm Box
0347	8/29/67	Mounting Bolt Problems
0348	8/30/67	Investigation of Causes of Transient Failures in Block II AGC's
0350	8/30/67	Retest of G&N Fail Detection Assembly after Re-rofit for Noise Susceptibility
0351	8/31/67	Encapsulating Materials used on AGC and DSKY
0352	8/31/67	Replacement Digital Indicator P/N 1006315 and Rerests for DSKY S/N 49 P/N 2003994-011
0353	8/31/67	Evaluation of Grounding Signal Lows to Buffer Box Chassis
0356	9/1/67	Computer Problems in G&N Testing of LEM III, C-16
0357	9/5/67	Nonlightworthiness of Indicator Driver Modules as Result of Module Level Vibration Failures
0358	9/5/67	Erasable Memory in AGC S/N 32 (C-16)
0359	9/5/67	A10/A11 Module Interchange in AGC C-15

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0361	9/6/67	Substitute Rope Jumper Modules, Block II/LEM
0366	9/11/67	SS White Depotting of AGC C-11 Tray A
0367	9/11/67	Component Positions During AGC Vibration Testing
0368	9/11/67	Interface Module Tests
0369	9/13/67	Computer Sextant Angle Discrepancy, Intermediary Report on AFR 18043
0371	9/14/67	Apollo Erasable Memory B-12 Diode Block Static Stress due to Vibration Pad
0375	9/18/67	Final Summary of IDM Recycle at AC
0376	9/18/67	CTS Noise Tests
0377	9/19/67	Program Bug in Burst 116 Rev 0
0379	9/19/67	ECDU Module Vibration
0380	9/19/67	AGC Vibration Fixture Modification
0381	9/19/67	IDM Module Level Vibration
0386	9/21/67	DSKY E/L Expected Life, P/N 1006315
0387	9/21/67	IDM Relay, System, and Test Loads
0388	9/21/67	Computer Rope and Module Call-Out
0393	9/25/67	Proposed Changes to +4 V Noise Test Plan
0394	9/25/67	Analysis of DSKY Relay Drive Circuit
0395	9/26/67	Program Abort Code 01301 (SUNDIAL)

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0397	9/28/67	LM-1 Restart of 9/14/67
0399	9/28/67	Development of IDM Vibration Profile
0400	9/28/67	Write Time -- Clear Time Races in AGC
0401	9/28/67	Post-Module Vibration IDM Failures
0403		
0404	9/29/67	Lockup Experienced in S/C 017 at KSC
0406	10/2/67	Programming Anomaly in Burst 116
0407	10/2/67	Comparison of Clear RTV with RTV -11
0408	10/2/67	Revised Schedule for Investigation of Possible Causes in AGC Transient Failures
0409	10/3/67	C-Series AGC Problems due to GSE Noise
0411	10/3/67	Standby/Proceed DSKY Key Cap Nomenclature
0413	10/4/67	External Use of RTV on AGC
0415	10/4/67	Vibration History and Rationale for use of IDM S/M 237
0419	10/6/67	Potential Danger in use of Edrupt
0420	10/7/67	Summary of IDM's Recycled during Test Station Setup Period at Raytheon
0421	10/9/67	Digital Systems Engineering and Raytheon Positions on Retrofit Requirements
0424	10/10/67	Simulated Load for Life Test of Relay 1005003
0425	10/11/67	Statement of LaMesh Software Errors and Time Schedule for Successful Checkout of Corrected Version of LaMesh

SUMMARY OF TECHNICAL REPORTS		
COMPUTER SUBSYSTEM (CSS) (GROUP 090)		
NUMBER	DATE	TITLE
EM-		
0431	10/17/67	Raytheon's Submittal of Nonmetallic Materials Exposed on Spacecraft Atmosphere List
0434	10/23/67	Apollo E-Memory Module, Lateral Resonant Frequency Analysis
0435	10/23/67	Micrologic Failures, Welding Techniques
0438	10/24/67	Raytheon E-Memory Test Plan
0439	10/24/67	E-Memory Redesign and Encapsulant Evaluation Plan
0440	10/24/67	Status of Failed IDM P/N 2003952
0441	10/25/67	Critical Relay Monitoring
0443	10/26/67	DSKY Pushbutton Switch Failure
0444	10/26/67	Ranking of Erasable Memories
0449	10/30/67	E-Memory Test Station
0450	10/30/67	Module Vibration Failure Summary
0453	10/31/67	Jumper Modules and Alternatives for Field Use
0458	11/7/67	B-3 Module Program
0459	11/7/67	Alarm System Reviews and Critical Timing and Logic Delay Reviews
0460	11/7/67	TELMONS Technical Description
0461	11/7/67	TELMONS Development Status
0465	11/13/67	LaMesh Checkout with PAC
0466	11/14/67	CFBG Race Condition

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0467	11/14/67	IDM Vibration Screen at Raytheon
0470	11/14/67	DITMCO Nondestructive Insulation Resistance Test
0473	11/15/67	AGC C-20 Lock-Up at AC/MKE
0477	11/16/67	Relay Screens at Device and IDM Level
0479	11/17/67	Circuit Function of Suspected High Failure Rate Kemet Tantalum Capacitors
0481	11/20/67	Cause of KSC Restart
0482	11/22/67	Cause of KSC Standby
0485	11/29/67	Cause of NAR Counter Fail, AFR 17155
0486	11/29/67	Cause of NAR Parity Fail Resets, AFR 17156
0487	11/29/67	Relay Screen
0489	12/1/67	Erasable Program to Sum Modules
0490	12/4/67	Encapsulant Stress Study
0494	12/6/67	Final Test Plan for B-6 Replacement for AS 206, Set T
0497	12/12/67	Fixed Memory Core Evaluation
0498	12/12/67	Test Plan for B6 RAY 106 Rope
0502		
0503		
0504	12/18/67	Scaler Operation when Switching from Standby to Operate
0511	1/3/68	IDM and Relay Screen

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)		
NUMBER	DATE	TITLE
EM-0515	1/12/68	Vibration Profile AGC Retest
0520	1/23/68	Leak Testing and Pressurization of AGC
0522	1/26/68	Laboratory DSKY
0523	1/26/68	LM-5 (C-26) Restart Analysis
0524	1/26/68	Relay Failure Summary
0526	1/29/68	Clear Driver Verification on LGC C-16
0527	1/29/68	Counter Fail during Optics Power Turn-On
0529	1/30/68	Rope Configurations
0533	2/7/68	Telexwriter/E-Memory Dump
0534	2/8/68	Rope Pattern Analysis Program
0536	2/9/68	Design Kickoff on AGC Buffer Unit
0538	2/12/68	Validity of Erasable Memory Module Qualification
0539	2/14/68	Sticky Pushbutton Switches, Block II/LM DSKY
0542	2/16/68	Apollo Computer Temperature Cycle Practices
0546	2/21/68	AGC S/14 E-Memory Contents, Mission 501 AGC
0548	2/23/68	AGC and DSKY Performance at AC
0549	2/28/68	Rope Module Color Coding
0551	3/1/68	Vibration of Block II/LM CDU Assembly

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-0552	3/5/68	Telemetry E-Memory Dump Program
0554	3/8/68	Digital Buffer to be used with Two-Machine System
0558	3/12/68	Weaver Tape Verification
0559	3/13/68	Review of E-Memory Timing and Proposed Sense Line Output during Margin Testing
0565	3/15/68	Fixed Memory Core Report
0567	3/19/68	LM High Temperature Computer Operation
0570	3/20/68	Programming Errors in Aurora and Sundial
0573	3/25/68	Utilization of Zero Erasable Routine
0575	4/1/68	Data Format for TELMONS Tape Reductions and E-Memory Dumps
0577	4/2/68	Flightworthiness of Sundisk B-2 Ray 154, B-3 Ray 155, and B-4 Ray 156
0578	4/3/68	Fixed Memory Production Problems
0581	4/5/68	Computer Pressurization Check Procedure
0582	4/5/68	Change to 28 V Failure Detection Level on Block II AGC
0585	4/17/68	Software Restarts for Sundisk 282
0589	4/24/68	Standby-Operate Transient Effects on Scaler Operation
0599	5/3/68	Sylgard Encapsulant Separation
0600	5/8/68	AGC TC Trap Alarm Circuit
0608	5/17/68	Core Rope Manufacture

SUMMARY OF TECHNICAL REPORTS		
COMPUTER SUBSYSTEM (CSS) (GROUP 090)		
NUMBER	DATE	TITLE
EM-0609	5/17/68	Scaler Operation when Switching from Standby to Operate
0610	5/20/68	4-Volt Noise Test Data
0613	5/24/68	JDC CTS Uplink Tape Procedures
0614	5/24/68	Oscillator Frequency versus Temperature Status
0616	5/27/68	Semiautomatic Mode Test "TINHINT" Protection.
0620	6/4/68	Potter Brumfield Relay Failures
0622	6/7/68	Analysis Plan for Alarm Indicator S/N 1
0624	6/10/68	AGC PIPA Up/Down Counter Test Plan
0625	6/11/68	Test Plan for "Plus Delta Theta Z" Problem
0628	6/20/68	Program for DASH Checkout
0623	6/20/68	Abnormal Y Axis PIPA Data on G&N 214
0632	6/25/68	Sigma Computer Interrupt Priority Assignment
0636	7/8/68	AGC Peripheral Load and Read Instructions
0637	7/11/68	AGC Peripheral TC Instruction
0642	7/19/68	Telemetry E-Memory Dump Program (Updated)
0643	7/23/68	Procedure for using Telemetry E-Memory Dump CTS Uplink Tape
0645	7/23/68	G&N 613, AFR 21391; AP 2
0646	7/24/68	Computer System Test History

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)		
NUMBER	DATE	TITLE
EM-0648	7/29/68	AGC S/N 35 (C-19) Rotational Hand Controller Failure in G&N 613, AFR 21168
0650	8/2/68	LM 4 Restart at GAEC, 7/26/68
0651	8/2/68	X-Ray of Flatpacks
0654	8/12/68	AFR 19363, AGC C-13, S/C 101
0657	8/16/68	Effort Planned to Investigate Flatpack Contamination Detection Capability at Raytheon
9658	8/21/68	AGC Logic Module Vibration Screen
0659	8/21/68	Computer Rope Testing Plan 678
0660	8/21/68	G&N 215, AGC C-19, AP 27, JDC 12218.M, Step 140, dated 8/8/68
0662	8/22/68	Logic Module Vibration Screen Project
0666	8/26/68	Logic Module Vibration Screen Project
0669	9/3/68	Repair of AGC C-3, S/N 17
0670	9/3/68	Need for Time Counter/Scaler Synchronization for Two Machine Utilizations of AGC
0671	9/3/68	Pseudo Real Time Operation of AGC in Nonreal Time Environment
0672	9/5/68	AFR 21656, CTS S/N 13
0674	9/9/68	Logic Module Vibration Screen Project
0677	9/10/68	Scaler Failure in AGC C-3, AFR 17769
0678	9/11/68	Repair of AGC C-3, S/N 17, Revision A
0680	9/13/68	AGC and DSKY Performance at AC, 8/19/68 to 9/12/68

SUMMARY OF TECHNICAL REPORTS		
COMPUTER SUBSYSTEM (CSS) (GROUP 090)		
NUMBER	DATE	TITLE
EM-0682	9/16/68	Restart Monitor S/N 6
0683	9/16/68	DSKY All 8 Failure Modes
0685	9/18/68	Unexpected Radar Rupt when Terminating High Speed Radar Sampling
0686	9/19/68	Apollo Two Machine Diagnostics
0688	9/20/68	Logic Module Vibration Screen Project
0689	9/24/68	Requirements of Sigma Executive for DASH Selfcheck
0693	10/2/68	Logic Module Vibration Screen Project
0695	10/8/68	Analysis of GAEC Fine Align Anomaly of 9/18/68
0698	10/17/68	Tracker Alarm upon Optics Power Turn-on
0700	10/18/68	Colossus Set 1 Module and Side Failures During Assembly Test Prior to Sale at Raytheon
0702	10/23/68	Repair of AGC C-33, Broken Malco Insulator
0704	10/30/68	Logic Module Vibration Screen Project
0705	11/1/68	DASHCO DR4, Preliminary Operator/System Interface and Test Descriptions
0710	11/14/68	DASH Selftest Project
0711	11/19/68	DASHCO DR3, Preliminary First Level Modulization of the Sigma Program
0714	11/19/68	DASHCO DR5, Automatic Routine Caller, General Description
0716	11/19/68	Logic Module Vibration Screen Project
0721	12/10/68	Preliminary Study of Fault Isolation and Detection Tools

SUMMARY OF TECHNICAL REPORTS

NUMBER	DATE	TITLE
EM-0727	1/2/68	Rope Memory Module, S/N 189, Testing at Raytheon, Waltham
0729	1/6/69	TELMONS Induced Downlink Too Fast Alarms
0730	1/8/69	Sundisk 302 B6 Module (S/N 8) History at KSC
0733	1/14/68	Possible Apollo Flight Rope Lockup Condition
0736	1/24/69	Improved G&N System Test Initialization Procedures
0737	1/29/69	Restart Data Destruction Protection
0742	2/18/69	AGC 4 Volt Noise Techniques Applied to Apollo Entry Monitor System Problems
0743	2/24/69	AFR 17272 C-27 End Around Carry Problem (G&N 216)
0744	2/25/69	Flight Rope Lockup Safeguards
0745	2/26/69	Computer C-34 Failure, NR/Downey, S/N 50, G&N 212, S/C 109, AFR 17275, 2/6/69
0746	2/26/69	Circuit Applications of 1006751 Diodes and 1006323 Transistors in AGC Modules B25, B26, B7, B11, and B15
0747	2/23/69	A Primer for the Sigma 7 Basic Assembler Language
0749	2/28/69	Major Mode Change during Vertical Drift of IMU Performance
0750	3/3/69	AGC Failures caused by CTS Noise
0752	3/10/69	4 Volt Noise Test Monitor Systems at Autonetics
0753	3/11/69	AFR 19202, G&N, C-8, 3/5/69
0760	4/22/69	E-Memory Lockup of C-42
0762	4/29/69	Apollo 10 Modified SEM Flight Verification

SUMMARY OF TECHNICAL REPORTS

COMPUTER SUBSYSTEM (CSS) (GROUP 090)

NUMBER	DATE	TITLE
EM-		
0765	5/14/69	LM 4 Radar Anomaly Software Protection
0766	5/14/69	LM 4 Radar Anomaly Software Protection
0772	6/20/69	E-Memory Dump Program for Sundial
0773	6/18/69	Telemetry Data during Standby/Operate
0774	6/18/69	Flight Rope Polarity Test Procedure
0776	6/27/69	Procedure for Environmental Testing of Single Rope Module
0778	6/28/69	Program Alarm during LMY99 B1 Rope Environmental Test
0779	7/1/69	Mode Switches for RHC use in DASH/2 Machine
0781	7/3/69	LMY 99B3 Module Vacuum Test Failure
0782	8/13/69	LM6/C29 Computer Problem
0788	8/14/69	Proposed Testing and Analysis of C29/LMY 99 R1 Failure
0790	8/19/69	520 Unexpected Radarupt Program Alarm on LM6/Apollo 11
0794	9/15/69	Computer C29 Failure Isolation Status

SUMMARY OF TECHNICAL REPORTS

ASTROEXTANT PASSIVE THERMAL PROTECTIVE SYSTEM (APTPTS) (GROUP 100)

NUMBER	DATE	TITLE
AP-M-		
13255	09-01-66	SXT PASSIVE THERMAL PROTECTIVE SYSTEM
13403	08-17-66	BASELINE TESTING FOR EVALUATION TESTS WITH APTPTS MOUNTED TO OUA
13421	08-19-66	FIELD OF VIEW OF THE APTPTS INSTALLED
13761	09-23-66	ASTROEXTANT PASSIVE THERMAL PROTECTION SHIELDS
13784	09-23-66	TESTING OF APTPTS FOR FLIGHT SAFETY
13791	09-23-66	MATERIALS USED FOR APTPTS
13845	10-03-66	THERM-VAC AND SAND-DUST QUAL TEST FOR APTPTS AND DUST COVERS
13858	10-04-66	OUA ENGINEERING EVALUATION TEST WITH APTPTS MOUNTED
14136	10-31-66	ASTRO-EXTANT PASSIVE THERMAL PROTECTION SYSTEM BLOCK I-SERIES 50
14464	12-05-66	SCALING OF SIGNAL GG 6020, PIA TEMPERATURES
14870	01-13-67	PRELIMINARY TEST REPORT APTPTS - THERMAL STRUCTURE TEST
15136	02-23-67	APTPTS WEIGHT AND CENTER OF GRAVITY INFORMATION
15371	03-16-67	DESIGN CRITERIA FOR ASTROEXTANT PASSIVE THERMAL PROTECTIVE SYSTEM (APTPTS)
17840	12-23-67	FIELDJDF VIEW, BLOCK II OUA, SCT AND SXT WITH OUTER ABLATOR, APTPTS & C/M LEM 60 DOCKED POSITION
17976	01-13-68	FABRICATION AND TESTING OF THE APOLLO APTPTS
21979	04-24-69	CRACKING OF TELESCOPE APTPTS FILLETS

SUMMARY OF TECHNICAL REPORTS		
SOFTWARE (GROUP 110)	DATE	TITLE
AP-M-		
01445	10-11-63	PREPARATION OF DATA PROCESSING AND ANALYSIS PLAN
04782	10-27-64	THE DISCOVERY OF TWO SUNRISE 38 PROGRAMMING ERRORS THAT WILL EFFECT SYSTEM PERFORMANCE
06607	04-27-65	EQUATIONS NEEDED TO EXTRACT IRIG COEFFICIENTS FROM SUNRISE 69, S/C VER, GYRO COEF DETERMINATION TEST
08989	10-22-65	PROGRAM DOCUMENTATION REPT #30 IMU COMPENSATION FOR FLIGHT #202
09016	10-25-65	PROGRAM DOC. REPT NO. 29 IN-FLIGHT ALIGNMENT SUBCONTRACTORS
09017	10-25-65	PROG. DOC. REPT NC 32, EXECUTIVE JOB CONTROL
09018	10-25-65	PROG. DOC. REPT NC 33, TASK CONTROL (WAIT LIST 13 RUPT)
09240	11-09-65	RLOCK I AND I (100) FVP-SUNRISE 69
10119	12-27-65	CHRONOLOGICAL HISTORY OF TURKEY TAPE VERIFICATION
13332	08-19-66	ROST TRAJECTORY PARAMETER COORDINATE TRANSFORMATION MISSION501
13398	08-16-66	ACE S/C COMPUTER SUBPROGRAM NC 1002316
13447	08-23-66	ACE COMPUTER SUBPROGRAM NC 1002317
13471	08-24-66	REVISION OF MODE SWITCHING FOR SUNDIAL D PROGRAM
13502	08-26-66	REVISION OF MODE SWITCHING FOR AURORA 88
13555	08-31-66	EXPERIMENTAL ACE STATION USE BY ACE FOR K START TAPE VERIFICATION
13615	09-08-66	ATTITUDE CONTRL MODE SIGNALS - CALCULATION OF NOMINAL VALUES & UNCERTAINTIES
13792	09-23-66	DEFINITION OF BLK II CMC SUNDIAL DOWNLINK DATA DISPLAYS ON ACE CRT
13988	10-19-66	DEFINITIONS OF LM LGC AURORA DOWNLINK DATA
14284	11-15-66	K-START TAPE POLARITY TEST REQUIREMENTS
14453	12-02-66	ACE EVENT DISPLAY OF GG9601LGC WARNING
15091	02-13-67	MISSION 258 OPERATIONS INFCRMAT ION
15135	02-20-67	LEM AND BLOCK II GYROCOMPASSING (AURORA 85, 88 AND SUNDIAL ROPES)
15164	02-22-67	E-MEMORY TEST PROGRAMMING REQUIREMENTS AS 504 AND SUBSEQUENT MISSIONS
15165	02-22-67	VALUE SIGNATURE "TSET PROFILE, NUMBER 1 MODIFICATION
15196	02-24-67	AUXILIARY MEMORY PROPOSALS
15263	03-03-67	COMPUTER DRIVEN EVENTS FOR ACE
15544	04-06-67	UPDATED DESCRIP OF DIGITAL COMPUTER SIM OF BLK II-LM IRIG DRIFT COEFFICIENT DETERMINATION TEST & RESULTS
15613	04-17-67	APOLLO ORBITAL NAVIGATION - DIGITAL SIMULATION
15671	04-21-67	DESCRIP OF & RESULTS FROM DIGITAL COMPUTER SIM OF BLK II TEST ROPE GYROCOMPASSING & VERTICAL ERECTION
15762	05-02-67	S/C AND GEN LAB MEASUREMENTS OF ADIA UTILIZING CDU'S
15844	05-10-67	PERFORMANCE AND RESOURCES MEETING APRIL 26 AND 28, 1967
15867	05-12-67	G&N COMPUTER DRIVEN EVENT REQUIREMENTS FOR ACE CSM STATIONS
15930	05-18-67	INFORMATION ON THE USE OF THE GE RE-ENTRY TRAJECTORY SIMULATION FOR APOLLO AND POST APOLLO APPLICATIONS
16070	06-08-67	SUGGESTED ATTITUDE ORIENTATION TO MINIMIZE GIMBAL LOCK CONDITIONING FOR A TYPICAL POLAR ORBIT BOOST
16119	06-12-67	EFFECTS OF ATTITUDE ORIENTATION ON LM-1 PRE LAUNCH ALIGNMENT ACCURACY
16212	06-21-67	SUGGESTED CHANGES TO APOLLO COMPUTER TEST ROPES TO IMPROVE PROBLEM DIAGNOSTIC CAPABILITIES
16319	07-09-67	STATUS REPORT ON STUDY TO USE WITH ARE TITAN TELEMETRY DATA MONITORING GROUP
16468	07-21-67	EXPECTED MISSION 502 ERROR ANALYSIS BASED UPON MISSION EVENT SIMILARITIES TO MISSION 501
17220	10-17-67	E-MEMORY CDU OPERATIONAL TEST FOR AURORA 88 AND SUNDIAL D
17222	10-17-67	ECDU SWITCHING TRANSIENTS - DIAGNOSTIC TESTING FOR PROGRAM ALARMS 211 & 1411
17229	10-18-67	NAS 9-497 - COMMENTS ON ACE-S/C UPLINK PROGRAM REQUIREMENTS FORMAT
17230	10-18-67	DOWNLIST DATA REDUCTION PROGRAM FOR GEN TESTING
17637	11-30-67	RCS OPPOSING JETS TEST
17666	12-04-67	SUMMARY OF BLOCK II AND LEM GEN DOWNLINK FORMAT CHANGES
17675	12-05-67	SOFTWARE VERIFICATION OF GEN SUBPROGRAM 731 & 731A

SUMMARY OF TECHNICAL REPORTS		
SOFTWARE (GROUP 110)		
NUMBER	DATE	TITLE

AP-M-		
17853	01-02-68	LEM 1 BURST 120 GYROCOMPASSING PROGRAM TO INERTIAL INSTRUMENTATION PERTURBATIONS
18087	02-01-68	DOWNLINK DATA SCALING FOR TELMONS
18090	02-02-68	RESPONSE CF THE AS502 SLRUM 55 GYROCOMPASSING PROGRAM TO INERTIAL INSTRUMENTATION PERTURBATIONS
18547	03-26-68	APOLLO MISSION 6 PERTURBED TRAJECTORIES
18650	04-03-68	APOLLO MISSION C (AS-205/CSM-101) DESCRIPTION
18727	04-13-68	PREM. ERROR ANALYSIS OF APOLLO MISSION C (AS-205/CSM-101) ENTRY
18818	04-23-68	IMPLEMENTATION CF NASA/MSC ACE-S/C SOFTWARE DEVELOPMENT(SDL) OPERATIONAL FLOW PLAN
18941	05-15-68	EFFECT OF NON-PERFECT NAVIGATION UPDATED BEFORE EIGHTH SPS BURN FOR APOLLO MISSION C
19144	06-12-68	APOLLO 7 MISSION C/AS-205/CSM-101 MISSION DESCRIPTION
19346	07-10-68	ERROR ANALYSIS FOR APOLLO MISSION 7 (AS-205/CSM-101) ENTRY
19432	07-24-68	ERROR ANALYSIS FOR APOLLO MISSION, SPS BURNSTHROUGH 8
19473	07-23-68	REVISED REFERENCE TRAJECTORY AND OPERATIONS CONSTRAINTS FOR MISSION D
19485	07-30-68	OPERATIONAL CONSTRAINTS RELATIVE TO MISSION C
19493	08-01-68	DESCRIPTION CF THE APOLLO ERROR ANALYSIS PROGRAM
19535	08-07-68	GENERATION OF LGC SELF TEST K-START TAPE FOR DUNDANCE 302
19720	09-04-68	COLOSSUS TEST PLAN SUBMITTAL
19727	09-05-68	K-START PROGRAM MONITORING CSM AGC CHANNELS AND INLINK REGISTER
19778	09-12-68	DESCRIPTION CF SERVICE (SUNDISK 282) ROUTINE
19899	09-27-68	PRELIMINARY REPORT FOR VERIFICATION OF SUNDISK
19973	10-09-68	SOFTWARE ANOMALY REPORT NO. ACM-03
19976	10-13-68	COLOSSUS 237 TEST PLAN REVISION
19990	10-11-68	INTERIM REPORT OF COLOSSUS VERIFICATION
20052	10-23-68	SOFTWARE ANOMALY REPORT ACM-04
20063	10-24-68	FINAL REPORT FOR VERIFICATION OF SUNDISK 282
20092	10-23-68	PGNCS GROUND TEST & SUPPORT OPERATION SOFTWARE VERIFICATION
20094	10-23-68	SOFTWARE ANOMALY REPORT AC M-05
21621	02-07-69	DATA FOR TWO MACHINE SPS-1 DEMONSTRATION
21760	03-06-69	SOFTWARE VERIFICATION
21822	03-13-69	INTERPRETIVE COMPUTER SIMULATION (JCS) DEVELOPMENT FINAL REPORT
21827	03-13-69	APOLLO SIMULATION FACILITY USER'S GUIDE
22000	04-23-69	SOFTWARE
22211	06-03-69	COMPUTER PROGRAM DESCRIPTION DOCUMENT- RENDEZVOUS RADAR ROUTINES- LUMINARY69- UHF RANGING ROUTINE-COL 249
22839	11-10-69	APOLLO CSM/LM HYBRID SIMULATION
22941	12-11-69	TESTING OF APOLLO 13 - LUMINARY FLIGHT PROGRAM ON TWO-MACHINE FACILITIES

SUMMARY OF TECHNICAL REPORTS		
FIELD OPERATIONS, TRAINING, AND MANUALS (GROUP 120)		
NUMBER	DATE	TITLE

AP-M-

00144	10-08-62	FAMILIARIZATION COURSE - APOLLO
00411	03-07-63	RECOMMENDED SPARES PROVISIONING & SUPPLY PLAN
00860	07-04-63	LEM PRELIMINARY PLANNING
00871	07-11-63	LETTER TRANSMITTAL NASA FAMILIARIZATION TRAINING PLAN
00931	07-22-63	APOLLO FAMILIARIZATION CCOURSE
01024	08-05-63	CROSS TRAINING COURSE ON APOLLO COMPUTER
01034	08-06-63	TRANSMITTAL FAMILIARIZATION TRAINING PLAN
01083	08-15-63	TRANSMITTAL OF RECOMMENDED MAINTENANCE REQUIREMENTS, CONCEPT & PLAN FOR THE APOLLO G & N EQUIP.
01128	08-26-63	APOLLO CROSS TRAINING
01153	08-29-63	APOLLO CROSS TRAINING
01207	09-06-63	G-N EQUIPMENT FAMILIARIZATION MANUAL-PRELIM.
01443	10-11-63	APOLLO FIELD OPS QUARTERLY PROGRESS REPORT 7-1-63 TO 9-30-63
01804	01-02-64	MAINTENANCE PLAN FOR APOLLO GEN EQUIPMENT
01964	12-11-63	CALIBRATION REQUIREMENTS SUMMARY FOR APOLLO
02060	12-23-63	FAMILIARIZATION MANUAL
02089	12-27-63	TOOL LIST FOR APOLLO FIELD OPTICS GEN SYSTEM SUPPORT
02187	01-13-64	CHECKOUT, MAINTENANCE & REPAIR MANUAL
02211	01-15-64	LOGISTICS SPARES ANALYSIS
02262	01-21-64	PROCEDURE FOR SPARES COMPUTATION ANALYSIS
02320	01-29-64	NAA FACILITIES INSTALLATION PROCEDURE (PRELIMINARY)
02328	01-29-64	32 HOUR APOLLO GEN FAMILIARIZATION CCOURSE (C.G.)
02405	02-08-64	GROUND SUPPORT EQUIPMENT CODES FOR MAINTENANCE ANALYSIS
02536	02-24-64	APOLLO GEN MAINTENANCE ANALYSIS DIAGRAMS
02700	03-13-64	BLOCK I MAINTENANCE ANALYSIS D FORMS
02703	03-13-64	CALIBRATION REQUIREMENT SUMMARY
02704	03-13-64	TOOL LIST TO SUPPORT GEN STOCKROOM AND LAB OPERATIONS
02732	03-16-64	SUBMITTAL OF FAMILIARIZATION MANUAL
02844	03-27-64	TRANSMITTAL OF EQUIPMENT HANDLING AND INSTALLATION INSTRUCTIONS GEN FIELD SITE LABORATORIES
03216	05-05-64	APOLLO FIELD OPERATIONS QUALITY ASSURANCE PLAN OUTLINE
03318	05-15-64	MAINTAINABILITY PROBLEM CAUSED BY USE OF IDENTICAL CONNECTORS ON THE CURRENT SOURCE MONITOR
03630	06-16-64	ACE AUTOMATIC CHECKOUT EQUIPMENT TRAINING COURSE
04570	10-02-64	TRAINING EQUIPMENT REQUIREMENTS
04736	10-21-64	FIELD OPERATIONS QUALITY CONTROL PLAN
05223	12-18-64	TRANSMITTAL OF RESULTS OF NASA TRAINING STUDY
05735	02-12-65	NASA CONTRACT NAS 9-497 TRANSMITTAL OF THE TRAINING REQUIREMENTS ANALYSIS RESULTS REPORT
06553	04-21-65	TRAINING EQUIPMENT PLAN AND TRAINING SERVICE PLAN
06850	05-17-65	FIELD TEST SITE LATITUDE AND GRAVITY VECTOR DATA
07612	07-13-65	COURSE CONTROL DOCUMENTS FOR NASA GEN TRAINING, PERIOD 1 SEPT. 1965 - 31 DEC. 1965
07684	07-13-65	MAINTAINABILITY DESIGN EVALUATION (BLK I-100 GSE)
07809	07-30-65	FACILITY INSPECTION PROCEDURE FOR APOLLO GEN SYSTEM LABORATORIES MILAAND MSC
08132	08-25-65	MAINTAINABILITY DESIGN EVALUATION (BLK I-100 GEN EQUIPMENT)
09299	11-13-65	ANALYSIS SUMMARIES - RECOMMENDED SPARE PARTS LIST BLOCK II & LEM SUBMITTALS PERTINENT TO MAINTENANCE
09696	12-03-65	FUNCTIONS & OPERATIONS STUDY GUIDE FOR LEM & BLK I
10096	12-22-65	MAINTAINABILITY PREDICTION REPORT FOR BLK I (SERIES 100) INERTIAL SUBSYSTEM
11076	02-22-66	COMPLETION OF MAINTAINABILITY REVIEW HARDWARE EVALUATION REPORT FOR BLK II & LEM GSE

SUMMARY OF TECHNICAL REPORTS

FIELD OPERATIONS, TRAINING, AND MANUALS (GROUP 120)

NUMBER	DATE	TITLE
AP-M-		
11378	03-11-66	AC ELECTRICIACS AND GRUMMAN CRCS-TRAINING ON LEM COURSE CONTROL DOCUMENTS
11419	03-18-66	FIELD OPERATIONS & SUPPORT DOCUMENTATION
11610	03-25-66	COMPLETION OF MAINTENANCE REVIEW/HARDWARE EVALUATION REPORT FOR BLK II & LEM GEN
13901	10-07-66	APOLLO GEN TRAINING SERVICE PLAN REV C OF 9-30-66
14679	12-29-66	INFORMATION ON INSTALLATION OF EJECTABLE DUST COVERS
16629	08-10-67	GEN SYSTEM TRAINING SERVICE PLAN, CHANGE PAGES DATED 31 MAY 67
19057	05-31-68	"B" HARNESS, S/N 17, ASSIGNED TO GEN 609 FOR LM 5
19241	06-23-68	USE OF C7 TO REPAIR NYLON INSULATORS
19663	08-27-68	RESPONSE TO REQUESTED CURRENT MEASUREMENTS OF EL LAMPS IN DSKY & GNIC PANEL
19884	09-25-68	STRUCTURAL INTEGRITY OF EJECTABLE DUST COVERS RETAINER
19994	10-14-68	LM-4, OCP-61018, TDR-3, REVERSE VOLTAGE ON GEN SYSTEM AT GAEC
20068	10-24-68	CHANGES TO NASA TRAINING SERVICE PLAN
22635	09-16-69	SPECIAL PACKAGING INSTRUCTIONS FOR GSE EQUIP. LONG TERM STORAGE

RELIABILITY AND QUALITY ASSURANCE (GROUP 130)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-

00262	01-02-63	EVALUATION OF CUFFER'S CIRCUIT METER & RAYTHEON WELDPower CALIBRATION REPORT
00497	03-04-63	SUBMISSION OF ACSP FINAL DATA REPORTING AND CORRECTIVE ACTION PLAN
00624	05-03-63	RECEIVING INSPECTION ENVIRONMENTAL CONTROL RECOMMENDATIONS FOR APOLLO IMU ELECTRO-MEC COMPONENTS
00651	05-15-63	TRANSMITTAL CF EVALUATION TEST REPORT FOR TRANSISTOR
00695	05-29-63	REQUIREMENTS FOR REFERENCE DICDE (1010259)
00747	06-11-63	OUTLINE OF DICCE CONDITIONING
00751	06-11-63	APOLLO WORKMANSHIP REQUIREMENTS
00899	07-16-63	LETTER OF TRANSMITTAL MONTHLY QUALITY STATUS REPORT
00905	08-07-63	LETTER OF TRANSMITTAL PARTS QUALIFICATION TEST PLAN
00907	07-16-63	TRANSMITTAL CF PROCEDURE FOR LOT CONTROL OF CRITICAL PARTS
01028	08-06-63	MONITORING CF IMU/P5A SIGNALS DURING VIB. TESTING
01063	08-15-63	TRANSMITTAL CF A WELDING MACHINE REPEATABILITY WELDED TO NICKEL RIBBON
01064	08-15-63	TRANSMITTAL OF INVESTIGATION OF NICKEL RIBBON LAP
01107	08-20-63	QUALIFICATION TEST PLAN ADIA
01125	08-26-63	MONTHLY QUALITY STATUS REPORT
01127	08-27-63	LETTER OF TRANSMITTAL MONTHLY RELIABILITY REPORT
01174	08-30-63	SOLDER BALL & PURPLE PLAQUE PROBLEMS
01178	09-03-63	QUALIFICATION TESTING OF IMU SHIPPING CONTAINER
01181	09-03-63	INVESTIGATION & EVALUATIONS REGARDING WELDING
01252	09-12-63	COMPARISON OF MERITS OF VISUAL INSPECTION PHYSICAL STRESSING TO DETERMINE QUALITY OF RESISTANCE WELD
01253	09-17-63	VISUAL INSPECTION VS PHYSICAL STRESSING TO DETERMINE RESISTANCE WELD QUALITY
01260	09-12-63	REQUALIFICATION TESTING OF THE IMU SHIPPING CONTAINER
01335	09-24-63	CHANGE TO 1010358-3 TRANSISTOR
01336	09-24-63	PURPLE PLAQUE AND SOLDER BALL PROBLEMS
01370	09-30-63	STATISTICAL ACCEPTANCE PLANS FOR ACSP RECEIVING INSPECTION
01392	10-02-63	PART QUALIFICATION SUMMARY SHEETS
01519	10-21-63	STATISTICAL ACCEPTANCE PLANS FOR ACSP RECEIVING INSPECTION
01863	12-02-63	QUALIFICATION TEST PLAN FOR RETATING COMPONENTS
01920	12-06-63	QUALIFICATION TEST - PARTS & MATERIALS
02121	01-06-64	RELIABILITY EVALUATION TEST PLAN & PROCEDURE
02159	01-08-64	MONTHLY RELIABILITY REPORT FOR NOVEMBER
02183	01-13-64	TRANSMITTAL RELIABILITY REPORT
03083	04-27-64	ASSEMBLY RELIABILITY EVALUATION GENERAL TEST PLAN AND PROCEDURE
03109	04-24-64	PARAMETRIC STABILITY DATA
03216	05-05-64	APOLLO FIELD OPERATIONS QUALITY ASSURANCE PLAN OUTLINE
03366	05-27-64	TRANSMITTAL ISS QUALIFICATION TEST PLANS BLOCK 1
03637	06-04-64	TRANSMITTAL OF TEST PLAN FOR QUALIFICATION OF SCANNING TELESCOPE AND SEXTANT BELLOWS ASSEMBLIES
04081	08-10-64	TRANSMITTAL CF PRELIMINARY FIELD OPERATIONS QUALIFY CONTROL PLAN
04234	08-26-64	STANDARD FOR REPAIR AND REWORK
04581	10-03-64	TRANSMITTAL OF TEST PROCEDURES FOR QUALIFICATION OF SCANNING TELESCOPE & SEXTANT BELLOWS ASSEMBLY
04736	10-21-64	FIELD OPERATIONS QUALITY CONTROL PLAN
04976	11-23-64	TRANSMITTAL CF PARAMETRIC STABILITY DATA
05579	01-23-65	TRANSMITTAL CF MONTHLY QUALITY STATUS REPORT FOR DECEMBER 1964
05602	02-01-65	QUARTERLY SUMMARY CF QUALITY PROGRAM PERFORMANCE AUDITS FOR PERIOD 1 OCTOBER THROUGH 31 DECEMBER 1964
07266	06-13-65	TRANSMITTAL PLAN FOR ISS BLOCK 1-100 ACCELERATION COMPLEMENT TO APOLLO QUALIFICATION TEST

SUMMARY OF TECHNICAL REPORTS

RELIABILITY AND QUALITY ASSURANCE (GROUP 130)

NUMBER	DATE	TITLE
AP-M-		
07500	07-07-65	RESPONSE TO NASA COMMENTS ON MONTHLY AND QUARTERLY QUALITY STATUS REPORTS
07545	07-09-65	REPORT OF NASA QUALITY SYSTEM AUDIT OF KOLLSMAN INSTRUMENT CORP.
07811	07-30-65	QUARTERLY QUALITY STATUS & QUALITY PROGRAM PERFORM AUDIT PROGRESS REPORT FOR PERIOD ENDING 06-30-65
07993	03-03-65	MONTHLY TECHNICAL AND PROGRAM PROGRESS REPORTS FOR PERKIN-ELMER, ITEK AND HUGHES
08224	09-C2-65	RESPONSE TO THE NASA QUALITY AUDIT SURVEY OF THE RAY. CO
08278	04-13-65	COMMENTS TO NASA RELIABILITY AUDIT OF AC
08307	09-17-65	RELIABILITY - CA PROGRAM REVIEW REPORTS
09673	12-02-65	PROBLEMS ENCOUNTERED IN THE HUMIDITY EXPOSURE OF G&N 111
09958	11-24-65	AC ELECTRONICS RELIABILITY PROGRAM PLAN VOL. 1
10308	01-07-66	SUMMARY OF PROBLEMS ENCOUNTERED DURING THERMAL VACUUM QUAL TESTING OF ISS 110
10388	01-13-66	KOLLSMAN QUARTERLY AUDIT REPORTS 31 MARCH 1965
10427	01-14-66	FORMAT AND CONTENT OF RELIABILITY QUARTERLY STATUS REPORT
10495	01-19-66	TWX - RESPONSE TO NASA QUALITY SYSTEMS AUDIT
10553	01-21-66	ISS AND G&N QUAL. STATUS
10597	01-25-66	TRANSMITTAL CF APOLLO QUARTERLY TECHNICAL PROGRESS REPORT FOR PERIOD ENDING 12-31-65
10671	01-31-66	APOLLO QUARTERLY QUALITY STATUS & QUALITY PERFORMANCE AUDIT REPORT FOR PERIOD ENDING 12-31-65
10672	01-31-66	TRANSMITTAL CF QUARTERLY RELIABILITY PROGRESS REPORT FOR PERIOD ENDING 12-31-65
10681	01-31-66	QUALITY SYSTEMS SURVEY, HUGHES AIRCRAFT,
10853	02-13-66	LEM OPTICAL RENDEZVUS SUBSYSTEM MONTHLY REPORT ON WEIGHT, CENTER OF GRAVITY, ELECTRICAL POWER REQUIREMEN
10855	02-13-66	FINAL REPORT INERTIAL SUBSYSTEM 110 QUALIFICATION TEST STAR TRACKER ELECTRONICS ASSEMBLY -
11294	03-09-66	RELIABILITY AUDIT @ KSC
11414	03-14-66	EMI TEST PLAN - QUALIFICATION TEST PROGRAM
11475	03-17-66	SOURCE VS RECEIVING TEST REQUIREMENTS
11620	03-25-66	RECOMMENDED MODIFICATION OF SALT FOG QUALIFICATION TEST REQUIREMENTS ON G&N 111
11757	04-04-66	MONTHLY TECHNICAL & PROGRAM REPORT
11796	04-06-66	MATERIAL REVIEW POLICY
12186	05-02-66	FIELD QUALITY CONTROL PROCEDURES FOR THE AC ELEC. FACILITY AT MANNED SPACE CENTER
12192	05-02-66	APOLLO QUARTERLY QUALITY STATUS & QUALITY PERFORMANCE AUDIT REPORT FOR PERIOD ENDING 03-31-66
12199	05-02-66	TRANSMITTAL CF APOLLO QUARTERLY TECHNICAL PROGRESS REPORT FOR PERIOD ENDING MARCH 31, 1966
12361	05-13-66	DELETION OF INDUCED FAILURE OVERSTRESS; COLD PLATE OUT OF TOLERANCE CONDITIONS BLK I-100 QUALIFICATION PR
12395	05-17-66	TRANSMITTAL CF RELIABILITY JUSTIFICATION TEST REPORT FOR KOLLSMAN INSTRUMENT CORP.
12430	05-18-66	REPORT TO RELIABILITY AUDIT OF AC ELECTRONICS DIVISION AT KSC
12552	05-26-66	FIELD QUALITY CONTROL PROCEDURES FOR AC FACILITY AT KSC - OPERAT. GMS PROCEDURE (APOP) APOLLO PRE-FLIGHT
12659	06-02-66	NASA QUALITY SYSTEMS SURVEY OF AC ELECTRONICS DIV., GMC MILWAUKEE
12902	06-13-66	PROCESSING CF CRITICAL FAILURE REPORTS
12999	07-05-66	APOLLO G&N PARTS QUALIFICATION PROGRAM
14243	11-17-66	APOLLO SPECIAL SAMPLING PLANS - AC STD 2.2
14520	12-12-66	MONTHLY PROGRESS LETTER, BLOCK II AND LEM QUALIFICATION TEST
14624	12-20-66	RELIABILITY AND QUALITY ASSURANCE PROGRAM REVIEW
14736	01-06-67	G&N SPACECRAFT OPERATIONAL CHECKOUT DISCREPANCY SUMMARY
14755	01-09-67	APOLLO ASSEMBLY TASK TEAM FINDINGS
15021	02-06-67	RELIABILITY ASSESSMENT OF CRITICAL PARTS PROBLEM
15040	02-07-67	MONTHLY PROGRESS LETTER, BLOCK II AND LEM QUALIFICATION TEST
15120	02-16-67	AC ELECTRONICS REVIEW OF RAYTHEON QUALITY CONTROL
15304	03-09-67	AC ELECTRONICS REVIEW OF RAYTHEON QUALITY CONTROL

SUMMARY OF TECHNICAL REPORTS

RELIABILITY AND QUALITY ASSURANCE (GROUP 130)

NUMBER	DATE	TITLE
AP-M-		
15321	03-10-67	CLARIFICATION OF PIECE PART QUALIFICATION OBJECTIVES
15740	04-28-67	TEST PLAN - TESTING OF G&N NON-METALLIC MATERIALS IN A PURE OXYGEN ATMOSPHERE
15750	05-01-67	TRANSMITTAL OF RESULTS OF BLOCK II ELECTROMAGNETIC INTERFERENCE QUALIFICATION TESTING
15799	05-04-67	RELIABILITY AND QUALITY ASSURANCE PROGRAM REVIEW
15818	05-09-67	TEST PLAN - TESTING OF G&N NON-METALLIC MATERIALS IN A PURE OXYGEN ATMOSPHERE
15854	05-11-67	FINAL REPORT - APOLLO RELIABILITY REPORT THERMAL VACUUM RETEST OF BLOCK II OPTICAL UNIT ASSY.
15956	05-23-67	TEST PLAN- TESTING OF G&N NON-METALLIC MATERIALS IN A PURE OXYGEN ATMOSPHERE, CAT B, E, F & H
16010	05-31-67	SUBMITTAL OF TEST PLAN
16055	06-05-67	FAILURE REPORTING
16156	06-14-67	RAYTHEON COMMENTS/ACTIONS TAKEN ON NASA MANUFACTURING PROCESS REVIEW
16175	06-16-67	REVIEW OF LM TRANSPORTATION SUPPORT MANUAL AND PTC RELIABILITY REPORT
16185	06-16-67	NASA PROCESS REVIEW OF ELECTRONIC SPECIALTY COMPANY (ESC)
16232	06-23-67	REPLY TO MSC'S REVIEW OF THE ACE G&N NON-METALLIC MATERIALS TEST PLAN
16233	06-23-67	DEVIATIONS FROM TEST PLAN, TESTING G&N NON-METALLIC MAT'L'S IN PURE OXYGEN ATMOSPHERE, CAT B, E, F & H
16307	07-03-67	TMX IDENTIFICATION OF TEST RESULTS
16359	07-10-67	DEVIATIONS IN THE TEST PLAN, TESTING OF G&N NON-METALLIC IN A PURE OXYGEN ATMOSPHERE
16376	07-12-67	RESULTS FROM TESTING G&N NON-METALLIC MATERIALS IN A PURE OXYGEN ATMOSPHERE (HARNES MATERIAL)
16406	07-13-67	INTEGRATED CIRCUIT FLATPACK LEAK TEST
16504	07-27-67	KSC GHSATISFACTORY REPORT (UR) G-006, G&N FAILURE DETECT MODULE
16593	08-08-67	DEVIATIONS IN THE TEST PLAN - TESTING OF G&N NON-METALLIC MATERIALS IN A PURE OXYGEN ATMOSPHERE
16688	08-15-67	QUALITY CONTROL REQUIREMENTS
16777	08-29-67	QUALITY REVIEW MEETING ACTION ITEMS 1 AND 6
16806	08-31-67	TMX RTV 11 AND 12 COMPATIBILITY
16865	09-08-67	DEVIATIONS IN TEST PLAN- TEST OF NON-METALLIC MAT'L'S IN PURE OXYGEN ATMOSPHERE, CAT B, E, F & H
16907	09-12-67	DEVIATIONS IN TEST PLAN- TEST OF NON-METALLIC MAT'L'S IN PURE OXYGEN ATMOSPHERE, CAT B, E, F & H
17061	10-02-67	COMPUTER NONMETALLIC MATERIALS AND SOURCE CONTROL DRAWINGS IDENTIFICATION OF METR.
17150	10-12-67	NON-METALLIC MATERIALS EVALUATION REPORT
17215	10-17-67	METALLIC MATERIALS INVESTIGATION
17227	10-18-67	EVALUATION OF SERIES 100 PSA THERMAL EXPOSURE AT KSC
17444	11-07-67	FRAYING OF BETA CLCTH LACING TAPE
17466	11-08-67	OBSERVED DISCREPANCIES WITH BETA LACING TAPE
18172	02-14-68	MODULE DEPOYING, MODULE DISTRIBUTED CAPACITANCE & SCD PARTS
18202	02-16-68	RE-EVALUATION OF THE STRUCTURAL INTEGRITY OF THE LEM NAV BASE
18357	03-05-68	COMPUTER ERASABLE MEMORY ENCAPSULANT EV. PROGRAM
18388	03-08-68	ENGR. EVALU. OF ESC/EYEPIECE QUAL. TEST PLAN
18389	03-09-68	FAILURE ANALYSIS AND CORRECTIVE ACTION REPORT SUBMITTAL
18396	03-11-68	QUALIFICATION TEST OF EYEPIECES STORAGE UNIT
18397	03-11-68	QUALIFICATION TEST OF EYEPIECES STORAGE UNIT
18491	03-20-68	RESPONSE TO ACTION ITEM FROM AGRR ON S/C 020 (502)
18649	04-03-68	NASA QUALITY SYSTEM SURVEY
18767	04-23-67	RECOM CORRECTIVE ACTION FOR SCREW FAILURE DURING QUAL TEST OF BLK II EWEPC STORAGE UNIT WITH EYEPIECES
18954	05-16-68	APOLLO BLOCK II G&N FAILURE REPORTING
19258	07-02-68	REVIEW OF G&N SYSTEM AT KSC
19446	07-24-68	TRANSMITTAL OF GUIDE LINE FOR ENGINEERING EVALUATION OF APOLLO I GYRO WHEEL PACKAGE QUALITY
19488	07-31-68	AGC VIBRATION FAILURES

SUMMARY OF TECHNICAL REPORTS		
RELIABILITY AND QUALITY ASSURANCE (GROUP 130)		
NUMBER	DATE	TITLE

AP-M-		
19509	08-02-68	EYEPIECE COVERS QUALIFICATION STATUS
19909	10-09-68	DETERMINATION OF IML STABLE MEMBER VIBRATION LEVELS DURING QUAL. TESTING
21154	11-03-68	FLAT PACK CONTAMINATION
21218	11-19-68	ANTI-WICKING TCCL EFFECTIVENESS STUDY
21270	11-29-68	SPRAGUE 137D MET SLLG TANTALUM CAPACITORS
22275	06-19-69	APOLLO II IRIG BEARING AND FAILURE REPORT

SUMMARY OF TECHNICAL REPORTS

GENERAL PROGRAM ASPECTS (GROUP 140)

NUMBER	DATE	TITLE
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AP-M-

00131	09-27-62	IMU OXYGEN ATMOSPHERE STUDY PROGRAM PLAN
00253	12-27-62	RELEASE OF WIRING STANDARDS AND DESIGN CRITERIA FOR APOLLO WELDING ASSEMBLIES*
00260	12-28-62	REVIEW OF WIRING STANDARDS AND DESIGN CRITERIA FOR APOLLO WELDING MODULES*
00263	01-02-63	REQUIREMENTS FOR PROCESS CONTROL AND FABRICATION OF RESISTANCE WELDED ELECTRONIC CIRCUIT MODULES.
00275	01-07-63	TRANSMITTAL OF WIRING STANDARDS AND DESIGN CRITERIA FOR WELDED ASSEMBLIES.
00545	04-17-63	ETHYLENE GLYCOL COMPATIBILITY & REACTOR MINIATURE
00573	04-25-63	ABBREVIATIONS TO BE USED FOR SYSTEM REFERENCE DESIGNATION (REV.)
01000	07-24-63	G&N SYSTEM DESIGN REQUIREMENTS
01093	09-04-63	TRANSMITTAL OF RADIATION STUDY PLANS
01377	10-01-63	REPORT OF RADIATION STUDY PROGRESS REPORT
01511	10-19-63	TRANSMITTAL OF TEST REPORTS
01638	11-04-64	MIT SPARES CHECKOUT PHILCROPHY
01658	11-05-63	FINAL REPORT STUDY OF RADIATION EFFECTS.
02002	12-16-63	TRANSFORMER FABRICATION
02103	01-03-64	LOT CONTROL & STERILIZATION OF AGE EQUIPMENT
02108	01-03-64	IN-FLIGHT ANALYSIS OF G & N SYSTEM
02110	01-03-64	PROCEDURE OF HELIUM LOCK CHECKING
02138	01-07-64	RECOMMENDATIONS FOR IMPROVING YIELD
02354	02-03-64	CLEANLINESS REQUIREMENTS FOR RESOLVER AND IMU ASSEMBLY AREAS
02371	02-04-64	VERIFICATION OF DC AMPLIFIER GAIN BY LOAD CHANGE METHOD
02357	02-06-64	PROBLEMS AREAS ENCOUNTERED IN THE MANUFACTURE OF IMU AGE 7 AND 8
02452	02-13-64	VARIATIONAL METHOD IN COMPUTING POSITION AND VELOCITY SENSITIVITIES IN TRANSLUNAR TRAJECTORIES
02482	02-17-64	CONNECTORS USED ON AGE HARNESES
02619	03-04-64	COMPLETED FORTRAN #4 PROGRAM MODULE FOR USE IN APOLLO TRAJECTORY AND G&N ANALYSIS
02624	03-09-64	AVAILABLE FORTRAN IV PROGRAMS FOR US SPACE GUIDANCE PERFORMANCE
02685	03-11-64	SENSITIVITY OF THE GRAVITATIONAL FORCE FIELD DUE TO UNCERTAINTIES IN LUNAR AND SOLAR POSITIONS
02958	04-15-64	VARIATIONS OF IRIG SENSITIVITY FROM GYRO TEST AREA TO THE SAT AREA
02955	04-11-64	A SOLUTION OF THE TWO BODY PROBLEM ON THE 7090 COMPUTER
03112	04-24-64	PRESERVATION, PACKAGING, PACKING, AND CLEANING REQUIREMENTS; CONSTRAINTS AND MEANS
03352	05-17-64	LANDMARK TRACKING SYSTEM MODIFICATIONS
03677	06-24-64	STRIPPING OF SPLINED SOCKETS ON BUTTON HEAD, SELF-LOCKING, SPLINED SOCKET SERREWS
03734	06-26-64	MEANS SPHERICAL CANDLE POWER REQUIREMENT AT 5.0 VOLTS DC
04471	09-23-64	WORKMANSHIP VIBRATION TEST
04510	09-29-64	PHYSICAL PROPERTIES OF VARIOUS COOLANTS
04573	10-03-64	APOLLO-X PRELIMINARY REPORT
04749	10-22-64	CONNECTOR MOISTURE SEALING
04776	10-26-64	RETENSION FORCE ON MALLO PINS AND INSULATORS
04973	11-20-64	MOISTURE SEALING OF HUGHES CONNECTORS
05111	12-07-64	USE OF COUNTERFEIT TRANSISTORS AND OBSOLETE VIKING CONNECTORS
05119	12-07-64	PRELIMINARY EVALUATION MOTOROLA 2N3495, MM 1730
05433	01-15-65	PRELIMINARY RANDOM VIBRATION SPECTRA FOR GEN SLED TEST
05491	01-20-65	WORKMANSHIP VIBRATION TESTS
05521	01-22-65	AC SPARK PLUG PARAMETRIC DRIFT TEST PROGRAM
05639	02-04-65	GYROCOMPASSING, ACCEPTANCE TEST MECHANIZATION AND THEORY
05658	02-04-65	AERDVAX MC 8C V CERAFIL CAPACITORS

SUMMARY OF TECHNICAL REPORTS

GENERAL PROGRAM ASPECTS (GROUP 140)

NUMBER	DATE	TITLE
AP-M-		
05661	02-04-65	TRANSISTORS WITH CUT-OFF TABS-NASA CONTRACT NAS 9-497
05841	02-23-65	TRANSMITTAL OF PARAMETER STABILITY DATA
06046	03-10-65	SOLDERING .032 DIAMETER NICKEL WIRE TO POWER TRANSISTORS
06054	03-13-65	ETHYLENE GLYCOL COOLANT SAMPLING-RESULTS TO DATE
06067	03-12-65	DISCUSSION OF GYRO COEF & TEST CAPABILITIES CONTAINED IN PROGRAM SIMPCHK & OTHER PROGRAMS BY A. LAUTS
06117	03-14-65	GSE-GFP PROBLEM AREAS FOR SLEC TEST PROGRAM
06187	03-19-65	DESCRIPTION OF PROGRAM SYNCCOMPASSING CHECK
06197	03-22-65	GYRO COMPASSING CALCULATOR PROGRAM
06256	03-26-65	INVESTIGATION OF HUGHES SOCKET FAILURES
06271	03-29-65	TRANSMITTAL OF FINAL TEST REPORT
06409	04-07-65	"PURPLE PLAGUE" RAYTHEON TRANSISTOR P/N 1006752
06415	04-03-65	LOW PRESSURE AND HUMIDITY TEST OF LOW DENSITY FOAM
06417	04-03-65	FINAL TEST REPORT - CUT-THRU & ABRASION RESISTANCE OF WIRE INSULATION FOR BLK II PSA & CDU
06429	04-05-65	INVESTIGATION PIN HOLE LOCATIONS ON HUGHES 108 PIN CONNECTOR BODIES
06430	04-09-65	INVESTIGATION OF CRIMP TENSILE STRENGTH USING 24 GAUGE SOLID COPPER WIRE AND HUGHES SOCKETS
06476	04-14-65	EVALUATION ON LAZER WELDING OF HARNESS INTERCONNECTS
06482	04-14-65	DESIGN MARGIN TESTING
06853	05-17-65	DUST SPEED DECADE RESOLVER STANDARD
07056	05-04-65	FINAL TEST REPORT- NON-FLAM, NON-WETTING, POLYURETHANE FOAM ENCAPSULANT ON BLK II LM PSA-ECDU MODULES
07079	06-07-65	LEM OPTICAL TRACKER SYSTEM PHASE I PRELIMINARY PROGRAM PLANS
07104	06-08-65	CAPACITOR NETWORK STATUS REPORT
07136	06-10-65	FAILURE ANALYSIS OF GOVERNMENT PROPERTY
07248	06-19-65	CONFIRMATION CN ASSEMBLER LCT NUMBERS
07324	06-24-65	THRUST VECTOR CONTROL - DESIGN DESCRIPTION (BLOCK II)
07368	06-28-65	S IV R TAKEOVER SIMULATION
07582	07-12-65	AUTHORITY TO UTILIZE THECDOLITES
07585	07-12-65	LOAD SIMULATION FOR THE BLOCK II COMMAND MODULE
07631	07-14-65	MERCURY POOLS
07648	07-15-65	TMC MONITOR METER ERROR ANALYSIS
07891	08-03-65	SUMMARY OF FAIL INDICATOR PROBLEM GEN 110 QUALIFICATION SUBSYSTEM
07955	08-10-65	CSM MOON CRBIT PARAMETERS AND THEIR RELATIONSHIP TO THE LEM OPTICAL TRACKER
07957	08-13-65	1/2X RESOLVER NULL IN THE ZERO ENCODE MODE
08025	08-17-65	ERROR ANALYSIS BY RANDOM NUMBERS
08044	08-18-65	RESULTS OF BLOCK II POWER SUPPLY INVESTIGATION
08108	08-24-65	BLOCK II ACE CONNECTORS
08110	08-24-65	DIGITAL CORE NULL VOLTAGE FAILURES
08134	08-25-65	OPERATIONAL AMPLIFIER OPTIMIZATION
08142	08-26-65	COMPUTER CONTROL AND RETICLE DIMMING ASSY
08156	08-27-65	EVALUATION OF THE HUGHES LEM OPTICAL TRACKER LOOP
08171	08-30-65	REPAIR OF GFP IN ACE SAT AREA
08185	08-31-65	DEFINITION OF FAILURE
08192	08-31-65	LEM OPTICAL RENDEZVUS SUBSYSTEM - HUGHES AIRCRAFT CO. THIRD MONTHLY TECH AND PROGRAM PROGRESS REPORT
08194	08-31-65	ENGR. REVIEW OF QUALIF. TEST FAILURES FOR VARIABLE RESISTORS
08199	08-30-65	PRELIMINARY SUMMARY OF MISSION 202 SUBSYSTEM TEST OBJECTIVES, FLITE PROFILE AND S/B/SIVB BOOST EVKON. ANA
08244	09-03-65	LEM OPTICAL RENDEZVUS SUBSYSTEM-ITEK THIRD MONTHLY TECHNICAL & PROGRAM PROGRESS REPORT

SUMMARY OF TECHNICAL REPORTS

GENERAL PROGRAM ASPECTS (GROUP 140)

NUMBER	DATE	TITLE
AP-M-		
08304	09-10-65	TECHNICAL & PROGRAM PROGRESS REPORTS FOR ITEK AND HUGHES
08342	09-14-65	TRACKER POWER SUPPLY, SERIES 100
08359	09-14-65	REPLY TO ACTION ITEMS MWG3-19A & MWG 3-20A OF APOLLO MATERIALS WORKING GROUP MEETING
08434	09-17-65	PROPOSED CHANGES FOR GROUNDING OF END CONNECTOR ASSEMBLY FOR BLOCK I SERIES 50 & 100
08428	09-20-65	REVISAL OF PROPOSED ACCEPTANCE TEST GROUND RULES
08441	09-21-65	FREQUENCY RESPONSE OF THE HUGHES' LEM OPTICAL TRACKER LOOPS
08550	09-27-65	BERYLLIUM CORROSION
08553	09-28-65	CONVERSION OF PHOTOtube SENSITIVITY IN RELATIVE UNITS (AMPERES/LUNAR) TO ABSOLUTE UNITS (AMPERES/WATT)
08641	10-01-65	LEM/OPTICAL RENDEZVOUS SUBSYSTEM SIGNAL PROCESSING - STAR TRACK MODULE
08655	10-04-65	FINAL REPORTS OF LCRS PROGRAM DEVELOPMENT PHASE FOR ITEK & PERKIN ELMER
08669	10-05-65	EMI/RFI GROUND FOR G&N SYSTEM 20, 12 AND 17
08691	10-05-65	CLARIFICATION OF ENVIRONMENTAL REQUIREMENTS
08734	10-07-65	LEM OPT RENDEZVOUS SUBSY (LORS) SIGNAL RATIO CALCULATION FOR BEACON TRACK MODE AGAINST SUNLIT LUNAR BACKGRD
08745	10-08-65	LORS PROGRAM PROGRAM DEFINITION PHASE
08746	10-08-65	LORS PROGRAM - PROGRAM DEFINITION PHASE
08806	10-12-65	RESULTS OF FUNCTIONAL TEST RUN ON STAR TRACKER FLECT.
08813	10-12-65	LEM OPTICAL TRACKER MECHANIZATION
08819	10-12-65	LEM OPTICAL RENDEZVOUS SUBSYSTEM
08890	10-16-65	LEM OR SUBSYSTEM, LUMINOUS BEACON
08907	10-18-65	LORS-G&N MEASUREMENTS LIST
08930	10-19-65	GRAVITY REFERENCES FOR AUTOCOLLIMATOR
08952	10-20-65	EVALUATION OF THE ACQUISITION LOOP OF THE LEM OPTICAL RENDEZVOUS SYSTEM
08953	10-20-65	PRELIMINARY QUALIFICATION TESTING REQUIREMENTS FOR LORS TRACKER
09019	10-25-65	PROGRESS REPORT ON THE DEVELOPMENT OF THE APOLLO ACCURACY ASSESSMENT PROGRAM FOR FIRST HALF OF OCTOBER
09027	10-26-65	ANTI-CREEP ASSEMBLY MODULE DESIGN OPTIMIZATION REPORT
09096	10-29-65	FINAL REPORT ON POLYURETHANE ENCAPSULATION
09204	11-04-65	G&N CARAVAN TYPE GSE REQUIREMENTS AT GSE FOR LAUNCH COMPLEXES 34-37 AND 39
09229	11-08-65	LEM ASCENT VEHICLE ANGULAR RATES
09237	11-08-65	PHOTOCATHODE RESPONSE TO STARS OF VARIOUS VISUAL MAGNITUDES AND COLOR TEMPS
09335	11-12-65	LEM OPTICAL TRACKER MECHANIZATION
09351	11-12-65	LORS BEACON POST INSTALLATION TEST RESULTS
09755	12-07-65	HUMIDITY TEST OF POLYURETHANE FOAM
09764	12-07-65	EVALUATION OF THE ACQUISITION LOOP OF THE LEM OPTICAL RENDEZVOUS SYSTEM
09812	12-09-65	REDUNDANT TRANSFORMER COUPLING GROUND ISOLATION AT ECDU OUTPUT AND LORS EL OR AZ DEMODULATOR INPUT
09820	12-03-65	LEM OPTICAL TRACKER SUBSYSTEM STOP AND INITIALIZING PROCEDURE
09893	12-14-65	SHIELDED ZIPPERTUBING.
09898	12-14-65	LEM OPTICAL TRACKER MECHANIZATION.
09945	12-15-65	THERMAL ANALOGS LORS BEACON.
09986	12-17-65	LUMINOUS TARGET SIMULATOR.
10220	01-04-66	HUMIDITY TEST OF EPCXY SEALED MALCO CONNECTOR SAMPLES
10252	01-05-66	PROCESSING OF FLIGHT 202 REFERENCE TRAJECTORY ENTRY
10359	01-11-66	ERRONEOUS MARKING OF SEXTANT POWER SWITCH ON G&N INDICATOR CONTROL PANEL FOR G&N 20
10411	01-14-66	LEM RENDEZVOUS SENSOR OLYMPICS
10483	01-19-66	CRIMPING V/S SOLDERING OF SOLDER WIRE IN DUETSCH CRIMP CONTACTS
10517	01-20-66	LORS BEACON USAGE

GENERAL PROGRAM ASPECTS (GROUP 140)			SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE		

AP-M-

10551	01-21-66	QUALIFICATION TESTING OF APCLL(1) HEARFORT MOTOR TACHS BLK I SUBSYSTEM PERFORMANCE		
10581	01-25-66	DIODES, IN825, STABILITY		
10616	01-26-66	3 - DIMENSIONAL ANALOG SIMULATION OF KEPLEIS EQUATIONS		
10649	01-27-66	SEAL DESIGN		
10712	02-02-66	LFM OPTICAL TRACKER TWO LINE MECHANIZATION DIAGRAMS		
10713	02-02-66	LORS BEACON RELIABILITY ANALYSIS		
10771	02-07-66	LORS GSE ENGINEERING MODEL #1 ACCEPTANCE TESTING		
10810	02-08-66	OUTLINE OF G&N PRE-INSTALLATION TESTING OF THE LEM OPTICAL RENDEZVOUS SYSTEM		
10820	02-08-66	INFORMATION PERTINENT TO FAIRCHILD TRANSISTORS HAVING FAILURE MODE		
10828	02-09-66	CONTINUATION OF LORS TRACKER GSE ENGINEERING MODEL #1 ACCEPTANCE TESTING		
10840	02-09-66	APOLLO LORS PROGRAM MAINTENANCE ENGINEERING ANALYSIS		
10841	02-09-66	APOLLO LORS PROGRAM		
10847	02-10-66	TESTING OF REVIEWED ELECTRICAL DRAWINGS TRACKING BEACON ASSEMBLY		
10871	02-10-66	DEVIATION OF LAUNCH VIBRATION TEST REQUIREMENTS FOR LORS REDUCED MISSION CYCLE TEST		
10903	02-11-66	MAX. LOTS ACQUISITION COMMAND RATE		
10915	02-14-66	G&N SYSTEM FUNCTIONAL TITELINES FOR MISSIONS 202, 204A, AND 206		
10935	02-14-66	DELIVERY OF WORKHORSE SERIES *100* SIGNAL CONDITIONERS FOR GEN 121		
10991	02-17-66	FAILURE OF MAP AND DATA VIEWER CONNECTOR 56J8 DURING FLIGHT		
11000	02-17-66	LORS PROG. SUP. INSTRU BREADBOARD OPTICAL TRACKER		
11062	02-22-66	AC ELECTRONICS MCCIFICATION OF DVM		
11102	02-24-66	POSSIBLE ERROR SOURCE FOR FLIGHT		
11116	02-24-66	BLOCK II AND LEM SURFACE COATING FOR CORROSION PROTECTIONS		
11140	02-25-66	INVESTIGATION OF A/B COMPONENTS PRESSURIZATION		
11180	03-01-66	MAGNESIUM FINISHES		
11221	03-02-66	PHASING OF LORS TRACKER		
11230	03-03-66	LOR-CSM LUMINOUS BEACON SECTION VIBRATION REQUIREMENTS		
11233	03-03-66	CSM LUMINOUS BEACON SECTION (CLOS)		
11237	03-04-66	DERIVATION OF LORS HUMIDITY TESTS		
11245	03-04-66	UNRESOLVED LORS ENVIRONMENTAL PROBLEM AREA		
11262	03-04-66	VIBRATION LEVELS FOR THE LEM OPTICAL RENDEZVOUS SYSTEM OLYMPIC		
11266	03-04-66	ACCELERATION VIBRATION OF GEN 111 TEST COMPLETION REPORT		
11268	03-07-66	LEM AIRBORNE COLD PLATES		
11306	03-08-66	BLOCK II ADDER		
11321	03-09-66	MAGNESIUM FINISHES		
11372	03-11-66	TITAN III FLIGHT VIBRATION DATA		
11411	03-14-66	LORS BEACON RADIATED ELECTRONIC MAGNETIC INTERFERENCE AND FAILURE MODE ANALYSIS		
11457	03-16-66	MATERIALS APPLICATION APPROVAL GROUND RULES		
11465	03-16-66	DERIVATION OF CLYMPICS VIBRATION TEST DEFINED IN AP-M-11262		
11481	03-17-66	GSE/LOTS & GSE BEACON FAT ENGR. MODEL #1		
11508	03-18-66	QUALIFICATION TESTING OF APOLLO PANCAKE RESOLVERS (BLOCK I)		
11532	03-21-66	BREADBOARD LORS BEACON INDUCED NOISE MEASUREMENT		
11543	03-21-66	LORS W-CG-I - DYNAMIC MODEL - LEM OPTICAL TRACKER TESTING		
11550	03-22-66	RESULTS OR ENGINEERING INVESTIGATION OF HEADER GROUP RESISTANCE CHARGE		
11560	03-22-66	LORS POST-INSTALLATION TESTING		
11583	03-23-66	VIBRATION LEVELS FOR LORS OLYMPICS TEST		

GENERAL PROGRAM ASPECTS (GROUP 140)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	NUMBER	TITLE

AP-M-			
11595	03-24-66		ANALYSIS OF COMPONENT CONDITIONS IN 1007665 DURING TEST FIXTURE FAILURE
11603	03-25-66		LOTS BEACON MODE SELF TEST
11616	03-25-66		STATUS REPORT ON THE LOTS PART OF THE AURORA COMPUTER PROGRAM
11627	03-28-66		LORS POST-INSTALLATION TESTING
11669	03-29-66		LEM OPTICAL RENDEZVOUS SYSTEM MEASUREMENT LIST
11672	03-30-66		MECHANIZATION OF LCRS MANUAL CONTROLLER
11677	03-30-66		LORS/RR COUPLING DATA UNITS
11682	03-30-66		LORS MANUAL CONTROL PANEL
11691	03-30-66		FACE TRANSDUCERS FOR MECHANICAL IMPEDANCE MEASUREMENTS
11693	03-31-66		TESTING OF THE BREACBOARD LCRS BEACON AT NAA
11699	03-31-66		NON-POTTED CONNECTORS APCLD G&N HARNESS & END CONNECTOR ASSO
11702	03-31-66		LORS TELEMETRY SIGNALS
11772	04-05-66		MECHANIZATION OF LORS MANUAL CONTROLLER
11795	04-06-66		LORS TELEMETRY SIGNALS
11805	04-06-66		CARR & FLIGHT READINESS REVIEW REPORT FOR GEN 20 THERMAL VACUUMMISSION
11806	04-06-66		POINT REQUIREMENTS FOR SINGLE PCINT TESTING
11825	04-07-66		LAP WELD ACCEPTABILITY
11853	04-11-66		INTERFERENCE BETWEEN THE MIT ACCELEROMETER AND LOTS
11856	04-11-66		LOTS SELF TEST
11858	04-11-66		CLARIFICATION OF THE LOCATION OF THE 5 MILLIRADIAN BIOS IN THE LOTS
11874	04-12-66		NON-METALLIC LIST FOR APCLLC CREW BAYS
11883	04-12-66		ACE PALMETRY UNIT TOLERANCES & SCALE FACTORS FOR LOTS POST INSTALLATION TESTING
11888	04-13-66		CONTROL OF CCM/PAND MODULE G&N SYSTEM CONFIGURATION
11908	04-14-66		LORS COMPOSITE ANALCG TELEMETRY OUTPUT
11933	04-15-66		GOVERNMENT AGENCY MANDATORY INSPECTION POINTS (MIP'S)
11984	04-18-66		LOCKING PCITTING ADAPTERS TO DETACH AND MICRO DATA CONNECTIONS ON G&N HARNESS
11998	04-19-66		APOLLO G&N SYSTEM POWERED FLIGHT AIR ANALYSIS
12017	04-20-66		RESULTS OF LUXORB INVESTIGATION
12032	04-21-66		BEACON BREADEJARD #1 VISUAL MODE ERRATIC OPERATION
12035	04-21-66		ADT LOCITE FIXES
12038	04-21-66		SERIES #0" END CONNECTOR FOR GEN 7 ACCK 6
12049	04-22-66		EFFECTS OF CRACKED NATIONAL NYLON INSULATORS
12080	04-25-66		LEM OPTICAL TRACKER TWO LINE MECHANIZATION DIAGRAM
12086	04-26-66		LOTS STAR MODE PNT MEASUREMENTS
12087	04-26-66		LOTS MEASUREMENTS
12106	04-26-66		CORROSION OF 416 S.S. ACTUATOR SHAFT (USED ON THE ATTITUDE IMPULSE SWITCH ASSEMBLY - SERIES 100)
12130	04-27-66		LORS AURORA PROGRAM
12131	04-27-66		LORS MEASUREMENTS NCMENCLATURE
12147	04-27-66		LORS MEASUREMENTS
12176	05-02-66		RECOMMENDED ADDITIONAL OLYPICS PICKUPS
12295	05-10-66		FAILURE EFFECTS ANALYSIS OF THE CUTER GIMBAL IMU-CDU RESOLVER PAIR IN MISSION 202
12304	05-10-66		INVESTIGATION OF QUALIFICATION TEST RESULTS ON APOLLO 16X PANCAKE RESOLVERS (BLOCK I)
12335	05-12-66		LORS AUTOMATIC CHECKOUT EQUIPMENT (ACE) SIGNALS
12386	05-17-66		SUMMARY OF LORS THERMAL-VACUUM TESTING 7 MAY - 9 MAY 1966
12398	05-17-66		QUALIFICATION TESTING OF APOLLO SOLVERE MOTOR TACHS BLOCK I EFFECTS ON OPTICAL SUBSYSTEM PERFORMANCE

SUMMARY OF TECHNICAL REPORTS

GENERAL PROGRAM ASPECTS (GROUP 140)

NUMBER	DATE	TITLE
AP-M-		
12402	05-17-66	GEN 111 HUMIDITY TEST COMPLETION
12480	05-23-66	OPERATING CYCLES AND TIME FOR RELAY AND JDC TEST TIME AND MODE FREQ. DATA FOR BLOCK I
12495	05-23-66	EFFECT OF HUMIDITY ON AN OPEN DESICCATOR ASSEMBLY
12512	05-24-66	MOD. OF SYS. 202 AND 602 FOR THERMAL-VAC TESTING
12531	05-25-66	LORS POLE PASSAGE
12540	05-26-66	APOLLO OPTICS "LCCKTIITE"
12583	05-27-66	QUALIFICATION TEST
12617	06-01-66	QUALIFICATION OF BLOCK II AND LEM EQUIPMENT FOR ACCEPTANCE TESTING
12679	06-03-66	WIREWAPPING OF STRANDED WIRE
12703	06-06-66	EFFECTS OF INCREASED OPTICS AXES ERRORS ON MISSION 204 PERFORMANCE OBJECTIVES
12725	06-08-66	SENSITIVITY OF ORBITAL PARAMETERS TO GEN ERROR SOURCES, AP-M NO. 11968, ADDENDUM TO
12728	06-08-66	GRAVITATIONAL POTENTIAL FUNCTIONAL OF LUNAR SPHERE OF INFLUENCE
12733	06-08-66	APOLLO FLIGHT VIBRATION, ETC., MEASUREMENTS DATA
12800	06-13-66	SIGNIFICANCE OF AIRBORNE SWITCH QUALIFICATION FAILURES
12886	06-22-66	FAIRCHILD TRACEABILITY
12965	06-29-66	LEM/GEN REMOTE MALFUNCTION MONITOR SYSTEM
12985	05-30-66	REPAIR OF QUAL EYEPIECE STORAGE UNIT AT KIC
13049	07-11-66	INFORMATION COVERING BURN-IN RESULTS, HISTOGRAMS OF BURN-IN RESULTS
13050	07-11-66	APOLLO PRE-FLIGHT OPERATIONS PROCEDURES, #ACG-302, DATED APRIL 22, 1966
13369	08-12-66	MATING OF MALCO OR NATIONAL CONNECTORS
13469	08-24-66	PROBLEMS PERTINENT TO SCD 1006359 DIODE
13584	09-07-66	GENERAL COMPUTER PROGRAMS FOR TIME RESPONSE OF LINEAR STATIONARY SYSTEMS
13616	09-08-66	PIN PROTRUSION IN NATIONAL CONNECTORS
13736	09-21-66	NATIONAL CONNECTOR PIN PROBLEMS
13752	09-23-66	LINK SIMULATION EQUIPMENT
13931	10-11-66	ORBITAL NAVIGATION USING OPTICAL SIGHTINGS TO KNOWN LANDMARKS
13952	10-13-66	TC TRAP PROBLEM
14000	10-18-66	WIREWAP TESTS
14024	10-20-66	USAGE OF DEUTSCH CONNECTORS
14066	10-25-66	TEMPERATURE MEASUREMENT OF A ROTATING SHAFT
14080	10-26-66	CM VIBRATION MEASUREMENTS IN FLIGHT AS-202 (SC 011, GEN 017)
14089	10-27-66	DESCRIPTION OF DIGITAL COMPUTER SIMULATION OF BLOCK I GYRO-COMPASSING AND VERTICAL ERECTION
14090	10-27-66	DELTA T CHARTS FOR SYSTEMS 12/50, 121A, 122 AND 123
14101	10-27-66	THE EFFECT OF SURFACE IRREGULARITIES ON RADIATION TRANSFER
14115	10-28-66	LEM OPERATIONAL AND FLIGHT QUALIFICATION MEASUREMENT SIGNAL TWO LINE MECHANIZATION SKETCHES
14123	10-28-66	MEASUREMENTS DURING THERMAL VACUUM TESTS OF EJECTABLE DUST COVERS FOR S/C 012 AND 014
14134	10-31-66	UPDATED DELTA T CHARTS FOR SYSTEMS 12/50, 121A, 122 AND 123
14137	10-31-66	MODIFICATION DC DIFFERENTIAL AMP AND PVR MODULE TO REMOVE RESISTORS
14142	11-01-66	COMPARISON OF NASA AND ACED SPECTRAL ANALYSIS OF PICKUP CK-0041 IN FLIGHT AS-201
14143	11-01-66	SUMMARY OF FLIGHT AS-201 (S/C 009) VIBRATION
14174	11-03-66	DEUTSCH PIN BENDING
14175	11-03-66	SENSE AMPLIFIER
14230	11-09-66	PROGRAM LOCKUP PROBLEM IN FLIGHT 204, FLIGHT 501, SUNDIAL AND AURORA PROGRAM
14233	11-10-66	SIGNAL CONDITIONER +2.5 BIAS SHIFT
14280	11-15-66	EJECTABLE DUST COVERS QUALIFICATION TEST, DEVIATION IN TEST ARTICLES

SUMMARY OF TECHNICAL REPORTS

GENERAL PROGRAM ASPECTS (GROUP 140)

NUMBER	DATE	TITLE
AP-M-		
14287	11-15-66	DELTA T CHARTS FOR BLOCK II EARLY FLIGHT SYSTEMS
14288	11-15-66	APOLLO FAILURE VERIFICATION CONTROL
14319	11-17-66	RENDEZVOUS RADAR SHAFT AND TRUNNION ANGLE CONVERTER G&N 653
14329	11-18-66	LINE-OF-SIGHT SLEW RATES DURING LANDMARK TRACKING
14340	11-21-66	STATUS OF THE ESTABLISHMENT OF BENT CONNECTOR PIN CRITERIA
14393	11-28-66	VARIOUS INFORMATION REGARDING CCIL POWER NOISE AND TRANSIENTS
14421	11-30-66	ADDITIONAL UTILIZATION OF G&N SUB PROGRAM 652
14436	12-01-66	IMPROVED GYRO COMPASSING
14454	12-02-66	OPENING OF BLOCK II ESU QUARTER TURN LOCK AT NAA
14531	12-13-66	DESCRIPTION OF DIGITAL COMPUTER SIMULATION OF BLOCK II IRIG DRIFT COEFFICIENT DETERMINATION TEST
14543	12-13-66	PROPOSED STANDARDIZATION OF CALIBRATION CURVES FOR BLOCK II ACE MEASUREMENTS
14565	12-15-66	RELAY LOADS
14582	12-16-66	COORDINATE SYSTEM FOR MISSION 206
14583	12-16-66	SUBROUTINE FOR COMPUTING ALTITUDE, LATITUDE, AND LONGITUDE
14594	12-19-66	PROPOSED LEAK RATES FOR BLOCK II AND LEM HEADERS TO ALLOW USE OF A PRESSURE DECAY LEAK TEST METHOD
14666	12-23-66	LUBS LUBRICATION INFORMATION
14693	01-03-67	TEMPERATURE CYCLING OF BCANDED EYEPIECE SUPPORT TO BLOCK II ESU
14728	01-05-67	ADD TO & MORE RESULTS FROM DIGITAL COMPUTER SIMULATION BLK II IRIG DRIFT COEF D-T TEST & CORR TO APM14531
14733	01-06-67	NASA POLICY ON RE-USE OF QUALIFICATION AND OFF LIMITS TEST HARDWARE
14750	01-09-67	SCD 1006323 TRANSISTOR LIFE PERFORMANCE
14816	01-16-67	TRANSFORMER FAILURE IN BLOCK II SIGNAL CONDITIONER
14819	01-16-67	THERMAL/STRUCTURAL QUALIFICATION TEST OF SEXTANT COVER AT LTB ON 1-5-67
14825	01-16-67	A SYNOPSIS OF THE APOLLO ACCURACY ASSESSMENTS PROGRAM
14845	01-17-67	REVIEW OF STANDARDIZED CALIBRATIONS FOR GEN SIGNALS DISPLAYED BY AC
14851	01-18-67	TECHNICAL DATA TRANSMITTAL
14865	01-19-67	DRL ASSISTANCE ON RAY TRACE STUDY
14907	01-24-67	STATUS OF BLOCK II AND LEM SYSTEMS
15000	01-24-67	GEN SYSTEM RELAY USAGE
15006	02-02-67	TESTING IN O2 ENVIRONMENT
15022	02-03-67	SPICIAL TESTING OF APOLLO PHILCO INTEGRATED CIRCUITS (FLAT PACK) P/N 1006321 AND 1006394
15023	02-06-67	STATUS OF AC ELECTRONICS, REVIEW AND EVALUATION OF RAYTHEON DEPOTTING PROCEDURE
15121	02-06-67	NASA REQUEST FOR REVIEW OF 12/50 IMPOUNDED MATERIAL
15151	02-16-67	PREVENTING ACTIVITY LAMP FLASHING DURING K-START TAPE USE
15173	02-21-67	SHIPMENT OF SAMPLES OF MATERIAL UTILIZED ON G&N 12/50
15181	02-22-67	NASA REQUEST FOR SAMPLES OF MATERIAL UTILIZED ON G&N 12/50
15192	02-23-67	SHIPMENT OF SAMPLES OF MATERIALS UTILIZED ON G&N 12/50
15195	02-24-67	BLOCK II-LEM JCC BREAKDOWN VERSLS A/B ASSEMBLY
15264	02-24-67	SHIPMENT OF SAMPLES IDENTIFIED BY AC PERTINENT TO G&N 12/50
15265	03-03-67	NASA CREW BAY NON-METALLIC MATERIAL STATUS REPORT
15284	03-03-67	TRANSISTOR 1006323 UTILIZATION DATA
15320	03-07-67	CRITICAL-PARTS PROBLEM
15326	03-10-67	SHIPMENT OF SAMPLES OF MATERIALS UTILIZED ON G&N 12/50
15331	03-13-67	SPACECRAFT 12 PRESSURE STUDY
15333	03-13-67	SHIPMENT OF SAMPLES OF MATERIALS UTILIZED ON G&N 12/50
	03-13-67	COLD FLOW AND SPLITTING OF WIRE INSULATION, WIRE P/N 1010789

GENERAL PROGRAM ASPECTS (GROUP 140)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-

15334	03-13-67	CURNING GLASS WORKS RESISTOR INQUIRY - P/N 1006750	
15335	03-13-67	SPECIAL TESTING OF APOLLO PHILCO INTEGRATED CIRCUITS (FLAT PACK) P/N 1006321 AND 1006394	
15372	03-15-67	SHIPMENT OF MATERIALS UTILIZED ON GEN 12/60 (SAMPLES)	
15394	03-23-67	INTEGRATED CIRCUIT (FLAT PACK) LEAK TESTING	
15445	03-27-67	SHIPMENT OF SAMPLES OF MATERIALS UTILIZED ON GEN 12/50	
15447	03-27-67	APOLLO ASSEMBLY CLEANLINESS - TASK TEAM FINAL REPORT	
15488	03-31-67	PROPOSED NON-METALLIC MATERIALS ASSESSMENT	
15492	03-31-67	PRODUCT PLAN REVIEW	
15550	04-05-67	GRUMMAN CORPORATION REQUEST FOR INFORMATION ON BENT CONNECTOR CONTACTS	
15555	04-07-67	EVALUATION OF GEN NCN-METALLIC MATERIALS EXPOSED TO CM AND LM INTERIOR	
15558	04-C7-67	SHIPMENT OF SAMPLES OF MATERIALS UTILIZED ON GEN 12/50	
15564	04-13-67	FIRE DRILL NC. 3 (BLACK BOX ANALYSIS)	
15587	04-13-67	USAGE OF #24 AND #25 AWG TWISTED PAIR IN THE BLOCK II AND LEM HARNESS	
15599	04-13-67	GUIDANCE CONCEPTS FOR LOGISTICS FERRY SYSTEMS	
15608	04-14-67	PAINTING OF ALARM INDICATOR FACE	
15619	04-17-67	NATURAL FREQUENCY OF REPAIRED BLOCK II AND LEM INTERCONNECT CABLES	
15621	04-17-67	USE OF MERCURY IN APOLLO SPACECRAFT	
15625	04-04-68	TRANSMITTAL OF GEN 210, 212, 611 WEIGHT STATUS	
15627	04-17-67	SHIPMENT OF SAMPLES OF MATERIALS UTILIZED ON GEN 12/50	
15659	04-20-67	SHIPMENT OF SAMPLES OF MATERIALS UTILIZED ON GEN 12/50	
15700	04-25-67	SHIPMENT OF SAMPLES NO. 17 AND 54 OF LIST J (MATERIALS UTILIZED ON GEN 12/50)	
15704	04-25-67	NASA INQUIRY ON INSULATED WIRE	
15718	04-27-67	SOLVERE MOTORS	
15726	04-27-67	SHIPMENT OF SAMPLES NO. 17 AND 54 OF LIST 4 (MATERIALS UTILIZED ON GEN 12/50)	
15746	05-01-67	SHIPMENT OF SAMPLES #38 OF LIST 4 (MATERIALS UTILIZED ON GEN 12/50)	
15766	05-02-67	RESPONSE TO NASA DESIGN STANDARDS BULLETIN DS-52, USAGE OF TANTALUM WET SLUG CAPACITORS	
15767	05-02-67	SPACECRAFT 012 (GEN 12) IMPOUNDED MATERIALS	
15794	05-04-67	USE OF LIQUID SOLDERING FLUX	
15796	05-04-67	COMPUTER DISK STORAGE AND SHIPMENT	
15800	05-04-67	SHIPMENT OF SAMPLES NO. 25 AND 54 OF LIST 4 MATERIALS UTILIZED ON GEN 12/50	
15808	05-05-67	GEN HARNESS S/N 17	
15826	05-08-67	CLARIFICATION OF SHIPPING DATES OF SAMPLES NO. 52 AND 54 OF LIST 4 (MATERIALS UTILIZED ON GEN 12/50)	
15857	05-11-67	MARKING AND IDENTIFICATION OF GEN TO S/C INTERFACE CONNECTORS	
15863	05-11-67	SHIPMENT OF SAMPLE # 7 LIST 4 (MATERIALS UTILIZED ON GEN 12/50)	
15881	05-15-67	COMPLETION OF SHIPMENTS OF SAMPLES OF MATERIALS UTILIZED ON GEN 12/50	
15922	05-18-67	OUTLINE OF ENGR TEST PROG FOR EVAL OF HIGH TEMP RESISTANT COATINGS FOR APPLICATION TO BLK II ESU	
15928	05-19-67	EVALUATION OF LOCK HELI-COILS WITH A DRY FILM LUBRICANT	
15936	05-19-67	TXN NO. PP7-0/67-67-217 CF MAY 11, 1967 APOLLO PACKAGING MATERIAL FLAMMABILITY POTENTIAL	
15996	05-26-67	ESTABLISHMENT OF NCN-METALLIC MATERIALS DESK	
16034	06-01-67	REQUEST FOR ABLATIVE MATERIAL FROM NASA/MSC	
16056	06-05-67	PARTICLE CONTAMINATION OF RELAYS	
16058	06-05-67	APOLLO PACKAGING MATERIAL FLAMMABILITY	
16147	06-14-67	FLIGHTWORTHINESS OF FILTERS RELAY	
16158	05-14-67	IC06323 TRANSISTORS	
16187	06-16-67	BLK II GNIC PANEL DESIGN CHANGES	

SUMMARY OF TECHNICAL REPORTS

GENERAL PROGRAM ASPECTS (GROUP 140)

NUMBER	DATE	TITLE
AP-M-		
16190	06-14-67	INVESTIGATION OF WIRE INSULATION DAMAGE
16193	06-19-67	FINAL REPORT, DEFORMED WIRE P/N 1010789
16247	06-23-67	INVESTIGATION OF P/A 101897-15, WIRE FAILURES, TWISTED SHIELDED PAIR
16298	06-30-67	TWX: SCD 1006323 TRANSISTOR
16352	07-07-67	GEN SYSTEM CONTRACTOR PERFORMANCE EVALUATION - PERIOD 11/1/64 - 2/28/67
16427	07-18-67	REDIRECTION RELATIVE TO COUNTING REQUIREMENTS OF CCRD FOR LEM-2
16453	07-20-67	NON-METALLIC MAT'LS EXPOSED TO CM AND L4 CABIN ATMOSPHERE
16470	07-24-67	REQUIREMENT FOR THERMOSTATS P/N 1012548
16523	08-01-67	CSM 101 LTA-8 HARNESS TESTING
16537	08-02-67	GEN ACE SUBPROGRAM REQUIREMENTS
16633	08-10-67	ASSESSMENT OF CONTRACT RESISTANCE PROBLEMS WITH FILTERS RELAYS
16654	08-11-67	ENGINEERING STUDY AND ANALYSIS OF BLOCK II LM GEN SYSTEMS FOR OPERATION IN A HYDROGEN-OXYGEN ATMOSPHERE
16662	08-14-67	QUARTERLY REVIEW MEETING OF 1 AND 3 AUGUST. RESPONSE TO ACTION ITEMS 3, 4, 9
16694	08-16-67	RESTRICTIONS ON USE OF MYSTIC TEFLON TAPE
16719	08-21-67	REPLACEMENT MATERIAL FOR GEN HARNESS CHANGES
16739	08-23-67	DELIVERY OF GFP TO THE FIELD SITES IN NON-SUITABLE CONDITIONS
16761	08-25-67	SPACECRAFT 012 (GEN 12) IMPOUNDED MATERIALS
16819	09-05-67	FINAL REPORT OF DEFORMED WIRE INVESTIGATION
16837	09-05-67	DELIVERY OF GFP TO THE FIELD SITES IN NON-SUITABLE CONDITIONS
16864	09-08-67	POTENTIAL SPACECRAFT FIRE HAZARD
16936	09-14-67	(RESPONSE TO NASA LETTER) LABORATORY CLEANLINESS SURVEY
16963	09-18-67	CHANGING OPTICS SHROUD GASKET MATERIAL
16967	09-19-67	56J8 PROTECTIVE COVER FOR SYSTEM 202
17048	09-28-67	ANALYSIS & STUDY OF AGT & OVA FOR OPERATION IN A HYDROGEN-OXYGEN ATMOSPHERE
17279	10-24-67	GEN SYSTEM PERFR. SUMMARY FOR MISSION 501 USING GEN SYSTEM 122
17368	10-31-67	FINAL REPORT - EXPLOSIVE ATMOSPHERE CERTIFICATION OF GEN EQUIPMENT
17458	11-08-67	MODULE DEPOTTING USING S. S. WHITE - ADDENDUM I
17494	11-10-67	EVALUATION OF HYDROGEN BUILDUP INSIDE APOLLO IMU
17661	12-04-67	- METALLIC MATERIALS INVESTIGATION
17751	12-13-67	- X-RAY INSPECTION OF ELECTRICAL CONNECTORS
17757	12-14-67	FINAL REPORT ON GEN SYSTEM OPERATION IN A HYDROGEN - OXYGEN ATMOSPHERE
17781	12-18-67	EARTH LANDING SHOCK CALCULATIONS
17924	01-11-68	SOLDER CRACKING PROBLEMS ON PRINTED CIRCUITS BOARD
17941	01-13-68	AXIAL ACCELERATION OF FLIGHT AS-501 AT MAXIMUM Q
18064	01-31-68	LM DIGITAL AUTO-PILOT, DAP
18077	02-01-68	LOW EMISSIVITY PAINT USED ON LM-GEN
18136	02-08-68	CSM ACOUSTIC & VIBRATION TESTS
18139	02-09-68	NON-METALLIC MATERIALS TESTING
18294	02-27-68	CONTAMINATED FEP WIRE INSULATION
18329	03-04-68	NASA FAILURE REPORTING SYSTEM
18384	03-08-68	APOLLO FLUID & FLUID SYSTEM CLEANLINESS REQUIREMENTS
18464	03-13-68	PROCUREMENT FROM A NON-QSL SOURCE
18483	03-20-68	CONNECTOR CONTINUITY MATRICES FROM CM 101
18488	03-21-68	EFFECT OF GYRC COMPLIANCE CRITERIA PERFORMANCE
18502	03-22-68	TRANSMITTAL OF GEN NON-METALLIC MATERIALS IN A HYDROGEN ATMOSPHERE - FINAL

GENERAL PROGRAM ASPECTS (GROUP 140)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE		TITLE

AP-M-

18530	03-26-68	CONNECTOR CONTINUITY MATRICES FROM LM3	
18537	03-26-68	CONNECTOR CONTINUITY MATRICES FOR CM 101	
18540	03-26-68	FLAMMABILITY TEST MOTION PICTURE CAPTION MATERIAL	
18568	03-28-68	CM 101 INTERCONNECT WIRING INFO. FOR SNEAK CIRCUIT ANALYSIS EFFORT	
18583	03-29-68	TEST PROCEDURES TOLERANCES	
18595	04-01-68	G&N 122 PCST FLIGHT ANALYSIS	
18608	04-02-68	TRANSMITTAL OF DOCUMENTARY MOTION PICTURE EVENTS, PACKING G&N 610, FINAL INSPECTION 210	
18616	04-03-68	CONTROL OF FAILURE SUSPECT EQUIPMENT DURING FAULT VERIFICATION	
18677	04-11-68	RESPONSE TO KSC UNSATISFACTORY REPORT G-009	
18686	04-15-68	S/C 101 DESIGN CERTIFICATION REVIEW	
18706	04-17-68	BLOCK II AND LM GUIDANCE AND NAVIGATION ACCEPTANCE TEST REQUIREMENTS	
18718	04-18-68	STRAPDOWN BIBLIOGRAPHY	
18721	04-18-68	G&N INTERCONNECT WIRING FOR LM3	
18729	04-18-68	LMC INTERCONNECT WIRING INFORMATION FOR SNEAK CIRCUIT ANALYSIS EFFORT	
18833	05-01-68	POTENTIAL IGNITION SOURCES (S/C G&N COMPONENTS)	
18841	05-02-68	STANDBY PROBLEM ACTION ITEM	
18852	05-03-68	POSSIBLE USE OF APOLLO SCH & MSCO FOR THE APOLLO TELESCOPE MOUNT PROGRAM	
18865	05-05-68	CONNECTOR CONTINUITY MATRICES AND INTERCONNECT WIRING INFORMATION FOR CM 103	
18925	05-14-68	G&N CONTROL ATTITUDE REFERENCE INTERFACE MECHANIZATION BLOCK II COMMAND MODULE	
18968	05-20-68	ELECTROSTATIC DISCHARGE PHENOMENON	
19003	05-23-68	SYSGARD ENCAPSULANT SEPARATION	
19017	05-24-68	STANDBY PROBLEM ACTION ITEM	
19020	05-24-68	INVESTIGATION OF ABRASION OF G&N HARNESS ON EYEPIECE HEATER CONNECTOR BRACKET	
19105	06-06-68	YOUR REQUEST FOR DATA	
19196	06-21-68	RESULTS OF INVESTIGATION TO ANALYZE AND EVALUATE S/C INTERFACE FASTENERS COMPATIBILITY	
19203	06-24-68	ALARM CODES FOR COLCSSUS, REV. 192	
19209	06-25-68	FAIRCHILD SEPI-CONDUCTOR INTEGRATED CIRCUIT	
19214	06-25-68	MERCURY CONTAMINATION	
19226	06-26-68	MANNED FLIGHT AWARENESS ACTIVITIES @ ACE	
19258	07-01-68	COMPARISON OF POLYURETHANE WITH RTV COMPOUNDS FOR REPAIR OF POTTING SEPARATIONS	
19301	07-03-68	JOINT MSC/MSFC COMMITTEE FOR INVESTIGATION OF SATURN APOLLO SPACE VEHICLE BALL & ROLLER BEARING	
19307	07-03-68	VELCRO INSTALLATION ON G&N SYSTEM	
19337	07-09-68	PRECISION CLEANING AGENT PURITY	
19356	07-12-68	COUNTERFEIT CUTLER-HAMMER RELAYS	
19357	07-12-68	DATA TO SPACE TECHNOLOGY LABORATORY (STL)	
19375	07-16-68	MANNED FLIGHT AWARENESS ACTIVITIES @ AC ELECTRONICS	
19394	07-13-68	COMPARISON OF STRENGTH OF EJECTABLE COVER (EDC)	
19413	07-22-68	ALERT REPORTS	
19423	07-23-68	NASA ALERT REPORTS	
19430	07-23-68	ACCEPTANCE AND DELIVERY OF RADIOACTIVE COMPONENTS	
19435	07-24-68	25 IRIG MOD. II SHRCUD CONNECTORS	
19484	07-30-68	G&N HARNESS ALUM. FAIL CABLE CLAMP/MARKER	
19504	08-02-68	NASA ALERT REPORTS - CONTAMINATION OF FEP WIRE INSULATION - BRUNING ENLARGER - GE DIODE	
19506	08-02-68	G&N OPERATING TIME SUMMARY	
19507	08-02-68	NASA ALERT REPORTS - COUNTERFEIT CH RELAYS SILICON RECTIFIER - ELECTRICAL CONNECTOR	

GENERAL PROGRAM ASPECTS (GROUP 140)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	
AP-M-			
19533	08-06-68	REQUESTED APOLLO II IRIG PMD'S ASSIGNMENTS AND TECHNICAL INFORMATION	
19550	09-08-68	PLASTIC/EPOXY/SILICONE ENCAPSULATED SEMI-CONDUCTOR	
19621	08-16-68	EFFECT OF KRYT-X 240 AL GREASE ON DC RESISTANCE OF CON. ARRAY HELICOILS TO CHASSIS	
19646	08-22-68	APOLLO G&N SYSTEM OPERATING TIME REPORT	
19685	08-29-68	RATIONALE FOR KSC LM & CM TESTING	
19716	09-04-68	SUPPLY OF TRANSFORMERS - SCD 10C6319	
19721	09-04-68	TRANSMITTAL OF 24 HOUR FAILURE NOTIFICATION	
19789	09-13-68	CONTACT ENGAGEMENT & SEPARATION FORCE	
19792	09-13-68	DATA ON HERMETICALLY SEALED CONNECTOR PINS	
19807	09-17-68	TRANSMITTAL OF ROUTING CHANGES FOR APOLLO II IRIG MANUFACTURE	
19816	09-19-68	NASA ALERTS (G.E) RELAY, CPS. (U.C.)	
19824	09-19-68	REQUESTED APOLLO II IRIG PMDS ASSIGNMENTS AND TECHNICAL INFORMATION	
19836	09-20-68	GLOSSARY OF G&N TELEMETRY SIGNALS FOR CM 101	
19858	09-24-68	REQUEST FOR SCALING INFORMATION	
19859	09-24-68	G&N SYSTEM OPERATING TIME REPORT	
19868	09-25-68	G&N INTERCONNECT WIRING FOR LM 3	
19880	09-26-68	APOLLO IRIG WHEEL ACCEPTANCE BOARD MEMBERS, 19 SEPT. 1968	
19888	09-26-68	G&N SPARES REPORTING	
19896	09-27-68	COMPLETION OF NON-METALLIC MATERIALS TESTING ON APOLLO G&N INTERFACE MATERIALS	
19900	09-27-68	EVALUATION OF TEST & INVESTIGATION WITH RESPECT TO ENCAPSULANT SEPARATION ON HEADERS	
19930	10-01-68	AC ELECTRONICS PCST PROBLEM BULLETIN NO. 55 PUSHBUTTON SWITCH MANUFACTURED BY JAY EL PRODUCTS	
19934	10-02-68	APOLLO II IRIG PMD'S ASSIGNMENTS AND TECHNICAL INFORMATION	
19938	10-03-68	WORKMANSHIP VIBRATION REQUIREMENTS	
19939	10-03-68	GENERAL DESCRIPTION OF SUNDISK 282 - ENTRY GUIDANCE AND ITS APPLICATION TO APOLLO 7 MISSION	
19944	10-03-68	ORBITAL INGESTION PORTION OF SUNDISK 282 NAVIGATION PROGRAMS	
19965	10-09-68	DISK 282 GYROCOMPASS	
20003	10-15-68	INSERTION LIMITS OF ELECTRICAL CONTACT INTO NYLON INSULATOR	
20031	10-18-68	NASA ALERTS	
20044	10-22-68	GRAVITY TRANSIENT (TWX)	
20054	10-23-68	SATURN V LOW FREQUENCY VIBRATION LEVELS	
20069	10-24-68	APOLLO SYSTEM OPERATING TIME REPORTS	
20075	10-28-68	RADIATION MEASUREMENT OF APOLLO BLOCK II GNIC PANEL, OSA & IMU	
20091	10-29-68	SATURN V LOW FREQUENCY VIBRATION LEVELS	
20102	10-31-68	SPACECRAFT USE OF G&N NON-METALLIC NON-FLIGHT MATERIALS	
20115	11-04-68	PLASTIC OR EPOXY ENCAPSULATED SILICONE SEMICONDUCTORS	
20155	11-11-68	ALUMINUM TUBING-PROCEDURES TO MINIMIZE INTERGRANULAR CORROSION	
21183	11-14-68	WASTE WATER DISPOSAL ON MISSION 8	
21300	12-04-68	SUMMARY OF INVESTIGATION OF SCRESCOPES	
21331	12-10-68	RELATIVE BOND STRENGTH OF VARIOUS ADHESIVES FOR MINIATURE WRAPPOST CONTACT REPAIRS	
21351	12-11-68	ORBITAL INSERTION NAVIGATION MEASUREMENT UNCERTAINTIES - APOLLO 8	
21423	01-02-69	RADIATION MEASUREMENT S/C 2TV-1 AT MSC	
21433	01-03-69	ETHYLENE GLYCOL HEAT TRANSFER SOLUTIONS CONTACTING EXPOSED SILVER ELECTRICAL CIRCUITS.	
21695	02-24-69	DIODE DYNAMIC IMPEDANCE PROBLEM - FINAL REPORT	
		ORBITAL NAVIGATION VIA LANDMARK TRACKING	

GENERAL PROGRAM ASPECTS (GROUP 140)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-			
21819	03-18-69		CAPABILITY OF THE LM IMU TO FUNCTION UNDER VARIOUS ADVERSE CONDITIONS
21982	04-24-69		GEOMETRIC COMPENSATION, AS A MEANS TO ELIMINATE CONING ERRORS IN STRAPDOWN SYSTEMS
22217	06-05-69		APOLLO II LEM FAILURES
22317	06-25-69		IMU FLEX HOSE
22321	06-27-69		DIMENSIONAL ANALYSIS OF IMU FLEX HOSE
22385	07-07-69		HLK. II & LEM COMPATIBILITY CHARTS
22615	09-10-69		LUNAR GRAVITY AS CALCULATED FROM MEASUREMENTS BY LM-5, G&N SYSTEM AT LUNAR SITE #2
22748	10-14-69		LM-5 LUNAR SURFACE ALIGNMENTS
22759	10-17-69		NEAR REAL TIME - DETERMINATION OF LM LANDING SITE COORD.
22787	10-27-69		MISSED DOWNRUPT DURING SINE FLIGHT CN S/C 108 AT KSC
22914	12-03-69		CONTAMINATION CA WHITE VERSUS BLACK FILTERS
22942	12-11-69		REDUCED GEN TELEMETRY DATA LIGHTNING INCIDENT APOLLO 12 LAUNCH
22947	12-12-69		LIGHTNING INCIDENT

ADMINISTRATIVE FACTORS (GROUP 150)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-

00027	07-24-62	4C NAS 9-497-APOLLO SPACECRAFT NAV. & GUID. SYSTEMS OFFICIAL CFE ALLOCATION AND DELIVERY SCHEDULE
00044	07-30-62	ACSP STATEMENT OF WORK-APOLLO NAVIGATION AND GUIDANCE
00101	09-05-62	SPACECRAFT NAVIGATION AND GUIDANCE PROGRAM PLAN
00126	09-24-62	TRANSMITTAL OF AC SPARK PLUG DIV. DOCUMENTATION PLAN T.D. A-6
00337	01-30-63	QUARTERLY TECHNICAL PROG. REPORT FOR PERIOD ENDING DEC. 31, '62
00331	01-30-63	QUARTERLY TECHNICAL PROG. REPORT FOR PERIOD ENDING DEC. 31, '62
00366	02-14-63	MONTHLY TECHNICAL PROGRESS REPORT PERIOD ENDING JAN. 31, 1963
00367	02-14-63	MONTHLY RELIABILITY PROGRESS REPORT PERIOD ENDING JAN. 31, 1963
00435	03-14-63	MONTHLY PROGRESS REPORT FOR PERIOD ENDING FEB. 28, 1963
00436	03-14-63	MONTHLY RELIABILITY PROGRESS REPORT FOR PERIOD ENDING FEB. 28, '63
00595	05-01-63	LETTER OF TRANSMITTAL RELIABILITY VOL. 3, 4, & 5 MIT
00596	05-01-63	LETTER OF TRANSMITTAL RELIABILITY VOL. 3, 4, & 5 NASA
00599	05-02-63	LETTER OF TRANSMITTAL QUARTERLY RELIABILITY NASA
00600	05-02-63	LETTER OF TRANSMITTAL QUARTERLY TECHNICAL NASA
00637	05-14-63	TRANSMITTAL ENGR. PLAN VOL. 1, MFG. PLAN VOL. 2
00638	05-14-63	TRANSMITTAL ENGR. PLAN VOL. 1, MFG. PLAN VOL. 2
00640	05-14-63	TRANSMITTAL OF MONTHLY RELIABILITY REPORT
00642	05-14-63	TRANSMITTAL OF MONTHLY TECHNICAL REPORT
00649	05-15-63	TRANSMITTAL CF CORRECTED PAGE QUARTERLY TECHNICAL REPORT
00763	06-14-63	LETTER TRANSMITTAL FOR TECHNICAL RELIABILITY MTHLY REPORT
00769	06-14-63	CONTRACT EQUIPMENT DELIVERIES
00819	07-01-63	LETTER TRANSMITTAL - FIELD MAINTENANCE EQUIPMENT LIST
00820	07-01-63	LETTER TRANSMITTAL APPROVAL OF SPARES PARTS CONTRACT NAS 9-497
00835	07-02-63	LTR. TRANSMITTAL SUBMISSION OF MANUAL OUTLINE INDEX LISTS
00837	07-03-63	LTR. TRANSMITTAL AP. ILLUSTRATION GUIDE TO MIT
00871	07-11-63	LETTER TRANSMITTAL NASA FAMILIARIZATION TRAINING PLAN
00887	07-13-63	APOLLO/LEM PROGRAM PLAN
00905	08-07-63	LETTER OF TRANSMITTAL PARTS QUALIFICATION TEST PLAN
00954	07-25-63	TRANSMITTAL CRAFT FACTORY TEST PLAN.
00970	07-29-63	TRANSMITTAL CF QUARTERLY TECHNICAL - RELIABILITY REPORTS
00979	07-29-63	TRANSMITTAL CF SCH FOR AFOLLC/LEM.
01034	08-06-63	TRANSMITTAL FAMILIARIZATION TRAINING PLAN
01061	08-13-63	MONTHLY TECH. PROGRESS REPORT JULY LEM
01066	08-15-63	RELIABILITY PROGRESS REPORT FOR JULY - LEM
01079	08-15-63	G & N FAMILIARIZATION MANUAL (LETTER OF TRANSMITTAL)
01080	08-15-63	STUDY REQUIREMENT CF EXHIBIT "C".
01083	08-15-63	TRANSMITTAL CF RECOMMENDED MAINTENANCE REQUIREMENTS, CONCEPT & PLAN FOR THE APOLLO G & N EQUIP.
01170	08-30-63	MONTHLY TECHNICAL PROGRESS REPORT 31 JULY
01192	09-04-63	MATERIALS REPORT FOR PERIOD 1-28-63 TO 7-28-63
01243	09-13-63	LEM MONTHLY TECHNICAL REPORT FOR AUGUST
01245	09-13-63	LEM MONTHLY RELIABILITY REPORT FOR AUGUST
01290	09-17-63	MONTHLY TECH. PROGRESS REPORT 31 AUG. 1963
01292	09-17-63	MONTHLY RELIABILITY PROGRESS REPORT AUGUST
01356	09-27-63	TDA-88 PROGRESS REPORT FOR SEPT 1963
01380	09-30-63	QUALITY STATUS REPORT

ADMINISTRATIVE FACTORS (GROUP 150)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-			
01487	10-16-63		REVISION TO SPARE PARTS LIST
01517	10-13-63		APOLLO INTEGRATED SITE INVENTORY - CONSUMPTION REPORT
01518	10-21-63		LEM QUARTERLY TECHNICAL PROGRESS REPORT
01525	10-22-63		QUALITY STATUS REPORT SEPT. 30, 1963
01556	10-25-63		LEM RELIABILITY QUARTERLY REPORT
01565	10-25-63		TRANSMITTAL QUARTERLY TECHNICAL PROGRAM RPT
01565	10-25-63		TRANSMITTAL QUARTERLY RELIABILITY PROGRAM RPT
01573	10-25-63		MAINTENANCE REQUIREMENT CHANGE NOTICE NO. 1
01610	10-31-63		QUARTERLY SUMMARY OF QUALITY PROGRAM PERFORMANCE
01696	11-09-63		SUBMISSION OF REVISED MANUAL OUTLINE
01733	11-14-63		MONTHLY TECHNICAL PROGRESS REPORT
01735	04-15-63		LEM TECHNICAL PROGRESS REPORT OCTOBER
01762	11-18-63		APOLLO INTEGRATED SITE INVENTORY & CONSUMPTION REPORT
01783	11-20-63		MONTHLY RELIABILITY REPORT - OCTOBER
01785	11-21-63		RELIABILITY REPORT OCTOBER
01886	01-02-64		REVISION TO APOLLO APPROVED SPARE PARTS LIST
01936	12-09-63		DELIVERY OF PRECISION TEST FIXTURE FOR OPTICS SUBSYSTEM
01974	12-12-63		TECHNICAL PROGRESS REPORT
02034	12-19-63		APOLLO INTEGRATION SIB INVENTORY - CONSUMPTION REPORT
02072	12-26-63		TRANSMITTAL FACTORY TEST PLAN
02099	01-02-64		SUBMITTAL OF PRELIMINARY MANUALS
02127	01-06-64		10A-88 PROGRESS REPORT FOR DEC. 1963
02139	01-07-64		DEVELOPMENT PLAN VCL IV - QUALITY ASSURANCE PROGRAM PLAN
02181	01-13-64		REPORT APOLLO INTEGRATED FIELD SITE & FACTORY INV. CONSUMPTION
02183	01-13-64		TRANSMITTAL QUALITY STATUS REPORT
02322	01-31-64		LEM QUARTERLY REPORT PERIOD 10-1-63 TO 12-31-63
02326	01-29-64		TRANSMITTAL OF PRINTED COPIES OF CHECKOUT MAINTENANCE & REPAIR MANUALS
02331	01-31-64		QUARTERLY TECHNICAL PROGRESS REPORT 10-1-63 TO 12-30-63
02403	02-07-64		LEM RELIABILITY PROGRESS REPORT, QUARTERLY
02436	02-11-64		LEM RELIABILITY QUARTERLY PROGRESS REPORT,
02491	02-18-64		SUPPORT OF GEN LABORATORY AT AAA
02523	02-27-64		CONSUMPTION REPORT, REPORT OF INTEGRATED FIELD SITE - FACTORY INV
02548	02-24-64		DEVELOPMENT PLAN VCL. IV, Q.A. PLAN
02552	02-24-64		TECHNICAL PROGRESS REPORT FOR JAN 1964
02581	02-23-64		QUARTERLY SUMMARY OF QUALITY PROGRAM PERFORMANCE, AUDIT
02599	03-02-64		LEM RELIABILITY PROGRESS REPORT, JANUARY 1964
02680	03-10-64		MATERIALS REPORT PERIOD ENDING 29 JULY TO 31 JANUARY 1964
02709	03-16-64		- QUALITY STATUS REPORTS FOR DECEMBER
02710	03-16-64		- TECHNICAL PROGRESS REPORT FOR FEBRUARY
02713	03-16-64		MONTHLY QUALITY STATUS REPORT FOR JANUARY
02732	03-16-64		SUBMITTAL OF FAMILIARIZATION MANUAL
02739	03-17-64		APOLLO INTEGRATED FIELD SITE AND FACTOR INVENTORY AND CONSUMPTION REPORT
02756	03-24-64		LEM PROGRAM PROGRESS
02758	03-24-64		RELIABILITY REPORT FOR JANUARY
02867	03-31-64		TRANSMITTAL OF APOLLO INTEGRATED FIELD SITE AND FACTORY EQUIPMENT AND LOCATION REPORT

ADMINISTRATIVE FACTORS (GROUP 150)		SUMMARY OF TECHNICAL REPORTS	
NUMBER	DATE	TITLE	

AP-M-

02884	04-01-64	MONTHLY QUALITY STATUS REPORT, FEBRUARY
02940	04-08-64	MONTHLY RELIABILITY REPORT, FEBRUARY
03067	04-20-64	APOLLO INTEGRATED FIELD SITE AND FACTORY EQUIPMENT STATUS AND LOCATION REPORT
03070	04-21-64	APOLLO INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT
03131	04-28-64	TECHNICAL PROGRESS REPORT, FIRST QUARTER 64
03132	04-28-64	VENDOR RELIABILITY AND QUALITY ASSURANCE PROGRAM PLAN
03137	04-28-64	TRANSMITTAL OF APOLLO SOFT CONSUMABLE LIST
03146	04-28-64	TRANSMITTAL OF TCOL LIST OPERATIONS, REV. II
03167	04-29-64	RELIABILITY PROGRESS REPORT, FIRST QUARTER 64
03195	05-01-64	TRANSMITTAL OF FAMILIARIZATION MANUAL
03204	05-06-64	LEM MONTHLY PROGRESS REPORT FOR MARCH
03295	05-13-64	TRANSMITTAL OF STATISTICAL SAMPLING PLANS FOR ACSP RECEIVING INSPECTION
03299	05-13-64	MARCH MONTHLY QUALITY STATUS REPORT
03368	05-20-64	TRANSMITTAL TEST PLANS AND PROCEDURE FOR ENGINEERING EVALUATION
03406	05-22-64	APOLLO INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT
03413	05-25-64	APOLLO INTEGRATED FIELD SITE FACTORY EQUIPMENT STATUS AND LOCATION REPORT
03471	06-01-64	MONTHLY RELIABILITY PROGRESS REPORT FOR APRIL
03472	06-01-64	MONTHLY QUALITY STATUS REPORT FOR APRIL
03551	06-08-64	TRANSMITTAL OF THE FINAL APOLLO GEN TEST DATA PLAN VOLUME 1, 2, 3
03641	06-17-64	FIELD OPERATIONS QC PLAN
03654	06-18-64	SOFT CONSUMABLE LIST
03672	06-22-64	QUARTERLY SUMMARY OF QUALITY PROGRAM PERFORMANCE AUDITS
03675	06-22-64	INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT
03681	06-22-64	RELIABILITY PROGRESS REPORT FOR MAY
03682	06-22-64	TECHNICAL PROGRESS REPORT FOR MAY
03683	06-22-64	MONTHLY QUALITY STATUS REPORT FOR MAY
03837	07-13-64	TRANSMITTAL OF RECEIVER COPIES OF CHECKOUT, MAINTENANCE AND REPAIR MANUALS
03906	07-20-64	APOLLO INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT
03907	07-20-64	SECOND SEMI-ANNUAL REPORT OF NEW TECHNOLOGY
03934	07-22-64	INTEGRATED FIELD SITE AND FACTORY EQUIPMENT STATUS AND LOCATION REPORT
04008	07-31-64	OF QUARTERLY TECHNICAL PROGRESS REPORT FOR PERIOD 4-1-64 TO 6-30-64
04138	08-17-64	QUARTERLY RELIABILITY PROGRESS REPORT
04158	08-19-64	TRANSMITTAL OF APOLLO FAMILIARIZATION MANUALS
04181	08-20-64	INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT
04212	08-24-64	INTEGRATED FIELD SITE AND FACTORY EQUIPMENT STATUS AND LOCATION REPORT
04280	08-31-64	MONTHLY RELIABILITY PROGRESS REPORT FOR PERIOD END 7-31-64
04281	08-31-64	MONTHLY QUALITY STATUS REPORT FOR JULY 1964
04298	09-01-64	QUARTERLY SUMMARY OF QUALITY PROGRAM PERFORMANCE AUDITS
04467	09-23-64	INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT
04598	10-06-64	APOLLO INTEGRATED FIELD SITE AND FACTORY EQUIPMENT STATUS AND LOCATION REPORT
04627	10-08-64	MONTHLY TECHNICAL PROGRESS REPORT FOR AUGUST 1964
04628	10-08-64	MONTHLY QUALITY STATUS REPORT FOR AUGUST 1964
04642	10-09-64	MONTHLY RELIABILITY PROGRESS REPORT FOR MONTH OF AUGUST 1964
04737	10-21-64	INTEGRATED FIELD SITE AND FACTORY EQUIPMENT STATUS AND LOCATION REPORT
04756	10-23-64	INTEGRATED FIELD SITES AND FACTORY INVENTORY CONSUMPTION REPORT

SUMMARY OF TECHNICAL REPORTS		
ADMINISTRATIVE FACTORS (GROUP 150)		
NUMBER	DATE	TITLE

AT AF-

04823	10-17-64	QUARTERLY SUMMARY OF QUALITY PROGRAM PERFORMANCE AUDIT
04934	11-13-64	INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT
04949	11-17-64	QUARTERLY TECHNICAL PROGRESS REPORT FOR PERIOD ENDING 30 SEPTEMBER 1964
04951	11-17-64	INTEGRATED FIELD SITE & FACTORY EQUIPMENT STATUS & LOCATION
05001	11-25-64	NASA TRAINING STUDY OUTLINE AND OBJECTIVE
05188	12-16-64	INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION
05225	12-19-64	TRANSMITTAL OF MONTHLY TECHNICAL PROGRESS REPORT FOR OCTOBER 31, 1964
05226	12-19-64	TRANSMITTAL OF QUARTERLY RELIABILITY PROGRESS FOR PERIOD 7-1 THRU 9-30-64
05242	12-21-64	INTEGRATED EQUIPMENT STATUS AND LOCATION
05453	01-19-65	MONTHLY TECHNICAL PROGRESS REPORT FOR PERIOD ENDING 30 NOVEMBER 1964
05467	01-13-65	MONTHLY RELIABILITY PROGRESS REPORT NOVEMBER 1964
05660	02-04-65	TRANSMITTAL OF GUIDANCE AND NAVIGATION TEST DATA PLAN-REVISION 1, DATED 29 JANUARY 1965
05748	02-15-65	TRANSMITTAL OF QUARTERLY RELIABILITY PROGRESS REPORT FOR PERIOD ENDING DECEMBER 31, 1964
05794	02-18-65	TRANSMITTAL OF QUARTERLY TECHNICAL PROGRESS REPORT OF PERIOD ENDING 31 DECEMBER 1964
05878	02-22-65	RAYTHEON QUALITY ASSURANCE PLAN (FR-4-354) CONTRACTS NAS 9-497 AND NAS 9-498
06048	03-10-65	APOLLO PARTS AND MATERIALS PROGRAM NAS 9-497
06055	03-10-65	BULK ITEMS LIST
06111	03-16-65	TRANSMITTAL OF MONTHLY QUALITY STATUS REPORT FOR JANUARY 1965
06154	03-19-65	CONTRACT NAS 9-497 APOLLO QUARTERLY RELIABILITY PROGRESS REPORT
06230	03-23-65	INTEGRATED FIELD SITE AND FACTORY EQUIPMENT STATES AND LOCATION REPT.
06241	03-27-65	RELIABILITY PROGRESS REPORT FOR JANUARY 1965
06335	04-01-65	GSE PLANNING AND REQUIREMENTS LIST
06354	04-02-65	FIELD OPERATIONS TRAINING PLAN
06769	04-05-65	SOFT CONSUMABLES MASTER LIST
06369	04-05-65	MASTER TOOL LIST
06497	04-15-65	QUARTERLY SUMMARY OF QUALITY PROGRAM PERFORMANCE AUDITS 1-1 THRU 3-31-65
06531	04-20-65	INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT
06532	04-20-65	INTEGRATED FIELD SITE AND FACTORY EQUIPMENT STATUS AND LOCATION REPORT
06628	04-29-65	QUARTERLY TECHNICAL PROGRESS REPORT FOR PERIOD ENDING 31 MARCH 1965
06640	04-29-65	PRELIMINARY APOLLO BLOCK I SERIFS 100 MANUALS
06663	04-30-65	QUARTERLY RELIABILITY PROGRESS REPORT 31 MARCH 1965
06661	04-30-65	QUARTERLY QUALITY STATUS REPORT 31 MARCH 1965
06693	05-05-65	AUDITS 1 JANUARY THROUGH 31 MARCH 1965
06764	05-04-65	DIFFICULTIES IN THE PROCUREMENT OF RESISTORS FROM THE ALLEN BRADLEY CO.
06767	05-11-65	BLOCK I FACTORY TEST PLAN
06799	05-13-65	KIC PRELIMINARY QUALITY ASSURANCE PROGRAM PLAN
06851	05-17-65	INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT
06862	05-13-65	ACSP, RAYTHEON & KOLLSMAN QUARTERLY SUMMARY OF QUALITY PERFORMANCE AUDITS JAN 1 TO MAR 31, 65
06902	05-20-65	QUALITY PROGRAM PERFORMANCE AUDITS
06914	05-21-65	INTEGRATED FIELD SITE AND FACTORY EQUIPMENT STATUS LOCATION REPORT
06948	05-25-65	PARTS AND MATERIALS PROGRAM
07018	06-02-65	RELIABILITY AUDIT OF SUB-CONTRACTORS
07020	06-02-65	ACSP QUALITY ASSURANCE PROCEDURES AND QUALITY ASSURANCE IMPLEMENTING INSTRUCTIONS
07065	06-04-65	APOLLO TEST PLAN
07269	06-19-65	FIELD OPERATIONS QUALITY CONTROL PLAN

SUMMARY OF TECHNICAL REPORTS		
ADMINISTRATIVE FACTORS (GROUP 150)		
NUMBER	DATE	TITLE

AP-M-		
07338	06-25-65	LEM OPTICAL TRACKER PROGRAM PHASE I FINAL PROGRAM
07455	07-01-65	LEM OPTICAL PRCG. MONTHLY TECH AND PRQG REPORTS
07494	07-06-65	LEM OPTICAL TRACKER PROGRAM, FINAL PHASE I PROGRAM PLAN
07558	07-09-65	UPDATED FIELD OPERATIONS TRAINING PLAN FOR BLJCK I (SERIES 100) BLOCK II AND LEM
07780	07-29-65	REPLY TO NASA COMMENTS ON QUARTERLY SUMMARY OF QUALITY PROGRAM PERFORMANCE AUDITS
07801	07-29-65	DESIGN EVALUATION TEST PLAN
07812	07-30-65	TRANSMITTAL CF QUARTERLY TECHNICAL PROGRESS REPORT FOR PERIOD ENDING 30 JUNE '65
07922	08-09-65	REVIEW OF NASA QUALITY SYSTEMS AUDIT OF THE RAYTHEON COMPANY
07923	08-09-65	SUBMITTAL OF QUARTERLY RELIABILITY PRQG REPORT FOR PERIOD ENDING 06-30-65
08007	08-15-65	ADD. TO KOLLSMAN QUARTERLY TECH. PRCG. REPORT
08017	08-16-65	FIELD OPERATIONS SUPPORT DATA CENTER STUDY
08029	08-17-65	FIELD OPERATIONS AND SUPPCRT PLAN
08058	08-20-65	REVIEW OF NASA QUALITY SYSTEMS AUDIT OF RAYTHEON CO.
08126	08-25-65	GSE CALIBRATION FUNCTIONAL TEST, PREVENTIVE MAINTENANCE AND FACILITY TEST PLAN
08305	09-10-65	PLAN FOR THE APCLLO BACK-UP COMPUTER REVIEW OF THE IBM PHASE II PROGRAM DEFINITION
08308	09-10-65	CRITICAL FAILURE NOTIFICATION TO NASAM/SC
08375	09-15-65	IMPLEMENTATION OF NPC 200-2 QUALIFICATION STATUS LIST REQUIREMENTS.
08446	09-21-65	RELIABILITY PROGRAM PLAN VOLUME I
08468	09-22-65	RAYTHEON AND KOLLSMAN QUALITY ASSURANCE PROGRAM PLAN
08595	09-29-65	GSE CALIBRATION, FUNCTIONAL TEST, PREVENTIVE MAINTENANCE, AND FACILITY TEST PLAN
08693	10-05-65	REVISION OF FIELD OPERATION TRAINING PLAN TO INCLUDE LEM OPTICAL RENDEZVOUS SUBSYSTEM (LORS) EFFORT.
08904	10-18-65	CLNYROLLING SPECIFICATION FOR MAINTENANCE ANALYSIS ACTIVITIES
08954	10-20-65	REVISED RELIABILITY REPORT FORMAT REQUEST
09081	10-28-65	QUARTERLY RELIABILITY PROGRESS REPORT
09082	10-28-65	QUARTERLY QUALITY STATUS & QUALITY PROGRAM PERFORMANCE AUDIT PROGRESS REPORT
09083	10-28-65	QUARTERLY TECHNICAL PROGRESS REPORT
09084	10-28-65	INTEGRATED FIELD SITE & FACTORY EQUIPMENT STATUS & LOCATION REPORT
09290	11-10-65	TRANSMITTAL OF PRINTED COPIES OF PREL. APOLLO LEM MANUALS
09291	11-10-65	TRANSMITTAL CF PRINTED COPIES OF PREL. APOLLO LEM MANUALS
09386	11-15-65	INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT
09627	12-01-65	NAS 9-497 AC ELECTRONICS QUALITY PROGRAM PLAN - VOLUME ONE
09730	12-03-65	SUBMITTAL MAINTAINABILITY DESIGN REVIEW-EVALUATION STATUS FOR BLOCK II SUBCONTRACTOR GSE AND LEM
09773	12-08-65	AC ELECTRONICS RELIABILITY PROGRAM PLAN
09830	12-10-65	KOLLSMAN INSTRUMENT CORPORATION QUALITY PLAN
09840	12-10-65	MATERIALS REPORT RAYTHEON CC.
09867	12-13-65	APOLLO INTEGRATED FIELD SITE AND FACTORY INVENTORY CONSUMPTION REPORT.
10041	12-21-65	RELIABILITY QUALIFICATION TEST REPORT FOR RAYTHEON COMPANY.
10944	12-21-65	LEM OPTICAL RENDEZVOUS SUBSYSTEM MONTHLY REPORT ON WEIGHT CENTER OF GRAVITY AND ELECTRICAL POWER REQUIREM
10100	12-27-65	CONTRACT NAS-9-497: GSE VALIDATION PLAN FOR MSC.
10111	12-27-65	NAS-9-497, GSE VALIDATION PLAN FOR KSC.
10112	12-27-65	NAS-9-497, GSE VALIDATION PLAN FOR GAEC.
10151	12-29-65	MAINTAINABILITY DESIGN REVIEW AND AC ELECTRONICS EVALUATION REPORT BLOCK II AND LEM - G&N
10155	12-29-65	TRANSMITTAL OF MATERIALS EVALUATION REPORT 421-6
10515	01-20-66	AC QUALITY ASSURANCE PROGRAM PLAN, VOLUME I
10639	01-26-66	PROPOSED APOLLO LOR GAC PROGRAM PLAN CLARIFICATION

SUMMARY OF TECHNICAL REPORTS

STRATIVE FACTORS (GROUP 150)

	DATE	TITLE
7	2-01-66	AC ELECTRONICS QUALITY ASSURANCE PROGRESS PLAN - VOL. I
1171	02-02-66	TRAINING SERVICE PLAN - REVISED 1-31-66 - REV. B
12007	02-08-66	GEN BLOCK II & LEM MAINTENANCE CONCEPT
10859	02-10-66	TRANSMITTAL OF KOLLSMAN QUALITY ASSURANCE PROGRAM PLAN VOL. I - JANUARY 10, 1966
10886	02-11-66	NASA/MSC QUALITY SYSTEMS SURVEY OF HUGHES AIRCRAFT QUALITY PLAN VOLUMES I AND II
10956	02-15-66	CATALOG OF FACTORY TEST EQUIPMENT 1-20-66 (FIRST ADDITION)
11049	02-21-66	PROGRAM PLAN
11084	02-23-66	GEN MAINTENANCE REQUIREMENTS, CONCEPTS AND PLAN DATE 1-15-66 BLOCK I-100; BLOCK II & LEM
11101	02-24-66	THERMO-VACUUM (T-V) CONFIGURATION AND OPERATION PLAN
11209	03-02-66	MAINTENANCE CONCEPT DESCRIPTION DOCUMENT (AIRBORNE AND GSE)
11215	03-02-66	UPDATE TO APOLLO GSE PLANNING CONTROL DOCUMENT
11528	03-21-66	NAS 9-497 RAYTHEON QUALITY PLAN VOL I - FINAL APPROVAL
11914	04-14-66	NASA APPROVAL OF QUALITY ASSURANCE (QA) PROCEDURES FOR USE AT AC ELECTRONICS FIELD LAB.
12051	04-22-66	AC ELECTRONICS QUALITY ASSURANCE PLAN, VOLUME I
12289	05-10-66	AC ELEC/HAC REVIEW OF PROPOSED LORS QUALITY ASSURANCE PROG. PLAN VOL. I, REV I, 1-31-66
12490	05-23-66	AC ELECTRONICS QUALITY ASSURANCE PLAN VOLUME II
12765	06-10-66	APOLLO ENVIRONMENTAL GROUND OPERATION PROCEDURE MANUAL
12887	06-22-66	KOLLSMAN QUALITY ASSURANCE PROGRAM PLAN VOLUME II (VOL. II, QUALITY CONTROL MANUAL FOR THE APOLLO/LEM)
12889	06-22-66	AC ELECTRONICS QUALITY ASSURANCE PLAN VOLUME I
13177	07-25-66	INTEGRATED STOCK BALANCE & CONSUMPTION REPORT
13283	08-03-66	INTEGRATED FIELD SITE & FACTORY EQUIPMENT STATUS & LOCATION
13342	08-10-66	RAYTHEON QUALITY PLAN VOLUME I
13525	08-30-66	APPROVAL OF GROUND TEST SOFTWARE DOCUMENTATION
13528	08-30-66	INTEGRATED STOCK BALANCE & CONSUMPTION REPORT
13597	09-07-66	INTEGRATED FIELD SITE & FACTORY EQUIPMENT STATUS & LOCATION
13816	09-29-66	KIC RELIABILITY PLAN VOL I & II
13860	10-04-66	INTEGRATED STOCK BALANCE AND CONSUMPTION REPORT
13901	10-07-66	APOLLO GEN TRAINING SERVICE PLAN REV C OF 9-30-66
13929	10-11-66	SEMI-ANNUAL MATERIALS REPORT
14363	11-22-66	GSE FUNCTIONAL TEST, PREVENTIVE MAINT. & FACILITY TEST PLAN
14382	11-23-66	SUBMITTAL OF PCST INSTALLATION GROUND TESTING PROGRAM PLAN
14987	02-01-67	CHANGED PAGES TO THE NASA GEN TRAINING SERVICE PLAN REV. C
15108	02-14-67	APPROVED QUALITY PLAN - KOLLSMAN INSTR. CORP.
15254	03-03-67	TRANSMITTAL OF THE FIELD OPERATIONS AND SUPPORT PLAN REVISED 19 JANUARY 1967
15848	05-16-67	RAYTHEON QUALITY ASSURANCE PLAN REVISION - SECTION 8
16756	08-25-67	REVIEW OF RAYTHEON QUALITY ASSURANCE PLAN REV., SECTION 8
17072	10-03-67	SPARE PARTS INTEGRATED STOCK BALANCE AND CONSUMPTION REPORT
17153	10-12-67	SIX MONTH MATERIALS REPORT
17161	10-12-67	STATUS OF MATERIAL AFFECTED BY THE COPPER STRIKE
17171	10-13-67	VERIFICATION OF GEN SYSTEM POWER SOURCES
17784	12-18-67	PARTS INTEGRATED STOCK BALANCE & CONSUMPTION REPORT
18142	02-09-68	SPARE PARTS INTEGRATED STOCK BALANCE & CONSUMPTION REPORT AS OF 31 JAN. 1968
18161	02-13-68	LIQUID FILLED RELAYS
18258	02-22-68	NON-METALLIC MATERIALS USAGE IN GEN SYSTEMS
19333	07-09-68	TRANSMITTAL OF ACE RELIABILITY PLAN REVISION OF 1 APRIL 1968
21887	04-02-69	TRANSMITTAL OF SEMI-ANNUAL MATERIALS REPORT
21891	04-02-69	STOCK BALANCE AND CONSUMPTION RPT.

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2.4 ENGINEERING CHANGE PROPOSALS

The following tabulation is a comprehensive log of Engineering Change Proposal (ECP) activity for the life of the program. The ECP numbers appear in the extreme left column with suffixes of "F" for Firm, "P" for Preliminary, or "R" to indicate the final revision number.

Although the remaining columns are largely self explanatory, for clarity the information given in each is explained briefly below.

- Title Column - Brief title of ECP as issued
- Contractor Affected Column - Indicates Contractor or Directed Subcontractor: A indicates AC Electronics, K indicates Kollsman, R. indicates Raytheon
- Basic Document Column - Contractor or Directed Subcontractor-originated document initiating ECP action
- RECP & Date Received Column - NASA-originated document initiating ECP action
- CE #, Budg./Firm Column - Internal AC Electronics vehicle for accumulating cost information of budgetary or firm nature
- Equip. Affected Column - Identification of hardware affected
- Effectivity, In-Line/Retrofit Column - Identification of specific items affected and where
- ECP Budg. to NASA & Date Column - Document transmitting cost information to NASA and date of transmittal
- NASA Disposition Columns - Identification of NASA document stipulating disposition as "Approved" or as "Disapproved/Cancelled"
- CTA 8604 - Date & Rev. Column - Internal AC Electronics vehicle for release of effort and instruction for performance
- Remarks Column - Self Explanatory

Further information may be obtained by review of Paragraph 2.5, which contains a tabulation of Contract Change Authorizations (CCA) and related paragraphs.

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved	Disapproved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
1	Acceptance Testing of newly designed WEDV	K	CRN-MK-92 9-29-64	N/A		WEDV	GMN 7	N/A	SRF-10-4-283 \$135,000 10-29-64		Cancelled CCA-497-0005	N/A	
2	GMN Tray harness wire insulation change	R	Dir. No. 13 1-12-65	N/A	14117	ACC	AGC 9	AGC 6, 7, 8, 20	APB-71C \$16,800 11/24/64	CCA-AL31 TXN No. 1093 12/11/64		N/A	TDRR-14473
3	Specification change for component selection	A	N/A	N/A	14124	PSA	GMN 110	N/A	APB-711 \$1800 11/25/64	CCA-AL36 TXN No. 1145 12/30/64		1014	
4	Reinforce mounting corners of modules	A	TDRR's: 14695 14687 14688 14689	N/A	14118	IMU	GMN 7	N/A	APB-712 \$23,000 12/7/64	CCA-AL32 TXN No. 1094 12/11/64		1008	Form quote by 30/65 497-189-215H
5	GMN Modules using metal cans	A	N/A	N/A	14123	IMU	See re- marks	N/A	APB-713 \$20,000 12/16/64	CCA-135 12/23/64 TXN No. 1131		1008	B/I 1000005-011-17 1000005-021-110 thru 114 1000205-17 thru 124
6	Verb noun change	R	N/A	N/A	N/A	ACC	N/A	N/A	See re- marks				Cancelled - never issued

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
7	Spring loading of the sextant shaft axes bull gear	K CRN-104 DRR's: 15306 15350 15351 thru 15359	N/A	14110	CUA	G&N 110	N/A	AFB-715 \$90,000 12/23/64	CCA-497-000L 1/20/65 CCA-497-000LRJ 2/19/65	N/A	
8	ND-1002220 completely revised and retyped (Mode Spec)	K R A ERP-K-5 CRN- MK-98 CRN-MR- 38, CRN- MA-125 10/6/64	N/A	14139	G&N Systems	AGC-109 111, 119, 121 G&N 121	N/A	AFB-714 \$3,885 12/29/64	CCA-A-142 1/25/65 TWX No. 1217	N/A	
9	Retrofit of AS-... simulation studies	R ERP- 10001 12/23/64	EC-009 1/29/65	14138	AGC	N/A	AGC 6 only	RDH-3-5- 29-74 3/8/65	CCA-497- 0012 3/24/65	N/A	
10	Sextant shaft backlash (hardware)	A RFC 1006	N/A	14131	PSA	N/A	G&N 20, 12	APM-9348 \$8538 11/12/64	Dissep. BGS-65- 286 11/29/65	1044 1069	
11	Sextant shaft backlash (Documentation)	A REFC-37F	N/A	15100	PSA	N/A	G&N 20, 12	APM-5248 \$1,800 10-12-65	CCA-A-140 1/13/65 TWX-1178		ECP 10P Auth. Engr. only
12	gyro-Motor Tachometer change in Oplice and over factor correction	A P/C 7125 7126	N/A	N/A	CDU	G&N 111, 121	G&N 110, 121	AP-B 721 \$115,000 2/10/65	ECP-11 & 11R TWX-MSL- 073 3/11/65	N/A	To be resubmitted as ECP-47 per NECF-86-047
13	gyro-Motor Tachometer change in Oplice and over factor correction	A	N/A	N/A	CDU	G&N 123	G&N 110, 111, 121, 122, 109	APM-5919 \$18,200 3/1/65			
14	Redesign of u&M Transport Cart	A N/A	N/A		G&N Transport Cart	P-10	P-1 thru P-9 and B.B.	In-Scope APM-5580 1/28/65	In-Scope	N/A	Submitted for record purposes. Ref. TDA-266, AG 980-64

6-6-68 Revisions

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Build. Dur.	RFCS	CE #	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Date	CTA \$000's	REMARKS
13	Eliminate Map and Data Viewer Assembly	R	7/65	15147		MOV Deleted G&M 110 & up. Cond. Ab. 1a-11e	17, 110, 121, 111, 122, 109, 123, 124, 125	\$5,7426 \$99,400 8/30/65	Dis. 8/17/65	N/A	Disapproved - New ECP being initiated. See ECP-0169. CCA 497-0005, 2/19/65 eliminates the MOV and associated equipment	
14	Specification Clarification	K R A	7/8/65	14395	G&M System	All parts fab'd, 2/15/65	N/A	AFB-716 \$1,600 2/4/65	CCA-A-144 3/19/65	1014 1021	ORDER 15855 From Comd. 5/26/65 497-203-252-R	
15	ADA Preamp Design	/C	7/406 7/405 7/401 7/400	N/A	IM6	G&M 17	N/A	AFB-717 \$18,500 2/3/65	CCA-A-143 2/8/65 TNX 1269	1008		
16	Tray A Mired Assembly	R	8/31 8/31 8/31	14150	AGC	AGC 120	N/A	\$3,100 2/8/65 AFB-722	CCA-A-147 2/8/65 TNX 1267	N/A		
17	Removal of Mytronics as Vendor	R A	8/40 8/40 8/40	14165	AGC	QSL Change	N/A	AFB-723 \$2,950 Credit 3/3/64	CCA-A-148 2/11/65 TNX-1285	1073	Credit resulting from deletion of qual. requirements	
18	G&M Mounting Fixture Computer Modification	A	N/A	N/A	GBE	G&M Mfg. Fixt. 11	Mfg. Fixt. 1 thru 10	See Remarks		N/A	ECP not issued per W. Ruine request. ECP not required. Effort negotiated as part of S/A 42	

6-4-66 Revisions

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
19	Supplement No. 1 to WFC 500-1	K R A	N/A	EG-007 1/22/65	14135 14134	GEN and GSE	See Remarks	See Remarks	Int. BAA-2-5-14-F-4 2/8/65 In-Scope	CCA-497-0027 6/11/65 CCA-497-0027 Rev. 1 7/23/65	1020	WFC 500-1 will be used for Blk. II & IEM. Rev. 1 incorporates Suppl. 1, Rev. B to WFC 500-1.
20	Moistureproofing of GEN 20	A	ERP-K-9	RASPO/ MIT 0042 3/2/65	14144	GEN System	N/A	GEN 20 Only	ECP 20, AFB-718 \$31,465 2/25/65 ECS-20R2 APM-8034 8/17/65 \$31,465	CCA-A-149 2/12/65 TWX 1294	1044	20R2 in need for part number inclusion. ECP 20R never issued.
21	Radiation Shielding	K	ERP-K-43 CRM-MK 175	N/A	14155	OIA	GEN 110	N/A	APM-6242 3/26/65 \$40,100	CCA-A-146 2/3/65 TWX 1257	N/A	
22	Prototype GS. Gear Box Assy. for R&I of KIC Equipment at AC Electronic	A	N/A	N/A	14160	GSE	N/A	N/A			N/A	KIC will furnish a piece of GSE that will replace this hdv.
23	Slip Ring Evaluation	A	CRM-MA136 2/2/65	N/A	14194	IMU	GEN 110	See Remarks	APM-6007 3/18/65 \$2,290	CCA-A-153 3/19/65	1022	GM 17 and 12 Slip Ring Assy's. being tested. Failure to meet requirements will require retrofit.
24	Use simulation Computer S/M 2 to a Blk 100 configuration	R	N/A	RASPO/ MIT 0044 2/26/65	14164	Simulation Computer	N/A	Sim. #2 Only Prior to Sell-off	APM-6157 2/24/65 \$25,300	CCA-A-150 2/24/65	N/A	

Revisions
e-8-89

SCP LOG & STATUS

SCP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
25	Addition of Signal Conditioning Power Supply to Blk I and Series 50 PMA's	A	N/A	14161	PSA	GMW 110	GMW 6, 20, 17, 12	APM-6889 5/19/65 \$56,600	CCA-497-0039 6/28/65		1214	GMW 5, 7, 8 Disapproved
26	Servant Hand Controller Diagram	A	CRM-110 7/14/64	15259	IMC	SEE REMARKS		APM-720 2/25/65	CCA-A-155 3/19/65		1044	In-Line GMW 17 Auth. Per MALLO SCP-26 Documentation Only. ----- SCP 26R Cancelled by AC Electronics Never Submitted
27	Servant Hand Controller Diagram	A		14196								
28	Revision of test plan to incorporate SAC's serv. Base structure	A	N/A	14145	LEM Rev. Base	N/A	N/A	INV RDB-1-13-1-2 \$25,300 1/27/65 APM-6068 3/10/65	CCA-A-152 3/11/65		1050	Eng. Evaluation Only. Ref. ID-A-27L Firm Quote 4/30/65 497-180-247E
28	Core Rope Simulator	R	N/A	14140	Core Rope Simulator	N/A	N/A	APM-607 3/5/65			N/A	SCP 28. EG-53-65-14 1/25/65 Addition of 6 Core Rope Simulator
28R	Core Rope Simulator							APM-6049 4/29/65	28R-CCA-497-0024 5/24/65			
29	Sled Test Program	A	N/A	14143	GMW Systems	N/A	N/A	APM-6050 3/17/65			N/A	NASA Ltr. EG-53-65-65 3/17/65
30	Manufacture 48 Prototype Core Ropes	R	N/A	14148	ACR	N/A	N/A	APM-6079 3/17/65 \$970,000			N/A	48 Prototype Modules to MIT for Design Verification (CCA-497-0013)

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	NASA Disposition Cancelled	CTA 8604 - Date & Rev.	REMARKS
31	Manufacture 60 Jumper Modules	R	N/A	EP-021 2/15/65	14319 15374	AGC	N/A	N/A	APM-6078 \$44,500 3/11/65	CCA-197-0158 1/28/66		N/A	Addition of 60 Jumper Modules NASA TXA C75 5/18/65 Consolidate Modules In-Scope (superseded by CCA 197-0158)
32	Elimination of Breadboard AOT	K	REP-K-28	EP-023 2/12/65	14317 15045	LEM GAN AOT	N/A	N/A	RDB-3-9-31-9-4 3/18/65 \$15,300 Credit		Disap. CCA-197-0016 4/12/65	N/A	
33	Data Analysis	A		EP-017 2/12/65	14357	GAN	N/A	N/A	APM-6107 \$2,373,449 3/15/65		Disap. NASA Tex. BO-55 4/14/65	N/A	
34	Apollo Parts Qualification Test Program Ground Rules	K R A	N/A	EP-031 2/22/65	14366 15022	GAN	N/A	N/A	APM-6209 In-Scope 3/24/65	CCA-197-0014 4/7/65		1073	
35	REP 1008 CDU Lubrication	A	N/A	N/A		CDU	---	---	Cancelled			N/A	Cancelled by ACBP
36	FSA Magnetic Amplifier Change No. 1	A	GBN-MA-128	N/A		FSA	N/A	GAN 17, 12, 110, 111, 109, 121, 122, 123, 124	APM-6018 \$64,765 3/4/65		Disap. REP-55 4/9/65	N/A	

4- 6-66 Revisions

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # & Budge. Filtn.	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budge. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
37	PSA Magnetic Amplifier Change No. 2	A	CRS-MA-128	N/A		PSA	GAM 110	GAM 17, 12	APM-6019 \$9,540 3/4/65	DISAP. BO-55 4/9/65	N/A	
38	PSA Tray Clinch Nut Change	A	CGA-A-156	N/A	14197	PSA	GAM 8	N/A	APB-719 \$2,385 2/25/65	CGA-A-156 3/10/65	1014	
39	Horizontally Sealed Rev. Block II Main BERY	R	N/A	N/A		AOC	GAM 201 601	-	APB-724 \$1,195.135 3/2/65	DISAP. BO-53-65-65 3/17/65	N/A	NASA Final Resolution per BOSS-272 dated 3/4/66 Considers ECP effort In-Scope
40	Addition of Optics Coolant By-Pass Adapter	A	N/A	N/A	15041	Optics & Rev. Base Assy.	GAM 6	N/A	APM-6336 \$2,088 4/1/65	CGA-A-162 4/21/65	1014 1010	
41	Addition of Cleanliness Spec. to IMU	A	Was part of CRS-MA-137	N/A	15142	IMU	GAM 110		APM-6069 3/11/65 See Remarks	CGA-A-197-0046 7/2/65	1008	\$1,456 if combined with ECP 42 \$13,375 if not. Retrofit of GAM 17 and 12 Disapproved.
42	IMU Heater Change	A	CRS-MA-137	N/A		IMU			Cancelled		N/A	Cancelled - Not Issued

6-8-66 Revisions

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	REC'D & Due Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
43	Reticle Air/Vacuum Focus	K	ERP-K-3 3/23/65	N/A	15113	OVA	QAN 101, 102, 121, 111, 109, 122, 123, 124	Learner Model Only	APM-6990 \$51,000 5/28/65	CCA-497-0029 6/18/65 Learner Only	N/A	NASA Ltr. EG-55-65-153 Retrofit of Learner Portion of ECP Only, In-Line effort considered in-scope by NASA.
44	Cancelled									Cancelled TWX 1394 3/11/65	N/A	
45	Cancelled									Cancelled TWX 1389 3/10/65		
46	Removal of Station Frequencies From Transmitting Facilities	R	RECOP 00011P	N/A		GBE	N/A	Units 1 thru 6 AGC Call Console	APM-6075 \$7,000 3/11/65	See Remarks	N/A	NASA TWX 1420 DTD 3/23/65 Requested Reubmittal
46R	Removal of Station Frequencies from Transmitting Facilities								APM-6648 \$2,600 4/30/65			46R Rejected per NASA TWX 1532 5/10/65
47	Servo Motor Tachometer Change in Optics CDU	A	N/A	EG-047 3/22/65	15049 14200	CDU	QAN 110	N/A	APM-6527 \$189,500 4/20/65 APM-6839 5/17/65	CCA-497-0022 5/24/65	See Remarks	CTA-8604-1012, 1018, 1057, 1087 - Verbal REC'D From K. LeBlanc on 3/5/65
48	Additional Field Verification Tests	R	EDER-211, Amenda #2	RASFO/MUNDOAS 3/5/65	14172 15031	AGC	N/A	N/A	APM-6322 \$5,300 4/1/65	CCA-159 4/9/65	N/A	

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP # & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
49	Field Verification Procedure for Block II ACC	R	ERP-R-10016	EG-028 3/9/65	24179	AGC	N/A	N/A	APM-6740 \$101,140 5/7/65	Disapp. MABA Ltr. EG-55-65-139 6/11/65	N/A	NASA final resolution per B955-272 dated 3/4/66 considers ECP effort in-scope.
50	Incorporate Moisture Resistant Resolver Trimming Module	K	ERP-K-9R DRR-45794	N/A	14141 14173	QUA	17	N/A	479-179-00229H \$3,500 4/14/65	TRX Nos. 1228, 1229 CCA-A-163 4/22/65	N/A	Firm Quote 4/30/65 497-187-299H
51	Logic Plate Relocation	R	ERP-R-10016	N/A	14106 15368	CTS	S/W 13	S/W 3-12	APM-6232 \$13,840 3/24/65	ECP 51H CCA 497-0159 1/26/66	N/A	ECP-51 is considered to be In-scope. (superseded by CCA 497-0159)
51H	Logic Plate Relocation								\$3,275 5/27/65			
52	QUA Design Evaluation Program (Kollman)	K	ERP-K-60A2	N/A	15109 15048	QUA	N/A	N/A	APM-6223 \$397,200 4/2/65	CCA-497-0036 6/11/65	1053	
53	Reduction in AOT Tester Accessories	K	ERP-K-59R	RASFO/ MET 3/22/65	14189 15066	AOT	N/A	N/A	APM-6577 \$22,000 Credit 4/23/65	CCA-A-168 5/10/65	N/A	
54	Post Installation Testing Support	A	TP-A-321	RASFO/ MET 3/22/65	15002 15015	OMF	N/A	N/A	APM-6321 \$9,100 4/2/65	CCA-A-157 4/2/65	1083	

6- 8-66 Revisions

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Rtdg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
55	Block II - LEM 16 FIPA Specifications	A	N/A	RASPO/ MIT 0013 3/22/65	14198 15071	GAN	N/A	N/A	APM-6522 \$16,200 4/20/65	CCA-109 5/18/65	1054 1086	PIP P&I Spec not authorized per CCA
56	Manufacture of 3 Sets of Block I-100 Main and Nav DESK's	R	ERP-R-10031	EG-045 3/22/65	14188	Main & Nav DESK	N/A	GAN 12, 17, 20	APM-7440 \$299,700 6/30/65	Disap. NASA Ltr. EG-55 7/19/65	N/A	
57	Fabricate LEM Dimming and Coincidence Circuit and Associated GSE, FIE, etc., for LEM AOT	A	N/A	EG-049 3/22/65	14185 15108	* CCROD GSE	LEM 601	N/A	APM-6911 \$107,054 5/21/65	CCA-497-0025 6/11/65	1030 1077 1079	* L. Water Control and Reticle Dinner
58	Point of Government Acceptance of GAN Hardware	A R K	N/A	EP-033 3/22/65	14186 15291	N/A	N/A	N/A	APM-6601 \$532,800 9/29/65	CCA-497-0117 11/22/65 CCA 497-0117RL 1/25/66	1019	CCA 497-0117R includes "ECBU and Associated Assemblies"
59	Battery Power Pack Assy.	A	N/A	RASPO/ MIT 0008 3/24/65	15006 15076	GSE	S/N 10	S/N 1 thru 9	APM-6653 \$15,545 4/30/65	CCA-A-170 5/24/65	1023	
60	Battery Power Pack Retrofit to Block I/100 Series	A	N/A	RASPO/ MIT 0009 3/24/65	15005 15064	GSE	S/N 3	S/N 1 & 2	APM-6652 \$8,189 4/30/65	CCA-A-166 5/10/65	1023	

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
61	Retrofit of FSA Mounting Fixture to a Block I/100 Series Configuration	A	N/A	RASFO/ MIT 0010 3/24/65	15003 15062	GSE	S/N 15	S/N 1 thru 14	AFM-6654 \$5,611 4/30/65	CCA-A-164 5/10/65	1044 1023	
62	Optics Navigation Base Fixture Assy.	A	N/A	RASFO/ MIT 0011 3/24/65	15004 15063	GSE	S/N 9	S/N 1 thru 8	AFM-6651 \$25,793 4/30/65	CCA-A-165 5/10/65	1044 1023	
63	Wire Change for GAN 20	A	N/A	N/A		DMC MDV	N/A	GAN 20	AFM-9086 10/28/65 63R - AFM-8204 9/27/65	ECP-63 CCA-197-0008 Rev. 1 3/15/65	1044 540	----- ECP 63R Cancelled by AC per AFM-9086.
64	Drawing Preparation 100 Series FSA Horizon Photometer Modules	A	TD-A-310	RASFO/ MIT 0014 3/26/65		FSA	N/A	N/A	AFM-6408 \$23,300 3/26/65	CCA-A-160 4/9/65	1069	
65	Retrofit of GAN Indicator Control Panel to Prevent Loosening of Switch Knobs	A	MECP 23 P	N/A	15087	DGC	N/A	GAN 7, 8 and Spare	AFM-7675 \$15,000 7/16/65		N/A	Disap. NASA Ltr. BG-55-65-192 7/30/65
66	Extension of Test Data Reduction and Analysis	A	TD-A-193 R-145	RASFO/ MIT 0018 3/26/65	15036 15111	GAN	N/A	N/A	AFM-6320 \$37,500 4/2/65	CCA-197-0017 and Rev. 1 4/12/65	1083	

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Ref. #.	ECP Rtdg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
67	Replacement of Metallic Bellows for Block II with Rubber S/C Vacuum Seals	A	TDRR 20250	EG-048 3/26/65	14199 15071	NWB & Optics Assy.	G&N 201	N/A	AFM-6650 \$1975.20 Credit 5/3/65	CCA-497-0021 5/24/65	1050	
68	Retrofit of Apollo FIPA Test Consoles for Block II & LEM	A	TD-A-209 Amend. #1	N/A	14190 15032	FIPA Test Consoles	N/A	FIPA Test Consoles 4 & 8	AFM-6410 \$13,000 4/7/65 AFM-7788 \$14,300 7-28-65	CCA-A-161 4/12/65 CCA-A-161-RI 8-23-65	1086	
69	Sextant Base Harness Assembly	X	ERP-K-12 TDRR 17902 MK-213	PASFO/ MIT 0019 4/5/65	15014 15010	OUA	G&N 110	N/A	AFB-759 \$3,276 4/1/65	CCA-A-158 4/5/65	N/A	Cancelled per Revised CRM MK-213 Dated 4/21/65
70	Updating of G&N 5A Mechanical Geuge From Block I-O Series to Block 1/100 Series	A R K	ERP-R-10028 ERP-K-58	EG-036 3/30/65	15007	G&N	N/A	N/A	AFM-7389 \$26,400 6/29/65		N/A	Disap. NASA Ltr. EG-55-65 184 7/28/65
71	Retrofit of Logic Module A-20	R	TDRR 16353	N/A	N/A	AGC	AGC 109	AGC 6, 120, 117, 112, 110, 108, 107 Remarks	AFM-6896 \$46,190 5/21/65	NASA Ltr. EG-55-65-160 7/1/65	N/A	Retrofit Portion Disapproved. NASA final resolution per EG-55-272 dated 3/4/66 includes in-line effort in scope.
72	New Diodes for Power Switch Modules	R	ERP-R-10011	N/A		AGC	AGC 109	N/A	AFM-6742 \$7,500 5/10/65		N/A	Disap. NASA Ltr. EG-55 7/26/65

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Rec'd	CE # Budge. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budge. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
73	Flight Qualification Micrologic (Series 100 Computer)	R	MR-41 ERP-R-10005 TDRS's 15177 & 16137	N/A		AGC	AGC 121, 111,109, 122,123 124	N/A	APM-6803 \$15,320 5/14/65	Disapp. NASA Ltr. BG-55-65- 175 7/20/65	N/A	
74	Flight Qual. Micrologic Units for Block II AGC & CDU's	R	ERP-R-10007 MR-42	N/A		AGC CDU	GM 201 601	N/A	APM-6925 \$1,309,000 5/24/65	Disapp. NASA Ltr. BG-55-65 139 6/11/65	N/A	
75	Add Recorders to GM Shipping Containers	R A K	GRSD 17, 17A ERP-R-10021 ERP-K-21	RASFO/ MET 0016 4/6/65	15012 15149	GM Shipping ping Container	SEE	BCP	APM-7391 \$4,170 6/29/65	CCA-497 0952 7/23/65 See Remarks	1024 1030 1044	CCA-497-0958, & CCA-497-0358 RL, Dec'd 11/16/65, Charges Quantities
76	Purge Valve Adapter (Gas Injection Valve Assy.)	X	ERP-K-60	RASFO/ MET 0017 4/6/65	15013	GSE	See Remarks	N/A	APM-8576 \$11,400 9/28/65		N/A	OUA GM 203 thru 222 ADT GM 604 thru 222 ----- OUA GM 205-222 ADT GM 605-610
77	Manufacture of OITS 13, 14 & 15 to a Block I Series 100	A	N/A	RASFO/ MET 0015 4/6/65	15011 15065	GSE			APM-6608 \$22,300 4/27/65	CCA-A-167 5/10/65	1023	
78	Gyro Wheel Tester	A	N/A	RASFO/ MET 0021 4/12/65	15098 15021	GSE	BLK. II LEM	N/A	APM-6968 \$204,100 5/27/65		N/A	BCP 78 BG-55-65- 184 7/28/65 ----- ECP 78R APM-7407 \$173,640 7/30/65
78R	Gyro Wheel Tester											

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
79	Block I & Series 100 Field Verification Procedure (FVP) for Sunrise 45	R ERP-R-10026 TR-211 Amend 1	EG-1803 4/9/65	15020 15380	AGC	N/A	N/A	AFM-6967 \$63,000 5/27/65	CCA-497-0172 1/31/66	N/A	CCA 497-0172 Supercedes Disapproval
80	Fabricate Resters for the SMT and SCT Eye Pieces	K ERP-K-41	EG-1802 4/9/65	15019 15110	OUA	GAM 109, 12-3, 124	GAM Sp 12, 20 1M, 101 121, 110 111, 102	AFM-6991 \$25,000 5/28/65 AFM-7001 \$31,500 6/7/65	CCA-497-0028 6/11/65 See Remarks	N/A	CCA 497-0028REL, 7/9/65 CCA 497-0028RE, 8/3/65 Include Block II & IEM AOT AFM-7001 is a resubmittal of Budgetary only.
81	GMA SMT & SCT 2.06 inch ER Eyepiece and Heater	K ERP-K-39	EG-051 4/9/65	15018	OUA	GAM 201, thru 222 for ERs 207 thru 222 for Eye Fes.	GAM 101, 102, 201, 206	AFM-7211 \$490,985 6/16/65		N/A	
82	Block I & Series 100 Field Verification Procedure (FVP) for Sunrise 69	R ERP-R-10027 TR-211 Amend 3	RABRO/ MIT 0020 4/9/65	15017 15381	AGC	N/A	N/A	AFM-6966 \$2,440 5/27/65	CCA-497-0171 1/31/66	N/A	CCA 497-0171 Supercedes Disapproval
83	Retrofit GAM 12 Optical Subsystem with a Double Reticle	K ERP-K-38	EG-1809 EG-42 EG-1004 4/9/65	15016 15169	OSB	GAM 110 per RCP 43	GAM 12 Sp.	AFM-6989 \$7,150 7/22/65	CCA-497-0063 8/17/65	N/A	
84	System 12 and 17 Module Changes	A RFC 1010	N/A	15058 15351	PHA	BLK 1/100 Series	17, 12	AFM-8154 \$194,989 8/20/65 AFM-9914 \$22,950 12/14/65	ECP 84R ECP 497-0146 1-8-66	1023 1097 1044 1023	84R covers the 800 cps 5% amp only. The CGA approved one set of requirements since ECP was in error.

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Prop. Disapproved	CTA 8604 - Date & Rev.	REMARKS
85	Retrofit Front Close-Out Panel	R	ERP-R-10010	N/A	15139	AGC	AGC 121, 111, 109, 122, 123, 124, SP 1, SP 2	AFM-6804 \$2,700 5/14/65	CCA-497-0043 7/29/65	N/A	CCA-497-0043, Rev. 1 Removes Retrofit of CCA-497-0043
86	GSE Changes to AC S.O.W.	R	ERP-K-15	RASFO/MET 0022 4/19/65	15025	GSE	Blk I / 100, Blk II, LEM	AFM-7427 6/30/65 AFM-7658 7/27/65 \$15,100 (Credit) 7/15/65 AFM-7745 8/15/65 \$815,630 2/27/66	ECP 8682 CCA-497-0055 7/27/65 ECP 8682 CCA-497-0169 2/27/66	1024 Rev. 3	
86R	GSE Changes to AC S.O.W.	K	ERP-K-35		15143 15145						
86R2	GSE Changes to AC S.O.W.	K	ERP-K-35		15143 15145						
87	KT Modification to Functional Tester	K	N/A	RASFO/MET 0024 4/19/65	15026 15151	Functional Tester	S/M 1	AFM-7328 \$28,350 Credit 6/24/65	CCA-497-0054 7/23/65	N/A	
88	Computer Simulator Updating Block II	R	N/A	RASFO/MET 0025 4/19/65		GSE		ERP-8-101 8/16/65	N/A	N/A	Considered as in-scope by AC
89	GSE Reduced Coolant Requirements for AGC Testing	R	ERP-R-10032	RASFO/MET 0026 4/19/65	15028 15150	GSE	Blk 100 DC 9, 10, 11, Blk II & LEM	AFM-7344 6/25/65 AFM-7656 AGC Hand. \$157,213 Credit 7-18-65	CCA-497-0053 7/23/65	N/A	
89R	GSE Reduced Coolant Requirements for AGC Testing	R	ERP-R-10032				Blk II and LEM DEK Ped. W. 12 - #2 AGC Hand. Flxt. 23 - 64				
90	Mode Addition to IMU Power Circuit	A	N/A	RASFO/MET 0028 4/19/65	15030 15170	IMU	N/A	AFM-7729 \$20,624 7/22/65	CCA-497-0064 8/17/65	1044	CCA-497-0064 RL Cancels this ECP.

Revisions
6-6-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd/Document	Basic Document	RECP # & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
91	Connector Bracket Material & Fabrication Change	A	N/A	RASRU/MCM 0027 4/19/65	15029	IMU	N/A	N/A	APM-8092 8/26/65	SEE REMARKS	N/A	ECP Withdrawn EG-75-65-226 9/13/65
92	Leakproof Sealing	K	ERP-K-3, 6 CRW-263, 130	N/A	N/A	OUA	GMW 110	N/A	See Remarks		N/A	Cancelled by KIC TWX SSC-65-704, In-Scope
93	Assembly Interference Elimination	K	ERP-K-4 CRW-154	N/A	N/A	OUA	GMW 110	N/A	See Remarks		N/A	Cancelled by KIC TWX SSC-65-704, In-Scope
94	Star Tracker & Horizon Sensor Housing Modification	K	ERP-K-7 CRW-245	N/A	N/A	OUA	GMW 110	N/A	See Remarks		N/A	Cancelled by KIC TWX SSC-65-704, In-Scope
95	Acceptance Data Package (Revision A)	A R K	ERP-K-53	FR2-1705 3/16/65	15054	Block II & LEM GMW	N/A	N/A	APM-8695 \$35,406 10/6/65	Cancelled by RECP IT10		Cancelled and superseded by ECP 0284
96	PSA Potting Separation Change on GMW 20	A	N/A	N/A	15059	PSA	N/A	GMW 20	APM-6704 458,000 5/12/65	CCA-497 0223 5/24/65	1014	APM-6848 Reduce Cost to \$28,510

6-6-66 Revisions

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	REC# & Date Recd.	CE # Budget Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Disapproved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
97	PSA Adapter Modules	A	GBSD-31,32	N/A		GBE	Blk II & IEM	N/A	APM-7103 \$400,720 6/29/65	ECP-97R CCA-1497-0191 2/17/66	1024	
	-----				15051 15004 15216				APM-1024-3 \$429,366 1/14/66			ECP-97R APM-10442 1/17/66 \$382,313 revised estimate & supercedes APM-10243
97R	PSA Adapter Modules						B/M-1 27 Units	N/A				
98	EC20 Amalg Module Mechanical Changes	A	N/A	RMSPO/ MIT 0029 5/3/65		CDU	N/A	N/A	APM-7137 \$16,879 7/1/65	CCA-1497-0161 1/28/66	1013	Considered to be In-Scope by NASA. CCA-1497-0161 Supercedes disapproval
					15093 15373							
99	Ser. 100 Compatibility Change to Series 50 GBE Equipment	A	RFC-169	N/A	15069 15159	GBE	N/A	B/M 1, 2	APM-7163 \$7,400 6/11/65	CCA-1497-0057 7/29/65	1023 1044	
0100	L.C.T.C. Adapter Cable Addition	A	N/A	RMSPO/ MIT 0030 5/30/65	15061 15372	GBE			APM-7322 \$1,730 6/29/65	CCA-1497-0164 1/28/66	1023 1029	Considered to be In-Scope T.D. to be issued. CCA-1497-0164 supercedes disapproval
0101	AOT Tolerance Change	K	ERP-K-10	N/A		AOT	IEM 601	N/A	See Remarks		N/A	Withdrawn by KIC
0102	Moistureproofing of Qualification Test Program PSA Modules	A	N/A	N/A		PSA Modules	N/A	N/A	APM-6965 \$6,700 5/27/65	CCA-1497-0042 7/20/65	1073	
					15138							

6-6-66 Revisions

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
0103	PSA Potting Separation Change	A	TEPR's 18669 thru 18695	N/A	15060 15167	PSA	QAW 17, 12,110	N/A	RDE-7-5- 113 7/6/65 \$346,382	CCA-197- 0062 8/11/65	1014	
0104	LEM AOT 2.06 Inch ER Eye-piece and Heater	K	ERP-K-32	EG-051 4/9/65	15018	AOT	601-622 Htrs. 605-622 Eye Pcs.	601-604 Eye Pcs.	APW-7210 \$327,718 6/16/65	Disap. EG-55-65 159 6/25/65	N/A	
0105	Raytheon Recovery Schedules	R	Ray. Rep. 5/18/65	N/A	N/A	AGC	N/A	N/A	See Remarks		N/A	Will not be issued.
0106	Block II/LEM Nav Base Shipping Container Requirement	A	N/A	RASPO/ MT 0032 5/25/65	15075 15171	GSE	BLK II & LEM	N/A	APW-7390 \$3,390 6/29/65	CCA-197- 0066 8/17/65	1011	
0107	Replacement of PSA Mounting Fixture With PTA/PEA Mounting Fixture	A	N/A	RASPO/ MT 0031 5/25/65	15074 15233-1	GSE			APW-7106 \$12,500 6/30/65 APW-5581 \$7,900 9/29/65	ECP 107 Disap. EG-55-65- 184 7/28/65	1032 1044	
0108	Improved DSKY Keyboard Button	R	ERP-R-10025	N/A	15143	AGC	AGC 110	N/A	APW-7088 \$4,120 6/6/65	CCA-197- 0047 7/21/65	N/A	

6-6-66 Revisions

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECF# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
0109	Add Jumper Wire and Connector Gasket	R	ERP-R-10020	N/A	15128	AGC	AGC 112, 110, 107	AGC 120, 117, 108	APM-7102 \$1,300 6/11/65	CCA-497-0041 6/29/65	N/A	
0110	Eliminate Interference	K	ERP-R-10021	N/A	15121	QWA	QWA 110	N/A	APM-7096 \$3,216 6/8/65	CCA-497-0037 6/25/65	N/A	
0111	Redesign Trap Circuits in P-A-37 Key Reset Circuit In DEKY Keyboard for Entry Problems from DEKY Keyboards and Mark Buttons	R	ERP-R-10022	N/A	15125	AGC	QWA 110, 121, 111, 109, 122, 123, 124 Sp 1 & 2	QWA 120 117, 107 112, 108	APM-7275 \$42,800 6/21/65	CCA-497-0040 6/29/65	N/A	
0112	Prevent Ghosting of "F" Segment and Signs	R	ERP-R-10029	N/A	N/A	AGC	AGC 110 121, 111 109, 122 123, 124 Sp 1 & 2	N/A	APM-7097 \$33,400 6/7/65	In-Scope BO-55-65-160 7/1/65 - Remarks	N/A	Approved by CCA-497-0167 1/28/66
0113	Select Transistors, Decoding Modules	R	ERP-R-10030	N/A	15378	AGC	AGC 110 121, 111 109, 122 123, 124 Sp 1 & 2	N/A	APM-7096 \$6,770 6/8/65	In-Scope BO-55-65-160 7/1/65 - Remarks	N/A	Approved CCA-497-0175 1/31/66
0114	Vibration Damping, AGC	R	ERP-R-10035	N/A	15215	AGC	AGC 110, 121, 111, 109, 122, 123, 124 Sp 1 & 2	AGC 120, 117, 112, 108, 107	APM-7274 \$10,175 6/18/65	In-Scope BO-55-65-160 7/1/65	N/A	

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
0115	Retrofit of Apollo GFP Spares to Series 100 Configuration	A	N/A	N/A	15078 15158	GSE Spares	N/A	All GSE Spares	APM-7402 \$28,950 6/23/65	CCA-497-0059 7/23/65	1023	
0116	Retrofit of Block I Series 50 Optical System	K	ERP-K-48	EG-1802-1809 5/27/65	15080 15169	OVA	N/A	GAM 20 L Spare	APM-8209 \$11,306 9/1/65	CCA-497-0087 10/5/65	N/A	Retrofit of Spare and GAM L2 Approved per CCA-497-0063
0117	Installation of Shim, Focusing (SXT) & Eye-piece for Optics Subsystem	K	ERP-K-50, K-67	EG-1810 5/27/65	15081 15310-1	OVA	GAM 1M 101, 12, 102, 110, 111, 109, 122, 123, 124, 200, 222		APM-8574 \$16,609 9/28/65 APM-8807 \$10,100 10/12/65	CCA-497-0092 11/25/65	N/A	ECP's 83 and 116 incorporate Shim into 12, 20 & Spare. New Eye Pcs. for SXT in 121, 124
0118	Deletion of Life Test Requirements for a Quantity of 20 GAM Parts and Delete 8 Bearing Tests	A	N/A	EG-1703 5/27/65	15082 15146	GAM	N/A	N/A	APM-7451 \$60,100 6/30/65	CCA-497-0050 7/21/65	1073	
0119	Application of Standard MSC Format for the "Failure Data Master File" Reporting, Analysis and Corrective Action	A R K	ERP-K-60	ER-1702 6/1/65	15083 15275	N/A	N/A	N/A	APM-8590 \$85,308 9/23/65 APM-9203 \$204,703 11/4/65	CCA-497-0123 11/22/65	1042	
0120	Simulation Support for MSFC	A R	SCL-65-667	EG-1822 6/1/65	15084	GAM Dynamic Simulator	N/A	N/A	APM-7730 \$1,312,550 7/22/65		N/A	Disapp. 86-37 8/31/65

ECP LOG & STATUS

ECP No.	TITLE	Cont. Aff'd	Basic Document	RECP# & Date Rec'd	CE # Budg. Film	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
0121	Break Sharp Edges	K	ERP-K-26 RI	N/A	15122	OUA	G&M 110	N/A	APM-7099 \$5,500 6/8/65	CCA-497-0038 6/25/65	N/A	
0122	Allow Visual Alignment of Horizon Photometer Optics	K	ERP-K-20 RI	N/A	15120	OUA	G&M 122, 102, 109, 123, 202, 124, 201, 222	N/A	APM-7187 \$10,182 6/15/65	CCA-497-0036 6/25/65	N/A	
0123	Increase SCT Field of Vision	K	ERP-K-34 KIC-WX SIC-65-988T	N/A		OUA	OUA 124	OUA 101, 102, 110, 111, 121, 122, 109, 123	APM-7212 \$6,200 6/16/65	CCA-497-0033 6/25/65	N/A	
0123R	Increase SCT Field of Vision				15117				APM-7830 \$6,200 8/3/65			
0124	Fork Swing Amplitude & Reference Signal Phasing Change	K	ERP-K-31 RI	N/A	15119	OUA	G&M 110 OUA BB1 & Tracker Hl. Elec. BB 1 & 2	N/A	APM-7188 \$17,000 6/15/65	CCA-497-0035 6/25/65	N/A	
0125	High Voltage Power Supply Modification	K	ERP-K-23 RI	N/A	15116	OUA	G&M 123	N/A	APM-7204 \$20,943 6/7/65	CCA-497-0032 6/25/65	N/A	
0126	Reduce probability of oscillations in head electronics assembly (Tracker and photometer). Add lead for photo current measurement	K	ERP-K-30 RI	N/A	15115	OUA	G&M 110	N/A	APM-7100 \$2,200 6/7/65	CCA-497-0031 6/25/65	N/A	

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
0127	Clamping of flex leads	K	ERP-K-37R	N/A	15114	OUA	G&M 110, 121 & Up N/A	APM-7164 \$7,714 6/14/65	CCA-497-0030 6/25/65	N/A	
0128	Parts qualification test program (TDR-125)	A R	TDR-125	N/A	15136	G&M	N/A	APM-7221 \$81,500 6/13/65	ECP-128 Disapp. BQ-55-65-192 7/30/65	N/A	Revised ECP to be requested by NASA
0128	Parts Qualification Test Program (TDR-128)							APM-6573 \$47,500 9/28/65			
0129	Adjustment of photometer high voltage supply	K	ERP-K-63 R1	N/A	15118	OUA	G&M 110 N/A	RDR-6-5-120 6/16/65	CCA-497-0034 6/25/65	N/A	
0130	Navigation base and optical unit assy. drawing configuration correction	A	TDR-23860	N/A	15124	New Base & Optics Assembly	G&M 110 G&M 8, 20, 17, 12	APM-7796 \$1,570 7/24/65	BQ-55-65-213 8/23/65	1044 1010	
0130	Navigation base and optical unit assy. drawing configuration correction							APM-8121 8/25/65	BQ-55-65-225		
0131	Panel purge valve replacement	K	ERP-K-49	N/A		OUA	G&M 101, 102, 110, 121, 111, 109, 122 N/A	APM-8575 \$1,872 9/28/65	BQ-55-65-249 10/28/65	N/A	Technically approved.
0132	PWR delay module addition to Tray 7, PSA (100 Series)	A	TDR-23917	RASPO/MT 0035 6/10/65	15092 15243	FSA	121, 122, 123, 124, 109, 110, 111 and Spares N/A	APM-8365 \$20,988 9/17/65	CCA-497-0093 10/28/65	1057 1044 -1	

ECP LOG & STATUS

ECP No.	TITLE	Cover Aff'd	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved / Disapproved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
0133	Replacement of plug-in module	R	HRP-R-10034, 10037	N/A	15193	AGC Cal. Console	U-7	U-1 thru U-6	APM-7393 \$123,500 8/13/65	CCA-497-0094 8-23-65 / 8-13-65	N/A	CCA-497-0074, Rev. 1 approves simplified concept. MAX RDR-10-132 Re: Issd Cost to \$28,276
0134	Support to MIV/IL for IEM GAN interconnect harness design	A	N/A	RASFO/MIV 0033 6/7/65	15089 15145	IEM - GAN Interconnect Harness	N/A	N/A	APM-7393 \$105,500 6/29/65	CCA-497-0049 7/21/65	1092	
0135	Mobile Gimbal Axis Switch Improvement	A	N/A	N/A	15144	IMU	GAN 110	N/A	APM-7394 \$13,200 6/29/65	CCA-497-0048 7/21/65	1008	
0136	Fabrication of an Apollo GAN Trainer and Associated Training Material	A	N/A	26-1838	15152 15009		Blk 1/100 Series	N/A	APM-7396 \$258,300 6/29/65	Disapp. EC-55 7/19/65	N/A	New ECP to be issued to cover 2 DMC Mock-Ups
0137	Time Delay Assembly Change	A	N/A	N/A	15123 15195	DMC	GAN 111, 121, 122, 109, 123, 124	17, 12	APM-8153 \$45,300 8/26/65	CCA-497-0076 9/13/65	1044 1016 1048	
0138	Signal Conditioner Design Improvement	A	TMA-334	N/A	15282 15140	Signal Conditions	N/A	N/A	APM-7395 \$13,500 6/29/65	CCA-497-0048 7/21/65	N/A	CCA-497-0044, Rev. 1 cancels all effort of CCA-497-0044

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd/Document	Basic Document	RECP # & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
0139	Addition of Airborne Optics Cleaning Kit	K	ERP-X-73	EG-1820 6/21/65	15102	GSE		APM-8432 \$7,568 9/20/65	Disap. EG-55-65-249 10/18/65	N/A	NMA to Furnish Kits
0140	Photometer, Tracker X and Tracker Y Module Re-design	A	TRR's 20120 20123 19777	N/A	15101 15141	FSA	N/A	APM-7488 \$11,462 6/30/65	CCA-497-0045 7/21/65	1044 1014	ECP to be prepared for deletion of horizon photometer
0141	Elimination of Main DSKY Federal Mount Oscillation	R	ERP-R-10018	N/A		Main DSKY Federal Mount	S/W 1 thru 9	APM-7563 \$3,350 7/9/65	Disap. EG-55-65-184 7/28/65	N/A	Considered to be within scope
0142	Mercury Pool Study	K	ERP-X-11	N/A		GSE		APM-8346 \$30,341 9/14/65	Disap. EG-55-65-243 9/25/65	N/A	Approved as in scope
0143	Revision to Apollo 25 IRIG Test Plan	A	N/A	N/A	14133	IRIG Test Plan	N/A	APM-7553 \$34,000 7/9/65	See Remarks	N/A	ECP withdrawn per AC TWX RDH 8-98 8/11/65
0144	Phase I Development Program for Optical Beacon	TRW/STL STL 12724	STL MSB 12724	N/A	15126 15218	Beacon Star Tracker		See Remarks		N/A	Separate Contract to be issued for this effort

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	Effectivity		ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
							In-Line	Retrofit				
0145	LEM GEM Interconnect Harness, Pre-production & Production	A	N/A	REP-1536 8/2/65	15156	Interconnect Harness	GEM 601	N/A	APM-8032 \$785,036 8/11/65	CCA-197-0085 10/1/65	1092 1093	
0146	Replace all Coolant Passages, etc. of GSE Coolant Supply with Stainless Steel	A	N/A	N/A	15130	GSE			See Remarks		N/A	Never issued - See APM-8284
0147	Replacement of Standby Power Switch	R	REP-R-10009	N/A	15210	AGC	N/A	AGC 120, 117, 112, 100	APM-7674 \$1,700 7/16/65	CCA-197-0080 9/23/65	N/A	
0148	ECVU Transformer Change	A	N/A	N/A	15160	ECVU	GEM 201	N/A	APM-7673 \$1,200 7/16/65	CCA-197-0058 7/24/65	1013 -2	
0149	Improve Receptacle Connector (Resolver Trim Module)	A K	REP-K-55	N/A	15174 15297 -1	GEM Harness	GEM 201	N/A	APM-9030 \$4,000 10/26/65	CCA-197-0127 11/28/65	N/A	
0150	Making and Replacement of Purple Flag Module	R	N/A	N/A	N/A	AGCG	N/A	112, 117			N/A	A) AGC 112, 117 B) AGC 110A, 117, 112

6-8-66 Revisions

7-25-66
9-1-66

ECP LOG & STATUS

ECP No.	TITLE	Conv. Aff'd Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
0151	PSA Tray 8 Wiring Change	A	N/A						See Remarks		N/A	Cancelled by AC. Effectivity in-Line 110
0152	Mapping & Survey Control Assembly (MCA)	A	N/A	EG-1824 7/20/65	15132		N/A	N/A	TXK DRG-115 \$4,900,000 9/15/65	See Remarks	N/A	Disposition Pending Further NASA Request EG-55, 12/1/65
0153	GAN Post-Installation Test Procedures	A	N/A	EG 1827 7/20/65	15133	N/A	N/A	N/A	APM-8152 \$33,656 8/26/65		1054-1	
0153	GAN Post-Installation Test Procedures				15242				APM-8577 \$17,617 9/28/65	See Remarks		
0154	Blk 2/100 Binary and Ternary Current Switch Redesign	A	N/A			PSA	GAN 110	N/A	APM-8033 \$17,972 8/17/65	CCA-497-0073 9/2/65	1014	
0155	Redesign and Fabrication of an Apollo Power 7MC Training Aid and Associated Training Material	A	N/A	EG-1832 MAY 57 7/29/65	15152	Lower DMC Training Aid	N/A	N/A	APM-8049 \$130,000 8/19/65		N/A	Disapp. EG-55-902-331 9/8/65
0156	Fabricate 507 Long Relief Eyepieces (2.6 in.) with bezels (Blk II)	X	PS	EG 1831 8/2/65	15154	Scan Tele. Long Rel. Eyepieces	See Remarks	See Remarks	APM-11010 \$73,215 2/18/66		N/A	Auxiliary Equip. (2) to MTR/II Design Evaluation 16 units for: 202, 203, 204, 205, 206, 207, 208, 209, 210, 213, 216, 217, 218, 219, 220, 222, Sp 1

6-6-66 Revisions
 7-25-66
 9-1-66

ECP LOG & STATUS

ECP No.	TITLE	Cor. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Approved Date	NASA Disposition (Disapproved/Approved/Cancelled)	CTA 8604 -	REMARKS
0157	Elimination of Photometer	A K	ERP-K-65 Part A	EG-1833 8/2/65	15155	OUA & PSA			See Remarks			Cancelled-APM-10345 1/11/66
0158	Elimination of Photometer and Star Tracker	A K	ERP-K-65 Part B	EG-1833 8/2/65	15155	OUA & PSA			See Remarks			Cancelled-APM-10345 1/11/66
0159	Installation of Thermocomplex on AGC 120	R	ERP-R-10045	N/A	15164	AGC	N/A	AGC-120	APM-8-27 \$1,440 8/25/65	CCA-497-0075 9/13/65	N/A	
0160	Black Anodize Change to OUA (Stray Light and Heat Fluxes)	K	ERP-K-56	N/A	15177	OUA	OUA 122	OUA 12, 121, 20	TXK RDB-8-103 \$61,000 8/23/65	CCA-497-0067 8/23/65	N/A	Data Fax TXK CCA Auth. GEN 20, in lieu of GEN 17
0161	Conversion of Blk I-Series 100 Computer Simulators to Blk II	R	ERP-R-10044	EG-1836 8/9/65	15164		N/A	N/A	Firm Quote Only	CCA-497-0071 8/25/65	N/A	ECP not required
0162	Replacement of Logic Modules AGC 117 and 112	R	ERP-R-10041	N/A		AGC		AGC 117 112	APM-8398		N/A	Cancel per NASA request MSC Mtg. 9/3/65

6-6-66 Revisions

7-25-66

9-1-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Aff'd.	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 Date & Rev.	REMARKS
0163	Computer Test Set Cabling Changes Due to GSED-R-12	R	GSED R-12	N/A		CTS	CTS 20-26	N/A	See Remarks		N/A	Cancelled - Will not be submitted as ECP
0164	ACC DSKY Field Test Unit ACC Test Article included as information only	R	ERP-R-10038	N/A		GSE	N/A	N/A	APM-8348 \$24,000 9/14/65	Disp. EG-55-65-243	N/A	Field Test unit only part of ECP Test Articles on RSPL
	Replacement of IMG-CDU Difference Meter	A	RFC 1011	N/A	15186 15264	D&C	See Remarks	Use Spare Meter for GAN 12	APM-8771 \$5,000 10/8/65	CCA-497-0109 11/8/65	1016 -3	Change already in-line 110
0166	Updating of BLK II Test Connector	R	ERP-R-10039 GSED-R-9	N/A	N/A	CTS PAC	CTS 20 PAC 1	CTS 3-19	APM-8347 \$14,250 9/15/65	Disp. EG-55-65-243	N/A	GSED-R9 approved as in-scope
0167	A, C, G, H Cables for GAN Mounting Fixtures	A	N/A	N/A	15179	GSE			See Remarks		N/A	Cancelled per NASA Status Mtg. 9/23/65
0168	Block II GAN Mounting Fixture	A	N/A	N/A	15178	GSE			See Remarks		1096	Cancelled per NASA Status Meeting 9/23/65

Revisions
 6-8-66
 7-25-66
 9-1-66
 1-6-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved & Cancelled	CTA 8604 - Date & Rev.	REMARKS
0169	Eyeiece Storage Compartments Assembly	A	ERP-K-119	EQ-1843 8/25/65		Eyeiece Storage Unit	N/A	GAN 20, 110, 111, 112, 121, 122, 123, 124, Sp. 1	TKX RDR-9-0088 10/8/65 \$233,000 9/15/65 4-8-68 APM-10895 \$239,475 C685 BE 2/11/66	CCA-497-0088 10/8/65 C685 BE 4-8-68 C685 BE 3/9/66	1057-1 1095-1 1096	1 Spare Storage Compt. 1 Spare 50 Series 1 Spare 100 Series
0169 R	Eyeiece Storage Compartments Assembly				15225-15183							
0169 R2	Eyeiece Storage Compartments Assembly											
0170	Supplemental Testing of Slip Rings	A	N/A	N/A	N/A				TKX RDR-9-113 9/10/65	CCA-497-0160 1/26/66	1073	CCA 487-0160 Superwarehouse Disapproval
0171	Material Change to Vibration Damper	R	ERP-R-10047	N/A	15215	AGL	AGC 109, 112, 123, 124, Sp 1 Sp 2	AGC 110A, 111, 121	TKX RDR-9-0082 9/21/65	CCA-497-0082 10/1/65	N/A	
0172	GSE Changes to Statement of Work	A R K	N/A	N/A	15190	GSE	N/A	N/A	APM-9745 \$275,835 12/16/65	CCA-497-0169 2/2/66	1024	
0173	Reticle Mount and Objective Lens Assembly	K	ERP-K-59	N/A	15265	AGT	601	N/A	APM-8767 \$3,836 10/8/65	CCA-497-0110 11/8/65	N/A	
0174 ★	Eyeiece Polarizer and Eyeguard Reinstatement	K	ERP-K-52	N/A	15295	OVA	201	102,200 1/100 SP 12,20,SP 110,121, 111,122, 123,109, 124,101	APM-9349 No Cont 11/12/65	CCA-497-0129 11/29/65	N/A	Incorporated with ECP 290

6-6-66 Revisions

7-25-66

9-1-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
0175	Night Watchman	R	ERP-R-10033 CCA-497-0007	N/A	144176	AGCG	Blk II	Blk I See ECP	APM-5728 12/6/65	Auth. by CCA-497-0007 3/8/66	1044 3	
0176	In-process Vibration and Thermal Cycle of AGC Modules	R	ERP-R-10036	N/A	N/A	AGC	In-Line	N/A	RDR-1-6-12 \$635,299 1/10/66	See Remarks ECP-0176R CCA-497-0199 2/24/66	N/A	Approval of ECP 0176R is limited to Task IV only.
0177	In-process Vibration and Thermal Cycle of AGC Modules	R	ERP-R-10036	N/A	15811	AGC	In-Line	N/A	APM-10762 \$635,299 2/5/66	See Remarks ECP-0176R CCA-497-0199 2/24/66	N/A	
0177 R2	Blk I 50 Series and G&N 20 Harness & End Connector Assembly Modification for Spacecraft Installation	A	N/A	N/A	15214	G&N Harness	R-2 N/A	17,12 & 20 Spares	ECP-177 RDR-9-122 2/24/66	ECP 177 CCA-497-0081 10/4/65	N/A	Approval of ECP 0177R2 is limited to Task IV only.
0178	Retrofit of Apollo GSE Spares to Blk II & LEM Configuration	A	N/A	N/A	15204 15278	GSE	All Blk I GSE Spares		APM-9032 \$34,000 10/26/65	CCA-497-0122 11/22/65	1024 8	
0179	G&N Filter Change	A	N/A	N/A	15339	GSE PSA	Pl-3 601 & Up GSE - 1st Unit & Up	N/A	APM-9424 \$4,897 11/18/65	CCA-497-0141 1/3/66	1015 1024 1086	
0180	Replacement of Harness With a Harness That Contains EMI Fixture	R	ERP-R-10050	RECP 1861 Ref. Only	15217	AGC/PSA Harness		120, 109 117, 122 112, SP 1 121, 123, 111	APM-8922 \$102,000 10/22/65	CCA-497-0084 10/1/65	N/A	CCA-497-0084R1, 11/29/65 Auth. (4) 1/50 and (7) 1/100 & Cancels CCA-0084

6-6-66 Revisions
 7-23-66
 9-1-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	RECP* & Basic Document	CE # Budg. Firm	Equip. Affected	In-Line Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
0181	AGC Power Switch Module	R ERP-R-10054	ERP-R-1860 Ref. Only	15216	AGC	N/A		Cancel CCA-497-0083, Rev. 2	N/A	ECP not submitted
0182	DSKY Revork to ICD Requirement	R ERP-R-10055	N/A	15254	NAV & Main DSKY	SP 1, 123, 124, SP 2	APM-8877 \$18,130 10/15/65	CCA-497-0102 11/2/65	N/A	Recycle and Retrofit of AGC 112 & 117 to be done per ECP 190
0183	Nav DSKY Outside Pin Replacement	R ERP-R-10056	N/A	15255	AGC Nav DSKY	SP 1, 123, 124, SP 2	APM-8860 \$450 10/15/65	CCA-497-0103 11/2/65	N/A	Recycle and Retrofit of AGC 112 & 117 to be done per ECP 190
0184	Vibration Dampening of Keyboards	R ERP-R-10057	N/A	15253	AGC Nav & Main DSKY	SP 1, 123, 124, SP 2	APM-8868 \$3,770 10/15/65	CCA-497-0101 11/2/65	N/A	Recycle and Retrofit of AGC 112 & 117 to be done per ECP 190
0185	Add Moisture Sealing Gaskets to All Modules	R ERP-R-10058	N/A	15252	AGC	N/A	APM-8861 No Cost 10/15/65	CCA-497-0100 11/2/65	N/A	Recycle and Retrofit of AGC 112 & 117 to be done per ECP 190.
0186	ECP of Record for Replacement of DSKY Decode Modules AGC 117 and 112	R ERP-R-10043	N/A		AGC	N/A	APM-9552 11/24/65	CCA-497-0051 10/26/65	N/A	

6-6-66 Revisions

7-27-66
9-1-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
0187	Retrofit of Front Close-Out Panel to Meet ICD Requirements	R	ERP-R-10048	N/A	15139	AGC	124, SP 2	120, 121, 117, 111, 112, 109, 122, 110, SP 1	AFM-8856 \$2,400 10/15/65 AFM-9262 \$2,400 11/9/65	CCA-497-0095 11/2/65 CCA-497-0095 R1 11/29/65	N/A	----- ECP-1878, in-line 123, & SP 1
0188	Resistor Addition to Tray A to Solve Mark Button Problem	R	ERP-R-10051	N/A	15247 -1 & 2	AGC	N/A	120, 117, 112, 107, 108	AFM-8862 No Cost 10/15/65 AFM-9264 11/9/65	CCA-497-0099 11/2/65	N/A	Retrofit AGC 120. AGC 120 Tray A to be recycled. ECP 1888, in-line 123, SP 1
0189	Grounding of 0 VDC to Chassis of Tray B	R	ERP-R-10052	N/A	15216 -3	AGC	124, 123 SP 2, SP 1	120, 121, 117, 111, 109, 112, 122, 110	AFM-8863 No Cost 10/15/65 AFM-9263 11/9/65	CCA-497-0083 R2 11/2/65 CCA-497-0083 R3 11/29/65	N/A	Retrofit AGC 120 CCA-497-0083, Rev. 2 cancels CCA-497-0083. CCA-497-0083, Rev. 1 Cancels ECP 0181
0190	Factory Retrofit of AGCG 117 and AGCG 112	R	ERP-R-10059, ERP-R-10060	N/A	15256	AGCG	N/A	117, 112	AFM-8855 \$54,500 10/15/65	CCA-497-0104 11/2/65	N/A	
0191	404e Assembly CPU Electronics	A	N/A	N/A	N/A	CTU	BLK II 201 & Up EXM 601 & Up 2 Proc. Prod.	N/A	AFM-10248 \$14,498 1/5/66	CCA-497-0156 1/28/66	1013	
0192	Retrofit of AMA Certification Fixture	K	ERP-K-14 TDRR's 20540, 20541, 20546, 20542	N/A	15660	Optics GSE	N/A	S/N 1, 2, 3, 4, 5	AFM-8916 In-Scope 10/20/65	CCA-497-0111 11/8/65	N/A	

6-6-66 Revisions
 7-25-66
 9-1-66
 10-13-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
0193	Modification to G&N Installation Qualification Fixture	K	ERP-K-84	N/A	15261	G&N Installation & Qual. Fixture	N/A	S/N 1, 2, 3	AFM-8885 In-Scope 10/19/65	CGA-197-0112 11/8/65	N/A	
0194	Modification to Azimuth Reference Fixture	K	ERP-K-83	N/A	15263	Azimuth Ref. Fixture (Porro Prism Assy)	N/A	S/N 1, 4, 5	AFM-8886 In-Scope 10/18/65	CGA-197-0108 11/8/65	N/A	Rework ARF to -011 by replacing Porro Prism Sub-Assembly 1022930 with -011.
0195	DSKY Keyboard Button Travel Interference	R	ERP-R-10065 TDRR-20445	N/A	15250	DSKY	N/A	117, 112, 120	AFM-8859 In-Scope 10/15/65	CGA-197-0098 11/2/65	N/A	Retrofit AGC's 112 and 117. DSKY 120 to be cancelled.
0196	Servo Motor Tach Generator	K	ERP-K-54 MK-265	N/A	15804	OVA	G&N 121 & Up	N/A	AFM-10246 \$178,550 1/5/66	Disapp. EG-55-78 1/26/66 EG-55-123 2/4/66	N/A	Spec. Requirement is for operation under vacuum conditions. Config. change approved. Considered in-scope.
0197	Provide for Vacuum Testing of AOT	K	MR-267 ERP-K-76	N/A	15825	AOT	AOT 605	N/A	AFM-11031 \$39,200 2/16/66 AP-M-1,0006 N-150 7/5/66	CGA-197-0211 3/2/66	N/A	601-604 to be air tested ECP 197 R2 deletes retrofit of call 602, AFM 13430, M-298 9/22/66 ECP 197 R2 Approved by ACA 197-0211 RL dated 9/29/66
0198	T.D. R50 Amendment No. 2 KIC Parts Qualification Program	K	TKK-80, Amend 2 ERP-K-61	N/A		OVA	N/A	N/A	See Remarks		N/A	Cancelled by AC Electronics will not be submitted

6-6-66 Revisions

7-25-66
9-1-66
10-13-66

ECP LOC & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
0199	Assure Negative Feedback of ECDU	A	TDRR 18445	N/A		ECDU	201, 601	N/A	See Remarks		N/A	Cancelled by AC 11/15/65
0200	Make Blk II Current SCD Switch Compatible with 100 Series	A	TDRR 19283	N/A		PSA IMU	201, 601	N/A	See Remarks		N/A	Cancelled by AC 11/15/65
0201	Transfer of CTS 20 & 21 From Blk 100 to Blk II New Build Including AGC/GSE Subsystem Cable Kits	R	ERP-R-10040	N/A	15262	CTS	S/N 20, 21	N/A	DRS-10-136 \$178,000 10/20/65 Credit	CCA-497-0107 11/8/65	N/A	
0202	Modify SCT Eyepieces to 108 & Focusable Configuration	K	ERP-K-108 ERP-K-117	EG 1856 10/14/65	15221 15184 -1	OVA	205 thru 222	12, 20, SP 1, 124, 110, 121, 111, 109, 122, 123, 200 thru 204, SP 1	APM-11029 See Remarks 2/18/66	CCA-497-0068 R2 2/25/66	N/A	\$6,300 plus costs resubmitted with ECP 290F
0203	Shielding of GSE Cables (GSED 17A)	A	GSED 17A, 17	N/A	15226 15337	GSE	Test Stations P-16 thru P-22, Blk II/LEM	Blk I/100	APM-9734 \$63,850 12/6/65 - APM-10240 \$63,850 1/4/66	ECP-203R CCA-497-0184 2/11/66	1024 1030	ECP-203 considered as in-scope by NASA ----- CCA-497-0184 supercedes disapproval
0203R	Shielding of GSE Cables (GSED 17A)											
0204	Temperature Control Changes to Blk II/LEM IMU	A	MA-145 10/13/66	N/A	N/A 15830	IMU	202, 603	N/A	APM-9261 \$57,500 11/12/65	CCA-497-0165 1/28/66	1009	

Revisions
 6-9-66
 7-25-66
 9-1-66
 10-13-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	Disapproved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
0205	Block I, 50 and 100 Series Signal Conditioner Changes	A	WEP's 23204 thru 23206, 23208, 23209, 23200	N/A	15197 15812	Signal Conditioner	17, 12, 110, 121, 122, 123, 124, 109	N/A	APM-10247 \$96,200 1/5/66	CCA-497-0189 2/24/66		1051	
0206	ECP of Record for Addition of FSA Gaskets & Covers	A	N/A	N/A	15231	FSA	N/A	109, 123, 124, 110, 124, 121, 111, 122, 5PS.	DPS-1-6-8 1/6/66	CCA-497-0153 1/12/66		1014	
0207	Improved E/L Lights	R	ERP-R-10046	N/A	N/A 15276	AGC Main & Nav DSKY	AGC 122, SP 1, 123, 124, SF 2	AGC 121, 111, 109	APM-9031 \$16,850 10/26/65	CCA-497-0124 11/2/65		N/A	
0208	Addition of Jumper Wires for Night Watchmen	R	N/A	N/A		AGC to FSA & G&N Harness	N/A	AGC 117, 112, 120	APM-8993 \$1,400 10/25/65	CCA-497-0096 11/2/65		N/A	
0209F	Deletion of Horizon Photometer & Star Tracker for Blk I/100	K A	ERP-K-96 See Remarks	8/2/65	15246 -1 15273	OUA DMC	OUA 122, 123, 109	110, 121, 111, 122, 123, 109, SF 124, Spares	APM-11174 3/1/66	CCA-497-0114 11/22/65		1044	Ref. EG-44-439-65 EG-55-34 NASA/NSC TRX EG 44-45-65-343 Technical Concurrence EG-55-391 4/5/66
0210F	Modifications to Blk II Horizon Photometer and Star Tracker	K	ERP-K-96	N/A		OUA FSA D&C	OUA 200-222 FSA 201-222 D&C 201-222		AP-M-1117 N- 7/6/66	CCA 497-0125 9-19-68 EG 55-341 3-18-66		N/A	

Revisions
 6-6-66
 7-25-66
 9-1-66
 10-13-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
0211	ECP of Record for Screw Replacement, Optics to Nav Base Blk 1/50 and 100 Series	A	MA-141	N/A	15239	Nav Base	N/A	12, 111, 121, 109, 122, 123, 124, SP 1, SP 2, 20 See Remarks	APM-9520 11/19/65 ----- JHK-3-6-72 3/11/66	CCA-497-0132 12/2/65 ----- CCA-497-0132R 3/11/66	1010 1014 -3 -3	ECP 211R Retrofit Effectivity - 12, 111, 109, 121, 122 and 2 spares In-line 123, 124
0212	Potting of Power Switch Modules	R	ERP-R-10053	N/A	15249	AGC	N/A	AGC 117, 112, 120	APM-9015 \$2,000 10/25/65 TWX	CCA-491-0097 11/2/65	N/A	GM 7 and 8 not to be reworked.
0213	GSE Battery Power Pack Remote Alarm	A	ERP-A-10053	N/A	15227 15294	I.C.T.C.	N/A	S/W 1 thru 14	APM-9357 \$4,182 11/12/65	CCA-497-0128 11/29/65	1023	
0214	Modification of GSN Simulator Certification Fixture	K	ERP-K-94	N/A	15293	GSE	S/W 3	S/W 1, 2 Complt.	APM-9168 No Cost 11/3/65	CCA-497-131 11/29/65	N/A	
0215	Shielding & Grounding of AGC Cables	R	ERP-R-10066 GSE's 12, 12A, 13, 13A	N/A	15395	AGC	See ECP	See ECP	APM-9733 \$533,032 12/6/65 ----- AP-M-12620 N-27 6/1/66	CCA-497-0185 2/11/66	N/A	Change to be accomplished in accordance with CCA-497-0185

6-8-88 Revisions

7-25-66
9-1-66
10-13-66

ECP LOG & STATUS

ECP No.	TITLE	Cont. Aff'd Document	Basic Document	RECP# & Date Rec'd	CE # Budg. F/Item	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Data & Rev.	REMARKS
216	Block II PSA Redesign	A	N/A	42-225 11-2-65	15230-1	PSA	GA&M 203	GA&M 201, 202	Not Submitted			Cancelled per 13 Jan. 1966 Quarterly Status Meeting
217	Deletion of the Signal Conditioner Power Supply Assy, P/W 2007119 and 6007119	A	MA-148 1-25-65	N/A	15245 15385	Signal Conditioner	Blk II LEM	N/A	APM-10466 \$62,585 1-18-66 Credit	CCA 497-0176 2-3-66	1015	
218	Improved Dimming Characteristics of Status/Caution Assembly	R	ERP-R-10069	ER-1858 10-29-64	15240	Blk II/LEM DSKY	202 603	201, 601, 602	APM-9729 \$62,730 12-6-65	Disp. EG-55-66-2 1-7-66		
219	Coat all exposed Beryllium parts on Manned Flight, Block I GA&M Systems	K A	ERP-K-109 Ref.	ER-1875 11-2-65	15244	GA&M Systems	N/A	GA&M 12, 12A, 12B, SP	APM-9952 \$46,727 1-4-66 GA&M-12388 \$1,882 5-11-66	CCA 497-0176 1-31-66 CCA 497-0176 Bl 2-24-66	1098	CCA-497-0136 Auth. Change for 121 CCA 497-0176 Excludes GA&M 20 and CPU's for System 122, and Spares
220	Deletion of Optics Cover Assembly	A	N/A	ER-1859 10-25-64	15229 15340	Optics Cover Assembly	All Blk II Prod. & Pre-Prod.	N/A	APM-9490 \$9,480 Credit	CCA 497-0143 1-3-66	1017R3 1044	
221	180 Degree Z IXUG Rotation	A	TERR-23863, 23865, 24308, 24309	N/A	15307 15826	IMU	201, 601 Spares	N/A	AP-M-10897 \$5,756 2-11-66	CCA-497-0210 3-2-66		

Revisions
 3-6-66
 7-23-66
 9-1-66
 10-13-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
222	AC Support to NASA Parts & Materials Management & Working Group Committees	A	EP-7-65-045A	N/A	N/A	N/A	N/A	N/A	APM-9729 \$157,600 12-6-65			Disapproved, New RDCP to be issued BG 55-78, 1-26-66
223	Factory Retrofit of AGCG 120	R	ERP-R-1006L	N/A	N/A	AGCG	N/A	AGCG-120	APM-9732 \$14,215 12-6-65	CGA 497-0144 1-3-66	N/A	CGA-497-0144 Revised Para. 1.B.9 to include FTM 1003770 Rev. H Test Agmts.
224	ECP of Record for Utilization of Block I AGE Harness and End Connector Assemblies	A	N/A	N/A	N/A	AGE Harness & End Conn. Ass'y's.	N/A	See Remarks	APM-9495 11-19-65	CGA 497-0126 11-19-65	1016	Retrofit GAN Harness from a -000 to -05 for use in P&G 8.
225	Block I, Series 100 AGE Harness & FSA End Connector Assy Modification Block I, Series 100 AGE Harness & FSA End Connector Assy, Modification	A	N/A	N/A	15271	GAN Harness & CDU Frame	N/A	109, 110, 121, 122, 123, 124, SF1, SF2	APM-10239 \$6,787 1-4-66	CGA 497-0132 1-26-66	1016	ECP 225F deletes CDU Frame Harness Clause Adapter. 109, 110, 121, 122, 123, 124, SF1, SF2
226	Aluminum to Magnesium Conversion of DSKY's and ACS Trays	R	ERP's R-10073 R-10074	N/A	N/A	AGC LCC DSKY	205, 206	GAN 602, 603, 202, 604, 203, 204, 605, 200R	APM-9740 \$939,520 12-6-65	CGA 497-0148 1-4-66	N/A	DSKY redesign is not authorized. Approved only if 200R is retrofitted prior to 4-2-66
227	Apollo GAN Configuration Back	A	N/A	N/A	15817 15350	GAN 203, 604	N/A	N/A	APM-10413 \$616,700 1-14-66		1060	See E.P. 333F

6-6-66 Revisions
 7-25-66
 9-1-66
 10-13-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Due Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 Date & Rev.	REMARKS
228F	PCI Laboratory Requirements	A	N/A	N/A	N/A	IMU			N/A	CCA497-0120 11-22-65	1093 -1	Firm Proposal Only
229F	Additional G&M Training Effort	A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CCA497-0121 11-22-65 See Remarks	1006	Firm Proposal Only. CCA497-0121, R2 cancelled. CCA497-0121 R1 and provides for 12 MW of Apollo G&M Training
230	Eyeiece Storage Compartments For Block II	A	N/A	N/A	N/A	G&M System	Blk II	N/A	NPM-11803 N-15 \$97,000 4-8-66	CCA497-0119 11-22-65 11 R1 2/10/66 11 R2 2/1/66		
231F	PSA Modules for IGE-BB#1	A	MA-159	N/A	N/A	Pre-Production	N/A	N/A	N/A	CCA497-0116 11-22-65	1036 -6	Firm Proposal Only
232	IMU Blower Motor Resistors	A	MA150 11-16-65	0088	15266 15386	IMU	N/A	All Series 50 & 100 Plus Spares	NPM-10619 \$57,722 1-26-66	CCA 497-0179 2-3-66	1008	NASA will direct Kit installation into specific G&M Systems. No schedule impact
233	CDU Frame and Panel Assembly Inserts	A	N/A	N/A	15287	CDU Panel	N/A	All Series 50 & 100 Plus Spares				Cancelled

6-6-66 Revisions
 7-25-66 2-15-67
 9-1-66
 10-13-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
234	ECP of Record for Navigation and Optical Unit Assy Rear Isolator Lockout Removal	A	N/A	N/A	15281 N/A	NE/OJA Assembly	N/A 5,6,7,8, 20,17,12, 110,109,111, 121,122, 123,124	DRS-2-6-47 2-16-66	CCAM97-0190 2-24-66	1010	
235	Specification Effort for the Signal Conditioner Configuration Change	A	N/A	N/A	N/A 15813	Signal Conditioner	N/A	AFM-10245 \$21,170 1-5-66	CCAM97-0190 2-24-66	1051 1069	
236	Operating Time/Cycle Master File	A	Apollo Req'd Document Q07	N/A	15285	Documentation	N/A 12,17,20, 121,122, 123,124 II, IEM 110, 111	AFM-10296 \$736,100 2-11-66		N/A	
237	Wire Map Certification	R	N/A	N/A	15266	PCDU AGC	N/A	AFM-11871-122 \$63,650 1-12-66		N/A	
238	ECP Record For Replacement of GSE Nameplate	R	ERP-R-10066	N/A		Comp Sam. Cal Console Comp Test Set Console	See ECP	DRS1-6-5 1-6-66	CCAM-497-0152 1-12-66	N/A	
239	Test Requirements Computer Interface	R	ERP-R-10071	N/A	15343	CTS	N/A CTS 20, thru 26	AFM-10238 \$30,872 1-21-66	CCAM97-0142 1-3-66	N/A	
239 RL	Test Requirements Computer Interface		GSEB-R24				See ECP	AFM-11754 N-58 1-9-67			

Revisions
 6-6-68
 7-25-66
 9-1-66
 10-13-66
 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
240F	Replacement of Cam Shaft Pin on Attitude Impulse Switch	A		N/A	15309	G&N Panel	N/A	APM-110237 \$25,244 1-4-66	CCA 497-0147 1-31-66 CCA-497-0147 83 8-22-66	1097	
241	Changes to Apollo G&N Spec. ND 1002136 (Wire Wrap)	A R	MA 152- AUT. 12-3-65	N/A	15498	PMA E2DU FBR FBR AGC				N/A	Cancelled
242	Block I/100 Series Signal Conditioner Work Around for G&N 121	A	N/A	N/A	N/A	Signal Conditioner	G&N 121 N/A	APM-110237 \$25,244 1-4-66	CCA 497-0147 1-26-66	1091	See GND
243	Panel Brightness Potentiometer Cam-Modification	A	MA 153- 11-30-65	N/A	15316 15809 15311	G&N Indicator Control Panel	N/A	APM-10898 \$135 2-11-66	CCA 497-0203 2-21-66 CCA-497-0147 83 8-22-66	1097	
244	Optics Handling Fixture	A	GSEP-29	N/A	15320 15863	GEP	N/A	APM-11362 \$9,504 3-11-66	CCA 497-0235 4-13-66	1024 1044	CCA exceptions: 1. Delete pubg. req't. 2. Delete paragraphs 11a, 11b and 11c
245	Shock Recorder Changes	A	GSEP-195	N/A	15306	IMU Shipping Container	3 thru 8 9 thru 11 S/N 21	APM-11071 \$20,000 2-2-66		N/A	ECP 245 Disap. BC 55-344 3-18-66 Disap. BC 55-416 4-12-66
245R	Shock Recorder Changes	K	ERP-K-21			Shipping Containers	1 thru 20 S/N 1,2 S/N 1-20 IMU	APM-11392 \$5,841 3-11-66			

Revisions

6-6-66
 7-23-66
 9-1-66
 10-13-66

ECP LOG & STATUS

ECP No.	TITLE	Cont. Aff'd.	Basic Document	RECP & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line SPARES	Effectivity Retrofit	ECP Budge. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
246F	Replacement of Relay & Diode Module in Block I/50 and 100 Series	A	N/A	N/A	15303	AGC Electronic	SPARES	G&M 17, 12, 110, 111, 122, 123, 124, 125	APM-10241 \$3,495 1-4-66 DAS 8-0-1/2 7/5/66	Disap. RC 55-78 1-25-66	1097	CCA 497-0145RL includes G&M 121
246F RL	Replacement of Relay & Diode Module in Block I/50 and 100 Series	A	N/A	N/A	15351-1				APM-10241 \$3,495 1-4-66 DAS 8-0-1/2 7/5/66			Considered as in-scope
247	Redesign of Protective Covers for AGC Handling ECP of Record for Protective Covers for AGC Handling Flxture	R	ERP-10072	N/A	N/A		N/A	S/N 1, 18 thru	APM-10241 \$3,495 1-4-66 DAS 8-0-1/2 7/5/66		N/A	
248	Addition of Capacitors to Pulse Torque Power Supply	A	TDRR's 2504, 2601	N/A	15319	Pulse Torque Power Supply	202, 203, 204, 205, 206, 207	201, 202, 203, 204, 205, 206, 207	APM-10414 \$3,816 1-14-66		1099 1015	REF 248 R3, 248-11-6-342, dated 11/30/66 REF 248 R2, APM 13854 R351 9-4-66 CCA 497-0236 R2, Dated 10/19/66 (Change Effectivity)
249	Additional GSE Colplate Requirements	A	N/A	N/A	N/A	GSE	N/A	N/A	APM-10414 \$3,816 1-14-66		1084	
250F	Retrofit of G&M 12 for Qual Test Failures	A	N/A	N/A	15359 15351-2	See Remarks	N/A	12	APM-10965 2-15-66	CCA 497-0145RL 0147RL 1-31-66 CCA 497-0147 R3 8-22-66	1097	D&C, PSA, PSA Toe Cap. PSA/G&M Harness & End Connector, CDU Frame & Panel Assembly
251F	Retrofit of G&M 17 for Qual Test Failures	A	N/A	N/A	15318 15351-2	PSA, D&C & CDU	N/A	17	APM-10965 2-15-66	CCA 497-0145RL 0147RL 1-31-66 CCA 497-0147 R3 8-22-66	1097	

Revisions
 6-6-66
 7-25-66
 9-1-66
 10-13-66
 1-13-67
 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	Effectivity In-Line	ECP Budg. to NASA & Approved Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS							
252	ECP of Record for Improved EL Alarm Lights (1L6)	R	ERP-R-10079		N/A	NAV. DSKY	AGC 207, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000											
253	ECP of Record for Replacement of the Primary Current Switches in GEN 12	A	REP-84 ECP 84	N/A	N/A	PSA	N/A	APM-10353 1-12-66	CCA 497-0155 1-14-66	10-77	Costs to be quoted against firm for ECP 84R.							
254	Computer Multi-layer Board Layout (MLB)	R	ERP-R-10080	1890 12-8-65	15324 15834 15835	AGC	AGC 203 604	APM-10763 \$53,000 2-5-66	CCA 497-0215 3-8-66 CCA-497-0216 3-9-66	N/A	CCA-0215 does not auth. retrofit and B+ Generation. CCA 0215 auth. NOR gate changes.							
255	Replacement of "Blue-Nose" Logic Elements	R	ERP-R-10082	1889 12-8-65	15323	AGC		See Remarks		N/A	Cancelled by AC Electronics APM-11564							
256	ICC, ACC Buffer Box Mod.	R	ERP-R-10081	1891 12-8-65	15325	AGC		See Remarks		N/A	Cancelled by AC Electronics APM-11564							
257	Redesign of Rope & Enable Drivers (BLK II)	R	ERP-R-10084	N/A	N/A 15820	AGC	AGC 203 604	APM-10768 \$53,000 2-5-66	CCA-497-0157 2-25-66	N/A	Retrofit of AGC 2000 not auth.							

6-6-66 Revisions
 7-25-66 11-18-66
 9-1-66 1-13-67
 10-13-66 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
258	Redefign Power Supply Module (Block II)	R	ESP-R-10085	N/A	N/A 15819	AGC	G&N 203 604	AGC 200R 2000	APM-10766 \$26,400 2-5-66	CCA-497-0199 2-25-66	N/A	Retrofit of AGC 200C not auth.
259	Redefign of Erasable Memory (Block II)	R	ESP-R-10086	N/A	N/A 15818	AGC	G&N 203 604	AGC 200R	APM-10767 \$27,800 2-5-66	CCA-497-0193 2-24-66	N/A	
260	Change Material of Strain Isolation Pressure Seal	A	MA-169 12-28-66	N/A	15334	Bellows Assembly	G&N 204 & Up & Spares	G&N 201, 202,203	APM-11224 \$12,227 2-25-66			*To be resubmitted upon completion of chemoplastic urethane rubber evaluation. See ECP-0353F
261	Package Change PIPA Electronics (Helicoids & non-corrosive screws)	A	MA-160 12-28-66	N/A	15335	PSA	G&N 202 & Spares	N/A	APM-11361 \$3,896 3-11-66			Longer helicoids not required per RASFO Eng.
262	AI to Mag. PTA Reader Change	A	MA-161 12-28-66	N/A	15336	PSA	G&N 606 & Up	G&N 602, 603, 604 605 & Spares	APM-11511 \$47,969 3-18-66			
263	PSA Package Change IEM (Helicoids & non-corrosive screws)	A	MA-162 12-28-66	N/A	15337 15816	PSA	G&N 602 & Spares	N/A	APM-11363 \$14,197 3-11-66	CCA-497-0428 3-29-66	1015	

6-6-66 Revisions
 7-25-66 11-18-66
 9-1-66 1-13-67
 10-15-66 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
264	ECP of Record for Revisions of Appendix II Exh. D-AUP	A K R	ERP-X-137	1710 9-5-65	15322	GEN	N/A	N/A	JHK-5-8-189 5-10-66 RDM-11-6-338 11/25/66	CCA-497-0029 9-8-66	1021	
264	ECP of Record for Revisions of Appendix II Exh. D-AUP											
265F	Replacement of Captive Screws	A	APW-10267	N/A	15349 15806 15351-2	D&K Group	N/A	12, 110, 111, 121, 123, 124, 122, 1-50 Sp., 2-100 Sp.	APM-11413 3-15-66	CCA-497-00194 2-18-66 CCA-497-0147 R3 8-22-66	1097	
266F	Replacement of G&N Subsystem Filter Module	A	N/A	N/A		PSA	N/A	17, 12, 121, 122, 123, 124, 1-50 Sp., 2-100 Sp.	APM-11470 3-16-66	CCA-497-0147 R1 1-31-66 CCA-497-0147 R3 8-22-66	1097	
267F	Redesign of CDU Frame and Panel Assembly	A	N/A	N/A		CDU & CSE	N/A	12, 111, 110, 121, 122, 123, 124, 1-50 Sp., 2-100 Sp.	APM-11753 N-3 4-4-66	CCA-497-0147 1-4-66 0147 R1 1-31-66 CCA-497-0147 R3 8-22-66	1097	CCA 497-0147 R1 Includes G&N 121
268	Removal of Temperature Monitor Output (A7) from Tray 7	A		N/A	15351-1	PSA	N/A	12, 110, 121, 122, 123, 1-50 Sp., 2-100 Sp.	APM-10534 4, 076 1-20-66 APM12461 N-101 5-23-66	CCA-497-0174 1-31-66 CCA-497-0174 R1 5-23-66 See Remarks	1097	Qual. Fix approved per CCA-497-0147 R3, 8-22-66
269F	PSA and TOE CAP Qual. Fixes	A			15379 15351-2	PSA	N/A	Same as ECP 267	AP-M-12602 N-122 5-31-66	CCA-497-0147 R1 1-31-66 CCA-497-0147 R3 8-22-66	1097	

6-8-66 Revisions
 7-25-66 11-18-66
 9-1-66 1-13-67
 10-13-66 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
270F	C&N Harness and PSA End Connector Qual. Fixes	A			15351-1	C&N Harness & PSA End Connector GSE	N/A	Same as ECP 267		0147RL 1-31-66 CCA 497-0147 1-4-66 CCA 497-0147 P3 8-22-66	1097	CCA 497-0147RL includes CAN 121 CCA 497-0358, Dated 11/16/66, Changes Quantities
271F	Changes to LEM S.O.W. Design Responsibility for LEM Nav. Base	A		N/A	15345	(S.O.W.) LEM N/B	N/A	N/A	N/A	CCA 497-0113 11-16-65	1049 1059	Change paragraphs 1.3 and 4.1.2.2 Firm Proposal Only
272F	Jumper By-Pass Tube	A		1715 12-27-65	15344	GSE			N/A	CCA 497-0149 1-8-66 CCA 497-0149RL 3-17-66	1024	Firm Proposal Only
273F												ECP No. will not be used. Dupli- cation of ECP no. 271F.
274F	LEM-CM Changes to S.O.W.	A R	N/A	1899 11-30-65	15333-1, 2	Pre-Pro- duction CCED ACC/GSE CPS	N/A	N/A		CCA 497-138 12-17-65 138RL 1-11-66	1078RII	Firm Proposal Only
275	Coolant Supply Heater Changes	A	REC 509 Amended	N/A	15359	Coolant Supply GSE			See Remarks			Will not be issued

Revisions

8-6-66
7-25-66 11-18-66
9-1-66 1-13-67
10-13-66 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 Date & Rev.	REMARKS
276	25 IBM Test Station Mod	A		N/A	15360	FTE	N/A	N/A	APM-11373 \$13,265 8-11-66	CCA3428-0012 4-19-66	N/A	
277F	Horizontal Handle Holds	A		6N030 1-31-66	15377 15351-2	DAC		G&N 12 & BLK 50 Spare	APM-11380 N-38 4-18-66	CCA 487-0173 1-31-66 CCA-497-0147 R3 8-22-66	1007	CCA 497-0356, dated 10/24/66 authorize new Com P/W 1023000 to replace Com P/W 1014593
278	Remote Optics Controller Modification	A	RFC 320			GSE		All Units	See Remarks			Will not be issued
279F	Use of Spare Module for Forward Production Without Replacement	R	N/A	N/A	15384	AGC	See Remarks	See Remarks	N/A	CCA 497-0168 1-28-66	N/A	Firm Proposal Only 60 of the 136 Spare NOR Modules are to be used in Fwd. prod. Spares requirement to be reduced by 60 units
280F	Mechanical Integrity Testing of Optics 101	K	N/A	N/A	15301-2	GSE OUA			N/A	CCA-497-0133 12-22-65	N/A	Firm Proposal Only
281F	Modification of Simulation Computer at NAA & MSC	R		1896	15363	GSE			N/A	CCA-497-0156 1-19-66	N/A	Firm Proposal Only

6-6-66 Revisions
 7-25-66 11-18-66
 9-1-66 1-13-67
 10-13-66 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Recd	CE # Bdg. Firm	Equip. Affected	In-Line	Effectivity Retroft	ECP Bdg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
282F	Test Data Analysis	A			15356	N/A			N/A	CCA 497-0140 1-1-66	1083	Firm Proposal Only
283F	Block II & LEM S. O. W. Changes Deletion of Load and Signal Simulators	A			15356	N/A			N/A	CCA 497-0150 1-12-66	1024 1030	Firm Proposal Only
	Modification of AGC-6	R			15346 15351-2	AGC			N/A	CCA 497-0157 1-19-66	N/A	Firm Proposal Only
285	Update of AGC 110 Incorporating ECP's 189, 212, & 182	R	ERP R-10079	N/A	15827	AGC	N/A	AGC 110 Only	APM-10902 \$3,340 2-11-66	CCA 497-0209 3-2-66	N/A	
286F	Delivery and Spares Adjustment	A	N/A	N/A	15326	G&N	G&N 124	N/A	APM-11420 3-15-66	CCA 497-0135 12-17-65	N/A	

Revisions

6-8-66
7-25-66
9-1-66
10-18-66
11-18-66
1-3-67
2-15-67
4-27-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
287	C/M PSA Header Change	A	CRN MA 164		N/A	PSA	GAN 202	N/A	APM-10701 \$8,260 2-1-66	CCA-497-0208 3-2-66	10/5	
287R	C/M PSA Header Change			15828					APM-11512 \$59,540 3-18-66	See Remarks		ECP-287R was a change in budgetary only. No CCA required
288	ECP of Record for Recertification Requirements for Maximum Shock Levels and Maintenance of Shock Recorders	A	N/A	N/A	15875	N/A	N/A	N/A	DRS-3-8-64 3-13-67	EC-53-207 4-6-67	N/A	See NASA Letter ECH2-65-96, Dated 8/19/65
289	Photography Requirements	A	N/A	6N004 1-11-66		N/A	N/A	N/A	APM-11374 \$147,930 3-11-66	CCA-497-0333 9/23/66	10/25	CCA 497-0333 supersedes disapproval
290F	Quick Disconnect OUA Eyeplate	K	ERP K-108	N/A	N/A	OUA	OUA 203 thru 222	OUA 20, 12, 17, 121, 110	APM-10957 2-10-66	CCA 497-0068 2-25/66	N/A	ECP 290F & ECP 202 To Be Incorporated Simultaneously per CCA-497-0068R-2 RI approves 20 & Space
290F RL	Quick Disconnect OUA Eyeplate		CRN-MK-275	15184-1			See ECP	111, 122, 123, 109, 124, 200, 201, 202	APM-13593 3-310 9-15-66			
291	Alarm Lights	R	ERP-R-10083	N/A	N/A	AGC	GAN 203 604	AGC 200R & 2 DSKY's	APM-10765 \$31,800 2-9-66	CCA 497-0198 2-24-66	N/A	Retrofit of AGC 200R & 2 DSKY's not auth.

Revisions

6-6-66
7-25-66
9-1-66
10-3-66
11-18-66
1-13-67
2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Bdg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
292	Modification to Shaft Accuracy Tester	K	ERP-K-107	N/A	N/A	GSE	N/A	S/N 4, 5, 6	AP-M-10900 \$4,880 2-13-66	DISAP. BG55-269 3-3-66	N/A	Considered in scope by NASA
292R	ECP of Record to Reidentify Shaft Accuracy Tester (Interim to Final)						N/A	N/A	JHK-3-6-98 0239 4-6-66	CCA-4, 7-4-19-66		
295	Rework the Opt/NB Shipping Container Mounting Hardware	K	ERP-K-128						See Remarks		N/A	Cancelled per March 23, 1966 Quarterly Status Meeting
294	OUA Functional Tester Modification	K	ERP K-113	N/A	N/A	GSE	N/A	CSE-2, 3 EP-1	AP-M-10901 \$23,878 2-11-66	DISAP. BG55-269 3-3-66	N/A	Not Program essential See ECP 0345
295	Update of AGC's 121, 111, 109, and 122	R	ERP-K-10064	N/A	15839	AGC	N/A	121, 111, 109, 122	AP-M-10959 \$86,985 2-15-66	CCA 487-0219 3-17-66	N/A	CCA 487-0219 does not approve retrofit of AGC 109. AGC 109 to be field retrofit.
296	ECP of Record For Commenting of Relay Assembly - AOT	K	ERP-K-129	N/A	N/A	AOT	602	N/A	JHK-2-6-34 2-15-66	CCA 487-0182 2-16-66	N/A	
297	Sub-Assembly Qualification Block II (TD-A-107, Amend-#3)	A	TDA 107 Amend. #3	N/A	15302	See ECP	N/A	N/A	APM-11509 \$153,603 3-18-66	DISAP. BG55-416 4-12-66	N/A	

6-6-66 Revisions
 7-25-66 11-18-66 4-24-67
 9-1-66 2-13-67 7-13-67
 10-13-66 2-15-67 8-14-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd/Document	Basic Document	RECF# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS	
298	HESI Electro-Instrument (EL) Panel, Brightness Tester	R	ERP-R-1007C	N/A	N/A	ACC GSE	N/A	N/A	AP-M-11028 \$10,292 2-18-66	DISAP B055-344 3-18-66	N/A	Not a mandatory program requirement	
299	ECP of Record for Optics Base Shipping Container Modification	K	ERP-K-1581	N/A	N/A	Optics Rev. Base Shipping Container	S/N 3	S/N 1 & 2	JHK-2-C-35 2-18-66	CCA 497-0231 2-21-66	N/A		
300	Glitch Detector Assembly Modification for N/P Carryon Equipment Compatibility	/	OSD 23 OSK-7 RVC	N/A	1532	SE	Block II	See Remarks	AP-M-13373-N244 \$8,024 8/12/66 AP-M-14500-N514 12/7/66	CCA-497-0288 9-7-66 CCA 497-0328RL 11/6/66	1023	Jumper Plan 100 Series PSAM's	
301	GN Thermal Instrumentation for Vehicles 2 IV-1 and IV-8.	/	ERP-K-146	1898 1-7-66		GN	N/A	02 2 2	AP-M-12927-N176 7/5/66 AP-M-1302-N-340 2/28/66 AP-M-15405-N-355 5-31-66 AP-M-1710 3/21/67	CCA-497-0127 1-7-66 Remarks See	N/A	Technical Concurrence via TRX-076 dated 10/20/66 states ECP 0301F RL to be incorporated into contract by SA-7	
301E	GN Thermal Instrumentation for Vehicles 2 IV-1 and IV-8.	/	ERP-K-146	68200 12/15/66	15361			Computer S/N 8					CCA-497-0373, Dated 12/15/66 Modifies Computers S/N 14, S/N 8, S/N 2, PEP-EEF, SMC29 SEP 304B1, APN-16458-BLKU, I-61-67
302	Manufacture of Block II & IEM Signal Conditioners	/	N/A	N/A		Signal Cond.	GN 209, 609	GN 202 thru 208 201SR, 601 thru 603	AP-M-12880-N-153 6/15/66 AP-M-12710-N164 3/30/66 5/24/66	CCA-497-105R1 1/12/66 105R2 3/30/66 105R-3 4/27-66	1099	ECP 0302FPE budgetary to SA 10/12/66 AP-M-13947-N-369	
302F	Manufacture of Block II, IEM Signal Conditioner assemblies	/	N/A	N/A	15362-3		Mod Kits BLO4051 Serial No. 2 end up	N/A					
303	ECP of Record for X in DSKY Pedestal Mount Modification	R	ERP-R-10092	N/A	N/A	X in DSKY Pedestal Mount		MDPM S/N 0	JHK-2-6-36 2-17-66	CCA-497-00196 2-18-66	N/A		

7-25-66 11-18-66
 9-1-66 1-13-67
 10-13-66 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
304	Mounting Screw Replacement ECP of Record	R	ERP R 10089	N/A	N/A	AGC Handling Fixture	8/N 19, 20, 21 thru 8	JHK-2-8-48 2-18-66	CCA 487-0202 2-21-66	N/A	
305F	LGE Mock-up for TM-2	A	N/A	8N028 1-17-66	15376	LGE Preproduction	N/A	N/A	CCA 487-0170 1-31-66	1078 1088 1084 1086 1088	Firm Proposal Only
306F	Mount. Harness. 1/2" Cable Clamp on IMU	A	MA168 TDRR's 26256 26257 26258 27776 27833	8N044 2-4-66	15388	IMU	605 and Up Dummy W.T., CC, MOI	AP-M-13099, M-197 7/15/66	CCA 487-0181 2-4-66	1009	
307	ECP of Record for Middle Axis Assembly Clamp Changes	A	MA 166	N/A	N/A	IMU	202 603	JHK-3-6-66 3-18-66	CCA 487-0222 3-25-66	1009	
308	ECP of Record for Stable Member Heat Transfer Change	A	MA 168	N/A	N/A	IMU	202 608	JHK-3-6-66 3-15-66	CCA 487-0223 3-25-66	1009	
309	ECP of Record for PIP Temp. Deviation Reduction and Temp. Alarm Test	A	MA170	N/A	N/A	IMU	202 603	JHK-3-6-66 3-15-66	CCA 487-0224 3-25-66	1009	

6-6-66 Revisions
 7-25-66 7-13-66
 9-1-66 1-13-67
 10-13-66 2-13-67

ECP LOG & STATUS

ECP No	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
310	ECP of Record for IMU Cross Coupling Change	A	MA 171	N/A	N/A	IMU	202 603	N/A	JHK-3-6-62 3-15-66	CCA 497-0225 3-25-66	1005	
311	Change in Maximum Limit of LEM 28V From 32.5 to 33.5	A	GSEC-6	N/A	15394	OITS			N/A		N/A	Cancelled verbally by NASA and AP-M-11824 - 4-7-66
312	ECP of Record for SXT-SCT Connector Flange Stiffener	K	ERP K-131	N/A	N/A	OUA	N/A	OUA S/N 11	JHK 2-6 44 2-18-66	CCA-497-0207 2-25-66	N/A	
313F	Repair of (1) Optical Unit Assy, P/N 1011000-007, S/N #1	K	N/A	N/A	N/A	OUA	N/A	N/A	JHK-1-6-26 1-19-66	CCA 497-0182 2-10-66	N/A	Firm Proposal Only
314	IMU Blower Relay Change	A	MA 173	N/A	15398	IMU	202 603		N/A See Remarks		N/A	Processed as Class II change per NASA Letter 0501-66
315	Addition of Telemetry Wiring for PIPA Current Monitors	A	MA-177						See Remarks		N/A	APM 11504 dated 3-18-66 requests CCA Authorization to prevent schedule slippage. BC55-489 DISAP. APM-11504 4-23-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Recd	CE # Buds. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Buds. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
316	ECP of Record for PSA & PTA Header Change	A	MA 169	N/A	N/A	IMU & PTA and PSA	603	N/A	JHK-3-6-73 3-11-66	CCA 497-0218 3-11-66	1015	
317F	Repair of (1) IMU P/N 1001500-021, S/N #5	A	Failure Report 4235	N/A	N/A	IMU	N/A	N/A	JHK-1-6-21 1-14-66	CCA 497-0177 3-17-66	N/A	Firm Proposal Only
318F	Corrosion Protection of Exposed Beryllium on OUA and AOT	K	ERP K-109		15382	OUA and AOT				CCA's 497-0220, 3-17-66 & 0220R1 4-27-66, 0224, 7/1/66	1101	ECP 318F RI deletes the OUA from GEN 203 CCA-497-0220 RI dated 8-29-66 approves ECP 318F RI
318F	Corrosion Protection of Exposed Beryllium on OUA & AOT				15640				AFM 13439 N-259 8/18/66			
319F	Additions to the Block II S.O.W	K	N/A	N/A	N/A	KIC Design Eval. Program	N/A	N/A	See Remarks	CCA 497-0106 11-26-65	N/A	Firm Proposal Only
320	ECP of Record for Edge Blackening of AOT Lenses	K	ERP-K 135	N/A	N/A	AOT	AOT 603	N/A	JHK-3-6-62 3-10-66		N/A	
320R	ECP of Record for Edge Blackening of AOT Lenses				N/A				JHK-3-6-81 3-21-66	CCA 497-0217 3-25-66		ECP-320R calls out next higher assembly changes

Revisions
6-8-66
7-25-66
9-1-66
10-11-66
11-18-66
1-13-67
2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	NASA Disposition Disappr Cant.	CTA 8604 - Date & Rev	REMARKS	
321F	Eye-piece Hsaters for LEM AOT	K	ERP R-122	N/A	N/A	AOT	G&N 603	N/A	APM 11493 M-213 7/26/66	CCA487-0028R1 7-2-65 CCA-497-0068 R3 8-22-66		N/A	CCA-497-0028 R4, Dated 10-14-66	
322	ECP of Record for The Retrofits of AGC 801	R	TDRR's 249 h2 R26860 R26861	N/A	N/A	AGC 100	AGC 201, & Up 100 602	AGC 801	DRS-8-66 3-8-66 DRS-6-67 3-4-66	CCA 497-0213 CCA 497-0213R1 3-4-66		N/A	ECP 322 R Includes Additional Wiring Changes	
322R	ECP of Record for The Retrofits of AGC 801													
323F	Block II and LEM Computer Design Review	A	N/A	6N063	15810-1	AGC	N/A	N/A	N/A	CCA 497-0204 2-24-66		1025	Firm Proposal Only CCA 497-0204R1 cancels only the Phase IA Portion of Block II and LEM and LEM Computer Design sub Review	
324	Sense Amplifier Threshold Voltage Stability Change	R	ERP R-10095	N/A	N/A	AGC	C-1, C-2, C-3 and subsequent	200 C & 200R	APM 11469 \$40,741 3-15-66	CCA 497-0232 4-12-66		N/A	CCA 0232 does not approve spares.	
325F	Less than "Class A Computers for G&N 201, 202, 601, 602, & 603	A	N/A	N/A	15814	G&N	N/A	N/A	N/A	CCA 497-0183 2-14-66		1019	Firm Proposal Only	
326F	Deletion of GSE test Station	A	N/A	6N064 2-18-66	15823-1	GSE	N/A	N/A	N/A	CCA 497-0200 2-24-66		N/A	Firm Proposal Only	

6-6-66 Revisions
 7-25-66 11-18-66 4-24-67
 9-1-66 1-13-67 7-13-67
 10-13-66 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
327F	DSKY Push Switch Adjustment	R	ERP-R 10091	6N051 2-4-66		AGC	AGC 122, 123, 124, SF2, plus 1 SF-KE Module	120, 112, 121, SF1, 111, 110A 1 KB Module	APM 11613 9-25-66	CCA 497-0188 2-16-66	N/A	Technical Concurrence BG55-400, 4-12-66
328	GMN 20 OUA Connector Change	K	N/A	N/A	15806 N/A	OUA	N/A	S/N 9	JHK-3-6-62 9-21-66	CCA 497-0226 3-25-66	N/A	
329	AGC/GSE Compatibility Changes	R	N/A	N/A		Seq ECP	S/N 1 of CTS, GMN Cables Sub-Sys. Cables	See Reasons	APM-11743 N-5 \$31,000 4-2-66	CCA 497-0233 4-13-66	N/A	Retrofit: CTS-S/N 20, 21, 22, 23, 24, 25, 26, & 3 Field Retrofit AGC/GSE Cables; S/N 16, 17, 18, 19, 20, 21, 22 & Assoc. GMN AGC/GSE; 10, 11, 12, 13
329R1	AGC/GSE Compatibility II Changes				15861				APM-12623 N-130 6-1-66	CCA 497-0233 R1, 6-3-66		ESP-329 R2 to MASA 9/13/66 APM-12623 R2A CCA 497-0148 3/30/67. Reduces 810452 Kit. Rev. No. (2)
329R2	AGC/GSE Compatibility II Changes								N/A	CCA 497-0163 2-14-66	N/A	Cancelled by AC - Same as ECP-325F
330F	Change AGC's for 601, 201	R			15814	AGC	Learner GMN 201 601, 603 only	N/A				
331	ECP of Record for Elimination of Digital Ohmmeter Heat Problem	R	ERP 10097	N/A		AGC	Cal Console S/N 8, 9 & Auxl. S/N 8, 9	Aux. Cal. Console S/N 1 thru 7	JHK 3-6-63 3-23-66	CCA 497-0227 3-25-66	N/A	
331R	ECP of Record for Elimination of Digital Ohmmeter Heat Problem								JHK-6-6-141 5-17-66	CCA 497-0261 5-25-66		
332F	GMN 20 Qual Fixes	A	N/A	N/A	15351	PSA	N/A	GMN 20	APM-12003 N-40 4-19-66	CCA-497-0145, 0147 3/31/66	10977	TWX 50-44-49-131 2/24/66 Qual. Fix approved per CCA-497-0147 R3; 8-22-66

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP # & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved / Disapproved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
333F	Apollo GAN Post Acceptance Configuration Data Book	A		6N084 3-18-66	15841-1	GAN	N/A	N/A	N/A	CCA 497-0221 3-18-66 CCA 497-0221R1 3-31-66	1020	Replaces ECP 227 CCA-497-0221R1 Extends Proposed S. O. W. thru FY 66
334	LEM GAN Dynamic Qualification Configuration Change	A		6N045 2-4-66	15815	N/A				80-55-215 2/24/66	N/A	Will not be submitted - Included as part of ECP-411
335	Precision Resolver Alignment Module Replacement	A		N/A	15836	IMU	N/A	N/A	JHK-6-6-166 5-13-66 AP-M-13020 N-105 7/6/66	CCA-497-0304 7/25/66		
335R	ECP of Record for Precision Resolver Algn. Mod. Replacement		APP 11/1/66		15952						8/7	
336	LEM ECDU Weight Reduction	A	N/A	N/A		ECDU	603 & Up	N/A	APM-11643 3-28-66	CCA 497-0231 4-12-66	1013	
336R1	LEM ECDU Weight Reduction				15864				APM-12885 N-117 5-27-66	CCA-497-0231 R1 8-22-66		
337F	Delete Block I-100 Signal Conditioner Assemblies from GAN Systems 109, 110, 111 & 124	A	N/A	N/A	15837	Signal Conditioner	GAN 109, 110, 111, 124	N/A	AP-M-12923 N-159 6/24/66	CCA 497-0205 2-28-66	1051	
338F	Parts Procurement for 30 additional Bk I-100 Fixed Memory Modules	A	N/A	6N083 2-25-66	15833	AGC	N/A	N/A	N/A	CCA 497-0214 3-4-66	N/A	Firm Proposal Only

Revisions
 9-6-66
 7-25-66
 9-1-66
 10-13-66
 11-18-66
 1-13-67
 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
339F	Apollo GEN Training Aids	A	N/A	N/A		GEN	N/A	N/A	N/A	CCA497-0187 2-28-66	1006	Firm Proposal Only
340F	LEM Nav. Base Redesign	A	N/A	N/A	15822	LEM Nav Base	603	N/A	APM 12581 N-119 5-31-66	CCA-497-0293 7/14/66	10570 811	Stop TWX BG55-10-25-348 Start TWX BG 56-349 CCA-497-0293 Disapproves "Moment of Inertial Unit"
341	Change LEM "A" Harness For: Computer Interface Wiring	A	N/A	N/A	15872 15845	LEM "A" Harness & GSE cables	601	N/A	APM 12232 N-64 \$10,429 5-4-66	CCA 497-0241 7-2-66	N/A	CCA 497-0244 approves PI-3 only
341R	Change Comp. Interface Wiring to add Yaw Impulse Functions						PI-3		APM-12621, N-128 6-1-66	0240 10/14/66		
342	LOBS Control Box	A	N/A	N/A		LOBS			See Remarks			Cancelled per TWX BG55-610 5-27-66 & TWX BG55-656 6-9-66
343	ECP of Record for Raytheon and Kohlsman GSE/GFP Listing to ECP 342	A K	N/A	N/A	N/A	GSE	N/A	N/A	JHK-3-6-99 4-5-66	CCA-497-0240 4-19-66	N/A	
344	CTS Power Control Change	R	N/A	N/A	N/A	CTS	CTS S/N 4, 5, 6, 7, 8, 9, 11, 12, 14, 15, 16, 18, 19	CTS S/N 3, 20, 21, 22, 23, 24, 25, 26	APM-11747, N-6 \$7,560 4-2-66	CCA 497-0238 4-13-66	N/A	
					15880							

6-6-66 Revisions Page 59
 7-23-66 11-18-66 7-13-67
 9-1-66 1-13-67
 10-13-66 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
345	ECP of Record for the Functional Tester. SGT & EXT MDA Modification	K	ERP- K 113	N/A	N/A	DUA Functional Tester	N/A	EP-1, 8/N 2,3	DRS-4-6-119 4-18-66	CCA 497-0247 6-12-66	N/A	
346F	Long Duration Testpieces	K	N/A ERP K 80R2 108R	6N097 3-4-66	15947	OVA	N/A	N/A	DRS-12-5-343 12/2/66	CCA497-0229 9-28-66	N/A	1. This ECP replaces ECP 156 2. Latest RH II Config. 3. Mfg. 7 Set LRE for RH II 4. No markers for SXT LRE 5. Delete 9 normal testpieces 6. Mfg. 1 SGT LRE for RH I & 124 7. Refurbish testpieces for GAN 111, 208,
347	Replace Saturable Reactor in IMU GAN 121	A	RFC 1012 AFR 5104	N/A	15888	IMU	N/A	GAN 121	ACM-11743 N-148 9-10-66 \$1,600 APM-13437 N-257 8/22/66	CCA-497-301 7/15/66	N/A	CCA-497-301 Deletes "Travel"
348	Replace Two Speed Switch Module ECP of Record	A	RFC 1013 FCAS A-024	N/A	15854 15951	PSA	N/A	GAN 121, 122, 124, Spare	JHR-5-6-169 6-13-66	CCA-497-0303 7/25/66	8/6	
349	Retrofit of Apollo PIPA Test Console for Block II & LEM	A	EG-26-66-129	N/A	15848 15856	GFP PIPA Test Console	N/A	N/A	APM-11979 N-97 \$2142 4-18-66	CCA 497-0264 5-27-66	1086	
350	Commercial Test Equipment Requirement	A	N/A	N/A	N/A 15885	N/A	N/A	N/A	APM 12231 N-64 \$2744 5-4-66	CCA-497-0251 5-12-66	1001	

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP # & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
351	Alarm Module Temperature Stabilization of Warning Integrator and Improvement of Oscillator Fail Alarm	R	ERP-R-10098	N/A	15886	AGC	C-1, C-2, 200R, C-3 and subsequent	APM-12201 N-60 89,143 5-2-66	CCA 497-0246 5-13-66	N/A	
352F	Sextant Anti-Creep Circuit	A	MA-188	8N117 4-21-66	15889-1	PSA	GMN 203	APM-12537 N-111 5-28-66	CCA 497-0242 4-21-66	N/A	
353F	Pressure Seal Material Change (Optics to Spacecraft Seal)	A K	ERP K-138	6N109 4-13-66	15888-1	AOT	603	AP-M-13005 N-119 7/5/66	CCA-497-0237 4-13-66 CCA 497-0237 Rev 1 5-13-66	N/A	Replaces ECP-0260 CCA-497-0202, Dated 7/15/66 Directs Shipment of 6 AOT Seals to GABC CCA Rev 1 changes effective to 662 & Up CCA-497-0237 R2, dated 9-9-66 Approves SER 353F
354	ECP of Record for CDU Panel Mounting Change	A		N/A		CDU	N/A	JHK-5-6-12, 110, 147 111, 121, 122, 123 5-17-66 SP. 124	CCA 497-0260 5-25-66	1087	
355	ECP of Record for IMU/25 IMG Apollo II Gyro Change	A	ERP's 7006 7009	N/A		IMU	GMN 204, 603	JHK-4-6-128 5-10-66	CCA-497-0248 5-12-66	1009	
356	ECP of Record for Change in Quantities of Shipping Containers Kits (Comp. & DSKY) & New Build Handling Fixture.	A	N/A	N/A	18859-1	Shipping Containers	N/A	JHK-5-6-135 4-8-66 JHK-1334 4-17-66 11/23/66 12/29/66	CCA-497-0286 12/29/66	N/A	\$1,668 Credit

6-4-66 Revisions
 7-25-66 11-18-66
 9-1-66 1-13-67
 10-13-66 2-15-67

7-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
357	Implementation of the Paying Resistor for the FIP by AC Electronics	A	N/A	N/A	15856	FIP	30 remaining systems	N/A	APM-12622 N-129 8-1-66 \$5,822	Disapp. BG 53-188 3/24/67		
358	ECP of Record for Redesign of Handling Fixture	R	ERP-R 10100	N/A	N/A	AGC Handling Fixtures	S/N 3 & Sub.	S/N 1, 2	JHK-5-6 148 5-17-66	CCA 497-0266 8-1-66	N/A	
359	Replacement of IMU Mounting Boats	A	N/A	N/A	15871 15962	IMU	GRN 2C7 & 607	201-206 601-606	AP-N-15098 R-190 7/15/66 \$4,152	CCA 497-0313 8/11/66	1011	APM 13192 Changes Cost Spread
360	AOT Ccm Lock	K	ERP-K 142 CCM MK 209	6N110 4/5/66	15887	AOT	GRN 603	N/A	APM 13194 R-214 7/26/66	CCA 497-0234 4-13-68	N/A	
361	S.O.W. Changes Documentation (Changes, Exhibit D)	A	N/A	N/A	15870	Exhibit D S.O.W.			N/A	CCA 497-0241 4-24-66 CCA 497-0241R1 5-28-66	1025	Firm Proposal Only
362	Mounting of Vibration Transducers on Block II Nav Base	A		6N124 5-10-66	15883	Nav Base	203, 204, 601, 602, 603, 604 605, 606		AP-N-13662 R-229 9-16-66	CCA-497-0246 8-10-66 CCA 497-0246 7/1/66	1011	CCA-497-294 Deletes 603, 604, 605, 606

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP # & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
363	ECP of Record for Field Operations S. O. W. Exhibit J	A				N/A	N/A	N/A	JRK-5-6-142 1/12/66	NA-53-121 8-25-66	N/A	To be submitted with ECP-371
364F	Logic Changes to the CTS	R	GSE - C -1 Para. 11 of GRED 19		15386	CTS	CTS 23, 3, 20, 21, 22, Rk 1/100 RFX 1-13	N/A	APM-12756 N-146 8-9-66	CCA-497- 0186 2-11-66	N/A	
365F	Design Evaluation Program Reduction	K			15851	N/A			N/A	CCA-497- 0230 3-29-66	N/A	Firm Proposal Only
366F	Primary Guidance System Computer Software Program	A		6N113 4-21-66	15876	N/A			N/A	CCA-497- 0243 4-21-66 CCA-497- 0306 7/26/66	1103	Firm Proposal Only
367	Addition of Light Diffusing Paint to DSKY	R	ERP- R-10104		15921	DSKY	C-1, C-2, 200, C-3, & Sub- sequent	N/A	APM-12442 N-83 5-19-66 \$24,177	CCA 4, 7- 0276 6/10/66 CCA-497- 0078 21 9-12-66	N/A	CCA by 7-0276 - Alarm Indicators P/N 100636, which have not passed the point in processing where paint is applied, to conform to this DCP.
368	Improved Power Supply Module Relays (AGC)	R	ERP-R 10105	N/A	15945	AGC	C-1, C-2, C-3, & Subsequent	/A	APM-12441 N-92 5-19-66 \$45,866	TCA-497- 239 7/15/66	N/A	

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd/Document	Basic Document	RECP# & Date Recd	CE # Buqg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
369	AGC/GSE Compatibility II	R	ERP-R 10106			CTS						Cancelled See ECP 320R1
370	Expedited Delivery of G&N Flight Ropes	R	N/A	N/A	N/A	G&N	N/A	N/A	APM 12690, N-118 3287 5-31-66 \$6,830	CCA 497-0252 6-9-66	N/A	
371	ECP of Record for Complete Revision of Documentation Requirements for Exhibit D	A	N/A	N/A	N/A		N/A	N/A	JHK-5-166 7/12/66	NO 53-121 8-25-66	N/A	To be submitted with ECP 363
372	IMU Temperature Out of Limits (OOL) Circuitry	A	MA-178 2-23-66		15878	IMU				Cancelled: ECP 497-0252 7/11/66		
373F	Fabrication of Stainless Steel Bellows for Blk II G&N Systems	A	N/A	GN132 5-13-66		Nav. Base A Opics Install. Kit	G&N 209	G&N 202, 204, 205, 206, 207, 208	APM-13330 8-231 8/9/66	CCA 497-0252 5-13-66	1011	CCA 497-0413, 4/14/67. Authorizes In-Line Effectivity G&N 207 and on.
373F	Fabrication of Stainless Steel Bellows for Blk II System				15891 8/8/67		G&N 207	G&N 202, 204, 205, 206	APM 13330 8/9/66			
374F	G&N Training, GFP Configuration Control & Reduction of Field OPS. Support	A	N/A	GN123 5-12-66			N/A	N/A	N/A	CCA-497-0252 5-12-66	1020 763	Firm Proposal Only

Revisions
 6-6-66
 7-2-66
 8-1-66
 10-13-66
 11-18-66
 1-13-67
 2-15-66

ECP LOG & STATUS

ECP #	TITLE	Contr. Aff'd.	Basic Document	RECP # & Date Rec'd	CE # Budg. F/INT	Equip. Affected	In-Line Effectivity Retrofitted	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
375F	Reprint of SIM Ccm Modules	R	MA 191 5-3-66 4/27/66	GN 121 5-12-66	15884	SIM Computer	S/N 4, 5, 8	N/A	CCA 497-0283 5-12-66	N/A	Firm Proposal Only
376	Rep of Record for Modification of 16 PIPA Test Consoles	A		N/A	15879	PIPA Test Console	N/A	DIR 6-6-108 9/21/66	CCA 497-0285 1/1/66	L.A.P.	
377	Modify Spare CDU From -041 Configuration to -061	A	N/A	N/A	N/A	CDU	S/N 10	APM-12795 N-150 8-13-66	CCA 497-0282 5-24-66	739	
378F	Out of Scope Connectors and Connector Plates	A	N/A	6N136 5-9-66	15894	N/A		N/A	CCA 497-0250 5-23-66	742	Firm Proposal Only
379F	Reorientation of Elbow Bend in "Y" Harness to Allow Accessibility to PSA Hold Down Bolts	A	MA 191 5-3-66	1148 5/25/66	15892	G&N Interconnect Harness	G&N 202	APM 13392 N-209 8/16/66	CCA 487-0209 5-9-66 CCA 497-0259 R1 8-29-66	N/A	
380F	Deletion of Acceptance Data List (ADL)	A		N/A	15890	ADL		N/A	CCA 487-0256 5-24-66	1022	Firm Proposal Only

Revisions
 6-6-66
 7-25-66
 9-1-66
 10-13-66
 11-18-66
 1-13-67
 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	Effectivity		ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
							n-Line	Retrofit				
382F	Delete Thirty (30) Block II Parts Qualification Tests (Exhibit E S. O. W.)	A	N/A	N/A	15882	Exhibit "g" S.O.W.	N/A	N/A	N/A	CCA 497-0255 5-23-66	1073	Firm Proposal Only
382F	Delete System Mothers and Maintenance Evaluation	A	N/A	N/A	15888	N/A	N/A	N/A	N/A	CCA 497-0254 5-23-66	1001 1004 1027 1062	Firm Proposal Only
382F	Delete Blk I-100 Single Axle Final Vibration Test	A	N/A	N/A	15889	N/A	N/A	N/A	N/A	CCA-497-0957 5-23-66	1074	Firm Proposal Only
384	Block I/100 Series PSAAM Wiring Changes	A	N/A	N/A	15915	PSAAM	S/N 1	Blk I/100 Series	ADPM 12755 N-145 6-9-66 \$4,888	CCA-497-0275 8-10-66	1028	
385	ECP of Record for Block II AGC/PAC Compatibility	R	ERP-R10101	N/A		PAC	PAC 1,3,4,7	PAC S/N 2	JEK-6-6-101 5/23/66 AP-M-13124 N-200 7/13/66	CCA 497-0286 7/1/66 SA 75	N/A	
386	Block II AGC/PAC Compatibility	R	ERP-R10102	N/A		PAC	PAC 1,4,5	PAC 2,3	DIS-6-0-101 6/23/66	CCA 497-0287 7/1/66	N/A	

Page 66
 Revisions
 3-20-67
 4-24-67
 7-25-66
 1-18-66
 9-1-66
 1-13-67
 7-13-67
 10-18-66
 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Affected	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
387	ECP of Record for Block I-100 AGC/FAC Compatibility	R	N/A	N/A		PAC	N/A	PAC 1, 2, 3, 4, 5	DRS-8-6-66 404 5/27/66	CCA 497-0288 7/1/66	N/A	
388	Corrosion and Out Gassing Protection MA183 MA184 MA200	A	MA192 MA183 MA184 MA200	6N143 6N149 6N182	N/A	Blk II PSA, PEA, CDU, LEM, PSA PTA, CDU, KHI, GSE	Block II 2nd LEM-OUT	Block II "parts" (see ECP 387) COJ, (U), & Spare	DRS-8-6-66 341 11-30-66	CCA 497-0271, 0272, 0273 6-8-66 CCA 497-0261 5/28/66	1009 1013 1015 1017 1094	CCA-497-0390 dated 1/3/67 approves ECP 388. ECP 388 is approved by DRS-8-6-66-15534, 1-719 dated 3/1/67. CCA-497-0271, 0272, 0273, 0261, 0261, dated 1-17-67 retrofits the PSA, PEA, CDU & CAN Interconnect Harness for GAN 202 Only.
389	ECP of Record for Improved Protective covers	R	ERP-R-10107	N/A		MS GSF	See ECP	See ECP	DRS-8-6-66-15534 7/5/66 Reduce kits by 2 per DRS 2-7-64	CCA 497-0270 7/15/66	N/A	
390	ECP of Record for Kit & Temperature Stability Modification for Digital Ohmster Retrofit Kits	R	ERP-R-10110	N/A		Cal Console	S/W 7, 8, 9 Aux. 1 thru 9	PSA 8104010 S/W 1 thru 9	DRS-8-6-66-227 8/16/66	CCA-497-0320 8-29-66	N/A	
391	ECP of Record for Modification of Spare Digital Recorder	R	ERP-R-10109	N/A		Spare Digital Recorder & Ohmster	N/A	Spare S/W 312	DRS-8-6-218 8/16/66	CCA-497-0321 8-29-66	N/A	
392	Refurbish the qual. OUA and perform analysis on Failed Parts	A	N/A	6N138 6/7/66	15907	OUA				CCA-497-0266 6/1/66	N/A	Firm Proposal Only

Revisions

2-20-67
 7-13-67
 9-1-66
 1-13-67
 10-13-66
 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP # & Date Rec'd	CE # & Budg. Firm	Equip. Affected	Effectivity In-Line	Retrofits	ECP Budg. to NASA & Date	NASA Dir. Approval	Disapproval Date & Rev.	REMARKS
3938	Deletion of OAM III Mission Cycle 13 Requirement	A	N/A	68146 6/8/66	15913	OAM Systems			N/A	CCA-497-0270 6/8/66	1074	Firm Proposal Only
3944	Float Freedom Axis Travel & Radial Recovery Tests on 25 IRIG's	A	N/A		15895	Gyros			N/A	CCA-497-0263 5/21/66	1019	Firm Proposal Only

Revisions

7-25-66 11-18-66 2-20-67
 9-1-66 1-13-67 4-24-67
 10-13-66 2-15-67 7-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document #	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
395	T. D. A-224, Amendment #, 5, and 6 AC Electronics Qual. Program	A	T. D. A-224 #, 5, 6	N/A	15866	N/A	N/A	N/A	AP-M-13007 R-181 7/5/66 \$49,402		N/A	ECP withdrawn per Memo RDR-2-7-33, 2/9/67
396F	Repair of Apollo Guidance Computer	R			15918	AGC			N/A	CCA 497-0277 6/15/66	N/A	Firm Proposal Only
397F	Repair of AGE 110	A			15917	AGE			N/A	CCA 497-0279 6/17/66	757	Firm Proposal Only
398	ECP of Record to Change Block II ECDU Header Potting Material for Reduced HT and Improved Bonding of Cover	A	MA 130	N/A		ECDU Block II	CSN 205 F 348.	N/A	DRS-7-6-200 7/5/66	CCA 497-0291 7/13/66	1013 791	
399	Delete PERT Requirements From Subcontractors	A			15903	N/A			N/A	CCA 497-0259 5/23/66	747	Firm Proposal Only
400	ECP of Record to Modify Spare CDU from -041 Configuration to -061	A	N/A	N/A		CDU	N/A	Spare CDU S/N '92	DRS-7-6-195 1/5/66	BA 75	N/A	

Revisions
 7-25-66 11-18-66 3-20-67
 9-1-66 1-13-67 4-24-67
 10-13-66 2-18-67 7-13-67

ECP LOG & STATUS

Item No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Filtm	Equip. Affected	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
401	E.P. of Record for Potting of Connectors on 16 PIPA Suspension Modules	A	NASA Ltr EG 26-165-66 5/9/66	N/A		PIP Cal. Assy.	N/A	DNS-7-6-199 7/14/66	CCA 497-0297 7/15/66	1009	
402	Clear Driver Circuit Modification	R	ERP R 10111	N/A		AGC	200, C-1 and Up	AP-M-13127, N-202 7/19/66 \$30,235		N/A	
403	Clear Driver Circuit Modification	R	ERP R 10108	N/A		ACC	C-1, C-2, 200, C-3 and Up	DNS-7-6-219 7/25/66 AP-M-13126 N-201 7/19/66 \$25,824	CCA-497-0197 R 8-25-66	N/A	ECP 402 RL Revises Budgetary Codes CCA-497-0393 Approves ERP 259 Counts for ECP 403 'Marginalized With ERP 259
404	ECP of Record for OUA Shipping Container Spring Retainer Modification	K	AP-N-12556, N-114 Failure Report #PR 13199	N/A		Optics Nav Base Shipping Container	S/N's 1-8	DNS-6-6-177 7/1/66	CCA 497-0297 7/11/66	N/A	
405	ECP of Record for AGC/GSE Compatibility III for CTS	R	ERP-R 10122	N/A		CTS	CTS 8,16, 12, 14, 18, 19, 7, 6, 5, 3	DNS-7-6-216 7/8/66	CCA 497-290 7/11/66	N/A	CCA-497-0418, 3/30/67, Reduces Kit 8104207 Qty. by Two (2)
406	Commercial Test Equipment Power Supply	A	EG 55-65-300 1/13/66	N/A		Commercial Test Equip.	N/A	AF-M-13097, N-195 7/15/66 \$244	SA 75	N/A	

Page 70
 Revisions
 7-25-66 11-18-66 3-20-67
 9-1-66 1-13-67 7-13-67
 10-13-66 2-15-67 3-8-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
407	ECP of Record to Add Rubber Shims to Eye-piece Stowage Unit	A	N/A	N/A		ESU	N/A	GEN 20,12 Same as ECP 169R2	498-7-6-62 7/26/66	BU 5 8/23/66 TWX	1095	To be incorporated into S-A. 75
408F	GEN Ground Checkout End Item Generation	A	N/A	60147 8/8/66	15925	N/A	N/A		N/A	CCA 497-0274 6/8/66	1106	Firm Proposal Only
409F	Retest and Repair of CJA P/N 2011000-031 (S/N 14)	K	N/A	N/A	15/26	N/A	N/A		N/A	CCA 497-0282 6/28/66	N/A	Cancelled Same as ECP 416
410F	Eye-piece Locking Lever	K	EXP-1 15C	60159 6/7/66	15/26 15928-1	N/A	GEN 606	Learners LMS-1 & LMS-2	APM 14018 10/20/66	CCA 497-0282 6-8-66	N/A	CCA 497-0534 Authorizer LMS-1 & LMS-2
411	Revision to LEM and Block II Qualification and Evaluation Program	A K	AC Electronics Letter RDR-6-6-187 7/8/66	60145 6/1/66		N/A	N/A		AP-4-13608 9-8-66	CCA 497-0286 6/8/66	1074	
412	Incorporation of ECP's 183, 184, 187R, and 321 into AGG 110A	R	EXP R-10124	N/A	18004	AGG	N/A	AGG 110A Only	APM 13228 7/28/66	CCA 497-0343 10/5/66	N/A	

Revisions
 7-25-66 11-18-66 3-20-67
 9-1-66 1-13-67 7-24-67
 10-13-66 2-15-67 7-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
413	ECP of Record to Modify CDU S/N 46 From & -61 to & -41 Configuration	A	N/A	N/A	N/A	CDU	N/A	S/N 46	DRS-8-6-224 8/2/66	CCA 497-0340 10/5/66	1012	
414	In Process Vibration Testings of Fixed Memory Modules	R	ERP R-1009AR	N/A	N/A	Core Rope	N/A	N/A	APM-13066 W-208 7/22/66	CCA 497-0314 8/11/66	N/A	
414 RI	In Process Vibration Testings of Fixed Memory			15965			See ECP		W-598 1-12-67	CCA 497-0314RI 3/20/67		
415F	Perform Thermal Analysis on a Block	K	N/A	6N 158 6/28/66	15929	OUA	N/A	N/A		CCA 497-0284 5/28/66	N/A	Firm Proposal Only
416F	Retest the Spare Block II Optical Unit S/N 14	K	N/A	6N 157 6/20/66	15934	OUA	N/A	N/A	N/A	CCA 497-0283 7/22/66	N/A	Firm Proposal Only CCA-497-0283 RI includes repair of Block II OUA S/N 14
417	Sale of DSKY's and Computer as Separate End Items	R	ERP-R-1011B 6/23/66	N/A		ABCC-DSKY	N/A	N/A	AP-2-3557 9-1-66 \$154,990	Disreg. HQ 53-109 12-7-66		
418	ECP of Record for 160 Notation of Block I/100 Harness Connector (5689/SCA)	A	N/A	N/A	N/A	Block I/100 GAW Harness	N/A	6AW 121, 122, 123 & 3 sps.	DRS-8-6-231 8/16/66	CCA-497-0307 7/28/66 CCA-497-0322 8-28-66	860	

3-8-68 11-2-67 Revisions Page 72
 5-15-68 1-15-68 11-18-66 3-20-67
 9-1-66 1-13-67 8-14-67
 10-13-66 2-15-67 10-2-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP # & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
429	I.D.M. Relay Replacement in DREX	R	REP-R-10103 5/27/66	N/A	18239-2 -5	DREX	DA & Sub.	CI DREX CT	AP-13456 8-23-66 AP-13456 8-23-66 AP-13456 8-23-66 AP-13456 8-23-66 AP-13456 8-23-66	CCA-497-0367 12/3/66 CCA-497-0367 1/20/67	N/A	CCA-497-0367 Deletes Retrofit DREX Designations Changed Per REP-R-10103, dated 1/22/67 As Authorized Per NASA Letter BG 53-141, dated 12/3/67. (CCA-497-0367 RI, reduces Spares.)
420F	GM Training and Handbook Preparation	A		6ML7 7/26/66	15946	N/A			N/A	CCA-497-0300 7/26/66	1006 807	Firm Proposal Only
421F	AOT Lens Housing Modification	K	TOPS 3/1/66 REP-K-153	6ML7 7/21/66	15942	AOT	GM 605 & Subsequent	N/A IMS-1 & IMS-2	AP-14019 8-28 10/20/66	CCA-497-0286 7/21/66	N/A	CCA 497-0286 Authorizes IMS-1 & IMS-2
422F	CCRD Mounting	A	M1208 N4299	RECP 6ML81	15957 18878	CCRD AOT	GM 606 & On GM 606 % Sub	N/A GM 604 Spares	AP-14445 8-25/66 AP-14445 8-25/66 AP-14445 8-25/66	CCA-497-0312 8/3/66 CCA-497-0476 7-27-67 CA 8604-824 10/20/67	1079	CA 8604-824 CCRF2 Cancelled as a result of CCA 497-0551 dated 3-27-68
423F	Optics Cover Modification	A	M205	RECP 6ML80	15958	Optics Cover	N/A	GM 12, 20, 121, 122, 123 & Spares	AP-13801 8-23/66 AP-13801 8-23/66 AP-13801 8-23/66	CCA-497-0311 8/3/66 Cancelled CCA-497-0311/AL 10/19/66	1016	CA 8604-825
424F	Delivery of one PSA Cover	A			15939	PSA			N/A	CCA-497-302 7-18-66	796	Firm Proposal Only

ECP LOG & STATUS

5-15-68
1-10-69

11-24-67 Revisions

Page 3
3-20-67
11-18-66
7-13-67
9-1-66
1-13-67
8-16-67
10-13-66
2-15-67
10-2-67

ECP No.	TITLE	Contr. Aff'd Documents	RECP # & Date Recd	CE # Bldg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
425	ECP of Record for the Addition of Rubber Isolators to GAN 17	A	N/A	N/A	Main DECK New DECK	N/A	GAN 17	APM-13317 N-228 8/2/66	CCA-497-0316 8/2/66	N/A	CCA 497-0316 Acctd 10/14/66 Approves ECP 425 RL
425 RL	ECP of Record for the Addition of Rubber Isolators to GAN 17 & Spare	A	N/A	N/A			GAN 17 & Spare	APM-13533 N-271 8-19-66	CCA-497-0316 RL 9/29/66		
426	Astro-Servant Passive Thermal Protection System, Block I, Series 50	A K	N/A	15948-3	APTES	N/A	GAN 12, 17, 20 & Spares	APM-14456 N-415 11/1/66	CCA-497-0309 7/29/66	108	
427	Ablative Shield 10" Dia. Eps	A	30179	15948-3	APTS	N/A	GAN 121, 122	APM-14753 N-519 1-9-67	CCA-497-0309 7/29/66	108	
428	Astro-Servant Passive Thermal Protective System, Blk II	A			APTES	GAN 209, 212 thru 222	GAN 209, 204 thru 209	APM-15061 N-664 2/8/67	CCA-497-0309 7/29/66	1108	CCA 497-0518, 3-21-68 Autl. GAN 220, 221, & 222 effectivity. CCA 497-0517 - Auth. Covers from Qual. for GAN 202 CCA's will be covered by 0428FR2 428 FR2 Issued 6-4-68 AP-M-19041-W2023 428 FR3 Issued 7-17-65 AP-M-19378-W306 Proposal 497-811-658-AJH
428 RL	Astro-Servant Passive Thermal Protective System, Blk II	A		15823 15896-3 19257-2 19250				APM-16509 N1098 7-28-67	CCA 497-0438 5-31-67		
429	ECP of Record for CPU Connector Engagement Modification	A	N/A	N/A	CDU	N/A	GAN 12, 121, 122, 123 & 50 & 100 Spares	RDB-8-6-23 8/11/66	CCA-497-0318 8/11/66	370	
429 RL	ECP of Record for CPU Connector Engagement Modification	A						RDB-9-6-290 9/29/66	CCA-497-0368 12/5/66		
430	ECP of Record for Mounting Change for GSE Connector	A			GSE	N/A	7 Sets	RDB-9-6-249 9-1-66	CCA 497-0350 10/14/66	1023	

Page 74
 Revisions
 5-15-68
 9-1-66
 10-13-66
 11-18-66
 1-19-67
 8-14-67
 2-15-67
 11-24-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA - 8604 - Date & Rev.	REMARKS
431	Notification of Critical Failures	A		6E174	15950	All Sites	N/A	N/A	See Remarks		N/A	Not submitted, See AC for 10041-97
432	ECP of Record for the Removal of 6 Dot Recorders	A	CSEC-15 /RFR-10120			DSK's & Cam Harness Handling Fixtures	See Remarks	See Remarks	NSA 497-0342 10/14/66		1023	Stop Production Installation and Retrofit all Units Containing G-Dots
433	ECP of Record for GEP Apollo II IRIG Recalibration	A	N/A	N/A	15953 15958	Apollo IRIG II	N/A	N/A	DBB-9-C-259 9-15-66		1009	Repad on Need Basis
434	Cancellation of Resident Support to MTW/IL	A	N/A	REC-3877 7/18/66			N/A	N/A	N/A		N/A	Firm Proposal Only
435	Performance Testing of all Unassigned Apollo I Gyros	A			N/A 15953	GYROS			N/A		N/A	Firm Proposal Only
436	Shift CCB to Milwaukee	A	N/A	N/A		Exhibit "D"	N/A	N/A	N/A		1020	Firm Proposal Only

Revisions
~~3-16-67~~ 11-18-64
~~7-24-67~~ 1-13-67
~~8-15-67~~ 7-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. NA. & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
437	In Process Vibration of Digital UTC Schedules	R	REP-R-10126	N/A	15868	CMC Digital Mod. Jcs		N/A	AFM-13591 R-308 9/16/66 \$103,878		N/A	ECP withdrawn per TWX AP-M-15367, W-758, 3/16/67
438	Signal Conditioner Noise Elimination	A	Prod. MA-216	N/A		Signal Cond.	N/A	GM 12, 121, 122, 123, Series 100 Sp. & 50	AFM-13542 R-281 8/31/66 \$72,500	CCA-497-0325 9/2/66	1051	ECP-438 RI Revisions Request Requirements
438 RI	Signal Conditioner Noise Suppression				15981				AFM-13607 R-291 9/8/66 \$5,500	CCA-497-0325 9/22/66		
439	ECP of Record for AOC/OME Compatibility IV	R	REP-R-10132	N/A		CTB	See ..	See ECP	IRM-0-6-236 9/9/66	CCA-497-0325 9/22/66	N/A	
440	"Clear Rope" Driver Circuit Identification	R	50-M-196 7/31/66	N/A	15983	AOC	GM 604, 205, 606, 206, 207, 607, sub.	GM 204, 605	AFM-13543 R-282 7/31/66 \$17,000	CCA-497-0325 10/14/66 See Remarks	N/A	CCA-497-0325 RI RI Retrofitted GM 207 to be at MA 9/28/66 RI Retrofitted GM 405 to be ready for turn-over to IM contractor 9/16/66
441	ECP of Record for the Addition of Isolators to GM 12 & 121	A	N/A	N/A		DMX	N/A	GM 12, 121	AFM-13645 R-288 9/9/66	CCA-497-0327 9/8/66	N/A	
441 RI	ECP of Record for the Addition of Isolators to GM 12 & 121							GM 12, 121, 122, 123 & 2 Support.	AFM-13645 R-288 9/9/66	CCA-497-0327 RI 9/9/66		
441	Revised Delivery Schedule of BIK II & IEM Fixed Memory Modules	A			15973	N/A			N/A	CCA-497-0319 8/16/66 8/19/66	N/A	First Proposal Only

Revisions
 1-17-67
 1-18-67
 1-16-67
 1-21-67
 2-15-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Dispositon Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
443	ECP of Record for Replacement of Short Screws	R KRP-R-10129 8/11/66	N/A	18207	AGC	C-2 & Sub.	C-1	DWB-9-6-256 9/16/66	CCA-497-0341 10/15/66	N/A	CCA 497-0341 Retrofitted C-1 & Production of C-2 and subsequent
444	ECP of Record to Cover Switch Arbitrating Mechanisms	A N/A	N/A		May. & Main BDCY GATE Panel & IMU Panel	N/A	GAM 12 & 121	DWB-9-6-250 9/2/66 DWB-9-6-250 9/2/66 DWB-9-6-250 9/2/66	CCA-497-0332 9/2/66 CCA-497-0332 9/2/66 CCA-497-0332 9/2/66	N/A	ECP-444 122 Buick. to MALA APM-14020, M389
445	Provide Filling & Leak Test Equipment	A		15963	PZA			N/A	CCA-497-0315 8/9/66	8/9/66	Firm Proposal Only Description of Adaptor Described in ECP 246 13
446	Change to More Reliable Relay in CPU Resolver Leads Module & Relay & Diode Module	A N/A	N/A	N/A	PZA and PXC	N/A	GAM 121 and 1 Spare Module each	APM-13 179 M-334 9/27/66	CCA-497-0337 10/9/66	10/9/66 10/16	CCA 497-0337 Does Not Approve Method
447	Incorporation of Plastic Pads Under Tray A & B Covers	R KRP-R-10130 9-8-66	N/A	N/A	AGC	C-3 & SUBS.	C-1 C-2	APM-13 179 M-334 9/27/66	CCA-497-0344 10/9/66	N/A	
448	Mfg. of 10 Additional Core Rope Fixed Memory Modules	R N/A	6M-1B5 8/22/66	15968	AGC	N/A	N/A	APM-13 662 M-303 9/13/66 482,000	CCA 497-0337 10/26/66	N/A	CCA 497-0337 Reduces Qty. of Modules from 10 to 4

Revisions
 10-13-67
 11-19-67
 12-15-67
 1-24-67
 2-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP # & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 Date & Rev.	REMARKS	
449	Addition of Capacitor to Block I "Y" Harness to Prevent Double Entry Problems	R	N/A	N/A	N/A	"Y" Harness	N/A	OM 12, 121, 122, 123, 124, System	APM-13796 M-331 9/28/66 \$6,725	Disapp. EG-53-109 12-7-66			
450P	Evaluation of Non-Metallic Crew Bay Materials	A	N/A	60195 8/23/66	15977	GM	N/A	N/A	APM-13830 M-345 9/30/66	EG-53-109 12-7-66			
451	Special Air Transport Battery Pack	A	N/A	N/A	N/A	GM			APM-13764 M-331 9/28/66 SEE ECP For Budg. Conting.	EG-53-109 12-7-66			
452	Wiring Changes Required to Accommodate Auxiliary Memory Unit	R	EMR-R-10133	60201 8/24/66	15979	AOC	AOC C-12 & Sub. 'C-5 & Subsequent	8/M 2,3,4, 6,7,8,9, 10,13, 15 16, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	APM-13693 M-310 9/28/66				See ECP-4492 RI for complete effectivity
453F	Incorporate the Expedited Be Wedge to the OUA Cont.	K	N/A	N/A		OUA	GM 207,	OUA 201A, 1 Space	APM-14462 M-538 12/17/66	CCA-197-0331 RI 9/21/66		N/A	
454	Incorporate the Expedited Be Wedge to the OUA Cont.	K	TRRR	18886-2	15992	AOT	AOT 604	OUA 201A, 1 SF, OUA, 5M 13, 15, 16, 17	APM-14494 M-1078 7-20-67 AP-M-1728, 1132, 10/21/67	CCA-197-0331 RI 9/21/66		N/A	
455	AOT Planning	K	TRRR		45991	AOT			APM-14462 M-538 12/17/66	CCA-197-0331 RI 9/21/66		N/A	

Revisions
 10-13-66 Page 7B, 20-67
 11-18-66 1-13-67
 8-7-67 2-15-67
 11-24-67 7-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP # & Due Recd	CE # Budg. Firm	Equip. Affected	In-Proc	Effectivity	Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
455P	Link Simulation Equipment	A R		15969	DESK MSU GAN Panel	M/A	M/A	M/A		M/A	CCA-497-317 8/11/66 See Remarks	1109	CCA-497-021781, dated 9/20/66; A) 200. and Del. 3 Expense Coverage Units, Blk II. B) 3 GAN M.C. Panels, Blk II C) 6 BPC's, Blk II D) 3 GAN I.C. Connector Mate
456	IMP of Record for Resonance Magnetic Core Amplifier System	A	PR 114331	M/A	MSU	M/A	M/A	OPM 12, III 121 and 124 15, are Case		DBH-10-6-306 10/19/66	CCA 497-0334 10/19/66 CCA-497-0337, RL 11/15/66	1095	
457	Covers for Blk II Switch Actuating Mechanisms	A	M/A	15989	Ind. Cont. Panel	GAN 208	GAN 208	GAN 203 thru 207, Bp.		APM-13978 M-377/66 thru 10/17/66 \$114,362 APM-14242 M-445 11/10/66	CCA 497-315 0/66	1017	
457 RL	Covers for Blk II Switch Actuating Mechanisms			18219									
458	ECP of Record for Portable Light Assembly Adapter	X	DRKC-170	M/A	GBE	M/A	M/A	S/M 1 thru 9		DBH-10-6-313 10/20/66	CCA 497-0339 11/3/66	M/A	
459	Mock-up of Blk II MSU and EXT IER Eyeplate	A	M/A	M/A	Mock-up of MSU & EXT IER	M/A	M/A			M/A	CCA-497-0330 9/3/66	1104	Firm Proposal Only
460	Addition of Jumper Wires in Tray A	R	ERP-R-10141 9/22/66	M/A	AGC	AGC C-3 & Sub.	AGC C-1, C-2			APM-13797 M-338 9/28/66 \$42,530	CCA-497-0330 RL 12/5/66	N/A	RCP 0460R1 Budg. to NASA 11/3/66 APM-14137, M-424
460 RL	Addition of Jumper Wires in Tray A												

10-13-66 Revisions Page 793-2047
 1-17-67 1-13-67 4-27-67
 8-16-67 2-15-67 6-6-67
 10-2-67 11-27-67 7-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
461	PBA Global Servo Amplifier Module Diode Replacement	A	N/A MA 218	N/A		PBA	QAM 206, 607 & Subs.	QAM 203 thru 205 603 thru 606	APM-15853 P-350 10/4/66 CCA 497-0339 10/29/66		1015	CCA-497-0339 R2, MA-43 11/9/66. Includes - QAM 205 & Subc. Retrofit - QAM 203, 204 & Spares, QAM 205 & Subc., 606 & Subc. ECP 463 R2, APM-14713, W-08 Dated 1/5/67 Revisions in Accordance with CCA-497-0339 R2
462	ECP of Record Addition of Ground Strain to IEM Nav. Base	A	N/A	N/A		Nav Base			QAM-11-6-387 11/10/66		1011	
463	ECP of Record for Incorporation of Torque Screws and Grounding Straps to AGC Nav Base	A	N/A	N/A	N/A	AGC Nav Base	N/A	S/N 2, 3, 7, 9, 10, 8	RDB-10-6-275 10/5/66		N/A	
464	ECP of Record to Incorporate Master End Item Specs. into Blk II & IEM S.O.V.	A	N/A	RECP 156		QAM	N/A	N/A	See Remarks			ECP 464 will not be submitted per RDB-10-6-380
465	ECP of Record for Integration of Simulation Computer with PAC & CTS	R	ERP-R-10125	N/A	N/A	Sim. Comp.	N/A	Sim. Comp. S/N 1, 2, 3	CCA-497-0346 12/5/66		N/A	
465 R1	ECP of Record for Integration of Simulation Computer with PAC & CTS	R	ERP-R-10125	N/A	N/A	Sim. Comp.	N/A	Sim. Comp. S/N 2	APM-16345-N-1046 7-7-67			
466	Shipping Container Modification due to Nav Key-piece Configurations	X	ERP-X-35	N/A	N/A	OVA/MB Shipping Containers			See Remarks		N/A	Cancelled by AC Electronics ECP not Required

ECP LOG & STATUS

Revisions
 10-13-66 Page 803, 20-67
 1-12-66 1-13-67 4-27-67
 7-15-67 2-15-67 6-6-67
 11-21-67 7-13-67

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved	Disapproved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
467	Modification of 101394's Optics Memory Module 64K Memory Resistors P/N 1010294	A	RFK	N/A	N/A	PSA	N/A	See ECP	APM-14137 N-426 11/1/66 \$4,536	Approved for rev'k under S/A 70. Per EG-44-530-68-780	Disapp. EG-53-109 12-7-66		
468	Change ILM Environment. Spec ID 100937	A	N/A	N/A	N/A	ILM	N/A	N/A	N/A	CCA-497-0385 9/22/66		1074 884	Phase Proposal Only
469	ILK 1/100 5/ 800 CFS Amplifier Change to Reduce the Optics Motor-Touch Reference Voltage to 16 Volts	A	N/A	N/A		PSA	N/A	GM 121 & Spare	PA-14106 N-428 \$5,000 10/27/66	CCA-497-0361 11/4/66	Cancelled CCA-497-0361 12-9-66	1014	
470	Amplifier Module - 101394	R	N/A	6W219 9/28/66		ACC DSKY	ACC C-1, C-2, C-4 & Sub. Subsequent	N/A	APM-14792 N-598 1-12-67	CCA-497-0336 9/28/66		N/A	DSKY Designations Changed Per RDR-17-12, Dated 1/12/67, As Authorized by NASA Letter BC 53-144, Dated 12/3/67.
471	Fixed Memory Module - 10136	R	RRP-R-10136			Core Rope Fixed Memory Module	S/M 30-35 34, 37 See ECP	See ECP	APM-14799 N-598 1-12-67 \$107,600	CCA-497-0399 2/9/67		N/A	Cancelled APM-13947 10/12/66
472	ECP of Record for Realization of Connector Cover Kit Blk II	R	N/A	RRP-R-10137		Connector Cover Kit	S/M 16 17, 18, 52	S/M 1 thru 15				N/A	

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP # & Date Rec'd	CE # & Budg. Firm	Equip. Affected	In-line Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8304 - Date & Rev.	REMARKS
473*	Pseudo Field Stop to Eliminate Light Scatter from Radar Mount	K	REP-K-163	N/A		AOT	AOT 609 thru 608	APM-14309 N-465 11/17/66 CCA-497-0347 10/11/66		N/A	
473*	Pseudo Field Stop to Eliminate Light Scatter from Radar Mount				18212		AOT 609 thru 608	APM-14791 N-594 1-17-67 CCA-497-0347 RI 12/19/66			
474*	Manufacture Test Connector Jumpers for the Blk I/100, Blk II & IEM Computers to Ground Certain Gate Inputs	R			18214	Test Conn. Jumper	See ECP	APM-14712 N-567 2/5/67 CCA-497-0352 10/14/66		N/A	Ref. ECP ACSK 0696R.
475	Chamber of Telescope Manual Adjust Seal Seat	K	REP-K-159 See Remarks	N/A		AOT	QAM 213	APM-14253 N-450 \$15,415 11/11/66 CCA-497-0365 12/5/66		N/A	FR's: 7359, 7853, 7873, 7886, 9689, 9647, 9573, 7610 ECP-475 R2, Dated 2/13/67 APM-15085, N669 CCA-497-0413, 4/14/67, Authorize In-Line Effectivity O&N 207 and C7. ECP 475R4, APM-17283 RI38C 3/24/67
475	Chamber of Telescope Manual Adjust Seal Seat				18238-1		QAM 209	APM-14868 N-512 1-17-67			
475	Chamber of Telescope Manual Adjust Seal Seat				18807		QAM 207				
475	Chamber of Telescope Manual Adjust Seal Seat				18888-2						
476	Painting of Alarm Indicator Face	R	REP-R-10140			DSKY	QAM 207	APM-14333 N-473 \$7,303 11/21/66 CCA-497-0372 12/15/66 CCA 497-0372 RI 3/8/67		N/A	DSKY Designations Changed Per XEM-1-7-12, Dated 1/12/67 As Authorized Per MASA Letter BG 53-141, Dated 2/3/67 CCA 497-0372RI deletes Ref. 1 & 1 D-1 through D-4
476	Painting of Alarm Indicator Face				18245-1		D-9 & Subs				
477	Delete Blk II & IEM Assembly Qual. Testing	A	N/A	N/A	N/A	N/A	N/A	CCA-497-323 8/23/66 CCA-497-0363 RI 1/17/67		1074 1015 1011	Firm Only
478*	ECP of Record for Painting Exposed Surfaces on H/d Tray Spacer	R	REP-R-10145	N/A	N/A	AGC	C-3 & Sub. C1, C2	DRS-11-6-325 11/21/66 CCA-497-0370 12/16/66		N/A	Ref: ECP ACSK 0696RI for C2 incorporation

8-16-67 Revisions 3-20-67
 11-18-66 1-13-67
 11-24-67 2-15-67
 7-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	REC# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity	ECP Bueg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
479	ECP of Record for DSKY Tealon Coated Pushbutton Shaft	R	ERP-R-10127 5/16/66 ERP-R-10146 10/31/66	N/A	N/A	DSKY	D-1 & Subsequent	DRS-12-G-345 12/2/66	CCA-497-0384 1/3/67	N/A	DSKY Designations Changed Per RDB-1-12-67, As Authorized Per MAGA Letter BG-53-1-1, Dated 2/3/67
480	Replacement of Block II and IEM CDU Transformers	A				ECDU		See Remarks			ECP not submitted per AF-M-14848, dated 1-17-67
481	Addition of Resistors to Jumper Modules	R	ERP-R-10144 10/26/66	N/A		Fixed Memory Jumper Modules	See ECP	APM-14631 N-546 426,700 12/24/66 APM-16353 N-1041 7-7-67 AP-R-17835 11/33/10/24/67	CCA-497-0373 12/15/66 CCA-497-0373 RL 2/6/67	N/A	CCA-497-0373 authorizes the modification of 6 Fixed Memory Jumper Mod. as CI corrected. CCA-497-0373 RL Deleted effectively Jumper Modules CCA-497-390, Dated 2/6/67 CCA-497-0398 RL, Dated 3/1/67 CCA-497-0398 RL, Dated 7-26-67
482	ECP of Record for AOTT Eyepiece Bester Circuit Modification (SSE)	K				AOTT	S/N 3	See Remarks			ECP will not be issued.
483	Correction of Sense Amplifier Breakdown	R	ERP-R-10116	N/A	N/A	ACC	ACC C-14 & Sub.	APM-14308 N-145 11/17/66 APM-15248 N-721 3/2/67	CCA-497-0375 12-15-66	N/A	
483 RL	Correction of Sense Amplifier Breakdown				18240		ACC C-15 & Subsequent				
484	Clear Rope Driver Circuit Mod.	R		6W236	18223	ACC	ACC C-17 & Sub.	APM-14924 N 621 1-26-67 200 C thru 200 F \$331,000			EC-53-1-14 3/27/67

Revisions
 2-20-67
 4-24-67
 6-6-67
 8-15-67
 11-24-67
 1-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
485	Redesign of Power Supply to Remove 28 VDC Regulator	R	TRU-4-10143 10/24/66	M/A		AOC	C-8 & Up	APR-14475 M-509 \$2,700 Credit 12/5/66	CCA-497-0395 1/3/67	927	
486	ECP of Record to Cut Plus on AOC Power Supply to Remove 28 VDC Regulator (ECP ACME 046, RL)	R	TRU-4-10143 11/18/66	M/A		AOC	C-3, C-6, C-7, C-2, C-4, C-5	AP-4-14244 M-146 11/11/66	CCA-497-0360 11/15/66	N/A	Change to C-8 & Up accomplished per ECP ACME 046
487	AOT Air Focus Data Requirements	K	REP K-173	REP K-173 4/27/66		AOC	AOT 605 & Sub. GAW 605 & Sub.	APR-14444 M-504 \$2,700 12/1/66	CCA-497-0382 1/3/67 CCA 497-0382 RI 1-5-67	N/A	REP-12-6-365, Revised 10/22/66 Revision Indefinite
488	ECP of Record for Relay Lens Alignment	K	REP K-180	M/A		LEM AOT	612			N/A	ECP will not be issued per AP-4-14380, dated 18 November 1966
489	Replacement of Transformers in the Block II & IEM ECDU	A	M/A	M/A		RECDS	CAF 211 & on, CAF 610 & on	APR-14528 M-504 \$2,700 12/13/66	CCA-497-0377 1/3/67	N/A	REP-145 RI 24/2/66 CDS P/M Change Requirements
490	Replacement of Transformers in the Block II & IEM ECDU	A	M/A	M/A	18255-			APR-14500 M-504 \$2,700 2/8/67		N/A	
4907	I & A OF DMEY S/M 30 Changed from AC Electronics to Raytheon	A	M/A	DMEY S/M 30		M/A	M/A		CCA-497-0385 11/23/66	N/A	Firm Proposal Only

Revisions
 2-16-67
 1-24-67
 5-15-68
 3-20-67
 4-27-67
 6-16-67
 7-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
491F	GSE Hardware - Quantity Change	A	N/A	N/A	N/A	GSE	N/A	N/A	N/A	CCA-497-0358 R1 11/16/66 CCA-497-0358 R2 2/10/67	1023 1/24	Firm Proposal Only
492	ECP OF RECORD For Improved Insulators	R	ERP-R-10147 11/2/66	N/A	18230-3	DSKY	N/A	N/A	See Remarks		N/A	Cancelled Class II Change
493	ECP OF RECORD For Y-Line Feedback Base Resistor	R	ERP-R-10148 11/1/66	N/A	N/A	DSKY	DSKY D-1 & Subs.	N/A	DRS-12-6-348 12/5/66 AFPM-15221 N-713 3/1/67	CCA-497-0386 1/3/67	N/A	DSKY Designations Changed Per RDE-1-7-12, Dated 1/12/67, as Authorized per NASA Letter BG 53-141, Dated 2/3/67
493 RL	ECP OF RECORD For Y-Line Feedback Base Resistor											
494	ECP OF RECORD For DSKY Wiring Improvement	R	ERP-R-10148	N/A	N/A	DSKY	DSKY D-1 & Subs.	N/A	DRS-12-6-349 12/5/66 AFPM-15220 N-712 3/1/67	CCA-497-0389 1-3-67	N/A	DSKY Designations Changed Per RDE-1-7-12, Dated 1/12/67, as Authorized per NASA Letter BG 53-141, Dated 2/3/67
494 RL	ECP OF RECORD For DSKY Wiring Improvement											
495	DSKY Adapter Cable	R	ERP-R-10153	N/A		GSE	N/A	N/A	See Remarks		N/A	Cancelled by Sub-Contract Management Office RSMO 40M-7, 2/24/67
495												
496	GSE Milco Connector Change	A	RP-625			GSE Crbles & Aux. Equipment			See Remarks		1024	ECP not required. Changes are part of marriage kit #3

ECP LOG & STATUS

Revisions
 8-16-67
 10-2-67
 11-24-67
 3-20-67
 4-24-67
 6-6-67
 7-13-67

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Aff'd.	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Approved	Disposition Disapproved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
497	ECP OF RECORD to add Beryllium Warning Decals	A			N/A	See ECP	See ECP	See ECP	DRS-12-6-364 1-18-67 13-M-15992-1944 5-25-67	CCA 497-0453 6-20-67	Disapp. XC 53-188 3-22-67	5095	
498	ECP OF RECORD to add Back-up Plate to Block Recorder Case	A	N/A	N/A	N/A	Shock Recorder	N/A						Cancelled
499	ECMU Damper Plate Blk. II & IEM	A	SA-219	N/A		CMU	GAM 206, 207, 1 Blk. II Spare	GAM 203, 204, 205, 2 Spares, GAM 606, 605, 606 3 Spares	LEM-14566 1-535 429,200 12/15/66 AP-M-15503-N811 4/10/67	CCA-497-0387 1/3/67 CCA 497-0387, RI 1-17-67	MCP 499 R2 Budgetary to MCR MEM-15609 M928 4-14-67	965	CCA 497-0387 RI Effectivities: Retrofit: GAM 203, 204, 205, 2 Block II Spares, 603, 604, 605, 606, 2 IEM Spares In-Line: GAM 206 & Subs., 1 Spare GAM 607 & Subs., 1 Spare
500	ECMU Damper Plate Blk. II & IEM	A			18871 1-5 -24	IMU	GAM 206, 207, 1 Sub.	See ECP	APM-15179 2/23/67	CCA-497-0376 1/3/67 CCA 497-0376 RI 1-17-67		946	CCA 497-0376 R2 dated 4-28-67, revised Retrofit: GAM 122, 123, & Spare IMU's S/N 7 & 9 -0376 R3, dated 9-2-67 changes Block I/ICC Retrofit.
501	ECP OF RECORD for the Implementation of Flight Processing Spec. #D 1062313	R	ERP-R-10112	N/A	N/A	AGC & DRKY	CB & Sub. P-1 & Subs.	N/A	DRB-12-6-363 12/19/66	CCA-497-0381 1/3/67		N/A	DRKY Designations Changed per DRB-1-12, Dated 1/12/57, as Authorized per NASA Letter BG 55-1A1, Dated 2/3/67
502	I & A of DRKY S/M 34 Changed from AC Electronics to Raytheon	A	N/A	N/A	N/A	DRKY	N/A	N/A	N/A	CCA-497-0364 1-12-66		N/A	Firm Proposal Only

8-16-67 Revisions
 1-24-67
 2-15-67
 3-20-67
 4-24-67
 6-6-67
 7-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line Effectivity	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Approved	NASA Disposition	CTA 8604 - Date & Rev.	REMARKS
508F	Mod. of Newspeak Ropes Sets 2 and 3	R	N/A	6R226 10/6/66	18210	QAM AOC Ropes	See ECP	See ECP	AFM-14790 R-593 1-12-67	CCA-497-0345 10-5-66		N/A	
509	ECP OF RECORD for AOC/ASE Competability	R	ERP-R-10155 12/20/66			CTS	See ECP	See ECP	DRG-1-7-21 2-3-67	CCA-497-0495 3/5/67		N/A	
509 RL	ECP OF RECORD for AOC/ASE Competability						CTS 13, 14	CTS 3, 11, 15, 19, 17, 5, 8, 16, 20 thru 26	AFM-15250 R-753 3/3/67	CCA 497-7409 3/22/67			
510	QCA Tightening Torque	K	ERP-K-169	N/A	N/A	QVA	G&N 213	N/A	AFM-15149 R-668 2/21/67 4, 180		Disp. 8053-188 3-22-67		
511	ECP of Record to correct Noise Scaful Problem	R	ERP-R-10158 1-5-67	N/A		AGC	C-8 & Subc.	N/A	DRG-1-7-22 1-27-67	CCA-497-0407 3/14/67		N/A	
512 F	AOT Sun Filters	K	ERP K-198	6R284 10-24-66	18261-1	AOT	See ECP N/A	N/A	AFM-15162 R-667 6-5-67	CCA 497-0392 1-13-67		N/A	
513	ISA of DSKY S/N 36 from AC Electronics to Raytheon	A	N/A	N/A	N/A	DSKY, S/N 36	N/A	N/A	N/A	CCA 497-0391 1-10-67			Firm Proposal Only.

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	Retiroff	ECP B' d'g. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
514F	Deletion of Parts & Materials Qual. Tests for Block II and LEM	A				S.O.W.	N/A	N/A		Part of Firm Quote 497-44-1528 3/23/67	CCA 497-0378 12-30-66		
515F	ECBU - CSA Module Resistor Replacement	A		N/A		ECBU	GA-208, 208 # Subst., 1 Spare GA-607 & Subst. 1 Spare	GA-203, 202 204, 205, 207 2 Spares GA-603, 602 605, 606 APM-157191 18279-1 2 Spares + 2 Spare Modules.		APM-15086 M-670 2/13/67 \$70,600	CCA-497-0403 2/17/67	1013	CCA-497-0403 R1: Prod. Effect: OAM 207 Retiroff: OAM 206 ECP 515F R2, APM-16564-R1112, Dated 6-4-67, See ECP for effectiveness.
516	ECBU - CSA Module Resistor Replacement	A				AGC	C-25 and Subst.	N/A					
517	Reducing Zero Noise in Erasable Memory System	A	ERP-R-10115										
517	G&M Training - April thru June 1967	A			18268 18002	N/A	N/A	N/A		APM-15157 M-694 2/21/67 \$53,000	CCA 497-0410 3/22/67	1006	
518	Standby Change on Computer	R	ERP-R-10161			AGC	C-12 & Subst.	C-8 thru C-11		APM-15044 M-658 \$102,700 3/2/67	CCA-497-0400 2/13/67	N/A	*51802 Submitted Per AP-M-15637-1837 4/18/67 CCR 497-0400 R2, dated 5-25-67
518a	Standby Change on Computer	R			18278-1-2		C-12 & Subst.	C-1 thru C-11		APM-15227 M716 3/1/67 *	CCA-497-0400 R1 approves ECP 518 R2 Ref. ECP AGSK 0896 & 0898R1, 10/31/67		
519F	IDM Module and Power Supply Replacement DSKY S/N 30	R				DSKY	N/A	N/A		APM-15044 M-658 2-3-67 N/A	CCA-497-0397 2/6/67	N/A	APM-15044-22-67-64 Dated 2/9/67 Authorizes the port of DSKY S/N 30 With Modules Containing Filter Relay. Firm Proposal Only

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP# & Due Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved & Canceled	CTA 8604 - Date & Rev.	REMARKS
520F	Change in IMA of DSKY S/N 37 from AC Electronics to Raytheon	R	N/A	N/A	N/A	DSKY	N/A	N/A	N/A	497-617-694-S 2-2-67	CCA 497-0393 1-27-67		
521F	Change in IMA of DSKY S/N 39 and C-8 Computer S/N 24 from AC Electronics to Raytheon	R	N/A	N/A	N/A	DSKY AGC	N/A	N/A	N/A		CCA-497-0395 2/2/67		
522F	Provide 0-Volt IGC for Reference of 1 Volt and 1 1/2 Volt IGC	A	RFC 235	5227 2/1/67		PSAMM	N/A	N/A	AP-415790 S/N 1 thru 7 904/PSAMM : S/N 1 thru 8 Blk 113444 S/N 1 thru 8	1024 1022		Hold Requested per AP-M-15420, N-776, 3/22/67	
523 523 523	Kit of hardware for the Ballistic of the Apollo Guidance Computer Group S/N 1003770, Training	R	N/A	N/A	N/A	AGCG	N/A	N/A	DRS-2-7-38 2/15/67 AP-4157915 1922 5-17-67	CCA 497-0411 3/22/67			
524F	Change in IMA of DSKY S/N 43 from AC Electronics to Raytheon	R	N/A	N/A	N/A	DSKY S/M 43	N/A	N/A	N/A		CCA-497-0401 2/10/67	N/A	CCA 497-0401R1: Changes DSKY S/N from 38 to 43
525F	Change in IMA of DSKY S/N 40 from AC Electronics to Raytheon	R	N/A	N/A	N/A	DSKY S/M 40	N/A	N/A	N/A		CCA-497-0402 1/15/67	N/A	

Revisions:
 1-26-67
 4-27-67
 6-6-67
 7-13-67
 1-6-67
 10-2-67
 11-24-67
 3-8-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Mfd. Document	Basic Document	RECP# & Due Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev	REMARKS
526	Eyeiece Vacuum	K	ERP-K-187 12/9/66	N/A	N/A	OUA	744444 744444 744444 744444 24 Spacers	8/4/2661 4/24/67 2023/8/1 S/N 719 N/A	APW-15652 N638 4-19-67 A. \$6,800 B. \$4,150 APW-15674 N1771-1-20-58	CCA 497-0511 10/4/67	N/A	
527F	Deletion of Parts and Materials Qual Test for Blk I/100	A		6M268 12/22/66		N/A			Part of P.M. Quote 497-041-688S 3/23/67	CCA-497-0383 12/30/66	1073	
528F	Statement of Work for Repair of Apollo Blk II Gyroc	A	N/A	6M282 12/18/66	18363 -1	Gyro		N/A	N/A	CCA-497-0280 12/30/66 CCA-497-0380 RL 1/26/67	N/A	Firm Proposal Only
529	Humidity Qualification Fix on PSA	A		N/A	18282 -4	PSA	GMN 207 & Subs., PM Sp. III "S"	GMN 203 Thru 206 Sp. I & II & GMN 202 (Part 1)	APW-15186 N-727 2/23/67 APW-15202 N-324 5-16-67 "S", "R", "L", "S"	CCA-497-0404 3/6/67 CCA-497-0404 RL 4/17/67	1015 1017 1024	529B3 AP-M-19120-N2254 C-15-68 4/3/67, Requesting Addition of "S/N" to Hermes to Effectivity. CCA 497-0404R2, dated 4-28-67 authorizes the use of PSA Header Assy S/N 3 to investigate/qual. test failure in humidity cycle # CCA 497-0404 R5, dated 6-14-67. - "S", "R", "L", "S" Part of P.M. Quote
529R1	Humidity Qualification Fix on PSA				18282 -4						N/A	
530F	Change in ISA of DSKY's S/M 33 & S/M 35 from AC Electronics to Raytheon	R	N/A	N/A	N/A	DSKY S/M 33 S/M 35		N/A		CCA-497-0359 12/17/66	N/A	
531	DSKY & Module Vibration and Computer Reduction	R	ERP-R-10157	N/A	N/A	DSKY ACC	AOC C-12 & Subs., DSKY D-12 & Subs.	N/A	AP-N-16207 N1012 \$528,144 (Credit) 6-20-67	CCA-497-0472 7-26-67 CCA-497-0472 RL 7-31-67	N/A	ECF Para. IA.3 Disap. ECF Para. IB. Held in Abeyance

3-20-67 Revisign 6-67
 4-27-67 11-24-67
 6-6-67
 7-13-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	Basic Document	REC# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
532	Resolver Test Modification	X	ERP-X-186 12/30/66			F.T.A.	N/A	N/A	AP-M-15357, N-756 3/15/67 \$7,400	RG53-196 3/29/67		
533F	Incorporate Uplink for IM-4 and Subsequent	A	N/A	68294 2/13/67	18284	LEM Harness	GMW 608 & Subs.	GMW 602 6/22/66 & 2 Spere	AP-M-15991 N-778 5-25-67	CCA-k97-0406 3/6/67 0406 RL 9/29/67	1094	
534	RAMBLE Memory Program & X-Start Types	A	N/A	68308 2/26/67	18285 18284	N/A	N/A	N/A	AP-M-15436, N-778 3/23/67 \$138,177	COR k97-0439 5-31-67	N/A	
535	Transistor 1006323 Life Test	R	N/A	N/A		1006323 Transistor	N/A	N/A	TXW AP-M-15365, N-757 3/16/67 \$30,000	RG53-188 3/22/67		
536	ECP of Record Computer Diagnostic Capability Extension	R	ERP-R-10162	N/A		CTS & Cables	N/A	See Remarks	IMS-k97-039 4-26-67			
536a1	ECP of Record Computer Diagnostic Capability Extension			18280-1					AP-M-15967 N-813 5-15-67	CCA-k97-0436 5/23/67	N/A	RL, Remarks: CTS 4, 5, 11, 15, 24, 25, 22, 23, 26, 6, 7, 8, 13, 14, 16, 18, 20, 21.
537F	CUA Image Motion Design Study	A K	ERP-X-200 3/28/67	68298 3/3/67	18280	CUA	N/A	N/A	AP-M-17322 N-813 10/28/67	CCA-k97-0408 3/13/67		Firm Proposal Only

4-24-67 Revisions 6-67
 6-6-67 10-2-67
 7-13-67 11-24-67
 3-8-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	NASA Disposition Disapproved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
538	Replacement of Reticle Brightness Potentiometer	A	N/A	N/A	18291 18819	Block II GNIC Panel LEM CGRD	209 Blk II Spare #1 600 & 2 Spares	204-208 Blk II Spare #2 603, 604, 607 LEM Spare #1-#3	APM-15638, N-836, 4/18/67 \$28,900	CCA 497-0431 4-23-67		10/17	CCA 497-0431 Effectivity: Production: CAN 209 & Subs, 1 Blk II Spare. Retrofit: CAN 204 thru 608, 1 Blk II Spare, 1 Blk II Spare, 2 Blk II Spares. Retrofit: CAN 603, 605, 606, 607
539	AOT Reticle Lamp Change	K	ERP K-194	7N325 3/29/67 7N351 4-11-67	18800 18817 -54	AOT	AOT 612 & Subs.	AOT 604 thru 611 thru 611 thru 611 LMS-1 & LMS-2	APM-15515 N-801 4-3-67 \$27,200	CCA 497-0430 4-20-67 CCA 497-0430 R3 7-6-67			CCA 497-0430 R2, dated 6-14-67 Effectivity: FROM: AOT 605 & Subsequent FROM: Retrofit 605 thru 612 FROM: AOT 613 & Subsequent FROM: AOT 613 & Subsequent CCA-497-0430 R4 Changes Effectivities as shown in the Effectivity Block CCA 497-0430 R5 9/29/67 0430R6-11/2/67 CCA 497-0430 R6 11/2/67 CCA 497-0430 R7 cancelled by Rev. 1 dated 4-20-67 CCA 497-0430 RL, dated 6-14-67. CCA 497-0430 R2, dated 6-14-67 Changes Effect. See Remarks column, ECP 0539 CCA 497-0534 Authorizes LMS-1 & LMS-2 Change Effect.
540	AOT Reticle Knob Change	K	ERP-K-194	7N311 3/29/67 7N351 4-11-67	N/A 18297 18817 -54	AOT	CAN 615 and Subs plus 2 Spares AOT 612 & Subs	AOT 605 thru 614 thru 611 thru 611 LMS-1 & LMS-2	APM-15510 N-796 4-3-67 \$19,200	CCA 497-0417 3/29/67 CCA 497-0430 R3 7-6-67		N/A	CCA 497-0430 R2, dated 6-14-67, Change Effect.
541	AOT Reticle Refinement	K	ERP-K-387	7N325 3/29/67 7N351 4-11-67	18800 18817 -54	AOT	CAN 614 and Subs. See Remarks	AOT 605 thru 613 thru 613 See Remarks	APM-15514 N-800 4-3-67 \$225,900	CCA 497-0430 4-20-67 CCA 497-0430 R3 7-6-67		N/A	CCA 497-0430 R2, dated 6-14-67, changes effect. See Remarks column, ECP 0539
542	AOT Eyeguard Plug	K	ERP-K-193	N/A 7N351 4-11-67	N/A 18817 -54	AOT	AOT 613 & Subs. AOT 612 & Subs.	AOT 605 thru 612 thru 611 thru 611 LMS-1 & LMS-2	APM-15513 N-799 4-3-67 \$5,800	CCA 497-0430 4-20-67 CCA 497-0430 R3 7-6-67		N/A	CCA 497-0430 R2, dated 6-14-67 changes effect. See Remarks column, ECP 0539
543	AOT Counter Moisture Proofing and Illumination	K	ERP-K-385	7N311 3/29/67 7N351 4-11-67	N/A 18297 18817 -54	AOT	AOT 617 and Subs. AOT 612 & Subs.	AOT 605 thru 616 thru 611 thru 611 LMS-1 & LMS-2	APM-15512 N-798 4-3-67 \$171,200	CCA 497-0417 3/29/67 CCA 497-0430 4-20-67		N/A	CCA 497-0417 cancelled by Rev. 1 dated 4-20-67 CCA 497-0430 RL, dated 6-14-67 CCA 497-0430 R2, dated 6-14-67 Change Effect. See Remarks column, ECP 538 CCA 497-0534 Authorizes LMS-1 & LMS-2

4-24-67 Revisions 6-67
 6-6-67 10-2-67
 7-13-67 11-24-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Documents	Basic Documents	RECP # & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retroft	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
544	GSA Trunnion Res tation Study Program	K	ERP-K-500 3/28/67	N/A	N/A	GSA		N/A				ECP Cancelled. To Become Part of ECP 0537F
545	Sundial Test Rope Replacement	R	N/A	N/A	18292	Sundial Test Ropes	Sets 8 Through 11	Sets 1 Through 8	N/A	CCA 497-0412 3-22-67	N/A	Firm Proposal Only
546	AOT Dust Proofing	K	ERP-K-199 7/31/67 (4311-67)	TR325 3/27/67	18800	AOT	AOT 613 & Subs	AOT 605 TRUN 612	AWP-15511 11-797 4-3-67 \$11,900	CCA 497-0430 4-20-67	N/A	
547	Addition of Limiting Resist. rs to GSE Battery Packs ECP of Record	A	RFC 633	N/A	18817	GSE Battery Packs	N/A	ICTO-14 Units ABP-2Units	IRS-5-7-106 5-8-67	CCA 497-0440 5-31-67	1024	
548	ECP of Record Modification of the Optical Telescope Cover	A	RFC 634	N/A	N/A	GSE AOT Cover	7 units	Units	IRS-4-7-87 5-4-67 \$10,100 6-20-67	CCA 497-0471 1-9-67		
548 C-1												
549	LEM Signal Conditioner Site /atmosphere Qualification Test.	A	TRK ECH-71-67-146	N/A	18812	S/C	N/A	N/A	TRK AP-M-15542 4/17/67	CCA-497-0426 4/17/67	1074	

4-24-67 Revisions 1-12
 6-6-67 1-12-68
 7-13-67 5-15-68
 8-16-67 10-7-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
550 F	Re-run of Vibration Qualification Tests at New ICD Levels.	A K	N/A	TN328 3/23/67 TN334 4/3/67	18896-1 -3 188847	DSKY	N/A	N/A	N/A	CCA 497-0415 3/30/67 0415 Rev. 1 4/10/67 0415R2 5-10-67	1074	CCA 497-0415 R3, dated 6-1-67 Firm Proposal Only.
551 F	Replace G&N Harness Lacing Tape, Block II & LEM	A	N/A	6N310 3/13/67	18802 -3 18828 -1	G&N LEM Harness			N/A	CCA 497-0433 5-10-67 CCA 497-0433 R1 6-12-67	1099 1079 1017 1094	Firm Proposal Only
552 F	Reduction of Block II ACC/CSSE Competability II & III Retrofit Kits From 9 Quantity of 1) to 17	R	N/A	N/A	18898	CTS & Cables	N/A	N/A	N/A	CCA 497-0418 3/30/67	N/A	Firm Proposal Only
553 F	Apollo Reliability Master Failure Data Code	A	N/A	TN313 2/6/67	18801	N/A	N/A	N/A	APM-15789 N-877 5-4-67			File Not Requested by NACA "QC" 18937-N1930 5-14-68
554 F	Furnish Four IL Pencils, P/S 1006367 for DSKY's	R	N/A	TN327 3/23/67	18899	DSKY	600A, B, C, D	N/A	N/A	CCA 497-0416 3/29/67		Firm Proposal Only
555 F	Diablo Core Optics Core Channel, Block I, Series 100	A	RFC	N/A	N/A 18811	PSA	N/A	G&N 122, 123 2 Spares	AP-M-16061 N-877 6-5-67 \$2,000	CCA 497-0497 4/17/67	1014	Preliminary Copy of ECP Submitted to NASA on 4/14/67

Revisions
 4-24-67 10-2-67
 6-4-67 11-24-67
 7-14-67 1-15-68
 8-16-67

ECP LOG & STATUS

ECP No.	TITLE	Cont. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Film	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
596	Configuration and Traceability (CAF) Master File Continuation	A	N/A	N/A	18887 18893	N/A	N/A	N/A	AP-M-159145 5-1-67 \$381,300	CCA 497-0508 9-11-67	1020	CCA 497-0508, dated 5-12-67 revises budgetary to \$414,500
597	Change in IKA of DSKY S/N 38 and Computer S/N 29 from AC Electronics to Raytheon	R	N/A	N/A	N/A	DSKY S/N 38 Computer S/N 29	N/A	N/A	N/A	CCA-497-0439 4/4/67		
598	Replacement of mounting hardware in the IEM Computer Instruction Kit.	R	ERP R-1016A	N/A	N/A	IEM Computer Installation Kit	CAF #608 & Spares plus Spares	CAF #606 & 607 & 605	AP-M-15914 5-17-67 AF-M-17158 N 1343 10/16/67	CCA-497-0424 4/11/67 CCA 497-0424 6-12-67 CAF #608	N/A	598FRL revises effectivity in accordance with CCA 0424R2
599	Fixed Memory Module Specification Changes	R	ERP R-10156	N/A	N/A	Fixed Memory Modules	All Flight Ropes Modules delivered after 11/22/67	N/A	AP-M-16759 N1184 9-25-67 \$ 35,600 AF-M-17206 N1346 10/17/67	CCA 497-0504 9-14-67 CCA-497-0504R1 2/67 CCA497-0504R2	N/A	
560	Continuation of AC Training for Fiscal 1968.	A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CCA-497-0421 4/10/67	1006	Film Proposal Only.
561	Replacement of Flex Wires Assembly CAFN 122 & 123	A	N/A	N/A	N/A	New Base & OVA Assembly	N/A	CAFN 122 & 123 & 1 Spare	AP-M-15917 N924 5-17-67	CCA-497-0425 4/13/67	1010	CCA 497-0425R1, dated 4-28-67: Shopper Occulant Boxes for CAFN 122, 123, & Spare 124. CCA 497-0425 R2, dated 6-12-67. approves ECP 0561R

4-24-67 Revisions
 6-6-67 10-2-67
 7-13-67 11-24-67
 8-16-67 1-15-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
562F	Replace LM-1 Harness Lacing Topc	A	N/A	18808	Harness	N/A	AP-M-16197 N1006 6-20-67	CCA-497-0420 4-11-67	N/A	
563	ADD Temporary Dust Covers	K	77325 3/29/67	N/A 18808	CSE AOT Cover	N/A	AP-M-15664 N-843 4-20-67 \$5,200	CCA 497-0423 5-18-67	N/A	CCA 497-0424 Reduces Quantity from 36 to 22.
564	Implementation of Flat Pack Specs. RD 1002359 A & RD 1002358 B	R	77325 4/20/67	N/A 18879	ACC, ECR, Modules	See ECP	AP-M-15689 N-852 4-24-67	CCA 497-0477 7-31-67	N/A	
564 RI							AP-M-17281 N1376 10/24/67			
565	Addition of Tests to Determine Non-g Sensitive IRUF Bias	A	MA 220 N/A	18813	N/A	G&N	AP-M-16362 N1027 \$8,400 6-28-67	Disapproved BG 53-287 7-25-67		
566 F	Perform Tear-Down and Failure Analysis on Two Category IV Apollo 25 IHIG's	A	N/A	N/A 18810	IRIG	N/A	N/A	CCA-497-0423 4/10/67	712	Firm Proposal Only
567	CCRD Modification to Limit Output Voltage	A	77325 3-25-67	18800	CCRD		See Remarks			ECP will not be submitted -- Not Required.

Revisions
 6-6-67 11-24-67
 7-13-67 1-15-68
 8-16-67 3-8-68
 10-2-67 5-15-68

ECP LOG & STATUS

ECP No.	TITLE	Cont. Aff'd Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECF Budg. to NASA & Date	NASA Disposition Approved / Disapproved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
568F	Non-Metall- Materials Testing	A	7N350 4-18-67	18815 -1 -Z	Non-Metallic Materials GAN 202, 602 & on	N/A	N/A	N/A	CCA 497-0428 4-19-67 CCA 497-0428 R1, 6-1-67	1110	Firm Proposal Only CCA 497-0428 R2, dated 6-13-67 CCA 497-0428 R3, dated 8-5-67
569F	GNIC Panel Modification	A	7N352 4-4-67	18816 -1 -3 19840	GNIC	GAN 210 and Subs. Plus One Spare	GAN 202, 204 thru 209 and 2 sps.	AP-M-17376, N 1408 10/31/67 AF-M-18711-1 N1894 2-2-68	CCA 497-0429 4-19-67 0429 R1 11/15/67 CCA 497-0432 2-2-68	1017	CCA 497-052R1, 2-0-68, Authorized engraving fill of GAN 206, 208 & Subs plus spares. CCA 497-053R2 9-13-68 Authorizes GAN 205 Firm Quote (Overlay) 497-787-834-1 AJH 4-16-68
570	Auxiliary Battery Pack Extended Capability	A	RFC 634 3-20-67	18818 19885	ABP	N/A	2 Units	AP-M-19219 N1031 6-29-67 \$6,100 AP-M-19668 N-3189 8/27/68	CCA 497-0565 5-2-68	1024	Proposal 497-818-874-AJH 7-28-68
571	EC: OR RECORD to Remove Shock Recorders From Shipping Containers	A	N/A	N/A	See ECP	/A	All Containers	DBS-5-7-102 6-27-67	CCA 497-0464 7-20-67	1024	
572	PSA Gasket Replacement	A	N/A	18824 18859 -1	PSA Bl. II	GAN 210 & Subs.	GAN 204 thru 209 Plus 3 Spares	AP-M-15921 1965 5-17-67 \$13,380	CCA 497-0456 7-6-67 * 0456R1 9/29/67	1015	* Requalification of new Gasket Disapproved.
573	BLK I/100 & Block II Parts Gen'l. Reduction	A	N/A	18838-1	N/A	N/A	/A	497-657-s-3 5-27-67	CCA 497-0443 6-1-67	1073	

6-6-67 Rev 10-2-67
 7-13-67 11-29-67
 7-16-67 1-18-68
 10-2-67 5-15-68
 10-2-67 10-7-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
574F	Stop Work on B1 Module	R	N/A	18804	B1 Module	S/N Rev101	N/A	N/A	497-0422 4-10-67	N/A	Firm Proposal Only
575	Modify GPP GSA Power Supply for Spares Usage	R	N/A	18859	GSE	N/A	N/A	AP-M-16252 1-20-67 AP-M-1900 6-26-67	CCA 497-0465 1-20-67	N/A	
576	Block II Fixed Memory Module Production Capability Maintenance	R	N/A	19250	APC Core Rope Module	Last 95 Fixed Memory Modules	N/A	AP-M-17544 11-11-67 AP-M-17547 1-14-67 AP-M-17548 6-25-68	CCA 497-0544 2-23-68 CCA 497-0544 6-25-68		See AP-M-19766-13224 For Purchase Information
577	Add Isolation Mode to LEM FSAMM's	A	7N368 5-9-67	188274	LEM FSAMM	N/A	S, N 1 - 7	AP-M-16177 11-15-67 AP-M-16177 1-16-67	497-0432 5-9-67 CCA 497-0432 1-10-67	1024	ECP Cover Letter Corrected Per AP-M-17035, N1289 9/26/67
578	ECP RECORD For G&N Harness Repair Procedure	A	N/A		G&N Harness Block II, LEM	/	/	497-691-AH 1-1-67	CCA 497-0489 8/28/67 CCA 497-0489 RI 8/29/67		
579F	APTES Qualification Plan for Block II	A	N/A	N/A 18823	OJA	N/A	OJA, S/N 13, 23	AP-M-16261 11-26-67 AP-M-16261 1-10-67	CCA 497-0438 5-31-67	1108	

7-13-67 Revision 48
 7-16-67 3-8-68
 10-2-67 5-15-68
 11-24-67

ECP LOG & STATUS

ECP No.	TITLE	Cont. Aff'd.	Basic Document	REC'D & Date Rec'd	CE # & Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date Rec'd	REMARKS
580F	Block II GAM BCI Qualification System	A	N/A	N/A	18889	G&Y	N/A	N/A	N/A	CCA 497-0435 5-22-67	1074	Firm Proposal Only
581	ECP OF RECORD For GSE Cable, W163 Modification	A	RPC 636	N/A	N/A	GSE Block II Cable Set	N/A	S/N 1 thru 12	AJK-6-7-135 6-30-67	CCA 497-0466 7-20-67	1024	
582F	Block II GAM BCI Qualification System W163 Modification GAM System 602 Flammability fixes	A	RPC 636	N/A N 383R1 8-11-67	18836 -2 -3	ICK, AOT, P&R, SCA, C&U, INU, CCRD	N/A	9/11/67 GAM 602	AP-M-18836-11979 5-14-68	CCA 497-0441 6-1-67	1094 1099	CCA 497-0441 R2, dated 6-14-67 CCA 497-0441 R3, dated 8-15-67 For ACT Insulation changes see ECP ACSSK-063?
583F	Interim Hold on AOT Heater Blankets	A	N/A	N/A	18831	AOT	N/A	N/A	N/A	CCA 497-0437 5-19-67	N/A	Firm Proposal Only
584F	AMS DSKY Keyboard Modification	R	N/A	N/A	18837	DSKY	N/A	S/N 16, 19, 20, 27, 32, 33	N/A	CCA 497-0442 6-1-67	N/A	Firm Proposal Only
585F	ETP Pre-amplifier Capacitor Replacement	A	N/A	N/A	18850	DMU	N/A	18 Modules	AP-M-17096 N 1310 10/6/67	CCA 497-0449 6-14-67	1009	

7-13-67 Revisions
 8-16-67 1-2-68
 10-2-67
 11-24-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	Ir-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
586	Refurbishment of OUA GAN 201A	K	N/A	N/A	N/A	OUA GAN 201A	N/A	OUA GAN 201A S/N 11	AP-N-16960, N1265 9-18-67	CCA 497-0494 6-20-67	N/A	
587	IRIG Gyro End Cap Replacement	A	N/A	N/A	N/A	IRIG Gyro IMU	GAN 211 & Subsequent GAN 608/8 Subsequent	GAN 603, 605 thru 607, 609 2 Spare IMU's thru 209, 2 Spare IMU's plus 37 IRIG's	AP-N-16133 N 984 6-13-67 \$ 223,050	CCA 497-0490 7-20-67 C470 RI 8-11-67 C470 R2, dated 9-28-67	1009	CCA 497-0470 Authorizes IMU S/N 9, 23, and 6 only. C470R3, 10/4/67 C470 R4, 10/4/67
588	DSKY Power Supply Overvoltage	R	RRP R-10166	N/A	N/A	DSKY	DL & Sub's	DL thru DL40	AP-N-1633C N1040 7-6-67 \$ 270,000			Disapproved BG53-776, 11/22/67
589	Implementation of FC 2016007	R	RRP R-10165	N/A	N/A	DSKY						ECP Cancelled. Effort included in cover letter for ECP 0504, R2.
590	Removal of Anti-Creep Module	A K	N/A	N/A	N/A	PSA OUA	PSA: GAN 208, & Sub's 204, 205, 209, & Sub's 209, & Sub's Plus one Spring & Collect Assy	PSA: GAN 208, 205, 207 OUA: GAN 205, & 207 PSA: GAN 208, 205, 207, & 208, 1 Sub's	AP-N-17470, N 1443, 10/9/67	CCA 497-0448 6-19-67 C446, RI 8-9-67	1015 1108	CCA 497-0459RI Authorizes the Removal of the Anti-Creep Module from GAN 202,
591	Block II Eye-piece Mechanical Design Changes	K	N/A	N/A	N/A	See ECP	N/A	N/A	AP-N-16334 N1042 7-6-67 \$ 19,000			Disapproved BG-53-279 7-20-67

Revisions
 7-13-67
 7-16-67
 10-2-67
 11-24-67
 1-10-69

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budge. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budge. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8694 - Date & Rev.	REMARKS
592	Deletion of one jumper module, P/N 1003763-021	R	R-TWX 587-1231P	N/A	N/A	Jumper Module	N/A	N/A	AP-M-16908 N1034 7-3-67	CCA 497-0467 7-20-67	N/A	
593F	GAM Explosive Atmosphere Testing		N/A	TN394 6-7-67	N/A	GAM	N/A	N/A	N/A	CCA 497-0445 6-13-67	1110	Firm Disposal Only. Firm report submitted to NASA via AP-M-17757, N1534, Dated 1. December 1967
594F	Flammability Protection of the CCRD Assembly	A	N/A	N/A	N/A	CCRD	GAM 610 & Subs. & one Spares	GAM/605, 606, 607, & 608 609 & two Spares	AP-M-17350, N 1399, 10/27/67	CCA 497-0446 6-14-67 CCA 497-0446, RI 6-30-67 CCA 497-0446, RI 6-30-67	1079	0446 R2, 10/4/67 adds G&N 6C to effectivity 0446 R3 12/20/67 CCA 497-0532, 1, 2-20-68, Auth. engraving. Fill of GAM 605 & Subs plus spares Firm Quote 497-787-834-1-WFH N/16/68 (Overlay)
595	ECP OF RECORD to change Potentiometer FROM 2K TO 5K in PTC and LTC	A	RPC 637 6-20-67	N/A	N/A	PTC LTC	N/A	4 LTC's 17 PTC's	AJH-6-1-134 8-2-67	CCA 497-0450 9/21/67	1024	
596F	IM-2	A R K	ERP K-210		18844-1 -1 -3 -4	IM-2	N/A	G&N 603	AP-M-18334-N1940 5-1-68	CCA 497-0450 6-14-67 0450, RI 8-16-67	N/A	
597F	CSM-101	A R K			18845-1 -1 -3 -4	CSM-101	N/A	G&N 204	AP-M-17287 N 1364 10/24/67	CCA 497-0447 6-14-67 0447, RI 7-31-67	N/A	See CUA for Exceptions

Revisions
 7-12-67
 8-16-67
 10-2-67
 11-24-67

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	REC# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	Disapproved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
598F	Maintenance of IRIG Repeater Specs. and Drawings	A	N/A	N/A	18846	N/A	N/A	N/A	N/A	CCA 497-0451 6-14-67		1020	Firm Proposal Only
599F	Apollo IRIG Bearing Improvement Proposal (Preliminary)	A	N/A	N/A	18861	IRIG	N/A	N/A	AP-M-16236 N 1022 6-23-67 \$ 21,700 AP-M-1430 N 1022 \$ 1,100,000				ECP 5999 included in Supplemental Agreement 107
600	Follow-on Repair and Evaluation of Apollo II IRIG (7A Series)	A	RFC 638	N/A	18855	PFC LTC	N/A	4 LTC's 1 PFC's	AP-M-16450 N 1075 \$ 9,500 7-1-67				
601	PFC II Internal Failure Alarm Indications and Inhibit Override Capability	A	RFC 639	N/A	18854	PFC	N/A	4 LTC's 17 PFC's	AP-M-16450 N 1075 \$ 9,500 7-1-67				
602	External Warning Bell for PFC II	A	RFC 639	N/A	18854	PFC	N/A	4 LTC's 17 PFC's	AP-M-16450 N 1075 \$ 9,500 7-1-67				
603	Modification of SCA Repeater Event Circuit Block II & LEM Flight Qual.	A	N/A	N/A	18856	SCA Block II & LEM Flight Qual.	N/A		AP-M-16450 N 1075 \$ 9,500 7-1-67				
603	Capacitor Replacement in MSA and Quad. Reject Module	A	N/A	N/A	18857	ECU	N/A	G&N 203-209 plus 3 Blk II Spares G&N 603, 505-609 plus 3 LEM Spares 2-46-68	AP-M-16450 N 1075 \$ 105,000 AP-M-16450 N 1075 \$ 7,200 AP-M-16450 N 1075 \$ 1,382.12	CVA 497-0475 7-26-67 -0473, PL 7-14-67		101	AP-M-16450 N 1075 \$ 105,000 AP-M-16450 N 1075 \$ 7,200 AP-M-16450 N 1075 \$ 1,382.12 Includes 4 Spare Modules Proposal 497-753-750/751-A.B.

Revisions
7-13-67
8-16-67
10-2-67
11-24-67
1-15-68
3-8-68
5-15-68
10-7-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budge. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budge. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
604	AGC Erasable Memory Unit	R	N/A	N/A	N/A	AGC	C-13 & Subsequent	C2 thru C10 & C12	AP-M-18271-11029 6-28-67 AP-M-17487-11447 11/10/67	CCA 497-0460 7-13-67 CCA 497-0460R1 3-21-68	N/A	TXK AP-M-18023, N1607, 1-23-68, Requests CCA Rev. Req Sub Assembly Qual Testing \$27,500 CCA 497-0460R1 Covers RI & RE Firm Quote - 497-781-768-AJH, 3-15-68 604R2-AP-M-18421, N1749, 3-21-68 Ref.: ECP ACSK 0696 & 0696R1
605	IMU Blanket Removal	A	N/A	N/A	N/A	IMU/PEA - IMU/PEA Block II - Hose Assy.	G&N 209 & Subsequent G&N 608, 511, 608R2, and subsequent G&N 211 - 2 spares & Subs.	G&N 202-208 plus 2 spares G&N 608, 511, 608R2, and subsequent 607, 609, plus 2 spares G&N 202-210 plus 2 spares	AP-M-17741-11527 12/21/67	CCA 497-0495 7-5-67	1009	Conversion of heater blankets to GSE blankets Disapproved per B053-35, 1/9/68
606	G&N 207-211 System Change	A	N/A	N/A	18853	N/A	N/A	N/A	N/A	CCA 497-0452 6-15-67 CCA 497-0452 RL, 6-23-67	1019	Firm Proposal Only.
607	Refurbishment of G&N 203 IMU and ECDU	A	N/A	N/A	18851 -1 -2 19727	IMU ECDU	N/A	G&N 203	AP-M-16672-11228 3-12-67 \$ 30,589 AP-M-19641-11100 8-21-68	Disapproved B053-377, 10/18/67		Firm Proposal 497-858-905-AJH 12-12-68
608	Elimination of CFBC Race Condition	R	ERP 8-10169	N/A	N/A	AGC	C-24 & Subsequent	C-1 thru C-23 200R & 200C	AP-M-16758-11183 8-25-67 \$ 162,200 AP-M-16910-11241 9-12-67 \$ 162,200	Disapproved EPT-57-462 10/14/67		
609	Elimination of ECDU DAC Saturation during C/A	A	N/A	N/A	18876 -1	ECDU	G&N 210 and Subs. G&N 610 and Subs	G&N 203-209 plus 1 Blk II Spares G&N 605-609 plus 3 LEM Spares	AP-M-18210-11672 2-26-68	CCA 497-0474 7-27-67 -0474 RL 9-14-67	1013	G&N 203 & Subsequent plus 3 Spares G&N 605 & Subsequent plus 3 Spares Approved 497-751-780/781 AXK

8-16-67 Revising 58
 10-2-67 5-9-68
 11-24-67
 1-16-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd. Document	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
610	System CSM 17 Retest and Retrofit	A	N/A	N/A	N/A	DMU	N/A	7221 1	AP-M-17272 N 1369 10/20/67 \$1147,100	CCA 497-0461 1-10-67		
610 RL					18881				AP-M-17375 N1407 10/31/67			
611	Dvsn L in Recorder	I	N/A	N/A	N/A	GSE	5 Fwd Prod 1 Proto-type 1 Bread-board	N/A	AP-M-17272 N 1369 10/20/67 \$1147,100			
612F	Retrofit GSK System 202 (CSM 17)	I	N/A	N/A	N/A	CSM 098	N/A	GSK 202	AP-M-18211 N-1673 2-27-68	CCA 497-0459 7-7-67 CCA 497-0459 RI 7-14-67 COS 167-0459 BE 7-21-68	1011 1017 1009 1015	
613	MSC Criteria and Standards	A	N/A	RECP 77413 6-22-67	18866							ACED requested rescind of RECP per AP-M-17829, N1555 12/21/67 RECP rescinded by JCH3 Dated 2-14-68
614F	Modification fo IEM M-6 PSA and SCA Header (Flammability Models)	A	N/A	N/A	18865	PSA SCA	N/A	M-5 Only	N/A	CCA 497-0461 1-13-67	N/A	Firm Proposal Only
615F	IEM "A" Harness & DSKY Face Modification (Flammability Model)	A	N/A	N/A	18860	IEM A Harness	N/A	M-5 Only	N/A	CCA 497-0457 1-7-67	1004	Firm Proposal Only

8-16-67 Rev 10-2-68
 10-2-67
 11-24-67
 1-15-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Document	RECP # & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date	REMARKS
616F	GSM 103 Configuration	ARRK	N/A	N/A	N/A	GSM 103	N/A	G&N 206	AP-M-16808-1925 4-24-68	CCA 497-0469 7-20-67 0469RL 9/29/67	1108 1105 1009 1015 1017 1099	
617F	Vibration and Shock Tests of Optics Shroud	A	N/A	7M-23 7-6-67	N/A	Optics Shroud	N/A	N/A	N/A	CCA 497-0463 7-20-67	1074	Firm Proposal Only
618F	IM-3 Configuration	ARRK	NA	NA	NA	IM-3	N/A	G&N 605	AP-M-18448-1756 3-21-68	CCA 497-0468 7-20-67	1001 1015 1010 1004 1099	
619	Non-Metallic Materials Flammability Modification for PFA	A	N/A	N/A	N/A	PFA			AP-M-16670 11142 8-14-67 \$ 10,000			Disapproved EG 44-231-67-86-53-305 8-15-67
620 RL	Non-Metallic Materials Flammability Modification for PFA	A	N/A	N/A	N/A	PFA	G&N 210 & Subs.	G&N 202 204-209, 2 Spares	NA AP-M-16667 11139 8-14-67 \$ 10,000 AP-M-17374 11406 10/31/67	CCA 497-0488 8-23-67	1009	
621 RL	Non-Metallic Materials Flammability Modification for CH/PFA	A	N/A	N/A	N/A	Block II PFA	G&N 210 & Subs.	G&N 202, 204 - 209, 3 Spares	NA AP-M-16664 11136 8-14-67 \$ 15,000 AP-M-17374 11403, 10/31/67	CCA 497-0491 8-23-67	1015	

8-16-67 Revis(ons) - 66
 10-2-67
 11-24-67
 1-15-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP# & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity	BCP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date & Rev.	REMARKS
622 RI	Non-Metallic Materials Flammability Modification for IM/PSA	A	N/A	N/A	N/A 18815-4	LEM PSA	G&N 610 & Subs. G&N 602, 603, 605 thru 609, 3 Spares	AP-M-16665 N1137 8-14-67 \$ 15,000 AP-N-17606, N1483 12/6/67	CCA 497-0484 8-23-67	1015	
623 RI	Non-Metallic Materials Flammability Modification for CM/SCA	A	N/A	N/A	N/A 18815-4	Block II Signal Conditioner	G&N 211 & 204 - 210 Sub. One Spare SCA, One Spare Header	AP-M-16669 N1141 6-14-67 \$ 15,000 AP-M-17608, N1485, 12/6/67	CCA 497-0483 8-23-67	1099-2	
624 RI	Non-Metallic Materials Flammability Modification for IM/SCA	A	N/A	N/A	N/A 18815-4	LEM Signal Conditioner	G&N 610 & Subsequent One OP. Header	AP-M-16668 N1140 8-14-67 \$ 15,000 AP-M-17601, N1484 12/6/67	CCA 497-0490 8-23-67	1099	
625 RI	Design of Computer Erasable Memory	R		7M-438	18868	AGC					Cancelled - Effort included in ECP AGSK-0604RI
626 RI	Modification of LEM Harness Group for Flammability Protection	A	N/A	N/A	N/A 18815-4	LEM Harness	G&N 608 & Subsequent One LEM "A" Barn. two LEM "B" Harnesses	AP-M-16674 N1145 8-14-67 \$ 30,000 AP-M-17739, N1525, 12/20/67	CCA 497-0497 9-5-67	1094	
627 RI	Modification of Block II Harness Group for Flammability Protection	A	N/A	N/A	N/A 18815-4	Block II Harness	G&N 210 & Subs. 2 Spares	AP-M-16673 N1145 8-14-67 \$40,000	CCA 497-0485, 9-5-67	1017	

7-16-67 Revisions - 13
 10-2-67 5-15-68
 11-24-67 10-7-68
 1-15-68 1-19-68

ECP LOG & STATUS

ECP No.	TITLE	Concr. Aff'd Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line & Sub.	Effectivity Retrofit Unit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date	REMARKS
628	ESU Redesign as a result of Flammability study	A	N/A		ESU	GMN 210 & Sub.	GMN 202, 204 - 209, One Qual. Unit	AP-M-16671 N1143 8-14-67 \$ 250,000 AP-M-18930-0552 N1975 3-27-68	CCA 497-0498 9-5-67 CCA 497-0552 3-27-68	1105	628R2-AP-M-19100-R2044 6-2-68 Proposal 497-812-862-AJH 7-11-68
629	Optics Shroud Redesign	A	N/A		Optics Shroud	GMN 210 & Sub.	GMN 202, 204 - 209	AP-M-16675 N1147 8-14-67 AP-M-18806-0552 N1923 1-24-68 \$ 30,000	CCA 497-0499 9-5-67 CCA 497-0552 3-27-68	1017	629R2-AP-M-19101-R2045 6-2-68 Proposal 497-812-862-AJH 7-11-68
630	Nav. Base Metallic Tape	A	N/A		Nav. Base Block II	GMN 210 & Sub.	GMN 202, 204 - 209	AP-M-16666 N1136 8-14-67 \$ 5,000 AP-M-17131 N1973 10/23/67	CCA 497-0486 8-23-67	1011	
631	Replacement of RTV-102 with RTV-109	A R	N/A		ECDU PSA AGC PSA PFA	N/A	See ECP	AP-M-16672 N1144 8-14-67 \$ 1,500 AP-M-18123 N-1642 2-14-68	CCA 497-0492 8-23-67		
632	CUA Eyepiece Flammability Fixes	K	N/A		CUA Eyepieces and ESU	N/A	GMN 202, 204 and Subsequent Plus Spare	TXK AP-M-17000 N1273 9-20-67 AP-M-17577 N-1476 11/24/67 \$195,600	CCA 497-0524 12/6/67 CCA 497-0524R1 2-2-68 CCA 497-0524R2 3-27-68	1074 1105	632R2-AP-M-19240-R3004 7-2-68 632R3 - AP-M-19922-R3317 10/15/68 Firm Proposal 497-861-908-AJH 1-9-69
633	ACT Blanket Replacement and Flammability Fixes	K	N/A		ACT	ACT 613 & Sub.	ACT 602, 606-612	TXK AP-M-17288 N1395 10/24/67 \$94,500 AP-M-18209 N-1671, 2-26-68	CCA 4970 0520, 11/15/67 -0520R1 12/20/67	N/A	633R2-AP-M-18594-R1882 4-2-68

8-16-67 Revisions

10-2-67
11-24-67
1-15-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 3604 - Date & Rev.	REMARKS
634F	Procurement of two (2) CM DSKY Assemblies		N/A	N/A	N/A	DSKY	N/A	N/A	N/A	CCA 497-0476 7-27-67 0476RL 9/20/67	N/A	Firm Proposal Only
635F	Failure Analysis of Block I IRIG's, S/N 3A-26, S/N 5A-6	A	N/A	N/A	N/A	IRIG	N/A	N/A	N/A	CCP 197-0471 7-26-67	773	Firm Proposal Only
636	Operation Console DSKY Dimmer Resistor Change	R	ERP 10171	N/A	N/A	Operation Console Assembly	N/A	Prototypes S/N 1 & 5 Prod. Units S/N 2, 5, 7, 13, 6, 9, 10, 11, 12	AP-M-17209 N 1386 10/24/67 \$7,700	Disapproved BG 53-757 11/15/67		
637F	Flammability Protection of ACT Seal	K	N/A	N/A	N/A	ACT	N/A	M-6 GRN 602, 605, 608	AP-M-17210, N1349 10/17/67	CCA 497-0476 8-9-67		
638	IDM Functional Vibration Screen	A R	N/A	N/A	N/A	DSKY	See ECP	D-1 thru D-5, D-7 thru D-11	AP-M-16791 N1197 8-30-67 \$ 787,784 AP-M-16858 N1234 9-11-67	ECP 0638 Disapproved BG 53-329, 9-14-67 ECP 0638 RI Disapproved BG 53-337 9-21-67		
639	ACT Corrosion Protection	K	ESP K-109	N/A	N/A	ACT						ECP Not submitted by AC Electronics See AP-M-16822, N1208 dated 9-1-67

10-2-67 Revisions
 11-24-67
 1-15-68
 3-8-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Ref.	REMARKS
640	Level-of-Effort for MSC	A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CCA 497-0490 8-9-67	N/A	Firm Proposal Only
641	Non-Metallic Materials Modification for DSKY	R	REF R-10100	N/A	N/A	DSKY	D30 and Subsequent	Proto: S/N 137C Series S/N 28 & 30-D Series D3, D4, D7 thru D29	TXK AP-M-16730 N1167 8-22-67 AP-M-15059 N162, 1-29-68	CCA 497-0500 9-3-67 0900RL 9/21/67 0500K2 10/18/67	N/A	----- 100% Subsequent effort required 100% all material fabricated
641					18894							
642	Modification of CAN Failure Detect Module (Flight Watch-Man) for Rejection of Extraneous Pulses	A	N/A	7M75 9-22-67	N/A	AGC Failure Detect Modules	N/A	G&N 122, 123 and 2 Spares	TXK AP-M-16730 N1169 8-22-67 \$ 9,000	CCA 497-0482 8-23-67	N/A	
642					18895							
643	Beryllium Corrosion Protection of OUA	K	N/A	N/A	N/A	OUA	N/A	OUA S/N 13, 15, 16, 17, 18, 20	TXK AP-M-16744 N1174 8-23-67 \$ 64,000	Disapproved 83 53-329 9-14-67	N/A	
643					N/A							
644	Procurement of Core Material for Rope Modules	R	N/A	7M79 8-17-67	N/A	Block II AG	6th. & Subsequent Block II Flight Systems	N/A	N/A	CCA 497-0493 8-24-67	N/A	Firm Proposal Only
644					18885							
645	Increase Scope of Effort for Field Operations	A R K	N/A	N/A	N/A	N/A	N/A	N/A	AP-M-16714 N1244 7-13-67 \$1,066,700 AP-M-16122 N-1641 2-11-68	Disapproved per TXK PPT-67-2023 358,10/8/67	N/A	Supplemental Agreement KSC-1 & SA128
645					19234							

12-2-67 Rev. 111
 11-24-67
 1-15-68
 3-2-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Buds. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
646	ACC Vibration Fixture Modification	R	N/A	N/A	N/A	ACC	C-28	N/A	AP-M-16138 N1214 \$ 10,000 AP-M-17614 N 1551 1/10/68	CCA 497-0503 7-14-67	N/A	2-4-68-AP-M-18959-N-1996 20 May 1968 Tech. Concurrence PPT-68-245 8-9-68
646 RL												
647	ECP of Record for GSE Cable Set W133	A	RFC 640	N/A	N/A	GSE	N/A	S/N 1-13	AP-M-17611, N 1500 12/15/67	CCA 497-0530 1/9/68	1024	ECP OF RECORD
648	PSAAM Retaining Spring Modification	A	RFC 641	N/A	18891	Block II PSAAM GSE	N/A	8 Units	AP-M-17568, N 1472, 12/5/67 \$7,950			
649	Category IV Repair of Gyro S/N 7A-121	A	N/A	N/A	N/A	IFIG	N/A	N/A	N/A	CCA 497-0434 6-24-67	N/A	Firm Proposal Only
650	Documentary Photography for Discrepant Materials	A	N/A	74464 8-16-67	N/A	N/A	N/A	N/A	N/A	CCA 497-0436	1124	Firm Proposal Only
651	Add a Momentary Light indicator switch in the TCL & A EL Lamp interrupt relay in the GDB	A	RFC 642	N/A	18892-1 18889-1	GSE GDB & TCL	N/A	CTA-20units GDB-19units	AP-M-17270 N 1357 10/24/67 \$19,300			Disapproved B653-716, 11/22/67

11-24-67 Revisions
 1-15-68
 3-9-68
 5-15-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Cancelled	CTA 8604 - Date & Rev.	REMARKS
658	Flammability Models of G&N Equipment	A R K	N/A	7N507 9/19/67 19224	18898- 19224	Flamm. Modules	N/A	N/A	AP-M-17496, 0519, 11/10/67 \$21,750	CCA 497-0519 11/15/67	1113	
659	G&N Environmental Protective Covers	K A	N/A	7N408 9/19/67 18897 18897/19723	18897 18897/19723	GSE	New Proc. 10 Sets	N/A	AP-M-19579 11-31-67 8-14-68 \$43,400 AP-M-19993-N3318 10-15-68	CCA 497-0591 8-29-68 CCA-497-0591 Rev. 11-14-68		NASA TRX BC44-370-66-887-301 10-2-68 Concurs with Fiberglass Container Firm Proposal 497-852-904-AUH 11-22-68
659 RL												
660	Replacement of 1010271 Transistor	A	N/A	N/A	N/A	PSA	N/A	N/A	TRX AP-M-17195, 11-30-67 \$19,000 TRX AP-M-17730, 11-20-67 12/12/67	CCA 497-0533, 2-6-68 Approved R1		
660 RL												
661	Add Spacer to LEM GSE Connector Covers (ECP of Record)	A	RFC 644	N/A	N/A	GSE Connector Covers	N/A	22 Sets	AUH-11-7-22-67 12/19/67 2-2-68	CCA 497-0513, 10/26/67	1024	
662	Removal of Ethylene Glycol Spillage from G&N Equipment (GSE Kits)	A	N/A	7N499 19221-1	19204 19221-1	GSE	N/A	N/A	AP-M-17732, 11-522 12/15/67	CCA 497-0513, 10/13/67	N/A	5 GSE Kits
663	System Conversion	A	N/A	7N512 19251 19290-1	19206 19251 19290-1	G&N Systems	G&N 622, 622, Only	N/A	AP-M-17486, 11-9-67 \$2,661,800 AP-M-19280-N3019 7-5-68	CCA 497-0540, 2-15-66 Approved one System Conversion		CCA 497-0540R1 4-18-68 All Equip. add Numbers
663RL												663R-2 AP-M-19498-N3113 8-2-68

11-24-68
1-23-69
3-2-69
5-2-69

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd	Basic Documents	RECP # & Due Date	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit:	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA #604 - Date	REMARKS	
664	Mod Systems for IM-4, IM-5 and IM-6	A R K	N/A	N/A	N/A	GM System	N/A	GM 606, 609, 607	AP-M-18807-1924 4-24-68	CCA 497-0509 10/4/67	1019		
665	Mod Systems for GM 104 and GM 106	A R K	N/A	N/A	N/A	GM System	N/A	GM 209, 206	AP-M-18804-1922 4-24-68	CCA 497-0510 10/4/67	1019		
666	Automatic Degasser for Apollo FPA	A	N/A	N/A	9213	GSE	New Procurement	N/A	AP-M-17731-1921 12/20/67 \$22,200			Disapproved B053-35, 1/9/68	
667	GM Harness Redesign for VFF Ranging	A	N/A	7W513 9/29/67	9207	GM Harness	GM 210 and Subs.	GM 205 & 2 Spares	AP-M-18278, N-1700, 2-28-68, AP-M-18631-1845 4-5-68	CCA-497-0515 10/2/67 0515R1 3-21-68	1017	CCA-497-0515	
668	Four Volt Noise Margin Test	R	ERP R-10172	N/A	N/A	AGC	6 Units CE, CH, C5 & C6	N/A	AP-M-17896, N-1573 1/10/68 \$14,300	CCA 497-0516 4-2-68		Disapproved B053-113 2-2-68	
669	IM Shipping Container Decal Temperature Change	A	ERC 645 10/17/67	N/A	N/A	IM Shipping Container	N/A	S/N 1-				Cancelled See Remarks	ERC Disapproved - Not Submitted

Revisions
 1-24-68
 1-15-68
 3-8-68
 5-15-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP # & Date Recd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS
670P	ECDU Fine Align. Transient Modification	A	N/A	N/A	N/A	ECDU	N/A	N/A	TXW AP-M-17372, N 1404, 10/31/67 \$10,440	Disapproved B653-757 11/15/67		
671	ECP of Record for AGC Wiring Change for ACM	R	ERP R-10170 RL									ECP Cancelled -Not to be submitted
672 F	Modification of SCA/PSAAM Adapter Cable ECP of Record	A	RPC 646	N/A	N/A	SCA/PSAAM Adapter Cable	N/A	4 Units	AJH-2-6-044 3-1-68	CCA497-0523, 11/22/67	1024	
673	DSKY Pushbutton Cap Housing Assembly Leaf Spring	R	ERP R-10191	N/A	N/A	DSKY	D30 and Subsequent (D38-in-line by Waiver)	13	TXW AP-M-17440, 11/6/67 \$50,000 AP-M-18364-1727 thru #29 3-8-68	CCA 497-0517, 11/9/67 051731 12/30/67	N/A	G&N 20E & 602 retrofit only if failure occurs.
673RL												
674	Noise Reduction in GSE	R	ERP R-10186	N/A	N/A	GSE	See ECP	See ECP	AP-M-17442, N 1426, 10/6/67 \$68,200 AP-M-17902, N 1576, 1/9/68	Disapproved B6-53-821, 12/6/67 CCA 497-0535, 2-2-68	N/A	
674 RL												
675	Implementation of 100% X-Ray of Flat Packs	R	ERP R-10197	N/A	N/A	DSKY ECDU	Last five Flat Pack Lots	N/A	AP-M-17429, N 1426 \$11,900 AP-M-18050C, N-1618 \$14,000	Disapproved B653-776, 11/22/67 Disapproved B653-107 2-23-68		0675C1-AP-M-17467, N 1439, 11/8/67
675 RL												

1-24-67 Revisions
 1-15-68
 3-8-68
 5-15-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP # & Date Recd	CE # Budg. Firm	Equip. Affected	In-line	Effectivity	EC. Budg. to NASA & Date	NASA Disposition Approved	Disapproved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
676	Qualification of Second Source for DSKY IDM Relays	R	N/A	N/A	N/A	DSKY	N/A	N/A	AP-M-17710, N 1524, 12/11/67 \$30,000		Disapproved BG53-25, 1/9/68		
677	Failure Mode and Effect Analysis	A	N/A	78515, 9-15-67	19217	N/A	N/A	N/A	AP-M-17559, N 1468, 11/20/67, \$214,800		Disapproved PFT-68-290 9-20-68		
678	Apollo II IRIG Harness and End Cap Assembly Problem	A	N/A	N/A	N/A	Apollo II IRIG	GAM 210 and Sube GAM 610 and Sube	GAM 203 -209 plus 2 Block II Spares GAM 603, 605 -609 plus 2 LEM Spares	AP-M-18928-11973 5-14-68	CCA-497 -516 11/7/67 -516 RL 11/22/67		1009	508/ 908/ 909/ 910/ 911/ 912/ 913/ 914/ 915/ 916/ 917/ 918/ 919/ 920/ 921/ 922/ 923/ 924/ 925/ 926/ 927/ 928/
679	Inertial Component Test Data	A	N/A	78516 10/16/67	19220 - 19246	IRIG & FIP Assemblies	N/A	N/A	AP-M-17843, N 1562 1/4/68 \$191,700 AP-M-18085, N 1532, 2-8-68 \$142,800	CCA 497 -0537, 2-6-68 Approves RL		1116	
680	Testing of AGC Bus A & Bus B Diodes for Shorts & Opens	R	ERP-R 10179	N/A	N/A	AGC/GSE Interconn. Set	N/A	11 Sets	AP-M-17738, N1524, 12/20/67 \$28,500		Disapproved BG53-113 2-2-68		
681	E-Memory Module Procurement	R	N/A	N/A	N/A	E-Memory Modules	N/A	N/A	AP-M-17498, N1450 11/10/67 \$225,000		Disapproved BG53-776 11/22/67		Related to ECP 604R1 10 Spare modules approved per NASA Letter BR93-790

Revisions
1-24-68
1-15-68
3-8-68
5-15-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Return	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
682	ECP of Record for the Deletion of the D&C Group Drawing	A	N/A	N/A	N/A	D&C Group	N/A	N/A	AP-M-17652, N-1506, 12/15/67	CCA 497-0529, 1/9/68	1017	
683	Modified Filling of Engraved Characters on GNIC CCRD Panels	A	N/A	77545 1-2-68	19843	GNIC Panel, CCRD	GNAN 218 GNAN 617 end Subs.	GNAN 205, 206, 208-211 plus one spare. GNAN 606, 607, 609-616 plus two spares	AP-M-18386-N173E 3-8-68 \$37,700	Disapproved B653-280, 3-20-68		////////////////// ////////////////// ////////////////// ////////////////// ////////////////// ////////////////// //////////////////
684	New Expanded Capability E-Memory Test Station	R	REP E-10166	N/A	N/A	GSE						ECP Cancelled by AC Electronics 1/10/68. Not to be submitted
685	E-Memory Module Encapsulant Evaluation	R	N/A	N/A	N/A	AGC			AP-M-17545, N1464 11/16/67 \$150,000	Disapproved B653-871 12/20/67		
686	GNM Mock-Ups for MSC-1 & MSC-2	A	N/A	N/A	N/A	GNM System	N/A	N/A	REP 14874952, 10/15/67 NA 12/12/67	CCA 497-0522 10/15/67 \$522 RL 12/12/67		New Procurement for MSC-1 & MSC-2 Firm Proposal Only
687	Test of Flight Reps in Computer	R	REP E-10176	N/A	N/A	Fixed Memory Modules	Remaining 12 Sets	N/A				ECP Cancelled by AC Electronics not to be submitted

1-15-68
3-8-68
5-15-68
10-7-68

ECP LOG & STATUS

ECP No.	TITLE	Concr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved Canceled	CTA 8604 - Date & Rev.	REMARKS
688	Modification of IMU to Reduce Sporadic Oscillation of the IRIG Preamp.	A	N/A	N/A	N/A	IMU	G&N 211 & G&N 611	G&N 202 - 210 G&N 602, 603, 605 - 610 & All Spares		TRX AP-M-17762, N 1537 12/14/67 \$25,000 TRX AP-M-17888, N1558 12/28/67	CCA 497-0527, 1/1/68	1009	688R2-AP-M-18835-N1941 5-1-68
688 EL					19236								
689	Block II G&N Flight Hardware Reuse Analysis	A R	R10196	7NS41 11-27-67	19231	A/B Equip.	N/A	N/A		AP-M-29176-NE07L 6-18-68 \$214,405	EC 44-390-68-JC33-1887 10-30-68		
690	Modification of O° Auto-collimator Plate Assembly	K	N/A	N/A	N/A	GSE Auto collimator Plate Assembly	N/A	12 Units					ERP will not be issued - not required S/N 1 & 2 at NR covered by ERP NR-210
691	ECP of Record To Add Insulator Strips to Breakout Box Cable Adapter	A	RFC 647	N/A	N/A	GSE Breakout Box	N/A	> Units		AJH-2-8-055 3-1-68	CCA 497-0549, 3-21-68	1024	
692	E-Memory Module Redesign	R	R-10195	N/A	NA								Cancelled-effort to be included in ECP-ACSK-0404R2
693	Monitor Critical Relays at DSKY Level	R	R-10194	N/A	N/A	DSKY	DE2 and Subs.	D3, D4, D7 through DE1		AP-M-18013, N-1606 1-23-68 \$117,200	CCA 497-0574, 5-23-68		AP-M-18931-N1976, dated 14 May 1968 Revised Budgetary to \$55,329. Proposal 497-823-885-AUH 7-25-68

3-8-68
5-15-68
10-7-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved	CTA 8604 - Date & Rev.	REMARKS	
694	Replacement of Erasable & Rope Driver Modules	R	R-10184	N/A	N/A	AGC	N/A	C2, C4, C5, & C6	AP-M-1866, N-1696 \$242,800 2-23-68	CCA 497-0560 4-24-68			
695P	ESU Latch and Heater Circuit Redesign	A	NA	NA	NA	ESU Eye-pieces	NA	NA	ACED Letter: 1-18-68, \$15,000 AP-M18026 N-1608			Withdrawn by AC Electronics per AP-M-16160, 1-13-68	
696	Recycle of AGC's for Incorporation of Changes	R	NA	NA	NA	AGC	NA	C8 thru C-10, C-12	AP-M-15037, N-1697 2-23-68 \$236,400 CCA 497-0560 4-24-68			Proposal 497-821-860-AJH 7-25-68	
696R1					19269-1			C5, & C6	AP-M-18618, N-1537 4-3-68				
697	AOT Harness Protective Shield	K	K-215	NA	NA	AOT	AOT 618 & Subs.	AOT 606-617	AP-M-18159, N-1765 3-21-68 \$7,200 CCA 497-0563R1 N3123 8-2-68			Proposal 497-824-871-AJH 7-25-68 CCA 497-0563R2 9-27-68	
697R1					19288								
690F	System G&N 122 Post-Flight Test	A	NA	NA	NA	G&N 122	NA	NA	NA	CCA 497-0538 2-7-68		Firm Proposal only	
699	Pre-Acceptance Readiness Review	A	NA	NA	NA	G&N Systems	G&N 210, G&N 610	NA	AP-M18670-N1861 4-11-68 \$195,800			Disapproved as In Scope	EC53-492- 4-26-68 Considers ECP In Scope

Revisions
2-8-68
5-15-68
10-1-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd Document	Basic Document	RECP# & Date Rec'd	CE # Budget Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. TO NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date Rev.	REMARKS
700F	Sneak Circuit Analysis	AR	NA	NA	NA	NA	NA	NA	NA	CCA 497-0536, 2-6-68 053681, 2-27-68	1115	Firm Proposal Only
701F	IRIG 2021500-121 Procurement	A	NA	NA	19245-1	IRIG	NA	CAT. IV Repair	NA	CCA 497-0539, 2-23-68 CCA 497-0539, 5-23-68	5184	Firm Proposal Only
702F	GSE Sertant and Telescope Cover Modification	K	NA	NA	19254	OVA Cover Assemblies	NA		AP-M-19279-13018, 7-5-68	CCA 497-0544, 2-23-68	1074	
703	Apollo G&N Simulation Capability	A	NA	NA	19256	NA	NA	NA	AP-M-18515-11786, 3-25-68 \$400,000 AP-M-19339-13045, 7-10-68	CCA 497-0567, 5-8-68		Proposal 497-810-881-AJX 7-11-68
703R1					19292							
704	Jumper Modules	R	RPC 10185, 10185-1	NA	NA	Fixed Memory Modules	NA	Alt. A (See ECP)	AP-M-18941, 3-26-68 Alt. A- \$27,200 Alt. B- \$209,100	CCA 497-0566, 5-8-68		704R1-AP-M-19803-13238 9-16-68
705	Buffer Resistors for Cross-Bar Switch Assembly	A	RPC 648, 3-1-68	NA	NA	GSE OTS	NA	19 Units 2 Bread-Boards 2 Spares	AP-M-18809-11926, 4-26-68 \$8,170	CCA 497-0573, 5-23-68		Proposal 497-819-884-AJX 9-22-68
705R1					19295				AP-19606-13193, 8-30-68			

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Recd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Re.rofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
T06	Vibration Fix for SXT Eyepieces in ESU	K	NA	NA	NA 19270	SXT Standard & L.E.R. Eyepieces	NA	25 SXT Standard 9 SXT L.E.R.	AP-M-18452-11762, 3-18-68 \$3,120 AP-M-19379-13056 7-19-68	CCA 497-0553 3-2-68		
T06RL												
T07	Procurement of Installation Kit Spacenet 2S-1	A	NA	NA	NA 19257	N.B., OUA and B.L. for Install. Kit	1 set for 2S-1	NA	NA	CCA 497-0546, 2-7-68	1011	Firm Proposal Only
T08	Fabrication of 2 Sets of IER Eyepieces	K	NA	NA	NA 19257	SXT L.E.R. Eyepieces	2 sets	NA	NA	CCA-497-0545, 2-28-68	NA	Firm Proposal Only
T09	Extension of Field Operations Support at MGC through 12-31-68	A	NA	NA	NA 19252	NA	NA	NA	NA	CCA-497-0542, 2-23-68	1090	Firm Proposal Only
T10	Extension of Block I-100 Field Support Through March, 1968	A	NA	NA	NA 19253	NA	NA	NA	NA	CCA-497-0543, 2-23-68	1001	Firm Proposal Only
T11	Field Installation of Spare DSKY E's & I's	R	ERP RI0150	NA	NA 19281 19704	NA	NA	NA	AP-M-18607-11830 4-3-68 \$5,300 plus \$500 per unit	CCA-497-0559 3-18-68 CCA-497-0579 6-6-68	N/A	Thermal Cycle will be operative Proposal 497-816-8704890 - AUF 7-26-68 71141-AP-M-20067-N3345 10-28-68

Revisions

5-15-68
10-7-68
1-10-69

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	REC# & Des. No.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
712	Thermal Cycle Test on Motorola Wedge Bond Transistors	R	NA	NA	NA	AGC Modules	NA	CE, CH, CS & CB	AP-M-18517-0560 R1787 3-25-68 \$61,200	CCA 497-0560 4-24-68		
713	Noise Reduction in GSE/ZTS	R	ERP 10198	NA	NA	GSE CTS	NA	ALL Units	AP-M-18923, R1785 3-25-68 No Cost AP-M-19400-19273 7/17/68	CCA 497-0555 4-3-68		
714	Reduction of ECDU Susceptibility to S/C Noise	A			19277	ECDU	N/A	N/A	AJH-48-097 4-3-68 AP-M-19775 N3289 9-12-68	CCA 497-0537 4-11-68 CCA 497-0578 5-17-68		Av: AC TXK RDR-3-8-088 Auth. For Emer. Evaluation Only CCA 497-057 2R3 is in lieu R1 & R2 10-24-68 CCA 497-0572-22 6-21-68 NASA Letter B044-299-68-J033-1263 Dated 15 Aug. 1968, Approves AC Plan for Review of ECDUs - Firm Proposal 497-837-8X-AJH 9-10-68
715	Manufacture 126 Fixed Memory Modules	P	NA	8N583 2-28-68	19265	AGC	NA	NA	Er. Cor. AP-M-18738-0571 - N.02 4-19-68 \$2,878,000	CCA 497-0571 - 5-23-68 - CCA 497-0584 5-25-68		Firm Proposal 497-841-901-AJH 9-9-68 See AP-M-19766-N3224 for Further Information
716	Modification of OMC/EGC & CDU Interface Connectors	A R	NA	8N594 3-28-68	19272	AGC	N/A	N/A	AP M-19427- N3088 7-23-68 \$3,300	NASA Letter JC 33-1286 Dated 15 Aug. 1968		
717	New Nonmetallic Material Requirements	A	NA	NA	N/A	Nonmetallic Materials	NA	NA	NA	CCA 497-0584 1-3-68		Firm Proposal Only 497-808-865 AJH 6-27-68

5-15-68 Revisions
10-7-68

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
718 ★	SXT & SCT Short Adapter Cr. bldg	X	ERP X-1149 16 June 1966	NA	NA	CSE	NA	NA	AP-M-19119 12053 6-10-68 \$20,800	JC33-796 6-21-68		
719F ★	Alarm Module Modification. V-Foil Detection	R		8N603 4-11-68	NA 19276	ADC	C-38 thru C-4C	See ECP 0696	AP-M-19373-13073 7-19-68	CCA 497-0536 4-13-68		
	ECP of Record for Wlyer Tape	A	NA	NA	NA	CSE	NA	NA	EDH-4-8-116/ 4-24-68	CCA 497-0568 3-8-68	10.9	
721 ★	K-Start Tapes for ACC Self Check Capability	A	NA	NA	NA 19297-1	USE	NA	NA	AP-M-18929-11974 5-14-68 \$19,359	CCA 497-0576 3-23-68 CCA 497-0576R1 6-7-68		497-807-886-AJH 6-26-68
722 ★	Spares Procuring Disposition	A	N/A	N/A	N/A	A/B & CSE	N/A	N/A	AP-M-19289 13023 7-8-68 \$53,791	JC33-1451 9-11-68		
723 ★	Additional Vibration Test of Orr (1) PSA	A	NA	8N597 3-27-68	19279 19714	PSA	N/A	N/A	AP-M-19257 13006 7-2-68 \$80,136	CCA 497-0586 7-11-68		497-839-898-AJH 7-19-68

Revisions

5-15-68
10-7-68
1-10-69
12-31-69

ECP LOG & STATUS

ECP No.	TITLE	Contr. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Firm	Equip. Affected	Effectivity		BOP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 - Date	REMARKS
							In-Line	Retrofit				
724F	OUA Stop Overwrite Problem and Limit Stop Covers	K			NA 19290-19716		OUA S/N2 13 thru 18, 20, 21, 25, 26, 29	OUA S/N2 13 thru 18, 20, 21, 25, 26, 29	Datatec AP-M-18976- N1971- 5-1-68 \$90,000 AP-M-19702 N3197 5-9-68 \$117,000 8/29/68	CCA 497-0561 5-1-68 CCA 497-0570 5-9-68 \$117,000	1011	CCA 497-0570 Proposed 1-497-827-872/876/879 AJH 8-1-68 Proposal 497-840-900-AJH 9-10-68
725F	EL Aluminum Placards	A	NA	NA	NA 19280				AP-M-19428 N3069 7/23/68 4-18-68	CCA 497-0558 4-18-68	1118	
726F	Modification of AOT S/N 4 & S/N 5	K	RP 5-22-68	NA	NA 19241-1	AOT	NA	NA	AP-M-18996 N2004 5-22-68	CCA 497-0534 0534R1		
727	Complete Testing of Spare Signal Conditioner Module Assy's	A	AP-M-18876 5-6-68	NA	NA 19703	Spare Signal Conditioner Module Assy	NA	NA	AP-M-18989 N2003 5-21-68 \$1,607	CCA 497-0577 5-29-68		
728F	Integrated Stock Balance & Consumption Report delivery to NASA deleted	A	NA	NA	NA 19299	NA	NA	NA	CCA 497-0582 4-29-68			Firm Proposal Only Firm Quote 497-809-887-474 7-3-68
729	Emergency Procurement of AGC Fixed Memory Cores - Second Source	R	AP-H-	NA	NA	AGC	NA	NA	AP-M-18921- N1969 \$117,000 5-13-68	ICC3-649 5-29-68		Reference: See ECP 0715

Revisions

5-15-68
10-7-68
1-1-69
12/31/69

ECP LOG & STATUS

ECP No.	TITLE	Cont. Aff'd.	Basic Document	RECP# & Date Rec'd	CE # Budg. Film	Equip. Affected	In-Line	Effectivity	Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved/Cancelled	CTA 8604 - Date & Rev.	REMARKS
730	Extension of 24 Training Program	A	NA	8N615 5-13-68 8N615R1	19286	NA	NA	NA	NA	AP-M-19079 N2043 5-7-68 \$325,053 AP-M-19946 N3292 10-8-68	CCA 497-058R 7-3-68 CCA 497-058R1 7-26-68		CCA 497-0585 Authorizes the first two months of FY 1969 CCA 497-0585R1 Authorizes effort 7-1-68 thru 6-30-69 Firm Proposal 497-836-897-AJH
730R1													
731F	Sub Bit By Bit & Parity Check	R	ERP L0201	NA	N/A 19284	AGC	N/A	N/A	N/A	AP-M-19378 N3064 7-17-68	CCA 497-0565 5-3-68		Part of Firm Proposal 497-814-873-AJH 19 July 1968
732F	Multi-Layer Board Design Requirements Updated	R	ERP R-10200	NA	NA 19293	AGC	NA	NA	NA	AP-M-20079 N3352 10-28-68	CCA 497-0561 5-1-68		Firm Proposal 497-848-888-AJH 10-28-68
733F	Vibration of Spare IDM Modules	R	N/A	8N631 6/19/68	NA 19705	AGC	Spare IDM Module	NA	NA	N/A	CCA 497-0578 6-16-68 CCA 497-0578R1 8-21-68		Firm Proposal Only Amended 497-833-897-AJH 8-3-68
734	FGCS Ground Test & System Operation Software Verification	A	N/A	8N636 6/17/68	19732	Software	NA	NA	NA	AP-M-19331 N3038 7-9-68 \$383,557 AP-M-19402 N3276 8-7-68	R3 - CCA 497-0589R1 1-1-7-68 CCA 497-0589 8-5-68		(34R2 - AP-M-20083-N3355 10/28/68 734R3 - AP-M-20077-N3350 10/28/68 \$19,390 (Additional Effort)
734R1				8N636R1 10-1-68	19720								
735F	Safety Class on ECU's/IL's on DSKY's	R	NA	NA	NA	DSKY	D55 & Sub.	5/N 4-7, 13, 16, 19, 20, 21, 28, 30, 32, 34, 36, 38, 40-54		AP-M19752 N3218 8-10-68	CCA 497-0583 6-25-68		Firm Proposal 497-834-894-AJH 9-5-68 ECP Updated at Negotiations

Revisions

10-7-68
 1-10-69
 5-9-69
 12-31-69

ECP No.	TITLE	Contr Aff'd	Basic Doc.	RECP & Date Rec'd.	CE # Budg. FY	Equip. Affected	Effectivity		ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS	
							In-Line	Retrofit					
736F	Post Flight Testing G&N 123	A	N/A	N/A	N/A	G&N	N/A	N/A	N/A	CCA 497-0580 6-12-68		Firm Proposal Only	
737	Normalization of SLX (6) IRIG's	A	N/A	8K627 5-28-68	19702	IRIG's	N/A	N/A				See Remarks JC33-1939 11-14-68	Cancelled per AC Request
738F	Update of Mockup 28 to S/C 103 Configuration	A	N/A	N/A	N/A	G&N System	N/A	N/A	N/A	CCA 497-0581 6-20-68		Firm Proposal Only 1/4/69 G.C.C.F. 497-51 2/13 / JH 8 21-61	
739F	Addition of Four (4) Lights on the Indicator Panel of the DSKY	R	N/A	7N543	N/A	IEM DSKY	N/A	32 Wetc	AP-M-19870 N3187 8/27/68	CCA 497-0582 6-25-68		CCA 497-0582 for Phase I Only CCA 497-0582R2 7-26-68 CCA 497-0594 Authorizes Plan I of the ECP Phase I Quote 497-842-695-AJH 739 R1 - Additional Eight Lights Dis 739 R2 - AP-M-21156-N3398 - Firm App 497-856-906-AJH 12-5-68	
740F	Repair of Block II IRIG's Utilizing Block I Parts	A	N/A	N/A	N/A	IRIG	N/A	N/A	N/A	CCA 497-0587 7-11-68		Firm Proposal Only To be quoted as part of CCA 497-0612	
741	Spare Lifting Battery Packs for KSC	A	N/A	8K643	19719	GSE	N/A	N/A	AP-M-19806 N3310 9-10-68 \$8,600	CCA-497-0599 10-11-68		Approves Prototypes (1) Only Firm Proposal 497-846-913-AJH 10-25-68	

Revisions

1-7-68
1-10-68

ECP No.	TITLE	Contr. Aff'd	Basic Doc.	RECP & Date Rec'd.	CE # Budg. Firm	Equip. Affected	In-Line Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled / Date & Rev.	CTA 8604 Date & Rev.	REMARKS
743	Increase Qty. of PTC, DSKF Hdng. Fixt., ECDU Hdng. Fixt., etc. on L. PSA H/L. Fixt.	A R	N/A	19726	19726	See Title	NA	AP-M-19910 N3464 1-30-68 \$113,744	IC33-1689 10-17-68		
743	LV Computer Installation Kits	R	NA	NA	NA 19721	G&H	NA NA	AP-M-29975 N3464 1-3-68 \$113,748	CTA 497- 1-1-68 F-19-68		Firm Proposal 497-850-203-A/H 11-11-68
744	Flatpack = ECDU & APC	A R	NA	NA	19724 N/A	ECDU AGC	NA NA NA	AP-M-19774 N3464 7-11-68 \$41,000	IC33-1689 10-17-68 See Remarks		Technically Approved but should be accomplished as part of Repair portion of the Contract.
746	Replacement of IMU Stable Member Harness	A	NA	NA	NA N/A	IMU	IMU 7, 11, 12	AP-M-19765 N3464 7-11-68 \$41,000	CGA 497- 0796 9-16-68		S/C 104 & Subsequent Firm Proposal 497-850-203-A/H 9-20-68
747	Ethylene Glycol Spillage Procedure Change	A	NA	88655 7-3-68	19725 N/A	GNIC Pne1	NA NA	AP-M-21331 N3464 12-6-68 \$13,320	IC43 1-10-68		

Revisions

- 10-7-68
- 1-10-69
- 5-9-69
- 9-18-69

ECF No.	TITLE	Contr. Aff'd	Basic Doc.	RECP & Date Rec'd	CE # & Budge. Effort	Equip. Affected	In-Line Effectivity	Effectivity Retrofit	ECP Budge. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS
748	Battery Power Peck & Auxiliary Peck Battery Peck Fuse Changes	A	RTG	N/A	N/A	GSE	N/A	2 Aux. & 14 Battery Pecks	AP-M-21215 N3420 11-19-68	CCA 497-0606 12-3-68		Firm Proposal 497-859-984-AJH 12-12-68
749	ECP of Record for Variable Deviation Wedge Correction	K	ERP-K-228 7-23-68	N/A	N/A 19743	OMA	N/A	N/A	RDH-9-B 252/L 9/25/68	CCA 497-0601 10-16-68		
750	S.O.W. Deletions	A R K	N/A	N/A	N/A 19729	G&N	N/A	N/A	N/A	CCA 497-0593 CCA 497-0593R1 CCA 497-0593R2 CCA 497-0593R3 CCA 497-0593R4 CCA 497-0593R5 11-25-68		Firm Quote Only Firm Quote 497-869-907- 2-19-69
751	Horness Analysis of IMU's 9 & 18	A	N/A	N/A	N/A 19736	IMU	N/A	N/A	AP-M-19957 N3257 9/24/68	CCA 497-0598 9-30-68		Firm Proposal 497-853-912-AJH 12-5-68
752	Design & Fabricate (3) Sunfilters for SCT Eyeieces	K	N/A	N/A	N/A 19735	Eyeiece	N/A	N/A	AP-M-21216 N3421 \$37,600 11/19/68	CCA 497-0597 9-24-68 CCA 497-0598 11-25-68		CCA 497-0597 Authorizes Filters Only Firm Proposal 497-857-911-AJH 12-10-68 CCA 497-0597R1 Supercedes 0597 and Authorizes (1) SCT Eyeiece Filters (2) Clamping Rings. (2) Special Tools
753	SXT Mirror Housing Steel Threaded Inserts	K	N/A	N/A	N/A 19742	Eyeieces	N/A	S/C-106 & Sub plus Spare (19 Total) \$14,310	AP-M-19945- N3291 10/8/68	CCA 497-0600 10-16-68 CCA 497-0600 R1 11-26-68		CCA 0600R1 Cells for Cleaning & Lubricating the threaded holes to connect the eyeiece for S/C 104 Firm Proposal 497-862-915-AJH 1-9-69

10-7-68
1-10-69
59-69

ECP No.	TITLE	Contr. Aff'd	Basic Doc.	REC'D & Date Rec'd.	CE # & Firm	Equip. Affected	In-Line Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS
754	Redesign GNIC Panel Verb- Noun Sts. 1st Display	A	N/A	8N666 10-1-68	19757 19750	GNIC	CM-104 & subsequent	AP-M-30039 N3321 10-21-68 \$10,172 AP-M-21579- N3571 11-25-68 2-4-69	CCA 497-0604 11-25-68		CCA 0604 & ECP ACSK 0754R1 Super- series ECP 0754 in its entirety. 754R1C1 - AP-M-21579-N3579 2-7-69
754R1	Replaceable Display	A	N/A								
755	Removal of Screw Retainer Brackets from LM ECDU's	A	N/A	N/A	N/A	ECDU	N/A	AP-M-20021- N3329 10-18-68	CCA 497- 0603 11-7-68		
756	Rope Module Delivery Requirement	R	N/A	8N664 9-26-68	19738	ACC					*ECP Received by NASA Lt. TCU3 dated 4-2-69
757	LEM PSA Reverse Power Problem	A	N/A	8N664 RL	N/A	PSA	N/A	AP-M-20104 N3369 10-31-68 Plus Spare PSA's \$10,700 Spare Modules AP-M- 20122 \$10,376 GAND03, 204, N3376 210 thru 222 2 Spare Modules & 2 Spare Modules	CCA 0602 11-1-68 CCA 497- 0602R1 2-19-69		CCA 497-0602-R1 Cells for Three (3) PSA's only, plus Test equipment 757R1 Proposal 497-865-918 A.H 2-4-69 CCA 497-0602R2 Authorizes all the effort 11-20-68 757R2-AP-M-21582-N3573 2-5-69 757R2-AP-M-21582-N3561 2-7-69 WILL NOT BE SUBMITTED
757R1	LEM PSA Reverse Power Problem	A	N/A	N/A	19745						
757R2	LEM PSA Reverse Power Problem	A	N/A	N/A	19764						
758	LEM BUS Problem	A	N/A	N/A	N/A	LEM Harness & CSE	N/A				See Remarks

Revisions

5-9-69
12-31-69

ECP No.	TITLE	Contr Aff'd	Basic Doc.	RECP & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS
759	Cyrc Interrogator for System Milliwatt Operation (GISMO)	A	N/A	8N674 11-11-68	19746 ----- 19762 22741	C&N System	N/A N/A	AP-M-21301 N3455 12-4-68 \$20,700	CCA 497-0613 1-23-67		Firm Quote 497-875-931- 4-2-69
760	IRIG Wheel Turn Off Box - IM	A	N/A	N/A	19752 ----- N/A	GSE	N/A N/A	AP-M-21399 N3488 12-18-68 \$17,200	JC 43 1-10-69		
761	CM/IM Docking Shock Qualification Test of PTA	A	N/A	8N678 11-2-68	19749 ----- 19758	PTA	N/A N/A	AP-M-21239 N3468 12-9-68 \$11,300	CCA 497-0610 12-20-68		Exceptions noted in CCA Firm Quote 497-867-928 AJH 2-14-69
762	Ext. of Site Support at MSC Thru June 1969	A	N/A	8N680 11-20-68	19748 ----- 19756	N/A	N/A N/A	AP-M-21277 N3447 12-4-68 \$226,600	CCA 497-0608 12-13-68		Firm Proposal 492-866-926-AJH 2-12-69
763F	Protection of AOT Cabling from the Eyepiece Heater	K	N/A	N/A	N/A ----- 19755	AOT	IM 3 & Sub.		CCA 497-0607 12-10-68		Firm Proposal Only 497-863-925-AJH 1-21-69

Revisions

5-9-69

9-18-69

ECP No.	TITLE	Contr Aff'd	Basic Doc.	RECP & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECR Budg. to NASA Data	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS
764F	Rengas' nder	K		206858L 12-10-68	N/A 19753	Apollo Rengas' nder	4 Units N/A	AP-M-2158C N3572 2-5-69 AP-M-21599- N3580 2-7-69	CCA497-050 12-11-68 CCA497-060511 12-11-68		
765	Alignment Verification Test Fixture	K	N/A	20698 12-10-68	19754				* SEE REMARKS		* RECP Rescinded per JO43 8-22-69
766	Vacuum Testing of Fixed Memory (Rope) Modules	R	N/A	20699 12-13-68	N/A 19757	AOC	N/A	N/A	CCA 497- 0609 12-19-68 CCA-497- 0619 3-7-69		Firm Quote 497-873-938 4-14-69 Firm Quote Only
767	ECP of Record to delete Reliability TD's from the Statement of Work	A	N/A	N/A	N/A	N/A	N/A	HD 1-9-013 1-16-69	CCA497- 0616 2-13-69		
768	EL Thermal/Vacuum Screen	R A	N/A	N/A	N/A	DSKY	N/A	AP-M- 21473-N351B 1-8-69 \$43,000 AP-M- 22078- N3710 5-9-69	CCA 497- 0611 1-10-69 CCA497-0614 1-23-69		Firm Proposal 497-880-929-1932 5-14-69

Revisions

5-9-69
9-18-69

ECP No.	TITLE	Contr Aff'd	Basic Doc.	RECP & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS
769 ★ RI	IRIG Qualification Testing of one (1) MIT II IRIG & one (1) Bendix IRIG	N/A	344-432-58-7043-12-19-68 344-8-68 7043-1978	N/A	1979-1 19770	Gyro	N/A N/A	AP-M-21580-13557 1-28-69 \$89,300 AP-M-22417-13859 7-22-69	CCA497-0617 2-12-69 CCA497-0618 6-11-69		Firm Proposal 497-879-936 4-25-69
770	ECP of Record for Adding Threaded Inserts for Cable 7-563	A	SFC 651 1-22-69	N/A	NA NA	GSE	N/A Field Retrofit 5 Units	AJH 1-9-031 2-3-69	CCA497-0618 2-19-69		
771 ★	Acceptable IRIG Configurations	A	N/A	N/A	N/A 19761	Gyro	N/A	N/A	CCA497-0612 1-23-69 CCA497-0612E1 8-18-69		Firm Quote Only #497-888-930 7-7-69
772	COL. 249 Verification	A	N/A	N/A	N/A 19768	AGC	N/A	AP-M-21571-13553 1-27-69 \$5,421	CCA 497-0615 1-29-69		
773	The Apollo Rangesfinder Knob Positive Lock	K	ERP -	N/A	N/A	Rangesfinder	S/N 003 & Sub S/N 002	AP-M-21586-13560 1-30-69 No Cost	CCA 497-0609R2 1-30-69		

Revisions

9-18-69

ECP No.	TITLE	Contr. Amt'd	Basic Doc.	RECP & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8004 Date & Ref.	REMARKS
774	Analysis of CR OUA Motor Tech Sub-plant (7/1/69)	A	N/A	900012 1-23/69	19777 19784	OUA	N/A	N/A	N/A	AP-M-21749- N3625 3-4-69 \$3,000	CCA497- 0625 4-2-69		AP-M- should be 21746-N3635 CCA 497-0625 calln for S/N 217 rather than 19777. Firm Quote 497-883-945 5-27-69
775	FONES Control Test & System Operator Software Verification.	A	N/A	900011A 1-24/69	19766	software	N/A	N/A	N/A	AP-M-21845- N3589 2-12-69 \$197,500 AP-M-21725- N3639 2-28-69 See Remarks	CCA497- 0620 3-12-69		ql b meter - Version I \$98,400 Version II \$125,300 CCA 497-0620 Approves Version I Firm Quote 497-812-934 3-21-69 Firm Quote 497-884-041 5-28-69
776	Formalization of (38) Shrouded C ro's	A	N/A		19769 19796	IRP's	N/A	N/A	N/A	AP-M-22016- N3659 5-1-69 \$265,600	CCA-497- 0631 5-15-69		Firm Quote 497-902-953 9-8-69
777	Porro Prism Mount	A	N/A			Range-finder	N/A	N/A	S R003 & S/N 004	AP-M-21666- N3601 2-18-69	JC 43- 2-19-69		
778	Software Verification of Apollo Radar Programs	A	N/A	900018 3-4-69	19773 19786	Software	N/A	N/A	N/A	AP-M-21821- N3656 3-19-69 \$226,100	CCA497- 0628 4-11-69		Firm Quote 497-887-947 6-10-69
779	SCT Eaveguard Ass'n. Modification	K	N/A	900025 3-4-69	19772	Electronics	N/A	N/A	19 Eye-pieces	AP-M-21864- N3676 3-28-69 \$36,200	JCH3 5-22-69		

9-18-69
12-31-69

ECP No.	Th. LE	Country Ac'd	Basic Doc.	RECP & Date F. S. d.	CE # & Budg. Firm	Equip. Affected	In-Line	Effectivity In-Line	Retirofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS
780	Replaces existing Cable Assy.	K	N/A	N/A	N/A	ACT	N/A	IM 4 & Subs.	AP-M-21774-13635 3-10-69	CCA 497-0624 3-26-69			Firm Quote 497-874-944 4-1-69
781	LEM ECDU Built Change	A	N/A	N/A	N/A	LE4 ECDU	N/A	IM 5 & Subs.	AP-M-21793-132643 3-12-69 \$9,400	CCA497-1322 3-13-69 CCA497-0622RI 3-27-69			Firm Quote 497-881-939 5-14-69
782	Post Flight Analysis of OVA S/N 27 & Feasibility Study	A K	N/A	9X0029 3-13-69	19776	OVA	N/A		AP-M-21794-135644 3-12-69 \$8,000	CCA497-0623 3-13-69			Firm Quote 497-885-940/946 6-2-69
783	Plan for Residual Inventory	A	N/A	N/A	N/A		N/A			CCA497-0621 3-13-69 CCA 497-06221 Rev. 1 26 June 1969			Firm Quote Only Firm Quote 497-914-942 10-9-69
784	Refurbishment & Retest of PEA S/N 11 & IMU S/N 31	A	N/A	N/A	19780	PEA IMU	N/A		AP-M-21943-135674 4-16-69 \$16,000	IC 43 4-23-69 TRX JC43-2057 5-1-69			Will be accomplished under the repair contract.
785F	Formy (40) Additional Fixed Memory Modules	R	N/A	N/A	17788	ACC	N/A			CCA497-0627 4-7-69			Firm Quote Only Firm Quote 497-894-948 8-6-69

12-31-69
12-31-69

ECP No.	TITLE	Contr. Aff'd	Basic Doc.	RECP & Date Rec'd.	Cr. # Budg. Firm	Equip. Affected	In-Line Effectively Retrofit	ECP Budg. to NASA Date	NASA Disposition Approved / Cancelled	CTA 8604 Date & Ref.	REMARKS
767	Replacement of two OUA & ACP Rotating Arm-De counters	A	N/A	N/A	N/A	C/A	10b through LM 5 & 5 Suba	N/A	5-16-69 4-7-69		Firm Quote Only Firm Quote 497-916-977 4-2-69
768	All items 1" & 4" Vnd for MSC Lab.	A	Engineering Request D-11-69	N/A	N/A	N/A	N/A	AP-M-21938- 13651 4-15-69 \$2,200	CCA 497- 0620 4-11-69		Firm Quote 497-886-019 Rec'd. 2 June 1969
768	IRIG Support of Lunar Expedition Program	A	N/A	980033 4/14/69	19782	Proc	N/A	AP-M22573 1394c \$1,550,600 8-28-69		JC 497- 10-7-69	
769	FIPA Support of Lunar Expedition P.o.rem	A	N/A	980034 4/14/69	19783	FIPA	N/A	AP-M22499 13897 8-8-69 \$92,200	CCA497-0648 10-6-69		Firm Quote 497-916-977 11-11-69
770	dedication to the ESU SX1 Retainer Spring	A	N/A	N/A	N/A	ESU	Apollo 12 & Sub (13 Units)	AP-1-22071- N705 5-9-69 \$2,300	CCA497- 0633 5-28-69		CCA authorize treekin at Apollo 15 & Sub. Mod. for Apollo 12, 13 & 14 W/O occur only if e/epiece retainer fails Firm Quote #497-891-955 7-25-69

9-18-69
12-31-69

ECP No.	TITLE	Contr. Aff'd	Basic Doc.	RECP & Date Rec'd.	CE # Budg. FY69	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS
791	Exhibit 1 Amendment	A	N/A		N/A 19789		N/A	N/A		CCA 497-0630 4-23-69 CCA 497-0630R1 5-20-69		Firm Quote Only - Will require mutual agreement.
792	Computer Aided Optics Tracking	A	N/A	910047 2-7-69	19791 22702	GNIC	N/A	Apollo 12 & Sub.	AT-M-22239 N3793 6-17-69 \$7,300	CCA 497-0635 5-26-69 CCA 497-0635 R1 8-18-69		Firm Proposal 497-807-958 9-18-69
793	Deletion of ENF & CAT Submitted Requirements	A	N/A	N/A	N/A 22700	N/A	N/A	N/A	AP-M-22070 N3704 5-9-69 (42,800)	CCA 497-0534 6-2-69		Firm Quote 497-895-957 8-13-69
794	FSAMM Spacer Blocks	A	RPC 652 5-3-69	N/A	N/A 22708	GSE	N/A	8 Units	AP-M-22209 N3767 6-5-69 \$2,000	CCA 497-0638 7-8-69		Firm Quote 497-899-963 9-8-69
795	SCT & SXT Teflon Locking Rings	K	N/A	N/A	N/A 19797	Eyepeices	N/A	Apollo 11 & Sub. 15 SCT 15 SXT	AP-M-22118 N3728 5-16-69 \$11,000	CCA 497-0632 5-26-69		Firm Quote 497-890-954 7-23-69

Revisions

12-31-69

ECP No.	TITLE	Contd. Aff'd	Basic Doc.	RECP & Date Rec'd.	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS
795	AA1 CN PSA Residue Power Modificator	A	N/A	SN677P 5-19-69	19794 27733	PSA	N/A	7% 205, 21%, 221, 222 3 Spares 1 Spare Header & all returned units for repair	AP-M-22203 N3765 6-5-69 \$19,600 CCA 497- 0651 10-19-69 CCA 497- 0651RL 11-10-69	Firm Quote 497-224-981 1-12-70		
797	Continuation & Update of S&N Training Tasks	A	N/A	SN0050 5-19-69	19793 22706	N/A	N/A	N/A	AP-M-22234 N3764 6-1-69 \$137,600 CCA 497- 0637 1-11-69	Firm Proposal 497-892-971 1-26-69		
798 R1 R1C1	AAP Optical Unit Assy. Qual.	K	N/A	SN0049 5-19-69	19795	O/A	N/A	N/A	AP-M-22213 N3771 -9-69 \$194,100 AP-M-2235 N3732 N3731-69 AP-M-22248 N3786 6-12-69	JC 43 12-10-69		
799	AGC Radar Wiring Change	R	N/A	N/A	N/A	AGC	N/A	30 AGC's	AP-M-22148 N3747 9-26-69 \$2,744,300	TC 43 6-12-69		
800	Deletion of AGC VIB at AGC Rete - (JRP Computer)	R	N/A	N/A	N/A 22703	AGC	N/A	N/A	AP-M-22223 N3777 \$5,500 credit 6-10-69	CCA 497- 0636 26 June 1969	Firm Proposal 497-903-959 9-8-69	

Revisions

12-31-69

ECP No.	TITLE	Contr Aff'd	Basic Doc.	RECP & Date Rec'd.	CE # Budget F/Y	Equip. Affected	In-Line Effectivity	Effectivity Retrofit	ECP Budg. to NASA	NASA Disposition	CTA 8604 Date & Rev.	REMARKS
801 R1	Flex Hoses	A	N/A	N/A	N/A 22709	DU Hoses & GSE	32 GSE Covers	17 Hoses	AP-M-22265 N3795 \$11,800 6-17-69 AP-M-22409 N385U 7-16-69	CCA 497-0639 7-1-69		AP-M-22317-N3816 AP-M-22262 * CCA does not approve GSE Covers Firm Quote 497-920-964 9-8-69
802	Deletion of DSKY VAS of DSKY Retest (GFP DSKY)	R	N/A	N/A	N/A 22713	DSKY	N/A	N/A	AP-M-22428 N3865 (\$1,100) 7-23-69	CCA 497-0644 8-11-69		Firm proposal 497-905-969 9-18-69
803	Two (2) New GSE Cables (ECP of Record)	A	RFC 653	N/A	N/A N/A	GSE	N/A	N/A	AJH 6-9-139 7-15-69	CCA 497-0643 8-11-69		Firm Proposal 497-898-967 8-19-69
804	Reuse of Flown FIPA Cal. Modules	A	N/A	N/A	19620 22710	Spare FIPA's	N/A	N/A	AP-M-22331 N3820 30 June 1969	CCA 497-0640 7-17-69		AP-M-22336 PKD 5/76 Firm Quote 497-921-965 9-8-69
805	Post Flight Analysis of C&N Panel Overlay	A	N/A	9N0032	N/A N/A	N/A	N/A	N/A	N/A			* Rescinded per JC 43 6-12-69

Revisions

12-31-69

ECP No.	TITLE	Contr Aff'd	Basic Doc.	RECP & Date Rec'd	CE # Budg. Firm	Equip. Affected	In-Line	Effectivity	ECP Budg. to NASA & DDC	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS
806	Rope Diode Dynamic Impedance Ch. nre & Computer Test	R	N/A	N/A	N/A	N/A	N/A	N/A	AP-N-22110 N385 \$192,000 7-16-69	CCA 497-0645 8-11-69		Firm quote 497-315-970 10-10-69
807	Testing of Luminer, 97 & 99 Sundance 292	A	B143-217-227-69 5-18-69	N/A	N/A	Ropes	N/A	N/A	AP-N-22330 N3819 \$3900 6-30-69	CCA 497-0642 8-11-69		Firm quote 497-908-968 9-25-69
808	Redesign IMU 1' ex Hose	A	N/A	9N0062	22701	IMU	CM 116	N/A	AP-N-22110 N3903 \$13-69 \$27,000		JC 43 9-22-69 9-29-69	
809	Closure of G&H Lab at KSC	A	NASA Ltr. AD-PRO-24/889-69 5-25-69	N/A	N/A	N/A	N/A	N/A	N/A	NASA Ltr. AD-PRO-24/889-69		Firm Quote Only Firm quote 497-897-960 8-19-69
810	RASPO Deletior	A			N/A	N/A	N/A	N/A	N/A	CCA 497-0641 7-18-69		Firm Quote Only Firm quote 497-896-946 8-13-69

Revisions

12-31-69

ACP No.	TITLE	Contr. Aff'd	Basic Doc.	RECP & Date Rec'd.	CE + Bldg. Flwy	Equip. Affected	Effectivity Date	Effectivity Retrofit	ECP Budg. to NASA & DMC	NASA Disposition Approved / Cancelled	CTA 8604 Date	REMARKS
811	Extend Period of Performance for Systems Repair Contract	A R K	Status Meeting 8-24-69	N/A	N/A 22723 (Ref.)	GAN System	N/A	N/A	AP-M-22516 N3919 \$100,000 8-21-69	SAL46		Firm quote 497-918-982 12-11-69
812	Rest of Flown CV 106 GAN Items	A R	ASHR 106048	N/A	22715 22722	Black Boxes	N/A	N/A	AP-M-22619 N3952 \$21,000 9-15-69	CCA 497-0647 10-1-69		Firm quote 497-920-975 12-15-69
813	OUA & Bellows Assy. S/N 16 (Apollo 11) Protective Covers	A	N/A	N/A	N/A 22720	OUA S/N 20	N/A	N/A	AP-M-22573 N3934 \$1,100 8-28-69	CCA 497-0646 9-5-69		Firm proposal 497-911-974 9-30-69
814	Apollo Software Program Compare Program	A	N/A	A00079 9-18-69	22719	N/A	N/A	N/A	APM 22695 N-3980 10-1-69 \$10000			
815	AGC Restart Monitor	A R	N/A	N/A	N/A 22728	AGC	N/A	Apollo & Sub. plus Spares	APM 22650 N3969 \$157,000 9-23-69	CCA 497-0649 10-23-69 CCA 497-0649R1 12-8-69		Firm proposal 497-921-979 12-29-69

Revisions

12-31-69

ECP No.	TITLE	Contr. Aff'd	Basic Doc.	RECP & Date Rec'd.	CE # Budg. Firm	Equip. Affected	In-Line Effectivity Retrofit	ECP Budg. to NASA & Date	NASA Disposition Approved / Carried & Rev.	CTA 8604 Date & Rev.	REMARKS
816	IMU "split" clamp change	A	N/A	N/A	N/A	IMU	12 pieces for replacement	APM 22751 \$3,998 \$2,300 10-16-69	CCA 497-0650 10-26-69		Firm quote 497-919-980 12-12-69
817	IMU Coupling "O" ring replacement	A	RFC 654	N/A	22730						Will not be submitted
818	Rigid Flex Hose Tubing Change	A	RFC 655	N/A	22731	CSE	N/A	APM 22946 \$4,060 \$5,600 12-15-69			
819	OUA Bearing Lubrication Study	A	N/A	9N0088 10-24-69	22729 22735	OUA	N/A	APM 22961 N4067 Phase I 23,000 Phase II 19600 12-19-69	CCA 497-0653 12-16-69		CCA 497-0657 covers Phase I only.
820	Failure Analysis of OUA CM 108 & Associated Electronics	A	ASRUP 108008	9N0091 12-1-69	22736	OUA plus	N/A	APM 22980 N4075 12-23-69 \$2,900	*		*Approved under Contract NAS 9-10356

Revisions

12-31-69

EC# No.	TITLE	Contr. Aff'n	Basic Doc.	RECP & Date Rec'd.	CE # Budg. Firm	Equip. Affected	In-Line Effectivity	ECP Budg. to NASA & Date	NASA Disposition Approved / Cancelled	CTA 8604 Date & Rev.	REMARKS
821	IMU Coolant supply Leakage Problem	A	N/A	N/A	N/A	IMU Coolant Supply	N/A	APM 22983 N/A077 \$9,000 12-30-69			*Approved under contract NAS 9-10356
822	AOT Screw Head & Sharp Corner Protection	A	N/A	N/A	N/A	AOT	N/A	N/A (No cost)	CCA 497-0652 12-5-69		Firm quote 497-922-984 12-19-69 Class II TDRR's

2.5 CONTRACT CHANGE AUTHORIZATIONS

This paragraph provides a comprehensive tabulation of Contract Change Authorizations (CCA's) issued against Contract NAS9-497. The CCA record is cross-referenced to the ECP Log presented in Paragraph 2.4.

The format of this record displays the information in the following manner.

- CCA 497 Column — Lists the CCA number
- CO Column — Lists the AC Electronics Change Order number
- CE Column — Lists the AC Electronics Cost Estimate number
- Date Column — Lists the date noted on the CCA as date of issue
- ECP Column — Lists cross-reference information referring to the ECP Log of Paragraph 2.4
- Subject Column — Lists the CCA title
- Remarks Column — Lists remarks which are limited to notations of cancellation, revision, supersession, or a reference to other relevant ECP's or CCA's

CONTRACT CHANGE AUTHORIZATION RECORD						
CCA #	CO	CE	DATE	ECP	SUBJECT	REMARKS
0001	225	14110	1-20-65	7	Spring Loading and Sextant Shaft Bull Gear	Rev 1, 2-19-65
0002	238	14162	2-4-65		Kollsman GSE, Deliver as Prototypes	
0003	239	14163	2-18-65		Change G & N 7 to Include 100 Series AGC	
0004						
0005	240	15057	2-19-65	13	Delete MDV and Associated Equipment	
0006	245	14175	3-9-65		Delete OLPD and Associated Equipment	
0007	246	14173	3-8-65	175	Night Watchman, Main DSKY Mod Kit, Block I and 100	
0008	248-1	14181	7-23-65	68	Add ECP 63 to CCA 8	
0009	303	15037	3-15-65		Block II Preproduction Hardware Reorganization	Rev 1, 7-12-65
0010	304	15037	3-15-65		LEM Preproduction Hardware Reorganization	Rev 1, 7-12-65
0011	249	14183	3-18-65		DSKY Lettering	
0012	250	14138	2-24-65	9	Retrofit AGC 6 for NAA Simulation	
0013	265	15044	4-12-65	30	Fixed Memory Modules, 48 Preproduction	
0014		15022	4-7-65	34	NASA Review of Parts Qualification Test Plans	
0015	267	15046	4-14-65		Delete two AOT's, SN 600 and 625, LEM	
0016		15045	4-12-65	32	Elimination of BB AOT	
0017	237	15111	3-65	66	Test Data Reduction and Analysis (Extension to 12-31)	Rev 1, 6-18-65
0018						
0019	285	15106	4-26-65		Change to CCA 9, Delete Partial D & C	Rev 1, 5-27-65
0020	286	15107	4-26-65		Change to CCA 10, Delete Dummy NVB	Rev 1, 5-27-65
0021	282	15077, 14199	5-24-65	67	Replacement of Metallic Bellows, Block II	
0022	255	15049	5-24-65	47	CDU Motor Change	
0023	281	15059	5-24-65	96	PSA Potting Separation Change on G & N 20	
0024	228-1	14140-2	5-24-65	288	Five Core Rope Simulators	
0025	287	15108	6-11-65	57	LEM Dimming and Coincidence Circuit and Associated GSE and STE	
0026	288	15109	6-11-65	52	ECP 52, 5 May 1965	
0027	289	15124	6-11-65	19	Incorporate Supplement I to NPC 500-1, Revision B	Rev 1, 7-13-65
0028	290	15110-2	6-11-65	80	Fabricate Heaters for SXT and SCT Ekepiece	4 Revisions

CONTRACT CHANGE AUTHORIZATION RECORD						
CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0029	291	15113	6-18-65	43	Retrofit Optical Unit Assembly, Learner	
0030	292	15114	6-25-65	127	Change OUA Subassembly, P/N 2011890	
0031	293	15115	6-25-65	126	Change OUA per ECP 126, 6-7-65	
0032	294	15116	6-25-65	125	Modify High Voltage Power Supply	
0033	295	15117	6-25-65	123	Increase SCT Field of Vision	
0034	296	15118	6-25-65	129	Adjust Photometer High Voltage Power Supply	
0035	297	15119	6-25-65	124	Fork Swing Amplitude and Reference Signal Phasing	
0036	298	15120	6-25-65	122	Allow Visual Alignment of Horizon Photometer Optics	
0037	299	15121	6-25-65	110	Eliminate Interference on Gear	
0038	300	15122	6-25-65	121	Proceed with ECP 121, 8 June 1965	
0039	302	15129	6-29-65	25	Addition of Signal Conditioner to Block I and 50	
0040	340	15196	6-29-65	111	Redesign in DSKY Trap Circuit	
0041	301	15128	6-29-65	109	Add Jumper Wire and Connector Gaskets	
0042	305	15138	7-20-65	102	Moisture Proofing and Qualification of PSA Modules	
0043	306	15139	7-20-65	85,187	Retrofit Front Closeout Panel	Rev 1, 11-2-65
0044	307	15140	7-21-65	138	Signal Conditioner Design Improvement (canceled)	Rev 1, 11-8-65
0045	308	15141	7-21-65	140	Redesign Photometer Modules	
0046	309	15142	7-21-65	41	In-Line Addition of IMU Cleanliness Specification	
0047	310	15143	7-21-65	108	DSKY Button Improvement	
0048	311	15144	7-21-65	135	Middle Gimbal Axis Switch Improvement	
0049	312	15145	7-21-65	134	Support MIT on LEM G & N Interconnect Harness	
0050	313	15146	7-21-65	118	Delete Life Test Requirement on 20 Parts and 8 Bearings (canceled)	Rev 1, 12-1-65 Rev 1, 9-17-65
0051	314	15148	7-23-65	186	12 New Decode Modules for G & N 12 and 17	
0052	315	15149	7-23-65	75	Provide Shock Recorders (Modifies ECP)	
0053	316	15150	7-23-65	89	GSE Reduced Coolant Requirements for AGC Test	
0054	317	15151	7-23-65	87	Modification to Functional Tester	
0055	325	15168	7-27-65	86	Revamp of GSE Preproduction Requirements	(Superseded by CCA 497-69)
0056	318	15159	7-26-65		Logic Modules for ACC 1 and 2 to MIT Design (200 M)	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0057	320	15159	7-29-65	99	50 Series GSE Changes for 100 Series Compatibility	
0058	321	15160	7-29-65	148	ECNU Transformer Change	
0059	319-1	15158	7-23-65	115	Retrofit GSE Spares to 100 Series	
0060	334	15191	8-31-65		Repairs one AGC, and one Optics	
0061	322	15166	8-1-65		Decrease Microfilm Submittals from three to two	
0062	324	15167	8-11-65	103	PSA Posing Separation Change, ECP 103	
0063	325	15169	8-17-65	83	Retrofit OUA 12 with Double Reticle, Heaters, etc.	
0064	326	15170	8-17-65	90	Diode Addition to IMU Blower Circuit (canceled)	
0065	326	15172	8-17-65		Special Procurement and Hold on Computer Boards	
0066	327	15171	8-17-65	106	Proceed Block II/LEM Nav Base Shipping Coni.	
0067	331	15177	8-23-65	160	Implement Stray Light and Heat Modification to OUA's	
0068	329	15184	8-23-65	202,	Fabricate New Housing for SXT and SCT Eyepieces	
0069	330	15185	8-23-65	290	Add Protective Cover to Star Tracker Photometer	Rev 2
0070			8-25-65		Delete Requirement for Test Plan, Paragraph 3.1 of Exhibit D	
0071	332	15164	8-25-65	161	Convert Computer Simulators to Block II	
0072	339	15126	8-26-65		LORS Authorization, No. TD's Required	Rev 1
0073	335	15192	9-2-65	154	Block I/100 Series Binary and Ternary Current Switch	Rev 1
0074	336	15193	9-13-65	133	Retire 11 S/N 2-6 AGC Calibration Consoles	Rev 1, Complete
0075	337	15194	9-13-65	159	Installation of Thermocouples	
0076	338	15195	9-13-65	137	40-Second Time Delay Changes	
0077	342	15198	9-14-65		Engineering and Drafting Support to MIT on Signal Conditioner	
0078	393	15209	11-16-65		GSE Changes, Presented as Statement of Work Changes	Superseded by CCA-169
0079	341	15199	9-5-65		Investigate Failure of OUA 101 and Repair	
0080	344	15210	9-23-65	147	Replacement of Standby Power Switch	
0081	347	15214	8-30-65	177	G & N Harness and End Connector Modification (50 Series and S/N 20)	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0082	348	15215	10-1-65	114, 171	Improved Vibration Damping Material in Computers	Revs 2 and 3
0083	349	15216	10-1-65	189, 190	Ground 0 Vdc, AGC	Rev 2, 3-23-66
0084	350	15217	10-1-65	180	New Y Wiring Harness for 100 Series AGC	
0085	351	15156	10-1-65	145	LEM G & N Interconnect Harness, Production	
0086	352	15219	10-5-65		Install Retrofit 26 Through 36 and Calibrate	
0087	353	15220	10-5-65	116	Retrofit OUA 20	
0088	355	15225	10-11-65	169R2	ECP 169 Eyepiece Storage Compartment	
0089	354	15224	10-7-65		Repair G & N Interconnect Harness S/N 6	
0090	357	15232	10-		Correct SCT Reticle Shift by Disassembling AGE 101	
0091	358	15233		107	Replace Block II/LEM PSA Mounting with PTA/PEA Mounting Fixture	
0092	406	15310	10-25-65	169, 89,117	Delete Shim from Eyepiece; Adds Training of Other Eyepiece	
0093	364	15243	10-28-65	132	Add PVR Delay Module to Tray 7 PSA (100 Series)	
0094	363	15242	10-24-65	153R	G & N Postinstallation Test Procedures	
0095	365	15247	11-2-65	187R	Retrofit Front Closeout Panel (AGC) (See ECP 190)	Rev 1, 11-29-65
0096	366	15248	11-2-65	208	Add Jumper Wires to Harness for Night Watchman	
0097	367	15249	11-2-65	212	Potting of Power Switch Modules	
0098	368	15250	11-2-65	195	Retrofit DSKY Keyboard Button Travel Interference	See ECP 190
0099	369	15251	11-2-65	188	Add Resistor to Tray A, Marks Button Problem	
0100	370	15252	11-2-65	185	Add Gaskets to Computer Trays for Moisture	See ECP 190
0101	371	15253	11-2-65	184	Vibration Damping of Keyboards	See ECP 190
0102	372	15254	11-2-65	182	DSKY Rework	See ECP 190
0103	373	15255	11-2-65	183	Navigation DSKY Guide Pin Replacement	See ECP 190
0104	374	15256	11-2-65	208, 212, 190	Factory Retrofit of AGC 112 and 117	See ECP 189, 190

CONTRACT CHANGE AUTHORIZATION RECORD						
CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0105-1	435	15332	1-12-66	302F	Manufacturing of Signal Conditioner, Evaluation and Qualification Test	3 Revisions
0106	411	15383	11-26-65	319	Engineering Support to Design Evaluation Program at KIG (canceled)	Rev 1
0107	379	15262	11-8-65	201	Change Computer Test Sets 20 and 21 to Block II, New Build	
0108	380	15263	11-8-65	194	Rework Azimuth Reference Fixture	
0109	381	15264	11-8-65	165	Replace IMU-CDU Difference Meter on IMU Control Panel	
0110	382	15265	11-8-65	173	Change Reticle Mount and Objective Lens Assembly	
0111	377	15260	11-8-65	192	Retrofit Aligner; Mirror Certification Fixture	
0112	378	15261	11-8-65	193	Modify G & N Installation Qualification Fixture	
0113	423	15345	11-16-65	271F	Detail Design of Navigation Base	
0114	386	15273	11-22-65	209F	Reassignment of 100 Series OUA's and Dummy Photo-electronics	
0115	392	15279	11-22-65		Change Design Test Environment and Subsystem Tests	
0116	398	15280	11-22-65	231F	Add Three PSA Modules to LEM BB 1 w/Headers	
0117	396	15291	11-22-65	58	Block II and LEM Acceptance Instructions	Rev 1, 1-25-66
0118	387	15274	11-22-65		Reduce 100 Series Qualification Test Program	
0119-1	540	15881	2-8-66	230F	Eyeiece Storage Compartment for Block II, Design	Rev 2
0119-2		15916	6-17-66		Requirements for IMU Mating Connectors, Malco	
0120	393	15277	11-22-65	228F	Additional 12 Man Months of Training Effort,	
0121-2	397	15292	12-17-65	229F	Exhibits A, B, and C	
0122	391	15278	11-22-65	178	Retrofit GSE Spares to Block II and LEM	
0123	388	15275	11-22-65	119	Failure Data Submittal to MSC	
0124	389	15276	11-22-65	207	Improved EL Lights	
0125	515	15853	3-18-66	210	Delete Star Tracker and Horizon Photometer, Block II	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0126	383	None	11-19-65	224	Replace G & N Harness 8 with 7	
0127	403	15297	11-29-65	149	Improved Receptable Connector, Resolver Trim Modification	
0128	399	15294	11-29-65	213	Battery Power Pack Remote Alarm	
0129	401	15295	11-29-65	174	Eyepiece Polarizer and Eyeguard Reinstatement	
0130	502	15296	11-29-65		Correct Failure of AGE 101 per AC TWX RDH 11-145 11-9-65	
0131	400	15293	11-29-65	214	Modify Star and Horizon Simulator Certification Fixture	
0132	407	15239	12-2-65	211	CCA of Record, Replace Three Bolts on Navigation Base and OUA	
0133	404	15301	12-3-65	280F	Modify Sextant Head 101 to Block II and Ship to MIT	Rev 1, 12-22-65 Superseded by CCA125 Rev 1, 1-24-66
0134	408	15315	12-10-65		Procure 5,000 Modified Flatrack Micrologic Units (Canceled)	
0135	412	15326	12-17-65	268F	G & N 124, Black Box Spares	
0136		15321	12-17-65		G & N 121, Paint Beryllium OUA, NVB, CDU	See CCA-176
0137	434	15361	1-7-66	301F	Design and Development of Thermal Sensor Harness	Rev 1, 1-28-66
0138-2	416	15333	12-17-65	274F	Delete LEM Preproduction Equipment	Rev 1, 1-11-66
0139					Replacement of Broken Tuning Fork Screw in AGE 101	
0140		15358	1-1-66	282F	Extension of Test Data Analysis, TD 193 Through 1-30-66	
0141	417	15339	1-3-66	179	Change PSA per ECP 179	
0142	421	15343	1-6-66	239	Change Test Requirement, Computer Interface	
0143	418	15340	1-3-66	220	Delete Optics Cover Assembly from Block II D & C Group	
0144	419	15341	1-3-66	223	Retrofit AGC 120, Changing to Paragraph 1. B. 9 of ECP	
0145	429	15351	1-4-66	246	Install new Relay and Diode Module on D & C Panel	Rev 1, 1-31-66

CONTRACT CHANGE AUTHORIZATION RECORD						
CCA	CO	CE	DATE	ECP	SUBJECT	REMARKS
497 -						
0146	420	15342	1-3-66	84R	System 17 and 12, Module Changes	3 Revisions
0147	430	15351	1-4-66	Sever	Qualification Fixes	
0148	428	15350	1-4-66	226	Block II AGC Trays to Magnesium, and Foam Potting	Rev 1, 2-24-66
0149	422	15344	1-6-66	272F	GSE Jumper Bypass Tube	Rev 1, 3-17-66
0150	432	15356	1-12-66	283F	Delete Load and Signal Simulator, Block II	
0151	424	Record	1-12-66	253	Ternary Current Switch in G & N 12	
0152	425	Record	1-12-66	238	Change Nameplates on Computer Simulators	
0153	426	Record	1-12-66	206	Add Gaskets and Covers to PSA	
0154	427	Record	1-12-66	177R2	Modify G & N 20 Harness and End Connectors for Spacecraft Installation	
0155	431	Record	1-14-66	252	Redesign Alarm Panel to four - 1 x 4 inch EL Panels	
0156	436	15363	1-19-66	281F	Modify Simulation Computer at NAA & MSC	
0157	437	15364	1-	284F	Modify AGC 6 at NAA	
0158	444	15374	1-26-66	31	Manufacture 60 Jumper Modules	
0159	438	15368	1-26-66	51R	Logic Plate Relocation	
0160	439	15369	1-26-66	170	Supplemental Testing of Sliprings	
0161	443	15373	1-26-66	98	ECDU Analog Module Mechanical Changes	
0162	440	15370	1-26-66	225	100 Series G & N Harness Modification	
0163	442	15371	1-26-66	242	100 Series Signal Conditioner Workaround, G & N 121	
0164	442	15372	1-26-66	100	ICTC Adapter Cable Addition	
0165	492	15830	1-26-66	204	Temperature Controiler Change on Block II/LEM IMU	
0166	493	15831	1-28-66	191	CDU Electronics Module Change	
0167	494	15832	1-28-66	112	Prevent Ghosting of N Segment and ± Signs	
0168	452	15384	1-28-66	279F	Divert 60 Spare NOR Modules to Forward Production	
0169	453	15393	2-2-66	86-2	GSE, Complete Redefinition of Quantity	Supersedes CCA 55 and 73
0170	445	15376	1-31-66	172	Provide One Mass Representative LGE, Mock-Up for TM2	
				305F		

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0171	450	15381	1-31-66	82	Provide Block I and I-100 Series Field Verification Procedures	
0172	449	15380	1-31-66	79	Provide Block I and I-100 Series FVP for Sunrise 45 Hand Holds on G & N 012	Rev 1, 5-23
0173	446	15377	1-31-66	277F	Remove Temperature Monitor Output for Tray 7	
0174	448	15379	1-31-66	266	Select Transistors, Decoding Module	
0175	447	15378	1-31-66	113	Coat All Beryllium Parts on Manned Block I	Rev 1, 2-24
0176	451	15321	1-31-66	219	G & N System	
0177	453	15382	2-3-66	317F	Repair Failed IMU S/N 5	
0178	454	15385	2-3-66	217	Signal Conditioner	
0179	455	15386	2-3-66	232	Resistor Change on IMU Blower Circuit (Same Problem as ECP 090)	
0180	456	15387	2-3-66	249	GSE Cold Plates, Additional Requirements	
0181		15388	2-4-66	306F	Mount Harness B Cable Clamp on IMU for Design Verification	
0182	462	15398	2-10-66	313F	Repair OUA S/N 1	
0183	478	15814	2-14-66	330F 325F	AGC 201, 601, and 602 Less than Class A	
0184	461	15397	2-11-66	203	Shielding of GSE Cables	
0185	451	15395	2-11-66	215	Shielding and Crounding of AGC Cables	
0186	460	15396	2-11-66	364F	GSED's C-1 and R-19	
0187	485	15822	2-28-66	339F	Provide 35.4 Man Months of Training in Accordance with Training Plans	See CCA 121
0188		15806	2-10-66	327F	Increase Travel of Switch on Navigation DSKY	
0189	476	15812	2-24-66	205	Block I-50 and I-100 Series Signal Conditioners Changes	
0190	477	15813	2-24-66	235	Specification Effort for Signal Conditions	
0191	467	15804	2-17-66	97R	PSA Adapter Modules, Block II and LEM	
0192	481-1	15818	8-25-66	403	ECP 403 was Negotiated with 259	
				259	New Design of Erasable Memory for Block II/LEM	

CONTRACT CHANGE AUTHORIZATION RECORD						
CCA 497 -	CO	QE	DATE	ECP	SUBJECT	REMARKS
0194	464		2-17-66	265F	Rework Most 100 Series D & C Groups to Use Standard Screw	
0195	482	15819	2-25-66	258	New Design of AGC Power Supply, Block II/LEM	
0196	466	Record	2-18-66	303	Main DSKY Pedestal Mount	
0197	483	15820	2-25-66	257	New Design of Erasable and Rope Driver, AGC	
0197-1	611		8-22-66	402R1	Block II	
0198	484	15821	2-24-66	291	New Design DSKY Incandescent Lights, Block II	
0199	475	15811	2-24-66	176R	Thermal Test Only, AGC Modules	
0200	487	15823	2-1-66	326F	Delete GSE Test Station P-7	
0201	472	Record	2-21-66	299	Optics/Navigation Base Shipping Container	
0202	471	Record	2-21-66	304	AGC Handling Fixture, Replace Mounting Screws	
0203	470	15809	2-21-66	243	Replace Cam on G & N Indicator Control Panel	
0204	474	15810	2-24-66	323F	AGC Design Review, Block II/LEM	
0205	498	15837	2-28-66	337F	Delete Block I Signal Conditioner Assemblies 109, 110, 111, and 124	
0206	473	Record	2-24-66	234	Remove Rear Isolator Clamp Set on Block I OUA's	
0207	479	Record	2-25-66	312	Add Stiffeners to SCT and SXT Harness Assemblies	
0208	491	15828	3-2-66	287	CM PSA Header Change	
0209	490	15827	3-2-66	285	Update AGC 110 to Incorporate ECP's 189, 212, 182	
0210	489	15826	3-2-66	221	180 Degree Z-IRIG Rotation	
0211	488	15825	3-2-66	197	Provide for Vacuum Testing of AOT	Rev 2
0211-1	488-1		8-29-66	197-2		
0212						
0213	486-1	Record	3-4-66	322R	Wiring Changes to LGC 601	
0214	495	15833	3-4-66	338F	Process Parts for 30 Additional 100 Series, Fixed Memory Modules	
0215	496	15834	3-8-66	254	Perform Redesign of AGC Logic for Blue Nose with Some Exceptions	
0216	497	15835	3-9-66	254	Disconnect Collector Resistor on Dual NOR Gate	

CONTRACT CHANGE AUTHORIZATION RECORD						
CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0217	510	Record	3-25-66	320R	Blacken Edges and Lens in AOT	
0218	502	Record	3-11-66	316	PSA and PTA Potting Void Change	
0219	499	15839	3-7-66	295	Update AGC's 212, 111, 122	
0220	500	15840	3-17-66	318F		
0220-1	500-2		4-27-66		Coat Exposed Beryllium on Block II and LEM	
0220-2					-1 Callies out OUA's to be painted, -2 Updates Authority to 3'8F, R1 8-18-66	
0221	501	15841	3-18-66	333	CAT File After DD 250 (Supersedes ECP 227)	Rev 1, authorized ECP 227
0222	503	Record	3-25-66	307	Middle Axis Assembly Clamp Change	
0223	504	Record	3-25-66	308	Stable Member Heat Transfer Change	
0224	505	Record	3-25-66	309	PIP Temperature Deviation Reduction and Temperature Alarm Test	
0225	506	Record	3-25-66	310	IMU Cross Coupling Change	
0226	507	Record	3-25-66	328	OUA S/N 9, Change Connector (Male to Female)	
0227	508	Record	3-25-66	331	Eliminate Digital Ohmmeter Heat Problem	
0228	509	15846	3-25-66	263	Helicoil and Screw Change for LEM PSA	See CCA 261
0229	511	15847	3-28-66	346F	Seven Sets of Long Relief Eyepieces, Block II, Miscellaneous Eyepieces	
0230	512	15851	3-1-66	365F	Reduce Design Evaluation Program	
0231	513	15864	4-12-66	336	ECDU Potting Change	R-1 - 5-27-66
0231-1	609		5-27-66	336-1		
0232	518	15859	4-12-66	324	Design Change, Computer Sense Amplifier	
0233	520	15861	4-13-66	329	Perform AGC/GSE Compatibility	Rev 1
0234	516	15857	4-13-66	360	Modify AOT 603 through 610, AOT CAM Lock Use Incremental Release	
0235	521	15863	4-13-66	244	Modify Three Optics Handling Fixtures	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA	CO	CE	DATE	ECP	SUBJECT	REMARKS
497 -						
0236	522	15862	4-13-66	248	Redesign Block II and LEM Pulse Torque Power Supply	Revs 1, 2; see CCA 315 2 Rev
0237	517	15858	4-13-66	353F	Change Optics-to-Spacecraft Seal Assembly	
0238	519	15860	4-13-66	344	Computer Test Set, Power Control Change	
0239	524	Record	4-19-66	292R	Modify Shaft Accuracy Testel	
0240	523	Record	4-19-66	343R	Add Raytheon and Kollsman GSE/GFP Listing to Block I Statement of Work	
0241	527	15870	4-24-66	301F	Reduction in Documentation Requirements	
0242	526	15869	4-21-66	352F	New OUA Motor Drive Amplifier and PSA Header Module	
0243	531	15876	4-21-66	366	Computer Software Verification, Unit Testing, etc. (Canceled)	CCA 306
0244	528	15872	5-3-66	341	Field Modification of LEM PI-3, G & N Harness A	
0245	536	15883	5-10-66	362F	MIT Mcounts, etc. for Vibration Transducers on Eight NVB's, Block II and LEM	
0246	532	15886	5-13-66	351	Alarm Module Modification, Temperature Stability	
0247	538	Record	5-12-66	R345	Modify OUA Functional Tester	
0248	537	Record	5-12-66	R355	New Gyro Configuration in G & N 204 and 603	
0249						
0250	549	15894	5-23-66	378F	Connectors and Plates to Mate tiwh Harness 6N136 Prototype	
0251	541	15885	5-12-66	350	Commercial Test Equipment	
0252	535	15930	5-12-66	374	Field Operations, Less MSC Support, Update CAT File After DD 250	
0253	534		5-12-66	375	Repair NAA Simulaticu Computer A-17 and A-28 Modules	
0254	542	15888	5-23-66	382F	Reduce Field Operations Mothers and Spares Documentation	
0255	545	15892	5-23-66	381F	Delete 30 Block II Parts Qualification Tests	
0256	544	15890	5-24-66	380	Delete ADL, All Blocks	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0257	543	15889	5-23-66	383F	Delete 100 Series One-Axis Vibration from System Qualification	
0258	533	15891	5-13-66	373F	Reinstate and Fabricate Stainless Steel Bellows, Block II	
0259	555	15903	5-23-66	399	PERT Requirements Deleted for Subcontractors	
0260	547	Record	5-23-66	354	CDU Panel Mounting Change	
0261	508-1	Record	5-25-66	331R	Digital Ohmmeter Heat Problem	Supersedes CCA 227
0262	546	Record	5-25-66	377F	Modify Spare CDU S/N 110 to -061	
0263	550	15895	5-27-66	394F	Float Freedom Tests on 25 IRIG's	
0264	551	15896	5-27-66	349	PIPA Test Console Retrofit, Block II/LEM	
0265	552	Record	6-1-66	358	AGC Handling Fixture, Block II	
0266	556	15907	6-1-66	392F	Refurbish Qualification OUA and Perform Analysis on Failed Parts and/or Assemblies 6N138	
0267	557	15911	6-8-66	370	Delivery of Flight 204 Flight Ropes, G & N 012	
0268	593	15931	6-8-66	411	Revise Block II and LEM Qualification Testing	
0269	558	15912	6-8-66	379F	Reorient Cabling to PSA for Hold-Down Bolt,	
0269-1	558-1	-	8-29-66		-1 Updated to ECP, 8-16-66	
0270	559	15913	6-8-66	393F	Reduce Qualification Test, 111 Mission Cycle; 110 Included Failure	
0271	562	15908	6-8-66	388F	Galvanic Corrosion Protection 6N143	
0272	562	15908	6-8-66	388F	Over-Coat of 3M 400-Series Paint to Hardware 6N149	
0273	562	15908	6-8-66	388F	Paint Protection Over DOW 17-Finished Magnesium	
0274	572	15925	6-8-66	408	G & N Ground Checkout End Item Generation, Phasover	
0275	564	15915	6-10-66	384	Wiring Changes to PSAAM	
0276	566	15921	6-10-66	367	Addition of Light Diffusing Paint to DSKY's	
0277	561	15916	6-15-66	396F	Repair AGC, P/N 1003770-031, S/N RAY 130	
0278	563	15919	6-16-66	436F	Shift CCB to Milwaukee	Superseded Rev 1

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0279	560	15917	6-17-66	337F	Repair AGE 110	Canceled by CCA 308, Superseded by CCA 390
0280	567	15926	6-28-66	409	Test and Repair OUA S/N 14	
0281	573	15927	6-28-66	388F	Protective Paint, Block II and LEM Harness	
0282	574	15928	6-28-66	410	Reposition Eyepiece Locking Lever, 180 Degree Arc	
0283	580-1	15934	7-22-66	416	Repair OUA 14, Block II	
0284	575	15929	6-28-66	409	Superseded CCA 28C	
0285	568	Record	7-1-66	376	Thermal Analysis in Block II Optics, New Ablative Covers	
0286	569	Record	7-1-66	385	Modify Three PIPA Test Consoles	
0287	570	Record	7-1-66	386	Compatibility I Changes for Block II PAC	
0288	571	Record	7-1-66	387	Compatibility II Changes for Block II PAC	
0289	577	Record	7-1-66	404	Compatibility Changes for Block I-100 PAC	
0290	576	Record	7-11-66	405	OUA Shipping Container Spring Retainer Modification	
0291	578	Record	7-13-66	398	CTS-AGC/GSE Compatibility III	
0292	589	15943	7-15-66	340F	Potting Change of ECDU, Effectivity S/N 205	
0293	579	15944	7-14-66	362F	Ship six AOT Seals, Rubber, to AC/GAEC	
0294	592		7-15-66		LEM NVB Redesign; Reference CE 15289	
0295	585	Record	7-15-66	247R1	Reduce Effort of CCA 245; Delete Brackets From LEM NVB	
0296	586	Record	7-15-66	389R	Provide New SCD Cover (Plastic) for AGC Handling Fixture	
0297	584	Record	7-15-66	401R	Provide Improved Protective Covers for Cables	
0298	588	15942	7-15-66	421F	Pot Connectors in 16 PIPA Suspension Module	
0299	581	15945	7-15-66	368	Modify Length of AOT Lens Housing and Add Protective Coat	
0300	590	15946	7-15-66	420F	Provide Improved Power Module Relays	
0301	587	15941	7-15-66	347	Additional Training and Handbook Requirements	
					Replace Saturable Reactor in IMU 121	

CONTRACT CHANGE AUTHORIZATION RECORD						
CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0302	591	15939	7-18-66	424	Fabricate and Deliver One PSA Cover to GAEC	
0303	594	15951	7-25-66	348	Replace Two-Speed Switch Modules for PSA 121 and 122	
0304	595	15952	7-25-66	335	Replace Precision Resolver Alignment Module 1008283-011 for IMU 122	
0305	604	15964	7-27-66	434	Cancel All Flight Programming, Hardware, and Ground Test Resident Effort	
0306	531-1		7-26-66	366F	Cancel CCA - 243, CE 15876, Software	
0307	596	Record	7-28-66	418	Rotate Connector 180 Degrees on 100 Series SCA Harness	CCA 322
0308				426	Canceled CCA 280, Duplicate of 283	CCA 283
0309	598	15948	7-29-66	427	Ablative Material for Optics Plus Letter on Extra Covers	Still on Contract
0310	597	15953	8-2-66	428	Test and Evaluate all Unassigned Apollo I Gyros	
0311	601	15958	8-3-66	435	Add 2 Velcro Strips to I-50, 100 Series Optics Cover Assembly	
0311-1				423F		Canceled by Rev 1
0312	600	15957	8-3-66	422	CCRD Mounting Changed to Side	
0313	601	15962	8-8-66	359	Replace IMU Mounting Bolts for Block II and LEM	
0314-1	605	15965	8-11-66	414-1	Random Vibration Test for all Fixed Memory Modules, Change Vibration Level	
0315	602	15963	3-20-67	248R2	Provide Test Equipment Fixtures and Connector to Retrofit PTA at GAEC	See Also CCA 236
0315-1						
0316	603	Record	11-7-66	445	-1 Adds Holding Fixture, NAA Fabricated	
0317	607	15969	8-9-66	425	Modify G & N 17 Rubber Isolators for DSKY's	
0318	606	15966	8-1-66	455	Fabricate Three Eyepiece Storage Units, Three G & N Indicator Control Panels, Six DSKY's	
0319	614	15973	8-11-66	429	Modify CDE Connector Engagement of Coupling Display Assembly	
			8-16-66		Delivery of Fixed Memory Modules	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0320	618	Record	8-29-66	390	Temperature Stability of Ohmmeter, Operations Console	Repeat of CCA 307
0321	619	Record	8-29-66	391	Modify Spare Digital Recorder	
0322	620	Record	8-29-66	418	Rotate 100 Series Harness Connector 180 Degrees	
0323-1	623	15906-1	8-25-66	477	Delete 28 Block II Assembly Qualification Tests; -1	
0324-1	630	15991-1	9-21-66	454	Deletes 28 Block II Tests and all LEM Tests AOT Design Change Pinning, Mirror Mounts, Relay Lens	
0325-1	622	15981	9-2-66	438	Signal Conditioner Noise Suppression Capacitor	
0326-1	624	15983	10-14-66	440	Clear Rope Driver Circuit	
0327	625	-	9-8-66	441	Screen Relay Modules, Add DSKY Isolators, G & N 122 and 123, and Two Spares to G & N 12 and 121	
0328	626	15985	9-8-66	300	Retrofit Glitch Detectors and Add Jumpers in Block I, PSAAM's	
0329	627	-	9-8-66	264	New Acceptance Data Package Requirement	
0330	628	15987	9-8-66	-	Fabricate Mockup of Block II Eyepiece Storage Unit and SXT LER	
0331-1	631	15992	9-21-66	453	OUA Modifications, Beryllium Wedge	
0332	629	15988	9-8-66	444	Retrofit Interconnect and IMU Control Panels, Switch Actuating	
0333	636	15988	9-21-66	289	Perform Photographic Coverage	
0334	632	15993	9-22-66	439	Provide AGC/GSE Compatibility	
0335	634	15996	9-29-66	468	Vibration Changes, ND1002337	
0336	633	15995	9-28-66	470	Change Apollo Guidance Group (AGC and DSKY) Acceptance Vibration Test From Sine to Random	
0337	639	18203	10-3-66	446	Fabricate Two New Relay and Diode Modules and Two Resolver Load Modules for G & N 121 and Spares	

CONTRACT CHANGE AUTHORIZATION RECORD						
CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0338	635	18204	10-3-66	462	Modify LEM Navigation Base by Addition of Ground Strap, Washer, and Screw, Retrofit from G & N 601 to Production	
0339	641	18205	10-5-66	461	Replace Diodes in Gimbal Servo Amplifier Module	
0340	642	18206	10-5-66	413	Modify CDU S/N 46 from -061 to -041 Configuration	
0341	643	18207	10-5-66	443	Replacement Screws (Except Retrofit Computer C-1, Process C-2)	
0342	644	18208	10-5-66	433	Recalibrate GFP Apollo IRIG's	
0343	645	18209	10-5-66	412	Factory Retrofit of AGC 110A	
0344	638	18202	10-5-66	447	Bond Foam Plastic Pads to Tray A and Tray B Covers	
0345	646	18210	10-6-66	508	Modify Newspeak Ropes to Add Diodes for Voltage and Temperature Stabilization of Computer Fixed Memory	RECP 6N226
0346	648	Record	10-10-66	463	AGC Navigation DSKY Torque Screws and Grounding Straps	
0347-1	647	18212	10-11-66	473	Authorize 473F Pseudo Field Stop for AOT Light Scatter	
0348	652	18213	10-14-66	341R1	Computer Interface Wiring, Yaw Impulse	
0349	649	Record	10-14-66	425R1	Vibration Damping of DSKY's for G & N 17 and Spare Mounting Change, Block I GSE Connector Covers	
0350	650	Record	10-14-66	430	Delete G-Dot Recorders from DSKY and G & N Handling Fixtures	
0351	651	Record	10-14-66	432		
0352	653	18214	10-14-66	474	AGC Test Connector Jumpers to Ground Certain Gates	
0353-1	661	CT1901	11-3-66	323	Discontinue Phase 1A of AGC Design Review	
0354-1	654	18217	10-18-66	456	Eyeiece Storage Unit, New Strike Catches and Stops, Recycle Plan	
0355	655	18219	10-20-66	457	Block II Indicator Control Panel, Switch Cover Module	
0356	656	Record	10-24-66	277	New Cam for CCA 173	
0357	657	18221	10-26-66	448	Fabricate Four Additional Core Ropes, Assembly Only	(See SA75 and 81)

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0358-1	663-1	18230	11-7-66	491	GSE Quantity Change, Revision, Additional Changes, -1 Change Quantity	
0359	660	Record	11-3-66	458	Provide a Threaded Adapter for Portable Light Assembly	
0360-1	667	18237	12-5-66	460-1	Jumper Wire in AGC and Special DSKY Testing	
0361	659	18226	11-4-66	469	5 Percent, 800 Hz Amplifier Modification	Canceled 11-22-66
0362	662		11-16-66	486	Modify AGC Power Supply Module-Cut Pins	
0363	664		11-23-66	490	Accept DSKY 30 at Raytheon	
0364	666		12-1-66	502	Accept DSKY 34 at Raytheon	
0365	668	18238	12-5-66	475	Modify OUA Manual Adjustment Knob	
0366	669		12-5-66	465	Replace 95 Resistors, Simulation Computer 1-3	
			3-20-67	504R2		
0367-2	670	18239-3	12-5-66	419	New Relay in DSKY D-9 and Up, Spare Retrofit Change	
0368	606-1		12-5-66	429-1	Modify CDU Connector Engagement (Refer CCA318)	
0369	693		12-7-66		Accept DSKY's 33 and 35 at Raytheon	
0370	673	Record	12-16-66	478	Paint Exposed Surface of Middle Tray Space of AGC	
0371	674	Record	12-10-66	452	AGC and AGC/GSE Interconnect Set Modification	
0372-1	675	18245-2	12-15-66	476	Add Light Diffusing Paint to DSKY's; -1 Deleted Retrofit	
0373-1	672	18244	12-15-66	301R2	Modify AGC's	RECP 6N260 - CCA 137
0374-1	671	18241	1-17-67	388-2	Paint G & N 202 Harness, CDU, PSA, PEA; -1 Effectivity Note (Reference CCA 390)	
0375	688	18260	12-15-66	483	Sense Amplifier Module Change, Siguetics	
0376-1	676	18271-4	1-17-67	500	New Capacitor for PIP Pre-amplifier and Conformal Coat; -1 Superseded Original	
-2, -3		18271-5	4-28-67			
0377	684	18255	1-3-67	489	Replace Transformers in Block II and LEM CDU and Signal Conditioner	
0378	692	18263	12-30-66	514	Delete Block II and LEM Parts Qualification Tests	CCA 383

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0379-1	677-1	18249	2-6-67	505	Implement Flight Processing Specifications C-8 and D-9 for Last 130 Modules; Spares Affected	
0380-1	691	18266	12-30-66	528	Gyro Repair	
0381	678	18258	1-3-67	501	Flight Processing Specification Change for AGC and DSKY	
0382-1	679	18250	1-6-67	487	AOT Procurement Specification Change, Air Focus Tests; -1 Effectivity Change	
0383	692	18263	12-30-66	527	Reduce Block I-100 Parts Qualification Test to 221	CCA 378
0384	680		1-3-67	479	Improve Elastic Properties of Contact, DSKY Pushbutton	
0385	681	18251	1-3-67	485	AGC Power Supply Module Redesign	
0386	682		1-3-67	493	DSKY Resistor Changes	
0387	683	18252	1-17-67	499	Damper Plates, Block II and LEM CDU Assembly	Rev 1
0388	687	18259	12-29-66	356	Change Quantity AGC Shipping Control and Handling Fixtures	
0389	685		1-3-67	494	DSKY Wiring Change	
0390	562-1		1-3-67	388R1	Retrofit Block II and LEM ISS and GSE, Paint and Seal	CCA 374
0391	689		1-10-67	513	Accept DSKY 36 at Raytheon	
0392-1	690	18261	1-11-67	512	Fabricate 15 Neutral Density Sun Filters	
0393	694		1-26-67	520	Accept DSKY 37 at Raytheon	
0394	695	Record	1-30-67	507-1	Rework OUA Motor Tachometers 1012156-1 to -4	
0395	696	18272	2-2-67	521	Accept DSKY 39 and AGC C-8 at Raytheon, AGC S/N 24	
0396	697	18274	2-3-67	522	Add Jumper Wire to Glitch Detector	
0396-1	751	18840		522	Add Block II per ECP	
0397	701	18277	2-6-67	519	Change IDM Modules and Power Supply Requalify DSKY 30	
0398-1	699	18275	2-6-67	481-1	Fixed Memory Jumper Modules, Add Resistors; -1 In-Line Earlier	
0399	700	18276	2-9-67	471	Modify Core Ropes -- Resistor and Diode Changes	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0400-2	703	18278	2-13-67	518-2	AGC Module to Prevent Signal Dropout (Power Supply and Tray A) Dated 5-23-67	R2
0401-1	702		2-10-67	524	Accept DSKY 43 at Raytheon	
0402	704		2-15-67	525	Accept DSKY 40 at Raytheon	
0403-2	705	18279	2-17-67	515	Change Resistor in Coarse System Assembly Module	
0404-1					Rev 1 - Add 202 for Retrofit	
0404-4	707-3	18281-4	3-6-67	529R2	Block II PSA Humidity Qualification Fix	
0405	708	18283	3-6-67	509	AGC/GSE Compatibility V Changes	
0406-1	709-1	18284-2	3-6-67	533	Change Uplink Wires on Interconnect Harness A	
0407	712		3-13-67	511	Wire Change - Tray B of AGC Eliminate SCAFAL Noise	
0408	711	18289	3-13-67	537	Study to Eliminate Residual Image Motion in OUA With Demonstration	
0409	708		3-22-67	509-1	AGC/GSE Compatibility V-2 Additional Retrofits	
0410	714	18293	3-22-67	517	Provide G & N Training Through June 1967	
0411	715		3-22-67	523	Delete Use of AGC Group Drawing 1003770	
0412	713	18292	3-22-67	545	Replace Sundial Test Rope Module B-3	
0413	725	18807	4-14-67	373, 475, 507	Bellows, Manual Adjust and Motor Tach on OUA	
0414						
0415-3	717	18296	3-30-67	550	Rerun DSKY and PSA/SCA Vibration Tests, Refurbish DSKY S/N 30	
0416	720-1	18299-1	3-29-66	554	Four Incandescent Lights for Simulator DSKY	
0417-1	718-1	18297-1	3-29-66		Design Study AOT Reticle Knob and Counter	
0418	719	18298	3-30-67	552	Reduce Quantity of AGC GSE, Compatibility Kit II and III	Canceled
0419	721		4-4-67	557	Accept AGC 29 and DSKY 38 at Raytheon	
0420	726	18808	4-11-67	552	Fiberglass Teflon Lacing on LEM-1 G & N Harness	
0421	723	18805	4-10-67	560	Provide 110 Man Months Update Training Effort	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0422	722	18804	4-10-67	574	Rework B-1 Module to -231 Configuration	
0423	728	18810	4-10-67	566	Tear-down and Analysis of Two Category IV IRIG's	
0424-2	727	18809	4-11-67	558	Replace LEM Computer Mounting Bolts and Brackets	
0425-1, -2	724	18806	4-13-67	561	Shorter Flexible Coolant Hose, ISS 122, 123, 124	
0426	730	18812	4-17-67	549	Signal Conditioner, Salt Atmosphere and Test	
0427	729	18811	4-17-67	555	Clip Pins on Two-Speed Switch Assembly, PSA	
0428-3	731	18815	4-19-67	568	Conduct Nonmetallic Materials Testing and Redesign	
0429-1	732	18816	4-19-67	569	Modify GNIC Panel 202 and Up	
0430-6	733-5	18817-4	4-20-67	541, 539, 546, 540, 543, 542	Design and Modify AOT	
0431	734	18819	4-28-67	538	Reticle Brightness Resistor Replacement	
0432-1	739	18327	5-9-67	577	Add Isolation Diode to LM PSAAM, Remove IRIG Temperature	
0433-1	740	18828	5-10-67	551	Replace Harness Lacing Tape, Block II and LM	
0434	716	18294	3-24-67		AOT Reticle for Mountain Top Test (TWX RG 53-191)	
0435	737	18826	5-18-67	563	Design and Manufacture 22 AOT Dust Covers	
0436	742	18829	5-22-67	580	Test G & N for Out-of-Tolerance EMI	
0437	743	18830	5-23-67	536	Extend Diagnostic Capability of Newspeak	
0438	744	18831	5-19-67	583	Hold Procurement of AOT Heater Bracket	
	745	18833	5-31-67	301, 428, 453, 475, 507, 579	Selloff OUA 207 and Retrofit for APTPS Qualification; Also Retrofit OUA for G & N 202.	
0439	746	18834	5-31-67	534	Prepare Erasable Memory and K-Start Tape 3	
0440	747	18835	5-31-67	547	Add Limiting Resistors to Battery Pack	
0441-3	748-1	18836	6-1-67	582	Remove Blankets AOT-611 and 612	
					Replace Harness LTA-8; Add PSA and Harness Modifications	R-3
0442	749	18837	6-1-67	584	DSKY Buttons Binding, Teflon Coated Shafts, Simulation	
0443	750	18838	6-1-67	573	Further Reduction in Parts Qualification	

CONTRACT CHANGE AUTHORIZATION RECORD							REMARKS
CCA 497 -	CO	CE	DATE	ECP	SUBJECT		
0444	752		6-12-67	506	AGC Handling Fixture Modification		
0445	753	18815	3-13-67	593	Engineering Study, Operation in Hydrogen Oxygen Atmosphere		
0446-3	757	18848-1	6-14-67	594	Replace Plastic Overlays, CCD		
0447-1	755	18845-1	6-14-67	597	Upgrade G & N 204		
0448-1	758	18849	6-19-67	590	Remove Anticreep Module, Replace Spring and Collet		
0449	75	18850	6-14-67	585	Change Capacitor in PIP Preamplifiers	367	
0450-1	754	18844	6-19-67	596	Upgrade G & N 602	608	
0451	756	18846	6-14-67	598	IRIG Drawing and Specification Maintenance		
0452-1	762	18853	6-15-67	606	Change 207 to 206		
0453	760	-	6-20-67	497	Beryllium Warning Decals		
0454	761	18852	6-20-67	586	Refurbish AGC 201A		
0455	763	18858	7-3-67	605	IMU Blanket Removal		
0456R-1	764-1	18859-1	7-6-67	572	New Gasket, Block II PSA		
0457	765	18860	7-7-67	615	Modify and Scrape Harness and Configure a DSKY Face for Flammability Test		
0458	766	18861	7-7-67	599P	IRIG Bearing Evaluation, Gyro Repair		
0459-2	767	18863	7-7-67	612	Upgrade G & N 202		
0460-1	768	18864	7-13-67	604	Modify and Vibrate Erasable Memory Modules		
0461	770	18865	7-13-67	614	LM-M-6 Flammability, PSA and SCA Header		
0462							
0463	771	18867	7-18-67	617	Vibration and Shock Test, Three D & C Assemblies		
0464	773	-	7-20-67	571	Remove Shock Recorder from Shipping Container		
0465	775	18869	7-20-67	575	Modify Raytheon Power Supplies (GFP) for Spares		
0466	772	-	7-20-67	581	Block II Interconnect Cable Modification		
0467	779	18873	7-20-67	592	Delete One Jumper Module		
0468	776	18870	7-20-67	618	Upgrade G & N 605 for LM 3		
0469-1	777-1	18871-2	7-20-67	616	Upgrade G & N 206 for CSM 103		
0470-1,	778-2	18872-3	7-20-67	587	IRIG End Cover Replacement		
-2, -4							

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0471	782	18877	7-26-67	635	Analyze Failure of Two Block I IRIG's	
0472-1	785	18875	7-26-67	531	Vibrate DSKY's and Modules	
0473-1	780-1	(18876-1)	7-26-67	603	Capacitor Change in MSA and Quadrature Rejection Module	
0474-1	781-1	(18876-1)	7-27-67	609	Diode and Resistor Change in MSA and Quadrature Rejection Module	
0475-1	783	18878	7-27-67	422	Change CCA-212 Effectivity, CCRD Mounting	
0476R-1	807	19205	9-25-67	634F	Two CM DSKY's for	
0477	784	18879	7-31-67	564	Implement Flatpack Specification ND 1002359	
0478	787	18882	8-9-67		One Seal and Four AOT Pressure-Seal Guards	
0479	788	18883	8-9-67	548	Modify Nine AOT Covers, GSE	
0480	789	18884	8-9-67		Eighty-Four Man Months LOE for Flight Control Plans, Tests, and so on.	
0481	786	18881	8-10-67	610	Refurbish IMU S/N I, 50 Series	
0482	790	18885	9-23-67	642	Add Capacitor to Four Nigh Watchmen and Evaluate	
0483	731-4	18815-4	8-23-67	623	Flammability Protection of CM SCA	
0484	731-4	18815-4	8-23-67	622	Flammability Protection of LEM PSA	
0485	731-4	18815-4	9-5-67	627	Flammability Protection of Block II Harness Group	
0486	731-4	18815-4	8-23-67	630	Flammability Protection of CM Navigation Base	
0487						
0488	731-4	18815-4	8-23-67	620	Flammability Protection of Block II PEA	
0489-1	795	None	8-29-67	578	Harness Splicing and Harness Replacements Block II and LEM	
0490	731-4	18815-4	8-23-67	624	Flammability Protection of LEM SCA	
0491	731-4	18815-4	8-23-67	621	Flammability Protection of CM PSA	
0492	731-4	18815-4	8-23-67	631	Use RTV-109 in ISS and AGC	
0493	791	18886	8-24-67	644	Procure One Ingot of Molybdenum For Fixed Memory Module	
0494	792	18887	8-28-67	649	CAT IV Repair of Gyro S/N 7A-121	
0495	793	18888	8-30-67		Retrofit of OUA's S/N 15 and 17	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0496	794	18885	8-30-67	650	Documentary Photography Requirements in Accordance with RECP 7N464	
0497	731-4	18815-4	9-5-67	626	Flammability Protection for LEM Harness	
0498	796	18890	9-5-67	628	Redesign of ESU	
0499	797	18890	9-5-67	629	Redesign of Optics Shroud	
0500-2	731-4, 5	18815-4, 6, 7	9-5-67	641	Flammability Protection for CM/LM DSKY	
0501	798	None	9-6-67	465R1	Retrofit Simulation Computer S/N 2 to Incorporate New Load Resistors	
0502	799	18893	9-11-67	556	Update and Maintain CAT Tape Through 1969	
0503	800	18894	9-14-67	646	Design and Fabricate New AGC Vibration Holding Fixture	
0504-1	801	18895	9-14-67	559	Modify 2 Fixed Memory Test Stations for Margin Testing	
0505	802	18896	9-15-67	655	Spacers for LGC and GAEC Cold Rails	
0506	804	None	9-21-67	595	PTC Block II and LTC Retrofit to Provide Adjustment of Cutoff Voltage	
0507						
0508	805	19201	9-29-67	653	IMU Wiring Changes to Minimize Preamplifier Oscillation, Block II and LEM	
0509	808	19208	10-4-67	664	Modification and Retest of LM-4, LM-5, and LM-6	
0510	809	19209	10-4-67	665	Modification and Retest of CSM 193 and 106	
0511	810	19210	10-4-67	526	OVA Eyepiece Vacuum Shim	
0512	811	19211	10-4-67		Sunburst B-3 Flight Rope Module	
0513	812	19214	10-13-67	662	Impelment MSC-PROC-C-105 Ethylene Glycol Spillage	
0514	814	19218	10-19-67	657	Conical Sunshade for AOT	
0515	816	19207	11-2-67	667	VHF Ranging Interface of Block II Harness G & N 205, 206, 210, and Subsequent	
0516-1	817	-	11-7-67	678	IRIG Flat Washer Modification and C-7	

CONTRACT CHANGE AUTHORIZATION RECORD						
CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0517-1	819	19222	11-9-67	673	DSKY Pushbutton Cap Housing Assembly	
0518	821	-	11-15-67	536	Extend Diagnostic Capability of Newspeak Program	
0519	822	19224	11-15-67	658	Flammability Models of G & N	
0520-1	823	19225	11-15-67	633	AOT Flammability Protection	
0521	824	-	11-15-67	654	G & N Mounting Fixture Modification for SCA and Aluminum Tape	
0522-1	820	19223	11-15-67	686	Mockups for MSC-1 and MSC-2	
0523	826	-	11-22-67	672	SCA/PSAAM Tester Adapter-Wire Change	
	37	19200	Negotiated		Reallocate Two DSKY's (Approved Spares List)	
	38	19216	1-15-68		Reallocate One DSKY (Approved Spares List)	
0524-1		19232	12-6-67	632-i, -2	Provide Flammability Protection for Eyepiece and ESU	
0525	829	19235	12-20-67	656	Vibration Screening of all IDM's, Reallocate as Required	
0526						
0527	830	19236	1-1-68	688	IRIG Modification to Reduce Preamplifier Oscillator	
0528	831	19237	1-9-68	506-2	Modification of AGC Handling Fixture	
0529	832	Record	1-9-68	682	Stop Use of D & C Group Drawing 2014623	
0530	833	Record	1-9-68	647	Increase Lead Size and Twist Ground of IMU Heater	
0531	836	Record	2-2-68	661	Gaskets for Electrical Connector Cover Sets (GSE Covers)	
0532R1	834	19240	2-2-68	569-1	Fill Aluminum Overlays for GNIC and	
R2				594-1	CCRD Panels (two), Include G & N 205	
0533	835		2-2-68	674-1	Noise Reduction in GSE	
0534R1	838	19241	2-2-68	726F	Modify AOT for LM-1 and LM-2 (Seven Separate Modifications) and Delete Item 6 of ECP 657 R2	
0535	839	19242	2-9-68	660R1	Qualify Transistor P/N 10-8969	
0536R1	840	19245	2-6-68	700FR1	Change Receipt of Exhibit to Perform in Accordance to Support Sneak Circuit Analysis for CSM-1 and Subsequent from 3-1-68 to 4-1-68	
0537	841	19246	2-7-68	673-1	IRIG and PIPA Data Tabulation	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0538	842	19247	2-7-68	698	Postflight Testing of G & N 122	
0539R1	847	19254	2-23-68	701F	CAT IV Repaired IRIG's Shall Conform to 121 Class II Changes; Add Nylasint Bearing Retainers	
0540R1	846	19251R1	2-15-68	663	Convert LM 622 to Block II 223, OUA Eyepieces, GFE	
0541	853	19260	2-23-68	576R2	Delivery of Fixed Memory Modules	
0542	850	19252	2-23-68	709F	Add "Through 12-31-68" to Last Sentence of Paragraph 4.1 of Exhibit J	
0543	852	19253	2-23-68	710F	Sentence 1 Paragraph 1.2, Exhibit J of S. O. W. Change for "Period of Performance"	
0544	848	19255	2-23-68	702F	Modify the Current GSE Sextant Cover Assemblies and Telescope Cover Assemblies	
0545	849	19257	2-28-68	708F	Fabricate Two Sets of Block II Long Relic Eye-pieces to Support Block II G & N Systems	
0546	851	19258	2-29-68	707F	Take One NB, OUA Installation Kit and Seals from NR for Support of SC-2S-1, and Replace	
0547	857	19266	3-20-68	428FR2	Provide Ejectable Dust Covers for G & N 202, 2TV-1	
0548	858	19267	3-21-68	428FR2	Procure and Install Various Hardware for G & N 220, 221, and 222	
0549	859		3-21-68	691	Re-rofit Five GSE Breakout Box and Cable Adapter Sets in Accordance with ECP 691	
0550R1	860	19269-2	3-21-68	636	Modify Computers C8, C10, C12, and C20 per ECP 696	
0551	783-1	18878	3-21-68	422F	Modify CCRD for G & N 605 in Accordance with ECP 422F	
0552R1	862	19271	3-27-68	628, 629	Redesign and Reassignment for ESU and OUA. Delete One OUA and Add Spare A0926	
0553	861	19270	3-27-68	706	Modify Eyepieces to Correct Qualification Failure	
0554	865	19275	4-3-68	717F	MSC-PA-D-67-13, Apollo Spacecraft, Nonmetallic Materials Required	

CONTRACT CHANGE AUTHORIZATION RECORD						
CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0555	863	19273	4-3-68	713	Provide Retrofit Kits for CTS to Add Resistor and Capacitors	
0556	866	19276	4-12-68	719F	Modify Alarm Module for Computer V-Fail Circuitry	
0557	867	19277	4-11-68	714P	Modify ECDU to Lessen Noise Voltage	
0558	869	19280	4-18-68	725F	Aluminum Placards for G & N 204 and Subsequent	
0559	870	19281	4-18-68	711	EL Spares Through Thermal and Vibration Test (Documentation)	
0560	860-1	19269-1	4-24-68	696R1	Change Block II/LM Computers C2, C4, C5, C6 in Accordance with ECP's (Canceled)	
				694, 712		
0561	882	19293	5-1-68	732	Design Requirements for Multilayer Boards	
0562	887	19299	4-25-68	728F	Deletion of Integrated Stock Balance and Consumption Report	
0561R1, R2	871	19282	4-30-68	697	Provide AOT Protective Shields for AOT 605-618 and Subsequent and Spares	
0564	872	19283	5-1-68	724F	Incorporate Special Selected Limit Stops Mechanism for OUA	
0565	873	19284	5-2-68	731F	Generate Programs and Documentation for Core Rope Changes	
0566	874	19285	5-2-68	570	Modify Two Auxiliary Battery Packs	
0567	881	19292	5-8-68	703	Conduct Tests to Identify True Causes of Failures	
0568	877	ECP of Record	5-8-68	720	CTS Uplink Tapes for Loading Information into AGC/LGC	
0569	875	19287	5-8-68	704	Retrofit 28 Fixed Memory Jumper Modules (Clipping Pins)	
0570	876	19288	5-9-68	724	Incorporate Special Selected Limit Stop Mechanisms for OUA S/N 20	
0571	888	19701	5-23-68	715	LM and Block II Fixed Memory Modules Increased by 68	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0572R1 R2, R3	880	19291-2	5-17-68	714	Retrofit Three CM ECDU's with Capacitors	
0573	884	19295	5-23-68	705	Modify Block II Optics Inertial Analyzers and Spares by Adding Resistors	
0574	885	19296	5-23-68	693	Fabricate Required FTE and Monitor Relays for DD22 and Subsequent	
0575	879	19290	5-23-68	724	Incorporate Redesign Limit Stops into OUA's 205, 207, 211, and Subsequent	
0576R1	886-1	19297-1	5-23-68	721	Generate and Verify K-Start Tapes Using DSKY and Read-Write; Add AGC CPT and Read-Write	
0577	899	19703	5-29-68	727	Temperature Soak Tests All Spare Signal/Conditioner Modules	
0578R1	891	19705	6-6-68	733F	Vibration of IDM Modules	
0579	890	19704	6-6-68	711	Change Paragraph 3, 1, 3 to Thermal Cycle Operative (IL Panels)	
0580R1	892	19707	6-12-68	8N634	Investigate KKK Failures During A-6 Mission (Canceled)	
0581	893	19708	6-20-68	738	Mockup 28 to Spacecraft 103 Configuration	
0582	895	19712	6-25-68	739	Additional Lights for Indicator Panel	
0583	894	19709	6-25-68	735	Safety Glass on EL and IL Lights	
0584	901	19717	6-25-68	8N641	Amended S. O. W. for Section 6, Fixed Memory Modules	
0585R1	897	19718	7-3-68	730	20 Man Months for AC Electronics G & N Training	
0586	898	19714	7-14-68	723	Additional Vibration of PSA S/N 6	
0587	899	19715	7-10-68	8N646	Utilize Parts from Block I to Repair Block II IRIG's	
0588	900	19716	7-10-68	724	Cover Design for Limit Stop Assembly	
0589	902	19270	8-1-68	734R1	Verification of CSM and LM PGNCS	
0590	903	19721	8-13-68	8N611	LM Installation Kits for LM 5 and Subs	
0591	904	19723	8-29-68	659	Design, Delivery, and Manufacture of Plastic Container and Postablative Covers for CM Optics	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0592	905	19727	9-4-68	607R1	Refurbish IMU S/N 7 and ECDU S/N 14	
0593R1	907	19729	8-13-68	750F	Delete LM 519, 620, 621, 622 from Statement of Work	
0594R1	906	19728	9-11-68	739	Modify all LM and Simulator DSKY's, Fourteen Ledgers LM5-15, and Simulation (32)	
0595	908	19730	9-11-68	632	Delete Repair of CCA 524 from Retrofit	
0596	909	19730	9-16-68	746	Springs for Pushbutton Switches	
0597R1	911	19735	9-24-68	752	Design and Fabricate Three Sunfilters	
				CCBI		
				8N663		
0598	912	19736	9-30-68	751	Analysis of Harnesses of 18 IMU's	
0599	913	19739	10-9-68	741	Provide One Updated Lifting Battery Pack	
0600R1	915	19742	10-16-68	753	Steel Threaded Inserts to SXT Mirror Housing Space-craft 104	
0601	916	19743	10-16-68	749	Calibration Instructions Plate to Deviation Wedge	
0602R1	918	19745	11-1-68	757	Modify PSA and Header by Changing Capacitor	
0603	920	19756	11-7-68	755	Remove Brackets for LM/ECDU	
0604	921	19750	11-21-68	754	Redesign Verb/Noun Star List Panel	
0605R2	923	19753	12-11-68	764	Rangefinder and Rangefinder Fix	
				773		
0606	924	Record	12-3-68	748	Replace Fuse in Battery Power Pack	
0607	925	19755	12-10-68	763	AOT Wire Harness Protection	
0608	926	19756	12-13-68	762	MSC Spacecraft Testing June 30, 1969	
0609	927	19757	12-19-68	766	Vacuum Testing of Fixed Memory Modules	
0610	928	19758	12-30-68	761	CM/LM Docking Shock Qualification Test of PTA	
0611	929	19760	1-10-69	768	Screen of GFP EL Panels	
0612R1	930	19761	1-12-69	771	Acceptable IRIG Configuration	
0613	931	19762	1-23-69	759	Measurement of Gyro Wheel Bearing Beat	
0614	932	19763	1-23-69	758R1	EL Thermal-Vacuum Screen	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0615	934	19768	1-29-69	772	Colossus 249 Comparison	
0616	935	Record	2-13-69	767	Technical Directive for Reliability from NASA	
0617	936	19770	2-12-69	769	Flight Qualification for One MIT and One Lendix IRIG	
0618	937	Record	2-19-69	770	Breakout Box Cable Tlreaded inserts	
0619	938	Record	3-7-69	766	Fixed Memory CFE Modules, Use GBL (Related to CCA 609)	
0620	341	19778	3-12-69	775R1	Software Verification, Colossus II	
0621R1	94?	19779-1	3-13-69	783	Residual Inventory	
0622R1	939-1	19776-1	3-27-69	781	ECDU Bolts Plus Spares LM 5 and Subs	
0623	940	19777	3-13-69	782	OUA S/N 27 Analysis, Apollo 9	
0624	944		3-26-69	780	Taping of AOT Cabling	
0625	945	19784	4-2-69	774	Analysis on Motor Tachometer Lubricant OUA	
0626	946	19785	4-7-69	786	Replace OUA/AOT Counters	
0627	948	19788	4-7-69	785F	40 Additional Fixed Memory Modules	
0628	947	19786	4-11-69	788	Verification of PGNCs and Radar Routes	
0629	949	19787	4-17-68	787	Modify A Harness VHF Ranging	
0630R1	950	19789	5-20-69	791	Deletion of PIA Testing at Field Sites	
0631	953	19796	5-15-69	776	Normalize 38 Shrouded IRIG's	
0632	954	19797	5-26-69	795	Teflon Locking Rings SXT and SCT Eyepieces	
0633	955	19798	5-28-69	790	ESU Spring Retainers	
0634	957	22700	6-5-69	793	CAT and EMF Tape Submittal	
0635R2	958	22702	6-26-69	792	Computer Aided Tracking	
0636	959	22703	6-26-69	800	Deletion of AGC Vibration	
0637	961	22706	7-1-69	797	G & N Training	
0638	963	22708	7-8-69	794	PSAAM Spacer Blocks	
0639	960	22705	7-8-69	809	PEA Deletion, KSC (See CCA 497-630)	
0640	964	22709	7-15-69	801	IMU Flex Hoses	
	965	22710	7-17-69	804	Reuse of PIPA Calibration Modules	

CONTRACT CHANGE AUTHORIZATION RECORD

CCA 497 -	CO	CE	DATE	ECP	SUBJECT	REMARKS
0641	966	22711	7-18-69	810	RASPO Deletion	
0642	968	22712	8-11-69	807	DAP Rope Polarity Tests	
0643	967	N/A	8-11-69	803	GSE Cables for CTS Noise	
0644	969	22713	8-11-69	802	DSKY Vibration Deletion	
0645	970	22714	8-11-69	800	Rope Diode Test	
0646	974	22720	9-5-69	813	OUA 16 Encapsulation	
0647	975	22722	10-1-69	812	CM 106 Postflight Spares	
0648	976	22725	10-6-69	789	PIPA Evaluation Program	
0649R1	979	22728	12-8-69	815	Restart Monitor	
0650	980	22732	10-28-69	816	IRIG Split Clamps	
0651R1	981	22733	10-29-69	796	CM PSA Reverse Power Problem	
0652	984		12-5-69		Provide Screwhead and Sharp Corner Protection	
0653	983	22735	12-18-69	819	Phase 1 of Motor Tachometer Evaluation	

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2.6 SOFTWARE

2.6.1 G & N POSTINSTALLATION GROUND TEST ACTIVITIES

AC Electronics generated and maintained G & N postinstallation subsystem test specifications, starting with Spacecraft CSM 14 at KSC and continuing through Apollo 13. AC Electronics also generated and maintained the Block II and Lunar Module (LM) postinstallation testing specifications for use at Grumman Aircraft Corporation (GAC), Bethpage, Long Island, New York, and North American Rockwell Corporation (NR), Downey, California.

In support of Automatic Checkout Equipment (ACE)/Spacecraft testing, AC Electronics developed a program for computer generation of G & N PCM downlink data to verify ACE Computer G & N subprograms. G & N requirements for ACE computer programs were generated as Subprogram Block Specifications and maintained during the contract.

K-Start Tapes which contain Apollo Guidance Computer (AGC) erasable memory programs for G & N testing at NR, GAC, KSC, and MSC, were programmed, produced, and verified. K-Start Tapes are used for both integrated and subsystem G & N testing. As part of the programming and verification effort, a Block II Apollo Computer Simulator IBM 360 Program was developed and a K-Start Tape reader and uplink logic were fabricated.

2.6.2 APOLLO PROGRAM SUPPORT TO MIT/IL

2.6.2.1 AS-501 Support at MIT/IL

The AC Electronics Software group at MIT/IL performed the analysis, programming, and simulation tasks required to assemble and validate the AGC control program SOLRUM for the AS-501 mission. Since the GSOP for AS-501 represented an extension of the AS-202 mission plan, the AS-202 AGC program was used as the starting point for the development of SOLRUM. Required programming changes between the AS-501 and AS-202 missions were identified by AC, and a realizable schedule for accomplishment was proposed. Target completion dates and specific responsibilities were assigned for each individual task. Analytical tasks included: rescaling of orbital integration and average g navigation programs, derivation of a new time-of-free-flight (T_{FF}) routine to account for a highly elliptic orbit, derivation of an attitude maneuver routine for a three-axis (pitch, yaw, roll) sequence, generation of a cold soak attitude routine, and incorporation of a new reentry package. The new routines were coded and checked out in system test laboratory simulations.

Logic changes, such as sequencing of S-IVB separation and SPS burns, new flags, verb codes, and DSKY entries, were programmed. Partial program assemblies were

made and checked out in simulations with environment and in Simflights under 1 g conditions to exercise the program logic.

For the validation, a final complete program assembly was made (Revision 59 of SOLRUM). The validation procedure involved simulation runs of discrete mission phases under both nominal and perturbed conditions, as well as end-to-end simulation runs under those conditions. Late changes during configuration control required that a Revision 55 be made.

After validation, AC Electronics provided documentation and continued support following rope release.

2.6.2.2 AS-501 Support at Milwaukee

An Interpretive Computer Simulation (ICS) was developed at Milwaukee for the Apollo 501 mission. A complete nominal run was made and delivered to MIT/IL in November 1966.

The flight equation portion of the program for Mission 501 was run successfully through the Automatic Checkout System (ACS). The results were documented in a Program Description Document (EP66-533, 31 January 1967) which was published and sent to MIT/IL.

2.6.3 APOLLO G & N SIMULATION CAPABILITY

AC Electronics established a Simulation Laboratory to support G & N testing in-house and in the field. The laboratory is also capable of investigating flight programs under certain simulated flight conditions, and is capable of verifying ground test programs under controlled conditions. The basic components of the laboratory are a Sigma 5 Digital Computer, an EAI 8800 Analog Computer, and an AGC, along with the associated buffering and peripheral equipment.

The laboratory has all analog, all digital, or hybrid operating modes. A software system was developed and maintained to support the operating modes of the laboratory.

2.6.4 AUTOMATIC CHECKOUT SYSTEM (ACS) ACTIVITIES

AC Electronics functionalized the Apollo Block II ACS, described in the Technical Report for ECP 703, and utilized it to perform program verification for the Apollo 8, 9, 10, and 11 flights. All verification was performed as defined by the test plans. Selected parts of the following programs were verified and reported in the program description documents.

- Colossus 237
- Sundance 306

- Luminary 069
- Colossus 249
- Luminary 099

In addition, fixed memory program comparisons were performed for the following releases.

1. Colossus 237 to Colossus 249
2. Colossus 237 to Comanche 44
3. Colossus 249 to Comanche 45
4. Comanche 45 to Manche 45R2
5. Manche 45R2 to Colossus 249
6. Luminary 69 to Luminary 69R2
7. Luminary 69R2 to Luminary 97
8. Luminary 97 to Luminary 99
9. Luminary 99 to Luminary 99R1
10. Manche 45R2 to Comanche 55
11. Comanche 55 to Comanche 67
12. Comanche 37 to Comanche 72
13. Luminary 99R1 to Luminary 116
14. Luminary 116 to Luminary 130
15. Luminary 130 to Luminary 131

Those comparisons numbered 1, 5, 7, 8, 9, 10, 11, 12, 13, 14, and 15 above are reported on in the comparison reports, Paragraph 2. 6. 6. 3. 2.

The following anomalies were generated during these efforts.

<u>AC-M</u>	<u>AP-M</u>	<u>DATE</u>
-41 (X)	22105	5/9/69
-42L	22283	6/23/69
-27 (L)	21949	4/11/69
-28 (L)	22040	4/21/69
-31 (L)	22048	4/29/69
-14 (S)	21444	12/20/68
-18 (L)	21647	2/5/69
-23 (L)	21863	3/5/69
-24 (C)	21874	3/21/69

<u>AC-M</u>	<u>AP-M</u>	<u>DATE</u>
-26(L)	21949	4/10/69
-03	19973	10/7/68
-07(C)	21111	11/7/68
-13(C)	21271	11/21/68

2.6.5 TWO-MACHINE FACILITY ACTIVITIES

AC Electronics has utilized the Two-Machine Facility to perform Apollo program verification for the Apollo 7, 8, 9, 10, 11, and 12 flights. All testing was in accordance with the test plans. Selected portions of the following programs were tested and reported in the test reports.

- Sundisk 282
- Colossus 237
- Colossus 249
- Sundance 306
- Manche 45R2
- Comanche 45
- Luminary 69
- Luminary 69R2
- Comanche 55
- Luminary 99
- Luminary 99R1
- Comanche 67
- Luminary 116

The following anomalies were generated during this effort.

<u>AC-M</u>	<u>AP-M</u>	<u>DATE</u>
-98C		12/12/69
-94C	22910	11/25/69
-92L	22838	11/5/69
-91L	22838	11/4/69
-90L	22838	11/4/69
-89L	22838	11/3/69
-88L	22838	11/3/69
-87L	22838	11/3/69
-86L	22838	10/30/69
-85L	22814	10/27/69

<u>AC-M</u>	<u>AP-M</u>	<u>DATE</u>
-84L	22800	10/27/69
-83L	22791	10/17/69
-82L	22791	10/17/69
-81L	22791	10/17/69
-80L	22774	10/16/69
-79L	22755	10/15/69
-78CL	22755	10/15/69
-77C		10/14/69
-76L	22755	10/13/69
-75C	22744	10/8/69
-74C	22744	10/8/69
-73C	22730	10/1/69
-72C	22708	10/1/69
-71C	22708	10/1/69
-70C	22708	10/1/69
-69L	22665	9/19/69
-68L	22661	9/17/69
-67L	22566	8/15/69
-66C	22558	8/13/69
-65L	22478	7/28/69
-64C	22454	7/24/69
-63L	22436	7/17/69
-62L	22424	7/11/69
-61L	22424	7/11/69
-60L	22424	7/10/69
-59L	22424	7/11/69
-58L	22424	7/11/69
-57L	22424	7/8/69
-56L	22393	7/7/69
-55C	22393	7/2/69
-54C	22393	7/2/69
-53L	22393	7/3/69
-52L	22393	7/3/69
-51L	22378	7/2/69
-50L	22378	7/1/69
-49L	22378	6/30/69
-48L	22378	6/30/69
-47L	22357	6/27/69
-46L	22357	6/27/69
-45L	22357	6/26/69
-44C	22357	6/26/69
-43C	22357	6/26/69
-42A	22283	6/13/69

<u>AC-M</u>	<u>AP-M</u>	<u>DATE</u>
-40 (L)	22063	5/1/69
-39 (L)	22063	5/1/69
-38 (L)	22063	5/1/69
-37 (M)	22063	5/1/69
-36 (M)	22063	5/1/69
-35 (L)	22063	5/1/69
-34 (L)	22063	5/1/69
-33 (L)	22063	5/29/69
-32 (L)	22063	5/29/69
-30 (C)	22040	4/24/69
-29 (C)	22040	4/24/69
-25 (C)	21905	4/14/69
-22 (L)	21809	3/5/69
-21 (L)	21809	3/5/69
-20 (L)	21809	3/6/69
-19 (L)	21809	3/5/69
-17 (S)	21524	1/10/69
-16 (S)	21524	1/8/69
-15 (S)	21524	1/8/69
-12 (C)	21265	11/20/68
-11 (C)	21265	11/20/68
-10 (C)	21265	11/20/68
-09 (C)	21209	11/15/68
-08 (C)	21209	11/15/68

In addition, the Two-Machine Facility has been used extensively for diagnostic and problem analysis investigations of the flight programs.

The current effort being performed for the Apollo 13 flight will not be completed by the termination of this contract and is not reported upon in this summary.

2. 6. 6 ITEMS DELIVERED

2. 6. 6. 1 Process Specifications

Process Specifications were delivered as follows.

- ND 1002323 Postinstallation Checkout Specification for LM G & N System (Aurora 88), Revisions through P
- ND 1002325 Postinstallation Checkout Specification for CSM G & N System (Sundial), Revisions through Y

- ND 1002348 Postinstallation Checkout Process Specification (Sundial), Revisions through L
- ND 1002379 Postinstallation Checkout Process Specification for Apollo Guidance and Navigation System Block II-F 3C-with Colossus Flight Ropes, Revisions through F
- ND 1002380 Postinstallation Checkout Process Specification for LM G & N System (KSC) with Luminary Flight Ropes, Revisions through D
- ND 1002321 Displays and Controls Specification (LM), Revisions through C
- ND 1002322 Displays and Controls Specification (Block II), Revisions through G
- ND 1002319 ACE-S/C Computer Subprogram Specification for Apollo CM and LM G & N Testing, Revisions through T

2.6.6.2 Special Reports

Special Reports were delivered as follows.

- EP 66-533 Apollo Guidance Computer Program Descriptions Document for Mission 501, Volumes I and II
- Apollo CSM/LM Hybrid Simulation Report, 24 October 1969
- SSW-69-60-74 Two-Machine Laboratory User's Guide, 29 July 1969
- APM-14382-N488 G & N System Postinstallation Ground Testing Program Plan, 25 November 1966
- SSW-69-60A-68 Apollo Block II ICS Development Final Report, 10 March 1969
- K-Start Tape Status Summary

2.6.6.3 Software Verification Reports

2.6.6.3.1 Program Description Documents

Program Description documents were delivered as follows.

- EP9545 Apollo Guidance Computer Program Description Document for Landing Radar Routine — Luminary 116, 1 October 1969
- EP9419 Apollo Guidance Computer Program Description Document for Landing and Rendezvous Radar Routines — Luminary 99, 11 July 1969

- EP9289 Apollo Guidance Computer Program Description Document for Rendezvous Radar Routines — Luminary 69, VHF Ranging Routine — Colossus 249, 6 June 1969
- EP9151 Apollo Guidance Computer Program Description Document for Luminary 69, 28 February 1969
- EP8576 Apollo Guidance Computer Program Description Document for Sundance 306, 30 December 1968
- EP8531-1 Addendum 1 to Apollo Guidance Computer Program Description Document for Colossus 237 Automatic Optics Positioning Routine, 6 June 1969
- EP8531 Apollo Guidance Computer Program Description Document for Colossus 237, 29 November 1968
- EP8422 Technical Report ECP 703, 16 September 1969

2.6.6.3.2 Program Comparison Documents

Program Comparison documents were delivered as follows.

- EP9734 Apollo Guidance Computer Program Comparison Document Luminary IC, Revisions 131 and 130, 11 December 1969
- EP9701 Apollo Guidance Computer Program Comparison Document Luminary IC and Luminary IB, 8 December 1969
- EP9654 Apollo Guidance Computer Program Comparison Document Colossus IID and Colossus IIC, 14 November 1969
- EP9502 Apollo Guidance Computer Program Comparison Document Luminary IB (Revision 116) Luminary IA (Revision 99R1), 22 September 1969
- EP9481 Apollo Guidance Computer Program Comparison Document Colossus IIC and Colossus IIA, 14 August 1969
- EP9418 Apollo Guidance Computer Program Comparison Document Luminary IA, Revisions 99R1 and 99, 30 June 1969
- EP9413 Apollo Guidance Computer Program Comparison Document Colossus IIA and Colossus II, 30 June 1969
- EP9390 Apollo Guidance Computer Program Comparison Document Luminary IA, Revisions 99 and 97, 30 June 1969
- EP9270 Apollo Guidance Computer Program Comparison Document Luminary I and Luminary IA, 30 June 1969

- EP9244 AGC Program Comparison Colossus II and Colossus IA, 22 April 1969
- Comparison of Apollo Guidance Computer Programs for Colossus 249 and Colossus 237, 14 February 1969

2.6.6.3.3 Two-Machine Test Reports

Two-Machine Test Reports were delivered as follows.

- AP-M-22851-N4029 Apollo 12 Radar and VHF Computer Routines Final Report (Luminary 116/Comanche 67), 13 November 1969
- AP-M-22836-N4024 Colossus IIC/Colossus IIA (Comanche 67/Comanche 55) Comparison Testing Report, 10 November 1969
- AP-M-22835-N4023 Luminary IB/Luminary IA (Luminary 116/Luminary 99) Comparison Testing Report, 10 November 1969
- AP-M-22572-N3931 Radar and VHF Computer Routines Final Report (Luminary 99/Comanche 55), 27 August 1969
- AP-M-22109-N3722 Lum 69 Rev. 002/Luminary Rev. 069 Difference Testing Report Including Rendezvous Radar Routines, 15 May 1969
- AP-M-21900-N3688 Luminary 69 Final Test Report, 3 April 1969
- AP-M-21698-N3610 SSW-69-60A-47 Colossus 249/Colossus 237 Difference Testing Report, 18 February 1969
- AP-M-21534-N3543 Sundance 306 Final Test Report, January 1969
- AP-M-21370-N3779 Colossus 237 Final Test Report, 12 December 1968
- AP-M-20063-N3343 Sundisk 282 Test Report, 17 October 1968
- AP-M-22402-N3851 Luminary Rev. 009/Lum 69, Rev. 002 Difference Testing Report, 14 July 1969
- AP-M-22396-N3848 Colossus IIA/Colossus II Comparison Testing Report, 10 July 1969
- AP-M-22111-N3724 Colossus II/Colossus IA Comparison Testing Report, 15 May 1969

2.6.6.3.4 Test Plans

Test Plans were delivered as follows.

- AP-M-22056-N3699 Radar and VHF Ranging Computer Routines Test Plan, 6 May 1969
- AP-M-22041-N3692 Test Plan for Comparison Testing of Lunar Mission Lunar Module Flight Programs Using the Two-Machine Facility, April 1969
- AP-M-22042-N3693 Lunar Module Flight Program Test Plan, 2 May 1969
- AP-M-21983-N3671 Test Plan for Comparison Testing of Lunar Mission Command Module Flight Programs Using the Two-Machine Facility, April 1969
- AP-M-21873-N3680 Command Module Flight Program Test Plan, 1 April 1969
- AP-M-21445-N3508 Luminary Test Plan, 3 January 1969
- AP-M-20092-N3359 Sundance Test Plan, 29 October 1968
- AP-M-19976-N3307 Colossus Test Plan — Addendum 1, 10 October 1968
- AP-M-19720-N3204 Colossus Test Plan, 4 September 1968
- AP-M-19543-N3137 Sundisk 282 Test Plan, 7 August 1968

2.7 LISTING OF HARDWARE DD-250's

To demonstrate the completion of delivery requirements, a summary listing of deliverable items has been prepared. This listing identifies the requirement for delivery, the nomenclature of the item, the quantity delivered, and the number of the DD Form 250 executed to acknowledge delivery. The DD-250 numbers having no prefix originated at AC Electronics, while the DD-250's originating at Kollsman are prefixed K, and those from Raytheon are prefixed LV.

A summary listing of K-Start Tape DD-250's is also included. The K-Start Tapes were furnished under Statement of Work Exhibit A, Paragraph 4.1.1.10.1, Exhibit B, Paragraph 4.1.1.9.4, and Exhibit C, Paragraph 4.2.1.6.8.4.

(AC) K-START TAPE ASSEMBLIES

K-START TAPE DD-250 SUMMARY			K-START TAPE DD-250 SUMMARY		
DRAWING NO.	K-START TAPE NO.	DD-250 NO.	DRAWING NO.	K-START TAPE NO.	DD-250 NO.
1026101	G03LTA1-K10501-00	19758	1026121A	G03LTA8-K10503-01	19795
1026102	G03LTA1-K10503-00	19758	1026122	G03LTA8-K10504-00	19768
1026103	G03LTA1-K10504-00	19758	1026122A	G03LTA8-K10504-01	19795
1026104	G03LTA1-K10505-00	19758	1026123	G03LTA8-K10505-00	19768
1026105	G03LTA8-K10500-00	19715	1026123A	G03LTA8-K10505-01	19795
1026105A	G03LTA8-K10500-01	20453	1026124	G03LTA8-K10507-00	19768
1026106	G03LTA8-K10502-00	19715	1026124A	G03LTA8-K10507-01	19795
1026106A	G03LTA8-K10502-01	20453	1026125	G03LTA8-K10510-00	19768
1026107	G03LTA8-K10506-00	19715	1026125A	G03LTA8-K10510-01	19795
1026107A	G03LTA8-K10506-01	20453	1026126	G03LTA8-K10511-00	19768
1026108	G03LTA8-K10508-00	19715	1026126A	G03LTA8-K10511-01	19795
1026108A	G03LTA8-K10508-01	20453	1026127	G03LTA8-K10512-00	19768
1026109	G03LTA8-K10509-00	19715	1026127A	G03LTA8-K10512-01	19795
1026109A	G03LTA8-K10509-01	20453	1026128	G03L001-K10501-00	20469
1026110	G03L001-K10500-00	20469	1026128A	G03L001-K10501-01	20864
1026111	G03L001-K10502-00	20469	1026129	G03L001-K10503-00	20469
1026112	G03L001-K10506-00	20469	1026130	G03L001-K10504-00	20469
1026113	G03L001-K10508-00	20469	1026131	G03L001-K10505-00	20469
1026114	G03L001-K10509-00	20469	1026132	G03L001-K10507-00	20469
1026115	N00C020-K00014-00	19717	1026133	G03L001-K10510-00	20469
1026115A	N00C020-K00014-01	19787	1026134	G03L001-K10511-00	20469
1026116	N00C020-K00019-00	19717	1026134A	G03L001-K10511-01	20864
1026116A	N00C020-K00019-01	19787	1026135	G03L001-K10512-00	20469
1026117	N00C020-K00020-00	19717	1026136	N05CTV1-K105	19759
1026118	N00C020-K00028-00	19717	1026136A	N05CTV1-K10513-01	19784
1026119	N00C020-K00031-00	19717	1026136B	N05CTV1-K10513-02	20451
1026120	G03LTA8-K10501-00	19768	1026137	N05CTV1-K10514-00	20475
1026120A	G03LTA8-K10501-01	19795	1026138	N00C020-K10049-00	19792
1026121	G03LTA8-K10503-00	19768	1026139	N00C020-K10023-00	19796

(AC) K-START TAPE ASSEMBLIES

K-START TAPE DD-250 SUMMARY			K-START TAPE DD-250 SUMMARY		
DRAWING NO.	K-START TAPE NO.	DD-250 NO.	DRAWING NO.	K-START TAPE NO.	DD-250 NO.
1026139A	N00C020-K0023-01	20175	1026165	N05C103-K10514-00	27186
1026140	N05C102-K10200-00	19787	1026166	F08C101-K10527-00	27523
1026141	F03L001-K10515-00	20887	1026167	F08C101-K10528-00	27523
1026142	F03L001-K10516-00	20887	1026167A	F08C101-K10528-01	27869
1026143	F03L001-K10517-00	20887	1026168	F08C101-K10529-00	27523
1026144	N05C101-K10513-00	20863	1026169	F07L003-K10515-00	27547
1026145	N05C101-K10514-00	20863	1026169A	F07L003-K10515-01	27778
1026146	G03L002-K100503-00	20864	1026169B	F07L003-K10515-02	27679
1026147	G03L002-K10506-00	20864	1026170	F07L003-K10516-00	27547
1026148	G03L002-K10518-00	21131	1026170A	F07L003-K10516-01	27679
1026149	N05C102-K10513-00	21230	1026171	F07L003-K10517-00	27547
1026150	F06L001-K10515-00	21133	1026171A	F07L003-K10517-01	27679
1026151	F06L001-K10516-00	21133	1026172	F07L003-K10525-00	27547
1026152	F06L001-K10517-00	21133	1026172A	F07L003-K10525-01	27679
1026153	G03L002-K10502-00	21246	1026173	F07L003-K10530-00	27547
1026153A	G03L002-K10502-01	22029	1026173A	F07L003-K10530-01	27679
1026154	M03LTA8-K10520-00	21193	1026173B	F07L003-K10530-02	28085
1026155	M03LTA8-K10521-00	21193	1026174	F07L003-K10531-00	27547
1026156	N05C102-K10514-00	21230	1026174A	F07L003-K10531-01	27666
1026157	G03L004-K10522-00	21607	1026174B	F07L003-K10531-02	28085
1026158	G03L004-K10523-00	21621	1026175	F07L003-K10532-00	27547
1026158A	G03L004-K10523-01	27502	1026175A	F07L003-K10532-01	27679
1026159	G03L004-K10524-00	21607	1026176	F07L003-K10533-00	27547
1026159A	G03L004-K10524-01	22082	1026176A	F07L003-K10533-01	27679
1026160	F03L001-K10525-00	21610	1026177	F07L003-K10534-00	27547
1026161	F06L001-K10525-00	21610	1026177A	F07L003-K10534-01	27679
1026162	F03L001-K10526-00	21622	1026178	F07L003-K10535-00	27547
1026163	F06L001-K10526-00	21622	1026178A	F07L003-K10535-01	27679
1026164	N05C103-K10513	27168	1026179A	F10L005-K10536-00	28424

(AC) K-START TAPE ASSEMBLIES

K-START TAPE DD-250 SUMMARY			K-START TAPE DD-250 SUMMARY		
DRAWING NO.	K-START TAPE NO.	DD-250 NO.	DRAWING NO.	K-START TAPE NO.	DD-250 NO.
1026180	F07L003-K10518-00	27547	1026204C	F09C104-K10527-01	28236
1026180A	F07L003-K10518-01	27666	1026204D	F09C104-K10527-02	28258
1026181	G03L005-K10517-00	27520	1026204E	F09C104-K10527-03	28333
1026182	F08C101-K10537-00	27529	1026204F	F09C104-K10527-04	28522
1026183	N05C104-K10513-00	27530	1026205B	F09C104-K10528-00	28100
1026184	N05C104-K10514-00	27530	1026205C	F09C104-K10528-01	28327
1026185	F07L003-K10538-00	27547	1026205D	F09C104-K10528-02	28505
1026185A	F07L003-K10538-01	27666	1026206B	F09C104-K10529-00	28100
1026186	F07L003-K10539-00	27547	1026206C	F09C104-K10529-01	28236
1026186A	F07L003-K10539-01	27679	1026207B	F09C104-K10531-00	28100
1026187	G03L005-K10502-00	27537	1026207C	F09C104-K10531-01	28301
1026188	G03L005-K10507-00	27537	1026208B	F09C104-K10541-00	28100
1026189	G03L005-K10509-00	27537	1026209	F08C106-K10542-00	28198
1026190	N05C106-K10513-00	27801	1026210	F10L004-K10515-00	28217
1026191	N05C106-K10514-00	27665	1026211	F10L004-K10516-00	28217
1026192	N05C106-K10540-00	27790	1026212	F10L004-K10517-00	28217
1026193	G03L005-K10540-00	27689	1026213	F10L004-K10518-00	28217
1026193A	G03L005-K10540-01	28235	1026214	F10L004-K10525-00	28217
1026194	F08C109-K10545-00	28744	1026215	F10L004-K10530-00	28217
1026195	F09C103-K10527-00	27953	1026216	F10L004-K10531-00	28217
1026196	F09C013-K10528-00	27953	1026217	F10L004-K10532-00	28217
1026196A	F09C103-K10528-01	28117	1026218	F10L004-K10533-00	28217
1026197	F09C103-K10529-00	27953	1026219	F10L004-K10534-00	28217
1026198	F09C103-K10530-00	27953	1026220	F10L004-K10535-00	28217
1026199	F09C103-K10531-00	27953	1026220A	F10L004-K10535-01	28323
1026200	F09C103-K10538-00	27953	1026221	F10L004-K10538-00	28217
1026201	F09C103-K10541-00	27953	1026222	F10L004-K10539-00	28217
1026202B	F09C104-K10538-00	28100	1026223	F09C107-K10545-00	28664
1026203B	F09C104-K10530-00	28100	1026224	G03L006-K10544-00	28428
1026204B	F09C104-K10527-00	28100	1026225	F08C109-K10527-01	28747

(AC) K-START TAPE ASSEMBLIES

K-START TAPE DD-250 SUMMARY			K-START TAPE DD-250 SUMMARY		
DRAWING NO.	K-START TAPE NO.	DD-250 NO.	DRAWING NO.	K-START TAPE NO.	DD-250 NO.
1026225A	F08C109-K10527-02	28843	1026250A	F10L005-K10546-01	28685
1026226	F11C106-K10527-00	28438	1026251	F11C107-K10545-00	28664
1026226A	F11C106-K10527-01	28522	1026252	G03L008-K10547-00	28663
1026227	F11C106-K10528-00	28438	1026253	F10L006-K10545-00	28664
1026227A	F11C106-K10528-01	28505	1026254	F09C108-K10527-00	28747
1026228	F11C106-K10529-00	28438	1026254A	F09C108-K10527-01	28843
1026229	F11C106-K10530-00	28438	1026255	F11C108-K10527-00	28747
1026230	F11C106-K10531-00	28438	1026255A	F11C108-K10527-01	28843
1026231	F11C106-K10538-00	28438	1026256	F11C108-K10527-00	28909
1026232	F11C106-K10541-00	28438	1026256A	F11C108-K10527-02	28922
1026233	F11C106-K10543-00	28438	1026257	F11C108-K10528-00	28909
1026233A	F11C106-K10543-01	28470	1026258	F11C108-K10529-00	28909
1026233B	F11C106-K10543-02	28522	1026259	F11C108-K10530-00	28909
1026234	F11C107-K10530-00	28636	1026260	F11C108-K10531-00	28909
1026235	F11C107-K10531-00	28636	1026261	F11C108-K10538-00	28909
1026236	F10L005-K10515-00	28636	1026262	F11C108-K10541-00	28909
1026237	F10L005-K10516-00	28636	1026263	F11C108-K10543-00	28909
1026238	F10L005-K10517-00	28636	1026264	F11C108-K10545-00	28909
1026239	F10L005-K10518-00	28636	1026265	F10L006-K10515-00	28909
1026240	F10L005-K10525-00	28636	1026266	F10L006-K10516-00	28909
1026241	F10L005-K10530-00	28636	1026267	F10L006-K10517-00	28909
1026242	F10L005-K10531-00	28636	1026267A	F10L006-K10517-01	28934
1026243	F10L005-K10532-00	28636	1026268	F10L006-K10518-00	28909
1026244	F10L005-K10533-00	28636	1026269	F10L006-K10525-00	28909
1026245	F10L005-K10534-00	28636	1026270	F10L006-K10530-00	28909
1026246	F10L005-K10535-00	28636	1026271	F10L006-K10531-00	28909
1026247	F10L005-K10536-01	28636	1026272	F10L006-K10532-00	28909
1026248	F10L005-K10538-00	28636	1026273	F10L006-K10533-00	28909
1026249	F10L005-K10539-00	28636	1026274	F10L006-K10534-00	28909
1026250	F10L005-K10546-00	28636	1026275	F10L006-K10535-00	28909

(AC) K-START TAPE ASSEMBLIES

K-START TAPE DD-250 SUMMARY			K-START TAPE DD-250 SUMMARY		
DRAWING NO.	K-START TAPE NO.	DD-250 NO.	DRAWING NO.	K-START TAPE NO.	DD-250 NO.
1026276	F10L006-K10536-00	28909	1026703	F10L1300-K10535-0	29090
1026277	F10L006-K10538-00	28909	1026704	F10L1300-K10536-0	29090
1026278	F10L006-K10539-00	28909	1026705	F10L1300-K10538-0	29090
1026279	F10L006-K10545-00	28909	1026706	F10L1300-K10539-0	29090
1026279A	F10L006-K10545-01	28922	1026707	F10L1300-K10545-0	29090
1026280	F10L006-K10546-00	28909	1026708	F10L1300-K10546-0	29090
1026281	G03L008-K10548-00	29021	1026709	F10L1300-K10550-0	29090
1026281A	G03L008-K10548-01	29044	1026710	F10L1160-K10551-0	29090
1026282	F10L0991-K10549-0	29045	1026711	F10L0991-K10551-0	29090
1026283	F11C0720-K10527-0	29053	1026712	F10L1300-K10551-0	29090
1026284	F11C0720-K10528-0	29053	1026713	F10L1300-K10549-0	29090
1026285	F11C0720-K105290	29053			
1026286	F11C0720-K10530-0	29053			
1026287	F11C0720-K10531-0	29053			
1026288	F11C0720-K10538-0	29053			
1026289	F11C0720-K10541-0	29053			
1026290	F11C0720-K10543-0	29053			
1026291	F11C0720-K10545-0	29055			
1026292	F11C0720-K10550-0	29053			
1026293	F10L1300-K10515-0	29090			
1026294	F10L1300-K10516-0	29090			
1026295	F10L1300-K10517-0	29090			
1026296	F10L1300-K10518-0	29090			
1026297	F10L1300-K10525-0	29090			
1026298	F10L1300-K10530-0	29090			
1026299	F10L1300-K10531-0	29090			
1026700	F10L1300-K10532-0	29090			
1026701	F10L1300-K10533-0	29090			
1026702	F10L1300-K10534-0	29090			

SECTION III

RELIABILITY AND QUALITY ASSURANCE

3.1 GENERAL

The summary material in this section has been prepared to document the completion of the requirements of Exhibit E stipulated in the Statement of Work dated 1 July 1966 as revised.

The organization of this section is generally chronological. The initial paragraphs deal with qualification testing and the evaluation of parts and materials because these were among the first major program efforts. Overstress analysis, technical manuals, and training are the logical subjects to follow in this chronology. The final three paragraphs cover operating hours, repairs, and failure analysis.

Further discussion on these subjects precedes the bibliography for each. The documents and data are being held in accordance with required retention practices. Additional relevant information may be found in the applicable portions of Section II, primarily those paragraphs dealing with technical reports, technical directives, and contract changes.

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3.2 QUALIFICATION TEST REPORTS

A qualification test program was conducted to assure that the Apollo production G & N equipment would perform its intended function. (See Statement of Work, Exhibit E, Section 5.) AC Electronics provided support in determining the qualification status of parts and material. Summaries contained recommendations for further testing should the existing test data indicate any deficiencies.

Tests were conducted in accordance with the environmental conditions as prescribed in the following specifications.

<u>SPECIFICATION</u>	<u>QUALIFICATION TEST</u>
ND 1002037	Block I-100 Subsystem and G & N System
ND 1002337	Block II and LM Subsystem
ND 1002044 through ND 1002060	Parts and Materials Qualification Tests

Qualification tests were conducted for the nominal environmental limits of the Apollo mission and the design limit of the airborne equipment. The results of each test were assessed to determine the qualification status of the system, subsystem, and part or material tested. Hardware changes were made as a result of testing and re-testing.

The Contractor provided support in establishing an integrated test program. This was accomplished by the Test Review Board (TRB). The TRB evaluated system reliability throughout the design, development, and qualification test program.

The qualification test reports for the Apollo production G & N equipment are listed below.

BLOCK I-100 SUBSYSTEM AND SYSTEM QUALIFICATION TESTS

BLOCK I-100 SUBSYSTEM AND SYSTEM QUALIFICATION TESTS

TEST	TEST REPORT NUMBER	DATE SUBMITTED	MEMO NUMBER	SOW EXHIBIT AND PARAGRAPH	NAEA ACCEPTANCE LETTER NUMBER	NAEA ACCEPTANCE LETTER DATE
ISS Vib and Shock	1502-1 through 7	7-15-66	13101 - None	E 5.3.3.1	EG44-564-66-815	12-30-65
ISS Acceleration	1502-9 and 10	8-5-66	13344 - N238	E 5.3.3.1	EG44-564-66-815	12-30-65
ISS GT and TV	1502-14	8-5-66	13344 - N238	E 5.3.3.1		
ISS ELS	1502-25	8-5-66	13344 - N238	E 5.3.3.1		
ISS Vib Overstress	1502-17 through 23	8-5-66	13344 - N238	E 5.3.3.1		
ISS TV Overstress	1502-24	8-5-66	13344 - N238	E 5.3.3.1		
SCA Qual	1506	6-1-66	12845 - None	E 5.3.3.1		
Optical CDU	1509-1	8-5-66	13344 - N238	E 5.3.3.1		
Optics Shroud and Cover Assy	1502-26	12-2-66	14482 - None	E 5.3.3.1		
Annunciator Panel and ESU ELS	1502-25-1	12-2-66	14482 - None	E 5.3.3.3		
Nav DSKY ELS	Ray-83-100-1	11-8-66	14201 - N436	E 5.3.3.2		
CSS TV Overstress	1503-21	11-22-66	14243 - N437	E 5.3.3.2		
Star Tracker Elect Qual	1505	2-11-66	10855 - None	E 5.3.3.1		
SCT and SXT Bellows Assy	1501 and 1507	2-8-66	10778 - None	E 5.3.3.1		
Sys Launch and Entry Accel	1503-2	11-7-66	14202 - N437	E 5.3.4.1		
Sys Humidity, O ₂ , Press, Temp, and SF	1508-1	8-5-66	13344 - N238	E 5.3.4.1		
Sys TV and CIT	1508-2	10-14-66	13972 - None	E 5.3.4.1		
Sys EMI	1503-1	10-14-66	13972 - None	E 5.3.4.1		
Ejectable Dust Covers	1516	1-15-67	14641 - N606	E 5.3.6.1		
KIC OUA Qual	AR-FR-100	11-28-65	14434 - N503	E 5.3.2.3		
KIC OUA TV Retest	AR-FR-100-PA 7024	5-10-67	15854 - N902	E 5.3.3.3	EG44-564-66-815	12-30-67
KIC ESU and Block II Eyeieces Qual	AR-FR-101	9-30-65	13619 - N947	E 5.3.3.3		
KIC ESU and Block II Eyeieces Qual Rev A	AR-FR-101-A	6-13-67	16132 - N983	E 5.3.3.3		
KIC ESU and Block II Eyeieces AC Supplement	-	6-13-67	16132 - N983	E 5.3.3.3		
Ray AGC Qual (Preliminary)	FR-66-250	8-5-66	13344 - N238	E 5.3.3.2		
Ray AGC Qual Rev. 1	Ray-83-100	1-19-67	14866 - N610	E 5.3.3.2	EG44-564-66-815	12-30-67
Ray Vib and Optics CDUs and Main DSKY Fly Shock	1503-3 through 9, 12, 13, 15, 16, 17	12-7-66	14504 - N517	E 5.3.4.1	EG44-83-67-169	4-67
Nav and Main DSKY and Fall Detect Assy Qual	1503-20	12-19-66	14586 - N534	E 5.3.4.1	EG44-83-67-169	4-67
G & S Summary Report	1503	2-21-67	15152 - N691	E 5.3.4.1		
ISS Summary Report	1502	6-28-67	16274 - N1030	E 5.3.3.1		
LTV APTFS Thermal Structural	LTV No. 00-911	6-6-67	16777 - N965	E 5.3.6.2	EG44-8-68-40	2-2-68

BLOCK II AND LM SUBSYSTEM AND SYSTEM QUALIFICATION TESTS

TEST	TEST REPORT NUMBER	DATE SUBMITTED	APM MEMO NUMBER	SHOW EXHIBIT AND PARAGRAPH NO.	NASA ACCEPTANCE LETTER NUMBER	DATE
<u>LM</u>						
Acceleration	1511-6	2-8-67	15053 - N700	E 5.3.3.4	EG44-68-68-40	2-2-68
Vibration and Shock	1511-1, 2, 3, 4	3-12-67	13832 - N901	E 5.3.3.4	EG44-68-68-40	2-2-68
Climatics	1511-7	7-21-67	16461 - N1082	E 5.3.3.4	EG44-68-68-40	2-2-68
Harness	1511-15	5-1-67	15734 - N867	E 5.3.3.4	EG44-68-68-40	2-2-68
PTPS	1511-13	5-1-67	15755 - N868	E 5.3.3.4	EG44-68-68-40	2-2-68
ECDU Vibration	1511-3A	8-10-67	16622 - N1120	E 5.3.3.4	EG44-68-68-40	2-2-68
PSA Vibration	1511-16	9-6-67	16836 - N1212	E 5.3.3.4	EG44-68-68-40	2-2-68
SCA	1511-14	10-20-67	17259 - N1367	E 5.3.3.4	EG44-68-68-40	2-2-68
<u>Block II CM</u>						
Acceleration	1512-1	6-1-67	16014 - N954	E 5.3.3.7	FG44-68-68-40	2-2-68
Vibration and Shock	1512-2, 3, 4, 5	7-23-67	16491 - N1088	E 5.3.3.7	FG44-68-68-40	2-2-68
Climatics	1512-7	9-11-67	16534 - N1232	E 5.3.3.7	FG44-68-68-40	2-2-68
Harness	1512-6	4-5-67	13527 - N804	E 5.3.3.7	EG44-68-68-40	2-2-68
SCA	1512-10	6-13-67	16130 - N982	E 5.3.3.7	EG44-68-68-40	2-2-68
PSA and harness Humidity	1512-17	7-20-67	16443 - N1072	E 5.3.3.7	EG44-68-68-40	2-2-68
Retest						
SCA ELS (Add. 1)	1512-10	9-27-67	17071 - N1202	E 5.3.3.7	EG44-68-68-40	2-2-68
ELS	1512-9	10-16-67	17231 - N1358	E 5.3.3.7	EG44-68-68-40	2-2-68
<u>Miscellaneous</u>						
Raytheon Qualification	AQTR-SS-2	10-18-67	17253 - N1361	E 5.3.3.5	FG44-68-68-40	2-2-68
DSKY Vibration	AQTR-SS-3	10-18-67	17265 - N1361	E 5.3.3.5	EG44-68-68-40	2-2-68
Kollsman AOI/CCRD Qualification	KIC-AR-FR-1000	9-29-67	17141 - N1327	E 5.3.3.6	EG44-68-68-40	2-2-68
AC Supplement AOI/CCRD	EP7413	9-29-67	17141 - N1327	E 5.3.3.6	EG44-68-68-40	2-2-68
KIC AOI/CCRD Addendum	KIC-AR-FR-1000	9-29-67	17141 - N1327	E 5.3.3.6	EG44-68-68-40	2-2-68
Block II EMI	1512-8	11-1-67	17534 - N1457	E 5.3.3.7	EG44-68-68-40	2-2-68
LM/Block II Summary	EP7234	11-27-67	17611 - N1438	E 5.3.3.7	EG44-68-68-40	2-2-68
AF/TPS	1517-A	11-6-67	17491 - N1414	E 5.3.3.6, 3	EG44-68-68-40	2-2-68
AOI/CCRD Request	KIC-AR-FR-2000	1-4-68	17879 - N1568	E 5.3.2.2	EG44-68-68-40	2-2-68
Optics Shroud Vib and Shock	1518	3-1-68	18321 - N1713	E 5.3.2.3	EG44-68-68-PP7-295	9-19-68
GNIC Vib and Shock	1519	4-4-68	18626 - N1841	E 5.3.2.6	EG44-68-68-PP7-295	9-19-68
AOT Conical Sunshade	KIC-AR-FR-1000	8-16-67	19614 - N3156	E 5.3.2.4	EG44-68-68-PP7-295	4-19-68
Eye-piece Storage Unit	PA8021	7-8-68	19332 - N3039	E 5.3.2.5	EG44-68-68-PP7-295	9-19-68
Eye-piece Covers	1521	7-8-68	19332 - N3039	E 5.3.2.5	EG44-68-68-PP7-295	9-19-68
Modified GSE Eye-piece Covers	40-30 068-222	8-2-68	19509 - N3122	E 5.1.2.8	EG44-68-68-PP7-295	8-19-68
Block II IL and EL Cover Assy Eval	R68-4352	8-20-68	19631 - N3162	E 5.3.3.5	EG44-68-68-PP7-295	8-19-68
Fire and Spring Fix Eval	68-19	8-20-68	19631 - N3162	E 5.3.3.5	EG44-68-68-PP7-295	8-19-68
Ray E Memory Eval	R68-4135	10-22-68	20010 - N3323	E 5.3.2.7	EG44-68-68-PP7-295	8-19-68
LM PTA Docking Shock	1511-17	2-20-69	21686 - N3606	ECP 761	EG44-119-69-PP7-85	5-20-69
GNIC Overlay Vibration and Shock	Evaluation Test	2-19-69	21690 - N3605	-	EG44-119-69-PP7-85	5-20-69
Range Finder	PA9017	2-5-69	21759 - N3628	ECP 764	EG44-119-69-PP7-85	5-20-69
LSKY EL Safety Glass	Evaluation Test	4-30-69	22009 - N3624	ECP 763	EG44-119-69-PP7-85	5-20-69

PART TESTS COMPLETED CONTRACT NAS 9-497, BLOCK i-100

PART TESTS REQUIRED, CONTRACT NAS 9-497, BLOCK I-100

AC ELECTRONICS

ITEM NO.	SCD NO.	PART TYPE	VENDOR	QSS NO.	REPORT ISSUED	AC TRANSMITTAL LETTER NO.
1	1000030	Resolver	Clifton	A-119-2	3-16-66	11427
2	1000032	Resolver Assembly	Clifton	A-122-2	3-21-66	11530
3	1000033	Resolver	Clifton	A-123-2	3-24-66	11570
4	1000037	Slipring	Electro-Tech	A-115-1	1-21-66	10111
	1000038			A-116-1		
5	1000037	Slipring	Polyscience	A-115-2	10-31-64	4660
	1000038			A-116-2		
6	1000037	Slipring	Collocron	A-115-3	11-23-66	9539
	1000038			A-116-3		
7	1000075	Motor	Inland	A-118-1	2-25-66	11113
8	1000116	Connector	Continental	A-006-1	1-21-66	10511
	1000117	Connector	Continental	A-195-1		
	1011646	Connector	Continental	A-349-1		
	1011647	Connector	Continental	A-350-1		
9	1000135	Fluid Coupling	Seaton-Wilson	A-108	11-10-66	9293
	1010797					
10	1000160	Resolver	Bendix	A-298-1	6-29-66	12967
11	1000161	Resolver	Clifton	A-268-1	4-29-66	12191
12	1000162	Resolver	Clifton	A-269-1	4-29-66	12191
13	1000170	Fuse	Bussman	A-060-1	11-10-65	9293
14	1000219	Blower	Rotron	A-047-1	3-11-65	6074
15	1000245	Switch	Cox	A-291-1	3-10-66	11347
16	1000284	Transformer	Magnetic Controls	A-258-1	4-13-66	11898
17	1000285	Transformer	Magnetic Controls	A-259-1	5-18-66	12142
18	1000286	Transformer	Magnetic Controls	A-260-1	3-23-66	11570
19	1000287	Transformer	Magnetic Controls	A-261-1	2-25-66	11113
20	1000288	Transformer	Magnetic Controls	A-249-1	3-9-66	11301
21	1000288	Transformer	Marin Controls	A-249-2	4-22-66	12030
22	1001485	Switch	Metals and Controls	A-254-1	10-26-65	9022
23	1001485	Switch	Metals and Controls	A-254-1	8-11-66	13497
				(Requal)		
24	1006789	Capacitor	Sprague	A-338-1	2-25-66	11113
25	1006802	Resistor	Sage	A-309-1	12-29-65	10147
26	1010250	Resistor	Ultronix	A-032-1	4-16-65	6386
27	1010251	Resistor	Ultronix	A-033-1	4-27-64	6424
28	1010252	Transistor	Texas Instruments	A-182-1	5-18-66	12420
29	1010262	Resistor	Sage	A-002-1	3-17-67	15378
30	1010268	Lamp	Chicago-Min	A-091-2	3-21-66	11530
	1010625	Holder	Dial-Lite			
31	1010260	Transistor	Texas Instruments	A-095-1	4-13-66	11895
32	1010271	Transistor	STC	A-042-1	6-29-66	12967
33	1010273	Transistor	Texas Instruments	A-003-1	2-8-66	10815
34	1010277	Transformer	UTC	A-161-1	4-27-65	6424
35	1010278	Resistor	Allen-Bradley	A-097-1	7-6-65	7505
36	1010279	Capacitor	Sprague	A-129-1	2-3-66	10707
37	1010283	Resistor	Ultronix	A-096-1	9-8-65	7538
38	1010285	Transistor	Fairchild	A-097-1	2-3-66	10707
39	1010289	Capacitor	Electron Products	A-130-1	2-15-66	11429
40	1010289	Capacitor	Sprague	A-130-2	2-3-66	10707
41	1010309	Transformer	UTC	A-163-1	7-27-65	7766
42	1010311	Resistor	Electra	A-057-1	12-3-65	9697
43	1010312	Resistor	Sprague	A-955-1	10-26-65	9022
44	1010316	Capacitor	Sprague	A-128-1	12-9-65	9771
45	1010317	Capacitor	Sprague	A-131-1	4-18-66	11962
46	1010320	Capacitor	Sprague	A-132-1	1-6-66	10223
47	1010321	Resistor	IRC	A-058-1	4-27-65	6424
48	1010325	Resistor	Dale	A-069-1	11-19-65	9470
49	1010329	Transformer	Utrad	A-223-1	8-9-65	7927
50	1010330	Resistor	Daven	A-056-1	2-21-66	11026
51	1010331	Diode	Hoffman	A-118-1	4-13-66	11898
52	1010331	Diode	Motorola	A-018-2	8-16-65	13389
53	1010335	Transformer	UTC	A-159-1	5-28-65	6979
54	1010337	Transformer	Bush	A-176-2	10-26-65	9022
55	1010339	Transformer	Bush	A-179-7	2-21-66	11026
56	1010342	Transistor	Fairchild	A-103-1	2-23-66	11573
57	1010344	Transformer	PCA Electronics	A-230-1	2-11-66	10854
58	1010346	Diode	Pacific Semiconductor (TRW)	A-019-1	9-30-66	13980
59	1010351	Resolver	Clifton	A-270-1	3-21-66	11530
60	1010353	Relay	Sigma	A-039-1	4-29-66	12191
61	1010359	Capacitor	Vitramon	A-127-1	2-11-66	10854
62	1010360	Resistor	Beckman	A-007-1	11-4-65	9186
63	1010361	Resistor	Dale	A-048-1	11-10-65	9293

PART TESTS COMPLETED, CONTRACT NAS 9-497, BLOCK I-100

PART TESTS REQUIRED, CONTRACT NAS 9-497, BLOCK I-100

AC ELECTRONICS

ITEM NO.	SCD NO.	PART TYPE	VENDOR	QSS NO.	REPORT ISSUED	AC TRANSMITTAL LETTER NO.
64	1010365	Transformer	UTC	A-143-1	3-18-65	6144
65	1010367	Transistor	National Semiconductor	A-036-1	3-29-66	11654
66	1010368	Resistor	Allen-Bradley	A-063-1	7-8-65	7538
67	1010369	Resistor	Allen-Bradley	A-065-1	7-6-65	7505
68	1010370	Diode	Fairchild	A-021-1	2-8-66	10815
69	1010372	Diode	Continental	A-022-3	6-29-66	12967
70	1010372	Diode	Hoffman	A-022-4	7-1-66	12995
71	1010373	Resistor	Bourne	A-008-1	1-1-65	5346
72	1010374	Resistor	Pyrofilm	A-054-1	4-27-65	6424
73	1010377	Resistor	Daven	A-052-1	2-11-66	10854
74	1010377	Resistor	Ultracix	A-052-2	3-16-66	11427
75	1010384	Diode	Fairchild	A-023-1	2-3-66	10710
76	1010385	Diode	Continental	A-037-1	4-13-66	11898
77	1010386	Transistor	Fairchild	A-100-1	4-22-66	12057
78	1010388	Inductor	Delevan	A-222-1	2-11-66	10854
79	1010391	Diode	Motorola	A-024-1	8-16-66	13389
80	1010392	Diode	Continental	A-031-1	3-10-66	11347
81	1010392	Diode	Fairchild	A-031-2	2-21-66	11026
82	1010394	Diode	Fairchild	A-025-1	9-30-66	14026
83	1010395	Transistor	Fairchild	A-102-1	3-16-66	11427
84	1010398	Transistor	General Electric	A-165-1	6-29-66	12967
85	1010406	Coil	Delevan	A-181-2	2-21-66	11026
86	1010408	Transistor	General Electric	A-167-1	7-27-66	13202
87	1010427	Reactor	Microtran	A-117-1	7-27-65	7766
88	1010429	Resolver	Clifton	A-113-1	3-16-66	11427
89	1010430	Motor-Tachometer	Solvere	A-188-1	7-20-66	13159
90	1010430	Motor-Tachometer	Kearfott	A-188-2	7-8-66	13037
91	1010431	Transistor	Fairchild	A-101-1	7-1-66	12995
92	1010432	Capacitor	Sprague	A-064-1	2-3-66	10710
93	1010434	Resistor	Fenwal	A-051-1	6-29-66	12967
94	1010437	Transistor	Silicon Transistor	A-040-1	6-29-66	12967
95	1010439	Diode	Dickson	A-026-2	4-13-66	11898
96	1010440	Diode	Dickson	A-027-1	4-13-66	11895
97	1010441	Diode	Dickson	A-023-1	3-16-66	11427
98	1010450	Resistor	Julie	A-071-1	12-29-66	10147
99	1010452	Resistor	Electra	A-050-1	1-21-66	10511
100	1010453	Resistor	Conelco	A-010-1	10-7-65	8761
101	1010455	Reactor	ADC	A-178-1	7-27-65	7763
102	1010469	Resistor	Beckman	A-069-1	11-10-65	9293
103	1010471	Transformer	UTC	A-155-1	3-18-65	6144
104	1010486	Transformer	Airpax	A-186-1	1-13-66	10392
105	1010486	Transformer	TDI	A-186-2	11-19-65	9470
106	1010489	Switch	Micro Switch	A-087-1	2-5-66	10736
107	1010492	Transformer	Bush	A-177-2	7-12-65	9701
108	1010493	Lamp	Chicago-Miniature	A-090-1	3-10-66	11347
109	1010497	Diode	Unitrode	A-030-1	3-16-66	11427
110	1010498	Resistor	Dale	A-049-1	11-19-65	9470
111	1010499	Transistor	Honeyv	A-098-1	3-16-66	11427
112	1010600	Transistor	Honeywell	A-099-1	4-29-66	12191
113	1010604	Resistor	Dale	A-067-1	4-27-65	6424
114	1010633	Transistor	Fairchild	A-093-1	4-1-66	11680
115	1010636	Diode	General Electric	A-233-1	3-30-67	15478-N785
116	1010637	Capacitor	General Electric	A-242-1	11-10-65	9293
117	1010653	Transistor	Fairchild	A-107-1	2-3-66	10707
118	1010675	Transistor	Fairchild	A-124-1	2-21-66	11026
119	1010684	Transistor	Fairchild	A-125-1	7-1-66	12995
120	1010694	Resistor	Electra	A-184-1	2-21-66	11026
121	1010715	Transistor	Fairchild	A-245-1	6-29-66	12967
122	1010723	Transformer	Bush	A-287-1	3-9-66	11301
123	1010726	Transformer	Bush	A-289-1	12-17-65	9701
124	1010733	Resistor	IRC	A-252-1	12-3-65	9697
125	1010745	Transformer	Bush	A-251-1	2-21-66	11026
126	1010746	Transistor	Honeywell	A-272-1	2-21-66	11026
127	1010747	Transistor	Fairchild	A-271-1	6-17-66	12847
128	1010761	Diode	Transitron	A-296-1	7-1-66	13497
129	1010764	Resistor	Beckman	A-273-1	2-3-66	10707
130	1010771	Connector	Deutsch	A-282-1	7-1-66	12995
	1012151					
131	1010777	Diode	General Electric	A-284-1	3-30-67	15478-N785
132	1010779	Connector	Cannon	A-281-1	7-13-66	13076
133	1010784	Relay	Babcock	A-278-1	10-15-66	14200
	1010790	Relay	Babcock	A-277-1		
134	1010786	Diode	Transitron	A-285-1	4-6-67	15540-N809

PART TESTS COMPLETED, CONTRACT NAS 9-497, BLOCK I-100

PART TESTS REQUIRED, CONTRACT NAS 9-497, BLOCK I-100

AC ELECTRONICS

ITEM NO.	SCD NO.	PART TYPE	VENDOR	QSS NO.	REPORT ISSUED	AC TRANSMITTAL LETTER NO.
135	1010804	Meter	Weston	A-299-1	2-5-66	10736
136	1010829	Diode	Motorola	A-300-1	6-29-66	12067
137	1010830	Diode	Motorola	A-301-1	7-20-66	13160
138	1010831	Diode	Motorola	A-302-1	4-18-66	11962
139	1010834	Resistor	Julie	A-305-1	2-3-66	10654
140	1010837	Diode	General Electric	A-321-1	3-15-66	11420
141	1010874	Diode	Unitrode	A-266-1	6-29-66	12967
142	1010901	Switch	Micro Switch	A-352-1	6-24-66	12915
143	1010902	Switch	Micro Switch	A-353-1	6-24-66	12915
144	1010903	Switch	Micro Switch	A-354-1	6-29-66	12967
145	1010904	Switch	Micro Switch	A-355-1	6-24-66	12915
146	1010905	Switch	Micro Switch	A-356-1	6-29-66	12967
147	1010906	Switch	Micro Switch	A-357-1	6-29-66	12967
148	1010907	Switch	Micro Switch	A-358-1	6-24-66	12915
	1010624	Lamp	Chicago-Minature			
149	1012156	Servo Motor	Solvee	A-348-1	3-9-67	15351-N751
150	1012156	Servo Motor	Kearfott	A-348-2	10-26-66	14356-N404
151	1018900	Temp Alarm Amp	Magnetic Controls	A-290-1	3-13-66	11696

RAYTHEON COMPANY.

ITEM NO.	SCD NO.	PART TYPE	VENDOR	QSS NO.	REPORT ISSUED	AC TRANSMITTAL LETTER NO.
1	1006291	Resistor	Ferrox Cube	R-057-1	7-7-66	13039-N186
2	1006286	Switch	Micro Switch	R-058-1	6-4-67	15797-N884
3	1006300	Diode	Transitron	R-061-1	12-1-66	14450
4	1006318	Transformer	Polyphase	R-013-2	7-7-66*	13039-N186
5	1006319	Transformer	Technitrol	R-013-1	3-17-65	11462
6	1006386	Indicator Alarm	Sylvania	R-087-1	9-16-66	13704-N312
7	1006700	Capacitor	TRW	R-041-1	8-5-66	13304-N226
8	1006701	Diode	Motorola	R-019-2	7-14-66	13075-N191
9	1006701	Diode	Dickson	R-019-1	12-1-66*	14450-N506
10	1006712	Thermistor	Goulton	R-008	4-14-67	15635-N834
11	1006714	Resistor	RCL	R-006-1	11-23-65	9537
12	1006714	Resistor	Davee	R-006-2		
13	1006715	Resistor	Fenwal	R-007-1	4-14-67	15635-N834
14	1006726	Reactor	Raytheon	R-031-1	6-3-66	12700-N142
15	1006736	Resistor	Waters	R-012-1	12-23-66	10041
16	1006738	Switch	Haydon	R-003-1	8-5-66	13304-N226
17	1006739	Indicator	Sylvania	R-039-2	9-16-66 (Rev. B)**	13704-N312
18	1006745	Indicator	Sylvania	R-038-2	7-14-66	13075-N191
19	1006751	Diode	Texas Instrument	R-020-1	9-16-66	13704-N312
20	1006752	Transistor	Texas Instrument	R-010-1	5-4-67	15797-N884
21	1006752	Transistor	Fairchild	R-010-3		
22	1006753	Transistor	Texas Instrument	R-015-1		
23	1006753	Transistor	Fairchild	R-015-2	11-23-65	9537
24	1006755	Capacitor	Sprague	R-009-1†		
25	1006755	Capacitor	Kemet	R-002-2		
26	1006759	Transistor	Texas Instrument	R-026-1	5-4-67	15797-N884
27	1006759	Transistor	Fairchild	R026-2		
28	1006760	Resistor	Corning	R-023-1	11-23-65	9537
29	1006769	Micrologic	Norden	R-025-1		
30	1006769	Micrologic	Signetics	R-025-2	4-14-67	15635-N834
31	1006769	Micrologic	Fairchild	R-025-3		
32	1006772	Relay	Sigma	R-009-1	5-4-67	15797-N884
33	1006772	Relay	Clare	R-009-2		
34	1006777	Capacitor	Aerovox	R-028-1	7-7-66	13039-N186
35	1003788	Resistor	Dale	R-001-1	3-17-66	11462
36	1006788	Resistor	Sage	R-001-2		
37	1006791	Diode	Hughes	R-018-1	9-16-66	13704-N312
38	1006798	Transformer	Bush	R-005-1	11-23-65	9537
39	1006798	Transformer	Polyphase	R-005-2*		
40	1006800	Inductor	Bush	R-004-1	7-14-66	13075-N191
41	1006800	Inductor	Polyphase	R-004-2	3-17-66	11462-N
42	1006827	Transistor	Solitron	R-016	9-16-66	13704-N312
43	1006829	Transistor	Motorola	R-021-1	12-23-66	10041
44	1006838	Diode	Transitron	R-017-1	11-23-66	9537
45	1006846	RF Coil	Delavan	R-022-1*	6-3-66	12007-N142
46	1006847	Crystal	Bliley	R-059-1	5-12-67	15872-N809

* Also submitted on 3-17-66 via AP M-11462.

** Also submitted on 7-14-66 via AP M-13075-N191.

† Subsequent revisions submitted on 3-17-66 via AP M-11462.

PART TESTS COMPLETED, CONTRACT NAS 9-497, BLOCK I-100

PART TESTS REQUIRED, CONTRACT NAS 9-497, BLOCK I-100

KOLLSMAN INSTRUMENT CORPORATION

ITEM NO.	SCD NO.	PART TYPE	VENDOR	QSS NO.	REPORT ISSUED	AC TRANSMITTAL LETTER NO.
1	1010341	Resolver	Clifton	K-096-1	4-2-66	11776
2	1011281	Differential	Astro Gear	K-003	4-18-66	11960
3	1011294	Resolver	Pendix	K-004-1	12-1-66	14673-N558
4	1011374	Lens	Eastman Kodak	K-008	5-13-66	12395-N86
5	1011499	Connector	Winchester	K-012-1	4-18-66	11960-N35
6	1011501	Connector	Winchester	K-013-1		
7	1011748	Connector	Continental	K-026-1		
8	1012041	Capacitor	Erie	K-130-1	3-7-66	11251
9	1012042	Diode	Micro-Semiconductors	K-136-1		
10	1012048	Transistor	Siliconix	K-150-1		
11	1012052	Transformer	Bush	K-145-1	3-21-66	11531
12	1012056	Diode	Dickson	K-137-2	5-25-66	12520-N107
13	1012065	Resolver	Clifton	K-138-2	1-11-67	14782-N589
14	1012065	Resolver	Reeves	K-138-3	2-1-67	14966-N633
15	1012141	Capacitor	Erie	K-131	3-9-66	11311
16	1012142	Capacitor	General Electric	K-132		
17	1012148	Transformer	Bush	K-149-2	3-21-66	11531
18	1012149	Transformer	Bush	K-159-2		
19	1012157	Resolver	Clifton	K-143-2	7-25-67	16486-N1087
20	1012502	Capacitor	Mallory	K-156-1	3-9-66	11311
21	1012512	Counter	Kollsman	K-165	3-21-66	11531
22	1012519	Flex Print	Sanders	K-170-1	3-15-66	11428
23	1012522	Flex Cable Connector	Gore	K-169-1	3-28-66	11653

PART TESTS REQUIRED, CONTRACT NAS 9-497, BLOCK II

AC ELECTRONICS

ITEM NO.	SCD NO.	PART TYPE	VENDOR	QSS NO.	REPORT ISSUED	AC TRANSMITTAL LETTER NO.
1	1008848	Capacitor	Electron Products	A-446-2	11-3-66	14177-N426
2	1010740	Linear Rotary Transformer	Clifton	A-369-1	7-26-67	16499-N1092
3	1010799	Capacitor	Electron Products	A-331-1	5-29-67	15999-N949
4	1010806	Transistor	Honeywell	A-328-1	12-20-66	14601-N537
5	1010826	Resistor	Dale	A-399-1	8-10-67	16623-N1121
6	1010928	Resistor	Dale	A-385-1		
7	1010843	Transistor	Solitron	A-371-1	10-13-67	17145-N1329
8	1010888	Transformer	Bush	A-314-1	5-29-67	15999-N949
9	1010910	Transformer	Microtran	A-318-1	4-6-67	15540-N809
9	2018606	Resolver	Clifton	A-361-1	7-19-67	16445-N1074
	2018607	Resolver	Clifton	A-362-1		
	2018608	Resolver	Clifton	A-363-1		
10	2018623	Motor	Inland	A-376-1	1-24-67	14935-N624
11	2018624	Slipring	Electro-Tech	A-334-1	10-11-66	13925
12	2018625	Slipring	Electro-Tech	A-335-1		
13	2018634	Slipring	Electro-Tech	A-378-1		
14	2018644	Blower	IMC	A-380-1	7-17-67	16424-N1066
15	1008848	Capacitor	Sprague	A-446-1	7-17-67	16424-N1066
16	1008969	Transistor	T.I.	A-486-1	6-14-68	19167-N2067

RAYTHEON COMPANY

ITEM NO.	SCD NO.	PART TYPE	VENDOR	QSS NO.	REPORT ISSUED	AC TRANSMITTAL LETTER NO.
1	1006290	Diode	Transitron	R-060-1	10-18-67	17235-N1361
2	1006304	Relay	Babcock	R-076-1	5-4-67	15797-N884
3	1006315	Display, EL	Lear-Siegler	R-082-2	11-14-67	17516-N1453
4	1006325	Reactor	Bush	R-066-2	9-16-66	13704-N312
5	1006327	Inductor	Bush	R-065-1		
6	1006328	Inductor	Bush	R-064-2		
7	1006330	Resistor	Dale	R-072-1	5-4-67	15797-N884
8	1006330	Resistor	Sage	R-072-2	12-1-66	14450-N506

**ASSEMBLY/SUBASSEMBLY QUALIFICATION TESTS COMPLETED,
CONTRACT NAS 9-497, BLOCK I-100**

ASSEMBLY/SUBASSEMBLY QUALIFICATION TESTS REQUIRED, CONTRACT NAS 9-497, BLOCK I-100

AC ELECTRONICS

ITEM NO.	ASSEMBLY PART NO.	ASSEMBLY NAME	TEST REPORT NO.	REPORT ISSUED	AC TRANSMITTAL LETTER NO.
1	1090097	ADA	N/A	7-28-64*	9975
2	1899951	Bellows		5-19-65	0003
	1899952				
3	1007007	Differential Amplifier and Precision Volt. Ref.		7-27-65	7760
4	1007009	PIPA Calibration		7-27-65	7760
5	1007036	Relay and Diode		7-27-65	7760
6	1007040	Gimbal Servo Amplifier		7-27-65	7760
7	1007042	Power Supply, -28 Vdc		7-27-65	7760
8	1007043	AAC Filter and Multivibrator, 3, 200 Hz		7-27-65	7760
9	1007044	Amplifier, 1 Percent, 3, 200 Hz		7-27-65	7760
10	1007045	Temperature Controller Power Supply, 3, 200 Hz		7-27-65	7760
11	1007046	AAC Filter and Multivibrator, 800 Hz		7-27-65	7760
12	1007047	Amplifier, 1 Percent, 800 Hz		7-27-65	7760
13	1007048	Amplifier, 5 Percent, 800 Hz		7-27-65	7760
14	1007054	Encoder Electronics		7-27-65	7760
15	1007055	CDU Digital to Analog Converter		7-27-65	7760
16	1007058	Forward Backward Counter and Computer Output		7-27-65	7760
17	1007209	IRIG Preamplifier		7-27-65	7760
18	1007212	ADA Preamplifier		7-27-35	7760
19	1015121	Motor Drive Amplifier		7-27-65	7760
20	1015123	Resolver Drive Amplifier		7-27-65	7760
21	1015137	Relay Module		7-27-65	7760
22	1007007	Differential Amplifier and Precision Volt. Ref.	1504	4-20-66	11993
23	1007009	PIPA Calibration		4-20-66	11993
24	1007036	Relay and Diode		4-20-66	11993
25	1007040	Gimbal Servo Amplifier		4-20-66	11993
26	1007042	Power Supply, -28 Vdc		4-20-66	11993
27	1007043	AAC Filter and Multivibrator, 3, 200 Hz		4-20-66	11993
28	1007044	Amplifier, 1 Percent, 3, 200 Hz		4-20-66	11993
29	1007045	Temperature Controller Power Supply, 3, 200 Hz		4-20-66	11993
30	1007046	AAC Filter and Multivibrator, 800 Hz		4-20-66	11993
31	1007047	Amplifier, 1 Percent, 800 Hz		4-20-66	11993
32	1007048	Amplifier, 5 Percent, 800 Hz		4-20-66	11993
33	1007054	Encoder Electronics		4-20-66	11993
34	1007055	CDU Digital to Analog Converter		4-20-66	11993
35	1007058	Forward Backward Counter and Computer Output		4-20-66	11993
36	1007209	IRIG Preamplifier		4-20-66	11993
37	1007212	ADA Preamplifier		4-20-66	11993
38	1015121	Motor Drive Amplifier		4-20-66	11993
39	1015123	Resolver Drive Amplifier		4-20-66	11993
40	1015137	Relay Module		4-20-66	11993

RAYTHEON COMPANY

ITEM NO.	ASSEMBLY PART NO.	ASSEMBLY NAME	TEST REPORT NO.	REPORT ISSUED	AC TRANSMITTAL LETTER NO.
1	1003074	Logic	RAY 521	10-11-66	13921-N364
2	1003150	Control	RAY 522	11-2-66	14182-N431
3	1003178	Rope Driver	RAY 523	3-2-66	11183
4	1003139	E Driver	RAY 524	4-13-66	11897-N27
5	1003132	Strand Select	RAY 525	3-17-66	11482
6	1003165	Driver Service	RAY 526	3-2-66	11183
7	1003153	Current Switch	RAY 527	4-13-66	11897-N27
8	1003470	Strand Gate	RAY 528	3-2-66	11183
9	1003527	Oscillator	RAY 529	2-1-67	14967-N634
10	1003133	Core Rope	RAY 530	9-16-66	13704-N512
11	1003113	Power Switch	RAY 531	11-2-66	14182-N431
12	1003069	E Memory	RAY 532	10-11-66	13921-N364
13	1003708	Interface	RAY 533	8-11-66	13341-N235
14	1003709	Interface	RAY 534	8-11-66	13341-N235
15	1003463	E Sense	RAY 535	4-28-66	12132-N52
16	1003154	Rope Sense	RAY 536	3-2-66	11183
17	1003530	Decoding	RAY 537	6-6-66	12700-N142
18	1003098	Relay	RAY 538	4-28-66	12132-N62
19	1003548	Keyboard	RAY 539	10-11-66	13921-N364
20	1003220	Failure Detect	RAY 83-100	11-2-66	14182-N431

KOLLSMAN INSTRUMENT CORPORATION

ITEM NO.	ASSEMBLY PART NO.	ASSEMBLY NAME	TEST REPORT NO.	REPORT ISSUED	AC TRANSMITTAL LETTER NO.
1	2007024	Head, Electronics	K-601	5-25-66	12520
2	2007032	High Voltage Power Supply	K-602	5-25-66	
3	2007022	Tuning Fork Assembly	K-603	5-25-66	

3.3 PARTS AND MATERIALS EVALUATION TEST REPORTS

3.3.1 MATERIALS

Materials were evaluated for suitability of application in the Apollo G & N equipment. The results of approximately 225 total tests of materials were summarized and forwarded to NASA at 6-month intervals, in accordance with Article 3D of the schedule of Contract NAS9-497. These reports summarized the test objective, the approach to the testing, and the conclusion reached for each material test. Listed below are the submittals of the summary reports.

<u>LETTER NUMBER</u>	<u>DATE</u>
AP-M-22793-N4010	28 October 1969
AP-M-21887-N3685	2 April 1969
AP-M-19927-N3288	1 October 1968
AP-M-18571-N1809	28 March 1968
AP-M-17153-N1332	12 October 1967
AP-M-15541-N810	6 April 1967
AP-M-13929-N366	11 October 1966
AP-M-11802-N14	7 April 1966
AP-M-9840	13 December 1965
AP-M-8880	15 October 1965
AP-M-6266	30 March 1965

3.3.2 PARTS

Parts evaluation tests were conducted at AC Electronics in support of the design program and manufacturing. (See S. O. W. Exhibit E, Paragraph 3.5.3.) Tests were conducted in cases where insufficient data was available for determining the adequacy of a part or material to perform to the Apollo requirements. Process controls and specification limits were evaluated or established through these efforts. Problem areas encountered during the manufacturing cycle were traced to the sources and resolved. The test reports of these efforts are listed below.

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-001	Connector	N/A	Micro D	Cannon
20-P-002	Capacitor	1006755	150 D and 151 D	Sprague
20-P-003	Capacitor	1006755	KJ and KN	Kemet
20-P-005	Transistor, PNP, Power	1010271	STC 5506	Silicon Transistor Corp
20-P-006	Inductor	1010277-10	ML-10	UTC
20-P-008	Capacitor, Fixed	1006755	RP-150-50 CRC	Transitron
20-P-009	Capacitor	N/A	U232	John Fast
20-P-010	Capacitor	N/A	Type 349	Gudeman
20-P-012	Capacitor	N/A	Type MPX	Dearborn
20-P-013	Transistor	1010271	ST65500	Silicon Transistor Corp
20-P-015	Diode	7925572	FD-100	Fairchild
20-P-016	Diode	7925572	CD-2467	Continental Devices
20-P-017	Diode	7925572	RD-2660	Rheem-Raytheon
20-P-018	Diode	7925572	IN660	Transitron
20-P-019	Switch, Toggle, DPDT	Not Standard	MS25307-215	Cutler Hammer
20-P-020	Harness Clamp	1010349	8837K1	Thomas and Associates
20-P-021	Teflon Harness Clamp	1010400	TA5000 BH 8 AW	
20-P-022	Resistors	8597510-8-12	TA500 BH 12 AW	Weekesser
20-P-023	Light Switch Assembly	1010310	1/2 - 6T	
20-P-047	Diode	1020399	3/4 - 6T	Sprague
20-P-048	Diode	CMX170870	239E, 240E	
20-P-049	Diode	N/A	242E, 243D	Micro Switch
20-P-050	Diode	7925572	N/A	Continental Device
20-P-051	Reactor	7925572	CD2467	Raytheon
20-P-052	Blower, Variable Speed	1010497	RD2660	Continental Device
20-P-053	Fuse, Digital	1010427	CD2441	Unitrade
20-P-054	Nut, Hexagon, Self-Locking, Miniature	1000219	UTR52	Microtran
		1000170	M4930	Rotron
		1010617-002,	N/A	Bussman
		-004	GFA	SFS
			50FM-25L	
			50FM-440	

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-055	Solder Sleeve	1010402-001, -002	D100 and D101	Ragelad
20-P-056	Rectifier Diode Stack	N/A	Alpha 611 Flux	GE
20-P-057	Screws, Locking	Various - See Test Request	4JA723EH8AB1	See Test Request
20-P-058	Nut, Hexagon, Self-Locking	1010617-002, -004	Test Request	SPS
20-P-060	Diode	N/A	50FM-256	North American
20-P-061	Capacitor, Fixed	N/A	50FM-440	Electronics
20-P-062	Capacitor, Fixed, Polystyrene	N/A	IN3992,	Sprague
20-P-063	4,000 V Stack Diodes	N/A	NSS1026	Sprague
20-P-064	Switch Assemblies	1010479-1, 1010480-1, 1010480-3	118P4749252	Unitrade
20-P-065	Transistor, Silicon, NPN, Power	1010499-2	114P Type	Micro Switch
20-P-066	Transistor, Dual, NPN, Silicon	1010653	N/A	
20-P-067	Switch	N/A	X28155, X28123	
20-P-068	Resistor	1010262	MHT6028	Minneapolis Honeywell
20-P-69	Solid and Stranded Wire	See Test Request	SP-8704	Fairchild
20-P-070	Screws, Miniature	None	N/A	Micro Switch
20-P-071	Capacitor	1010279	3010M	Sage
20-P-072	Switch	1010480	N/A	
20-P-073	Relay	1010353	Varies	All Metal, Waltham
20-P-074	Switch, Thermostatic	1016256	151D	Sprague
20-P-076	Motor Relay	1016111-105	X28763	Micro Switch
20-P-77	Resolver, Size 8	1010429	97148	Sigma Instrument
20-P-078	Meter; Yaw, Pitch, and Roll	1010336	1C1C2-3 1C2C-1	Vulcan Elec
			VHS	Assembly Products
			HS6-8-H	Clifton
			22/195	
			CMX110824	Weston

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-079	Diode, Voltage Regulator	1010286	1N752A	Motorola
20-P-080	Slipring	1010462	N/A	Collectron
20-P-081	Temperature-Compensated Motor Tachometer-Generator	1000037	11-MT-45	Solveire
20-P-082	Temperature-Compensated Motor Tachometer-Generator	1000038	CR40875002	Kearfott
20-P-083	Switch Assembly, Pushbutton Actuated	1010430	AT4-6-1	Micro Switch
20-P-085	Connector, Plug and Receptacle	1000116 and 117, 1011646, and 647	MM-5 MM-29	Continental Connector
20-P-086	Switch, Pushbutton	1010480	AT4-6-1	Texas Instruments
20-P-087	Slipring Assembly	1000037	AU1264C040	Poly Scientific
20-P-088	Lamps, Miniature	1000038	AU1265CO50	Chicago Miniature
20-P-089	Motor; Yaw, Pitch, and Roll	1010268-002	CM8-406	Weston
20-P-090	Torque Motor	1010336	196977	Kearfott
20-P-091	Motor Tachometer-Generator	1000075	CU16631001	Solveire
20-P-092	Motor Tachometer-Generator	1010430	11MT-45	Kearfott
20-P-024	Toggle Switch	1010430	CR40875002	Micro Switch
20-P-025	Light Switch Assembly	N/A	5ET1-T	Korry
20-P-026	Zener Diode	CMX-110876	N/A	Transitron
20-P-028	Filter, RF	1010259	1N825	Genistron
20-P-029	Filter, RF	1015823	CGF20291	Genistron
20-P-030	Torque Motor	1015822	CGF20290	Inland Motors
20-P-031	Torque Motor, DC, Frameless	1000075	T5402-A	Kearfott
20-P-032	Sliprings	1000075	CJ16631001	Electro Tec
20-P-033	Sliprings	1000037, 38	13346	
20-P-034	Resolver Receiver, Size 8	1010341	13360	
20-P-035	Resolver Receiver, Size 11	1010351	AU126465 HSC-8-LA-01/ L198 11R55N8	Poly Scientific Clifton Clifton

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-036	Resolver Receiver, Size 11	1010351	X1812162-3	Eclipse
20-P-037	Resolver, 1x, Pancake	1000030	SSC-46-A-1	Clifton
20-P-038	Resolver, 1x, Pancake	1000030	4SRU10N8	Eclipse
20-P-039	Resolver, Error Pickoff, Pancake	1000032	N/A	Clifton
20-P-040	Resolver, Error Pickoff, Pancake	1000032	N/A	Eclipse
20-P-041	Resolver, Pitch and Yaw, Dual Pancake	1000033	N/A	Clifton
20-P-042	Resolver, Pitch and Yaw, Dual Pancake	1000033	N/A	Eclipse
20-P-043	Resolver, 16 Speed	1000101	N/A	Clifton
20-P-044	Resolver, 16 Speed	1000161	N/A	Eclipse
		1000162		
20-P-093	Diode, Voltage Reference	1010286-6	1N962	Motorola
20-P-095	Slipring Assembly	1000037	13346	Electro Tec
20-P-096	Resistor	1010253	N/A	
20-P-097	Solder Sleeve	1010763	D121	Rayclad Tubes
20-P-098	Diode	1010372	DZ40824-C-	Dickson
20-P-099	Diode, Rectifier	1010777	D-E-F	G.E.
20-P-100	Resistor, Fixed	1010693	4JA28B	Electra
		1010694	MF6C, MF4C,	
		1010695	MF5C	
20-P-101	Resistor, Fixed	See Test Request		Electra
20-P-103	Transistor	1010271	STC5506	STC
20-P-104	Transistor	1010271	STC5506	STC
20-P-105	Transistor	1010271	STC5506	STC
20-P-106	Switch Assembly	1010480,	X28763,	Micro Switch
		1010484	X28155	
20-P-107	Battery	MX113060	8698	Gulton
20-P-108	Screws	N/A	LP57D0053	Long Lock
			LP57U14J6	
			LP5702656	

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-109	Slipring Assembly	2018625A	SRA-70-1043	Collectron
20-P-110	Slipring Assembly	2018624A	14569	Electro Tec
20-P-111	Capacitor	2018625A	504-P	Sprague
20-P-112	Lamp, Incandescent	2018624A	CM8-406	Chicago Miniature
20-P-113	Diode	1010317-1	1N3191	GE
20-P-114	Male and Female Wraposts	1010268-2	3610005,	Malco National
20-P-115	Resistor	1010832	3-74	Connector
20-P-116	Transistor	1010374	PT60	Pyrofilm
20-P-117	Diode	1010437	N/A	STC
20-P-118	Switch, Sensitive	1010362	1N647	GE
20-P-119	Resistor, Fixed	(Modified)	X28776	Micro Switch
20-P-120	Transformer	1010435-1	(Similar)	
20-P-121	Blower, Variable Speed	1010834	HR1251	Daven
20-P-122	Transistor, NPN	1010335	EHO 60	UTC
20-P-123	Transistor, NPN	1000219	Aximax 2EX	Rotron
20-P-125	Motor Tachometer-Generator	1010376	Series 712YS	Fairchild
20-P-126	Transistor	1010342	2N2060	Fairchild
20-P-127	Transistor	1012156	SP8778,	
20-P-128	Slipring	1010376	2N998	Solve
20-P-129	Long Lock Screws	1010376	11MT47	Fairchild
20-P-130	Diode, 6A, Fast Recovery	1006752	2N2060	Raytheon
20-P-132	Lighted Switch Assembly	1000037	2N914	Electro Tech
20-P-133	Diode	-	13346	Long Lock
20-P-134	Diode	1010777	LP57	General Electric
		1010827	IN3881	Micro Switch
		1010433,	5P	Dickson
		1010441	N/A	
		1010832	1N3189	General Instruments

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-135	Power Transformer	1010337	BF-502	Bush
20-P-136	Contacts	1010738	N/A	Hughes
20-P-137	Transformer	1010335	EH060	UTC
20-P-138	Transducer	1000272	PA414TC-25	Statham
20-P-139	Motor Tachometer-Generator	1012156-3	11MT-47	Solvere
20-P-140	Transistor	1010367	NS3024	National
20-P-141	Motor Tachometer-Generator	1012156-1	11MT47	Solvere
20-P-142	Transistor	1006752	SM2135 (ZN914)	Texas Instruments
20-P-143	Coupling	1000185	Z-602-4	Seaton Wilson
20-P-144	DC Torque Motor	1000075	N/A	Inland
20-P-145	Transistor, NPN	1010397	2N930	Texas Instruments
20-P-146	Transistor, NPN, Dual	1010252	2N2642 (Dual)	Texas Instruments
20-P-147	Transistor, Chopper	1010367	3N68	National
20-P-148	Reactor, Filter	1010427	4930	Microtron
20-P-149	Transistor, PNP	Various	2N3505	Fairchild
20-P-150	Transformer	1010315	HH667, HH868, HH869	UTC
20-P-151	Transistor, NPN, Power Mesa	1010471	2N2151	GE
20-P-152	Transistor, NPN, Power, Mesa	1010269	2N1724	GE
20-P-153	Transistor, Dual	1010652	2N2980	Fairchild
20-P-154	Transistor	1010633	S6611	Fairchild
20-P-155	Transformer	1010335	EM-60	UTC
20-P-156	Diode	1010712	FR-555	General Instruments
20-P-157	Transformer	1010761	N/A	Utrad
20-P-158	Transistor, NPN, Power	1010329-1	3748	TI
20-P-159	Transistor, NPN, Power	1010269	2N2151	TI
20-P-160	Transistor, PNP, Silicon	1010273	2N1724	TI
		1010950	2N2303	Raytheon

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-161	Contact, Female	1010382	N/A	Malco
20-P-162	Relay, Armature	1010353	Type 32	Sigma Instruments
20-P-163	Motor Tachometer-Generator	1010430	11MT-45	Solvere
20-P-164	Motor Tachometer-Generator	1010430	CR40875002	Kearfott
20-P-165	Diode	1010830, -1, -9, -19	1N754A	Motorola
20-P-166	Diode	1010830, -2, -20	1N965B, 1N975B	Motorola
20-P-167	Resistor, Variable	1010469-010	SZ11014H-2, SZ11014H-20	Beckman
20-P-168	Transistor	1010269-1	55PR50K	TI
20-P-169	Buttonhead Screws	1006783	2N2131	TI
20-P-170	Transistor, Silicon, Stud-Mounted	1010269-1	N/A	General Electric
20-P-171	Power Transformer	1010337	2N2151	Bush
20-P-172	Relay, Armature	1010353 (SM)	BF502	Sigma
20-P-174	Wrist, Female	1006781-1, 1006782-1	33RJPUG-- SIL	Sigma
20-P-175	Motor Tachometer-Generator	1012156-1	N/A	Malco
20-P-176	Sliding Assembly	1000037	11MT47	Solvere
20-P-177	Relay	1000038	1000 S/N	Electro Tec
20-P-178	Relay	MX111915	Configuration	Babcock
20-P-179	Transistor	MX111915	BR-16	Filters
20-P-180	Resistor	Similar to 1010273	DJ	GE
20-P-181	Torque Motor	1010330-14	N/A	GE
20-P-182	Diode	2018623	R1133	Daven
20-P-183	Lead Cutter Tools	1010385	T-3107	Inland
20-P-184	Capacitor	N/A	1N660	Cont Devices Corp
2-P-185	Heater	1010317	Various	Various
20-P-186	Contact	1897367	N/A	Sprague
		1006782-1	H-180	Hotwatt
		1006782-9	N/A	Malco

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-188	Diode	1010385	1N660	Continental Device Corp
20-P-189	Diode	1010771-1	N/A	GE
20-P-190	Relay	1010353-001	33	Sigma
20-P-191	Transistor	1010806	MHT7402	Solitron
20-P-192	Transistor	1010499, 1010746 1010806, 1010843	MTH 4452, MTH 6309, MTH 7402, MTH 6028	Solitron
20-P-193	Transistor	1016182	2N3014	Fairchild
20-P-194	Capacitor	1010359-29 (Sim)	2100275190	Vitramon
20-P-195	Transistor	1010345	N/A	Fairchild
20-P-196	Diode	1010831	N/A	Motorola
20-P-197	Diode	1010831	1N3796	Dickson
20-P-198	Contact and Ground Sleeve	1003018-002	N/A	Malco
20-P-199	Slipring Capsule Assembly	1008019 2018624, 2018625 2018634	17235, 17256, 17240	Electro Tec
20-P-200	Diode Voltage Regulator	1008152	1N825	Transitron
20-P-201	Contact Wrapost, Male	1006782-1, -10, 1010382-1	N/A	Malco
20-P-202	Resistor, Fixed, Precision	1010834-013	CH33XA	Julie
20-P-203	Contact, Wrapost	1006781, 1006774, 1006782, 1006775	N/A	Malco
20-P-204	Integrated Chopper	1010367	NS3024	NSC
20-P-205	Transformer	1010723, 1010751	NP501, DG507	Bush
20-P-206	Transistor	1010376	2N2060	Amelco
20-P-207	Precision Resistors	1010836, 1010254	N/A	JRL
20-P-208	Resistor, Wire Wound	1010377	N/A	Ultronix
20-P-209	Resistor, Wire Wound	1010377	N/A	Daven
20-P-210	Transistor, PNP	1010271	STC5506	STC

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-211	Resolver	1010341	MSC-8-LA-01/ U98	Clifton
20-P-212	Relay	1010784	BR-16	Babcock
20-P-213	Relay	1010353	33(97148)	Sigma
20-P-214	Capacitor	1010637-1	15K013AB1	GE
20-P-217	Insulator	1897264	N/A	Malco
20-P-218	Capacitor	1010317-001	504P1	Sprague
20-P-219	Relay, Armature	1010353	97148	Sigma Instruments
20-P-220	Transformer	1010712	FR555	UTC
20-P-221	Transformer	1010712	FR555	UTC
20-P-222	Transistor	1010386	S6249	Fairchild
20-P-223	Connector	1010965, 1010783, N/A	MD53-068-15-615 C43HH-4P MD53-00N-15-61P	Microdot
20-P-224	Diode, Rectifier	1010391-1	1N3189	Motorola
20-P-225	Capacitor	1008848-1	N/A	Sprague
20-P-226	Diode, Silicon	1010830-011	1N967B	Motorola
20-P-227	Diode	Various	Various	Continental
20-P-228	Beryllium Oxide Washers	N/A	N/A	Brush
20-P-229	Torque Motor	1090075	N/A	Inland Motors
20-P-230	Transistor, NPN	1010746	MHT4492	Soliton
20-P-231	Washers	SK-24278	AL S. Mag 748	American Lava Corp
20-P-232	Transistor	1010343-003	11C1890	GE
20-P-233	Transistor	1010715	2N2851	Solid State Products
20-P-234	Capacitors	1008848-1	N/A	Electron Products
20-P-235	Valve	N/A	P11-309	James, Pond, and Clark
20-P-236	Diode, Voltage Regulator	1010372-24	N/A	Hoffman
20-P-237	Diode, Voltage Regulator	1008815-11	1N967B	Motorola
20-P-238	Diode, Zener, Regulator	1010372-19	N/A	Transitron
20-P-239	Diode, Zener, Regulator	1010372-19	N/A	Continental Diode
20-P-240	Diode, Zener, Regulator	1010372-19	N/A	Hoffman
20-P-241	Contact, Wrapost, Male	1006782-10	N/A	Malco

SUMMARY OF EVALUATION TEST REPORTS

TEST NC	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-242	Transformer, Audio	1010328	EH-561	United Transformer
20-P-243	Motor, Tachometer-Generator and Servo Motor	1010895 1010430 1012156 8567724	HB-717 SR 2-SSW5C SR2-655W25	Kearfott Oster
20-P-244	Wrapost-Double Ended	1010994	N/A	National Connector
20-P-245	Insulator, Wrapost, Female	1006774	N/A	Malco
20-P-246	Resolver, 1 and 16 Speed	2018631	SSJH-40-C-1	Clifton
20-P-247	Semiconductor Device, Diode	1006751	IN914B	TI
20-P-248	Relay	1010353	33 Series	Sigma
20-P-249	Screws	N/A	4-40, 6-32, 8-32, 10-32	-
20-P-250	Capacitor-Tantalum	1008860		
20-P-251	Switch, Push	1010637	150K013AB	GE
20-P-252	Insulator, Bushing, Wrapost, Male	1008824	N/A	Jay-El
20-P-253	Semiconductor Device, Diode	1010956-001	N/A	National Connector
20-P-254	Transistor, NPN, Silicon	N/A	PG285	TI
20-P-258	Contact, Pin, Size 22	N/A	2N930	Amelco
20-P-259	Electroluminescent Lamp	1010738-5	N/A	Hughes
20-P-260	Screw, Cap, Socket Head	1010999	N/A	GE
20-P-261	Capacitor, Solid Tantalum	1008861-18	N/A	N/A
20-P-262	Capacitor, Solid Tantalum	1006755	N/A	Sprague
20-P-264	Insulator, Bushing	1010956	N/A	Kemet
20-P-265	Contact, Electrical	1897414-001 1897414-002	N/A 41868 41914	National Connector AMP
20-P-266	Insulator, Bushing	1010956	N/A	National Connector
20-P-269	Resistor, Fixed	1010330	R1791	Daven
20-P-270	Insulator, Wrapost	1010377	R1793	
20-P-271	Resistor-Fixed	1006775 1010377-309 (Sim)	N/A Type 105A	Malco Ultronix

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-272	Transistor, Dual	1010252 (Sim)	2N2642	Amelco
20-P-273	Transistor	N/A	2N930	Raytheon
20-P-274	Transistor	N/A	2N930	TI
20-P-275	Transistor	N/A	2N930	Fairchild
20-I-276	Transistor	N/A	2N930	GE
20-P-277	Capacitor	1006755	350D	Sprague
		1010393	J Series	Kemet
20-P-278	CDU	1015500	N/A	AC Electronics
20-P-279	Pin Contacts, Size 22	1010770-1	N/A	Deutsch
20-P-281	Transistor, Dual Element	1010431-000	N/A	Fairchild
20-P-282	Transistor, NPN, Silicon	1010343-3	4JX11C1890	GE
20-P-283	Contact, Electrical	1010955	540094	National Connector
20-P-284	Boron, Nitride	N/A	N/A	Union Carbide
20-P-285	Transistor	1010684	SP9164	Fairchild
20-P-286	Transistor, NPN, Silicon	1010397	2N930	Amelco
		(Sim)		
20-P-287	Transformer, Power	1010724	BA-508	Bush Trans
20-P-288	Motor Tachometer-Generator	1012156-001	11MT-47	Solvare
20-P-289	Transistor	1006323	2N2848	Motorola
				Fairchild
20-P-290	Insulator	1010995	550046	National Conn Corp
20-P-291	Semiconductor, Diode	1010385	1N660	Raytheon
20-P-292	Transistor	1010633	2N2303	Fairchild
20-P-293	Transistor	N/A	2N930	Amelco
20-P-294	Semiconductor	1010385	1N660	Raytheon
20-P-295	Transistor	1010437	STC5906	STC
20-P-296	Relay	1006772	Type LF	CP Clare
20-P-297	Semiconductor, Diode	1010385	1N660	Raytheon
20-P-298	Diode	1010385	1N660	Raytheon
20-P-299	Diode	1010385	1N660	Raytheon
20-P-300	Servo Motor	1012156-3	11-MT-47	Solvare

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-301	Servo Motor	1010430	11-MT-45	Solvere
20-P-302	Servo Motor	1010430	CR040875013	Kearfott
20-P-303	Semiconductor; Diode	1010385	IN660	CDC
20-P-304	Diode	1010385	IN660	Raytheon
20-P-305	Transformer	1008832	N/A	UTC
20-P-306	Diode	1010370	N/A	Fairchild
20-P-307	Capacitor	1010317	5C4P	Sprague
20-P-308	Motor Tachometer-Generator	1010430	N/A	Solvere
20-P-309	Motor Tachometer-Generator	1010430	N/A	Kearfott
20-P-310	Motor Tachometer-Generator	1012156-1	N/A	Solvere
20-P-311	Motor Tachometer-Generator	1012156-3	N/A	Solvere
20-P-312	Motor Tachometer-Generator	1012156-3	N/A	Kearfott
20-P-313	Diode, Silicon, Planar	1006399 (Sim)	PG285	TI
20-P-314	Diode, Silicon	1010385	RD2661	Raytheon
20-P-315	Motor Tachometer-Generator	1010430	IN660	Solvere
20-P-316	Motor Tachometer-Generator and CDU	1010430	N/A	Kearfott
20-P-317	Motor Tachometer-Generator	1015500	N/A	and AC
20-P-318	Motor Tachometer-Generator	1010430	N/A	Solvere
20-P-319	Motor Tachometer-Generator	1010430	N/A	Kearfott
20-P-320	Resistor, Fixed	1010430	N/A	Solvere
20-P-321	Connector, Electrical	1006750	C07	Corning Glass
20-P-322	Contact, Electrical	1012151-001	DSMS103-27-	Deutsch
20-P-323	Motor Tachometer-Generator	1010770-2	30PP	Deutsch
20-P-324	Motor Tachometer	1010430	2202-17-0101	Deutsch
20-P-326	Motor Tachometer-Generator	1012156	Non Imp-Inp	Kearfott
20-P-327	Motor Tachometer-Generator	1012156	N/A	Solvere
20-P-328	Motor Tachometer-Generator	1012156	N/A	Kearfott
20-P-329	Motor Tachometer-Generator	1010610	N/A	Kearfott

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-330	Motor Tachometer-Generator	1010610	N/A	Solvere
20-P-331	PIP Preamplifier Assembly	1008825-011	N/A	AC Electronics
20-P-332	Relays	1010353-4 and -7	33 Series	Sigma
20-P-333	Resistor, Fixed	1010369-90	Type BB	Allen Bradley
20-P-334	Diodes	1010786	5V9836	Transitron
20-P-335	Lamp	N/A	CM8-680	Chicago Miniature
20-P-336	Motor	1012156-1	N/A	Solvere
20-P-337	Motor	1012156-3	N/A	Kearfott
20-P-338	Bell, Electrical	N/A	6100-3	Edwards
20-P-339	Semiconductor, Diode	N/A	PG-285	TI
20-P-340	Resistor, Fixed	1006750	CO-7	Corning
20-P-341	Motor Tachometer-Generator	1012156	N/A	Solvere
20-P-342	Motor Tachometer-Generator	1012156	N/A	Kearfott
20-P-343	Motor Tachometer-Generator	1012156	N/A	Solvere
20-P-344	Multilayer Circuit Board	1006395	N/A	ACED
20-P-345	Diode Semiconductor	1010385	1N660	Raytheon
20-P-346	Contact Wrapost, Female	1006781-003	5190002	Malco
20-P-347	Multilayer Circuit Board	1006395	N/A	-
20-P-349	Motor Tachometer-Generator	1012156	N/A	Solvere
20-P-350	Motor Tachometer-Generator	1012156	N/A	Kearfott
20-P-351	Multilayer Circuit Board	1006395	N/A	ACED
20-P-352	Relay Armature	1005003	BRDJ	Filters
		1005001	BRDJL	
20-P-353	Diode, Certified Voltage Reference	1010786-001	SV9836	Transitron
20-P-354	Capacitor, Fixed	1010317-001	504P1	Sprague
20-P-355	Bearing/Lubricant System	-	SR2 Bearings	Bardeen
			G-300 and F-50	General Electric
			Lube	
20-P-356	Servo Motor Tachometer-Generator	1012156	11-MT-47	Solvere
20-P-357	Motor Tachometer-Generator	1012156	11-MT-47	Solvere
20-P-358	Motor Tachometer Generator	1012156	11-MT-47	Solvere
20-P-359	Diode	1010787-001	SV9836	Transitron

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-360	Diode	1010385	RD2661	Raytheon
20-P-361	Diode	1010736-001	SV9836	Transitron
20-P-362	Transformer	1010753	N/A	Bush UTC
20-P-363	Dual Norgate	1006321	U 7125	Philco
20-P-364	Connector, Electrical, Hermetically Sealed	1010783-1	C43HH-4P/054	Microdot
20-P-365	Contact, Electrical	1010770-1 and 2	N/A	Deutsch
20-P-366	Integrated Circuits	Various	Various	Raytheon
20-P-367	Transistor, NPN	1006323	SM 7370H	Motorola
20-P-368	Capacitor, Fixed, Polystyrene	1010317-004	504P	Sprague
20-P-369	Blower	2018694	BC1303F-1	IMC Magnetics
20-P-370	Capacitor	1006755	"J" Series 350D	Kemet, Sprague
20-P-372	Diode	1006399	CD8274	CDC
20-P-373	Diode	1006399	PG-285	TI
20-P-374	Transformer	1008832	JR-473	UTC
20-P-375	Capacitor - Resistor	1008842	JB-533	
20-P-376	Blower	1006755	C07 "J"	Corning Glass
20-P-380	Relay, Armature	1006750	Series 3500	Sprague, Kemet
20-P-381	Resistor, Fixed	2018644	BC1303F-1	IMC
20-P-382	Relay, Magnetic Latching	1005001	BRDJ	Filtors
20-P-383	Resistor, Variable	1005003	BRDJL	
20-P-384	Capacitor, Fixed, Solid Tantalum	1010369	CCM BB	IRC
20-P-385	Transformer	1010733		AB
20-P-386	Connector	1005001 (1008932)	BRDJL	Filtors
		1010916	6109-50-1	Beckman
		1006755	350-D	Sprague
		1010365	EH-224	United Transformer
		1010274	EH-093	
		1010783-001	C43 HH-48	Microdot

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-387	Male-Female Contact	1010955	540094 (M)	National Corporation
20-P-388	Male-Female Contact	1006781	5190002 (F)	Malco
20-P-389	Integrated Circuit, Dual NOR Gate	1006781	5191030 (M)	Malco
20-P-390	Connector, Insert Assembly	1006782	5190002 (F)	Philco
20-P-391	Resistor, Variable	1006321	U7125	Deutsch
20-P-392	Resistor	1010929	346-18-85S	Beckman
20-P-393	Wrapoff Contacts	1010930	340-18-85P	
20-P-394	Relay and Switch	(1010916)	N/A	
20-P-395	EL Lamp Relay	1008932		
20-P-396	Resistor	1010733	CCM	IRC
20-P-397	Wrapoff Contacts	1006781 and 2	519002	Malco and
20-P-398	Resistor Film	1010955	5198030	National
20-P-399	Resistor Film	1010907	HM	Babcock and
20-P-400	Resistor Film	1010784	BR16	Micro Switch
20-P-401	Splice	1010999	N/A	GE, Felsenthal
20-P-402	Transformer	2014738		
20-P-403	Relay Armature	-	FH	Mepco
20-P-404	EL Lamp	1010695	CHM5	Electra
20-P-405	EL Lamp	1010311	MF4	
20-P-406	Lamp, Electroluminescent	1010733	CCM	IRC
20-P-407	Relay	1606750	CO7	Corning Glass
		1008900	N/A	Aerovox
		1010952-002	YSM22-63	Burndy
		1008832	Jr-473	UTC
		1010353	Series	Sigma
		1006772	33 and 32	General Electric
		1008943	N/A	
		1010999	N/A	General Electric
		1008944	N/A	General Electric
		1010999	BRDJL26	Raytheon/Filtor
		1005001-2	C1P6AS-5	

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-409	Transistor	1006323	N/A	Fairchild
20-P-410	5 amp	1008943	N/A	GE
20-P-411	EL Lamp	1010999	N/A	GE
20-P-412	EL Lamp	1010999	N/A	GE
20-P-413	EL Lamp	1010999	N/A	GE
20-P-414	EL Lamp	1008943	N/A	GE
20-P-415	Relay, Armature	1010353	33 Series	Sigma Instruments
20-P-416	Lamp	1008943	N/A	GE
20-P-417	Lamp	1010999	N/A	GE
20-P-418	Lamp	-	N/A	GE
20-P-419	Lamp	-	N/A	GE
20-P-420	Lamp	-	N/A	GE
20-P-421	Lamp	-	N/A	GE
20-P-422	Transformer	1010724	BA-508	Bush Transformer
20-P-423	Diode	1006399	CD827A	CDC
20-P-425	Electroluminescent Lamp	1008944	N/A	GE
20-P-426	Transistor	1010397	N/A	TI
20-P-427	Leaded Bronze Pins	1010955-1 and 2	540100	National Con Corp
20-P-428	Connector	1010965-001	MD53-0GE	Microdot
20-P-429	G & N Panel, Metal Overlay	Non Prod	15-GTS-N	Central Stamp and Seal
20-P-430	Capacitor and Resistor	Various	Various	Various
20-P-431	Self-Locking Screws	1897014-416	N/A	-
20-P-432	Transistor	1010397	2N930	TI
20-P-433	EL Lamps	1008944	N/A	GE
20-P-434	Connector, Electrical	1010937-108	347-16-61P4	Deutsch
20-P-435	EL Lamp	1008944	N/A	GE
20-P-436	Relay, Armature	1005003	BRDJ series	Filters
20-P-437	Transformer	1010365	EH 224	UTC
20-P-438	Capacitor	1010724	BA 508	Bush
20-P-438	Capacitor	1010359	VK R	Vitramon

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-439	Self-Locking Screws	1001488-010 1010477-012 1010892-012	N/A	Long Lock
20-P-440	Insert, Threaded, Self-Locking	1000115-002, -003	KCL0440 KCL0632	Newton Insert
20-P-441	Terminal Seal	202151	N/A	Elec Inst
20-P-442	Pin Contacts	1010955-002	N/A	National Comm
20-P-443	Electroluminescent Lamps	1008944 (Ref only)	N/A	Sylvania
20-P-444	Electroluminescent Lamps	1008944 (Ref only)	N/A	GE
20-P-445	Connector, Electrical	1010965	N/A	Micredot
20-P-446	Relay	1010353-007	33	Sigma
20-P-447	Transistor, NPN	1010397	5M3172	TI
20-P-448	Contacts, Male	1010955 1006782	N/A	Malco
20-P-450	Transistor	1010397	A1401	Amelco
20-P-451	Transistor	1010966	N/A	Fairchild
20-P-452	Resistor, Metal Film	1010733-011	CCM	IRC, Inc.
20-P-453	Connector, Receptacle	1008988 with 2021516 1006750	6216 5 MIN-1 6208 5 MIN-J-2 C07/ RS1A	Alden Prod CGW/Dale
20-P-454	Resistor, Fixed	2018	N/A	Cox and Co
20-P-455	Thermostat and Heater Assembly	1006750	C07	Corning Glass
20-P-456	Resistor, Fixed Film	1003891	X-5133-6	AC
20-P-457	Screw, Captive	2021509	N/A	Alden Prod
20-P-458	Connector Assembly	1010262	3037M	Sage
20-P-459	Resistor, Fixed, Wire Wound	1010901-1B	X32308	Micro Switch
20-P-460	Switch, Sensitive	1006750-143	C07	Corning Glass
20-P-461	Resistor	N/A	No Record	CDC
20-P-462	Diode	1006399		

SUMMARY OF EVALUATION TEST REPORTS

TEST NO	PART NAME	PART NO	VENDOR'S NO	VENDOR
20-P-463	Diode	1010885	No Record	Ray Hoff Mot CDC
20-P-464	Connector Plug	1008815-19	MD53065	Microdot CDC
20-P-465	Diode	1008987 N/A	N/A	
20-P-466	Diode	1010372-016 N/A	1N2970B	Hoffman Semicond
20-P-467	Transformer	1010331		
20-P-468	Resistor, Fixed	1010886	JG-501	Bush
		1006750-30 -32	C0-7	Corning Glass
20-P-469	Transistor, PNP	1008812-1	N/A	Motorola
20-P-470	Transistor, PNP	1008812-1	N/A	Motorola
20-P-471	Diode	N/A	SV 9836	Transitron
		1010786		
20-P-472	Transistor	1010252-001	N/A	Amelco

6

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3.4 OVERSTRESS ANALYSIS REPORTS

In support of failure investigations and suspected overstress circumstances, AC Electronics and its major subcontractors conducted overstress analyses. (See Statement of Work, Exhibit E, Paragraph 3.3.1.) These analyses were primarily concerned with reliability assessment of potential overstresses on airborne hardware units. The results of these analyses would be assessed to determine the possible secondary overstress, the risk of future failure if continued in use, and the repair/replacement action necessary to eliminate any risk. The reports of these analyses are listed below.

SUMMARY OF OVERSTRESS ANALYSES	
AC ELECTRONICS	
REPORT NO.	SUBJECT
3242-DE-560-A	Overstress Analysis of Apollo II IRIG 9A9
3242-DE-555-A	Reliability of PIPA Calibration Modules, P/N 2007105-011, S/N's 19, 32, 36
3242-DE-548-A	Stress Analysis of Apollo E/L Panel Bond to Safety Glass Laminate
3242-DE-531-A	Overstress Evaluation of Apollo IMU, P/N 20186-1-231, S/N 30
3242-DE-529-A	Reliability of PIGA Electronic Assembly, P/N 2007201-031, S/N 11
3242-DE-521-A	Ducosyn Transformer, P/N 1010888, Stress Level During G & N Failure
3242-DE-519-A	Stress Analysis of Power Servo Assembly, P/N 2007200-051, S/N 23
3242-DE-517-A	Stress Analysis of PIPA Electronics Assembly
3242-DE-516-A	Analysis of Workmanship Vibration Effects on G & N Indicator Control Panel
3242-DE-510-A	Overstress Analysis of Raytheon Memory Module
3242-DE-482-A	Overstress Analysis of LM PSA, P/N 6007200, S/N 20
3242-DE-473-A	Mechanical Overstress Analysis of Apollo Coarse System Module, P/N 2007236, S/N 213

SUMMARY OF OVERSTRESS ANALYSES

AC ELECTRONICS

REPORT NO.	SUBJECT
3242-DE-471-A	Analysis of Workmanship Vibration Effects on CM Sign Conditioner, P/N 2007234-021, S/N 13
3242-DE-455-A (Rev. 1)	Indentations on Convolutions of Apollo Sextant Bellows, P/N 1898952
3242-DE-418-A (Ref. 1)	Overstress Analysis of Test Point Adapter Induced Malfunctions in PSA S/N 7
3242-DE-452-A	Dropped Block II ECDU, P/N 2007222, S/N 41
3242-DE-447-A	LM-4 PSA S/N 8 28 V, 800 Hz, 1 percent Failure
3242-DE-443-A	Failure of Phase B Gyro Wheel Supply in G & N 214
3242-DE-441-A	Stress Analysis of Apollo ECDU
3242-DE-437-A	Analysis of Overstresses in C/N PSA S/N 14, PEA, S/N 8, and IMU S/N 17, Induced by GSE Crossbar Switch Failure
3242-DE-435-A	Stress Analysis of Apollo Computer Ropes Recovered from Apollo Flight AS-501
3242-DE-432-A	25 IRIG Overstress Analyses Related to G & N 210 Failure
3242-DE-431-A	Ribbon Run Rerouting between Relay K1 Terminal 7 and Diode CR1 on Apollo Gimbal Servo Amplifier, P/N 2007114
3242-DE-430-A	Effects to IRIG Electrical Normalizing Network Due to Superimposing 115 V, 60 Hz Voltage with 27.5 Vdc
3242-DE-421-A	LM IMU S/N 13 Thermal Problem at KSC
3242-DE-418-A	Overstress Analysis of Test Point Adapter Induced Malfunctions in PSA S/N 7
3242-DE-417-A	Stress Analysis of IRIG Preamplifier Module, P/N 2021785, S/N 418
3242-DE-412-A	Mechanical Overstress Analysis of Apollo PIP Preamplifier Module, P/N 2007060-021, S/N 44

SUMMARY OF OVERSTRESS ANALYSES

AC ELECTRONICS

REPORT NO.	SUBJECT
3242-DE-408-A	Overstress of OSS 800 Hz, 5 percent Amplifier in G & N 206, PSA S/N 13
3242-DE-407-A	800 Hz, 5 percent Amplifier Overstress in G & N 603
3242-DE-406-A	Mechanical Overstress Analysis of Apollo MSA and Quadrature Reject Module, P/N 2006238-061
3242-DE-403-A	LM IMU S/N 13 and PSA S/N 3 Thermal Problems at KSC
3242-DE-390-A	Overstress of PTA S/N ACSK-6 in G & N 603
3242-DE-385-A	Overstress Analysis of IRIG Preamplifier, P/N 2021785-011
3242-DE-376-A	Apollo Block I-100 PSA Coldplate Malfunction
3242-DE-364-A	OA Resolver Assembly Failure
3242-DE-360-A	Overstress Analysis of Apollo Quadrature Select S/N 169
3242-DE-356-A	Analysis of Shaft Stress of Beckman Variable Resistor, Apollo P/N 1008932
3242-DE-337-A	G & N 122 Ablative Shield/RTV-560 Separation
3242-DE-335-A	Megger Failure in Apollo G & N S/N 212, IMU S/N ACSK-29
3242-DE-334-A	Thermal Stress of G & N Indicator Control Panel, P/N 2014578, S/N ACSK-13
3242-DE-330-A	Electrical Overstress Investigation of Apollo Block I-100 PSA Tray 7 During Pre-Power Assurance Testing
3242-DE-329-A	Y IRIG S/N 7A-42 Short Circuit in IMU ACSK-21
3242-DE-319-A	Analysis of Shaft Stress During Vibration of Beckman Potentiometer, P/N 1010916
3242-DE-308-A	Bent Pins, Failure Report 16638
3242-DE-304-A	Thermal Overstress of G & N Indicator Control Panel, P/N 2014578-021, S/N 10

SUMMARY OF OVERSTRESS ANALYSES

AC ELECTRONICS

REPORT NO.	SUBJECT
3242-DE-301-A	PSA Module Failures in ISS 607
3242-DE-300-A	Apollo G & N 204 Vibration Overstress
3242-DE-294-A	Corning Glass Resistor Problem
3242-DE-288-A	Attitude Error Demodulator Failure in G & N 123
3242-DE-286-A	603P1A Nonconformance
3242-DE-282-A	IMU Short Circuit in LM ISS S/N 607
3242-DE-265-A	Analysis of Quadrant Selector Module, P/N 2007243, S/N 35, from ECDU 203, P/N 2007222, S/N 140
3242-DE-263-A	Stress Analysis of Failure Experienced During Qualification Testing of Block II ISS
3242-DE-262-A	800 Hz, 5 percent Amplifier Failure in G & N 203
3242-DE-261-A	800 Hz Power Supply Failure in Apollo Block II Spare PSA
3242-DE-260-A	Apollo Module Ground Stud Resistance Problem
3242-DE-258-A	Apollo II IRIG Normalizing Network Connector Short Circuit
3242-DE-251-A	Apollo Command Module Cover Stress Analysis
3242-DE-248-A	Apollo, Analysis of Test Results of GE Capacitor, P/N 1010637-1
3242-DE-239-A	LORS/PMT and Beacon Electronics
3242-DE-235-A	Apollo Sextant Alignment Zero Shifts
3242-DE-230-A	LORS Sensor Electronics Stress Analysis
3242-DE-229-A	Apollo G & N 12 PSA Junction Box Interchange
3242-DE-218-A	Results of Requested Investigations for Signal Condi- tioner, P/N 1007700-021, S/N 4
3242-DE-207-A	Apollo GSE Transistor Failures, P/N 1015928 and P/N 1015938

SUMMARY OF OVERSTRESS ANALYSES

AC ELECTRONICS

REPORT NO.	SUBJECT
3242-DE-183-A	Apollo Pulse Torque Power Supply Transistor Q5 Failure
3242-DE-179-A	ADA Preamplifier Failures
3242-DE-172-A	Design Analysis of Transformer, P/N 1010329-001 Application in Apollo Two Speed Switch Module, P/N 1007522
3242-DE-171-A	Apollo Program, Reversed Outputs on IRIG/PIP Excitation Module
3242-DE-170-A	Overstress Susceptibility, G & N 110 PSA Tray 8 and 9 Interchange Mishap
3242-DE-143-A	Overstress on G & N 110 PIPA and IRIG Suspension
3242-DE-142-A	Conclusions Reached from Investigation of Apollo Transistor Bond Failures
3242-DE-141-A	Optics Slew Rate Out-of-Tolerance Condition on G & N 12/59
3242-DE-140-A	Transistor P/N 1010376, Tests on
3242-DE-125-A	Apollo IMU, Brazing Defects in 1001553 Assembly
3242-DE-119-A	Apollo 800 Hz, 1 percent Amplifier, Design Evaluation
3242-DE-109-A	Apollo IMU Control Panel, Comparison of Effect of Random and Sine Vibration
3242-DE-101-A	Design Review of Apollo Monitor Panel Assembly
3242-DE-77-A	CDU D to A Connector
3242-DE-76-A	CDU Motor Driver Amplifier

SUMMARY OF OVERSTRESS ANALYSES	
KOLLSMAN	
REPORT NO.	TITLE
AA-64-103	Optical Unit Shaft Axis Bearings Preload Study, 28 August 1964
LA-66-305	Engineering Analysis of LM Alignment Optical Telescope Prism Mounting, 4 February 1966
AA-63-028	SCT and SXT Shaft Axis Lateral Vibration Analysis
AA-64-103	OUA Shaft Axis Bearing Preload Study
AA-64-109	Block I OUA Structural Analysis Final Report
AA-64-111	Structural Analysis, OUA 1011000
AA-65-219	Thermal Analysis, Block I OUA
AA-65-223	OUA AGE 2 Mechanical Integrity Test
AA-65-232	OUA AGE 1 TV Evaluation Test Report
AA-65-235	Design Evaluation Report, OUA Block I-100
AA-65-245	TV Cycling Test, AGE 102
AA-65-246	Acceleration and Acceleration Overstress Test, AGE 101
AA-65-247	Acoustic Test, AGE 101
AA-65-248	Shock and Overstress Test, AGE 101
AA-65-249	Oxygen Overpressure Temperature Test, AGE 101
AA-65-250	Mission Cycling Test, AGE 102
AA-65-258	AGE 101 Design Evaluation, TV Cycling, and Simulated Mission Cycle Test
AA-65-262	Evaluation and Functional Test Results for Vibration Overstress Tests, AGE 101
AA-66-307	AGE 101 Mechanical Integrity Test
AA-67-410	TV Retest of OUA Block II Units — 4 Motors
AA-68-509	Structural Analysis Review, OUA 220 Overstress
AE-66-023	AGE 207 Special TV Conditioning
AE-66-024	Report on OUA TV Tests
AE-66-025	Learner's Model TV Test with Proposed New Flanged Trunnion Bearing Design

SUMMARY OF OVERSTRESS ANALYSES

RAYTHEON

REPORT NO.	DRAWING NO.	SUBJECT
AFR 6431 TFR 1055	2007140-031	Error lights 32 and 33 came on during tape portion of QAP 187346 due to an induced failure on gate 6-497 of flatpack 6-497, apparently caused by excessive B plus voltage while testing Read Counter Ray 5.
AFR 17197	2003994-021	During installation of G & N 208 equipment in S/C 103 at N/R, DSKY D14, S/N 47, was found to have indentations in the back cover. Raytheon performed overstress analysis.
AFR 19523 Memo No. 6/HWH/67	2003993-031	Variable Frequency Oscillator (GSE) was installed backwards in C-23 Ray 39, and current was applied.
AFR 19551	2003994-011	Improperly keyed environmental cable W-11 resulted in improperly connected DSKY D9 Ray 42. When power was turned on, Alarm and E/L Panels would not illuminate.
AFR 19552	2003972	Improperly keyed environmental cable W-11 resulted in improperly connected DSKY D19 Ray 52. When power was turned on, Alarm and E/L Panels would not illuminate.
AFR 19607	2003993-031	During AGC Power turn-on of C-18 Ray 34, the Temperature and Restart Alarm lights stayed on. W4 2 cable had a connector keyed 180 degrees out.
AFR 20409	2003983-041	Power was applied to Alarm Module B8 Ray 43 while it was inserted in test fixture backwards.
AFR 20445	1006387	High intensity and high current drain of IL Panel Ray 110 resulted from a fractured middle lamp.

SUMMARY OF OVERSTRESS ANALYSES

RAYTHEON

REPORT NO.	DRAWING NO.	SUBJECT
AFR 20853	2003100	Due to a testman error, 11.2 Vdc was applied to the +4 V buss in Tray B of AGC C-36 prior to module vibration test, causing a constant parity failure. An overstress analysis was performed on the B-16 and B-27 rope drivers.
AFR 20890	2003993-031	J10 connector of C-34 Ray 50 was connected to J1 of the CTS, and power was applied. A V Fail, Restart, and GOJAM STPT occurred as a result.
AFR 21741	2003994	During Sale vibration of D64 Ray 97 the g level suddenly increased to 10.5 g's rms.
AFR 21777	2003988-021	E/L Digital Indicator Ray 189 cracked in upper left corner during thermal cycling.
AFR 21853	2003988-021	E/L Digital Indicator Ray 189 was subjected to 100° C temperatures for about 15 minutes.
AFR 21854	2003983-021	E/L Digital Indicator Ray 325 was subjected to 100° C temperatures for about 15 minutes.
AFR 21857	2003988-021	E/L Digital Indicator Ray 152 cracked in the upper left hand corner and a rainbow effect became noticeable following thermal cycling.
AFR 22278	2003972	Exterior of shipping box containing Fixed Memory B+ Ray 252 contained a deep dent.
MRR A4-3684	2003972-921	Fixed Memory Ray 308 was dropped to bench top— approximately 2 feet.
RJK-313	2003067	Effect of a 7-volt negative going pulse on +14 volt dc line to the interface XT circuit of interface module.
RJK-313	2003067	Overstressed transistors in rope driver modules S/N 88 and S/N 124.
ASD-66-58	2003953-011	Computer Power Supply Module Ray 36, effect of overstress thermal environment on component parts.

3.5 TECHNICAL MANUALS AND JOB DESCRIPTION CARDS

Two types of technical manuals were prepared for the Apollo program: a familiarization manual and field support manuals. (See Statement of Work, Exhibit D, Paragraphs 9.1.1 and 9.1.2, respectively.) The familiarization manual with inputs from the subcontractors provided a description of the G & N system and subsystems, including the Ground Support System. The manual was used as an orientation and indoctrination document. Revisions were not required.

Field manuals were required for use of the field site personnel in supporting the G & N system, major subsystems, and the Ground Support Equipment. This use was not extended beyond the G & N laboratory. Interface was maintained with the spacecraft contractor with regard to improved methods and procedures. Field support manuals provided a physical description, theory of operation, maintenance and repair information, packing, shipping, handling, and checkout procedures.

In addition, Apollo procedural information was provided in the format of Job Description Cards (JDC's). Through the JDC's, the proper sequence of operation and checkout was established, and uniformity was maintained throughout the system assembly and checkout and preinstallation acceptance testing. The JDC's were updated periodically with changes and revisions to improve the procedures, as results of using the equipment, to provide expanded data coverage, and to provide for design changes.

Listed below are the technical manuals and JDC's prepared for Apollo.

APOLLO G & N TECHNICAL MANUAL LIST			
NUMBER	TITLE	EQUIPMENT COVERAGE	CONTENTS
ND-1021002 (1 Volume)	AGC Calibration System Checkout, Maintenance, and Repair Manual	Block I Series 0	Description, theory of operation, system tie-in, calibration, checkout, and maintenance
ND-1021003 (1 Volume)	AGC Simulator Checkout, Maintenance, and Repair Manual	Block I Series 0	Description, theory of operation, system tie-in, calibration, checkout, and maintenance
ND-1021005 (3 Volumes)	AGC Test Set Connections Manual	Block I Series 0	Lists of connections within subassemblies, connections through chassis connectors to attaching plugs, interchassis cabling connections, and connections for AGC/CTS operation console

APOLLO G & N TECHNICAL MANUAL LIST

NUMBER	TITLE	EQUIPMENT COVERAGE	CONTENT
ND-1021034 (1 Volume)	Associated Test Equipment Checkout, Maintenance, and Repair Manual	Block I Series 0 and Series 50	General description of equipment functions, plus description, theory of operation, calibration, checkout, and maintenance of each unit of associated test equipment
ND-1021035 (3 Volumes)	Optics-Inertial Test Set Checkout, Maintenance, and Repair Manual	Block I Series 0 and Series 50	Description, theory of operation, system tie-in, calibration, checkout, maintenance, list of oscillograph console wire harness connectors, network listing of OIA wire harness, and JDC's
ND-1021036 (2 Volumes)	Guidance and Navigation System Checkout, Maintenance, and Repair Manual	Block I Series 0 and Series 50	Description, theory of operation, system tie-in, checkout, maintenance, and JDC's peculiar to Block I Series 0
ND-1021037 (1 Volume)	Apollo Equipment Familiarization Manual		Description of complete Guidance and Navigation system, subsystems, and GSE for indoctrination usage
ND-1021038 (1 Volume plus Supplement A)	Packing, Shipping, and Handling Manual	Block I Series 100, Block II and LM	Packing, unpacking, transportation, and handling of all airborne components and all GSE (Supplement A contains special information covering heater power support for spacecraft-installed IMU.)
ND-1021039 (1 Volume)	Auxiliary Ground Support Equipment Manual	Block I Series 100, Block II, and LM	Description, theory of operation, calibration, checkout, and maintenance of each unit of A-GSE

APOLLO G & N TECHNICAL MANUAL LIST

NUMBER	TITLE	EQUIPMENT COVERAGE	CONTENT
ND-1021040 (3 Volumes plus Supplement A of 2 Volumes and Supplement B of 2 Volumes)	Bench Maintenance Ground Support Equipment Manual	Block I Series 100, Block II, and LM	General description of equipment functions and universal test station, G & N checkout, ISS checkout, OSS checkout, and CSS checkout, plus description, theory of operation, calibration, checkout, and maintenance of each unit of BM-GSE. Supplements cover AGC/CTS operations console connections, computer test set connections, and Block II and LM OITS used with associated Block I Series 100 and Block II and LM BM-GSE during checkout
ND-1021041 (2 Volumes)	Guidance and Navigation System Manual	Block I Series 100	System tie-in, functional analysis, description, component theory of operation, prelaunch and in-flight operations, list of checkout and maintenance equipment, checkout, and maintenance
ND-1021042 (2 Volumes)	Primary Guidance, Navigation, and Control System Manual	LM	System tie-in, functional analysis, description, component theory of operation, prelaunch and in-flight operations, list of checkout and maintenance equipment, checkout, and maintenance
ND-1021043 (1 Volume)	Primary Guidance, Navigation, and Control System Manual	Block II	System tie-in, functional analysis, description, component theory of operation, prelaunch and in-flight operations, list of checkout and maintenance equipment, checkout, and maintenance

APOLLO G & N TECHNICAL MANUAL LIST

NUMBER	TITLE	EQUIPMENT COVERAGE	CONTENTS
ND-1021066 (1 Volume)	Miscellaneous Optical Subsystem Test Equipment Checkout, Maintenance, and Repair Manual	Block I Series 0	Description, preparation for use, preparation for shipment, receiving and inspection, checkout and analysis, replacement and repair, and maintenance of each unit of optical subsystem test equipment
ND-1021067 (1 Volume)	Optical Unit Checkout, Maintenance, and Repair Manual	Block I Series 0 and Series 50	Description, preparation for use and shipment, list of test equipment and tools, theory of operation, checkout, and repair
ND-1021068 (1 Volume)	Functional Tester Fixture Checkout, Maintenance, and Repair Manual	Block I Series 0	Description, list of test equipment, preparation for use and shipment, theory of operation, maintenance and certification, and list of replacement parts
ND-1021070 (1 Volume)	Precision Test Fixture Checkout, Maintenance, and Repair Manual	Block I Series 0	Description, preparation for use or shipment, list of test equipment, theory of operation, maintenance and certification, alignment, repair, and replacement
ND-1021071 (1 Volume)	Map and Data Viewer Tester Checkout, Maintenance, and Repair Manual	Block I Series 0	Description, receiving, inspection, storage, shipment, list of support equipment, theory of operation, maintenance and certification, and list of repair and replacement parts
(11 Volumes)	Apollo G & N System Job Description Cards (JDC's)		JDC's required to support Block I Series 50 and Series 100, Block II, and LM G & N system, plus Block I-100 and Block II/LM Ground Support Equipment

APOLLO G & N JOB DESCRIPTION CARD LIST

JDC NUMBER	TITLE
00009 Through 00235	ISS Checkout (Block I)
02072 Through 03683	Optical Equipment Checkout
04175 Through 05784	Computer Equipment and CSS Checkout
10001 Through 10099	G & N Checkout (Block I)
10180 Through 10185	OSS Checkout
10701 Through 10741	OSS Checkout (Block I Series 100)
12200 Through 12299	G & N Checkout (Block II)
12600 Through 12699	G & N Checkout (LM)
14001 Through 14230	ISS Checkout (Block II)
15014 Through 15244	ISS Checkout (Block I)
16001 Through 16244	ISS Checkout (Block II, LM)
17101 Through 17108	Removal and Replacement
17205 Through 17305	Packaging
17601 Through 17603	Removal and Replacement
18000 Through 18250	GSE Operation
18269 Through 18874	PIA and PPA
19000 Through 19269	GSE Checkout
19286 Through 19304	Packaging
19360 Through 19933	GSE Checkout
20101 Through 20138	OSS Checkout (Block II)

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3.6 NASA G & N TRAINING

3.6.1 INTRODUCTION

The NASA G & N Training Program was systematically developed, based on program needs, and accorded fully with Exhibit J, Paragraph 3.3.3, of the contract. The program has been continuously reviewed and evaluated to assure that the training remained relevant. The steps involved in the program development included the following.

1. Training Study,
2. Training Requirements Analysis,
3. Training Curriculum Development,
4. Training Material and Equipment Development,
5. Training Course Presentation.

3.6.2 TRAINING STUDY

The purpose of the Training Study was to provide understanding of NASA training activities and knowledge of the G & N training needs at the many NASA branches and divisions at both MSC and KSC.

3.6.3 TRAINING REQUIREMENTS ANALYSIS

The results of the Training Studies were used to perform Training Requirements Analyses, one for operations personnel and one for administrative personnel.

3.6.4 TRAINING CURRICULUM DEVELOPMENT

Using the results of both Training Requirements Analyses, a NASA G & N Training Curriculum was established as follows.

1. Block I (50/100) Courses
 - Level 2 Familiarization
 - Level 3 System Mechanization
 - Level 3 Utility Programs
 - Systems Update Briefings
 - Special Briefings

2. Block II Courses
 - Level 2 Familiarization
 - Level 3 System Mechanization
 - Level 3 Utility Programs
 - Level 3 System Mechanization/Utility Programs
 - Level 3 Mission Programs
 - Level 3 Digital Autopilot Programs
 - System Update Briefings
 - Special Briefings
3. LM Courses
 - Level 2 Familiarization
 - Level 3 System Mechanization
 - Level 3 Utility Programs
 - Level 3 System Mechanization/Utility Programs
 - Level 3 Mission Programs
 - Level 3 Digital Autopilot Programs
 - Systems Update Briefings
 - Special Briefings
4. Flight Crew Briefings
5. Special Briefing (Block II and LM PGNCS)

The NASA G & N Training Program was defined in the Training Service Plan and the Training Equipment Plan. The transmittal of these plans by AC Electronics was accomplished 26 April 1965 via memorandum AP-M-6553. The Training Service Plan included the Training Requirements Analyses. Nine updates or revisions to the Training Service Plan were accomplished.

3.6.5 TRAINING MATERIALS AND EQUIPMENT DEVELOPMENT

The training materials developed to support the above curriculum were of three types: study guides, handouts, and self-instruction materials. Each study guide was revised from three to five times to keep it as current as possible. Following is a list of study guides and supplements and the number delivered as of 1 August 1969.

<u>Type</u>	<u>Equipment Coverage</u>	<u>Number</u>
116 Familiarization	Block I Series 100	249
F1100 Functions and Operations	Block I Series 100	206
H1100 Hardware	Block I Series 100	94
FH1100 Functions and Hardware	Block I Series 100	392
C1100 Computer Programs	Block I Series 100	374
G1100 GSE and Testing	Block I Series 100	70
216 Familiarization	Block II	75
H256 Hardware	Block II	95
2324 Special Briefing Handouts	Block II	25
FH2100 Functions and Hardware	Block II	44
F2100 Functions and Operations	Block II	764
SM2100 System Mechanization	Block II	316
C2100 Computer Programs	Block II	971
MP2100 Mission Programs	Block II	359
DAP2100 Digital Autopilot	Block II	200
316 Familiarization	LM	50
F352 G & N Hardware	LM	95
FH3100 Functions and Hardware	LM	137
F3100 Functions and Operations	LM	2,570
SM3100 System Mechanization	LM	649
C3100 Computer Programs	LM	644
MP3100 Mission Programs	LM	380
DAP3100 Digital Autopilot	LM	60
	Total	<u>9,319</u>

The self-instruction materials developed for the hardware familiarization courses and for a space navigation series were as follows.

- Introduction to LM PGNCS
- LM Inertial Subsystem Familiarization
- LM Optical Subsystem Familiarization
- LM Computer Subsystem Familiarization
- Introduction to CSM PGNCS
- CSM Inertial Subsystem Familiarization
- CSM Optical Subsystem Familiarization
- CSM Computer Subsystem Familiarization
- Introduction to Space Navigation

- Orbital Mechanics and Rendezvous Techniques
- Applied Orbital Mechanics
- Stabilization Loops
- Gyro Torquing Electronics
- Accelerometer Loops
- Inertial Subsystem Moding
- Attitude Control and Error Display
- CM Thrust Vector Control
- Saturn Takeover

The training equipment consisted of a series of models and mockups. Three complete sets of these models and mockups were developed. Each set included the following.

- Axes Configuration Model
- Computer Core Array Model
- Earth-Moon Training Aid
- Gyro and Accelerometer Input Axes Model
- LM Axes Configuration Model
- Block II Optical Eyepiece Training Aid
- Block II Navigation Base Model
- LM/Spacecraft and Service Module Models
- Computer Display and Keyboard Model
- LM Optical Rendezvous Sensor

3.6.6 TRAINING COURSE PRESENTATION

Training courses presented are listed on the following page.

TRAINING COURSE SUMMARY

COURSE	NO. OF CLASSES	LENGTH (hours)	NO. OF STUDENTS		TOTAL NO. OF STUDENTS	TOTAL TRAINING (hours)
			NASA	CONTRACTOR		
<u>Block I Courses</u>						
Block I G & N Familiarization	9	16	88	45	133	2,128
Block I Functions, Operational Hardware	4	20	35	22	57	1,140
Block I Functions, Operational Hardware	2	24	28	-	28	672
Block I Functions, Operational Hardware	3	40	43	12	55	2,200
Block I Comp Utility Program	1	30	10	11	21	630
Block I Comp Utility Program	1	36	16	5	21	756
Block I Comp Utility Program	3	40	43	21	64	2,560
Block I GSE and Testing	2	20	10	7	17	340
Block I Updates	1	4	28	13	41	164
Block I Updates	1	7	2	10	12	84
Block I Updates	1	8	10	-	10	80
Block I Updates	1	16	12	6	18	2
<u>Block II and Astronaut Briefings</u>						
Block II/LM Special Briefing	1	24	21	5	26	624
Block II/LM Special Briefing	1	72	7	34	41	2,952
Block II PGNCS Familiarization	6	16	75	36	111	1,776
Block II PGNCS Familiarization	4	20	36	47	83	1,660
Block II Systems Mechanization	5	20	30	82	112	2,240
Block II Systems Mechanization	7	25	35	80	115	2,875
Block II Systems Mechanization	1	36	17	5	22	792
Block II Systems Mechanization	1	6	2	8	10	60
Block II Computer Utilities	2	23	19	14	33	759
Block II Computer Utilities	4	24	16	41	57	1,368
Block II Computer Utilities	4	25	34	41	75	1,875
Block II Computer Utilities	1	30				

TRAINING COURSE SUMMARY

COURSE	NO. OF CLASSES	LENGTH (hours)	NO. OF STUDENTS		TOTAL NO. OF STUDENTS	TOTAL TRAINING (hours)
			NASA	CONTRACTOR		
<u>Block II and Astronaut Briefings</u> (Continued)						
Block II Mission Programs	4	20	36	78	114	2,280
Block II Mission Programs	4	25	12	65	77	1,925
Block II Digital Autopilot	6	20	29	34	63	1,265
Block II Digital Autopilot	2	40	13		13	520
Astronaut Briefing	1	4	4		4	16
Astronaut Briefing	1	6	1		1	6
Astronaut Briefing	1	10	1		1	10
Astronaut Briefing	1	12	1		1	12
Astronaut Briefing	1	15	12		12	180
Astronaut Briefing	1	20	3		3	60
Astronaut Briefing	1	30	24		24	720
Astronaut Briefing	1	32	24		24	768
Astronaut Briefing	1	40	15		15	600
<u>LM Courses</u>						
LM Special Briefing, Function and Operations	1	7	3		3	21
LM Special Briefing, Function and Operations	1	4	6	12	18	72
LM Special Briefing, Guidance and Control	1	20	10	2	12	240
LM Special Briefing, 204/L Update	2	16	20	4	24	384
LM Familiarization	2	11	4	32	36	396
LM Familiarization	7	12	27	125	152	1,824
LM Familiarization	4	14	53	67	120	1,680
LM Familiarization	11	16	124	141	265	4,240
LM Familiarization	3	20	27	54	81	1,620

TRAINING COURSE SUMMARY

COURSE	NO. OF CLASSES	LENGTH (hours)	NO. OF STUDENTS		TOTAL NO. OF STUDENTS	TOTAL TRAINING (hours)
			NASA	CONTRACTOR		
<u>LM Courses (Continued)</u>						
LM System Mechanization	1	18	12	14	26	468
LM System Mechanization	5	20	78	25	103	2,060
LM System Mechanization	6	25	30	57	87	2,175
LM System Mechanization	1	32	21	6	27	864
LM Computer Utility Programs	1	20	-	7	7	140
LM Computer Utility Programs	1	22	8	4	12	264
LM Computer Utility Programs	6	24	29	35	64	536
LM Computer Utility Programs	4	25	39	49	88	2,200
LM Mission Programs	2	16	10	5	15	240
LM Mission Programs	11	20	78	82	160	3,200
LM Mission Programs	1	25	9	9	18	450
LM Digital Autopilot	2	20	20	26	46	920
LM Digital Autopilot	1	23	1	6	7	161
TOTALS	165		1,401	1,484	2,885	60,440

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3.7 OPERATING HOURS

Reliability assessments, time-scheduled item removal compliance, and other corrective actions require an operating time base. Establishing the necessary time base required a comprehensive operating time reporting system, which has been maintained during the entire Apollo contract period. Accuracy has been achieved through procedural control and periodic audits.

The operating time reporting system utilizes the Historical Event Operation Record (HEOR). This record documents both time and non-time accumulating events at the system level. Maintenance of a system inventory record is also required to provide for allocation of system time and events to the specific units associated with the G & N system.

The applicable unit time and events data are documented on a Unit History Record (UHR). This record documents time and events at the unit level. Maintenance of a unit inventory record provides for allocation of unit operating time to the assembly level.

The operating hours accumulated on Block I-100, Block II, and LM G & N equipment through 30 November 1969 are summarized below.

BLOCK I-100 UNIT	G & N 17/50 CSM 011 As 202 (Launched 8-25-66)		G & N 122 CMO 17 APOLLO 4 (Launched 11-9-67)		G & N 123 CMO 20 APOLLO 6 (Launched 4-4-68)		QUAL 110 SUBSYSTEM		QUAL 111 G & N SYSTEM	
	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours
IMU	1	2,083	11	2,688	4	3,117	3	3,204	5	3,795
PSA	1	64	502	18	301	21	1	27	3	16
CDU	7	453	4	-	6	1,492	9	1,093	3	474
GNK	1	-	7	-	2	1,257	1	-	3	-
AGC	1	2,235	14	1,754	13	2,994	4	1,946	9	3,256
Main DSKY	1	2,454	2	2,238	9	2,651	7	757	3	3,217
Navigation DSKY	1	2,453	10	1,702	7	2,916	8	690	5	3,045
WJA	12	965*	7	1,356	9	1,313	124	-	6	1,570
SCA	3	529*	10	-	9	1,240	-	-	-	-
IMU Control Panel	2	N/A	6	N/A	4	3,187	1	N/A	3	N/A
D & C Electronics	1	2	10	-	7	1,792	3	-	5	-
Control Electronics	1	2	8	-	7	2,417	3	389	6	-
IRIG X	3A12	2,142	4A26	2,989	5A23	2,301	3A3	3,802	4A19	3,658
Y	3A10	2,405	5A7	3,791	4A7	2,192	5A16	1,939	4A16	3,734
Z	3A24	2,364	4A14	1,677	4A24	2,452	2A36	1,701	4A25	4,138
G & N System	17/50	-	122	2,703*	123	2,682	110	3,109	111	3,766

* 20 February through 30 April 1968 was 137 hours additional

BLOCK II UNIT	G & N 216		G & N 217		G & N 218		G & N 219		G & N 220		G & N 221		G & N 222	
	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours
IMU:	35	1,099	44	688	31	841	30	1,369	-	-	-	-	-	-
PEA	18	912	19	493	11	2,559	14	1,103	-	-	-	-	-	-
ECJU	20	348	44	396	50	583	16	1,700	-	-	51	301	14	1,862
PSA	23	339	21	446	22	571	7	1,076	24	328	25	586	-	-
GNIC	8	557	25	154	6	1,186	23	299	-	-	-	-	-	-
CMC	41	762	36	954	39	1,362	59	238	55	426	52	1,091	51	317
Main DSKY	90	482	94	500	99	435	100	521	-	-	88	338	-	-
Navigation DSKY	83	668	95	429	-	-	101	417	-	-	91	140	-	-
OUA	31	307	15	693	16	517	17	614	38	189	13	1,461	28	487
SCA	15	116	13	200	16	181	14	165	17	239	13	100	19	112
IRIG X	7C178	1,448	7C170	2,207	7C54	3,105	7C163	2,644	-	-	-	-	-	-
Y	7C162	949	7B10	3,239	7C203	1,488	7C143	1,862	-	-	-	-	-	-
Z	7A141	1,949	7B23	3,273	7C139	975	7C60	1,412	-	-	-	-	-	-
G & N System	216	702	217	483	218	615	219	358	220	327	221	285	222	374

BLOCK II UNIT	G & N 204 CM 101 APOLLO 7 (Launched 10-11-68)		G & N 206 CM 106 APOLLO 10 (Launched 5-18-69)		G & N 208 CM 103 APOLLO 8 (Launched 12-21-68)		G & N 209 CM 104 APOLLO 9 (Launched 3-3-69)		G & N 210 CM 107 APOLLO 11 (Launched 7-16-69)		G & N 211 CM 108 APOLLO 12 (Launched 11-14-69)		G & N 212 CM 109 APOLLO 13		G & N 214 CM 110		G & N 215 CM 111	
	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours
IMU	8	2,730	45	787	23	2,165	14	2,043	17	2,327	46	872	47	857	34	1,022	25	1,116
PEA	4	2,212	20	765	11	2,559	7	1,623	8	1,861	21	791	22	608	17	887	12	1,200
ECRU	15	2,044	22	1,622	35	1,233	34	1,381	40	766	41	894	42	570	39	558	43	4*7
PSA	4	2,362	13	2,020	11	1,995	9	927	15	1,532	12	2,353	18	784	19	752	20	800
GNIU	5	1,358	14	895	19	1,149	17	658	12	647	26	374	18	807	13	896	21	346
CMC	27	2,383	40	1,394	33	1,602	37	1,602	44	1,527	34	1,381	53	326	35	1,254	54	863
Main DSKY	50	1,492	43	1,362	58	1,431	59	1,760	53	1,241	67	1,006	72	1,071	77	726	80	695
Main DSKY	64	1,255	62	1,161	48	1,585	42	2,201	66	1,357	74	1,012	79	1,001	69	723	36	780
OUA	24	501	22	465	19	535	27	314	20	694	26	446	18	1,279	21	689	30	335
SCA	2	991	5	837	2	919	4	1,166	6	983	8	741	9	619	12	342	11	391
IRIG X	7A211	2,391*	7A52	2,382*	7A197	1,852*	7A110	2,057*	4C18	1,821*	8A105	1,194*	-	-	7B150	1,897	7A183	2,662
Y	7A85	2,435*	7A128	2,595*	7A89	3,061*	7A69	1,204*	4C1	2,228*	8A103	1,324*	-	-	7C83	2,170	7A36	2,960
Z	7A31	3,778*	7C190	1,858*	7A207	2,335*	7A86	2,217*	4C26	3,183*	8A104	1,205*	-	-	7B189	1,749	7C133	2,026
G & N System	204	2,345	206	1,956	208	1,905	209	2,077	210	1,689	211	1,179	212	1,133	214	841	215	904
		+127 Flight Time		+192 Flight Time		+147 Flight Time		+106 * Flight Time		+194 Flight Time		+245 Flight Time						

* Includes Flight Time and time where checked in Milwaukee/40-30 Lab

LM UNIT	G & N 603 LM 1 APOLLO 5 (Launched 1-22-68)		G & N 605 LM 3 APOLLO 9 (Launched 3-3-69)		G & N 606 LM 4 APOLLO 10 (Launched 5-18-69)		G & N 607 LM 6 APOLLO 12 (Launched 11-14-69)		G & N 608 LM 2		G & N 609 LM 5 APOLLO 11 (Launched 7-16-69)		G & N 610 LM 7 APOLLO 13		G & N 611 LM 8	
	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours
LMV	6	2,572	19	1,757	27	1,233	15	2,426	26	1,073	11	2,261	13	2,704	37	1,046
ECDU	12	1,168	11	2,195	38	1,166	45	301	10	1,841	31	1,211	37	723	26	982
PSA	12	828	18	520	3	3,095	9	1,438	11	1,080	17	785	20	804	6	2,214
GNIC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AGC	30	1,226	32	1,892	31	1,626	25	1,161	19	948	42	1,504	46	1,000	49	1,159
DSKY	37	931	51	1,860	65	1,324	56	1,375	16	735	54	1,431	61	925	96	609
SCA	1	1,205	4	1,412	1	1,254	4	953	-	-	3	983	8	683	5	561
PTA	3	1,861	11	1,403	13	1,042	8	2,017	12	7	6	1,805	7	2,305	18	887
CCRD	5	1,025	11	312	10	357	16	171	3	80	15	335	9	206	14	312
AOT	9	128	18	148	16	149	19	59	11	67	15	207	20	79	21	85
IRIG X	7A103	2,697*	7A98	1,381*	7A107	2,423*	8A113	730*	7C147	774*	8A110	833*	8A129	549*	7C8	1,508*
Y	7A112	1,492*	7A83	3,301*	7A204	1,858*	8A118	737*	7A84	1,730*	8A108	869*	8A127	614*	7C109	1,259*
Z	7A81	2,085*	7A130	1,572*	7A53	2,225*	8A116	929*	7A148	887*	8A106	760*	8A132	577*	7C64	1,922*
G & N System	603	2,626	604	2,033	606	2,167	607	1,216	608	1,184	609	1,743	610	844	611	769
				+27 Flight Time		+25 Flight Time		+19 Flight Time				+37 Flight Time				

* Flight Time and/or time run in Milwaukee Lab is included in gyro hours.

LM UNIT	G & N 612 LM 15		G & N 613 LM 9		G & N 614 LM 10		G & N 615 LM 11		G & N 616 LM 12		G & N 617 LM 13		G & N 618 LM 14	
	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours	S/N	Hours
IMU	-	-	39	574	36	818	18	2,178	33	1,022	32	1,348	38	905
ECDU	24	1,142	25	1,465	18	1,177	46	223	17	187	48	213	49	228
PSA	13	1,267	10	1,661	8	1,468	5	1,607	16	462	22	381	14	931
LGC	28	1,049	24	1,077	29	757	43	602	Ray 56	117	Ray 58	131	Ray 48	571
DSKY	-	-	85	648	41	1,027	78	414	40	470	81	135	87	186
SCA	-	-	7	222	9	95	10	49	11	62	12	46	13	56
PTA	-	-	20	581*	17	714*	9	1,640	16	678	15	1,151	19	672
CCRD	17	50	18	205	19	95	21	55	20	56	13	188	22	8
AOT	22	42	12	130	17	146	13	66	14	114	23	37	24	33
IRIG X	-	-	3C17	1,673	7C19	1,508	7A211	2,391	8A138	462	7C91	1,618	5C13	1,326
Y	-	-	8A102	823	7C185	1,155	7A85	2,435	8A135	437	.C105	2,295	8A81	886
Z	-	-	8A101	832	7A195	1,979	7A31	3,778	8A137	479	7B34	2,324	7A27	989
G & N System	612	320	613	565	614	276	615	314	616	388	617	170	618	374

BLOCK II/LM UNIT	Block II/LM G & N 203/604 Qualification System (4/66 - 6/67)	
	S/N	Hours
IMU	3	3, 063
PEA	3	1, 994
ECDU	19	3, 281
PSA	3/4	2, 163/2, 483
GNIC	4	986
AGC	16	2, 461
DSKY	30	1, 500
DSKY	-	-
OUA	*	-
SCA	1/2	889/397
PTA	4	2, 453
CCRD	6	125
AOT	10	687
IRIGS X	7A211	3, 561
Y	7A85	2, 281
Z	7A31	3, 911
G & N System	203	2, 057
	604	2, 474

* OUA was qualified as part of Block I-100

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3.8 AIRBORNE EQUIPMENT REPAIRS (OTHER THAN GYROS)

The repair of Apollo GFP began in 1964. During this first year, repairs were primarily on ground support equipment from the system assembly and test area. From 1964 through June 1966, coverage for repair efforts was provided by Work Authorization Procedures under the basic contract. In June 1966 a Master Repair Schedule approach for contracting repairs was introduced. Since then four Repair Supplemental Agreements have provided for a continuing factory repair program to support field and in-house operations.

A summary of airborne repair inputs by Supplemental Agreement follows.

FACTORY AIRBORNE EQUIPMENT REPAIR SUMMARY					
EQUIPMENT	BASIC CONTRACT 1964 - June 66	SA70 July 66- June 67	SA100 July 67- June 68	SA126 July 68- Sept 69	SA146 Oct 69- Dec 69
IMU - Block I	1	9	2	-	-
IMU - LM	-	13	7	13	3
IMU - Block II	-	7	6	13	3
PSA - Block I	1	12	2	-	-
PSA - Block II	-	10	15	2	-
PSA - LM	-	-	5	3	-
CDU - Block I	14	18	-	-	-
ECDU - Block II	-	7	5	4	-
ECDU - LM	-	11	1	3	2
Harness - Block I	4	1	-	-	-
Harness - Block II	-	7	7	11	1
Harness - LM	-	4	5	6	3
ESU - Block I	-	1	-	-	-
Navigation Base - LM	-	-	1	-	-
GNIC - Block II	-	4	3	5	-
SCA - Block I	1	-	1	-	-
SCA - Block II	-	-	1	-	-
SCA - LM	-	2	-	-	-
Optics Shroud - Block I	-	1	-	-	-
Optics Shroud - Block II	-	1	-	-	-
D & C Electronics - Block I	1	1	-	-	-
Control Electronics - Block I	-	1	-	-	-
IMU Control Panel - Block I	1	2	-	-	-
G & N Control Panel - Block I	4	1	-	-	-

FACTORY AIRBORNE EQUIPMENT REPAIR SUMMARY					
EQUIPMENT	BASIC CONTRACT 1964 - June 66	SA70 July 66-- June 67	SA100 July 67-- June 68	SA126 July 68-- Sept 69	SA146 Oct 69-- Dec 69
Bellows Assembly - Block II	-	-	1	6	-
Flex Hose - Block II	-	-	3	5	2
CCRD - LM	-	1	5	-	-
Optic Unit Assembly - Block I	1	1	1	-	-
Optic Unit Assembly - CM	-	2	4	4	-
Alignment Optical Telescope	-	1	1	-	-
Navigation DSKY - Block I	2	1	-	-	-
Main DSKY - Block I	2	5	1	-	-
Universal DSKY	-	4	17	15	1
AGC - Block I	1	8	3	-	-
AGC - Block II and LM	1	5	10	11	1

3.9 FAILURE ANALYSIS REPORTS

Failure analyses, in the form of laboratory investigations of failed items to establish the modes and causes of failure, were conducted throughout the contract period. (See Statement of Work, Exhibit E, Paragraph 3.4.2.) The results of these analyses were used to determine the corrective action necessary for recurrence control. Each failure analysis is documented in a report supported by photographs, X-rays, diagrams, and so on, as needed, and includes the Failure Analysis group's recommendation for corrective action. A summary listing of the Failure Analysis Reports (FAR's) follows.

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
3230	1010390	Tunnel Diode, Hoffman
3235	1010373-1	Transistor 2N2060, Fairchild
3550	1015816-001	Resistor, Julie
3551	1900096-005	Wire, Code 4802
3570	1015815-001	Resistor, Julie
3571	1010370	Diode, Raytheon
3578	1010265-12	Diode, Motorola
3579	1010265-12	Diode, Motorola
3598	1010353-1	Relay, Sigma
3615	1016111-105C	Relay Meter (API)
3616	1015869-803	Light Indicator (MSC)
3617	1010273-2	2N1724 Transistor, TI
3619	1016111-169	Relay Meter (API)
3622	1016111-169	Relay, Meter (API)
3680	None	Electron Tube, RCA
3684	1016111-105	Relay, Meter (API)
--	--	Expansion Network
3690	1010408	2N2420A GE Unijunction
3690	1010408	2N2420A GE Unijunction
3700	Commercial	2N214, Sylvania
3709	1006772-3	Relay, Sigma
3715	1016010	Light Indicator
3737	1010480-3	Transformer, Technitrol
3743	1015908	Switch Assembly, Pushbutton, Lamp
3755	1015898	Coaxial Connector, Burndy
3759	1010253-3	Transformer, Stancor
3774	1016111-169	Resistor, Julie
3776	1015841-006	Relay, Meter (API) DC
3777	1015869-805	Reactor, UTC
3781	1000247	Micro Light Switch
3789	1015989-009	Thermostat and Heater Assembly, Cox and Co.
3790	1015898	Potentiometer, Rectilinear, Bourns
3791	1015908	Transformer, Stancor
3804	1015944-001	Battery
3794	1010322	Diode, Hughes
3804	1015944-001	Battery
3805	--	Wire
3823	1016136-3	Pressure Gauge, U. S. Gage
3824	Note	Switches, Pushbutton, TI

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
3831	1010435-2	Microswitches
3836	Commercial	2N1172 Transistor, Delco
3839	1010480-1	Switch, Microswitch
3841	D868	Diode, Zener
3854	1010360-16H	Potentiometer, Bourns
3863	1007028	Suspension Capacitor Assembly, Sprague
3868	1007028	Suspension Capacitor Assembly, Sprague
3880	1010435-1C	Microswitch S-1
3920	1010327	Transformer
3919	1015928-002	Transistor
3933	1010360-20	Trimpot, Helipot
3955	1007028	Suspension Network Assembly, Electron
3962	1010453-1	Potentiometer, ConElco
3963	1010271	Transistor, STC 5506
3964	1010494-1	Switch, Rotary
3973	1010289-18	Capacitor, Elec Prod
3978	MASSA A5967-2	Transistor, Sylvania 2N35
3979	MASSA A5967-2	Transistor, Sylvania 2N35
4027		Oven, Bulova
4028		Transistor 2N383
--	--	Diode, 1N95
4043	1015983-001	Relay, Leach
4078	1010435-1	Micro Sensitive Switch
4084	1015832-318	Relay, Sigma
4085	1015832-118	Relay, Sigma
4086	1016013-001	Frequency Standard, American Time Products
4096	1000247	Thermostat and Heater Assembly
4114	1010480-003	Switch, Micro
4115	1896966-004	Diode, General Instruments
4116	1015837-001	Relay, Electrotech
4150	1010624-002	Bulb, Incandescent
4151	1014509-011	Plunger, Assembly
4152	1016255	Flasher, TungSol
4157	1015674	Motor Tachometer, Solvere
4161	1010392-001	Diode, CDC
4177	1000272	Transducer, Pressure
4214	1010330-051	Resistor, Daven
4222	1010252	Transistor, TI
4244	1006752	Transistor, Raytheon
4246	1010764	Potentiometer, Helipot

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4260	1010453	Potentiometer, VonElco
4261	1010360	Potentiometer, Helipot
4262	1010385	Diode, CDC
4263	1010320-27	Capacitor, Sprague
4264	1010316-35	Capacitor, Sprague
4247	See S152	Transistor, Fairchild
4269	1015666-021	Wedge Light
4272	1010279-248	Capacitor, Sprague
4274	1012156-1	Motor Generator, Solvare
4275	1010252-1	Transistor, TI
4276	1010392	Diodes, CDC
4287	1010684-1	Transistor, Fairchild
4290	1010254-22	Resistor, Julie
4290	1010254-22	Resistor, Julie
4292	1008152	Diode, Transistron
4296	1010376-4	Transistor, Fairchild
4309	1010367	Chopper, National Semiconductor
4318	1010360	Potentiometer, Beckman
4325	1010367	Chopper, National Semiconductor
4337	1010715-1	Transistor, Fairchild
4342	1016236	Fuse, Indicator
4343	1010337	Transformer, Bush
4352	1010372-5	Diode, Hoffman
4354	1010329	Transformer, Utrad
4355	1010345	Transistor, Fairchild
4347	1016012-001	Oscillator, American Time Products
4361	1010279-248	Capacitor, Sprague
4354	1015666-011	Wedge Light Assembly
4365	1010395	Transistor, Fairchild
4366	1010312-1, -36	Resistor, Sprague
4367	1010285	Transistor, Fairchild
4368	1010653	Transistor, Dual, Fairchild
4369	1010684-1	Transistor, Dual, Fairchild
4380	1010633-1	Transistor, Fairchild
4384	1010329-1	Transformer, Utrad
4385	1010440-1	Diode, Dixon
4387	1010395	Transistor, Dual, Fairchild
4388	1010654	Transistor, Dual, Fairchild
4406	1010759	Transformer, Bush
4407	1010391-031	Diode, Motorola

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4410	1011375	Integrating Readout Indicator
4411	1010329-011	Transformer, Utrad
4415	1010252-1	Transistor, Dual, TI
4416	1010499-2	Transistor, Honeywell
4417	1010684-1	Transistor, Fairchild
4422	1015803-1	Relay, Allen Bradley
4425	1000247	Heater, Thermistor
4433	1015908-037	Coil, Pin C
4450	1010499-2	Transistor, Honeywell
4451	1015846	Transformer, Technitrol
4453	1010738	Connector Pins
4455	1010499-2	Transistor, Honeywell
4459	1010715-002	Transistor, Dual, Fairchild
4464	1010499-2	Transistor, Honeywell
4465	1010329-1	Transformer, Utrad
4466	1016271	Heater, Hotwatt
4466	1016271	Heater, Hotwatt
4466	1016271	Heater, Hotwatt
4469	1015914	Relay, Hart
4470	1010353-004	Relay, Sigma
4471	1015842	Transformer, Dresser
4489	1010438	Resistor, Dale
4491	1010318-801	Connector, Cannon
4502	1010684-1	Transistor, Dual, Fairchild
4505	1010830-10A	Diode, Motorola
4508	1000013	Heater Sensor
4514	1010134	Resistor, Julie
4516	1010431	Transistor, Dual, Fairchild
4517	1010437-1	Transistor, STC
4518	1015342	Transformer, Dresser
4522	1015928	Transistor, GE
4547	1010271	Transistor, STC
4540	1016136	Pressure Gauge, USG
4548	1010831	Diode, Motorola
4549	1010432-4	Capacitor Network, Sprague
4552	1010771-201	Connector, Electrical
4553	1010437-1	Transistor, STC
4554	1010723	Transformer, Bush
4555	1010271	Transistor, STC
4556	1010269-1	Transistor, TI

SUMMARY OF FAILURE ANALYSIS REPORTS			
AC ELECTRONICS			
FAR NO.	PART NO.	DESCRIPTION	
4557	1010747	Transistor, Fairchild	
4558	1010393-045	Capacitor, Kemet	
4559	8595547-075	Resistor, Daven	
4574	1010385	Diode, CDC	
4576	1010317	Capacitor, Sprague	
4589	1015832-218	Relay, Sigma	
4590	1896966-068	Diode, Dixon	
4591	1010317-1	Capacitor, Sprague	
4596	1010430	Motor Tachometer Generator	
4599	1010341	Resolver, Clifton	
4600	1010428	Resolver, Clifton	
4601	1010428	Resolver, Clifton	
4602	1010831-1	Diode, Motorola	
4605	1016012-005	Frequency Standard, American Time Products	
4616	1000288	Reactor, Marin Co.	
4625	1016380	Transformer, Transformer Design, Inc.	
4631	1015928-001	Transistor, Raytheon	
4638	8595547	Resistor, Daven	
4642	1010761	Diode, Transatron	
4645	1010831	Diode, Motorola	
4650	1010753	Transformer, Bush	
4658	1010499-1C	Transistor, Honeywell	
4661	1896966-68	Diode	
4684	8595547-XX	Resistor, Daven	
4676	1010486-2	Transformer, Transformer Design, Inc.	
4680	1010715	Transistor, Fairchild	
4679	1010715	Transistor, Fairchild	
4722	1010930-3	Diode, Motorola	
4724	1010764-002	Variable Resistor Helipot	
4725	1010317-1	Capacitor, Sprague	
4732	1010710	Transformer, Utrad	
4733	1015840	Magnetic Amplifier	
4742	1015914	Relay, Hart	
4743	2018637-002	Thermostat Assembly	
4743	2018637-002	Thermostat Assembly	
4750	1010759	Transformer, Bush	
4761	1010759	Transformer, Bush	
4762	1010903	Switch, Micro	
4763	1013397-001	Transistor, TI	
4769	1010430	Motor Tachometer	

SUMMARY OF FAILURE ANALYSIS REPORTS			
AC ELECTRONICS			
FAR NO.	PART NO.	DESCRIPTION	
4770	1010429	Resolver	
4773	1010317-061	Capacitor, Sprague	
4776	1010806	Transistor, 2N2814, Honeywell	
4780	1897283	Resistor, Thermal Probe	
4785	2021505	Resistor, Daven	
4788	1010317-1	Capacitor, Sprague	
4791	1010823-029	Resistor, Julie	
4792	1006750-039	Resistor, CGW	
4794	1897283	Thermistor	
4793	1010600	Transistor, Honeywell	
4805	1010760	Transformer, Bush	
4811	1015802-004	Relay, CP Clare	
4813	1010430	Motor Tachometer, Kearfott	
4815	1015802-004	Relay, CP Clare	
4819	1010430	Motor Tachometer, Kearfott	
4821	1010353-007	Relay, Sigma	
4822	1010547-3	Capacitor, Sprague	
4823	1010351	Resolver, CPPC	
4825	1010430	Motors, Solvers	
4826	1010760	Transformer, Bush	
4827	1010285	Transistor, Fairchild	
4829	1010799-16 & 18	Connectors, Cannon	
4832	1010343-003	Transistor, GE	
4834	1010430	Motor, Kearfott	
4835	1010275	Transformer, UTC	
4840	1015994-1	Switch Assembly, ElectroSnap	
4841	1015994-1	Switch Assembly, ElectroSnap	
4842	1010684-1	Transistor, Fairchild	
4844	1010697-1	Transistor, Amelco	
4845	1010333	Transformer, Bush	
4847	1006750	Resistor, CGW	
4848	1015837-1	Relay, Electro-ac	
4849	1010343-1	Transistor, GE	
4853	1010712	Transformer, UTC	
4854	1006755	Capacitor, Kemet	
4855	1010273	Transistor, TI	
4857	1015898-5	Transformer, FerroDyn	
4858	1897205	Transformer, Transformer Design, Inc.	
4860	1010430	Motor Tachometer, Kearfott	
4861	1010353-007	Relay, Sigma	

SUMMARY OF FAILURE ANALYSIS REPORTS			
AC ELECTRONICS			
PART NO.	DESCRIPTION	PAR NO.	PI. RT N°
4862	Relay, Sigma	1010353-007	1010724
4863	Transistor, Fairchild	1010684-1	1010397-1
4864	Transistor, Amelco	1010397-1	1010397-1
4865	Transistor, GE	1010343-1	1010830-9
4866	Transistor, GE	1010343-1	1010397
4867	Resistor, Julie	1010923-040	1006755-034
4872	Capacitor, Kemet	1006755-30	1010364-707
4873	Diode, Hoffman	1010372-011	1010343
4874	Transformer, Bush	1010725	1010397
4875	Transistor, Fairchild	1010376	1010275
4876	Transistor, Fairchild	1010715	1007655-079
4877	Switch, ElectroSnap	1015954-001	1010843-2
4878	Resistor, Corning Glass	1006750-051	1010966-1
4880	Transformer, UTC	1010712	1010397-1
--	Resistor, Corning Glass	1006750-073	1010652-1
--	Transistor, Amelco	1010397-1	1010385
4881	Resistor, Corning Glass	1006750-051	1010830-9
4882	Switch, ElectroSnap	1015994-001	1010684
4884	Transistor Pair	1010398-004	1010273-2
4885	Relay, Sigma	1006772-003	1006319
4886	Transistor, Fairchild	1010376-1	1010367
4887	Transistor, Fairchild	1010652-1	1010377-309
4889	Transistor, TI	1010397-1	1010652-001
4890	Potentiometer, Bourns	1010373-012	1010345-1
4891	Transistor, Fairchild	1010966-001	1010270
4892	Relay, Babcock	1016790-3	1010343
4893	Capacitor, Kemet	1006755	1010829-12
--	Transformer, Amelco	1010397-1	1010398-4
--	Transformer, UTC	1010324	1010343-2
4894	Capacitor, Elec Products	2021503	1010373
4895	Resistor, Corning Glass	1006750-051	1006750-051
4896	Diode, Motorola	1010829-3	1008838-3
4897	Resistor, Corning Glass	1006750	1010715-2
4898	Relay, CP Clare	1015802-004	1010354-7
4899	Diode, Motorola	1010829-012	1010715-2
4900	Capacitor, Sprague	1010317-004	1006755-085
4901	Relay, Sigma	1010353	1010273-2
4902	Capacitor, Sprague	1010264-007	1010652-1
4903	Capacitor, Kemet	1006755-081	1010843-2
4904	Transistor, Fairchild	1010431	

SUMMARY OF FAILURE ANALYSIS REPORTS			
AC ELECTRONICS			
PART NO.	DESCRIPTION	PAR NO.	PI. RT N°
4908	Transformer, Bush	1010724	1010397-1
4912	Transistor, Amelco	1010397-1	1010397-1
4913	Transistor, TI	1010397-1	1010397-1
4914	Diode, Motorola	1010830-9	1010830-9
4915	Transistor	1010397	1010397
--	Capacitor	1006755-034	1006755-034
--	Resistor	1010364-707	1010364-707
4916	Transistor, GE	1010343	1010343
4917	Transistor, Amelco	1010397	1010397
4918	Transformer, UTC	1010275	1010275
4919	Capacitor, Kemet	1007655-079	1007655-079
4921	Transistor, Solitron	1010843-2	1010843-2
4922	Transistor, Fairchild	1010966-1	1010966-1
4923	Transistor, Amelco	1010397-1	1010397-1
4924	Transistor, Fairchild	1010652-1	1010652-1
4925	Diode, CDC	1010385	1010385
4926	Diode, Motorola	1010830-9	1010830-9
4927	Transistor, Fairchild	1010684	1010684
4929	Diode, Motorola	1010830-11	1010830-11
4930	Diode, Motorola	1010273-2	1010273-2
4931	Transformer, TI	1006319	1006319
4932	Transformer, Technitrol	1010367	1010367
4933	Resistor, National Semiconductor	1010377-309	1010377-309
4934	Transistor, Fairchild	1010652-001	1010652-001
4935	Transistor, Fairchild	1010345-1	1010345-1
--	Transistor, GE	1010270	1010270
4939	Transistor, GE	1010343	1010343
4940	Diode, Motorola	1010829-12	1010829-12
4941	Transistor, GE	1010398-4	1010398-4
4942	Transistor, GE	1010343-2	1010343-2
4947	Potentiometer, Bourns	1010373	1010373
4951	Resistor, Corning Glass	1006750-051	1006750-051
4952	Annunciator, Oppenheim	1008838-3	1008838-3
4953	Transistor, Fairchild	1010715-2	1010715-2
4954	Relay, Sigma	1010354-7	1010354-7
4955	Transistor, Fairchild	1010715-2	1010715-2
4956	Capacitor, Kemet	1006755-085	1006755-085
4957	Transistor, TI (MP)	1010273-2	1010273-2
4958	Transistor, Fairchild	1010652-1	1010652-1
4959	Transistor, Solitron	1010843-2	1010843-2

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4960	1010675	Transistor, Fairchild
4970	1010633	Transistor, Fairchild
4971	1010633	Transistor, Fairchild
4975	1008824-001	Switch, Master Alarm
4976	1008812	Transistor, Raytheon
4977	1010367	Transistor, NSC
4978	1010317	Capacitor, Sprague
4979	1010806-1	Transistor, Solitron
4980	1019273-3	Transistor, TI (MP)
4981	1010637-1	Capacitor, GE
4983	1010343-3	Transistor, GE
4984	1006755-63	Capacitor, Sprague
4984	1006755-62	Capacitor, Sprague
4986	1010790	Relay, Babcock
4987	1010715-1	Transistor, Fairchild
4990	1012156-1	Motor Tachometer-Generator, Solvere
4992	1010652-1	Transistor, Fairchild
4993	1010806-1	Transistor, Solitron
4994	1010806-1	Transistor, Solitron
4995	1010637-1	Capacitor, GE
4997	1010324	Transformer, UTC
4998	1008832	Transformer, UTC
5002	1010652-1	Transistor, Fairchild
5003	1010274	Transformer, UTC
5004	1009152	Diode, Transiltron
5005	1010843-2	Transistor, Solitron
5008	1000162	Resolver, Clifton
5016	1010343-3	Transistor, GE
5017	1010343-3	Transistor, GE
5018	1010353-7	Relay, Sigma
5020	1010431-1	Transistor, Fairchild
5021	1008832	Transformer, UTC
5022	1010395	Transistor, Fairchild
5023	1012156-1	Motor Tachometer-Generator, Solvere
5024	1017551	Motor Tachometer-Generator, Kearfott
--	1016894	Terminal Board
--	1017546	Encoder
5025	1010715-1	Transistor, Fairchild
5026	1010377-039	Resistor, Ultrahm
5027	1010430	Motor Tachometer-Generator, Kearfott

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
5031	1010652-1	Transistor, Fairchild
5032	1010806	Transistor, Solitron
5033	1008832	Transformer, UTC
5034	1010652-1	Transistor, Fairchild
5041	1010733-11	Resistor, IRC
5042	1010715-2	Transistor, Fairchild
5043	1010652-1	Transistor, Fairchild
5044	1008152	Diode, Transiltron
5045	1010376	Transistor, Fairchild
5048	1010771-1	Connector, Deutsch
5049	1010397	Transistor, Amelco
5052	1010786	Diode, Transiltron
5057	1006755-085	Capacitor, Kemet
5062	1010353-007	Relay, Sigma
5064	1010274	Transformer, UTC
5065	1010806-1	Transistor, Solitron
--	1010829-26	Diode, Motorola
5066	1008812-1	Transistor, Raytheon
5067	1010633-1	Transistor, Fairchild
5068	1010385	Diode, Raytheon
5069	1010950-2	Transistor, Fairchild
5071	1006755-079	Capacitor, Kemet
5074	1010637-1	Capacitor, GE
5075	1010274	Transformer, UTC
5076	1010684	Transistor, Fairchild
5079	1010385	Diode, CDC
5080	1010274	Transformer, UTC
5093	Various	Resistor, Julie
5097	1010397-1	Transistor, Amelco
5098	1010397-1	Transistor, Amelco
5099	1008812-1	Transistor, Raytheon
5100	1008812-1	Transistor, Raytheon
5101	1010367-1	Transistor, NSC
5102	1010829-1	Diode, Motorola
5103	1010331-5	Diode, Motorola
5104	1010323	Transformer, UTC
5105	1010829-12	Diodes, Motorola
5106	1010254-022	Resistor, Julie
5107	1010652-1	Transistor, Fairchild
5108	1008832	Transformer, UTC
5112	1010274	Transformer, UTC

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
5113	1010385	Diode, Raytheon
5114	1010367	Transistor, National Semiconductor
5115	1010343	Transistor, GE
5116	1010377-309	Resistor, Ultronic
5117	1010430	Motor Tachometer, Kearfott
5118	1010430	Motor Tachometer, Kearfott
5119	1010317-6	Capacitor, Sprague
5120	1010343-3	Transistor, GE
5121	1010784-1	Relays, Babcock
5124	1012156-1	Motor Tachometer-Generator, Solvare
5125	1012156-1	Motor Tachometer-Generator, Solvare
5127	1010733-011	Resistor, IRC
5128	1010385	Diode, Raytheon
5129	1010385	Diode, Raytheon
5130	1010715-1	Transistor, Fairchild
5131	1010715-1	Transistor, Fairchild
5132	1010715-1	Transistor, Fairchild
5133	1010715-1	Transistor, Fairchild
5134	2021503-012	Capacitor, Electron
5135	1897188-001	Battery, Gulton
5138	101037-309	Resistor, Ultronic
5143	1010395	Transistor, Fairchild
5144	1010395	Transistor, Fairchild
5145	1010395	Transistor, Fairchild
5146	1012156-1	Motor Tachometer-Generator, Solvare
5148	1010652-4	Transistor, Fairchild
5149	18860-1	Capacitor, GE
5150	1010652-1	Transistor, Fairchild
5154	1010353-007	Relay, Sigma (K 2)
--	1010385	Diode
5155	1010385	Diode, Raytheon
5156	1006755-79	Capacitor, Kemet
5157	1010353-007	Relay, Sigma
5158	1010353-007	Relay, Sigma
5159	1008814-2	Transistor, Raytheon
5160	1008814-2	Transistor, Raytheon
5165	1010360	Resistor, Beckman
5166	1010397-1	Transistor, TI
5167	1010373-12	Potentiometer, Bourns
5168	1010337-1	Transformer, Bush

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
--	1006750-17	Resistor, Corning Glass
--	1010269-2	MP Transistor, TI
5171	MS-3193-20A	Connector Pins
5172	1010771-1	Diodes, GE
5175	1008152	Diode
5176	1005003-2	Relay, Filtrors
5177	1010740	Transformer, Linear
5178	1010353-7	Relays, Sigma
5179	1010274	Transformer, UTC
5181	1010385	Diode, Raytheon
5182	1010786-1	Diode, Transiron
5186	1010753	Transformer, Bush
5187	1010397-1	Transistor, Amelco
5188	1010715-1	Transistor, Fairchild
5189	1006750-84	Resistor, Corning Glass
5190	1008832	Transformer, UTC
5192	1017547	Resolver, Clifton
5193	1010733-1	Resistor, IRC
5197	1010343-3	Transistor, GE
5198	1010397-1F	Transistor, TI
5199	1012156-3	Motor Tachometer-Generator, Solvare
5200	1012156-3	Motor Tachometer-Generator, Solvare
5201	1012156-3	Motor Tachometer-Generator, Kearfott
5202	1012156-3	Motor Tachometer-Generator, Kearfott
5203	1008814-2	Transistor, Raytheon
--	1010397-1	Transistor, TI
5207	1006750-084	Resistor, Corning Glass
5208	1010369-090	Resistor, Allen Bradley
5209	1010341	Resolver, CPPC
5212	1010377-307	Resistor, Ultronic
5213	1006750-49	Resistor, Corning Glass
5214	1010274-1	Transformer, UTC
5215	1006750-60	Resistor, Corning Glass
5219	1012156-3	Motor Tachometer-Generator, Kearfott
5220	1006750-56	Resistor, Corning Glass
5225	1010397-1	Transistor, TI
5226	1010410	Capacitor, Corning Glass
5227	1006750-60	Resistor, Corning Glass
5228	1010274	Transformer, UTC
5229	1010274	Transformer, UTC

SUMMARY OF FAILURE ANALYSIS REPORTS

AC ELECTRONICS

FAR NO.	PART NO.	DESCRIPTION
5230	1010357-1	Transistor, Fairchild
5232	1006750-49	Resistor, Corning Glass
5234	1010724	Transformer, Bush
5237	1010652-2	Transistor, Fairchild
5238	1010430	Motor Tachometer-Generator, Kearfott
5239	1010430	Motor Tachometer-Generator, Solvare
5240	1010430	Motor Tachometer-Generator, Solvare
5243	1006750-80	Resistor, Corning Glass
5244	1010733-11	Resistor, IRC
5245	1010351	Resolver, Clifton
5247	1000247	Thermostat, Cox
5250	1010369-90	Resistor, Allen Bradley
5253	1010636	Diode, GE
5254	1010786-1	Diode, Transatron
5255	1010273-3	Transistor MP, GE
5260	1008842	Transformer, UTC
5261	1005003-2	Relay, Filtrors
5264	1000272	Transducer, Statham
5268	1010837-1	Diode, GE
5269	1010753	Transformer, Bush
5270	1010753	Transformer, Bush
5272	1010916-1	Potentiometer, Helipot
5274	1008823-2	Transistors, Motorola
5276	1008918	SCR Bidirectional, SSI
5277	1010636	Diode, GE
5278	1010999	EL Lamp, GE
5283	1010942	Transformer, Bush
FA-472 A	1010317-1	Poly Capacitor, Sprague
FA-472 A	1010317-1	Poly Capacitor, Sprague
FA-472 A	1010317-1	Poly Capacitor, Sprague
FA-472 A	1010317-1	Poly Capacitor, Sprague
5292	Various	Sliprings
5297	1008815-12	Zener Diode, Hoffman
5294	1010367	Integrating Chopper, NSC
5295	1010715-1	Dual Transistor, Fairchild
5296	1010652-1	Dual Transistor, Fairchild
5299	1010753	Transformer, Bush
5300	1012156-3	Motor Tachometer-Generator, Solvare
5305	1012156-1	Motor Tachometer-Generator, Solvare
5306	1012156-1	Motor Tachometer-Generator, Solvare

SUMMARY OF FAILURE ANALYSIS REPORTS

AC ELECTRONICS

FAR NO.	PART NO.	DESCRIPTION
5317	1010724	Transformer, Bush
5318	1010724	Transformer, Bush
5319	1010252-1	Transistor, TI
5321	1008832	Transformer, UTC
5323	1008832	Transformer, UTC
5334	1008832	Transformer, UTC
5333	1008832	Transformer, UTC
5337	1010377-307	Resistor, Ultronic
5338	1003832	Transformer, UTC
5341	1010377-347	Resistor, Ultronic
5344	1010397-1	Resistor, TI
5345	1010397-1	Resistor, TI
5347	6014523-7	Cables AA104 and 105
5348	1006755-182	Capacitor, Sprague
5350	1010652-1	Transistor, Fairchild
5353	1010273-1	Transistor, GE
--	1010271	Transistor, STC
5356	1008815-12	Diode, Hoffman
5357	1010373-8	Potentiometer, Bourns
5359	1010330-014	Resistor, Daven
5361	1010916-1	Potentiometer, Beckman
5367	1008814-1	Transistor, Motorola
5374	1008832	Transformer, UTC
5375	1008842	Transformer, UTC
5376	1010393-45	Capacitor, Kemet
5377	1010343-3	Transistor, General Electric
5380	1010397-1	Transistor, Amelco
--	1008812-1	Transistor, Raytheon
5381	1008812-1	Transistor, Motorola
--	1010397-1	Transistor, TI
5382	1008812-1	Transistor, Motorola
5383	1008812-1	Transistor, Motorola
5384	1008832	Transformer, UTC
5392	1008814-1	Transistor, Motorola
5393	1010317-1	Transistor, TI
5405	1010365	Transformer, UTC
5407	1010343-3	Transistor, GE
5411	1006319	Transformer, Technitrol
5420	1008832	Transformer, UTC
5433	1010652-1	Transistor, Fairchild

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
5450	1008842	Transformer, UTC
5456	1006750-1	Resistor, Corning Glass
5457	1008832	Transformer, UTC
5458	1008842	Transformer, UTC
5459	1010273-1	Transistor, GE
5460	2021505-1	Capacitor, Electron
5462	1006399	Diode, TI
5466	1008832	Transformer, UTC
5475	1010377-309	Resistor, Ultronic
5474	1010733-12	Resistor, IRC
5488	1010652-1	Transistor, Fairchild
5491	1010952-002	Crimp, Solder, Splice
5497	2018641	Heater Assembly, Cox
5509	1005001-2	Relay, Filtrors
5511	1010999-4	EL Panel, GE
5515	1010952-2	Splice Connector, AC
5516	1010365	Transformer, UTC
5520	1006750-12	Resistor, Corning Glass
5522	1010377-20	Resistor, Ultronic
5523	1008842	Transformer, UTC
5529	1010783-1	Connector, Microdot
5533	1010367	Transistor, NSC
5534	1008814-2	Transistor, Raytheon
5553	1010367-1	Transistor, NSC
5555	1008812-1	Transistor, Motorola
5565	1010733-11	Resistors, IRC
5572	1010999	EL Lamps, GE
5578	1010317-4	Capacitor, Sprague
5581	1008832	Transformer, UTC
5587	1008815-19	Diode, Hoffman
5592	1010343-3	Transistor, GE
5597	1008815-19	Diode, Hoffman
5598	1010343-3	Transistor, GE
5599	1010397-1	Transistor, TI
5608	1010397-1	Transistor, TI
5612	1010343-3	Transistor, GE
5613	2018612-021	Resolver Assembly
5615	1006323	Transistor, Fairchild
5616	100^323	Transistor, Fairchild
5623	1008944	EL Panel, GE

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
5624	1006323	Transistor, Motorola (3), Fairchild (1)
5625	1010376-3	Transistor, Fairchild
5636	1008944-6	EL Panel, GE
5637	1010343-3	Transistor, GE
5638	1005001 & 3	Relay, Filtrors
5639	1008944	EL Panel, JE
5649	1008943	EL Panel, GE
5653	1010343-3	Transistor, GE
5654	1010343-3	Transistor, GE
5697	1900989	GSE W60 Cable
5721	1010343-3	Transistor, GE
5730	1897261	Comparator, Control Data
5735	1006750-76	Resistor, Corning Glass
5738	1010343-3	Transistor, GE
5743	1010342	Transistor, Fairchild
5744	1010367	Transistor, National Semiconductor
5744	1010966	Transistor, Fairchild
5765	1010343-3	Transistor, GE
5767	1010377-307	Resistor, Ultronic
5770	1015832-120	Relay, Sigma
5804	1008824-1	Switch, JayEl Products
5827	1010353-7	Relay, Sigma
5854	6010673	B-Harness, AC Electronics
5855	1008922-2	Transistor, Solitron
5859	1010377-303	Resistor, Ultronic
5870	2018823	Thermostat, Cox
5898	1010343-3	Transistor, GE
5899	1008814-1	Transistor, Raytheon
5903	1006750-12	Resistor, Corning Glass
5982	1008943-9	EL Lamp, GE
5961	2021518	Thermistor, Victory Engineering
5964	2021501	Heater End Mount Assembly, Cox
5970	1010343-3	Transistor, GE
5971	1010343-3	Transistor, GE
5986	1010343-3	Transistor, GE
6013	6010678	B-Harness, AC Electronics
6052	1900048-11	Relay, CP Clare
6073	1010252-1	Transistor, Amelco
6095	GA 17D	Relay, P & B
6140	1010372-11	Diode, Hoffman

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
6141	1010372-11	Diode, Hoffman
6145	None (7221)	Potentiometer, Hellipot
6148	1010353-7	Relay, Sigma
6149	1010353-7	Relay, Sigma
6170	1008969	Transistor, TI SP4806
6202	1008969	Transistor, TI SP4806
6204	1008812-1	Transistor, Raytheon
6233	1010346-1	Diode Zener, TRW
6240	1008833	Thermistor, Gulton
6288	1010652-1	Transistor, Fairchild
6311	1010604-46	Resistor, Dale
6315	1008944-4	Electroluminescent Lamp
6332	1010398-3	Transistor, GE
6340	1008824-1	Master Alarm Switch, JayEl Products
6363	1008944-4	EL Lamp, GE
6483	1010367-0	Transistor, NSC
6523	1010901-1	Switch, Micro
6525	1010377-13	Resistor, Ultronic
6662	1010262	Resistors, Sage
6663	1010949	Annunciator, Oppenheimer
6761	1010733-13	Resistor, IRC
6829	1008932-1	Potentiometer, Beckman
6955	1010264-6	Capacitor, Sprague
6957	1006755-55	Capacitor, Sprague
6992	1010264-9	Capacitor, Sprague
7015	1006755-85	Capacitor, Kemet
7057	1006750-72	Resistor, Corning Glass
7060	1008812-1	Transistor
7080	NA2021503-3	Capacitor, Electron
7094	1006789	Capacitor, Sprague
7352	1010264-9	Capacitor, Sprague
7399	1010364-443	Resistor, Electra
7407	1008932	Potentiometer, Beckman
7440	1010377-311	Resistor, Ultronic
7464	2021518	Thermistor, Victory Engineering
7469	1010377-397	Resistor, Ultronic
7479	1008932	Potentiometer, Beckman
7617	1000135	Quick Disconnect

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
3438	1007033	40-Second Time Delay
3525	1007033	40-Second Time Delay
3545	1015136	Buffer Circuit
3689	1007036	Relay and Diode
3708	1007015	PIP Preamplifier
3722	1015104	Two-Speed Switch
3738	1007054	Encoder
3742	1007060	Motor Drive Amplifier
3744	1900376-011	Error Sensor
3758	1000085	Center Case
3760	1007047	800 Hz, 1 Percent Amplifier
3783	SK44641	Base Assembly
3825	1007007	DC Differential Amplifier
3826	1007061	CDU Z and L Relays
3840	1007055	CDU Digital to Analog Converter
3862	1010613-001	D to C Base Assembly
3871	1007060	Motor Drive Amplifier
3882	1007027	Binary Current Switch
3890	1010052	Pulse Torque Power Supply
3918	1007054	Encoder
3921	1007214	PIP Preamplifier
3949	1007036	Relay and Diode
3950	1007056	IMU Temperature Controller
3967	1007042	-28 Vdc Power Supply
3976	1007051	Failure Indicator
3977	1007216	Precision Resolver Alignment
4029	1007214	PIP Preamplifier
4036	1007064	CDU Zeroing Transformer and Relays
4040	1007036	Relay and Diode
4041	1007052	Pulse Torque Power Supply
4042	1007055	CDU Digital to Analog Converter
4060	1007048	800 Hz, 5 Percent Amplifier
4131	1007016	Ternary Current Switch
4132	1007052	Pulse Torque Power Supply
4133	1007019	Interrogator
4134	1007052	Pulse Torque Power Supply
4135	1007016	Ternary Current Switch
4136	1007052	Pulse Torque Power Supply
4156	1007047	800 Hz, 1 Percent Amplifier
4158	1007007	DC Amplifier and Precision Voltage Regulator

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4159	1007507	DC Differential Amplifier and Precision Voltage Regulator
4163	1007017	AC Differential Amplifier
4164	1007019	Interrogator
4190	1007426-011	IMU Temperature Control
4199	1007007	DC Differential Amplifier
4229	1007555	CDU Digital to Analog Converter
4230	1007487-011	Zero Optics
4231	1007437	800 Hz, 1 Percent Amplifier
4232	1007412	Pulse Torque Power Supply
4233	1007412	Pulse Torque Power Supply
4234	1007427-011	Binary Current Switch
4234	1007427-011	DC Differential Amplifier and Precision Voltage Regulator
4235	1007007	DC Differential Amplifier and Precision Voltage Regulator
4236	1007007	DC Differential Amplifier and Precision Voltage Regulator
4237	1007427-011	Binary Current Switch
4248	1007545-004	Temperature Controller and Power Switch
4249	1007557-011	Motor Drive Amplifier and Selector Circuit
4265	1007047	800 Hz, 1 Percent Amplifier
4283	1007412	Pulse Torque Power Supply
4289	1007007	DC Differential Amplifier and Precision Voltage Regulator
4295	1007255-011	ADA Preamplifier
4298	1007541-021	Gimbal Coarse Align Amplifier
4319	1007554	Encoder
4345	1007516-011	Ternary Current Switch
4346	1007534-011	Encoder
4353	1007040	Gimbal Servo Amplifier
4362	1007007	DC Differential Amplifier and Precision Voltage Regulator
4363	1007560	Motor Drive Amplifier and Selector Circuit
4382	1007527	Binary Current Switch
4383	1007522	Two-Speed Switch
4385	1007522	Two-Speed Switch
4395	1007554-011	Encoder
4396	1007557-011	Motor Drive
4397	1007414-011	Encoder
4394	1007527-011	Binary Current Switch
4401	1007507-021	DC Differential Amplifier and Precision Voltage Regulator

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4402	1007516-011	Ternary Current Switch
4403	1007516-011	Ternary Current Switch
4404	1007554	Encoder
4405	1007040	Motor Generator Servo Amplifier
4408	1007528-011	Signal Conditioner Power Supply
4409	2021793-011	IRIG Preamplifier
4426	1007007	DC Differential Amplifier and Precision Voltage Regulator
4427	1007052	Pulse Torque Power Supply
4423	1007527-011	Binary Current Switch
4424	1007517-011	AC Differential Amplifier
4428	1007560	Motor Drive Amplifier and Selector Circuit
4434	1007016	Ternary Current Switch
4449	1007516-011	Ternary Current Switch
4452	1007255-011	ADA Preamplifier
4480	1007027	Binary Current Switch
4488	1007048	5-Percent Power Amplifier
4490	1007512	Tracker, Y Channel
4492	1007549-021	Encoder Excitation Power Supply
4493	1007554-011	Encoder Module
4494	1007527-011	Binary Current Switch
4495	1007517-011	AC Differential Amplifier
4496	1008285	PIP Preamplifier
4509	1007552	Pulse Torque Power Supply
4510	1007507-021	DC Differential Amplifier and Precision Voltage Regulator
4511	1007554	Encoder Module
4512	1007540	Gimbal Servo Amplifier
4513	1007567-011	Relay Module
4515	1007526-011	Buffer Circuit Module
4519	1007522-011	Two-Speed Switch Module
4520	1007552-011	Pulse Torque Power Supply
4521	1007555-011	CDU Digital to Analog Converter
4523	1007255-011	ADA Preamplifier
4526	1007560-011	Motor Drive Amplifier
4525	1007522	Two-Speed Switch
4524	1007522	Two-Speed Switch
4533	1015036-011	Relay and Diode Module
4533	1007016	Ternary Current Switch

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4534	1007551-011	Failure Indicator Module
4535	1007516-011	Ternary Current Switch
4536	1015036-011	Relay and Diode Module
4537	1007036	Relay and Diode Module
4538	1015137	Relay Module (PSA)
4539	1007027	Binary Current Switch
4541	1007554-011	Encoder Module
4542	1007528-011	SCT Moding Assembly
4543	1007511-011	Modulator and Loop Compensation
4544	1007526-011	Buffer Circuit
4545	1007540-011	Gimbal Servo Amplifier
4546	1007564	CDU Zeroing Transformer and Relays
4551	1007566	X Channel Assembly
4560	1007521	Pulse Torque Gyro Calibration
4568	1007518-011	Temperature Indicator
4572	1007131	Signal Conditioner Assembly
4580	1007123	Signal Conditioner Assembly
4581	1007567-011	Relay Module
4582	1007554-011	Encoder Module
4585	1007483-011	CSC Generator
4586	1007558-011	Forward-Backward Counter and C/O
4587	1007285-011	PIP Preamplifier
4592	1007590-011	G & N Subsystem Supply
4593	1007517-011	AC Differential Amplifier
4594	1007581	Motor Drive Amplifier
4597	1007590-011	G & N Filter Module
4598	1007651-011	Resolver Drive Amplifier
4603	1015036-011	Relay and Diode Module
4612	1007556-011	IMU Temperature Controller
4610	1007516-011	Ternary Current Switch
4611	1007552-011	Pulse Torque Power Supply
4613	1007512	Y Tracker
4614	1007525	Buffer Circuit Module
4615	1007566-011	X Tracker
4623	1007419	Interrogator
4627	1007590	G & N Filter Module
4626	1007581	Motor Drive Amplifier
4628	1007555-011	CDU Digital to Analog Converter
4629	1007419-011	Interrogator

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4630	1007557-011	Motor Drive Amplifier and Selector Switch
4636	1007507-021	DC Differential Amplifier and Precision Voltage Regulator
4637	1014638-011	Attitude Error Demodulator
4641	1007552-011	Pulse Torque Power Supply
4643	1007555-011	CDU Digital to Analog Converter
4644	1007557-011	Motor Drive Amplifier and Selector Switch
4646	1007556-011	IMU Temperature Controller
4647	1007507-021	DC Differential Amplifier and Precision Voltage Regulator
4649	1007519-011	Interrogator
4652	1015036-011	Relay and Diode Module
4653	1007414-011	Encoder
4654	1007590-011	Filter Module
4657	1007590-011	Filter Module
4659	1007255-011	ADA Preamplifier
4660	1007255-011	ADA Preamplifier
4665	1007507-011	DC Differential Amplifier and Precision Voltage Regulator
4666	1015500-021	CDU Assembly
4668	1007546-011	AAC Filter and Multivibrator
4669	1007507-021	DC Differential Amplifier and Precision Voltage Regulator
4670	1007525-011	Signal Conditioner Power Supply
4671	1007162	IMU Temperature Indicator
4672	1007516	Ternary Current Switch
4674	1015500-021	CDU Assembly, Inner Gimbal
4675	1015500-021	CDU Assembly, Outer Gimbal
4677	1007519-011	Interrogator
4678	1007544-011	1 Percent, 3, 200 Hz Amplifier
4714	1015500-021	CDU Assembly
4715	1015500-031	CDU Assembly
4716	1015500-031	CDU Assembly
4708	1007507-011	DC Differential Amplifier and Precision Voltage Regulator
4709	1007507-011	DC Differential Amplifier and Precision Voltage Regulator
4710	1007546-011	AAC Filter (800 Hz) Multivibrator
4711	1007016	Ternary Current Switch

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4712	1007507-011	DC Differential Amplifier and Precision Voltage Regulator
4713	1007124	Signal Conditioner Assembly (TM)
4721	1007554-011	Encoder Module
	1015086	G & N Harness
4726	1007027	Binary Current Switch
4727	1007507-021	DC Differential Amplifier and Precision Voltage Regulator
4728	1007554-011	Encoder
4729	1007581-011	Motor Drive Amplifier
4730	1007554-011	Encoder
4731	1007414-011	Encoder
4749	1007485	Relay Module
4739	1007555-011	CDU Digital to Amplifier Converter
4745	1008285-011	PIP Preamplifier
4746	2021785-011	IRIG Preamplifier
4747	1007559-011	Photometer Electronics
4748	1007581-011	Motor Drive Amplifier
4754	1007414-011	Encoder
4755	1015500-011	CDU Assembly, Outer Gimbal
4768	1015500-011	CDU Assembly
4771	MX 113265	Temperature Alarm Module
4772	1007555-011	Digital to Analog Converter
4777	1014638	Attitude Error Demodulator
4778	2007110-011	800 Hz. 1 Percent Amplifier
4779	2007103-011	Binary Current Switch
4781	1007540-021	Gimbal Servo Amplifier
4783	1007525-011	Signal Conditioner Power Supply
4784	2007103-011	Binary Current Switch
4786	1007554-011	Encoder
4787	1007581-011	Motor Drive Amplifier
4790	1007507-011	DC Differential Amplifier and Precision Voltage Regulator
4797	1007581-011	Motor Drive Amplifier
4798	1015097-011	Relay and Diode Module
4799	1015500-021	CDU Assembly, ISS 110
4800	2021785	IRIG Preamplifier
4803	1007516-011	Ternary Current Switch
4804	6007114-011	G & N Subsystem Supply Filter

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4806	1007007	DC Differential Amplifier and Precision Voltage Regulator
4807	1015500-021	CDU Assembly, ISS 110
4808	1015500-021	CDU Assembly, ISS 110
4809	2007103	Binary Current Switch
4810	1008283-011	Precision Resolver, Alignment
4812	1007128	CDU Resolver Module
4814	MX 113204	Binary Current Switch
4816	1007549-021	Power Supply, 25. 6 KHz Encoder Excitation
4824	1007581-011	Motor Drive Amplifier
4830	1007507-021	DC Differential Amplifier and Precision Voltage Regulator
4831	2007101	DC Differential Amplifier and Precision Voltage Regulator
4833	1007555-011	CDU Digital to Analog Converter
4839	2007101-011	DC Differential Amplifier and Precision Voltage Regulator
4843	MX 113264	PIP Preamplifier
4859	1007546-011	AAC Filter and Multivibrator
4868	1007507-021	DC Differential Amplifier and Precision Voltage Regulator
4869	1007416-011	Ternary Current Switch
4870	2007102-011	Gyro Calibration Module
4871	2007204-011	Precision Resolver Alignment Assembly
4879	1007510-011	CDU Resolver Load
4883	2007060	PIP Preamplifier
4888	1007124	Signal Conditioner
	1016384	Magnetic Amplifier
4910	1007416-011	Ternary Current Switch
4920	1007507-021	DC Differential Amplifier and Precision Voltage Regulator
4928	1902439-031	Circuit Board Assembly
4937	1007507-021	DC Differential Amplifier and Precision Voltage Regulator
4936	1007507-021	DC Differential Amplifier and Precision Voltage Regulator
4938	2007144	Operational Amplifier
4944	1007412-021	Pulse Torque Power Supply
4946	2007144	Operational Amplifier

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
5110	2007170-011	Temperature Alarm Module
5111	2007060-011	PIP Preamplifier
5122	1007516-041	Ternary Current Switch
5123	2007111-011	800 Hz, 5 Percent Amplifier
5126	1003824	Relay Module, Raytheon
5136	1007516-021	Ternary Current Switch
5140	1003527	OSC Module, Raytheon
5141	1003824-011	Relay Module, Raytheon
5152	2007060-011	PIP Preamplifier
5153	2007103	Binary Current Switch
5162	2007243-011	Quadrant Selector Module
5164	1007507-011	DC Differential Amplifier
5173	MX 113239	Mode Module
5174	2007254	Mode Module
5183	1007522-021	Two-Speed Switch
5184	1007559-021	Photometer, Electron
5204	1007516-021	Ternary Current Switch
5205	2007254	Mode Module
5210	1008285-011	PIP Preamplifier
5211	1008285-011	PIP Preamplifier
5218	1007547	800 Hz, 1 Percent Amplifier
5216	1007546-011	ACC Filter and Multivibrator
5231	1015500-071	CDU (Shaft)
5246	6010660	B Harness
5249	2007060-011	PIP Preamplifier
5252	1008285-011	PIP Preamplifier
5256	2018625	Slipring Assembly
5271	2007106	Pulse Torque Power Supply
5289	2007093	PSA Header Assembly
5290	1008285-311	PIP Preamplifier
5291	1007522	Two-Speed Switch
5298	1007412-021	Pulse Torque Power Supply
5314	2007238	MSA and Quadrant Reject
5316	6007011-011	CDU Fine Error and IRIG Temperature Regulator
5346	2007204-011	Precision Resolver Module
5364	2007238-011	MSA and Quadrant Reject
5372	2007200	PSA Header Assembly, Block II
5379	201111	800 Hz, 5 Percent Amplifier
5378	1021255	Annunciator Panel and ESA
5394	2010734	Motor Drive Amplifier

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4967	1007518-041	IMU Temperature Alarm
4968	2007236-011	ECDU Coarse
4972	2007060	PIPA Preamplifier
4982	1007527-021	Binary Current Switch
4988	MX 113264	PIP Preamplifier
4989	1007516-011	Ternary Current Switch
4996	2007102-011	Gyro Calibration Module
5006	2007144	Operational Amplifier
5007	2007117-011	IMU Auxiliary Module
5009	2007144	Operational Amplifier
5015	2007144	Operational Amplifier
5028	2007238-011	MSA Module
5030	2007107-011	-28 V Power Supply
5036	1007007	DC Differential Amplifier and Precision Voltage Regulator
5037	2021785	IRIG Preamplifier
5038	2021785	IRIG Preamplifier
5039	1007581-011	Motor Drive Amplifier
5046	2007111	800 Hz, 5 Percent Amplifier
5050	1007549-031	25.6 kHz Power Supply Module
5051	1007255	ADA Preamplifier
5056	2007144-011	Operational Amplifier
5059	2007123-011	Relay Module
5059	2007111-011	800 Hz, 5 Percent Amplifier
5060	1007551-021	Failure Indicator
5061	1007541-021	Gimbal Coarse Align
5070	1007517-011	AC Differential Amplifier
5081	1007564-011	CDU Zeroing Transformer Relay and Entry Relays
5082	1015500-041	Trunnion CDU
5086	1015500	Motor Generator CDU
5087	1007414-011	Encoder Module
5083	1014638-011	Attitude Error Demodulator
5084	1007507-031	DC Differential Amplifier and Precision Voltage Regulator
5085	1007516-021	Ternary Current Switch
5088	1007414-011	Encoder Module
5089	1007581-021	Motor Drive Amplifier
5091	2007170-011	Temperature Alarm Module
5092	1007547-021	800 Hz, 1 Percent Amplifier

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
5505	2007101-011	DC Differential Amplifier and Precision Voltage Regulator
5512	2007238-011	MSA and Quadrant Reject
5517	2007238	MSA and Quadrant Reject
5524	2007238-021	MSA and Quadrant Reject
5525	2007238	MSA and Quadrant Reject
5526	1007549	25 kHz Encoder Excitation
5532	2007254	Mode Module
5535	2007239	Torque Motor and Gimbal Resolver
5541	2007239	Coarse System Module
5548	200734-011	Motor Drive Amplifier
5549	2007254	Mode Module
5554	2007060	PIP Pre-amplifier
5558	2007109	Filter and Multivibrator Assembly
5561	2007263	Interrogate Module
5566	2007172-001	Blower Control Module
5567	2007166-011	Pulse Torque Power Supply
5568	2007238-021	MSA and Quadrant Reject
5569	2007238-021	MSA and Quadrant Reject
5571	MX 113236	Digital to Analog Converter
5584	1007664	Signal Conditioner Gimbal Resolver
5585	2007064	Temperature Control Module
5591	2021785-011	IRIG Pre-amplifier
5595	2007238-011	MSA and Quadrant Reject
5633	1007549-021	25.6 kHz Encoder Excitation
5641	6007102	Signal Conditioner Assembly, Radar Resolver
5642	2007238	MSA and Quadrant Reject
5646	2007222-031	ECDU, S-Tray Dropped
5648	1015500-071	CDU, Mechanical
5650	2007243	Quadrant Selector
5651	2007238	MSA and Quadrant Reject
5652	2007238	MSA and Quadrant Reject
5658	1007662-011	IRIG and PIPA Signal Conditioners
5673	1007028-007	PIP Suspension Module
5681	2014578	GNIC Panel
5687	2007170-011	Temperature Alarm Module
5688	2007238-051	MSA and Quadrant Reject
5689	2007238-051	MSA and Quadrant Reject
5690	2007238-051	MSA and Quadrant Reject
5691	2007238-051	MSA and Quadrant Reject

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
5395	2007238	MSA Quadrant Reject
5391	2007204-011	Precision Resolver Alignment
5397	2007170-011	Temperature Alarm Module
5398	2007238	MSA Quadrant Reject
5399	2007236-011	Coarse System Module
5406	2007236-031	Coarse System Module
5415	2007263	Interrogate Module
5419	2007236	Coarse System Module
5424	1007527-021	Binary Current Switch
5430	2007118-011	Motor Drive Amplifier
5431	2007105	C/M PIPA Calibration Module
5432	2007117	IMU Auxiliary
5442	2007093-031	PSA Header Assembly, Block II
5449	2007093-031	PSA Header Assembly
5451	2007237	Digital to Analog Converter
5452	2007235	Coarse System Module
5453	2007166	Pulse Torque Power Supply
5454	2007238	MSA and Quadrant Reject
5467	2007238	MSA and Quadrant Reject
5469	2007170-011	Temperature Alarm Module
5470	2007172	Blower Control Module
5472	2007238	MSA and Quadrant Reject
5473	2007237-021	Digital to Analog Converter
5483	2007093	PSA Header
5486	2007237	Digital to Analog Converter
5487	2007166	Pulse Torque Power Supply
5489	2007238	MSA and Quadrant Reject
5490	2007236-021	Coarse System Module
5484	2021785	Normalization Package
5492	2007254-011	Mode Module
5493	2007117-011	IMU Auxiliary Assembly
5496	2007101-011	DC Differential Amplifier and Precision Voltage Regulator
5498	2007117-011	Regulator
5499	2007103	IMU Auxiliary Assembly
5500	2007166	Binary Current Switch
5501	2007166	Pulse Torque Power Supply
5503	2007243	Quadrant Selector
5503	2007101-011	DC Differential Amplifier and Precision Voltage Regulator
5504	2007101-011	DC Differential Amplifier and Precision Voltage Regulator

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
5693	2007114-021	Gimbal Servo Amplifier
5709	1007505-031	PIPA Calibration Module
5710	2007238	MSA and Quadrant Reject
5711	2007238	MSA and Quadrant Reject
5712	2007238	MSA and Quadrant Reject
5713	2007238	MSA and Quadrant Reject
5714	2007238	MSA and Quadrant Reject
5728	2007238	MSA and Quadrant Reject
5740	2007238	MSA and Quadrant Reject
5741	2007238	MSA and Quadrant Reject
5742	2007238	MSA and Quadrant Reject
5749	2007238	MSA and Quadrant Reject
5750	2007238	MSA and Quadrant Reject
5753	2007114-021	Gimbal Servo Amplifier
5754	2007238	MSA and Quadrant Reject
5755	2007238	MSA and Quadrant Reject
5756	2007238	MSA and Quadrant Reject
5757	2007236	Coarse Systems
5759	1008285	PIP Pre-amplifier
5766	2007238	MSA and Quadrant Reject
5768	2007238	MSA and Quadrant Reject
5769	2007108-011	3, 200 Hz Amplifier
None	2007238	MSA and Quadrant Reject
5785	2007238	MSA and Quadrant Reject
5787	2007238	MSA and Quadrant Reject
5738	2007238	MSA and Quadrant Reject
5800	2007238	MSA and Quadrant Reject
5801	2007114-021	Gimbal Servo Amplifier
5805	2007238	MSA and Quadrant Reject
5806	2007236	Coarse Systems
5807	2007-38	MSA and Quadrant Reject
5908	2007236	Coarse Systems
5809	2007238	MSA and Quadrant Reject
5810	2007238	MSA and Quadrant Reject
None	2007238	MSA and Quadrant Reject
None	2007238	MSA and Quadrant Reject
5824	2007236	Coarse Systems
5835	2007263	Interrogate Module
5843	2007230	Gimbal Resolver

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
5848	2007254	Mode Module
DE412A	2007060-021	PIP Pre-amplifier
5849	2021785-011	IRIG Pre-amplifier
5857	2007243	Quadrant Selector
5872	2007238	MSA and Quadrant Reject
5873	2007243	Quadrant Selector
5874	2007238	Coarse System
5875	2007238	MSA and Quadrant Reject
5883	2007238	MSA and Quadrant Reject
5885	2007118	Motor Drive Amplifier
5887	2007142-011	ECDU Power Supply
5888	2007238	MSA and Quadrant Reject
5893	2007110	800 Hz, 1 Percent Power Amplifier
5896	2007238	MSA and Quadrant Reject
5897	2007236	MSA and Quadrant Reject
5905	2007237	Coarse System
5906	2007238	Digital to Analog Converter
5907	2007238	MSA and Quadrant Reject
5909	2007238	MSA and Quadrant Reject
5939	2007238	MSA and Quadrant Reject
5939	2007243	Quadrant Selector
DE496A	2007238	MSA and Quadrant Reject
5912	2007254	Mode Module
5922	2007238	MSA and Quadrant Reject
5923	2007238	MSA and Quadrant Reject
5924	2007238	MSA and Quadrant Reject
5925	2007238	MSA and Quadrant Reject
None	2007092-031	PEA Header Assembly
5988	2007238	MSA and Quadrant Reject
5963	2007238	MSA and Quadrant Reject
5968	2007238	MSA and Quadrant Reject
5972	2007238	MSA and Quadrant Reject
5973	2007238	MSA and Quadrant Reject
5992	2007238-061	MSA and Quadrant Reject
5996	2007254-011	Mode Module
5998	1007668	Optics Signal Conditioner
6007	2007238	MSA and Quadrant Reject

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
6316	2007114-021	Gimbal Servo Amplifier
6320	2007019-011	Ducosyn Transformer
6321	2007243-011	Quadrant Selector
6337	2007238	MSA and Quadrant Reject
6364	2007238	MSA and Quadrant Reject
6371	2007060-021	PIP Preamplifier
6372	2007019-011	Ducosyn Transformer
6439	2007243-011	Quadrant Selector
6440	2021318-000	G Harness
6444	2007238	MSA and Quadrant Reject
6445	2007238-071	MSA and Quadrant Reject
6449	2021406	A Harness - G & N 214
6489	207114-021	Gimbal Servo Amplifier
6524	207236-031	Coarse System
6524	2007237-011	Digital to Analog Converter
6526	2007238-081	MSA and Quadrant Reject
6527	2007238-071	MSA and Quadrant Reject
6528	2007112-011	AA' Filter and Multivibrator, 800 Hz
6528	2007263	Interrogate Module
6530	2007141	Digital Mode Module, Raytheon
6565	2007238-081	MSA and Quadrant Reject
6566	2007238-081	MSA and Quadrant Reject
6577	2007238-081	MSA and Quadrant Reject
6568	2007238-081	MSA and Quadrant Reject
6571	2007111-011	800 Hz, 5 Percent Amplifier
6595	2007238-011	MSA and Quadrant Reject
6597	2007236-021	Coarse System
	2007236-021	Coarse System
	2007236-021	Coarse System
	2007243	Quadrant Selector
6631	2007238	MSA and Quadrant Reject
6664	2007166-011	Pulse Torque Power Supply
6696	2007112-011	AAC Filter and Multivibrator, 800 Hz
6743	2007102-011	Gyro Calibration Module
6773	2007237-021	Digital to Analog Converter
6777	2007254-011	Mode Module
6778	2007102-011	Gyro Calibration Module
6779	2007243-011	Quadrant Selector

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
6011	2007254	Mode Module
6014	6007105	PIPA Calibration Module
6015	2007239-011	Torque Motor and 1 x Sine Generator
6028	2007111	800 Hz, 5 Percent Amplifier
6033	1900048-011	Cross Bar Switch
6034	2007110-011	800 Hz, 1 Percent Amplifier
6111	2007166-011	Pulse Torque Power Supply
6119	2007276	Coarse System
6119	2007437-021	Digital to Analog Converter
6062	2007107-011	-28 Vd. Power Supply
6075	2007254	Mode Module
6139		IMU Block I-100, Mission 501
6080	2007060	PIP Preamplifier
6113	2021785-011	IRIG Preamplifier
6100	2007238	MSA and Quadrant Reject
6101	2007238	MSA and Quadrant Reject
6117	2007104	AC Differential Amplifier
6147	2007236	Coarse System
6169	1007263	ADA Preamplifier
6189	2007254	Mode Module
6190	1007662-011	PIPA Signal Conditioner
6191	2007256	Coarse System
6198	6007005-011	Pulse Torque Transformer
6200	2007166-011	Pulse Torque Power Supply
6203	2007238	MSA and Quadrant Reject
6218	2007103-011	Binary Current Switch
6232	2007114	Gimbal Servo Amplifier
6234	2637238	MSA and Quadrant Reject
6235	2007238	MSA and Quadrant Reject
6237	2007102-011	Gyro Calibration Module
6244	2007238-0	MSA and Quadrant Reject
6264	2007122	Blower Control
6269	2007185-011	IRIG Preamplifier
6270	2007111	800 Hz, 5 Percent Amplifier
6310	2007114-021	Gimbal Servo Amplifier
6312	2007110-011	800 Hz, 1 Percent Amplifier
6313	2007101-011	DC Differential Amplifier and Precision Voltage Regulator
6314	2007238	MSA and Quadrant Reject

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
6805	2007104-011	AC Differential Amplifier
6828	2007107-011	-28 Vdc Power Supply
4050-DE-		
473-A	2007236	Coarse System
4050-DE-		
473-A	2007237-021	Digital to Analog Converter
6878	2007140-041	Read Counter
6925	2007114-021	Gimbal Servo Amplifier
6926	2007111-011	800 Hz, 5 Percent Amplifier
6939	2021406	A Harness
6939	2003993-061	AGC, C-38
6979	2007238-031	MSA and Quadrant Reject
	2007104-011	AC Differential Amplifier
7035	2021314	C Harness
	2007107-011	-28 Vdc Power Supply
	2007107-011	-28 Vdc Power Supply
7051	2021319	H Harness
7121	2007064-011	Temperature Control Module
7122	2007237-011	Digital to Analog Converter
	2021785-011	IRIG Pre-amplifier
7213	2007243-011	Quadrant Selector
7266	2007114-021	Gimbal Servo Amplifier
None	2007111-011	800 Hz, 5 Percent Amplifier
7314	2007109	AAC Filter and Multivibrator
7314	2007117	IMU Auxiliary
7314	2007108	3, 200 Hz, 1 Percent Amplifier
7350	2007243-21	Quadrant Selector
7411	2007114-021	Gimbal Servo Amplifier
7424	2021406	A Harness
4220	1000038	Slipping Assembly
4209	1015523	Gears from CDU S/N 63
	1015524	
4266	1006781	Wrapost, Female Contact
4251	1015038-011	40-Second Time Delay Module
4438	1015666-031	Wedge Light Assembly
4435	1016781	Wrapost, Female Contact
4460	1016782	Wrapost, Male Pin

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
4458	1016782	Wrapost, Male Pin
FA 379-A	1010329-001	Transformer
4651	1010627-1	Switch Assembly
4632	1015048-011	Impulse Attitude Switch
4674-3	1005500	Coupling Display Unit
4828	1015044	Actuator Shaft
4875	1005500	Coupling Display Unit
4768	1005500	Coupling Display Unit
4714-3	1005500	Coupling Display Unit
4755-2	1005500	Coupling Display Unit
4906	1005500	Coupling Display Unit
4911	1015053-021	G & N Indicator Control Panel
FA 401-A	1005500	Coupling Display Units, S/N 29, 66, 67, 69
5029	1010929	Connector From E-Harness, P/N 2014645
5040	1010770	Contact Pin Broken, A-Harness, P/N 2014624 S/N 2
5095	1011606	Bearing from SCT
5088-1	1015500	Coupling Display Unit
5109	1010965	Connector, B-Harness, P/N 6010660, S/N 6
5185	1010929-104	Connector, G & N A-Harness, P/N 2014641, S/N 7
5073	1014664-021	G & N Indicator Control Panel
4911	1015053	G & N Indicator Control Panel
5206	2018601	IMU Torque Motor Lead
5090	1898952	SXT Bellows
5217	Low 28-28066	Navigation Base, GAEC
5231	1015500	Coupling Display Unit
5241	105787-2	Module Assembly
5257	2018601	IMU Torque Motor Leads
5273	2018796	A-Harness Solder Joints
FA-504	2018644	Blower Assembly
5293	2018644	Blower Assembly
5235	1015668	Connector Bracket, CDU S/N 101
5262	1010965	Connector Locking Device
5307	2018601	Broken Lead, Resolver Module
5366	2018625	Slipping Assembly
5413	2018644	Blower Assembly
5416	1010930	Connector Contact Pins
5440	2018644	Blower Assembly
5545	1010770	Contact Sockets, Deutsch

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
5536	2018644	Blower Assembly
5544	1010929	Connector, Deutsch
5418	1021329 and 1021337	SXT Crown and SCT Crown
FA 539-A	1006323	Transistor Material and Dimension Analysis
5573	2018644	Blower Assembly
5582	1022780	Sextant Cover Assembly
5476	6899956	Shouldered Stud, LM 605
5619	1010929	Connector, Deutsch
FA 573-A	2004147	Bolts, Material and Dimension Analysis
5683	2018612	Resolve:
5771	1008834	Cover and Seal Assembly
5682	1010965	Connector, Microdot
5826	1000135	Coupling Half, Quick Disconnect
5847	1010917-906	Contact Sockets, IMU Harness
5814	2021611	Mod II IRIG Assembly
5940	2007092-031	PEA Header
5856	2018644	Blower Assembly
5995	2018644	Blower Assembly
6047	2018601	IMU Leads, Broken
5799	2004943	Leaf Spring
6031	1001485	Safety Switch, IMU 13
6079	1001485	Safety Switch, IMU 24
6336	2018601	IMU Solder Connection Analysis
6339	2021318	G-Harness Leads
6239	2012793 and 2012774	SCT Eyepiece and Prism Housing
6481	2011000-071	Optical Unit Assembly
6532	2007213	Pressure Valve
6529	2014550	Sextant Controller
6809	6016077	LM A-Harness
6937	2018821	Flex Hose
6994	2018601	IMU Solder Connection Analysis
6928	2018821	Flex Hose
7085	1000135	Coupling Half Quick Disconnect
6874	1000135	Coupling Halves, Quick Disconnect S/N 323, 328, 394, 324, 340, and 226
7265	2014550	Sextant Hand Controller
7328	2001100	Optical Unit Assembly

SUMMARY OF FAILURE ANALYSIS REPORTS		
AC ELECTRONICS		
FAR NO.	PART NO.	DESCRIPTION
7387	1016019	Coupling, Quick Disconnect
7528	1000135	Coupling Half, Quick Disconnect
7556	1000135	Coupling Half, Quick Disconnect
7608	1000135	Coupling Half, Quick Disconnect
7617	1000135	Coupling Half, Quick Disconnect
7622	1000135	Coupling Half, Quick Disconnect

SUMMARY OF FAILURE ANALYSIS REPORTS		
KOLLSMAN INSTRUMENT CORPORATION		
FAR NO.	PART NO.	DESCRIPTION
1	1011778-2	Luxorb, Coating
2	1012151-001	Electrical Connector
3	1012156	Servo Motor, Tachometer-Generator
4P	1012512	Counter
4F	1011357	Gears
5	1012142	Capacitor, Fixed Tantalum, Electrolytic
6	2007032	High Voltage Power Supply, Star Tracker
7	2007024	Tracker, Preamplifier
8	2011254	Housing
9	2011000	Optical Unit, Haze
10	2007023	Tuning Fork Assembly, Tracker and Photometer
11	1011000	Optical Unit, Corrosion
12	1012142	Capacitor, Fixed Tantalum, Electrolytic
13	1012141	Capacitor, Fixed, Ceramic
14	1012156	Motor, Tachometer-Generator
15	1008755-69	Capacitor, Fixed, Solid Tantalum
16	1010341	Resolver, Receiver, One Speed
17	1012154	Resonator, Tuning Fork Assembly, Tracker
18	1012048	Transistor, Field Effect, Silicon
19	1012156-1	Motor, Tachometer-Generator
20	1012502	Tantalum Capacitor, Wet Process, Sintered Anode
21	1012157	Resolver
22	1011820	Manual Position Knob
23	1011607	Angular Contact Ball Bearings
24	1017405	Angle Counter Assembly
25	1012142	Capacitor, Fixed Tantalum, Electrolytic
26	1010341	Resolver
27	1012042	High Voltage Diode
28	1012042	High Voltage Diode

SUMMARY OF FAILURE ANALYSIS REPORTS		
KOLLSMAN INSTRUMENT CORPORATION		
FAR NO.	PART NO.	DESCRIPTION
29	1012042	High Voltage Diode
30	1012042	High Voltage Diode
31	1019218 (Rod)	Washer, Threaded, and Post Fixture
	1019219 (Post)	
32	1012048	Transistor, Field Effect
33	1012157	Resolver
34	1012033	Valve, Threaded, Gas Injection
36	1012519	Cable, Flat, and Connector Assembly
1-66-01	1012156	Motor, Tachometer-Generator
1-66-02	1012141	Capacitor, Fixed, Ceramic, Dielectric
1-66-03	1012142	Capacitor, Fixed, Tantalum, Electrolytic
1-66-05	1011000	Optical Unit, Foreign Material on Reticle
2-66-06	6011000	LM Alignment Optical Telescope
2-66-07P	1011000	Optical Unit, Foreign Material on Reticle
2-66-08	1010610	Servo Motor, Tachometer-Generator
3-66-07F	2011000	Optical Unit, Foreign Material on Reticle
3-66-09	1012506-2	Annular Ball Bearing
5-66-11	1010771	Connector Plug, Electric
6-66-12	2012367	Resolver Trimming Module
6-66-13	1001792-001	Electrical Connector
6-66-14	1017484	Powerstat Variable Transformer
6-66-15	2011000	Optical Unit, Foreign Material on Reticle
66-16	2012519	Flexprint Assembly
66-17	6011000-021	Alignment Optical Telescope, Foreign Particle Analysis
66-20	1011281	Differential, Gear Assembly
66-21	2011258	Shaft, Index Mirror
66-25	1011745-4	Gasket
66-26	2011000	Optical Unit, Foreign Material on Reticle
66-27	1001792-201	Electrical Connector
66-28	2012699	Sextant Eyepiece Assembly
66-29	1010373-17	Resistor Variable Trimmer
66-30	NASA	Cable Assembly, Special, All Purpose Electrical
	02386910617	
66-31	1012157	Resolver
66-32	2012719	SCT Eyepiece Assembly
66-33	1001801	Resolver
66-34	1019665	Shipping Container

SUMMARY OF FAILURE ANALYSIS REPORTS		
KOLLSMAN INSTRUMENT CORPORATION		
FAR NO.	PART NO.	DESCRIPTION
66-35	2012124 (Plug)	SXT Mirror Housing Assembly
67-1	2012195(Plate)	Resistor Variable Trimmer
67-2	2012124 (Plug)	SXT Mirror Housing Assembly
67-3	2011896	Harness Assemblies
67-4	2011713	Alignment Optical Telescope, Foreign Matter
67-5	6011000	Trim Module
67-6	2012568	Mechanical Positioning Assembly
67-8	6011829	Optical Unit, Intermittent Tachometer Output,
	2011000	1012156-1 Motor
67-9	2011703	SCT-SDA Gearbox
67-10	2012719	SCT Eyepiece Assembly
67-11	1012548	Thermostat, Switch
67-12	1012156-4	Motor, Tachometer
68-1	2011706	SXT TDA Gearbox
68-2	2012033	SXT Purge Valve
68-6	1012548A	Thermostat, Switch
68-7	1012548A	Thermostat, Switch
68-8	1010929-117	Connector, Deutsch
68-9	1012157	Resolver

SUMMARY OF FAILURE ANALYSIS REPORTS		
KOLLSMAN INSTRUMENT CORPORATION		
FAR NO.	PART NO.	DESCRIPTION

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
138	Fairchild Ulogic 1006771, Lot F, ID 7993, Analysis of Screen and Burn In Failures
148	Zener Diode, Transistron 1006838, Determination of Failure Mechanism
149	Micrologic, Fairchild #18 ID 8405, Analysis of First and Second Electrical Test Rejects
152	Fairchild 1006771, RT 5910W, Failure Analysis
156	Nor Gate 1006771, Raytheon 403-1 1555, Lot F
158	Transistor 1006752, Raytheon 350 ID 346056, Second Electrical Test Failure
162	Nor Gate 1006771, Raytheon 427 425026, Analysis of First Electrical Test Failure
167	Transistor 1006759, Texas Instruments ID 354043 385001, Evaluation of Second and Third Electrical Test Failure
169	Transistor 1006752, Texas Instruments ID 398095, Evaluation of First Electrical Test Failures
178	Nor Gate 1006771, Westinghouse 01412, Analysis of Second Electrical Test Rejects ID35015
179	Nor Gate 1006771, Raytheon 423 IDV016018, Analysis of Second Electrical Test Failure
181	Transistor 1006752, Raytheon 352 3904, Evaluation of Second Electrical Test Rejects
182	Transistor 1006752, Raytheon 350 ID8012, Analysis of Second and Third Electrical Test Rejects
186	Diode 1006751, Texas Instruments 422081, Analysis of First Electrical Test Reject
189	Diode 1006751, Fairchild 334035, Analysis of Second and Third Electrical Test Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
190	Diode 1006751, Texas Instruments 7706 7164 1953 412066 5779 V13066 V17011 422081 V17002 2022 V15084 V17010, First, Second, and Third Electrical Test Rejects
191	Diode 1006751, Fairchild 7779, Analysis of Second and Third Electrical Test Rejects
192	Diode 1006751, Fairchild 346069, Analysis of First, Second, and Third Electrical Test Rejects
193	Diode 1006751, Fairchild 7628, Analysis of Second and Third Electrical Test Rejects
194	Nor Gate 1006771, Raytheon 423 398110 V01618, Analysis of Second and Third Electrical Test Failures, and Summary of Findings on the Lot
200	Transistor 1006752, Raytheon 3903, Analysis of First, Second, and Third Electrical Test Rejects
201	Micrologic Raytheon 434, Analysis of Effectiveness of Raytheon Semiconductor 300°C Screening Process on SCD1006771
202	Transistor 1006753, Texas Instruments 5305 403125 403126, Analysis of Screening and Burn-in
203	Transistor 1006752, Texas Instruments 01347 398109, Analysis of First, Second, and Third Electrical Test Rejects
204	Transistor 1006752, Raytheon 352 3904, Analysis of Second and Third Electrical Test Rejects
205	Transistor 1006829, Motorola, Correlation and Evaluation of TACT Testing of 1006829
209	Transistor 1006759, Texas Instruments 1408 431043, Analysis of Second and Third Electrical Test Rejects
210	Diode 1006751, Texas Instruments 403104, Second and Third Electrical Test Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
237	Micrologic 1006771, Fairchild 444 ID 454976, Analysis of First, Second, and Third Electrical Test Failures
239	Dual Transistor 2318944-3, Raytheon 433, Reject Test 12501
241	Micrologic 1006771, Fairchild
242	Micrologic 1006771, Fairchild, Analysis of Stick Rejects
245	Inductor/DC Converter 2318950 106, Raytheon, Determine Cause of Failure of 800 Hz Power Ampere
246	PNP Transistor 2401788, Fairchild, Find Cause of Fault
247	Diode, Texas Instruments 1006751 486B 482081, Analysis of Second and Third Electrical Test Rejects
248	Transistor 1006753, Texas Instruments 455062, Second and Third Electrical Test Reject Analysis
249	Diode 1006838, Transiron 409096, Analysis of First and Second Electrical Test Rejects
254	Transistor 1006759, Texas Instruments 1422 ID 517048, 383 110
256	Diode 1006751, Texas Instruments 487039, Analysis of Second Electrical Test Failure
258	Diode 1006751, Texas Instruments ID 403106, Analysis of First, Second, and Third Electrical Test Rejects
259	Variable Resistor, Waters 1006736, Determine Intermittent Open at Midpoint
262	Transistor 1006752, Texas Instruments 01-438 462057, Analysis of First and Second Electrical Test Rejects
265	Diode 1006751, Texas Instruments ID 487039, Analysis of Second and Third Electrical Test Rejects
266	Zener Diode 2411736, Parts Qualification Reject Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
211	Micrologic 1006771, Raytheon V22065, Analysis of Second Electrical Test Rejects
216	Transistor 1006752, Texas Instruments 1439 462053, Analysis of Second and Third Electrical Test Rejects
217	Transistor 1006752, Texas Instruments 1439 462060, Analysis of Third Electrical Test Rejects
218	Transistor 1006752, Texas Instruments 1439 462056, Analysis of Second and Electrical Test Rejects
219	Q5 AGC Module, Raytheon-Texas Instruments 2N702A, 2N722, Analysis of Six Failures
220	Nor Gate 1006771, Fairchild 446 465067, Analysis of First Electrical Test Rejects
221	Transistor 1006759, Texas Instruments 1408 431044-431045, Analysis of Third Electrical Test Rejects
224	Diode 1006751, Texas Instruments 428025, Analysis of Third Electrical Test Rejects
225	Nor Gate 1006771, Raytheon 416 7996, Analysis of Third Electrical Test Failures
226	Logic Stick A1-A16, Raytheon Ray 147 1003074, Reliability Analysis
228	Diode 1006751, Texas Instruments 440 428026, Analysis of Second and Third Electrical Test Rejects
229	Diode 1006751, Texas Instruments 83078, Analysis of Second and Third Electrical Test Rejects
230	Diode 1006751, Texas Instruments 440 428033, Analysis of Second and Third Electrical Test Rejects
235	Micrologic 1006771, Fairchild/Raytheon, Internal Shorts, Posts to Can.

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
269	Nor Gate 1006771, Fairchild 420 ID Reject Tickets, Analyze Rejects
270	Sense Amp, Norden, SCD 1006769, Rope Sense Module Ray 12, Failure Analysis
276	Transistor 1006759, Fairchild, Analysis of Failure from AGC-5 Computer at MIT/IL
277	Nor Gate 1006771, Fairchild 446 ID 476063, Failure Analysis
278	Nor Gate 1006771, Fairchild 442 ID 464047, Determine Cause of Failures
280	Transistor 1006753, Texas Instruments 01-438, ID 476032, Analysis of First, Second, and Third Electrical Test Failures
281	Transistor 1006759, Texas Instruments 01408 330041, Analysis of Rejects
285	Nor Gate 1006771, Westinghouse ID A-2, from Nor Module Ray 6554, Find Cause of Failure
287	Diode 1006751, Texas Instruments, Date Code 502 ID 510063, Third Electrical Test Rejects
288	Diode 1006751, Texas Instruments, Date Code 502 ID 510075, Third Electrical Test Rejects
289	Diode 1006751, Texas Instruments, Date Code 452 ID 501026, Third Electrical Test Rejects
290	Diode 1006751, Texas Instruments 436 ID 482976, Analysis of Second Electrical Test Rejects
291	Diode 1006751, Texas Instruments 502 ID 510079, Analysis of Second Electrical Test Rejects
292	Transistor 1006752, Texas Instruments 438 ID 505039, Analysis of Third Electrical Test Rejects
293	Diode 1006751, Texas Instruments 452 ID 501026, Analysis of Second Electrical Test Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
299	Micrologic 1006771, Fairchild DC 448 ID 482084 and 482976, Complete Analysis of Lot
303	Transistor 1006759, Texas Instruments 527035, Analyze Units for Possible Damage due to Test Equipment
318	Nor Gate 1006771, Fairchild 450, Analysis of First, Second, and Third Electrical Test Failures
319	Diode 1006791, Hughes ID 6360 3, - First Electrical Test Lot Quantity, Evaluation of First Electrical Test Failures
323	Transistor 1006753, Texas Instruments 504 ID 510060, Analysis of Third Electrical Test Failures
324	Transistor 1006753, Texas Instruments 504 ID 510061, Analysis of Third Electrical Test Failures
325	Magnetic Cores 1006320, Arnold, Check for Potting Seepage into Cores by Means of Tracer in Potting
328	Rectifier 1006300, Transistron 510 ID 537010, Analysis of Second Electrical Test Failures
335	Transistors 1006829, Motorola, Date Code 512 ID 494041, Analysis of Second and Third Electrical Test Rejects
336	Relays 1006815 and 1006772, Sigma and Clare, Analysis of Electrical Rejects and VS
338	Transistor 1006753, Texas Instruments 504 ID 510073, Analysis of Second Electrical Test Failures
339	Transistor 1006752, Texas Instruments 509 ID 544042, Analysis of Second and Third Electrical Test Failures
340	Relay 1006772, Clare, Determine Cause of Failure
342	Sprague Cores 1006298 546116, Determine Difference Between VS Units and Failed Units

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
345	Nor Gate 1006771, Fairchild 450, ID 490030, LQ 4480, Analysis of Special Test Failures
346	Cores 1006320, Arnold/Sprague, 34 Received. Determine Physical Differences between Failed Unit and Units Sectioned for Vendor Surveillance
352	Nor Gate 1006771, Fairchild, Date Code 506, ID 507074, Analysis of Failures
354	Micrologic 1006771, Fairchild 510, Preliminary Visual Analysis of Lot 510
355	Nor Gate 1006771, Fairchild 510 553019, Analysis of Failures
356	Micrologic 1006771, Fairchild 506 ID 507074, Analysis of Failures of Lot Resubmitted to 150°C Bake for 168 Hours and 20,000 g Centrifuge
358	Nor Gate 1006771, Fairchild 452 500070, Analysis of Failures
359	Micrologic 1006771, Fairchild 452 500070, Visual Analysis of Ulogics for Chip Lifting and Corrosion
360	Nor Gate 1006771, Fairchild 506 507074, Additional Inspection/Conducting Particles and Corrosion
369	Diode 1006751, Texas Instruments 502, VS and First, Second, and Third Electrical Test Rejects
374	Transistor 1006759E, Texas Instruments ID 527976, Lot Quantity 525, Analysis of Failures
375	Diode 1006751, Fairchild 545094, LQ 200, Analysis of Second and Third Electrical Test Rejects
380	Coil 10-346, Reject Ticket 024403, Analysis of Failure
382	Cores 1006320A, Arnold ID 583017 LQ 1000, Determine Cause of Failures

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
385	Micrologic 1006771K, Fairchild, Date Code 442, 506, Washer Problem, Dented Cans
389	Transistor 1006753, Texas Instruments 501 ID 533093, Analysis of Rejects
392	Switch 1006890-2, Daven, Determine Cause of Failure
395	Relay 1006772, C. P. Clare, Reject Ticket 010163, Parts Failure Analysis
398	Dual Nor Gate 1006321, Philco, Lot Quantity 3000, Analysis of Failures
400	Alarm Panels/Switches, Oppenheimer/Microswitch 1006316/20033923, Check Manufacturer's Claims
403	Nor Gate 1006771, Fairchild 512, 583020, 575976, Analysis of Failures
429	Transistor 1006752, Texas Instruments 509 551203, Analysis of Third Electrical Test Rejects
430	Capacitor 1006755-69 Kemet, 589040, Analysis of Failures
431	Diode 1006751, Texas Instruments 559007, Analysis of First, Second, and Third Electrical Test Rejects
432	Transistor 1006752, Fairchild 511 557039, Analysis of First, Second, and Third Electrical Test Rejects
434	Potentiometer 1006736, Waters Field Return, Determine Cause of Failure
436	Transistor 1006752, Texas Instruments 515 ID 586014, Analysis of Second and Third Electrical Test Rejects
441	Nor Gate 1006771, Fairchild 442, Fault Tag 021888, Field Reject, Analysis of Failures
444	Nor Gate 1006771, Fairchild 442 From A-17 Logic Stuck Ray I, Inspect for Corrosion
446	Transistor 1006829, Motorola 521 ID 605003, LQ 50, Analysis of Second and Third Electrical Test Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
446A	Transistor 1006829, Motorola 521 ID 605003 LQ 50, Analysis of Second and Third Electrical Test Failures
447	Transistor 1006759E, Texas Instruments, ID 609174 LQ 374 Date Code 507, Examine First, Second, and Third Electrical Test Rejects
450	Diode 1006751, Texas Instruments ID 559006 LQ 2886, Analysis of Electrical Test Failures
453	Micrologic 1006771, Fairchild 42Q A73269, Reject Ticket 016116, Locate Short
455	Transformer 1006762-D, Technotrol ID 04423, Determine Cause of Failure
457	Micrologic 1004300, Logic A26, Reject Ticket 021454, Investigate Short from Pin 1, Gate 89 to Zero Vdc
463	Nor Gate 1006771, Fairchild 514 587052 587055, Analysis of First, Second, and Third Electrical Test Failures
470	Diodes 1006751, Texas Instruments 512 559009, Analysis of Third Electrical Test Failures
471	Diode 1006751, Texas Instruments 573046, Analysis of Third Electrical Test Failures
475	Diode 1006751, Texas Instruments ID 573043, Analysis of Second and Third Electrical Test Rejects
474	Diode 1006751, Texas Instruments ID 573042, Analysis of First Electrical Test Failure
478	Transistor 2318952-2, Transistron 507 ST 4457-2, Determine Open between Collector and Emitter
479	Transistor 2479692, Fairchild ID SI 5939, Determine Cause of Failure on One Unit and Manufacture Process on 17 Units
480	Diode 2318896, Analysis of Parts Rejected during Qualification Testing

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
489	Sense Amplifier 1006769, Fairchild, Evaluation of Problem with Fairchild Sense Amplifiers
494	Nor Gate 1006771, Fairchild 522 ID 597056, Analysis of Failures
496	Transistor 1006310, 531 Fairchild ID 624009, Analysis of First Electrical Test Reject
498	Dual Nor Gate 1006321, Philco 514 and others, ID 562089, Analysis of Failures

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
502	Transistor PNP 1006310, Fairchild 528, Flatpack SC 2038 GME/430, Transistor Analysis
509	Diode 1006751, Texas Instruments 609976, Analysis of Second Electrical Test Rejects
513	Diode 1006751, Texas Instruments 573042, Analysis of Second Electrical Test Rejects
514	Diode 1006751, Texas Instruments 573045, Analysis of Third Electrical Test Rejects
515	Transistor 1006323, Fairchild 530 618976, Analysis of Second Electrical Test Rejects
516	Transistor 1006323, Fairchild 530 618082, Analysis of First Electrical Test Rejects
517	Transistor 1006752, Fairchild 513 590010, Analysis of First Electrical Test Rejects
518	Transistor 1006310, Fairchild 531 624976, Analysis of Second Electrical Test Rejects
519	Diode 1006751, Texas Instruments 573040, Analysis of Electrical Test Rejects
526	Capacitors 1006755-57, Kemet EFT 015611, Examine Three From Lot Containing One Failure
529	Diode 1006751, Texas Instruments 573044, Analysis of Third Electrical Test Rejects
530	Dual No.: Gate 1006321, Fairchild 516 ID 563027, Analysis of Electrical Test Rejects
531A	Transformer 2318765, Bush 6507/BC16B, Reject Ticket 024926
532	Dual Nor Gate 1006231, Comparison of Voltage Out Readings of Screen and Burn-in
533	Sense Amplifier 1006769, Fairchild 512, Analysis of Failures 364110
535	Dual Nor Gate 1006321, Fairchild 516, Analysis of Electrical Test Failures

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
538	Transistor 1006827, Honeywell 321 ID 612040, Analysis of Second Electrical Test Failure
539	Relay 1006772, FAR 4414, Clare 6420, Determine Cause of Failure
541	Transistor 1006323, Fairchild 530 ID 618082, Analysis of Second Electrical Rejects
542	Nor Gate 1006771, Analysis of Rise Time Problem Associated with Gate 77 of A1-A6- Logic Stick
543	Transistor 1006752, Fairchild 513 ID 590010, Analysis of Second Electrical Test Rejects
545	Sense Amplifier 1006769, Norden 432 ID 594178, Analysis of Electrical Test Failures
547	Switch 1006738, Haydon EFT 010150 Failure Analysis
549	Transistor 1006310, Fairchild 531 ID 624009, Analysis of Second Electrical Test Rejects
550	Nor Gate 1006771, Fairchild 525 ID 609014, Analysis of Electrical Test Failures
553	Diode 1006751, Texas Instruments ID 573042, Analysis of Third Electrical Test Failure
556	Transistor 1006752, Fairchild 513 ID 590010, Analysis of Third Electrical Test Rejects
563	Sense Amplifier 1006769, Norden 431 ID 573082, Analysis of Failure of First Electrical Test
565	Diode 1006751, Texas Instruments 524 ID 603173, Analysis of Second and Third Electrical Test Rejects
566	Diode 1006751, Texas Instruments ID 592172, Analysis of Second Electrical Test Reject
567	Relay 1006304, Babcock 528L 617018, Failure Analysis
568	Transistor 1006317, Honeywell 204 ID 585094, Analysis of Second Electrical Test Reject

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
608	Diode 1006751, Texas Instruments 5177 ID N89046, Screen and Burn-in of First Electrical Test
609	Transistor 1006317A, Honeywell 5193J IR 383022, Surveillance Screen and Burn-in of First Electrical Test Reject
610	Transistor 1006317, Honeywell 5205A ID 585098, Determine Cause of Failure at Screen and Burn-in
611	Dual Nor Gate 1006321, Fairchild 516 ID 568108, Analysis of Failure of First, Second, and Third Electrical Test Failures
612	Transistor 1006310, Fairchild 536 ID 655106, Analysis of Failure of Transistors from Screen and Burn-in
613	Transistor 1006759, Texas Instruments 1506 ID N27031, Analysis of Cause of Failure of First Electrical Test
614	Transistor 1006323, Fairchild 534 ID 641003, Analysis of Screen and Burn-in Failures of First Electrical Test
616	Diode 1006888, Transistron 609206, First and Second Electrical Test
618	Relay 1006282-2, Babcock 647083, Second Electrical Test Failure Analysis
619	Dual Nor Gate 1006321, Philco, Analysis of Rejects
622	Relay 1006282-2B, Babcock 533N 641001, Failure Analysis of Second Electrical Test Rejects
623	Micrologic 1004300, Fairchild, Determine Cause of Failure (New Post-Potting Fix)
624	Micrologic 1004300, Fairchild, Determine Cause of Failure
628	Nor Gate 1006771, Fairchild 538 ID 575145, Analysis of First, Second, and Third Electrical Test Failures
629	Transistor 1006323, Fairchild 534 ID 641979, Screen and Burn-in Failure of First Electrical Test
630	Transistor 1006323, Fairchild 534 ID 641976, Screen and Burn-in Failure of First Electrical Test

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
569	Diode 1006751, Texas Instruments ID 25223, Analysis of First Electrical Test Reject
570	Relay 1006772-4K, Clare 535 ID 647069, Failure Analysis
576	Diode 1006751, Texas Instruments ID 625015, Analysis of First Electrical Test Failure
580	Nor Gate 1004300/1006771, Fairchild ID 015021, Analysis of Reject
586	Diode 1006751, Texas Instruments ID 609173, Analysis of First Electrical Test Rejects, Screen and Burn-in
587	Diode 1006751, Texas Instruments 524 ID 609172, Screen and Burn-in Analysis of Third Electrical Test Rejects
588	Diode 1006751, Texas Instruments 520 ID 593050, Screen and Burn-in Analysis of First and Second Electrical Test Rejects
589	Transistor 1006323, Fairchild 534 ID 641002, Screen and Burn-in Analysis of First Electrical Test Rejects
590	Diode 1006751, Texas Instruments 520 ID N93061, Screen and Burn-in Analysis of First, Second, and Third Electrical Test Rejects
591	Transistor 1006759, Texas Instruments 530 ID 653026, Screen and Burn-in Analysis of First Electrical Test Reject
592	Transistor 1006323, Fairchild 530 ID 618082, Screen and Burn-in Analysis of Third Electrical Test Rejects
593	Transistor 1006759, Texas Instruments 506 ID 610029, Screen and Burn-in Analysis of Second Electrical Test Rejects
594	Transistor 1006629, Motorola 512 ID 565069, Screen and Burn-in Analysis of First Electrical Test Rejects
595	Diode 1006751, Texas Instruments ID 593058, Screen and Burn-in Analysis of Third Electrical Test Rejects
607	Transistor 1006751, Texas Instruments ID 593058, Screen and Burn-in Analysis of Third Electrical Test Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
631	Transistor 1006752, Fairchild 1513 ID 590010, Screen and Burn-in Failure of Third Electrical Test
640	Transistor 1006751-E, Texas Instruments 01506 ID 610, 9, Third Electrical Test Reject from Screen and Burn-in
641	Transistor 1006829, Motorola 521 ID 649124, Analysis of First Electrical Test Failure
642	Micrologic SCD 1006771, Particulara Mater. Study, Final Report on Micrologic Shorting
646	Transistor 1006828, Fairchild 534 ID 641977, Analysis of First Electrical Test Rejects
647	Diode 1006751K, Texas Instruments 015075, Analysis of Second Electrical Test Reject
648	Transistor 1006752-C, Texas Instruments 530 ID 606034, Analysis of First Electrical Test Failures
649	Transistor 1006823, Fairchild 534 ID 641976, Analysis of Second Electrical Test Failures
651	Transistor 1006828, Fairchild 534 ID 641978, Analysis of First Electrical Test Rejects
652	Diode 1006751K, Texas Instruments ID 625015, Analysis of Third Electrical Test Rejects
653	Transistor 1006823, Fairchild 534 ID 641002, Screen and Burn-in of Second Electrical Test Failures
656	Diode 1006751, Texas Instruments ID 625009, Analysis of First Electrical Test Rejects
657	Diode 1006751-L, Texas Instruments 625008, Analysis of First Electrical Test Reject
658	Diode 1006751-L, Texas Instruments 428 ID 64, Analysis of First Electrical Test Reject

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
659	Micrologic Field Reject, Fairchild A1-A16, Raytheon 151 RT 019940, Determine Cause of Failure (Phase 1)
660	Transistor 1006823, Fairchild 534 ID 641981, Analysis of Second Electrical Test Rejects
661	Transistor 1006810, Fairchild 531 ID 624009, Analysis of Third Electrical Test Failures
662	Integrated Sense Amplifier 1006769L, Norden 434 ID 640022, Analysis of First Electrical Test Catastrophic Failure
663	Diode 1006751, ITT, Prequalification Sample Analysis of Third Electrical Test Rejects
664	Micrologic Field Reject, Fairchild 522, Ray 158, Prepotting Test. Determine Cause of 1's Appearing in Logic Check
671	Micrologic 1004300-011, Fairchild RT 023504 LA30, 31, R17, Determine Cause of Only Logic 1's Appearing
672	Diode 1006751K, Texas Instruments ID 45223, Analysis of Second Electrical Test Rejects
673	Variable Coil 1006846, Delevan FT 020139, Failure Analysis
674	Relays, Clars ID 1000772, Determine Cause of Locking During Walkham Assembly and Effects of Wear
679	Diode 1006751-K, Texas Instruments ID V25223, Screen and Burn-in of Third Electrical Test Failures
684	Transistor 1006823, Motorola 537 ID 669106, Analysis of First Electrical Test Reject
685	K Core Assembly 1003153, Raytheon FT 015235, Failure Analysis
687	Transistor 1006823, Fairchild 534 ID 641979, Analysis of Second Electrical Test Failures
688	Transistor 1006823-A, Motorola 537 ID 669106, Analysis of Screen and Burn-in Failures
689	Transistor 1019376-1H, Fairchild 433 ID 626003, Analysis of Second Electrical Test Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
692	Sense Amplifier 1006769, Norden 6428, 6432, 6445, 6501 ID V25136, Analysis of First, Second, and Third Electrical Test Rejects
693	Diodes 1006751-L, Texas Instruments 536 ID 668092, Analysis of First Electrical Test Failures
698	Capacitor 1006755, Union Carbide 51; and 518 ID 674023, 680003, 662051, Vendor Surveillance
699	Capacitor 1006755, Sprague ID 664158, 664123, 664076, Vendor Surveillance
700	Transistor 1006323, Fairchild 534 ID 641978, Analysis of Second Electrical Test Failures
701	Diode 1006751-L, Texas Instruments ID 625008, Analysis of Second Electrical Test Failures
703	Resistor 1006750, Corning Glass 677073, 683978, 680976, 680977, 680259, 682083, 683977, 683976, Vendor Surveillance
704	Transformer, Raytheon Magnetics ID MEL 1054 P1, Determine Cause of Open Between Pins 9 and 10
705	Nor Gate 1006311, Philco 519, 521-524 ID 607XX7, Analysis of Rejects
706	Diodes 1006751-B, Texas Instruments ID 648045, Analysis of Third Electrical Reject
707	Transistor 1006752, Fairchild 513 ID 667030, Analysis of First Electrical Failures
708	Transistor 1006829, F. Motorola 512 ID 565069, Analysis of Second Electrical Failure
709	Relay 1006282-2, Babcock --- ID MDT 19466 Failure Analysis
711	Transistor 1006759-E, Texas Instruments 506 ID N27031, Analysis of Third Electrical Rejects
712	Transistor 1006753-E, Texas Instruments 506 ID 624031, Analysis of Third Electrical Rejects
SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
713	Integrated Sense Amplifier 1006769, Norden 6434, 6438, 644 ID V27043, Analysis of Electrical Test Rejects
714	Micrologic 1006771, Fairchild 422 ID 350084, Analysis of Electrical Test Failures
715	Micrologic 1006771, Fairchild Lot SL 525, Analyze Headers for Contamination Prior to Washer Assembly
717	Transistor 1006310-A, Transistron 534 ID 661098, Analysis of First Electrical Test Failures
723	Micrologic 1004300-011, Fairchild, Determine Cause of Short at Gate 67, Pin 3
729	Diode 1006751-J, Texas Instruments ID 625008, Analysis of Third Electrical Test Failures
731	Diode 1006751-K, Texas Instruments ID V25976, Analysis of First Electrical Test Failures
732	Transistor 1006323-A, Motorola 537 ID 669106, Analysis of Second Electrical Test Failure
733	Diode 1006751-L, Texas Instruments ID 625008, Analysis of Third Electrical Test Failures
734	Diode 1006751-B, Texas Instruments ID 676012, Analysis of Second Electrical Test Failures
735	Transformer, Technitrol ID 1006762, Determine Cause of Open at Pin 2
739	Transistor 1006323, Fairchild 534 ID 641002, Analysis of Third Electrical Test Rejects
740	Micrologic, Fairchild FT 019041, 020182, 024358, 024357 ID 1004300, Analyze Failures (Phantom Shorts)
741	Transistor 1006310B, Motorola 535 ID 658035, Analysis of First Electrical Test Rejects
744	Dual Nor Gate 1006321, Philco 522, 526, -9 ID 614XXX, Analyze Electrical Test Failures

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
746	Transistor 1006323, Fairchild 534 ID 641977, Analysis of Second Electrical Test Failures
747	Relay 1006262, Babcock MD 19454, Failure Analysis
751	Dual Nor Gate 1006321, Philco FT 018919, 024261, 019402, Analyze Failures
754	Nor Gate 1006771, Fairchild 514 FT 024335, Analyze Failure
755	Transistor 1006759-E, Texas Instruments 506 ID 635031, Analysis of Second Electrical Test Failures
756	Diode 1006751, Texas Instruments ID 625013, Analysis of First Electrical Test Failures
761	Transistor 1006310-B, Fairchild 535 ID 655106, Analysis of Third Electrical Test Failures
762	Transistor 1006323, Motorola 537 ID 669106, Analysis of Second Electrical Test Failures
763	Diode 1006751, Texas Instruments 536 ID 668092, Analysis of Second Electrical Test Failures
765	Transistor 1006323A, Motorola 535 ID 684977, Analysis of First Electrical Test Failures
766	Dual Nor Gate 1006321, Philco Diffusion Lot 59-5-1
770	Dual Nor Gate 1006321, Fairchild 527 ID V33005, Analysis of First, Second, and Third Electrical Test Rejects
771	Nor Gate 1006771, Fairchild 543 ID 682303, Analysis of Second and Third Electrical Test Rejects
774	Transistor 1006323-A, Motorola 535 ID 684976, Analysis of First Electrical Test Failures
776	Diode 1006751, Texas Instruments ID 625008, Diode Evaluation After Shock and Vibration Test No. 12 per ND1002264
777	Diode 1006751, Texas Instruments ID V25223, Diode Evaluation After Shock Vibration Test No. 12 per ND1002264

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
786	Micrologic 1004300, Fairchild 514 FT 019281, Determine Cause of Failure
787	Dual Nor Gate 1006321, Fairchild 516 ID V26097, Analysis of Rejects
790	Transistor 1006323-A, Motorola 535 ID 684978, Analysis of First Electrical Test Failure
795	Transistor 1006310-B, Fairchild 535 ID 655106, Analysis of Third Electrical Test Failures
796	Transistor 1006363-1, Texas Instruments 539 ID 687976, Analysis of Second Electrical Test Failure
797	Diode 1006838-D, Transatron ID 609206, Analysis of Tap Test of Diodes
800	Diode 1006290, Transatron ID 607128, Analysis of Diodes After Tap Testing
801	Transistor 1006323-A, Motorola 535 ID 684977, Analysis of Second Electrical Test
802	Flatpacks 1006321, Philco ID 666160, Analysis of First, Second, and Third Electrical Test Failures
810	Dual Nor Gate 1006321, Philco ID 635208, Analysis of First, Second and Third Electrical Test Rejects
811	Dual Nor Gate 1006321, Philco ID 653119, Analysis of First, Second and Third Electrical Test Rejects
815	Transistor 1006323, Fairchild 534 ID 674001, Analysis of First Electrical Test Failures
816	Transistor 1006323, Motorola 535 ID 684976, Analysis of Second Electrical Test Failures
817	Transistor 1010876-1H, Fairchild 435 ID 660075, Analysis of First Electrical Test Failures
818	Transistor 1006752-C, Texas Instruments 530 ID 666034, Analysis of Second Electrical Test Failures

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
815	Nor Gate 1006771, Fairchild 545 ID 694117, Analysis of First, Second, and Third Electrical Test Failures
820	Transistor 1006317-A, Honeywell 5193 ID 583976, Analysis of Third Electrical Test Reject
822	Transistor 1006310-B, Motorola ID 658035, Analysis of Second Electrical Test Rejects
823	Nor Gate 1006771, Fairchild 544 ID 698226, Analysis of Electrical Test Rejects
824	Dual Nor Gate 1006321, Fairchild 527, 532, ID E and D, A-163, AFR 8186, 8169, 8711 Device, Determine Cause of Failure
826	Diode 1006329, Transistron 52° ID 661097, Analysis of Third Electrical Test
828	Diode 1006751-K, Texas Instruments ID V25975, Analysis of Second Electrical Test
831	Diode 1006751-L, Texas Instruments 536 ID 66809, Analysis of Third Electrical Test
832	Transistor 1006752-C, Texas Instruments 530 ID 66976, Analysis of Third Electrical Test
836	Transistor 1006323A, Motorola ID 684978, Second Electrical Test Failure Analysis
837	Transistor 1006759-E, Texas Instruments ID 687169, Analysis of Second Electrical Test Reject
839	Diode 1006751-K, Texas Instruments ID V25977, Electrical Test After Shock and Vibration
840	Diode 1006751-L, Texas Instruments 536 ID 668092, Electrical Test After Shock and Vibration
841	Diode 1006751-K, Texas Instruments ID V25978, Electrical Test After Vibration and Shock
842	Diode 1006751-K, Texas Instruments ID V25976, Electrical Test After Shock and Vibration
SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
843	Transistor 1006323, Motorola 536 ID 684060, Analysis of Second Electrical Test
844	Transistor 1006323, Motorola 536 ID 684060, Analysis of Third Electrical Test
849	Dual Nor Gate 1006321, Fairchild 539 ID 694106, Analyze Electrical Test Failures
853	Dual Nor Gate 1006321, Fairchild ID 664009, Analysis of Electrical Test Failures
858	Diode 1006751-L, Texas Instruments 536 ID 668976, Analysis of Second Electrical Test Failure
859	Diode 1006751-L, Texas Instruments 536 ID 668976, Analysis of First Electrical Test Failures
860	Diode 1006751-K, Texas Instruments ID V25977, Analysis of First Electrical Test Rejects
861	Transistor 1006752-C, Texas Instruments 6530A ID 665034, Analysis of Third Electrical Test Rejects
862	Diode 1006751-L, Texas Instruments 536 ID 668092, Analysis of Third Electrical Test
863	Diode 1006751-K, Texas Instruments ID V25978, Analysis of First Electrical Test Rejects
866	Diode 1006751-L, Texas Instruments 536 ID 668976, Electrical Test After Shock and Vibration
867	Diode 1006751-L, Texas Instruments 538 ID 668979, Electrical Test After Shock and Vibration
869	Diode 1006751, Texas Instruments ID V25976, Analysis of Third Electrical Test Failures
871	Diode 1006751-K, Texas Instruments ID V25977, Analysis of Third Electrical Test
873	Dual Nor Gate 1006321, Philco 541 ID 67772, Analysis of Electrical Test Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
874	Dual Nor Gate 1006321, Philco ID 672032, Analysis of Electrical Test Rejects
875	Transistor 1006323-A, Motorola 535 ID 684060, Analysis of Second Electrical Test Rejects
878	Relay 1006772, C. P. Clare.AFR 8485, Failure Analysis
879	Relay 1006772, Sigma, Failure Analysis
880	Transistor 1006323, Motorola ID 684060, Analysis of Third Electrical Test Failures
881	Dual Nor Gate 1006321, Philco ID 682095, Analysis of Electrical Test Rejects
882	Core 1006320, Sprague 27 ID's, Analysis of Second Electrical Test Rejects
883	Relay 1006772, C. P. Clare EFT 013706, Failure Analysis
884	Transistor 1006323-A, Motorola 535 ID 684060, Analysis of Third Electrical Test Failures
885	Transistor 1006363-001, Solitron 547 ID 705209, Analysis of First Electrical Test Rejects
887	Diode 1006751-L, Texas Instruments 538 ID 668980, Electrical Test After Shock and Vibration
888	Transistor 1006323, Motorola 543 ID 710976, Analysis of Second Electrical Test Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
891	Transistor 1006322, Motorola 543 ID 710977, Analysis of Second Electrical Test Rejects
899	Diodes 1006751-L, Texas Instrument 536 ID 668776, Analysis of Third Electrical Test
900	Dual Nor Gate 1006321, Philco ID 697170, Analysis of First, Second, and Third Electrical Test Rejects
901	Dual Nor Gate 1006321, Philco ID 687234, Analysis of First, Second, and Third Electrical Test Rejects
902	Dual Nor Gate 1006321, Fairchild 539 ID 689082, Analysis of Results of Special Back Bias Test
903 or 903A	Dual Nor Gate 1006321, Philco ID 718115, Analysis of First Electrical Test Rejects, Analysis of Tests 3, 9, 11, and 16
909	Diode 1006751, Texas Instruments FTU24074, 019425, Determine Cause of Failure
910	Diode 1006751-K, Texas Instruments ID V25978, Analysis of Second Electrical Test Rejects
911	Transistor 1006326-Rev, Motorola 536 ID 687160, Third Electrical Failure Analysis
912	Micrologic 1004300-011, Fairchild EFT 019269, Inspect Gate for Possible Short
913	Transistor M1006323-A, Motorola ID 684976, Determine Cause of Third Electrical Test Failure
917	Nor Gate 1006771, Fairchild 548 ID 710279 and 719021, Analysis of First, Second, and Third Electrical Test Rejects
920	Diodes 1006751-K, Texas Instruments ID V25977, Analysis of Second Electrical Test Failures
921	Dual Nor Gate 1006321, Philco ID 692133, Analysis of Electrical Test Rejects
924	Micrologic Nor Gate 1006771, Fairchild EFT 011731, Field Reject, Analysis of Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
945	Micrologic 1004300-001, Fairchild EFT 018828, Inspect Gate for Possible Short
946	Diodes 1006751, Texas Instruments 540 ID 688983, Electrical Test After Shock and Vibration
948	Dual Nor Gate 1006321, Philco EFT 011615, Analyze Failed Component
949	Dual Nor Gate 1004301-001 (1006321), Philco ID EFT 013905 and 013909, Analysis of Failed Components
950	Diode 1006751, Texas Instruments 538 ID 668977, Electrical Test After Shock and Vibration
951	Diode 1006751-L, Texas Instruments 538 ID 668977, Analysis of Second Electrical Test Failures
952	Diode 1006751-L, Texas Instruments 538 ID 668977, Analysis of First Electrical Test Failures
953	Diode 1006751-L, Texas Instruments 538 ID 668979, Analysis of Second Electrical Tests
955	Diode 1006751-L, Texas Instruments 538 ID 668977 of Third Electrical Test Failures
956	Diode 1006751-L, Texas Instruments 538 ID 668979, Analysis of Third Electrical Test Failures
957	Diode 1006751-L, Texas Instruments: 38 ID 668979, Analyze First Electrical Test Failures
958	Diode 1006751-L, Texas Instruments 538 ID 68980, Analyze First, Second, and Third Electrical Test Failures
959	Dual Nor Gate 1006321, Fairchild ID 664015, Analysis of Electrical Test Rejects
961	Dual Nor Gates 1006321 and 1004301-001, Texas Instruments 443 and 441 EFT 011689, 011604, Analysis of Failed Devices

SUMMARY OF FAILURE ANALYSIS REPORTS	
MCGN	
	DESCRIPTION
	Dual Nor Gate 1006321, Philco ID 701100, Analysis of Electrical Test Rejects
	Dual Nor Gate 1006321, Fairchild 539 ID 669086, Analysis of Electrical Test Rejects
	Diodes 1006290, Transistron ID 705131, Electrical and Tap Test After Shock and Vibration
928	Transistor 1006310-B, Motorola 530 ID 658035, Analysis of Third Electrical Test
929	Transistor 1006752-C, Fairchild 513 ID 667029, Analysis of Third Electrical Test
931	Transistors 1006310-B, Motorola 530 ID 658025, Analysis of Third Electrical Test Rejects
932	Transistors 1006759-E, Texas Instruments 542 ID 693118, Analysis of Third Electrical Test Failures
933	Transistors 1006310-B, Motorola 530 ID 658035, Analysis of Second Electrical Test Failures
934	Transistor 1006752-C, Fairchild 511 ID 703005, Analysis of Second Electrical Test Failures
935	Transistor 1006323, Motorola 543 ID 710976, Analysis of Third Electrical Test Failures
936	Transistor 1006759-E, Texas Instrum. Its 542 ID 693118, Analysis of Second Electrical Test Failures
937	Transistor 1006759-E, Texas Instruments 542A ID 687169, Analysis of Third Electrical Test Failures
938	Diodes 1006751-L, Texas Instruments 538 ID 668981, Electrical Test After Shock and Vibration
940	Dual Nor Gates 1006321 and 1004301-001, Fairchild and others ID, Various Reject Tickets and Equipment Fault Tags, Analyze Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
962	Transistor 1006829-A, Motorola 521 ID 690089, Analysis of Second Electrical Test Failure
963	Transistor 1006752-C, Fairchild 511 ID 703005, Analysis of Third Electrical Test Failure
968	Diodes 1006838-D, Transistron ID 746027, Electrical and Tap Test After Shock and Vibration
971	Transistor 1006323, Motorola 543 ID 710977, Analysis of Third Electrical Test Failures
972	Transistor 1006752-C, Texas Instruments 541 ID 694078, Analysis of Third Electrical Test Failures
975	Diode 1006751-K, Texas Instruments 542 ID 688979, Electrical Test after Shock and Vibration
976	Dual Nor Gate 1006321-E, Philco ID 708022, Analysis of Second Electrical Test Failures
977	Diode 1006751-L, Texas Instruments 536 ID 669080, Electrical Test After Shock and Vibration
978	Diode 1006751-L, Texas Instruments 542 ID 688981, Electrical Test After Shock and Vibration
979	Diode 1006751-L, Texas Instruments ID 688978, Electrical Test After Shock and Vibration
981	Resistor 1006750-63, Transistor 2004004-001 R - Unknown, Fairchild EFT 012702, 012710, Determine Cause of Failure
983	Nor Gate 1006771, Fairchild 552 ID 728102, Analysis of Electrical Test Rejects
984	Dual Nor Gate 1006321, Philco EFT 012431, 012740, Analyze Rejects
985	Diodes 1006751-L, Texas Instruments 542 ID 688181, Electrical Test After Shock and Vibration
986	Diode 1006751-L, Texas Instruments 540 ID 688976, Electrical Test After Shock and Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
987	Dual Nor Gate 1006771, Fairchild EFT 013185, Report Findings
988	Zener Diode 1006838-D, Transistron ID 751140, Shock and Vibration Electrical and Tap Test
991	Diode 1006751-L, Texas Instruments ID 688977, Electrical Test After Shock and Vibration
992	Diodes 1006751-L, Texas Instruments ID P09085, Electrical Test After Shock and Vibration
993	Diode 1006751-L, Texas Instruments ID P09085, Electrical Test After Shock and Vibration
994	Diode 1006751, Texas Instruments 542 ID 688982, Electrical Test After Shock and Vibration
997	Diode, Texas Instruments, Analysis of First, Second, and Third Electrical Test Failures
998	Transistor 1006752-C, Fairchild 513 ID 667030, Analysis of Second and Third Electrical Test Failures
1000	Dual Nor Gate 1006321, Philco 549 ID 713086, Analysis of Electrical Test Failures
1001	Dual Nor Gate 1006321, Philco EFT 012995, Analysis of Failure
1002	Sense Amplifier 1006769, Norden 6515 EFT 013148, Analysis of Failed Component
1003	Dual Nor Gate 1006321, Fairchild ID 721029, Analysis of Electrical Test Failures
1004	Dual Nor Gate 1006321, Fairchild ID 689062, Analysis of Electrical Test Rejects
1005	Dual Nor Gate 1006321, Fairchild ID 729018, Analysis of Electrical Test Rejects
1011	Diode 1006300-B, Transistron 6510 ID 706177, Analysis of Second Electrical Test Failures

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1014	Transistor 1006752-C, Fairchild 542 ID 728066, Analysis of First Electrical Failure
1015	Transistor 1006753-E, Fairchild ID 737055, Analysis of First, Second, and Third Electrical Failures
1017	Transistor 1006823, Motorola 543 ID 710978, Analysis of Third Electrical Test Failures
1018	Transistor 1006823, Motorola 543 ID 710031, Analysis of Third Electrical Test Failures
1019	Transistor 1006759-E, Texas Instruments 542 ID 687170, Analysis of Third Electrical Test Failures
1020	Transistor 1006829-F, Motorola 521 ID 690089, Analysis of Third Electrical Test Failures
1021	Diode 1006751, Texas Instruments ID 069141, Electrical Test After Shock and Vibration
1023	Transistor 1006759-E, Texas Instruments 537 ID 706073, Analysis of Third Electrical Test Failures
1024	Transistor 1006759-E, Texas Instruments 542 ID 687171, Analysis of Third Electrical Test Failure
1025	Transistor 1006753, Texas Instruments 524 ID 623055, Analysis of Second and Third Electrical Test Failures
1026	Zener Diode 1006838-D, Transistron ID 751140, Determine Cause of Second Electrical Test Failure
1028	Nor Gate 1006771, Fairchild 603 and 604 ID 742103, 747026, 748012, 749065, 750065, Analysis of Test 3, 9, 11 Rejects
1030	Diode 1006751-L, Texas Instruments ID 069141, Analysis of Test 7 Rejects
1031	Transistor 1006752-C, Texas Instruments 541 ID 694077, Analysis of Test 13 Rejects
1034	Diodes 1006751-L, Texas Instruments ID 688976, Analysis of Test 9
SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1035	Diode 1006751-L, Texas Instruments ID 688976, Analysis of Test 9
1036	Diode 1006751-K, Texas Instruments ID 069139, Analysis of Test 7 Rejects
1037	Diode 1006751-L, Texas Instruments ID 069141, Analysis of Test 9 Rejects
1038	Diode 1006751-K, Texas Instruments ID P09082, Electrical Test After Shock and Vibration
1039	Diodes 1006751-K, Texas Instruments ID 069139, Electrical Test After Shock and Vibration
1040	Transistor 1006759E, Texas Instruments 506 ID 724129, Analysis of Test 9 Rejects
1041	Transistor 1006759E, Texas Instruments ID 721089, Analysis of Test 9 Rejects
1042	Diode 1006751-K, Texas Instruments ID P09082, Analysis of Test 7 Rejects
1045	Nor Gate 1006771, Phil. Screen and Burn-in, D95527
1046	Cores, Sprague, Analysis of Second Electrical Test Failures
1047	Diode 1006751-K, Texas Instruments ID 069135, Electrical Test After Shock and Vibration
1050	Diode 1006751, Texas Instruments EFT 027213, Determine Reason for Failure during Vibration
1051	Sense Amplifier, Norden 6434 ID V27043 or EFT 016952, Analyze Reject from Sense Amplifier Module
1052	Dual Nor Gate 1006321 (1004301-001) Philco Screen and Burn-in C71156 EFT 012946 ID 607977, Analyze Failure from CDU Read Counter, Ray 7
1054	Sense Amplifier 1006769, Norden ID V25136, Screen and Burn-in D45000, Analyze Electrical Test Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1055	Dual Nor Gate 1006321 (1004301-001), Philco EFT 011883, Analyze Failed Component
1058	Dual Nor Gate 1006321, Philco EFT 016839, Analyze Failed Components
1059	Nor Gate 1006771, Fairchild EFT 013679, 013963, ID 6090M, Analyze Failed Components
1061	Core 1006320-2, Arnold ID 771005, Analysis of Test 2 Rejects
1062	Diode 1006751-L, Texas Instruments ID 688977, Analysis of Test 9 Rejects
1063	Diode 1006751-L, Texas Instruments ID 688982, Analysis of Test 9 Rejects
1064	Diode 1006751-L, Texas Instruments ID 688982, Analysis of Test 4 Rejects
1065	Diode 1006751-L, Fairchild ID 735024, Analysis of Test 4 Rejects
1066	Diode 1006751-L, Texas Instruments ID 688977, Analysis of Test 7 Rejects
1067	Diode 1006751-L, Texas Instruments 542 ID 688979, Analysis of Test 9 Rejects
1068	Diode 1006751-L, Texas Instruments 538 ID 668981, Analysis of Test 4 Rejects
1069	Diode 1006751-L, Texas Instruments 538 ID 668981, Analysis of Test 7 Rejects
1070	Diode 1006751-L, Texas Instruments 538 ID 668981, Analysis of Test 9 Rejects
1071	Diode 1006751-L, Texas Instruments 540 ID 688983, Analysis of Test 4 Rejects
1072	Diode 1006751-L, Texas Instruments 540 ID 688983, Analysis of Test 7 Rejects
1073	Diode 1006751-L, Texas Instruments 542 ID 688981, Analysis of Test 7 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1074	Diode 1006751-L, Texas Instruments 542 ID 688981, Analysis of Test 9 Rejects
1075	Diode 1006751-L, Texas Instruments 542 ID 688979, Analysis of Test 4 Rejects
1076	Diode 1006751-L, Texas Instruments 542 ID 688979, Analysis of Test 7 Rejects
1077	Diode 1006751-L, Texas Instruments 542 ID 688980, Analysis of Test 4 Rejects
1078	Diode 1006751-L, Texas Instruments ID P09085, Analysis of Test 4 Rejects
1079	Diode 1006751-L, Texas Instruments 540 ID 688977, Analysis of Test 4 Rejects
1080	Diode 1006751-L, Texas Instruments ID 688978, Analysis of Test 7 Rejects
1081	Diode 1006751-L, Texas Instruments ID 688982, Analysis of Test 4 Rejects
1082	Diode 1006751-L, Texas Instruments 542 ID 688181, Analysis of Test 4 Rejects
1083	Diode 1006751-L, Texas Instruments ID 669080, Analysis of Test 9 Rejects
1084	Diode 1006751, Texas Instruments 542 ID 688980, Analysis of Test 9 Rejects
1085	Diode 1006751-L, Texas Instruments 542 ID 688980, Analysis of Test 7 Rejects
1086	Diode 1006751-L, Texas Instruments 542 ID 688979, Analysis of Test 9 Rejects
1087	Diode 1006751-L, Texas Instruments 542 ID 688982, Analysis of Test 7 Rejects
1088	Diode 1006751-L, Texas Instruments 540 ID 688976, Analysis of Test 4 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1089	Diode 1006751-J, Texas Instruments ID 069137, Analysis of Test 4 Rejects
1090	Diode 1006751-K, Texas Instruments ID P09082, Analysis of Test 4 Rejects
1091	Diode 1006751-L, Texas Instruments 542 ID 688980, Analysis of Test 7 Rejects
1092	Diode 1006751-L, Texas Instruments 540 ID 688977, Analysis of Test 7 Rejects
1093	Diode 1006751-L, Texas Instruments ID P09085, Analysis of Test 7 Rejects
1094	Diode 1006751-L, Texas Instruments 542 ID 688181, Analysis of Test 7 Rejects
1095	Diode 1006751-L, Texas Instruments 540 ID 688976, Analysis of Test 7 Rejects
1097	Nor Gate 1006771-X, Fairchild 605 ID 755075, Analysis of Tests 3, 9, and 11 Rejects
1100	Diode 1006751-K, Texas Instruments ID V25976, Analysis of Test 7 Rejects
1101	Diode 1006751-L, Texas Instruments ID P09085, Analysis of Test 9 Rejects
1102	Transistor 1006323, Motorola 546 ID 744062, Analysis of Test 13 Rejects
1103	Diode 1006751-L, Texas Instruments ID P09085, Analysis of Test 7 Rejects
1104	Transistor 1006323-B, Motorola 546 ID 771976, Analysis of Test 3 Rejects
1105	Diode 1006751-K, Texas Instruments ID 069135, Analysis of Test 9 Rejects
1106	Dual Nor Gate 1006321, Philco EFT 017129, Analysis of Rejected Component from Logic Module, Error Angle R-41

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1107	Transformer 1006293, Technitrol EFT 016566, Determine Cause of Intermittent Open
1108	Diode 1006751-K, Texas Instruments ID P09082, Analysis of Test 9 Rejects
1109	Diode 1006751-K, Texas Instruments ID P09082, Analysis of Test 7 Rejects
1110	Nor Gate 1006771, Fairchild 545 EFT 018298 ID 694117, Analysis of Rejected Component from Logic Module
1112	Cores 1006320-1 and -2, Sprague, Arnold, Analysis of Second Electrical Test Rejects
1113	Nor Gate 1006771, Fairchild 606 ID 760062, Analysis of Test 3, 9, and 11 Rejects
1114	Diode 1006751-L, Unitrode ID 769104, Analysis of Test 12
1117	Dual Nor Gate 1006321, Philco ID 687234, EFT 018132, 018133, Analyze Rejected Component from CDU Error Angle Counters R-55
1119	Sense Amplifier 1006769, Norden 6515 EFT 016551, Find Cause of Sense Amplifier Failure
1120	Diode 1006751-K, Texas Instruments ID V25976, Analysis of Special Rerun Test
1121	Diode 1006751-L, Texas Instruments ID 068982, Analysis of Test 7 Rejects
1122	Dual Nor Gate 1006321, Philco EFT 016807, ID 607976, Analysis of Failed Component from Read Counter R-29
1123	Zener Diode 1006838-D, Transistron ID P51077, Analysis of Test 14 Rejects
1126	Diode 1006751-L, Fairchild ID 771081, Analysis of Test 12
1129	Transistor 1006323-B, Motorola 541 ID 771134, Analysis of Test 9
1130	Diode 1006751-L, Unitrode ID 769104, Analysis of Test 4

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1174	Transistor 1006323-B, Motorola 541 ID 771134, Analysis of Test 13
1175	Diode 1006751-L, Fairchild ID 771081, Analysis of Test 4
1176	Diode 1006751-L, Unitorde ID 779104, Analysis of Test 7
1177	Diode 1006751, Fairchild ID 782023, Analysis of Test 12
1178	Diode 1006751, Texas Instruments FAR 90536
1179	Transistor 1006759-F, Fairchild 329 ID 753005, Analysis of Test 9
1180	Diode 1006838, Transistron ID 778010, Analysis of Test 11
1181	Transistor 1006759-F, Fairchild 329 ID 753005, Analysis of Test 13
1182	Transistor 1006323, Fairchild EFT 012069, 012574, 013677, Analysis of Failures
1183	Dual Nor Gate 1006321-E, Philco ID 741078, Analysis of Test 3, 9, 11, 13, and 16 Rejects
1184	Expander Gate 1006394, Philco ID 772011, Analysis of Tests 3, 9, 11, and 16
1185	Dual Nor Gate 1006321, Philco ID 747010, Analysis of Tests 3, 11, 9, and 16
1186	Cores, Sprague, Magnetics, Analysis of Second Electrical Test Rejects
1187	Zener Diode 1006838-D, Transistron 610 ID 787067, Analysis of Test 11
1188	Transistor 1006323-B, Motorola 535 ID 789031, Analysis of Test 3
1189	Zener Diode 1006290, Transistron ID 778157, Analysis of Test 14
1190	Zener Diode 1006290, Transistron ID 778137, Analysis of Test 11
1191	Transistor 1006310-C, Fairchild 550 ID 779079, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1170	Transistor 1006323-B, Motorola 546 ID 771976, Analysis of Test 13
1171	Diode 1006751-L, Fairchild ID 782023, Analysis of Test 9
1172	Diode 1006751-L, Fairchild ID 782023, Analysis of Test 7
1173	Transistor 2J18909-4, Texas Instruments EFT 018355, Analysis of Component Failure
1174	Transistor 1006310-C, Fairchild 550 ID 777092, Analysis of Test 9
1175	Nor Gate 1006771, Fairchild EFT 016548 Ray 221 AFR 6447, Analyze Rejected Component from Logic Module A1-A16.
1176	Transistor 1010376-1H, Fairchild 435 ID 776008, Analysis of Test 3
1177	Dual Nor Gate 1006321, Philco ID 756154, Checks on Screen and Burn-in Emitter Back Bias Results
1178	Nor Gate 1006771-K, Fairchild 603, 604 ID 784105, Analysis of Tests 1, 2, and 3
1179	Zener Diode 1006290, Transistron 610 ID 786167, Analysis of Test 11
1180	Sense Amplifier 1006769-K, Norden 431 ID M73082, Analysis of Tests 3, 9, and 14
1181	Dual Nor Gate 1006321-E, Philco 603, 604 ID 756154, Analysis of Tests 3, 9, 11, and 16
1182	Dual Nor Gate 1006321 (104FC-001), Philco ID 687234 EFT C-2829, Analysis of Rejects Component from A-12 Module R-5
1183	Transistor 1006310, Motorola ID 658035, Electrical Test After Acceleration at 30 g
1184	Transistor 1006310-C, Fairchild 550 ID 779079, Analysis of Test 9 Rejects
1185	Expander Gate 1006394, Philco ID 781154, Analysis of Test 3, 9, 11, and 16 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
P.A.R. NO.	DESCRIPTION
1206	Transistor 1006363-1, Solitron 605A ID 793096, Analysis of Tests 9 Rejects
1207	Transistor 1006752-C, Fairchild 548 L. 781035, Analysis of Test 13 Rejects
1208	Dual Nor Gate 1006321 (1004301-001), Philco ID 677072 EFT 026570, 010801, 010802, 010803, 010304, Investigate Possible Intermittent Shorts
1211	Dual Nor Gate 1006321, Philco ID 677072, Unit D97344
1212	Transistor 1006310-C, Fairchild 550 ID 777092, Analysis of Test 11 Rejects
1213	Transistor 1006310-B, Transistron 613 ID 767095, Analysis of Test 3 Rejects
1214	Transistor 100675-C, Fairchild 542 ID 728066, Analysis of Test 13 Rejects
1215	Sense Amplifier 1006769, Norden 6515 EFT 016956, 017182, Determine Cause of Failure
1218	Dual Nor Gate 1006321-E, Texas Instruments 6605 ID 759070, Analysis of Test 3, 9, 11, and 16 Rejects
1219	Diode 1006329-A, Transistron 548 ID 788018, Analysis of Test 7 Rejects
1220	Dual Nor Gate 1006321 (1004301-001), Philco EFT 010805, 010806, 01087 020552, 020562, Investigate Cause of Intermittent Short
1223	Expander: Gary 1006764, Philco ID 791026, Analysis of Tests 3, 9, 11, and 16
1224	Sense Amplifier 1006769 (2004003-001), Norden 6503 EFT 013129, Determination of Cause of Fault
1225	Sense Amplifier 1006769, Norden 6428 EFT 016559, Determine Cause of Fault
SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
P.A.R. NO.	DESCRIPTION
1228	Zener Diode 1006290, Transistron 610 ID 765976, Analysis of Test 7
1229	Transistor 1006752-C, Fairchild 548 ID 781034, Analysis of Test 13
1230	Transistor 1006323-B, Motorola 612 ID 805977, Analysis of Test 3
1232	Transistor 2004094-001, Raytheon MDT 27231, Determine Cause of Open Emitter
1236	Transistors 2N918, Motorola, Electrical and Physical Evaluation
1238	Nor Gate 1006771, Fairchild 607 ID 768137, 783001, 784106, Analysis of Tests 3, 9, 11, and Special
1239	Transistor 1006323, Motorola 543 ID 710977, Analysis of Special Test
1242	Transistor 1006323-B, Motorola 612 ID 802976, Analysis of Test 13
1243	Transistor 1006310-B, Fairchild 550 ID 777092, Analysis of Test 9
1245	Transistor 1006310-C, Fairchild 550 ID 777092, Analysis of Test 13
1249	Transistor, 1006323, Fairchild 534, Motorola 534, ID Fairchild 674976, 641979; Motorola 641981, Thermal Resistance Measurements to Find Defective Die to Header Bonds
1251	Transistor 1006310-C, Fairchild 550 ID 777092, Analysis of Test 13
1252	Nor Gate 1006771-K, Fairchild 614 ID 802221, Analysis of Tests 3, 9, and 11
1253	Dual Nor Gate 1006321, Philco ID 781065, 781067, Analysis of Tests 3, 9, 11, and 16
1254	Nor Gate 1006771-K, Fairchild 605 ID 755075, Analysis of Tests 1, 2, 3, and Special
1257	Transistor 1006323-B, Motorola 612 ID 805976, Analysis of Test 13

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1285	Diode 1006751-L, Texas Instruments Q14046, Analysis of Test 12 Rejects
1286	Sense Amplifier 1006769-L, Signetics 614 ID 811169, 811186, Analysis of Test 3, 9, and 14 Rejects
1287	Transistor 1006323, Motorola 543 ID 710977, Special Test
1288	Diode 1006751-L, Texas Instrument ID 814976, Analysis of Test 12 Rejects
1289	Diode 1006751-L, Texas Instruments ID Q14977, Analysis of Test 12 Rejects
1290	Nor Gate 1006771 (1004300-011), Fairchild 01-525 ID 609014, EFT 017580, FAR 11444, Determine Cause of Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1259	Transistor 1006323-B, Motorola 541 ID 771977, Analysis of Test 13
1260	Transistor 1010376-IJ, Fairchild 546 ID 777007, Analysis of Second Electrical Test
1261	Transistor 1006323-B, Motorola 612 ID 802977, Analysis of Test 13
1262	Transistor 1006323-B, Motorola 612 ID 802978, Analysis of Test 13
1263	Transistor 1006323, Motorola 543 ID 710976, Analysis of Special Test
1266	Nor Gate 1006771-K, Fairchild ID 760962, Analysis of Special Tests 1, 2, and 3
1268	Transistor 1006827, Honeywell EFT 021090, Determine Reason for C to E Short
1269	NPN Transistor 1006323B (2004004-001), Motorola EFT 022370, Determine Cause of Failure
1271	Sense Amplifier 1006769-L, Signetics 614 ID 81116, 811186, Test 15
1277	Dual Nor Gate 1006321-E, Philco ID 775003, Analysis of Tests 3, 9, 11, and 16
1278	Dual Nor Gate 1006321, Philco ID 769003, Analysis of Tests 3, 9, 11, and 16
1279	Cores, Sprague, Test 2
1280	Core 1006320 ID, Sprague, Analysis of Test 2
1282	Thermistor 1006715-1, Fenwal QA51L6 PC 53-3315 SL-013, Fenwal 31266, Retest of Fenwal Thermistors Rejected by ETL
1283	Expander Gate 1006394, Philco ID 807098 and 80797 Analysis of Tests 3, 9, 11, and 16
1284	Transistors 1006323, Motorola EFT 017736, 017287, 022428, Analysis of Failures

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1292	Relay 1010784-009, Babcock 6651N EFT 017708, Determine Cause of Failure of Indicator. Driver Module at System Test
1302	Diode 1006751-L, Texas Instruments ID 814976, Analysis of Test 7 Rejects
1303	Diode 1006751-L, Texas Instruments ID 814976, Analysis of Test 9 Rejects
1304	Diode 1006751-L, Texas Instruments ID 814976, Analysis of Test 4 Rejects
1305	Diode 1006751-L, Texas Instruments ID 814976, Analysis of Test 7 Rejects
1306	Thermistor 1006715-2, Fenwal FAR 9147, Analysis of Failure
1307	Diode 1006399, Texas Instruments ID 825298, 844207, Analysis of Test 4, 7, and 9 Rejects
1308	Transistors 2004004-001, Motorola EFT 017338, 017339, Analysis of C to F and E to B Shorts
1310	Diode 1006399-A, Texas Instruments ID 844976, Analysis of Test 12 Rejects
1311	Diode 1006751-L, Texas Instruments ID Q14977, Analysis of Test 7 Rejects
1312	Diode 1006751-L, Texas Instruments ID Q14977, Analysis of Test 4 Rejects
1313	Diode 1006751-L, Texas Instruments ID Q14046, Analysis of Test 9 Rejects
1314	Diode 1006751-L, Texas Instruments ID Q14046, Analysis of Test 4 Rejects
1315	Diode 1006751-L, Texas Instruments ID Q14046, Analysis of Test 4 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1316	Diode 1006751-L, Texas Instruments ID Q14977, Analysis of Test 9 Rejects
1318	Sense Amplifier 1006769, Norden 610-613, ID 816977, 816143, 795034, 816976, Analysis of Test 3, 9, and 14 Rejects
1319	Transistor 2004004-001, Motorola EFT 28299, Rope Driver S/N 36, Determine Reason for P-E and B-C Opens
1320	C-8 1006755, Q-2 1006827, Q-1 1003089-2, C-Unknown, Q-2 MH, Q-1 Motorola EFT 015292, 021090, 022802, Determine Causes of Failure
1321	Diode 1006300, Transistron FAR 9177, Determine Reason for High V _F
1324	Dual Nor Gate 1006321-E, Fairchild ID 794040, Analysis of Test 3, 9, 11 and 16 Rejects
1325	Expander Gate 1006394 (1004301-002), Philco Production Lot H07A12, Examine Electrically and Visually for Induced Damage
1326	Nor Gate 1006771-K, Fairchild 615 ID 802220, 806189, 825134, Analysis of Test 3, 9, 11, and 13 Rejects
1327	Zener Diode 1006838, Transistron 610 ID 802046, Tap Test
1329	Micrologic 1006771-K, Fairchild 616 ID 814125, 828116, Analysis of Test 3, 9, 11, and 13 Rejects
1330	Dual Nor Gate Flat Pack 1006321, Philco ID 80706, Analysis of Test 3, 9, 11, and 16 Rejects
1331	Transistor 1006310-B, Motorola 530 ID 058979, Analysis of Test 3 Rejects
1332	Sense Amplifier 1006769-L, Norden 442 ID 799016, Analysis of Test 3, 9, and 14 Rejects
1333	Transistor 1006323, Fairchild 635 ID V34982, Analysis of Test 3 Reject,

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1351	Diode 1006399-A, Texas Instruments ID 844976, Analysis of Test 4 Rejects
1352	Diode 1006751-L, Texas Instruments ID 840039, Analysis of Test 4 Rejects
1353	Transistor 1006323-C, Fairchild 635 ID V34979, Analysis of Test 13 Rejects
1354	Transistor 1006323-B, Motorola 612 ID 848021, Analysis of Test 13 Rejects
1355	Transistor 1006323-B, Motorola 612 ID 848022, Analysis of Test 13 Rejects
1356	Diode 1006399-A, Texas Instruments ID 844976, Four Units Damaged by TACT Machine, One Unit Failed at Burn-In Test Station
1357	Dual Nor Gate Flat Pack 1006321, Philco ID 781065, Continuity Rejects
1361	Transistor 1006323-C, Fairchild 635 ID V34978, Analysis of Test 3 Rejects
1362	Dual Nor Gate 1006321 (1004301-001), Philco EFT 017761, ID 741078, Determine Cause of Failure
1363	Transistor 1006317-001, Honeywell EFT 017523, Determine Reason for Failure
1370	Diode 1006399-A, Texas Instruments ID 844976, Analysis of Test 9 Rejects
1373	Transistor 1006323-B, Motorola 612 ID 848022, Analysis of Test 9 Rejects
1374	Transistor 1006323-C, Fairchild 635 ID V34176, Analysis of Test 9 Rejects
1375	Transistor 1006323-C, Fairchild 635 ID V37978, Analysis of Test 3 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1334	Transistor 1006323, Fairchild ID V34982, V34976, V34978, V34985, V34983, V34979, V34981, V34986, Analysis of Special Test
1335	Transistor 1006323, Fairchild V34979, Analysis of Special Test 3
1336	Transistor 2003140-011, Motorola EFT 28289, from Rope Driver S/N 36, Determine Reason for B-E and B-C Opens
1339	Diode 1006329-A, Transatron 548 ID 772116, Analysis of Test 7 Rejects
1340	Transistor 1006323-C, Fairchild 635 ID V34977, Analysis of Test 3 Rejects
1341	Transistor 1006323-C, Fairchild 635 ID V34176, Analysis of Test 3 Rejects
1342	Transistor 1006323-C, Fairchild 635 V34082, Analysis of Test 9 Rejects
1343	Diode 1006751-L, Texas Instruments ID 8149797, Analysis of Test 12 Rejects
1344	Transistor 1006323-C, Fairchild 635 ID V34976, Analysis of Test 9 Rejects
1346	Dual Nor Gate 1006321-E, Fairchild ID 770008, Analysis of Test 0, 3, 9, 11, and 16 Rejects
1347	Nor Gate 1006771, Fairchild 514 EFT 017576, FAR 12951, Determine Cause of Failure
1348	Diode 1006399-A, Texas Instruments ID 844207, Analysis of Test 12 Rejects
1349	Diode 1006751-L, Texas Instruments ID 840976, Analysis of Test 12 Rejects
1350	Diode 1006751-L, Texas Instruments ID 840039, Analysis of Test 12 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1377	Transistor 1006323-C, Fairchild 635 ID V37978, Analysis of Test 9 Rejects
1378	Transistor 1006323-C, Fairchild 635 ID V34980, Analysis of Test 3 Rejects
1379	Transistor 1006323-C, Fairchild 635 ID V34982, Analysis of Test 3 Rejects
1380	Transistor 1006323, Motorola 612 ID 805979, Analysis of Test 9 Rejects
1382	Transistor 1006759, Texas Instruments FAR 8409, Determine Cause of C to B Short
1383	Nor Module 1014034, Apollo GSE EFT 017209, FAR 12648
1384	Zener Diode 1006701, Dickson FAR 8402, Determine Cause of Shorts
1385	Nor Gate 1004301-001, Philco EFT 28772, Determine Cause of Failure
1386	Transistor 2N918, Fairchild 030-D, Determine Cause of Failure
1389	Transistor 1006323-C, Fairchild 635 ID V34984, Analysis of Test 3 Rejects
1390	Transistor 1006323-C, Fairchild 635 ID V34985, Analysis of Test 3 Rejects
1391	Diode 1006791-L, Texas Instruments ID 840976, Analysis of Test 4 Rejects
1393	Transistor 1006323-C, Fairchild 635 ID V34983, Analysis of Test 3 Rejects
1394	Transistor 2004004-001, EFT 017969-28286, Failure Analysis
1397	Transistor 1006323-C, Fairchild 635 V34176, Analysis of Test 13

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1398	Diode 1006751-L, Texas Instruments ID 840977, Analysis of Test 4
1399	Transistor 1006323-C, Fairchild 635 ID V34982, Analysis of Test 13
1400	Diode 1006399-A, Texas Instruments ID 852084, Analysis of Test 4
1401	Diode 1006399-A, Texas Instruments ID 844976, Analysis of Test 4
1402	Diode 1006751-L, Texas Instruments ID 840977, Analysis of Test 4
1403	Transistor 1006323, Fairchild 635 ID V37979, Determine Cause of Failure during 2000 Hour Intermittent Life Test
1404	Transistor 1006323, Motorola ID 805980, 831028, 789031, 771134, 849009, 849007, 849010, 849011, 852017, Determine Cause of Failure during 2000 Hour Intermittent Life Test
1405	Diode 1006399-A, Texas Instruments ID V36033, Analysis of Test 4
1406	Diode 1006399, Texas Instruments ID 834001, Analysis of Test 4
1407	Diode 1006399, Texas Instruments ID 834001, Analysis of Test 4
1408	Diode 1006751-L, Texas Instruments ID 840039, Analysis of Test 7
1409	Diode 1006399-A, Texas Instruments ID 844207, Analysis of Test 7
1410	Diode 1006399-A, Texas Instruments ID 844207, Analysis of Test 4
1411	Diode 1006399, Texas Instruments ID 832009, Analysis of Test 4

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1412	Diode 1006751-L, Texas Instruments ID 840039, Analysis of Test 7
1413	Transistor 1006323-C, Motorola ID 710977, Analysis of Special Retest
1414	Transistor 1006323-B, Motorola 612 ID 831028, Analysis of Test 3
1416	Nor Gate 1006771 (1004300-011), Fairchild 615 EFT 017888, FAR 11716, ID 806189 Screen and Burn-in J17992, Determine Cause of Failure
1417	Transistor 1006310-B, Motorola ID 058979, Analysis of Test 9
1418	Transistor 1006363-2, Solitron 603 ID 812110, Analysis of Test 3
1419	Transistor 1006310-B, Motorola 530 ID 058979, Analysis of Test 3
1420	Transistor 1006323-B, Motorola 612 ID 805977, Analysis of Test 13
1421	Transistor 1006323-C, Fairchild 635 ID V37976, Analysis of Test 3
1422	Transistor 1006323-C, Fairchild 635 ID V34976, Analysis of Test 9
1423	Transistor 1006323-C, Fairchild 635 ID V37977, Analysis of Test 3
1425	Diode 1006751-L, Continental Devices ID 805256, Analysis of Test 12
1426	Diode 1006751-L, Texas Instruments ID Q14980, Analysis of Test 12
1427	Diode 1006399-A, Texas Instruments ID V36033, Analysis of Test 12

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1428	Diode 1006399-A, Texas Instruments ID 852084, Analysis of Test 12
1429	Diode 1006751-L, Texas Instruments ID 840976, Analysis of Test 9
1430	Zener Diode 1006838, Transitron 623 ID 841119, Analysis of Test 11
1431	Transistor 1006323-C, Fairchild 635 ID V34979, Analysis of Test 9
1432	Diode 1006751-L, Texas Instruments ID 840039, Analysis of Test 9
1433	Diode 1006751-L, Texas Instruments ID 840976, Analysis of Test 7
1434	Transistor 1006323-C, Fairchild 635 ID V34978, Analysis of Test 9 Rejects
1435	Diode 1006399-A, Texas Instruments ID 844207, Analysis of Test 9
1438	Diode 1006751-L, Texas Instruments ID Q14980, Analysis of Test 9
1439	Diode 1006751-L, Texas Instruments ID Q14980, Analysis of Test 4
1440	Diode 1006751-L, Texas Instruments ID 814979, Analysis of Test 4
1441	Diode 1006399-A, Texas Instruments ID 870978, Analysis of Test 4
1442	Dual Nor Gate 1006321, Fairchild 538 FAR 12662, From Computer Assembly (PC-4), Determine Cause of Failure
1443	Transistor 1006323-C, Fairchild 635 ID V37014, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1444	Dual Nor Gate 1006321-E, Fairchild ID P70009, Analysis of Tests 3, 9, 11, and 16
1446	Diode 1006751-L, Continental Devices ID 805256, Analysis of Test 4
1449	Transistor 2004004-001, Motorola EFT 38784 and 39176, FAR 11717, Determine Cause of E-B Open
1450	Transistor 1006323, Motorola and Fairchild, 2000 Hour Intermittent Life Test, Analysis of Failures during Life Test
1451	Diode 1006399-A, Texas Instruments ID 870976, Analysis of Test 4
1452	Relay 1006772, C.P. Clare ID F, G, H, I, X, Visual Observation of Relay Behavior Under Vibration
1455	Dual Nor Gate 1006321-F, Philco ID 815028, Analysis of Tests 3, 9, 11, and 16
1456	Diode 1006399-A, Texas Instruments ID 870034, Analysis of Test 3
1457	Diode 1006399-A, Texas Instruments ID 877056, Analysis of Test 4
1458	Diode 1006751-L, Texas Instruments ID 840977, Analysis of Test 7
1459	Diode 1006751-L, Texas Instruments ID 814979, Analysis of Test 9
1461	Sense Amplifier 1006769-L, Norden 620, 621 ID 842037, Analysis of Tests 3, 9, 11, and 14
1462	Transistor 1006323, Motorola ID G623660, EFT 017945, Determine Reason for Lack of Output
1463	Transistor 1006323, Motorola ID G623676, E T 34931, Determine Reason for Lack of Output
1464	Transistor 1006323, Motorola ID G623676, EFT 34932, Determine Reason for Lack of Output

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1465	Transistor 1006323, Motorola 543, 612, Analysis of 2000 Hour Intermittent Life Test
1466	Sense Amplifier 1006769, Norden 613 ID 795034, Analysis of Test 4
1467	Lamp Driver 1006481, Dialco ID N/A, EFT 34803, FAR 13006, Determine Cause of Short
1468	Diode 1006399-A, Texas Instruments ID 852084, Analysis of Test 13
1469	Transistor 1006323, Motorola ID G21345, EFT 28622, Determine Cause of Rejection
1470	Transistor 1006323, Motorola ID G26248, EFT 39056, Determine Cause of Emitter-Base Open
1471	Transistor 1006310, Motorola ID G19829, EFT 017984, Determine Cause of Short
1472	Transistor 1006310, Motorola ID G19829, EFT 39159, Determine Cause of High Leakage
1473	Transistor 1006323, Motorola ID G21345, 7Q3, EFT 28621, Analysis of Part Failure
1474	Transistor 1006323, Motorola ID G23660, EFT 28695, Determine Nature and Cause of Defect
1475	Transistor 1006323, Motorola ID G23676, EFT 28290, Determine Cause of B-C Short
1476	Transistor 1006310, Motorola ID G19829, EFT 39017, Determine Reason for B-E Open
1479	Transistor 1006310, Motorola ID G19829, EFT 39038, Determine Cause of Leakage
1480	Transistor 1006323, Motorola ID V34976, EFT 014559, Determine Cause of High IC EX Reading

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1482	Transistor 1006310, Motorola ID G19829, Q12, EFT 39058, Determine Why Transistor Does Not Turn Off
1483	Diode 1006751, Texas Instruments ID G68979, CR41, EFT 39059, Determine Cause of Short
1484	Transistor 1006310, Motorola ID G19829, Q12, EFT 34910, Determine Cause of CE Leakage
1487	Transistor 1006323, Motorola ID G21327, Q24, Q2, EFT 39012, 39040, FAR 12966, Determine Reason for Absence of Output
1488	Transistor 1006323, Motorola ID G21327, Q24, Q2, EFT 39019, 39039, FAR 12965, Determine Reason for Absence of Output
1489	Transistor 1006323, Motorola 612 ID G23676, 9Q7, EFT 28637, Analysis of Failed Transistor
1490	Transistor 1006310, Motorola ID G19829, Q23, EFT 017870, Determine Reason for Lack of Output
1491	Transistor 1006310, Motorola ID G19829, 423, EFT 28771, Determine Reason for B-B Open
1492	Transistor 1006310, Motorola ID G19829, Q23, EFT 34980, Determine Cause of Open
1493	Transistor 1006323-C, Fairchild 635 ID V37976, Analysis of Test 9
1494	Transistor 1006310, Motorola EFT 014553, Determine Cause of E-B Open
1495	Transistor 2094004-001, Motorola EFT 017842, 017802, Q2 and Q12, Failure Analysis
1497	Transistor 1006310, Motorola ID G19829, EFT 39057, Determine Cause of E-B Open
1498	Transistor 1006323, Motorola ID G26253, EFT 39041, Determine Cause of Low Beta

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1499	Diode 1006701, Dickson FAR 8408, Determine Reason for Diode Degradation
1500	Expander Gate 1006394, Philco ID 825195, Investigate Apparent Discrepancies in Screen and Burn-In Readings
1501	Diode 106399-A, Texas Instruments ID 879977, Analysis of Test 4
1502	Transistor 1006323, Motorola 620 ID 856978, Analysis of Test 9
1503	Diode 1006838-D, Transistron 623 ID 841119, Analysis of Part Failure
1507	Transistor 1006323, Motorola ID G21345, Q25, EFT 28766, Analysis of Part Failure
1508	Diode 2004102-001, Texas Instruments ID G68960, CR-26, EFT 28315, Determine Why Unit is Open
1509	Transistor 1006323, Motorola 612 ID G26173, Q24, EFT 28770, Analysis of Part Failure
1511	Transistor 1006323-C, Fairchild 635 ID V37014, Analysis of Test 9
1512	Dual Nor Gate 1005321 (1004301-001), Philco 05-5-48 Screen and Burn-in 20945, EFT 38783, AFR 12962, Determine Cause of Failure
1513	Transistor 1006310-D, Motorola 622 ID 877011, Analysis of Test 3
1514	Transistor 1006759, Texas Instruments FAR 8415, Determine Cause for Low Beta
1515	Transistor 1006310, Motorola Q12, EFT 34992, Determine Cause of High Leakage Current
1517	Transistor 1006323-C, Fairchild 635 ID V34977, Analysis of Test 9

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1518	Transistor 1006323-C, Fairchild 635 ID V34985, Analysis of Test 9
1519	Transistor 1006323-C, Fairchild 635 ID V34981, Analysis of Test 9
1520	Dual Nor Gate 1006321-F, Philco ID 826037, Analysis of Tests 3, 9, 11, and 16
1521	Triple Three Input Gate, Radiation SCD 2621509, Poseidon, Failure Analysis
1522	Lamp Driver 1006481, Dialco ID XDS67, EFT 30864, FAR 12970, Determine Cause of E-C Short
1524	Diode 1006751-L, Texas Instruments ID 840977, Analysis of Test 12
1525	Diode 1006399-A, Texas Instruments 623 ID 870978, Analysis of Test 12
1526	Transistor 1006323-C, Fairchild 635 ID V37978, Analysis of Test 13
1527	Transistor 1006310-B, Motorola 530 ID 058979, Analysis of Test 13
1529	Transistor 1006310-D, Motorola 622 ID 877011, Analysis of Test 9
1530	Zener Diode 1006701 Dickson FAR 8408A, Determine Cause of High Leakage
1531	Transistor 1006310-D, Motorola 622 ID 879073, Analysis of Test 3
1532	Dual Nor Gate 1006321-F, Philco ID 830009, Analysis of Test 3, 9, 11, and 16
1533	Transistor 1006310, Motorola ID G19829, Q1, EFT 39150, Determine Cause of Excessive Leakage
1534	Transistors 1006310 and 1006323, Motorola and Raytheon ID P020 (Ray 116), P022 (Ray 40), Determine Mode and Cause of Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1537	Lamp Driver 1006481-A1, Dialco ID XDS81, EFT 34802, FAR 13006, Determine Cause of E-B Open
1538	Lamp Driver 1006481, Dialco ID XDS30, EFT 34847, Determine Cause of C-E Short
1539	Lamp Driver 1006481, Dialco ID XDS29, EFT 34846, Determine Cause of B-E Open
1540	Lamp Driver 1006481, Dialco ID XDS31, EFT 34844, Determine Cause of C-E Short
1541	Lamp Driver 1006481-A1, Dialco ID DS-11, EFT 17576, Determine Reason for No Output
1542	Lamp Driver 1006481, Dialco ID XDS19, EFT 17694, Determine Reason for E-B Open
1543	Lamp Driver 1006481, Dialco ID XDS83, EFT 28305, Determine Cause of B-C Short
1544	Lamp Driver 1006481-A1, Dialco ID XDS69, EFT 14256, Determine Cause of B-C Open
1545	Lamp Driver 1006481, Dialco ID XDS11, EFT 28309, Determine Cause of Open Unit
1546	Lamp Driver 1006481, Dialco ID XDS22, EFT 38761, Determine Cause of Failure
1547	Zener Diode 1006838, Transistor 623 ID 850116, Analysis of Test 11
1548	Transistor 1006323-C, Fairchild 635 ID V34978, Analysis of Test 13
1549	Diode 1006399-A, Texas Instruments ID 870978, Analysis of Test 7
1550	Diode 1006399-A, Texas Instruments ID 852084, Analysis of Test 9

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1566	Transistor 1006317-1A, Solitron 6603AK, ID 747008, Analysis of Test 13
1569	Triple-Three Input Gate, Motorola ID 2618801, SCD 2621509, Failure Analysis
1571	Transistor 1006323-C, Fairchild 635 ID V34985, Analysis of Test 13
1572	Transistor 1006323, Fairchild 635 ID V34980, Analysis of Test 9
1573	Diode 1006399-A, Texas Instruments ID 870976, Analysis of Test 7
1574	Transistor 1006323-C, Fairchild 635 ID V34985, Analysis of Test 9
1575	Transistor 1006323-C, Fairchild 635 ID V34984, Analysis of Test 9
1576	Transistor 1006137-1, Solitron 6603 ID 747008, Analysis of Third Electrical Test
1577	Diode 1006399, Texas Instruments 623 ID 870978, Analysis of Test 7
1578	Transistor 1006323, Fairchild 635 ID V34980, Analysis of Test 13
1579	Diode 1006399, Texas Instruments Special, Analysis of Test 12
1580	Diode 106399-A, Texas Instruments ID 870979, Analysis of Test 7
1581	Transistor 1006323-C, Fairchild 635 ID V34984, Analysis of Test 13
1583	Transistor 1006310, Motorola EFT 34978, Determine Reason for C to E Short
1584	Transistor 1006310, Motorola ID G14672, Q13, EFT 30856, Determine Cause of High Leakage

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1552	Transistor 1006323, Motorola ID G27507, Q25, EFT 014171, Determine Reason for C-B Open
1553	Dual Nor Gates 1006321-F, Philco ID 833009, Analysis of Tests 3, 9, 11, and 16
1553-A	Dual Nor Gates 1006321, Philco 32-6-20 ID 833009, Unit G78749, Reexamination of Screen and Burn-in Failure
1554	Diode 1006751, Texas Instruments 7CR6, EFT 022274, Analysis of Part Failure
1555	Transistor 1006323, Motorola ID G23676, Q4, EFT 28292, Determine Cause of B-C Short
1556	Transistor 1006323, Motorola ID G23660, Q3, EFT 28700, Determine Cause of E-B Open
1557	Transistor 1006323, Motorola ID G23660, Q8, EFT 17944, Determine Cause of E-B Open
1558	Diode 1006399, Texas Instruments 623 ID 870977, Analysis of Test 12
1559	Zener Diode 1006290, Transitron 623 ID 849113, Analysis of Test 11
1560	Zener Diode 1006290, Transitron 5182 ID 841108, Analysis of Test 11
1561	Transistor 1006310, Motorola 622 ID 879073, Analysis of Test 9
1562	Diode 1006399, Texas Instruments ID 870978, Analysis of Test 9
1563	Transistor 2004004-001, Motorola ID 069976, EFT 30859, FAR 10654, Failure Analysis
1564	Dual Nor Expander Gate Flat Pack 1006394, Philco ID 825976, 825977, 825195, Analysis of Tests 3, 9, 11 and 16
1565	Diode 1006399-A, Texas Instruments ID V36033, Analysis of Test 9

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1602	Transistor 1006323, Motorola ID Q4, EFT 39685, Determine Cause of B-E Open
1603	Transistor 1006323, Motorola ID Q5, EFT 39065, Determine Cause of Failure
1604	Transistor 1006310-D, Fairchild 602 ID 887978, Analysis of Test 3
1605	Nor Gate 1006771, Fairchild 605 ID 760662, EFT 38623 and 38685, Determine Cause of Failures
1606	Dual Nor Gate 1006321 (1004301-001), Philco 26-5-42 ID 682093, EFT 32464, Determine Cause of Failure
1607	Transistor 1006310, Motorola ID G14672, EFT 30806 and 30807, Failure Analysis
1608	Diode 1006399-A, Texas Instruments ID 852084, Analysis of Test 7
1609	Nor Gate 1006771, Fairchild 602 ID 739085, EFT 023349, Determine Cause of Failure
1612	Nor Gate 1006771, Raytheon 418 ID V22065, EFT 022369, Determine Cause of Failure
1614	Dual Nor Gate 1006321, Fairchild ID P70009, EFT 31045, Determine Cause of Failure
1617	Transistor 1006323, Motorola ID Q5, EFT 3902, Determine Cause of Collector-Chassis Leakage
1618	Diode 1006399, Texas Instruments ID 852084, Determine Cause of Short during Vibration Testing
1619	Nor Gate 1006771 (1004300-011), Fairchild 525 ID 609014, EFT 27943, FAR 8459, Determine Cause of Failure
1620	Dual Nor Gate Flat Pack 1006321-F, Philco ID 842008, Analysis of Tests 3, 9, 11, 14, and 16

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1585	Transistor 1006323, Motorola ID G23676, Q5, EFT 28291, Determine Cause of B-C Short
1587	Transistor 1006323, Motorola ID G26237, 1Q7, EFT 31072, Determine Cause of Open
1588	Transistor 1006323, Motorola ID M-2, M-15, N- Determine Cause of Failure during Motorola 2000 Hour Life Test
1589	Transistor 1006310, Motorola ID 9-110, Determine Cause of Failure during Motorola 2000 Hour Life Test
1591	Nor Gate 1006771 (1004300), Fairchild 514 ID 58705, EFT 28255, Determine Cause of Failure
1592	Diode 1006399, Texas Instruments ID 889976, Analysis of Test 4
1593	Diode 1006399-A, Texas Instruments ID 844207, Analysis of Test 7
1594	Lamp Driver 1006481, Dialco ID XDS15 and 67, EFT 34806, Determine Cause of Shorts
1595	Lamp Driver 1006481, Dialco ID XDS29, EFT 34804, Determine Cause of Short
1596	Lamp Driver 1006481, Dialco ID XDS68, EFT 28761, Determine Cause of Short
1597	Quad Two-Input DTL Gate Dual Four-Input Line Driver, Signetics ID 618-624, Failure Analysis
1599	Nor Gate 1006771, Fairchild 605 ID 755075, EFT 39173, Determine Cause of Failure
1600	Nor Gate 1006771 (1004300-011), Fairchild 614 ID 802221, EFT 28675, Determine Cause of Failure
1601	Transistor 1006323, Motorola ID Q2, EFT 30945, Determine Cause of Emitter-Collector Short

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1621	Nor Gate 1006771 (1004300-011), Fairchild 543 ID 682303, EFT 27349, FAR 6166, Determine Cause of Failure
1622	Diode 1006751, Texas Instruments ID CR-38, EFT 0172, Determine Cause of Low Temperature Failure
1623	Diode 1006399-A, Texas Instruments ID 870034, Analysis of Test 7
1624	Diode 1006399-A, Texas Instruments ID 870034, Analysis of Test 9
1625	Transistor 1006310-D, Fairchild 532 ID 887978, Analysis of Test 9
1626	Diode 1006399-A, Texas Instruments ID 852084, Analysis of Test 12
1627	Diode 1006399-A, Texas Instruments ID 870979, Analysis of Test 9
1628	Transistor 1006310-D, Fairchild 632 ID 887976, Analysis of Test 3
1629	Transistor 1006323-C, Motorola 63P, ID 887153, Analysis of Test 3
1632	Diode 1006399 (formerly 1006751-L), Continental Devices ID 805256, Analysis of Test 9
1634	Nor Gate 1006771 (1004300-011), Fairchild 544 ID 688226, EFT 014124, FAR 14556, Determine Cause of Failure
1635	Transistor 1006310-D, Motorola ID 879073, Analysis of Test 11
1639	Transistor 1006310-D, Fairchild 632 ID 887977, Analysis of Test 9
1640	Transistor 1006310, Motorola 622 ID 877011, Analysis of Test 13
1642	Transistor 1006363-001, Solitron ID MHT 6579, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1643	Transistor 1006323, Motorola Q4 and Q5, Apollo EFT 32441 and 30944, Determine Reason for Shorts
1644	Diode 1006399-A, Texas Instruments ID 870979, Analysis of Test 7
1645	Diode 1006399-A, Texas Instruments ID 870056, Analysis of Test 7
1649	Diode 1006399, Texas Instruments 023 ID 870976, Analysis of Test 9
1650	Diode 1006399, Texas Instruments 623 ID 870976, Analysis of Test 7
1651	Diode 1006399-A, Texas Instruments ID 870056, Analysis of Test 9
1657	Diode 1006399-A, Texas Instruments ID V36033, Analysis of Test 10
1658	Transistor 1006323-C, Fairchild 635 ID V34976, Analysis of Test 13
1661	Dual Nor Gate Flat Pack 1006321-F, Philco ID 844025, Analysis of Tests 3, 11, 16, and 19
1662	Transistor 1006323, Fairchild 633 ID V34977, Analysis of Test 13
1664	Dual Nor Gate 1006321, Philco ID 854145, Analysis of Tests 3, 9, 11, and 16
1665	Dual Nor Gate Flat Pack 1006321-F, Philco 625 ID 850070, Analysis of Tests 3, 9, 11, and 16
1666	Micrologic 1006771, Fairchild ID 83842, EFT 34901, FAR 5343, Analysis of Failure
1667	Transistor 1006310, Fairchild ID Q8, EFT 32478, FAR 10680, Determine Cause of Emitter-Base Open

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1672	Transistor 1006310, Fairchild 632 ID 887979, Analysis of Test 9
1673	Transistor 1006323-C, Motorola 630 ID 887976 Analysis of Test 9
1674	Transistor 1006310 (2004004-002), Motorola Q12, EFT 25816, Determine Cause of Open Emitter
1675	Transistor 1006323, Fairchild 635 ID V37014, Analysis of Test 13
1679	Transistor 1006310, Fairchild 632 ID 887976, Analysis of Test 9
1680	Transistor 1006310, Motorola ID Q16 EFT 30802, Determine Cause of Improper Pulse Characteristics
1681	Transistor 1006323, Fairchild 633 ID V34977, Analysis of Test 9
1682	Transistor 1006323, Fairchild 635 ID V37014, Analysis of Test 9
1683	Nor Gate 1006771, Fairchild ID 83850 EFT 38690 FAR 5344, Failure Analysis
1684	Transistor 1006323, Motorola ID A-17 E-20, Analysis of Failures of 2,000-Hour Intermittent Life Test
1685	Transistor 1006310, Fairchild ID 4-70, Determine Cause of Unit Failure in 2,000-Hour Intermittent Life Test
1686	Nor Gate 1006771, Fairchild EFT 28346 FAR 5340, Failure Analysis
1687	Core 1006320-1E, Sprague 481 ID 889976, Failure Analysis
1688	Core 1006320-1E, Sprague 469 ID 880976, Failure Analysis
1691	Transistor 1006323-C, Fairchild 635 ID V37976, Analysis of Test 13
1694	Micrologic 1006321 (1004301-001), Philco 46 6-17 ID 826037 FAR 14962, Failure Analysis
1697	Transistor 1006310-D, Motorola 632 ID 879073, Analysis of Test 9

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1698	Zener Diode 1006838 (2004112-002), Transistron H02046 CR-5 CR-9 EFT 32412 and 32411, Determine Cause of Failure
1699	Transistor 1006323 (2004004-001), Motorola ID G27430 Q2 EFT 25885, Determine Cause of Emitter Base Open
1700	Transistor 1006310-D, Motorola 633 ID 903008, Analysis of Test 9
1703	Micrologic 1004301-001, Philco ID 6-572 EFT 27820 FAR 15134, Determine Why Gate Would Not Switch
1704	Zener Diode 1006838-D, Transistron 636 ID 898145, Analysis of Test 7
1706	Transistor 1006310-D, Motorola 622 ID 879073, Analysis of Test 13
1707	Diode 2004103-001, Texas Instruments CR5 EFT 25817, Determine Cause of High Leakage
1708	Sense Amplifier 2004003-001, Norden 6442 ID G147830 3SA1 EFT 26448, Analysis of Failure
1711	Flatpack 1006321 (1004301-001), Philco EFT 27804 ID 815028 FAR 14964, Failure Analysis
1712	Diode 1006751 (2004103-002) Texas Instruments EFT 32409 ID Q14977 CR
1715	Diode 1006399-A, Texas Instruments ID V36033, Analysis of Test 4 Rejects
1717	Diode 1006399, Texas Instruments ID V36033, Failure Analysis
1721	Transistor 1006323, Motorola EFT 27810 3Q2 FAR 15139, Determine Cause of Emitter Base Open
1722	Micrologic 1004301-001, Philco EFT 017887 FAR 14152 ID 687A17, Failure Analysis
1724	Transistor 1006310, Motorola Q1 EFT 28098, Determine Cause of Leakage Current
1725	Micrologic 10063201 (1004301-011), Philco 446-03 ID 756154 EFT 35443 FAR 15001, Failure Analysis
1726	Micrologic 1006321 (1004301-001), Philco 446-03 ID 756154 EFT 35465 FAR 15001, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1731	Transistor 1006310, Fairchild 550 ID 2-34, 2-35, Analysis of EPT Failures
1732	Transistor 1006323, Motorola 535 and 612 ID A-3, E-17, G-16, H-38, Analysis of EPT Failures
1733	Transistor 1006323, Fairchild ID 904029, and V349, Determine Extent of Screen and Burn-in Damage on Transistors
1736	Diode 1006399 (2004183-001), Texas Instruments ID CR-20 EFT 26558. Determine Cause of Intermittent Open
1737	Sense Amplifier 1006769-L, Signetics 622 ID 847043, Analysis of Test 3, 9, 11, and 14 Rejects
1739	Micrologic 1006771-E, Fairchild ID 350084 EFT 34822 AFR 5339, Failure Analysis
1746	Transistor 1006310 (2004004-002), Motorola ID Q13 EFT 39631, Determine Cause of Base Collector Short
1747	Diode 1006751 (2004103-001), Texas Instruments ID CR-4 EFT 39642, Determine Cause of Short
1748	Diode 1006751 (2004103-001), Texas Instruments ID CR EFT 26405, Determine Cause of Short
1749	Flatpack 1006321, Philco EFT 27444, Failure Analysis
1750	Flatpack 1006321 (1004301-001), Philco 26 6-15 EFT 27936 ID 815028, Failure Analysis
1753	Dual Nor Gate-Flatpack 1006321, Fairchild ID V38106, Analysis of Tests 3, 9, 11, and 16
1755	Transistor 1006323-C, Fairchild 635 ID V37977, Analysis of Test 13 Rejects
1756	Dual Nor Gate - Flatpack 1006321, Philco ID 869064, Analysis of Probable Defect
1758	Flatpack 1006321, Philco FAR 8467-8470 ID H5132, Failure Analysis
1760 & 1760A	Dual Nor Gate-Flatpack 1006321 (1004301-001), Philco 33-5-48 EFT 27813 FAR 14943, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1762	Diode 1006399-A, Texas Instruments ID 852084, Analysis of Test 7 Rejects
1763	Diode 1006399 (2004183-001), Texas Instruments CR-42 EFT 30386 ID 844207, Failure Analysis
1765	Diode 1006751 (2004103-001), Texas Instruments CR-42 EFT 25815, Determine Cause of Failure
1766	Transistor 1006323-C, Motorola 630 ID 887977, Analysis of Test 13 Rejects
1768	Transistor 1006323, Motorola, Intermittent Life Test
1770	Transistor 1006323-C, Motorola 630 ID 887976, Analysis of Test 13 Rejects
1772	Zener Diode 1006838-D, Transitron 636 ID 898145, Analysis of Test 11 Rejects
1773	Diode 1006399-A, Continental Devices ID 924976, Analysis of Test 4 Rejects
1775	Transistor 1006310-D, Fairchild 632 ID 887026, Analysis of Test 13 Rejects
1776	Transistor 1006310-D, Fairchild 632 ID 887978, Analysis of Test 13 Rejects
1777	Flatpack, Signetics, Apollo Aux. Memory Failure Analysis
1778	Flatpack 1006321 and 1006324, Philco EFT 30484 ID 653119, Failure Analysis
1780	Micrologic 1006771-K, Fairchild 615 ID 886011, Analysis of Test 3, 9, 11, and 13 Rejects
1781	Diode 1006399-A, Continental Devices ID 924048, Analysis of Test 4 Rejects
1782 & 1782A	Transistor 1006310, Fairchild ID 777092, 655976, 2N930, Lead Bond Integrity
1783	Diode 1006751, Texas Instruments EFT 32264, Failure Analysis
1784	Dual Nor Gate-Flatpack 1006321-F, Philco ID 869064, Analysis of Tests 3, 9, 11, and 16

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1785	Diode 1006399-A, Texas Instruments ID 870056, Analysis of Test 4 Rejects
1786	Diode 1006399-A, Texas Instruments ID 870034, Analysis of Test 4 Rejects
1788	Dual Nor Gate-Flatpack 1006321-F, Philco 627 ID V42010, Analysis of Tests 11 and 16
1789	Dual Nor Gate-Flatpack 1006321-F, Philco ID V36058, Analysis of Tests 3, 9, 11, and 16
1790	Dual Nor Gate-Flatpack 1006321-E, Fairchild ID P85041, Analysis of Test 3 Rejects
1791	Diode 1006399-A, Texas Instruments ID 870078, Analysis of Test 4 Rejects
1793	Diode 1006399, Texas Instruments CR-6 EFT 29951, Failure Analysis
1794	Nor Gate 100672, Fairchild 605 ID 755975 EFT 30630, Failure Analysis
1795	Diode 1006399-A, Texas Instruments ID 870056, Analysis of Test 4 Rejects
1796	Diode 1006399-A, Texas Instruments ID 852084, Analysis of Test 4 Rejects
798	Diode 1006399-A, Texas Instruments ID 870976, Analysis of Test 4 Rejects
1799	Diode 1006399-A, Texas Instruments ID 852084, Analysis of Test 4 Rejects
1800	Dual Nor Gate 1006321 (1004301-001), Philco EFT 35448 ID 692133, Failure Analysis
1801	Dual Nor Gate 1006321 (1004301-001), EFT 26246 ID 830009, Failure Analysis
1803	Diode 1006399-A, Texas Instruments ID 870056, Analysis of Test 7 Rejects
1804	Sense Amplifier 1006769 (2004003-001), Norden 6610 EFT 32287, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1805	Transistor 2N2410, Texas Instruments FAR 10544, Failure Analysis
1806	Transistor 1006310, Motorola EFT 30214 FAR 14973, Failure Analysis
1811	Diode 1006399, Texas Instruments EFT 38378, Failure Analysis
1812	Diode 1006399, Texas Instruments EFT 38323, Failure Analysis
1813	Diode 1006399, Texas Instruments ID 870034, Analysis of Test 7 Rejects
1814	Dual Nor Gates 1006321 (1004301-001), Philco EFT 30270, 30269, 35514, 35513 FAR 14964, 15002 ID 756154, Failure Analysis
1816	Diodes 1006399, Texas Instruments, Analysis of Test 4 Rejects
1817	Diode 1006399, Texas Instruments ID 870976, Analysis of Test 7 Rejects
1818	Dual Nor Gate 1006321 (1004301-001), Philco 25-6-24 ID 850070, Analyze Broken Device
1820	Transistor 1006310 (2004004-002), Motorola EFT 38434, Failure Analysis
1822	Diode 1006399-A, Continental Devices ID 924976, Analysis of Test 7 Rejects
1823	Diode 1006399-A, Continental Devices ID 924048, Analysis of Test 12 Rejects
1824	Diode 1006399-A, Continental Devices ID 924976, Analysis of Test 12 Rejects
1826	Transistor 1006323-C, Motorola 30 ID 887979, Analysis of Test 13 Rejects
1827	Diode 1006399-A, Fairchild ID 937048, Analysis of Test 4 Rejects
1828	Sense Amplifier 1006769 (2004003-001), Norden 170 Date Code 6501 EFT 39418, Failure Analysis
1830	Diode 1006399-A, Continental Devices ID 924048, Analysis of Test 7 and 9 Rejects
1831	Diode 1006399-A, Continental Devices ID 933977, Analysis of Test 4, 7, and 9 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1832	Diode 1006 Back Bias + Texas Instruments FAR 66-094-1,
1834	Lamp Driver 1006481-A1, Dialco FAR 15176, Failure Analysis
1836	Diode 1006399-A, Texas Instruments ID 870979, Analysis of Test 4 Rejects
1837	Sense Amplifier 1006769, Norden 6432 EFT 38590, Related EFT 39417, Failure Analysis
1838	Dual Nor Gate 1006321 (1004301-001), Philco 01-6-27 ID 854145 EFT 39410, Failure Analysis
1839	Dual Nor Gate 1006321 (1004301-001), Philco 26-6-22 ID 844025 EFT 30210, Failure Analysis
1844	Transistor 1006310-D, Fairchild 632 ID 887976, Analysis of Test 13
1845	Transistor 1006310-D, Fairchild 632 ID 887979, Analysis of Test 13
1846	Transistor 1006323-C, Fairchild 638 ID 904029, Analysis of Test 7
1849	Diode 1006399-A, Texas Instruments ID V36033, Analysis of Test 4
1850	Flatpack 1006321, Philco EFT 35488 AFR 14037, Failure Analysis
1851	Flatpack 1006321, Philco 346-22 ID 844025 EFT 38350, Failure Analysis
1852	Diode 1006399-A, Continental Devices ID 924976, Analysis of Test 9
1854	Sense Amplifier 1006769, Signetics ID 915006, Analysis of Tests 3, 9, 11, and 14
1856	Transistor 1006317-A, Solitron 603 ID 799103, Analysis of Test 9
1858	Diode 1006399-A, Continental Devices ID 932203, Analysis of Test 4

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1859	Diode 1006399-A, Texas Instruments ID 870978, Analysis of Test 7
1860	Diode 1006399-A, Texas Instruments ID 870979, Analysis of Test 7
1861	Transistor 1006323, Fairchild EFT 33938, Failure Analysis
1862	NPN Transistor 2004004-001 Q34, Motorola EFT 023208, Determine Reason for Operational Failure at Low Temperature
1863	Diode 1006399, Texas Instruments, Determine Cause of Failure
1864	Dual Nor Gate 1006321 (1004301-001), Philco 44-6-03 ID 756154 EFT 30271 FAR 15001, Determine Cause of Failure
1875	Transistor 1006323, Motorola EFT 34004, Failure Analysis
1876	Transistor 1006323, Motorola EFT 33421, Failure Analysis
1877	Transistor 1006323, Fairchild 638 ID 904029, Analysis of Test 13
1878	Transistor 1006310, Fairchild, Motorola 100632 ID 21, 110, 130, Analysis of Life Test Failures
1880	Dual Nor Gate 1006321 (2004301-011), Philco 11-5-48 ID 708022 EFT 34534 AFR 16402, Analyze Rejected Device
1881	Transistor 1006310, Fairchild, Motorola ID 90, 190, Determine Cause of Life Test Failures
1882	Diode 1006399, Texas Instruments ID K91938 FAR 66-094-3, Determine Cause of 168-Hour Back Bias Test Failure
1883	Diode 1006399, Texas Instruments F. T. R. 66-094-4, Determine Cause of 168-Hour Burn-In Failures
1884	Dual Nor Gate 1006321 (1004301-001), Philco 08-6-06 EFT 35564, Determine Cause of Failure
1885	Flatpack 1006321, Philco ID 815028 EFT 38561, Failure Analysis
1887	Transistor 1006323, Motorola, Determine Cause of 168-Hour Life Test Failure
1890	Diode 1006399, Texas Instruments ID 844207 EFT 014571, Determine Cause of Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1891	Sense Amplifier 1006769-M, Signetics ID 919035, Analysis of Test 14
1892	Sense Amplifier 1006769 (2004003-001), Norden 6621 EFT 38510, 33511, 33512, Determine Cause of Part Failures
1895	Diode 1006399-A, Continental Devices ID 933977, Analysis of Test 9
1896	Dual Nor Gate 1006321, Philco ID 869064, Find Reason for Inability to Operate on Burn-In Rack
1897	Diode 1006399-A, Fairchild ID 946054, Analysis of Test 9
1898	Transistor 1006310-D, Motorola 633 ID 903008, Analysis of Test 13 Rejects
1899	Transistor 1006310-D, Fairchild 632 ID 887977, Analysis of Test 13
1900	Transistor PNP 1006310, Motorola, Determine Cause of 2,000-Hour Life Test Failure
1901	Diode 1006399-A, Texas Instruments ID 897173, Analysis of Test 7
1902	Diode 1006399-A, Continental Devices ID 933976, Analysis of Test 12
1903	Diode 1006399-A, Continental Devices ID 933977, Analysis of Test 12
1904	Diode 1006399-A, Continental Devices ID 933008, Analysis of Test 12
1905 & 1905A	Dual Nor Gate-Flatpack 1006321-F, Philco ID 886018, Analysis of Test 3, 9, 11, and 16 Rejects and Analysis of Test 11
1906	Dual Nor Gate 1006321 (1004301-001), Philco 41-5-47 ID 708022 EFT 38553 to 38557 and 38578, Determine Cause of Intermittent Fault
1907	Diode 1006399-A, Continental Devices ID 952054, Analysis of Test 12
1908	Diode 1006399-A, Continental Devices ID 933976, Analysis of Test 4, 7, and 9 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
FAYTHEON	
FAR NO.	DESCRIPTION
1909	Diode 1006399-A, Continental Devices ID 943037, Analysis of Test 12
1910	Diode 1006399-A, Continental Devices ID 952076, Analysis of Test 12
1912	Diode 1006399-A, Texas Instruments ID 897173, Analysis of Test 4
1913	Thermistor 1006712-1, Gulton FAR 15093, Analysis of Failures During Qualification Tests
1914	Dual Nor Gate-Flatpacks 1006394, Philco 629 ID 858977, 858976, 858092, Analysis of Test 9, 11, and 16 Rejects
1915	Dual Nor Gate 1006321 (1004301-001), Philco 09-6-17 ID 815028 EFT 33945, Determine Cause of Failure
1916	Expander Gate, 1006394 (1004301-002), Philco EFT 38337, Determine Cause of Failure
1917	Transistor 1006323, Motorola EFT 011406, Failure Analysis
1918	Sense Amplifier 1006769 (2004003-001), Norden 621 EFT 27249, Determine Cause of Failure
1927	Transistor 1006323, Fairchild 644 ID 964981, Analysis of Test 3 Rejects
1931	Diode 1006399-A, Continental Devices ID 952054, Analysis of Test 4 Rejects
1932	Sense Amplifier 1006769 (2004003-001), Norden 6450 EFT 33952 Determine Cause of Failure
1933	Transistor 1006310, Motorola 615 ID 966034, Analysis of Test 9 Rejects
1934	Transistor 1006323, Fairchild 644 ID 964978, Analysis of Test 3 Rejects
1935	Diode 1006399, Texas Instruments, Determine Cause of 168-Hour Burn-In Failures
1936	Transistor 1006753, Texas Instruments EFT 38597 FAR 7870, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1942	Dual Nor Gate 1006321 (1004301-001), Philco 21-6-19 ID 826037 EFT 27483, Determine Cause of Failure
1943 & 1943A	Micrologic 1006771, Fairchild ID 2566-Lot N EFT 38563, FAR 12535, Failure Analysis
1944	Transistor 1006310, Fairchild EFT 33159, Failure Analysis
1947	Diode 1006751, Texas Instruments, EFT 33747, Determine Cause of Failure
1948	Zener Diode 1006290, Transifron, Determine Cause of Failure
1949	Flatpack 1006321, Philco DC 386-21 EFT 27395 AFR 17408, Failure Analysis
1950	Diode 1006399-A, Continental Devices ID 933008, Analysis of Test 7 and 9 Rejects
1951	Dual Nor Gate Flatpack 1006321 (1004301-001), Philco 12-6-20 ID 830009 EFT 34021, Determine Cause of Failure
1952	Transistor 1006323, Fairchild G08713 EFT 33283, Determine Cause of Failure
1953	Transistor 1006323, Fairchild G08713 EFT 33284, Determine Cause of Failure
1955	Transistor 1006310, Fairchild and Motorola, Determine Cause of Life Test Failure
1957	Diode 1006399-A, Continental Device Corp. ID 952054, Analysis of Test 4, 7, and 9 Rejects
1958	Thermistor 1006715-2, Fenwal FAR 15094, Determine Cause of Failure
1959	Sense Amplifier 1006769, Signetics, Determine Cause of Failure
1960	Expander Gate 1006394 (1004301-002) Philco 22-6-18 EFT 38346, Determine Cause of Failure
1961	Diode 1006399-A, Texas Instruments ID 897173, Analysis of Test 7 Rejects
1962	Diode 1006399-A, Texas Instruments ID 897173, Analysis of Test 9 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1963	Diode 1006399-A, Texas Instruments ID 897173, Analysis of Test 3 Rejects
1964	Diode 1006399-A, Fairchild ID 94054, Analysis of Test 15 Rejects
1965	Sense Amplifier 1006769 (2004003-001), Norden 621 EFT 37000, Analyze Suspect Device
1966	Transistor 1006310-D, Fairchild 632 ID 887026, Analysis of Test 3 Rejects
1967	Diode 1006399-A, Fairchild 643 ID 965119, Analysis of Test 4 Rejects
1969	Diode 1006399-A, Continental Devices ID 943037, Analysis of Test 9
1970	Diode 1006399-A, Continental Devices ID 952976, Analysis of Test 4, 7, and 9 Rejects
1971	Diode 1006399-A, Fairchild ID 946054, Analysis of Test 4 Rejects
1972	Dual Nor Gate 1006321, Philco 66-6-28 ID 69064, Analysis of Special Test
1973	Diode 1006399-A, Texas Instruments ID 889038, Analysis of Test 4 Rejects
1975	Sense Amplifier 1006769 (2004003-001), Norden 613 EFT 33751
1976	Dual Nor Gate 1006321 (1004301-001), Philco 02-6-22 ID 842008 EFT 36851 FAR 16954, Determine Cause of Failure
1977	NPN Transistor 1006323 (2004004-001), Motorola 612 EFT 36831, 36832, Determine Cause of Failure
1979	Transistor 1006310-D, Motorola 633 ID 903008, Analysis of Test 9
1980	Transistor 1006323-C, Fairchild 644 ID 964976, Analysis of Test 3 Rejects
1981	Diode 1006399-A, Texas Instruments ID 897173, Analysis of Test 15 Rejects
1982	Diode 1006399-A, Texas Instruments ID 889038, Analysis of Test 15 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2006	Diode 1006399-A, Fairchild ID 965119, Analysis of Test 3 Rejects
2007	Diode 1006399-A, Fairchild ID 946054, Analysis of Test 7 and 9 Rejects
2008	Transistor 1006323-C, Fairchild 644 ID 964976, Analysis of Test 9
2009	Diode 1006399-A, Fairchild ID 965119, Analysis of Test 15 Rejects
2010	Diode 1006399, Texas Instruments ID R70038, Analysis of Test 3
2011	Diode 1006399-A, Texas Instruments ID S70034, Analysis of Test 12
2012	Diode 1006399-A, Fairchild ID 965119, Analysis of Test 7 Rejects
2013	Dual Nor Gate 1006321-F, Philco 4-6-21 and 05-6-21 ID 833009, Analysis of Fourth Electrical Test Rejects
2014	Diode 1006399-A, Texas Instruments ID 889038, Analysis of Test 7
2015	Transistor 1006323, Motorola EFT 36853, 36854 FAR 17791, Determine Cause of Failure
2016	Diode 1006399, Fairchild ID 770038, Analysis of Failures of Special Lot Evaluation from Screen and Burn-In
2017	Diode 1006399-A, Continental Devices ID 967040, Analysis of Test 15
2018	Diode 1006399-A, Fairchild 643 ID 965119, Analysis of Test 9 Rejects
2019	Diode 1006399-A, Continental Devices ID 967040, Analysis of Tests 4 and 7
2020	Diode 1006399, Continental Devices ID 933976, Analysis of Special Burn-In Test
2021	Diode 1006399, Continental Devices ID 933977, Analysis of Two Special Tests
2022	Diode 1006399-A, Texas Instruments ID 889976, Analysis of Test 9
2023	Transistor 1006323-C, Fairchild 644 ID 964981, Analysis of Test 9
2024	Transistor 1006323, Fairchild EFT 36996, Determine Cause of Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
1983	Diode 1006399-A, Texas Instruments ID 889976, Analysis of Test 15 Rejects
1984	Transistor 1006323-C, Fairchild 644 ID 964977, Analysis of Test 3
1987	Dual Nor Gate 1006321, Philco 43-6-26 and 52-6-26 ID V42010, Analysis of Fourth Electrical Test Rejects
1988	Flatpack 1006321-F, Philco ID 879016, Analysis of Test 3, 9, and 16 Rejects
1989	Transistor 1006323-C, Fairchild 644 ID 964978, Analysis of Test 9
1990	Transistor 1006323-C, Fairchild 644 ID 964979, Analysis of Test 9
1991	Diode 1006399-A, Fairchild ID 946054, Analysis of Test 12 Rejects
1992	Diode 1006399-A, Fairchild ID 946054, Analysis of Test 7 Rejects
1993	Diode 1006399-A, Texas Instruments ID 889976, Analysis of Test 7 Rejects
1994	Transistor 1006323, Fairchild EFT 33441, Determine Cause of Failure
1995	Transistor 1006323 (2004184-005), Fairchild EFT 36933, Determine Cause of Failure
1996	Dual Nor Gate 1006321 (1004301-001), Philco 02-6-22 ID 842008 EFT 36803 FAR 17005, Determine Cause of Failure
1998	Dual Nor Gate 1006321 (1004301-001), Philco 2-6-22 ID 8 2008 EFT 37511, Determine Cause of Failure
1999	Dual Nor Gate 1006321 (1004301-001), Philco 11-5-48 ID 708022 EFT 27081, 27082, Determine Cause of Failure
2000	Dual Nor Gate 1006321 (1004301-001), Philco 33-6-16 ID 815028 EFT 33422, Determine Cause of Failure
2001	Transistor 1006310-D, Motorola 615 ID 966034, Analysis of Test 16 Rejects
2004	Diode 1006399, Continental Devices ID 933976, Analysis of Test 12
2005	Transistor 1006323-C, Fairchild 644 ID 964007, Analysis of Test 13 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2025	Transistor 1006323-C, Fairchild 644 ID 964982, Analysis of Curve Tracer Test
2026	Transistor 1006323-C, Fairchild 644 ID 964977, Analysis of Test 9
2027	Diode 1006399-A, Texas Instruments ID 889038, Analysis of Test 3
2028	Diode 1006399-A, Texas Instruments ID 889038, Analysis of Test 7
2030	Transistor 1006323, Fairchild 644 ID 964978 and 964007, Test 17, Internal Visual
2031	Transistor 1006323, Fairchild EFT 36815, Determine Cause of Failure
2032	Transistor 1006323, Fairchild 644 ID 964980, Test 17, Internal Visual
2033	Expander Gate 1006394, Philco 06-6-28, 60-6-18, 01-6-28, 61-6-18, 51-6-27 ID 888092, 888977, Fourth Electrical Test Rejects
2034	Diode 1006399-A, Fairchild ID 965119, Analysis of Test 7
2035	Transistor 1006323, Fairchild 644 ID 964982, Analysis of Test 9
2036	Transistor 1006323-C, Fairchild 644 ID 964980, Analysis of Test 9
2037	Diode 1006399-A, Fairchild ID 965119, Analysis of Test 9
2039	Diode 1006399, Texas Instruments FTR 66-094-7, 168 Hour Burn-In
2040	Sense Amplifier 1006769, Norden 6515 EFT 37486, Determine if Damage Occurred at Q3
2041	Transistor 1006323-C, Fairchild 644 ID 964007, Analysis of Test 3
2042	Transistor 1006323-C, Fairchild 644 ID 964981, Analysis of Test 3
2044	Transistor 1006323, Fairchild EFT 36694 G25311, Determine Cause of Failure
2045	Diode 1006399, Texas Instruments EFT 37545 and 37546, Determine Cause of Failure
2046	Transistor 1006323, Motorola EFT 36837, Determine Cause of Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2047	Dual Nor Gate 1006321-F, Philco 48-6-32 ID 879016, Fourth Electrical Test
2048	Expander Gate 1006394, Philco ID 825977, Fourth Electrical Test
2049	Dual Nor Gate 1006321-F, Philco ID 898043, Analysis of Tests 3, 9, 11, 16 and Fourth Electrical Test
2050	Dual Nor Gate 1006321 (1004301-001), Philco EFT 37529, 37530, 37531, 37534, Determine Cause of Failure
2051	Transistor 1006310-D, Motorola 615 ID 966034, Analysis of Test 13
2052	Diode 1006399, Texas Instruments ID 870976, Determine Cause of Failure
2055	Transistor 1006323, Fairchild EFT 37397, 37308 G34838, Determine Cause of Failure
2056	Expander Gate 1006394, Philco ID 791026, Analysis of Special Test
2057	Sense Amplifier 1006769, Signetics 639 ID 334140, Analysis of Test 3, 9, and 14 Rejects
2059	Diode 1006399-A, Continental Devices ID 967040, Analysis of Test 9
2060	Diode 1006399-A, Texas Instruments ID R70038, Analysis of Test 7

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2065	Diode 1006399-A, Continental Devices ID 967040, Analysis of Test 7
2066	Flatpack 1006321, Philco G65686. ID 781154, EFT 27397, Determine Cause of Failure
2068	Transistor 1006310, Fairchild Q10 EFT 26765, FAR 15638, Determine Cause of Failure
2069	Transistor 1006317, Solitron, Determine Cause of Failure
2070	Dual Nor Gate-Flatpack 1006321 (1004301-001), Philco 04-5-41 ID 677072, EFT 37733, AFR 16993, Determine Cause of Failure
2071	Cores 1006320-1E, Sprague 512 ID 959111, Analysis of Test 2 Rejects
2077	Diode 1006399-A, Continental Devices ID 967040, Analysis of Test 9
2078	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 12-6-20 ID 83009, EFT 37602, Determine Cause of Failure
2079	Transistor 1006323-C, Fairchild 644 ID 964982, Analysis of Test 13 Rejects
2080	Sense Amplifier 2044003-001, Norden EFT 33680, 3: 691, 33682, 33683, Determine Cause of Failure
2081	Transistor 1006323, Motorola, Determine Cause of Intermittent Life Test Failures
2084	Transistor 1006323-C, Fairchild 644 ID 964982, Analysis of Test 1
2085	Transistor 1006323-C, Fairchild 644 ID 964976, Analysis of Test 1
2087	Transistor 1006323-C, Fairchild 644 ID 964976, Analysis of Test 13
2088	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 22-6-21, 26-6-21 EFT 31940, 31941, 31942, 31943, Determine Cause of Failure
2089	Transistor 1006323, Fairchild 261 EFT 37737, Determine Cause of Failure
2090	Sense Amplifier 1006769-M, Signetics ID 944035, Analysis of Tests 3 and 9 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2091	Transistor 1006317-2, Solitron 703 ID 993014, Analysis of Test 1 Rejects
2092	Transistor 1006363-2, Solitron 693 ID 979005, Analysis of Test 1
2095	Transistor 1006323-C, Fairchild 644 ID 964981, Analysis of Special Test Before First Electrical Test
2096	Diode 1006399-A, Continental Devices ID 993A01, Analysis of Test 9
2097	Diode 1006399-A, Texas Instruments ID R70038, Analysis of Test 9
2098	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 04-6-22 ID 844xxx, EFT 31536, Determine Cause of Failure
2101	Transistor 1006323, Fairchild EFT 36709, Determine Cause of Failure
2102	Dual Nor Gate-1006321, Philco ID V42010, Determine Severity of Gold Pile-up
2103	Dual Nor Gate-Flat Pack 1006321, Philco, Interim Report on Analysis of Corrosion in Flat Packs
2104	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco, Determine Cause of Failure
2105	Diode 1006399-A, Continental Devices ID 993A01, Analysis of Test 15
2106	Diode 1006399-A, Continental Devices ID 993009, Analysis of Test 15
2107	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 38-5-4S ID 713086, EFT 27373, FAR 14943, Determine Cause of Failure
2108	Flat Pack 1006321, Philco EFT 30484, FAR's 14964, 15001, 15002, Examination of Gates for Electrical Overstress
2109	Transistor 1006323, Fairchild EFT 37612, Determine Cause of Failure
2110	Transistor 1006323, Motorola D66 F110 G128, 2,000 Hour Intermittent Life Test
2111	Diode 1006399, Texas Instruments, Electrical Test after 1,000 Hours

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2114	Dual Nor Gate 1006321-F, Philco ID 906025, Analysis of Tests 3, 9, 11, and 16
2115	Transistor 1006323-C, Fairchild 644 ID 964978, Analysis of Test 13
2116	Transistor 1006323, Motorola EFT 37145, FAR 16996, Determine Cause of Failure
2117	Transistor 1006323, Fairchild EFT 36711, 36712, Determine Cause of Failure
2118	Flat Pack 1006321, Philco 642 ID 930015, Analysis of Tests 3 and 11 Rejects
2119	Dual Nor Gate-Flat Pack 1006321, Philco 163 EFT 37437, AFR 16415, Determine Cause of Failure
2120	Dual Nor Gate 1006321, Philco ID 848020, Analysis of Tests 3, 9, and 11 Rejects
2121	Transistor 1006323-C, Fairchild 644 ID 964978, Analysis of Test 3
2122	Diode 1006399-A, Continental Devices ID 006004, Analysis of Test 3
2126	Transistor 1006323-C, Fairchild 644 ID 964978, Analysis of Test 3 Rejects
2127	Transistor 1006323-C, Fairchild 644 ID 964977, Analysis of Test 9 Rejects
2128	Dual Nor Gate-Flat Pack 1006321-F, Philco ID 927017, Analysis of Tests 3, 9, 11, and 16 Rejects
2129	Quartz Crystal 1006847, Bliley, Determine Cause of Failure
2130	Quartz Crystal 1006847, Bliley EFT 018162, P004, Determine Cause of Failure
2132	Transistor 1006310, EFT 26230, 27039, 27357, 33606, 33609, 33745, Determine Cause of Failure
2136	Diode 1006399-A, Continental Devices ID 993009, Analysis of Test 9
SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2138	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 31-6-22 ID 844025, EFT 36900, AFR 17039, Determine Cause of Failure
2139	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 12-6-20 ID 830009, EFT 31483, Determine Cause of Fault
2140	Transistor 1006323-C, Fairchild 644 IL 964980, Analysis of Test 13
2141	Diode 1006751, Texas Instruments R-30 EFT 37405, Determine Cause of Failure
2142	Transistor 1006323-C, Fairchild 644 ID 964979, Analysis of Test 13
2143	Transistor 1006317-2B, Solitron 703 ID 993A01, Analysis of Test 3
2144	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 12-6-20 ID 830009, EFT 31529, Determine Cause of Failure
2145	Transistor 1006323, Motorola, Determine Cause of 2,000 Hour Life Test Failure
2146	Sense Amplifier 1006769-M, Signetics 630 ID 975039, Analysis of Tests 3, 9, and 14 Rejects
2147	Quad Two-Input Nand-Nor Gates SGI40 and SGI41, Sylvania, Determine Cause of Failure
2148	Sense Amplifier 1006769, Signetics 639 ID 915006, Analysis of Test 9 Rejects
2149	Nor Gate 1006321-E, Fairchild ID 77000, Analysis of Special First Test Retest
2150	Diode 1006399-A, Continental Devices ID 021112, Analysis of Test 3 Rejects
2152	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 36-6-24 EFT 35744, 35745, Determine Cause of Failures
2154	Sense Amplifier 1006769, Signetics ID 975037, Analysis of Tests 3, 9, and 14 Rejects
2155	Flat Pack 1006321-E, Fairchild ID P70009, Analysis of Tests 3 and 9 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2157 and 2157A	Nor Gate 1006771, Fairchild EFT 38564, AFR 12234, Determine Cause of Failure
2160	Sense Amplifier 1006769-A Signetics ID 957050, Electrical Test and Internal Visual
2161	Diode 1006399-A, Continental Devices ID 006003, Analysis of Test 15 Rejects
2162	Diode 1006399-A, Continental Devices ID 006003, Analysis of Test 9
2163	Diode 1006399-A, Continental Devices ID 006004, Analysis of Test 15
2164	Diode 1006399-A, Continental Devices ID 006004, Analysis of Test 9
2165	Diode 1006399-A, Continental Devices ID 006004, Analysis of Test 7
2166	Diode 1006399-A, Continental Devices ID 019034, Analysis of Test 3
2168	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco, Gate Quality Inspection
2169	Expander Gate 1006394, Philco EFT 35788, FAR 16831
2174	Transistor 1006323, Motorola EFT 2555, Determine Cause of Failure
2175	Transistor 1006323, Fairchild EFT 25425, 25443, Determine Cause of Failure
2176	Transistor 1006323, EFT 31506, Determine Cause of Failure
2177	Transistor 1006323, Motorola EFT 2542, Determine Cause of Failure
2181	Dual Nor Gate-Flat Pack 1006321, Philco ID 815028, EFT 35564, 33945, Corrosion Study
2182	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 40-6-25 E.T 25536
2183	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 12-6-20 ID 830A03, EFT 31481, 31482

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2184	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 12-6-20 ID 830A03, EFT 31498
2185	Transistor 1006323, Motorola, 2,000 Hour Life Test
2186	Sense Amplifier 1006769-M, Signetics ID 957050, Analysis of Tests 3, 9, and 15 Rejects
2187	Diode 1006399-A, Continental Devices ID 006003, Analysis of Test 9
2188	Diode 1006399-A, Continental Devices ID 006004, Analysis of Test 7
2189	Diode 1006399-A, Continental Devices ID 006003, Analysis of Test 7
2190	Diode 1006399-A, Continental Devices ID 006003, Analysis of Test 4 Rejects
2196	Transistor 1006310, Motorola 615, Analysis of Test 9
2197	Diode 1006399-A, Continental Devices 712 ID 021112, Analysis of Test 15
2198	Diode 1006399-A, Continental Devices ID 019034, Analysis of Test 15
2200	Sense Amplifier 1006769, Signetics ID 975976, Analysis of Tests 3 and 9 Rejects
2201	Transistor 1006323, Fairchild EFT 35767, Determine Cause of Failure
2207	Transistor 1010376-K, Fairchild 633 ID 990002, Analysis of Test 3
2209	Expander Gate 1006394 (2004301-002), Philco 27-6-19 EFT 29147, Determine Cause of Failure
2211	Transistor EFT 35747-2004184-002 Q6 and EFT 35748-2004004-004 Q4 EFT 35750-2004004-004, Q7
2212	Transistor 1006317-2, Solitron 713 ID 03114, Analysis of First Electrical Test

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2213	Diode 1006399, Continental Devices ID 027167, Analysis of Test 15
2214	Diode 1006399-A, Continental Devices ID 019034, Analysis of Test 9
2218	Transistor 2004184-001, Fairchild EFT 35699, Determine Cause of Failure
2219	Diode 1006399-A, Continental Devices ID 021112, Analysis of Test 9 Rejects
2220	Diode 1006399-A, Continental Devices ID 027167, Analysis of Test 7
2221	Diode 1006399-A, Continental Devices ID 027167, Analysis of Test 9
2223	Diode 1006399-A, Continental Devices ID 014011, Analysis of Test 15
	Sense Amplifier 1006769-M, Signetics ID 975977, Analysis of Tests 3 and 9
	Transistor 2004184-003, Fairchild EFT 25236-Q3, 35799-Q1, 35800-Q2, 25253-Q4, Determine Cause of Failure
	Sense Amplifier 1006769, Norden EFT 25433, Determine Cause of Failure
2232	K-Core 1003084-011, EFT 35777, AFR 15188, Determine Cause of Failure
2233	Transistor 1006317, Solitron, Determine Cause of Failure
2236	Sense Amplifier 1006769-, Signetics ID 975976, Analysis of Tests 3, 9, and 14
2237	Dual Nor Gate-Flat Pack 1006321 (2004301-001), Philco 42-6-29 EFT 29111, ID 898043, Determine Cause of Failure
2238	Diode 1006399-A, Continental Devices ID 035A02, Analysis of Test 15
2239	Diode 1006399-A, Continental Devices ID 035017, Analysis of Test 15

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2240	Diode 1006399-A, Continental Devices ID 035A03, Analysis of Test 15
2241	Sense Amplifier 1006769, Signetics G17849 EFT 29168, Determine Cause of Failure
2243	Diode 1006388, Transistron EFT 31464, Determine Cause of Failure
2244	Diode 1006838, Transistron EFT E29218, Determine Cause of Failure
2245	Sense Amplifier 1006769-M, Signetics ID 975977, Analysis of Test 14
2246	Diode 1006399-A, Continental Devices ID 035A02, Analysis of Test 9
2247	Diode 1006399-A, Continental Devices ID 035A02, Analysis of Test 3
2248	Diode 1006399-A, Continental Devices ID 035A02, Analysis of Test 7
2249	Diode 1006399-A, Continental Devices ID 035017, Analysis of Test 9
2250	Diode 1006399-A, Continental Devices ID 035A02, Analysis of Test 3
2251	Diode 1006399-A, Continental Devices ID 035A01, Analysis of Test 15
2252	Diode 1006399-A, Continental Devices ID 035A03, Analysis of Test 7
2253	Diode 1006399-A, Continental Devices ID 014011, Analysis of Test 9
2254	Diode 1006399-A, Continental Devices ID 035017, Analysis of Test 3
2255	NPN Transistor 1006323, Fairchild 6644, Determine Cause of Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2257	Sense Amplifier 1006769, Norden 6621 ID 842037, Investigate Apparently Low Resistor Value
2258	Sense Amplifier 1006769, Signetics RAL 907, EFT 29169, Determine Cause of Failure
2259	Sense Amplifier 1006769, Signetics RAL 907, EFT 35785, Determine Cause of Failure
2260	Transistor 1006323, Fairchild ID 964007, VS4976, V37014, Wire Thickness at Bond
2261	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 01-5-48 ID 708022, EFT 37483, 37484, Determine Cause of Failure
2262	Dual Nor Gate-Flat Pack 1006321 (2004301-001), Philco 04-6-38 ID 906025, EFT 23068, Determine Cause of Failure
2263	Expander Gate-Flat Pack 1006321 (2004301-002), Philco 01-6-28 ID 858092, EFT 29036, Determine Cause of Failure
2264	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 56-6-26 ID 844025, EFT 25595, Investigate for Possible Induced Damage
2265	Diode 1006399-A, Continental Devices ID 027167, Analysis of Test 3 Rejects
2266	Diode 1006399-A, Continental Devices ID 015034, Analysis of Test 8 Rejects
2267	Dual Nor Gate-Flat Pack 1006321 (2004301-001), Philco 13-6-36 ID 898043, EFT 29103, Determine Cause of Failure
2269	Sense Amplifier 1006769, Signetics EFT 29109, Determine Cause of Failure
2271	Transistor 1006363-1, Texas Instruments, Determine Cause of Failure
2272	Transistor 1006323, Motorola, Determine Cause of Failure
2273	Transistor 1006753, Texas Instruments EFT 36980, 36981, 36982, Determine Cause of Failure
2274	Diode 1006399-A, Continental Devices ID 035017, Analysis of Test 7

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2275	Diode 1006399-A, Continental Devices ID 014011, Analysis of Test 11
2276	Diode 1006399-A, Continental Devices ID 035A01, Analysis of Test 7
2278	NPN Silicon Transistor 1006323C, Fairchild 6644, Analyze Failures
2279	Expander Gate-Flat Pack 1006394 (2004201-002), Philco 51-6-27 ID 858977, EFT 29018, Determine Cause of Failure
2280	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 09-5-48 ID 708022, EFT 29005, AFR 16402
2281	Transistor 1006323-E, Fairchild 713 ID 036A02, Analysis of Test 3
2282	Diode 1006399, CDC, Special Surge Test for Further Lot Analysis
2283	Transistor 2004004-002, Motorola EFT 29248, Determine Cause of Failure
2287	Diode 1008815-46D, Hoffman Electrical ID 033110, Analysis of Test 1
2294	Transistor 1010376-1K, Fairchild 633 ID 989024, Analysis of Test 1
2295	Diode 2004183-001, EFT 29037, Determine Cause of Failure
2296	Transistor 1006323, Motorola and Raytheon, Determine Capacitance Necessary to Degrade and/or Destroy E-B Junction at 2.5 kV
2297	Dual Nor Gate-Flat Pack 1006321 (2004301-001), Philco 12-6-31 ID 879016, EFT 29009
2300	Diode 1006399-A, Continental Devices ID 035A01, Analysis of Test 9
2301	Diode 1006399-A, Continental Devices ID 048A05, Analysis of Test 3
2302	Diode 1006399-A, Continental Devices ID 006004, Analysis of Test 3 B

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2303	Transistor 1006323-E, Fairchild 713 ID 036A01, Analysis of Test 13
2304	NPN Transistor 1006323, Fairchild 6713, Determine Cause of Failure
2305	NPN Transistor 1006323, Fairchild 6635, Determine Cause of Failure
2306	Sense Amplifier 1006769, Signetics EFT 41283, Determine Cause of Failure
2307	Sense Amplifier 1006769, Signetics EFT 41267, Determine Cause of Failure
2308	Diode 1006399-A, Continental Devices ID 048078, Analysis of Test 3
2309	Core 1006320-1, EFT 29080, Analysis of Core
2310	Core 1006320-001, EFT 31494, Analysis of Core
2311	Dual Nor Gate-Flat Pack 1006321 (2004301-001), Philco EFT 51969, Determine Cause of Failure
2312	Dual Nor Gate-Flat Pack 1006321 (2004301-001), Philco 04-6-38 EFT 51933, 51934
2313	Dual Nor Gate-Flat Pack 1006321 (2004301-001), Philco 49-6-25 ID V36058, EFT 25794, 52014, Determine Cause of Failure
2314	Nor Gate 1006771 (1003813-3), Fairchild ID 609014, EFT 25710, FAIR 16507
2315	Diode 1006399-A, Fairchild ID 033A01, Test 15
2316	Diode 1006399-A, Continental Devices ID 006003, Analysis of Reprocessed Test 4
2317	Diode 1006399-A, Continental Devices ID 035017, Analysis of Test 3
2318	Transistor 1006323-E, Fairchild 713 ID 036A03, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2319	NPN Transistor 1006323, Motorola 543, Determine Cause of Failures
2320	Core 1006320-1, EFT 25726, Analysis of Core
2321	Diode 1006399-A, Continental Devices ID 048078, Analysis of Test 15
2322	Diode 1006399-A, Continental Devices ID 035017, Analysis of Test 9
2323	Diode 1006399-A, Continental Devices ID 035A01, Analysis of Test 7
2324	Diode 1006399-A, Continental Devices ID 035017, Analysis of Test 9
2325	Diode 1006399-A, Continental Devices ID 048078, Analysis of Test 7
2326	Diode 1006399-A, Continental Devices ID 035A01, Analysis of Test 9
2327	Diode 1006399-A, Fairchild ID 072079, Analysis of Test 3
2328	Cores, Inspect for Broken Welds and Loose Windings
2330	Transistor 1006323 (2004004-001), Fairchild EFT 017453, Determine Cause of Failure
2331	Diode and Transistor 1006399 and 1006323, Continental Devices and Motorola EFT 41188, 41189, CR-5 and Q3, Determine Cause of Failure
2332	NPN Transistor 1006323, Fairchild 6713, Determine Cause of Failure
2334	NPN Transistor 1006323, Fairchild 6644, Determine Cause of Failure
2335	Sense Amplifier 1006769, Signetics EFT 51914, RAL 1041-C17849, Determine Cause of Failure
2336	NPN Transistor 1006323, Motorola, Determine Cause of Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2339	Diode 1006399-C, Continental Devices ID 048A02, Analysis of Test 15
2341	Dual Nor Gate-Flat Pack 1006321 (2004301-001), Philco 39-6-41 EFT 25767, ID 927017, Determine Cause of Failure
2342	Transistor 2004184-001, Fairchild EFT 52479, Determine Cause of Failure
2343	Dual Nor Gate 1006321 (2004301-001), Philco 01638 ID 906025, EFT 25643, 25644
2344	Diode 1006399-A, Continental Devices ID 048A02, Analysis of Test 7
2345	Diode 1006399-A, Continental Devices ID 048078, Analysis of Test 9
2346	Diode 1006399-A, Continental Devices ID 048A03, Analysis of Test 7
2347	Diode 1006399-A, Continental Devices ID 048078, Analysis of Test 3
2348	Diode 1006399-A, Continental Devices ID 057A01, Analysis of Test 3
2349	Diode 1006399-A, Continental Devices ID 048A02, Analysis of Test 3
2350	Dual Nor Gate-Flat Pack 1006321 (2004301-001), K32966 ID 848020, EFT 25775, Determine Cause of Failure
2351	Dual Nor Gate-Micrologic 1006321 (2004301-001) ID 927017, EFT 25691, 25692, Determine Cause of Failure
2352	NPN Transistor 1006323, Motorola 543, Determine Cause of Failures
2353	NPN Transistor 1006323, Motorola, Determine Cause of Failure
2354	NPN Transistor 1006323, Fairchild 6713, Inspect Good Devices for Comparison with Life Test Failures

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2355	Diode 2004183-002, Continental Devices EFT 25634, 25589, Determine Cause of Failure
2356	NPN Transistor 1006323, Fairchild 6713, Analyze Failures
2357	NPN Transistor 1006323, Motorola, Determine Cause of Failure
2358	Diodes 2004183-002 and 2004183-001, EFT 52474, 52475, 52485, Determine Cause of Failure
2359	NPN Transistor 1006323, Fairchild 6713, Determine Cause of Failure
2361	Expander Gate-Flat Pack, 1006394 (2004301-002), Philco 46-0-27 EFT 25624, 51969, Examine for Induced Damage
2362	NPN Transistor 1006323, Motorola 543, Determine Cause of Failures
2363	NPN Transistor 1006323, Motorola 543, Determine Cause of Failures
2364	NPN Transistor 1006323, Fairchild 6713, Determine Cause of Failure
2365	Diode 1006399-A, Fairchild ID 033AC2, Analysis of Test 3 Rejects
2366	Diode 1006399-A, Continental Devices ID 048A02, Analysis of Test 9 Rejects
2367	Diode 1006399-A, Fairchild ID 072073, Analysis of Test 15 Rejects
2368	Diode 1006399-A, Fairchild ID 033A01, Analysis of Tests 3 and 12
2369	Diode 1006399-A, Continental Devices ID 048079, Analysis of Test 15 Rejects
2370	Diode 1006399-A, Continental Devices ID 048A03, Analysis of Test 15 Rejects
2371	Diode Transistor 2004183-002/2004004-006 CDC, Motorola ACR114, BCR114/Q3, EFT 32195/32049

SUMMARY OF FAILURE ANALYSIS REPORTS		SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON		RAYTHEON	
FAR NO.	DESCRIPTION	FAR NO.	DESCRIPTION
2373	Sense Amplifier 2004003-003, Signetics 46630, 617869 EFT 32194, Determine Cause of Failure	2396	Dual Nor Gate 1006321 (1004301-001), Philco 08-6-16 H65763 ID 815028, EFT 25510, 25511
2374	Sense Amplifier 2004003-003, Signetics 46644 G17869 EFT 32196, Determine Cause of Failure	2400	Transistor 2004004-002, Fairchild Q16 EFT 25700
2375	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 12-6-01 EFT 25714, FAR 18180, ID 826037	2401	Transistor 2004184-001, Motorola EFT 32023, Determine Cause of Failure
2377	NPN Transistor 1006323, Motorola 6638, Determine Cause of Failures	2403	Dual Nor Gate 1006321, Philco, Life Test on Artificially Degraded Gates
2378	NPN Transistor 1006323, Fairchild 6713, Determine Cause of Failures	2404	Dual Nor Gate 1006321 (1004301-001), Philco 08-6-16 EFT 25796, ID 815028
2379	NPN Transistor 1006323, Fairchild 6635, Determine Cause of Failures	2405	Diode 1006399-A, Sylvania ID 073048, Analysis of Test 15 Rejects
2380	NPN Transistor 1006323, Motorola 543, Determine Cause of Failures	2406	Transistor 1006323-E, Motorola 714 ID 082078, Analysis of Test 9 Rejects
2383	Dual Nor Gate 1006321 (1004301-001), Philco 01-6-38 EFT 32175, 32176, ID 906025	2407	Transistor 1006323-E, Motorola 714 ID 082078, Analysis of Test 7 Rejects
2384	Dual Nor Gate 1006321 (2004301-001), Philco 22-6-42 L98530 EFT 25690	2409	Dual Nor Gate 1006321 (2004301-001), Philco 11-6-21 ID 842008, EFT 32032
2385	Transistor 2004184-001, Motorola 13Q2 EFT 25738	2411	Transistor 1006317-2B, Solitron 717 ID 056060, Storage Time Test After Test 3
2386	Transistor 1006310-F, Motorola 711 ID 063A01, Analysis of Test 3 Rejects	2412	Zener Diode 1008815-46E, Hoffman ID 048090, Electrical Test 1
2387	Transistor 1006310-F, Motorola ID 063025, Analysis of Test 3 Rejects	2413	Transistor 1006317-2B, Solitron 717 ID 055061, Second Electrical Test
2388	Diode 1006399-D, Continental Devices ID 056049, Analysis of Test 15	2414	Sense Amplifier 2004003-003, Signetics G46520 EFT 52363
2389	Diode 1006399, Continental Devices ID 057006, Analysis of Test 15	2415	Transistor 2004184-001, Fairchild, Ray G43802 EFT 25606, Rope Driver 2003140-031
2390	Diode 1006399-A, Fairchild ID 033A01, Analysis of Test 17	2416	Sense Amplifier 2004003-003, Signetics G46520 EFT 52464
2393	Diode 1006399, Continental Devices ID 051051, Analysis of Test 15 Rejects	2417	NPN Transistor 1006323 (2004184-001), Fairchild EFT 32131
		2421	Transistor 1006323-E, Fairchild 724 ID 091072, Analysis of Test 13
		2422	Transistor 1006323-E, Fairchild 724 ID 091072, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2423	Transistor 1006323-E, Fairchild 724 ID 091072, Analysis of Test 9
2424	Transistor 1006323-E, Fairchild 724 ID 091072, Analysis of Test 3
2425	NPN Transistor 1006323 (2004184-001), Fairchild 6635 Lot G43708 EFT 32146
2426	Diode 1006399-C, Continental Devices ID 057006, Analysis of Test 7
2427	Diode 1006399-C, Continental Devices ID 057006, Analysis of Test 7
2428	Diode 1006399-C, Continental Devices ID 057006, Analysis of Test 3
2429	Diode 1006399-A, Continental Devices ID 048079, Analysis of Test 9
2430	Diode 1006399-A, Continental Devices ID 048079, Analysis of Test 3
2431	Transistor Q6 2004184-002, Fairchild J67259 EFT 32148
2432	Thermistor 1c06712 ID 864112, EFT 32137
2434	PNP Transistor 1006310 (2004722), Fairchild EFT 32114, 32115, 32116
2435	Sense Amplifier 2004003-003, Signetics G17882 EFT 32117
2436	Dual Nor Gate 1006321, Philco 42-6-27 ID 854145, EFT 44255, 44256, 44257
2437	Dual Nor Gate 1006321, Philco 42-6-27 ID 854145, EFT 36739, AFR 17050
2438	PNP Transistor 1006310 (2004004-002), Fairchild 6632 EFT 32051, 32101
2439	NPN Transistor 1006323 (2004184-005), Motorola EFT 44342
2440	NPN Transistor 1006321 (2004184-001), Motorola 630 EFT 25779

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2441	NPN Transistor 1006323 (2004184-001), Fairchild EFT 32100
2442	Diode 1006399-C, Continental Devices ID 057A01, Analysis of Test 15
2443	Diode 1006399-C, Continental Devices ID 056049, Analysis of Test 3
2444	Diode 1006399-C, Continental Devices ID 057006, Analysis of Test 9
2445	Diode 1006399-A, Continental Devices ID 051051, Analysis of Test 3
2446	Diode 1006399-C, Continental Devices ID 056049, Analysis of Test 7
2447	Diode 1006399-D, Continental Devices ID 056049, Analysis of Test 3
2448	Diode 1006399-D, Continental Devices ID 056049, Analysis of Test 9
2449	Diode 1006399-A, Continental Devices ID 057006, Drift Variable Failures
2450	NPN Transistor 1006323 (2004184-001), Fairchild 6635 EFT 32074

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2451	NPN Transistor 1006323 (2004184-001), Fairchild 6635 EFT 32101
2452	Sense Amplifier 2004003-003, Signetics EFT 52018
2453	Sense Amplifier 2004003-003, Signetics G17896 549512 EFT 32167
2454	Diode 1006399-C, Continental Devices ID 057A01, Analysis of Test 9
2455	Diode 1006399-C, Continental Devices ID 057A01, Analysis of Test 7
2456	Sense Amplifier 1006769-M, Signetics 32166 ID 088069, Analysis of Test 3
2457	Diode 1006399-A, Fairchild ID 033068, Analysis of Test 3
2458	Diode 1006399-C, Continental Devices ID 057006, Analysis of Test 3
2459	Diode 1006399-A, Continental Devices ID 068037, Analysis of Test 15
2460	Diode 1006399-A, Fairchild ID 084134, Analysis of Test 15
2465	Transistor 2004004-002, Fairchild EFT 32067
2466	Transistor 2004004-002, Fairchild EFT 32124
2467	Transistor 2004004-006, Motorola EFT 44369
2468	Diode 1006399-C, Continental Devices ID 068037, Analysis of Test 3
2469	Diode 1006399-A, Fairchild ID 033068, Analysis of Test 15
2470	Diode 1006399-A, Sylvania ID 073048, Drift Variable Test

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2471	Diode 1006399-A, Continental Devices ID 068037, Drift Variable Rejects
2473	Zener Diode 2004112-002, Transistron H02046 EFT 32090
2474	Transistor 2004184-002, Fairchild C639952 EFT 32093
2475	Transistor 2004004-002, Fairchild C38082 EFT 52213
2476	Transistor 2004004-006, Diode 2004183-001, 1008815, C38076, K46054, K44017, EFT 2096, 37312, 37314
2477	Transistor 2004004-002, Fairchild C39953 EFT 43946
2479	Dual Nor Gate 2004301-001, Philco A07509 EFT 52195
2481	Transistor 1006323-E, Motorola 717 ID V10010, Analysis of Test 3 Rejects
2482	Dual Nor Gate 2004301-001, Philco V42M12 EFT 43933
2485	Transistor 1006323-E, Motorola 718 ID V10009, Analysis of Test 13 Rejects
2486	Transistor 1006323-E, Motorola 718 ID V10010, Analysis of Test 13 Rejects
2487	Diode 1006399-A, Fairchild ID 072073, Analysis of Test 7 Rejects
2488	Diode 1006399-A, Fairchild ID 084134, Analysis of Test 3 Rejects
2489	Diode 1006399-A, Fairchild ID 084134, Analysis of Test 7 Rejects
2490	Diode 1006399-C, Fairchild ID 084134, Analysis of Test 3 Rejects
2491	Diode 1006399-A, Sylvania ID 073048, Analysis of Test 7 Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2492	Diode 1006399-A, Sylvania ID 073048, Analysis of Test 9 Rejects
2493	Diode 1006399-A, Sylvania ID 073048, Analysis of Test 7 Rejects
2494	Diode 1006399-A, Sylvania ID 073048, Analysis of Test 3 Rejects
2497	Diode 2004183-001, Texas Instruments 967040 EFT 43944
2498	Transistor 2004184-001, Fairchild G43810 EFT 52157
2499	Transistor 1006323SP, Fairchild MIR 13692 EFT 52498
2500	Transistor 2004184-001, Fairchild G43708
2501	Transistor 2004004-004, Fairchild G43774 EFT 52134
2502	Transistor 2004184-005, Motorola G38083 EFT 52376
2503	Sense Amplifier 1006769-M, Signetics 32166 ID 088069, Leakage Test Per EIR WA 2060
2504	Sense Amplifier 2004003-003, Signetics G1.896 EFT 44511
2505	Dual Nor Gate 2004301-002, Philco H25J15 EFT 43945, 43948, 43949, 43950, 43951, 43952
2506	Sense Amplifier 20042003-001, Norden V15136
2507	Dual Nor Gate 2004301-001, Philco EFT 52172 K34506
2508	Diode 2004183-001, Continental Devices AFR 18645 EFT 32136
2511	Transistor 1006323-E, Fairchild 724 ID 087145, Analysis of Test 13 Rejects
2512	Transistor 1006323-E, Fairchild 724 ID 087145, Analysis of Test 3 Rejects
2514	Dual Nor Gate-Flat Pack 1006321 (1004301-001), Philco 31-6-19 ID 830009 EFT 38405

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2516	Diode 2009183-001, Texas Instruments 124976 EFT 41002
2517	Transistor 2004184-005, Motorola G38083 EFT 41035
2518	Transistor 1006310, Fairchild EFT 44212
2519	Dual Nor Gate 2004301-001, Philco EFT 44620, 44621, 44622
2522	Transistor 1006323-E, Fairchild 724 ID V02049, Analysis of Test 3 Rejects
2523	Diode 1006399-A, Sylvania ID 073048, Analysis of Test 3 Rejects
2524	Transistor 1006323, Motorola, Fairchild, Special Life Test
2525	Transistor 1006323, (2004004-001), Motorola AFR 18936 Q25 EFT 52169
2526	Diode 1006399-C (2004183-001), Texas Instruments 8CR3 EFT 52167
2527	Diode 1006399-C (2003972-211), Texas Instruments ACR and BCR62 EFT 41087
2528	Transistor 2004004-002, Fairchild G39932 EFT 40948
2529	Transistor 2004184-002, Fairchild G39952 EFT 41045
2530	Transistor 2004184-001, Fairchild G43798 EFT 40933
2531	Diode 2004183-001, CDC EFT 43932
2532	Transistor 1006323-E, Fairchild 724 ID V02049, Analysis of Test 13 Rejects
2533	Transistor 1006323-E, Fairchild 724 ID V02049, Analysis of Test 3 Rejects
2535	Transistor 1006310-F, Motorola 711 ID 063A01, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	DESCRIPTION
FAR NO.	DESCRIPTION
2536	Sense Amplifier 2004003-001, Norden G17821 EFT 52339
2537	Sense Amplifier 1006769-M, Signetics 32166 ID 088069, Electrical Test 2
2538	Sense Amplifier 1006769-M, Signetics 32166 ID 088069, Failed Electrical Test 1, Pulled at Electrical Test 3
2539	Transistor 1006310-F, Motorola 711 ID 063A, Analysis of Test 3 Rejects
2540	Transistor 1006310-F, Motorola 711 ID 0630, Analysis of Test 13 Rejects
2541	Transistor 1006310-F, Motorola 711 ID 063025, Analysis of Test 3
2542	Transistor 1006310-F, Motorola 711 ID 063A01, Analysis of Test 9
2543	Transistor 1006310-F, Motorola 711 ID 063025, Analysis of Test 1
2544	Diode 1006399-A, Fairchild ID 084134, Analysis of Test 15 Rejects
2545	Transistor 1006310-F, Motorola 711 ID 063025, Analysis of Test 9
2546	Diode 1006399-A, Continental Devices ID V08070, Analysis of Test 15
2547	Diode 1006399-A, Continental Devices ID 094033, Analysis of Test 15
2549	Transistor 1006317-002, Solitron EFT 52579,
2550	Transistor 1006317, Solitron 32, 39
2551	Diode 1006399-C, Continental Devices ID V08070, Drift Variables
2552	Diode 1006399-A, Continental Devices ID 094033, Drift Variables

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	DESCRIPTION
FAR NO.	DESCRIPTION
2553	Diode 1006399-C, Fairchild ID 084134, Drift Variables
2554	Diode 1006399-C, Continental Devices ID V08070, Analysis of Test 7
2555	Diode 1006399-C, Continental Devices ID V08070, Analysis of Test 7
2556	Diode 1006399-A, Fairchild ID 033A01, Analysis of Test 7 Rejects
2557	Flat Pack 2004301-001, Philco V36H08 EFT 40926
2558	Flat Pack 2004301-001, Philco 925502 EFT 44288
2559	Flat Pack 2004301-001, Philco 925502 EFT 44287
2560	Flat Pack 2004301-001, Philco V36H05 EFT 40902
2561	Flat Pack 2004301-001, Philco V36H05 EFT 40824
2563	Diode 1006399-C, Continental Devices ID V08070, Analysis of Test 9
2564	Diode 1006399-A, Fairchild ID 084134, Analysis of Test 9 Rejects
2565	Diode 1006399-A, Continental Devices ID 094033, Analysis of Test 3
2566	Diode 1006399-A, Fairchild ID 033A01, Analysis of Test 9 Rejects
2567	Diode 1006399-C, Fairchild ID 084134, Analysis of Test 7 Rejects
2568	Diode 1006399-A, Fairchild ID 033A01, Analysis of Test 3 Rejects
2571	Diode 2004133-001, EFT 36168
2572	Diode 1006329, Transatron 65467 EFT 52581
2575	Diode 1006399, Continental Devices ID 113A01, Analysis of Test 15

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2576	Sense Amplifier 2004003-015, Signetics EFT 52171
2577	Sense Amplifier 2004003-003, Signetics G17896 EFT 44568
2578	Flat Pack 2004301-001, Philco 925302 EFT 51938
2579	Flat Pack 2004301-001, Philco U36H08 EFT 52184
2580	Flat Pack 1004301-001, Philco 815A19 EFT 32105 FAR 18534
2581	Flat Pack 2004301-001, Philco 925502 EFT 44292,
2582	Diode 1006399-A, Fairchild ID 033A02, Analysis of Test 3 Rejects
2585	Diode 1006399-C, Continental Devices ID 113A02, Analysis of Test 15
2586	Diode 1006399-C, Continental Devices ID 113029, Analysis of Test 15
2587	Diode 1006399-E, Continental Devices ID 113A02, Analysis of Test 3
2588	Diode 1006399-C, Continental Devices ID 113A01, Analysis of Test 7
2589	Diode 1006399-C, Continental Devices ID 113A01, Analysis of Test 9
2590	Diode 1006399-C, Continental Devices ID 113A01, Analysis of Test 9
2591	Diode 1006399-C, Continental Devices ID 113A01, Analysis of Test 3
2594	Diode 1006399-C, Continental Devices ID 113A01, Drift Variables
2595	Flat Pack 2004301-001, Philco 925502, 10634 EFT 59394

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2596	Flat Pack 2004301-002, Philco H25N10 EFT 40793
2597	Micrologic 2004301-001, Philco 906H01, 01635 EFT 54382
2598	Diode 1006399-C (2004183-001), Continental Devices 5CR35
2599	Diode 1006399-C (2004183-001), Continental Devices 5CR26 EFT 50352
2600	Diode 1006399-C (2004183-001), Continental Devices CR10 EFT 50400
2601	Diode 1006399-C (2004183-001), Continental Devices CR11 EFT 50491
2602	Diode 1006399-C (2004183-001), Continental Devices 5CR48 EFT 54387
2603	Diode 1006838 (2004112-002), Transistron CR9 EFT 54392
2604	Diode 1006399, Continental Devices
2606	Transistor 1006323, Fairchild Q4 EFT 48816
2607	Transistor Q10 1006310 (2004722), Fairchild EFT 52580
2608	Transistor 1006323 (2004184-001), Fairchild Q4 EFT 52141
2609	Transistor 1006399 (2004184-001), Fairchild IQ14 EFT 47223
2610	Flat Pack 2004301-001, Philco 12642, 927H12 EFT 30883
2611	Micrologic 2004301-001, Philco 01638, 906 EFT 54381
2613	Diode 1006838 (2004112-002), Transistron CR9 EFT 40742
2614	Diode 1006399-C (2004183-001), Continental Devices EFT 40936
2615	Transistor 1006310-P, Fairchild Q10 EFT 52393

RAYTHEON		SUMMARY OF FAILURE ANALYSIS REPORTS
FAR NO.	DESCRIPTION	
2635	Transistor 1006323 (2004184-001), Motorola 8014 EFT 50320	
2636	Transistor 1006323 (2004184-001), Motorola 6Q14 EFT 50365	
2637	Sense Amplifier 1006769-M, Signetics 730 ID 126028, Screen and Burn-in Special Leakage Test (EURWA 2060)	
2638	Sense Amplifier 1006769, Signetics 730 ID 126028, Analysis of Test 2	
2639	Sense Amplifier 1006769, Signetics ID 126028, Analysis of Test 1	
2640	Diode 1006399-A, Fairchild ID 033A02, Drift Variables	
2641	Zener Diode 1006838-A, Transistron ID A41119, Analysis of Test 7	
2642	Diode 1006399-A, Fairchild ID 033A02, Analysis of Test 12	
2643	Diode 1006399-C, Continental Devices ID 115017, Analysis of Test 9	
2644	Diode 1006399-A, Fairchild ID 033A02, Analysis of Test 9	
2645	Diode 1006399, Continental Devices ID 113029, Analysis of Test 7	
2646	Diode 1006399-A, Fairchild ID 033068, Analysis of Test 3	
2647	Diode 1006399-A, Fairchild ID 033068, Analysis of Test 7	
2648	Diode 1006399-C, Continental Devices ID 115117, Analysis of Test 3	
2649	Diode 1006399-A, Fairchild ID 033A02, Analysis of Test 7	
2650	Diode 1006399-A, Fairchild ID 033068, Variable Drift Failure	

RAYTHEON		SUMMARY OF FAILURE ANALYSIS REPORTS
FAR NO.	DESCRIPTION	
2616	Zener Diode 1006838 (2004112-002), Transistron ID 02046 EFT 49139, 49140, 49201	
2617	Diode 1006399 (2004183 001), Continental Devices ID 952976 EFT 49140, 49201	
2618	Diode 1006399 (2004183-002), Texas Instruments ID 889038 EFT 50410	
2619	Diode 1006399 (2004183-002), Texas Instruments ID 889038, EFT 50401	
2620	NPN Transistor 1006323 (2004184-001), Fairchild EFT 49131	
2621	Diode 1006399-C, Continental Devices ID 113029, Analysis of Test 3	
2622	Dual NPN Transistor 1010376-IK, Fairchild 626 ID 054011, Analysis of Test 2 (CAT)	
2623	Transistor 1006323-E, Motorola 729 ID 123A01, Analysis of Test 3	
2624	Diode 1006399-C, Continental Devices ID 113A02, Analysis of Test 3	
2625	Diode 1006399-A, Continental Devices ID 113A02, Analysis of Test 3	
2626	Diode 1006399-E, Continental Devices ID 113A02, Analysis of Test 9	
2627	Diode 1006399-C, Continental Devices ID 113A02, Analysis of Test 9	
2628	Diode 1006399-A, Continental Devices ID 113A02, Analysis of Test 7	
2629	Diode 1006399-C, Continental Devices ID 115017, Analysis of Test 15	
2634	Sense Amplifier 1006769-M, Signetics 730 ID 126026, Special Leakage and Junction Voltage Test	

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2651	Diode 1006399-A, Fairchild ID 072073, Analysis of Test 3
2652	Diode 1006399-A, Fairchild ID 033068, Analysis of Test 9
2655	Transistor 1006310-F, Motorola 711 ID 06LA01, Analysis of Test 13
2656	Dual Nor Gate 1006321 (2004301-001), Philco 11-6-45 ID 985011, EFT 40865
2657	Dual Nor Gate 1006321 (2004301-001), Philco 46-6-44 ID 983003 EFT 54396
2658	Diode 1006399, Fairchild ID V11068, Analysis of Test 15 Rejects
2659	Diode 1006399-C, Fairchild ID 072073, Variable Drift Failures
2660	Diode 1006399-A, Fairchild ID 033068, Analysis of Test 11 Rejects
2661	Diode 1006399-A, Fairchild ID 072073, Analysis of Test 9 Rejects
2662	Transistor 1006323-E, Motorola 729 ID 123A0, Analysis of Test 7 Rejects
2663	Transistor 1006323-E, Motorola 729 ID 123A0, Analysis of Test 3 Rejects
2664	Transistor 1006323-E, Motorola 729, ID 12301, Analysis of Test 9 Rejects
2669	Transistor 1006323-E, Motorola 729, ID 12301, Analysis of Tests 9 Rejects
2672	Sense Amplifier 2004003-003, Signetics S19505-G17896 EFT 49187
2677	Diode 1006399C (2004183-001), Continental Devices 5CR85, EFT 47277

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2679	Diode 1006399-C, Fairchild ID V11068, Drift Variable Rejects
2680	Diode 1006399-C, Fairchild ID V11068, Analysis of Test 9 Rejects
2681	Diode 1006399-C, Fairchild ID V11068, Analysis of Test 7 Rejects
2682	Diode 1006399-C, Fairchild ID V11068, Analysis of Test 3 Rejects
2683	Diode 1006399-C, Fairchild ID V11068, Analysis of Test 3 Rejects
2684	Diode 1006399-C, Continental Devices ID 113029, Analysis of Test 7 Rejects
2685	Diode 1006399-C, Continental Devices ID 113029, Drift Variable Rejects
2686	Diode 1006399-C, Continental Devices ID 113029, Analysis of Test 9 Rejects
2687	Diode 1006399-C, Continental Devices ID 113029, Analysis of Test 3 Rejects
2688	Diode 1006399-C, Continental Devices ID 124009, Analysis of Test 3 Rejects
2690	Transistor 1006323-E, Motorola 729 ID 123011, Analysis of Test 13 Rejects
2691	Flat Pack 2004301-001, Philco EFT 40922 AFR 17958
2695	Transistor 1006323-C, Fairchild
2696	Diode 1006399-C (2004193-002), Continental Devices ACR185 BCR185 EFT 50432
2697	Sense Amplifier 1006769-N, Signetics 730 ID 136055, Special Leakage Test (EIRWA 2060)

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2698	Flat Pack 2004201-001, Philco X09523 EFT 40913
2699	Transistor PNP 1006310, Motorola ID 063025, HFE Degradation Study
2700	Diode 1006395-C, Continental Devices ACR18 BCR 18 EFT 50406
2702	Diode 1006329-B, Transistor 6548 ID 788019, Analysis of Test 3 Rejects
2703	Diode 1006399-C, Continental Devices ID 115017, Analysis of Test 9 Rejects
2704	Diode 1006399-C, Continental Devices ID 115017, Analysis of Test 3 Rejects
2705	Diode 1006399-C, Continental Devices ID 115017, Analysis of Test 7 Rejects
2706	Transistor 1006323, Motorola 730 ID 123010, Analysis of Test 3 Rejects
2707	Transistor 1006323-E, Motorola 730 ID 123A03, Analysis of Test 3 Rejects
2709	Transistor 1006323, Motorola 730 ID 123010, Analysis of Test 13 Rejects
2711	Transistor 1006310 (2004004-006), Motorola Q5 EFT 49205
2712	Transistor 1006310 (2004004), Motorola 2Q1 EFT 48808
2713	Transistor 1006323-E, Motorola 730 ID 123A03, Analysis of Test 9 Rejects
2715	Transistor 1006323, Raytheon EFT 48815
2716	Transistor 1006310 (2004004-002), Fairchild 2Q10 EFT 47517
2717	Diode 1006399-C (2004183-001), Continental Devices EFT 48707

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2718	Dual Nor Gate 1006321, Philco, 1,000-Hour Data Results on Philco S ⁺ Emitter Nor Gates
2719	Diode 1006399-C (2004183-002), Continental Devices EFT 52183
2720	Diode 1006399, Continental Devices, Evaluation of Diode Behavior in Various Potting Media
2721	Dual Nor Gate 1006321, Philco, 2,000-Hour Life Test Results on Degraded Gates
2722	Transistor 1006310 (2004004-002), Fairchild Q23 EFT 48839
2723	Transistor 1006323 (2004184-001), Motorola 5Q14 EFT 47300
2724	Transistor 1006323 (2004184-001), Motorola Q4 Q6 Q7 EFT 47626, 47627, 47845
2725	Indicator Alarm 1006387, EFT 49302
2726	Sense Amplifier 1006769-M, Signetics 730 ID 126026 Continuity and Internal Visual
2727	Transistor 1006323, Motorola 730 ID 123A03, Analysis of Test 13 Rejects
2729	Sense Amplifier 1006769-N, Signetics 730 ID 135010, Analysis of Test 1
2730	Diode 1006399-C (2004183-002), CDC
2731	Thermal Resistor 1006291, Amperex
2732	Transistor 1006323-E, Motorola 730 ID 123A02, Analysis of Test 9
2733	Transistor 1006323-E, Motorola 730 ID 123A02, Analysis of Test 13
2734	Transistor 1006323-E, Motorola 730 ID 123A02, Analysis of Test 3
2737	Transistor 1006323 (2004184-001), Motorola EFT 47598

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2738	Transistor 1006310 (2004004-002), Fairchild EFT 47178
2739	Transistor 1006310 (2004004-002), Fairchild EFT 48785
2741	Micrologic Gate 2004301-002, Philco J85310 EFT 48887
2745	Sense Amplifier 2004003-003, Signetics G17885 EFT 49198
2746	Micrologic 2004301-001, Philco EFT 47683
2747	Micrologic Gate 2004301-001, Philco A00511 EFT 47853
2748	Transistor 1006310 (2004004-002), Motorola EFT 47874
2749	Diode 1006399-C, Continental Devices ID 126005, Analysis of Test 15
2750	Diode 1006399-C, Continental Devices ID 124009, Analysis of Test 15
2751	Diode 1006399, Continental Devices ID 124009, Analysis of Test 3
2753	Diode 1006399-C (2004183-002), Continental Devices. ACR and BCR 69 EFT 51697
2754	Transistor 1006323 (2004104-001), Motorola 303 EFT 51649
2755	Diode 1006399, Continental Devices
2756	Diode 1006399-C, Continental Devices ID 124009, Analysis of Test 7
2757	Diode 1006399-C, Continental Devices ID 124009, Analysis of Test 7
2758	Transistor 1006323 (2004184-002), Fairchild EFT 51513, 51523, 51524
2759	Transistor 1006323 (2004184-001), Motorola 3Q3 EFT 43182

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2761	Diode 1006399-C (2004183-001), Continental Devices CR63 EFT 43200
2763	Diode 1006399-C, Continental Devices ID 126005, Analysis of Test 7
2765	Diode 1006399-C, Continental Devices ID 126005, Analysis of Test 9
2766	Diode 1006399-C, Continental Devices ID 126005, Analysis of Test 7
2767	Diode 1006399-C, Continental Devices ID 152088, Analysis of Test 15
2769	Sense Amplifier 1006769-N, Signetics 730 ID 135010, Test 15
2770	Sense Amplifier 1006769, Signetics 730 ID 135055, Test 15
2771	Sense Amplifier 2004003-003, Signetics EFT 47872
2772	Sense Amplifier 2004003-003, Signetics G17862 EFT 43300,
2773	Diode 1006399-C (2004183-001), Continental Devices CR56 EFT 47595
2774	Diode 1006399-C, Continental Devices
2775	Fiat Pack 2004301-01, Philco K85501 EFT 47580
2776	Sense Amplifier 2004003-003, Signetics G17862 EFT 47690
2777	Sense Amplifier 2004003-003, Signetics G17860 EFT 47830
2778	Diode 1006399-C, Continental Devices ID 152088, Analysis of Test 3
2781	Diode 1006399-C, Continental Devices ID 152088, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2782	Diode 1006399 (2004183-001), Continental Devices CR23 EFT 43869
2783	Tape Core, Magnetics 073-102-104
2784	Zener Diode 1006338 (2004112-002), Transiltron CR9 EFT 43616
2788	Transistor 1006310 (2004722), Fairchild EFT 43298, 43299, 43201
2790	Sense Amplifier 2004003-003, Signetics G17871 EFT 51682
2792	Diode 1006399-C, Continental Devices ID 152088, Analysis of Test 7 Rejects
2793	Diode 1006399-C, Continental Devices ID 152088, Analysis of Test 7 Rejects
2794	Sense Amplifier 1006769-N, Signetics 730 ID 136055, Analysis of Test 4
2797	Diodes 1006399-A, Continental Devices ID 150288, Prift Variable Failures
2798	Transistor 1006323 (2004184-001), Fairchild Q17 and Q18 EFT 48898
2799	Diode 1006399 (2004183-001), Continental Devices EFT 51302
2800	Diode 1006399-C, Continental Devices, Evaluation of Diode Behavior in Potting Media
2804	Transistor 1006310-F, Fairchild 744 ID 184100, 184A01, Analysis of Tests 3 and 9
2806	Transistor 1006363-1, Solitron 733 ID 151017, Analysis of Test 3
2807	Transistor 1006363-1, Solitron 733 ID 151017, Analysis of Test 3
2809	Diode 1006399-C, Continental Devices ID 152088, Analysis of Test 9

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2812	Transistor 1006310 (2004004-002), Fairchild 2Q12 EFT 47590
2813	Transistor 1006310 (2004004-002), Fairchild 2Q14 EFT 47591
2815	Diode 1006399 (2004183-001), Continental Devices EFT 43572
2818	Transistor 1006363-1, Solitron 733 ID 151017, Analysis of Test 9
2820	Transistor 1006323 (2004184-001), Fairchild 13Q2 EFT 43751
2821	Flat Pack 2004301-001, Philco EFT 43872
2822	Sense Amplifier 2004003-003, Signetics G55953, 533983 EFT 48602
2823	Transistor 1006310-F, Motorola 742 ID 200131, Analysis of Test 3
2824	Transistor 1006310-F, Motorola 742 ID 200A01, Vendor Surveillance
2825	Transistor 1006323-E3, Motorola 734 ID 182194, Analysis of Test 3
2827	Diode 1006399-C, Continental Devices ID 186A02, Analysis of Test 3
2828	Sense Amplifier 1006769, Signetics 740 ID 176017, Analysis of Test
2829	Transistor 1006310P, Fairchild 1Q2 EFT 48497
2830	Transistor 1006323P, Raytheon 2Q1 EFT 48496
2832	Magnetic Core 1006320, Magnetics, Determine Cause of Amplitude Deviation
2835	Sense Amplifier 2004003-003, Signetics ID 126026 S83172, EFT 47934
2836	Sense Amplifier 2004003-003, Signetics G17870 83841 EFT 43602

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2838	Transistor 1006310-F, Motorola 742 ID 200A01, Analysis of Test 3
2840	Diode 1006751, Texas Instruments 2CR1 EFT 48498

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2841	Transistor 1006310, Fairchild 2Q2 EFT 48499
2842	Transistor 1006323 (2004184-001), Motorola Q4 EFT 51486
2843	Diode 1006399 (2004183-001), Continental Devices EFT 48677, CR63
2844	Transistor 1006323 (2004184-001), Motorola 5Q3 EFT 48683
2845	Diode 1006751 (2004103-001), Texas Instruments CR19 EFT 51485
2850	Sense Amplifier 1006769N, Signetics 740 ID 176017, Analysis of Test 2
2851	Transistor 1006310-F, Motorola 742 ID 200131, Analysis of Test 3
2852	Transistor 1006310 (2004004-004), Motorola 2Q1 EFT 48554
2853	Transistor 1006310 (2004004-006), 4Q1 EFT 52863
2854	Transistor 1006310 (2004004-006), Motorola 8Q1 EFT 48553
2855	Transistor 1006310 (2004004-006), Motorola 4Q1 EFT 51496
2857	Flat Pack 2004301-001, Philco 18728 100042 Z95823 EFT 48595
2859	Transistor 1006310-F, Motorola 742 ID 200131, Analysis of Test 9
2861	Flat Pack 2004301-001, Philco EFT 48008, 48451, 48461, 48462, 48463, 48464, 48466, 48608, 43759, 48476, 48561, 48596, 48597, 48657, 48692
2862	Sense Amplifier 2004003-003, Signetics G17868, 583892, EFT 48651
2864	Transistor 1006323 (2004184-001), Motorola 7Q14 EFT 52880
2865	Transistor 1006310-F, Motorola 742 ID 200131, Analysis of Test 13
2866	Transistor 1006310-F, Fairchild 6744 ID 184100, Analysis of Test 9

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2867	Transistor 1006323 (2004184-001), Motorola 13Q2 EFT 47377
2868	PNP Transistor 1006310-F, Motorola 742, 200130, 200131, 18 CT1, OCT2, 48 CT3
2869	Sense Amplifier 1006769-N, Signetics 740 ID 135010, Analysis of Test 4
2870	Diode 1006399-C, Continental Devices ID 186A01, Analysis of Test 15
2871	Flatpack 2004301-001, Philco 10713 ID 052071, EFT 48669
2872	Dual Nor Gate 1004301-011, Fairchild 516 C80182 ID V26097, EFT 48456
2873	Sense Amplifier 2004003-003, Signetics G17901, S32958, EFT 48688
2874	Sense Amplifier 2004003-003, Signetics G17873, S4536, EFT 51453
2875	Transistor 1006310 (2004004-002), Fairchild Q8 EFT 52891
2876	Sense Amplifier 2004003-003, Signetics S49376 G17859 EFT 43542
2879	Diode 1006399-C, Continental Devices ID 186078, Test 1
2880	Diode 1006399-C, Continental Devices ID 186A02, Test 1
2885	Transistor 1006310 (2004004-002), Fairchild Q11 EFT 51495
2886	Transistor 1006323 (2004004-001), Motorola Q4 EFT 43792
2887	Transistor 1006323 (2004004-001), Raytheon Q2, Q8 EFT 43793, 48558
2890	Diode 1006399-C, Continental Devices ID 186078, Analysis of Test 3
2891	Diode 1006399-C, Continental Devices 186A02, Analysis of Test 3
2892	Diode 1006399-C, Continental Devices ID 186A02, Analysis of Test 7
2893	Diode 1006399-C, Continental Devices ID 186A02, Analysis of Test 7
2894	Diode 1006399-C, Continental Devices ID 186A04, Analysis of Test 3
2895	Diode 1006399-C, Continental Devices ID 186078, Analysis of Test 7

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2896	Diode 1006399-C, Continental Devices ID 186078, Analysis of Test 3
2897	Diode 1006399-C, Continental Devices ID 186078, Analysis of Test 9
2898	Transistor 1006310-F, Fairchild 6744 ID 184100, Analysis of Test 3
2899	Transistor 1006310-F, Motorola 742 ID 200A01, Analysis of Test 9
2900	Diode 1006399-C, Continental Devices ID 186078, Drift Variable Failure
2905	Sense Amplifiers 1006769, Signetics 526 ID 193133, Analysis of Test 15
2906	Diode 1006399-C, Continental Devices ID 186A02, Analysis of Test 9
2910	Transistor 1006323 (2004184-001), Motorola EFT 43181
2912	Transistor 1006323 (2004184-001), Motorola 6Q14 EFT 52879
2915	Transistor 1006310-F, Fairchild 6744 ID 184100, Analysis of Test 13
2916	Diode 1006399-C, Continental Devices ID 186A03, Analysis of Test 15
2917	Magnetic Core 1006320, Magnetics, Analysis of Defects
2918	Magnetic Core 1006320, Sprague, Analysis of Defects
2919	Magnetic Core 1006320, Sprague, Magnetics, Analysis of Defects
2922	Diode 1006399-C, Continental Devices ID 186078, Analysis of Test 8
2923	Diode 1006399-C, Continental Devices ID 186A01, Analysis of Test 3
2924	Diode 1006399-C, Continental Devices ID 186A03, Analysis of Test 3

RAYTHEON		SUMMARY OF FAILURE ANALYSIS REPORTS	
FAR NO.	DESCRIPTION	FAR NO.	DESCRIPTION
2926	Transistor 1006323-E, Motorola 734 ID 182194, Analysis of Test 9	2947	Transistor 1006310-F, Fairchild 744 ID 184A01, Analysis of Test 13
2927	Transistor 1006310-F, Fairchild 744 ID 184A01, Analysis of Test 3	2948	Flatpack 2004301-001, Philco EFT 52374
2928	Transistor 1006310-F, Fairchild 744 ID 184A01, Analysis of Test 9	2949	Flatpack 1004301-001, Fairchild 539 EFT 52873
2929	Transistor 1006310-F, Motorola 742 ID 200A01, Analysis of Test 3	2950	Flatpack 2004301-001, Fairchild EFT 48690
2930	Transistor 1006310-F, Motorola 742 ID 200130, Analysis of Test 3	2951	Flatpack 2004301-001, Fairchild EFT 48561
2932	Magnetic Core 1006320, Raytheon, Sprague	2952	Flatpack 2004301-001, Fairchild EFT 48572
2933	Magnetic Core 1006320, Raytheon, Sprague	2953	Sense Amplifier 2004003-003, Signetics EFT 53266
2934	Transistor 1006363-001, Solitron	2954	Transistor 1006323 (2004184-001), Motorola EFT 46523
2935	Flatpack 1004301-001, Philco 12728 291943 ID 125107, EFT 55140	2955	Transistor 1006323 (2004184-001), Motorola EFT 46436
2936	Flatpack 2004301-001, Fairchild D23106 516, EFT 48667	2956	Transistor 1006323 (2004184-005), Motorola EFT 53255
2938	Diode 1006399-C, Continental Devices ID 186A04, Analysis of Test 15	2957	Transistor 1006323 (2004184-001), Motorola EFT 52978
2939	Diode 1006399-C, Continental Devices ID 186A03, Analysis of Test 7	2958	Diode 1006399 (2004183-001), Continental Devices CR-62 EFT 53261
2940	Diode 1006399-C, Continental Devices ID 186A01, Analysis of Test 3	2959	Dual Nor Gate Flatpack 1006321 (1004301-001), Philco 23602 EFT 46505, 46506, 46507
2941	Diode 1006399-C, Continental Devices ID 186A03, Analysis of Test 9	2960	Diode 1006399-C, Continental Devices ID 186A01, Analysis of Test 9
2942	Diode 1006399-C, Continental Devices ID 186A03, Analysis of Test 3	2961	Transistor 1006323 (2004184-001), Motorola 1Q14 EFT 46774
2943	Diode 1006399-C, Continental Devices CR10, CR11 EFT 43617, 43618	2962	Transistor 1006310 (2004004-006), Motorola Q20 EFT 52876
2944	Transistor 1006323 (2004184-001), Motorola 7Q18 EFT 53265	2963	Transistor 1006310 (2004004-006), Motorola 6Q1 EFT 46797
2945	Transistor 1006323 (2004184-001), 16Q2, 32Q2 EFT E46756, 46758	2964	Dual Nor Gate 2004301-002, Philco 885057 L28973, 78632 EFT 53281
		2965	Dual Nor Gate 2004301-001, Philco J52071 Z00926, 02716 EFT 51488
		2966	Flatpack Gate 1004301-001, Fairchild D23072, 516 EFT 48689
		2970	Sense Amplifier 2004003-003, Signetics G17913, S83153 EFT 52996

RAYTHEON		SUMMARY OF FAILURE ANALYSIS REPORTS	
FAR NO.	DESCRIPTION	FAR NO.	DESCRIPTION
2947	Transistor 1006310-F, Fairchild 744 ID 184A01, Analysis of Test 13	2947	Transistor 1006310-F, Fairchild 744 ID 184A01, Analysis of Test 13
2948	Flatpack 2004301-001, Philco EFT 52374	2948	Flatpack 2004301-001, Philco EFT 52374
2949	Flatpack 1004301-001, Fairchild 539 EFT 52873	2949	Flatpack 1004301-001, Fairchild 539 EFT 52873
2950	Flatpack 2004301-001, Fairchild EFT 48690	2950	Flatpack 2004301-001, Fairchild EFT 48690
2951	Flatpack 2004301-001, Fairchild EFT 48561	2951	Flatpack 2004301-001, Fairchild EFT 48561
2952	Flatpack 2004301-001, Fairchild EFT 48572	2952	Flatpack 2004301-001, Fairchild EFT 48572
2953	Sense Amplifier 2004003-003, Signetics EFT 53266	2953	Sense Amplifier 2004003-003, Signetics EFT 53266
2954	Transistor 1006323 (2004184-001), Motorola EFT 46523	2954	Transistor 1006323 (2004184-001), Motorola EFT 46523
2955	Transistor 1006323 (2004184-001), Motorola EFT 46436	2955	Transistor 1006323 (2004184-001), Motorola EFT 46436
2956	Transistor 1006323 (2004184-005), Motorola EFT 53255	2956	Transistor 1006323 (2004184-005), Motorola EFT 53255
2957	Transistor 1006323 (2004184-001), Motorola EFT 52978	2957	Transistor 1006323 (2004184-001), Motorola EFT 52978
2958	Diode 1006399 (2004183-001), Continental Devices CR-62 EFT 53261	2958	Diode 1006399 (2004183-001), Continental Devices CR-62 EFT 53261
2959	Dual Nor Gate Flatpack 1006321 (1004301-001), Philco 23602 EFT 46505, 46506, 46507	2959	Dual Nor Gate Flatpack 1006321 (1004301-001), Philco 23602 EFT 46505, 46506, 46507
2960	Diode 1006399-C, Continental Devices ID 186A01, Analysis of Test 9	2960	Diode 1006399-C, Continental Devices ID 186A01, Analysis of Test 9
2961	Transistor 1006323 (2004184-001), Motorola 1Q14 EFT 46774	2961	Transistor 1006323 (2004184-001), Motorola 1Q14 EFT 46774
2962	Transistor 1006310 (2004004-006), Motorola Q20 EFT 52876	2962	Transistor 1006310 (2004004-006), Motorola Q20 EFT 52876
2963	Transistor 1006310 (2004004-006), Motorola 6Q1 EFT 46797	2963	Transistor 1006310 (2004004-006), Motorola 6Q1 EFT 46797
2964	Dual Nor Gate 2004301-002, Philco 885057 L28973, 78632 EFT 53281	2964	Dual Nor Gate 2004301-002, Philco 885057 L28973, 78632 EFT 53281
2965	Dual Nor Gate 2004301-001, Philco J52071 Z00926, 02716 EFT 51488	2965	Dual Nor Gate 2004301-001, Philco J52071 Z00926, 02716 EFT 51488
2966	Flatpack Gate 1004301-001, Fairchild D23072, 516 EFT 48689	2966	Flatpack Gate 1004301-001, Fairchild D23072, 516 EFT 48689
2970	Sense Amplifier 2004003-003, Signetics G17913, S83153 EFT 52996	2970	Sense Amplifier 2004003-003, Signetics G17913, S83153 EFT 52996

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2971	Dual Nor Gate 2004301-001, Philco Z88199 08731, 125107 EFT 47005
2972	Dual Nor Gate 2004301-002, Philco L29050 78632, 885057 EFT 46432
2973	Sense Amplifier 2004003-003, Signetics 6SA1 EFT 46798
2974	Sense Amplifier 1006769 (2004003-003), Signetics 6SA2 EFT 46799
2975	Transistor 1006310 (2004004-004), Motorola Q3 EFT 46790
2976	Transistor 1006323 (2004184-001), Fairchild Q2 EFT 46768
2978	Diode, Silicon, Planar 1006399, Continental Devices, Determine Cause of IR Shorts
2979	Transistor 1006323 (2004184-001), Fairchild 19Q2 EFT 53957
2980	Transistor 1006323 (2004184-001), Motorola 1Q3 EFT 47042
2981	Flatpack 2004301-001, Philco EFT 46445
2982	Sense Amplifier 1006769-N (2004003-003), Signetics S49354, 1SA2, EFT 53136
2984	Magnetic Core 1006320-1, Sprague, Core Examinations
2985	Dual Nor Gates 1006321, Philco, Status Report on Analysis of Bond Failures in Philco Dual Nor Gates SCD 1006321
2986	Sense Amplifier 1006769, Signetics 752 ID 220033, Analysis of Test 9
2987	Diode 1006399-C, Continental Devices ID 186A04, Analysis of Test 3
2988	Diode 1006399-C, Continental Devices ID 186A04, Analysis of Test 9
2989	Sense Amplifier 1006769-N, Signetics 752 ID 220033, Analysis of Test 15
2991	Diode 1006399 (2004183-002), Continental Devices ACR, BCR 196 EFT 46752
2992	Dual Three-Input Gate 2004301-001, Philco 09717, 024012 EFT 46627

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
2997	Transistor 1006323 (2004184-001), Motorola
3000	Transistor 1006323 (2004184-001), Motorola EFT 48434
3001	Transistor 1006323 (2004184-001), Fairchild 22Q2 EFT 53959
3005	Zener Diode 1006838 (2004112-002), Transiron CR-9
3006	Transistor 1006323 (2004184-001), Motorola Q5 EFT 58552
3008	Transistor 1006323-E, Motorola 734 ID 182194, Analysis of Test 9
3010	Magnetic Memory Core 1006320, Sprague 03804, 03805, Examination of Core Ribbon for Anomalies
3014	Transistor 1006323-E, Motorola 734 ID 182194, Analysis of Test 13
3017	Transistor 1010376-1K, Fairchild 626 ID 232084, Analysis of Test 1
3019	Transistor 1010376-1K, Fairchild 626 ID 232084, Analysis of Test 2 Rejects
3020	Transistor 1006310-F, Motorola 742 ID 211153, Analysis of Test 13
3024	Diode 1006399 (2004183-001), Fairchild EFT 43420
3025	Diode 1006399 (2004183-001), Continental Devices EFT 47023
3026	Transistor 1006310 (2004004-002), Fairchild EFT 55872
3027	Transistor 1006323 (2004184-001), Fairchild EFT 55873
3028	Magnetic Core 1006320-1, Sprague ID 091080, Vendor Surveillance
3031	Sense Amplifier 1006769 (2004003-003), Signetics 1SA2 EFT 53992
3032	Diode 1006399 (2004183-001), Fairchild CR41 EFT 56150
3033	Transistor 1006323 (2004184-001), Motorola 1Q2 EFT 55889
3034	Diode 1006399 (2004183-001), Continental Devices CR45 EFT 56137
3035	Transistor 1006323 (2004184-001), Motorola 2Q18 EFT 56154

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3037	Dual Nor Gate 1006321 (2004301-001), Philco EFT 55952, 55953, 55954, 55955, 55956
3040	Sense Amplifier 1006769 (2004003-003), 2SA2 EFT 55704
3042	Diode 1006399, 2004183, Fairchild CR36 EFT 56148
3043	Dual Nor Gate 1006321 (1004301-001), Philco H71364, 20549, 714086 EFT 55974, AFR 19471
3044	Transistor 1006323 (2004184-001), 8Q1 EFT 61407
3047	Dual Nor Gate 1006321 (2004301-001), Philco EFT 56127, 56128, 55888
3048	Dual Nor Gate 1006321 (1004301-001), Philco EFT 55720, 55721, 55722, 55723, 55724, 55725
3049	Dual Nor Gate 1006321 (1004301-001), Philco EFT 48639, 48640, 48641, 48642, 48643, 48644, 48645, 48646
3050	PNP Transistor 1006310 (2004004-006), Motorola Q3 EFT 56126
3051	Transistor 1006310 (2004004-002), Motorola Q27 EFT 56359
3052	Transistor 1006323 (2004184-001), Motorola 2Q17 EFT 56393
3054	Dual Nor Gate 1006321 (2004301-001), Philco 879016, L03544, 48632 EFT 54439
3055	Transistor 1006323 (2004184-001), Motorola 8Q14 EFT 61410
3056	Transistor 1006310 (2004004-002), Motorola Q27 EFT 61430
3065	Dual Nor Gate 1006321 (2004301-001), Philco 06742 EFT 61908 FR 20454
3066	Dual Nor Gate 1006321 (1004301), Philco EFT 48647, 48648, 48649, 48650, 55702
3067	Dual Nor Gate 1006321 (2004301-001), Philco R626 17704, 011011 EFT 56142
3068	Diode 1006399 (2004183-001), Fairchild CR41 EFT 56368
3069	Diode 1006399 (2004183), Fairchild CR41 EFT 56329

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3072	Sense Amplifier 1006769 (2004003-003), 2SA2 EFT 47743
3079	Diode 2004112-002, 2004183-001 (1006838, 1006399), Transistor CDC CR9, 10, 11 EFT 61924, 61926, 61927
3080	Zener Diode 1006838 (2004112-002), Transistor CR1 EFT 61446
3081	Expander Gate 1006394, Philco L28661, 69632, 885057 EFT 61564
3082	Dual Nor Gate 1006321 (2004301-001), Philco Z88271, 02732, 125107 EFT 43436
3083	Dual Gate 1006321 (2004301-001), Philco R517 07649 EFT 56159
3089	Sense Amplifier 1006769 (2004003-003), Signetics 5SA1 EFT 55713
3090	Sense Amplifier 1006769 (2004003-003), Signetics 1SA2 EFT 55730
3091	Sense Amplifier 1006769 (2004003-003), Signetics 7SA1 EFT 56171
3092	Dual Nor Gate 1006321 (2004301-001), Philco 886018, L33439, L33448 77633 EFT 5637, 46605
3095	Lamp Driver 1006481, Dialco XDS 54 EFT 61567, FR 20363
3096	Transistor 2004722, Fairchild Q9, Q10, Q11 EFT 54490
3103	Diode 1006399, Fairchild ID V11068
3107	Dual Nor Gate - Flatpack 1006321 (2004301-001), Philco 05-7-39, S82556 ID 163031
3109	Sense Amplifier 1006769 (2004003-003), Signetics 2SA2 EFT 55714
3113	Dual Gate 2004301-001, Philco L28828, 78632, Blue Nose EFT 61925
3114	Dual Gate 2004301-001, Philco R01990, 14647, 990013 EFT 61565
3115	Dual Nor Gate 2004301-001, Philco Z9070, 08731, 125107 EFT 43415
3116	Transistor 1006323 (2004184-005), Motorola Q5 EFT 61571

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3117	Diode 1006399 (2004183-1), Fairchild CR61 EFT 61437
3119	Dual Nor Gate 2004301-001, Philco 92707, 09646, 990011 EFT 56394
3120	Dual Nor Gate 1006321 (2004301-001), Philco 55-274, 551398, 05721, V02050 EFT 61931, 62041
3127	Transistor 1006323 (2004184-001), Fairchild Q1 EFT 61573
3128	Dual Nor Gate 1006321 (2004301-001) Philco 553398, 12721, V02050 EFT 62099
3130	Sense Amplifier 1006769 (2004003-003), Signetics EFT 62035, 62036
3138	Diode 1006399, Fairchild
3139	Sense Amplifier 1006769 (2004003-003), Signetics S60917, G17920 EFT 6158
3140	Dual Gate 1006394 (2004301-001), Philco 02728, 100042 EFT 59165
3141	Dual Nor Gate 1006321 (2004301-001), Philco Z46911, 05742, 172055 EFT 59185
3142	Dual Nor Gate 1006321 (2004301-001), Philco Z80089, 05739, 163031 EFT 62086
3145	Diode 1006751 (2004183), Continental Devices CR-30 EFT 59181
3146	Flatpack 2004301-001 (2004301-001), Philco 36642, 930016, 39628, 858 EFT 59239, 59362
3147	Expander Gate 1006394 (2004301-002), Philco 69632 ID 885057 EFT 59385
3151	Dual Nor Gate 1006321 (2004301-001), Philco 05739, 163031 EFT 59231
3156	Dual Nor Gate 1006321 (2004301-001), Philco 05738, Z81373, 163031 EFT 62056
3157	Dual Nor Gate 1006321 (2004301-001), Philco 18728, Z95808, 100042 EFT 59367
3158	Dual Nor Gate 1006321 (2004301-001), Philco 19603, H31056, 747010 EFT 60651

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3159	Dual Nor Gate 1006321 (2004301-001), Philco 27638, L91086 ID 909025 EFT 5935
3163	Diode 1006399 (2004183-001), Fairchild CR6 EFT 62044
3164	Dual Nor Gate 1006394 (2004301-002), Philco 13720, Z27744, 081035 EFT 59360
3167	Transistor 1006323 (2004184-005), Motorola Q3 EFT 59352
3168	Transistor 1006323 (2004184-001), Motorola Q5 EFT 59194
3169	Dual Nor Gate 1006321 (2004301-001), Philco 88633, L3419, 886018 EFT 46604
3170	Dual Nor Gate 1006321 (2004301-001), Philco 05742, Z46913, 172055 EFT 60984
3171	Dual Nor Gate 1006321 (2004301-001), Philco 05742, Z47273, 172055V EFT 59357
3172	Dual Nor Gate 1006324 (2004301-001), Philco 08719, S52384, V02050 EFT 60653
3173	Dual Nor Gate 1006321 (2004301-001), Philco 01737, S87080, 148081 EFT 61686
3174	Dual Nor Gate 1006321 (2004301-001), Philco 08719, S52448 EFT 60656
3175	Dual Expander Gate 1006394 (2004301-002), Philco 07619, J05184, 825976 EFT 60755
3179	Dual Nor Gate 1006321 (2004301-001), Philco 27638, L91087, 909025 EFT 60961
3181	Diode 1006399 (2004183-001), Continental Devices CR32 EFT 59645
3182	Dual Nor Gate 1006321 (2004301-001), Philco 05742, Z46919, 172055 EFT 60983
3186	Dual Nor Gate 1006321 (2004301-001), Philco 05739, 163031 EFT 60757
3187	Dual Nor Gate 1006321 (2004301-001), Philco 07742, Z48922, 172055 EFT 60780

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3188	Dual Nor Gate 1006321, 2004301-001, Philco 57744, S48168, 192145 EFT 60783
3189	Dual Expander Gate 1006394 (2004301-002), L28608, 885057 EFT 60751
3190	Diode 1006399 (2004183-001), Continental Devices CR3 EFT 60677
3198	Dual Nor Gate 1006321 (2004301-001), Philco 42740, R83445, 171003 EFT 60995
3199	Dual Nor Gate 1006321 (2004301-001), Philco 77633, L33432, 886018 EFT 61117
3200	Transistor 1006323 (2004184-001), Motorola 3Q18 EFT 61105
3206	Dual Nor Gate - Flatpack 1006321(2004301-001), Philco 08717, Z24654 ID 076016 EFT 61139
3207	Dual Nor Gate - Flatpack 1006321 (2004301-001) Philco Z23230 ID 076016 EFT 62258
3208	Dual Nor Gate 1006321 (2004301-001), Philco 57744 ID 192145 EFT 61138
3209	Dual Nor Gate 1006321 (2004301-001), Philco 02735 EFT 60791
3213	Dual Nor Gate - Flatpack 1006321 (2004301-001), Philco 26621 ID 842008 EFT 62906
3214	Dual Nor Gate - Flatpack 1006321 (2004301-001), Philco 10732, Z58373 ID 130026 EFT 62396
3215	Dual Nor Gate 2004301-001, Philco 05739, Z82056, 163031 EFT 61133
3216	Diode 2004183, Fairchild CR30 EFT 61111
3217	Dual Nor Gate - Flatpack 1006321 (2004301-001), Philco 36624 ID 850070 EFT 62364, 62368
3218	Dual Nor Gate - Flatpack 1006321 (2004301-001), Philco 08719, S52117 ID V02050 EFT 62352
3219	Diode 1006399 (2004183-002), Continental Devices CR197, CR195 EFT 62933, 62934

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3221	Dual Nor Gate - Flatpack 1006321 (2004301-001), Philco 07735 EFT 62388
3226	Dual Nor Gate - Flatpack 1006321 (2004301-001), Philco 34622, J61411 ID 844025 EFT 62274, 62271
3246	Diode 1006399 (2004183-001), Continental Devices CR59 EFT 60978
3247	Transistor 1006323 (2004184-001), Motorola Q3 EFT 61136
3248	Transistor 1006310 (2004004-006), Motorola Q3 EFT 61586
3249	Transistor 1010376-1, Fairchild Q1 EFT 60788
3253	Transistor 1006310-F, Motorola 817 ID 325008, Analysis of Test 3 Rejects
3259	Dual Nor Gate - Flatpack 1006321 (2004301-001), Philco 02735, S88186, S88187 ID 1-8081 EFT 62913, 62914
3260	Dual Nor Gate 1006321 (2004301-001), Philco S52233 EFT 61446, 61447, 61448
3267	Integrated Circuit 1006321, Philco, Study of Gold-Aluminum Bond Failures
3279	Diode 1006399-C, Continental Devices ID 322005, Analysis of Test 9 Rejects
3280	Diode 1006399-D, Continental Devices ID 322005, Analysis of Test 15 Rejects
3284	Diode 1006399-C, Continental Devices ID 334102, Analysis of Test 15
3285	Diode 1006399, Continental Devices ID 334102, Analysis of Test 3
3286	Diode 10 199-C, Continental Devices ID 334102, Analysis of Test 9
3292	Transistor 1006323 (2004184-001), Motorola Q7 EFT 59234
3293	Dual Gate 1006394 (2004301-002), Philco 36633, L2-928, 885057 EFT 62905

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3297	Diode 1006399, Continental Devices, Switching Mismatch of Diodes, SCD 1006399
3302	Diode 1006399-C, Continental Devices ID 334A01, Analysis of Test 8
3303	Diode 1006399-C, Continental Devices ID 334A03, Analysis of Test 15
3304	Diode 1006399-C, Continental Devices ID 334103, Analysis of Test 15
3305	Diode 1006399-C, Continental Devices ID 334103, Analysis of Test 7
3306	Diode 1006399-C, Continental Devices ID 334103, Analysis of Test 9
3307	Diode 1006399-C, Continental Devices ID 334A01, Analysis of Test 7
3308	Diode 1006399, Continental Devices ID 334A03, Analysis of Test 3
3309	Core 1006320-1, Sprague EFT 49464
3310	Core 1006320-001, Magnetic EFT 62919
3311	Lamp Driver 1006481, Dialco XD553 EFT 62053
3313	Diode 1006399 (2004183-003), Continental Devices ACR, BCR 168 EFT 58362
3314	Transistor 1006323 (2004184-005), Motorola Q3 EFT 61102
3318	Dual Nor Gate 1006321 (2004301-001), Philco S47406, 57744, 192145 EFT 62369
3319	Dual Nor Gate 1006321, Philco 05739 EFT 59231, 60757, 62086, 62020, TFR 3151, 3186, 3142, 3107, Measure Thickness of Metallization
3322	Diode 1006399-C, Continental Devices ID 334A02, Analysis of Test 15
3323	Diode 1006399-C, Continental Devices ID 334A01, Analysis of Test 15

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3324	Diode 1006399, Continental Devices ID 334102, Drift Variables
3332	Diode 1006399, Continental Devices ID 334A01, Analysis of Test 3
3333	Diode 1006399 (2004183-001), Fairchild CR26 EFT 62387
3334	Core 1006320-1, Sprague D13003 EFT 61120
3336	Diode 1006399-C, Continental Devices ID 334A03, Analysis of Test 3
3337	Diode 1006399-C, Continental Devices ID 334A02, Analysis of Test 3
3339	Lamp Driver 1006481, Dialco XD553 EFT 62055
3340	Dual Nor Gate 1006321 (2004301-01), Philco 266-21, 842008 EFT 58366
3343	Diode 1006399-C, Continental Devices ID 334A01, Analysis of Test 9
3344	Diode 1006399-C, Continental Devices IL V21A01, Analysis of Test 9
3345	Diode 1006399-C, Continental Devices ID 334A02, Analysis of Test 9
3346	Diode 1006399-C, Continental Devices ID 334A03, Analysis of Test 9
3347	Diode 1006399-C, Continental Devices ID V21A01, Analysis of Test 7
3348	Diode 1006399-C, Continental Devices ID V21A01, Analysis of Test 7
3349	Diode 1006399-C, Continental Devices ID V21A01, Analysis of Test 3
3350	Diode 1006399-C, Continental Devices ID V21A01, Analysis of Test 3
3351	Diode 1006399-C, Continental Devices ID 334A01, Drift Variables

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3352	Diode 1006399-C, Continental Devices ID 334A02, Drift Variables
3353	Diode 1006399-C, Continental Device ID 334I03, Drift Variables
3354	Diode 1006399-C, Continental Device ID V21A01, Analysis of Test 15
3355	Diode 1006399-C, Continental Devices ID V21A03, Analysis of Test 3
3356	Diode 1006399-C, Continental Devices ID V21A02, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3362	Transistor 1006317-002, Solitron Q12 EFT 60994
3363	Diode 1006399-C, Continental Devices ID V21A02, Analysis of Test 15
3364	Dual Nor Gate 1006394 (2004301-002), Philco 13619 J05-30 825976 EFT 58339
3365	Dual Nor Gate 1006321 (2004301-001), Philco Q2737 EFT 60261
3367	Diode 1006399-C, Continental Devices ID V21A04, Analysis of Test 7
3368	Diode 1006399-C, Continental Devices ID V21A01, Drift Variables
3369	Diode 1006399-C, Continental Devices ID V21A03, Analysis of Test 15
3370	Diode 1006399-C, Continental Devices ID V21A04, Analysis of Test 15
3371	Dual Nor Gate 1006321 (2004301-001), Philco 33616 815028 EFT 58737
3372	Dual Nor Gate 1006321 (2004301-001), Philco 52643 EFT 58728
3373	Dual Nor Gate 1006321 Philco
3374	Diode 1006399-C, Continental Devices ID V21004, Analysis of Test 15
3387	Diode 1006399-C, Continental Devices ID V21A04, Analysis of Test 9
3388	Dual Nor Gate 1006394 (2004301-002) Philco EFT 58367
3389	Diode 1006399 (2004183-001), Continental Devices CR 42 EFT 58363
3390	Diode 1006399 (2004183-001), Continental Devices CR14 EFT 58717
3392	Diode 1006399, Continental Devices, Diode Switching Problems
3393	Diode 1006399-C, Continental Devices ID V21A04, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3394	Dual Nor Gate 1006399 (2004301-002), Philco 13720 Z28343 081035 EFT 60291
3397	Diode 1006399, Continental Devices L9401 to L99420
3398	Diode 1006399 (2004183-001), Fairchild CR 6 EFT 58376
3399	Diode 1006399-C (2004183-001), Fairchild CR 3 EFT 58701
3414	Diode 1006399-C, Continental Devices ID 348A01, Analysis of Test 4
3415	Diode 1006399-C, Continental Devices ID 348006, Analysis of Test 15
416	Diode 1006399-C, Continental Devices ID 337014, Analysis of Test 15
3420	Diode 1006399 (2004183-001), CR42 EFT 58727, 59237
3421	Transistor 2004722, Motorola Q9, Q10, Q11 EFT 59770
3422	Transistor 1006310 (2004004-004), Fairchild Q7, Q4 EFT 58726, 58725
3428	Diode 1006399-C, Continental Devices ID V21A02, Analysis of Test 3
3429	Diode 1006399-C, Continental Devices ID V21A02, Analysis of Test 9
3430	Diode 1006399-C, Continental Devices ID V21A02, Drift Variables
3431	Diode 1006399-C, Continental Devices ID V21A02, Analysis of Test 8
3432	Diode 1006399-C, Continental Devices ID 361027, Analysis of Test 8
3433	Diode 1006399-C, Continental Devices ID V21A03, Analysis of Test 7
3434	Diode 1006399-C, Continental Devices ID V21A03, Drift Variables
3449	Diode 1006399-C, Continental Devices V21A03, Analysis of Test 9
3450	Diode 1006399-C, Continental Devices ID 361027, Analysis of Test 9

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3451	Diode 1006399-C, Continental Devices ID V21A03, Analysis of Test 3
3452	Diode 1006399-C, Continental Devices ID V21A03, Analysis of Test 8
3454	Transistor 1006310 (2004004-2), Motorola Q13 EFT 02919
3455	Dual Nor Gate 1006321 (2004301-001), Philco 52643 L726-2 934005 EFT 58743, 58744, 58728
3456	Dual Nor Gate 1006321 (2004301-001), Philco 52643, L72773 934005 EFT 58744, 58728, 58743
3457	Diode 1006399 (2004183-001), Fairchild CR5 EFT 59772
3460	NPN Transistor 2N5477, TFW F1F1
3462	Diode 1006399-C, Continental Devices ID 361027, Analysis of Test 15
3463	Diode 1006399-C, Continental Devices ID 361A01, Analysis of Test 15
3464	Diode 1006399-C, Continental Devices ID 334103, Special Electrical Test
3466	Dual Nor Gate 1006321 (2004301-001), Philco 14744 S45134/192145 EFT 03158
3470	Diode 1006399-C, Continental Devices ID 348A01, Analysis of Test 3
3471	Diode 1006399-C, Continental Devices ID 348006, Analysis of Test 7
3472	Diode 1006399-C, Continental Devices ID 348A01, Analysis of Test 3
3473	Diode 1006399-C, Continental Devices ID 361A01, Analysis of Test 3
3474	Diode 1006399-C, Continental Devices ID V21A04, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3477	Dual Nor Gate 1006394 (2004301-002), Philco 14270, 729316/081035 EFT 64448
3478	Transistor 1006317-2B, Solitron 703 ID 249A01, Electrical Test 3
3482	Transistor 1006323 (2004184-001), Motorola 1Q14 EFT 64418
3483	Diode 1006399-C, Continental Devices ID V21A04, Analysis of Test 7
3485	Diode 1006399 (2004183-001), CDC CR33 EFT 64319
3489	Diode 1006399-C, Continental Devices ID V21A04, Analysis of Test 8
3490	Diode 1006399-C, Continental Devices ID V21A04, Analysis of Test 9
3491	Diode 1006399-C, Continental Devices ID V21A04, Drift Variables
3495	Dual Nor Gate 1006321 (2004301-001), Philco 14744 S45042 192145 EFT 63284
3498	Core 1006320-1, Magnetics D22007 EFT 58336
3499	Diode 1006399, Continental Devices 817 ID 361A06, Analysis of Test 3
3500	Diode 1006399-C, Continental Devices 817 V21004, Drift Variables
3502	Dual Nor Gate 1006394 (1004301-002), Philco 13619 J054- 825976 EFT 63321
3503	Dual Nor Gate 1006321 (1004301-001), Philco 266-21 J50153-842008 EFT 63325
3519	Sense Amplifier 1006769 (2004003), Signetics 2SA1 EFT 64302
3525	Diode 1006399, Continental Devices ID V21004, Analysis of Test 7
3526	Diode 1006399-C, Continental Devices ID 348A01, Analysis of Test 3
3527	Diode 1006399-C, Continental Devices ID 348A01, Analysis of Test 7

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3538	Dual Nor Gate 1006321 (2004301-001), Philco 23627 J80078 854145 EFT 63616
3539	Dual Nor Gate 1006394 (2004301-002), Philco 44618 J06323 825976 EFT 63617
3540	Dual Nor Gate 1006321 (2004301-001), Philco 01735 S86009 148081 EFT 63638
3544	Sense Amplifier 1006769 (2004003), Signetics EFT 61940
3546	Diode 1006399-C, Continental Devices ID 348A01, Analysis of Test 9
3547	Diode 1006399-C, Continental Devices ID 361A02, Analysis of Test -5
3548	Diode 1006399-C, Continental Devices ID 361A03, Analysis of Test 15
3549	Diode 1006399-C, Continental Devices ID 361A04, Analysis of Test 15
3552	Dual Nor Gate 1006321 (2004301-001), Philco 56324 K29356 V42010 EFT 63630
3553	Dual Nor Gate 1006321 (2004301-001), Philco 12733 Z59223 130026 EFT 63631
3554	Dual Nor Gate 1006321 (2004301-001), Philco 26621 J50150 842008 EFT 63632
3555	Diode 1006399-C, Continental Devices ID V21004, Analysis of Test 3
3556	Diode 1006399, Continental Devices ID V21004, Analysis of Test 9
3537	Diode 1006399-C, Continental Devices ID V21A01, Baseline Noncatastrophic Failure before Reburn-in
3569	Core 1006320, Sprague, Sample Inspection for Lot Quality
3570	Core 1006320, Sprague, Sample Inspection for Lot Quality
3572	Diode 1006399, Continental Devices ID 337014, Drift Variables

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3573	Diode 1006399, Continental Devices ID 21A01, Analysis of Test 7
3581	Diode 1006399, Continental Devices ID 348006, Analysis of Test 9
3582	Diode 1006399-C, Continental Devices ID 361027, Analysis of Test 3
3583	Diode 1006399, Continental Devices ID V21A01, Special Burn-in
3584	Diode 1006399-C, Continental Devices ID 361027, Analysis of Test 7
3585	Diode 1006399-C, Continental Devices ID 361027, Analysis of Test 3
3586	Diode 1006399-C, Continental Devices ID V21A02, Special Reburn-In
3587	Dual Nor Gate 1006321 (2004301-001), Philco 02803 S16791 247087 EFT 63611
3593	Core 1006320-1, Magnetics, Examine for Evidences of Poor Workmanship and Entrapped Contaminants
3595	PNP Transistor 1006310 (2004004-002) EFT 63286, 64348
3596	Dual Nor Gate 1006321 (2004301-001), Philco 02803 S16-88 247087 EFT 66799
3597	Core 1006320-1, Magnetics V17094 EFT 66907
3598	Diode 1006399, Continental Devices ID 361A04, Analysis of Test 3
3599	Diode 1006399-C, Continental Devices ID 361A02, Analysis of Test 3
3600	Diode 1006399-C, Continental Devices ID 361A02, Analysis of Test 7
3607	Cores 1006320 Magnetics D46051 EFT 66922
3608	Core 1006320, Magnetics D71005 EFT 67167
3609	Diode 1006399-C, Continental Devices ID 361A05, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3610	Diode 1006399-C, Continental Devices ID 361A05, Analysis of Test 7
3611	Diode 1006399-C, Continental Devices ID 361A05, Analysis of Test 15
3612	Diode 1006399-C, Continental Devices ID V21A03, Reburn-In
3614	Dual Nor Gate 1006321 (1004301-001) Philco 26621 J52569, Apollo EFT 67253, From Logic A-4 2003121-041, S/N 24
3620	Dual Nor Gate 1006321 (2004301-001), Philco 18728 Z95853 100042 EFT 63640
3621	Core 1006320, Magnetics D05008 EFT 60290
3634	Diode 1006399-C, Continental Devices ID 361A04, Analysis of Test 3.
3635	Diode 1006399-C, Continental Devices ID 361A07, Analysis of Test 3.
3636	Diode 1006399-C, Continental Devices ID 348006, Analysis of Test 3.
3637	Diode 1006399-C, Continental Devices ID 361A03, Analysis of Test 3.
3638	Diode 1006399-C, Continental Devices 361027, Analysis of Test 8.
3639	Diode 1006399-C, Continental Devices ID 361027, Analysis of Test 9.
3640	Diode 1006399-C, Continental Devices ID 361027, Drift Variable
3641	Dual Nor Gate 1006321 (2004301-001), Philco 04742 EFT 67269
3642	Dual Nor Gate 1006321, (2004301-001), Philco 10732 Z58048 EFT 67289
3643	Dual Nor Gate 1006321 (2004301-001), Philco 41740 EFT 67294
3644	Dual Nor Gate 1006321 (2004301-001), Philco 13720 EFT 67295
3645	Dual Nor Gate 1006321 (2004301-001), Philco 118111 13720 EFT 67296

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3719	Relay K16 2004688-2, Filter E99795 EFT 67266
3720	Multilayer Board 1006395, Electra Laboratory Analysis of Plated Through Holes on 1/10 Coupon
3721	Diode 1006399-C, Continental Devices ID 348A01, Postreburn-in
3722	Diode 1006399-C, Continental Devices ID V21004, Analysis of Test 1
3723	Indicator Symbolic 1, Analysis of IL Face Plate
3730	Diode 1006399-C, Continental Devices ID 348006, Reburn-in
3736	Malco Pin 1006782-1, Malco EFT 68158, 68160, 68161
3738	Core 1006320-01, Magnetics 312M EFT 67187
3739	Core 1006320-01, Magnetics 340B EFT 67200
3740	Core 1006320-01, Magnetics 261B EFT 67182
3751	Resistor 1R26 1006750-49, Corning Glass EFT 68162
3752	Resistor 1R28 1006750-22, Corning Glass E.T 68163
3753	Resistor 1R27 1006750-15, Corning Glass V05113 EFT 68751
3754	Diode 1006399 (2004183-001), Motorola 1CR35 EFT 68159
3755	Diode 1006399 (2004183-001), CDC 1CR35 EFT 68165
3757	Core 1006320-1, Magnetics 328A EFT 67509
3758	Diode 1006399 (2004183-001), CDC 1CR 48, EFT 68166
3759	Transistor 1006323 (2004184-001), Motorola 1Q14 EFT 68169
3760	Transistor 1006323 (2004184-001), Motorola 1Q13 EFT 68168, 68158 to 70
3761	Resistor 1R29 1006788-213, Dale EFT 68164
3762	RF Choke Coil 1010406-10, Delevan EFT 68170
3763	Diode 1006399-C, CDC ID 361A01, Analysis of Test 3
3764	Diode 1006399-C, Continental Device ID 361A01, Electrical Test 1

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3670	Coils 1006320-1, Magnetics D18018 EFT 66908
3671	Coils 1006320-1, Magnetics D66026 EFT 67166
3672	Dual Nor Gate 1006321 (2004301-001), Philco 02803 EFT 67568
3674	Coils 1006320-1, Magnetics V17094 EFT 66923
3675	Dual Nor Gate 1006321 (2004301-001), Philco 06720 Z27374 EFT 67557
3680	Dual Nor Gate 1006321 (2004301-001), Z600 130026 EFT 67580
3681	Dual Nor Gate 1006321 (2004301-001), Philco 02803 S16449 247087 EFT 67582
3682	Dual Nor Gate 1006321 (2004301-001), Philco 02803 6646 297087 EFT 67583
3683	Diode 1006399-C, Continental Devices ID V21A04, Postreburn-in
3696	Dual Nor Gate 1006321 (1004301-001), Philco 07621 J50982 842008 EFT 67576
3697	Dual Nor Gate 1006321, 2004301-001, Philco 13733 Z59684 130026 EFT 67577
3698	Dual Nor Gate 1006321 (2004301-001), Philco 01622 L50034 842008 EFT 67578
3699	Dual Nor Gate 1006321 (1004301-001), Philco 4762F J81376 854145 EFT 67584
3701	Diode 1006399-C, Continental Devices ID 348006, Electrical Test 2
3702	Diode 1006399-C, Continental Devices ID 361A06, Analysis of Test 15
3703	Diode 1006399-C, Continental Devices ID 361A07, Analysis of Test 15
3704	Diode 1006399-C, Continental Devices ID 386036, Analysis of Test 15
3717	Diode 1006399-C, Continental Devices ID 348A01, Reburn-in
3718	Coils 1006320-1, Magnetics 272 EFT 66924

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3765	Diode 1006399, Continental Devices ID 361A01, Electrical Test 4
3766	Diode 1006399-C, Continental Devices ID 361027, Reburn-in
3767	Dual Nor Gate 1006321 (2004301-001), Philco S78133 41740 171002 EFT 68151
3768	Dual Nor Gate 1006394 (2004301-002), Philco J0546 136-19 EFT 67591
3769	Malco Pin 1006782-1, Malco EFT 6755, 63640
3772	Diode 1006399, Continental Devices ID 361A01, Electrical Test 2
3775	Multilayer Board 1006395, Electra Laboratory, Analysis of Plated Through Holes on 1/10 Coupon
3776	Dual Nor Gate 1006394 (2004301-002), Philco 14720 EFT 68157
3826	Multilayer Board 1006395-016, Electra Laboratory, Analysis of Plated Through Holes on 1/10 Coupon
3827	Core 1006320-1, Magnetics 3104 EFT 64790
3828	Capacitor C3 1006755-57, Kemet EFT 67297
3829	Relay A21 2004629-1 P & B EFT 67567
3830	Diode 1006399 (2004183-001), Continental Devices, 1CR36 EFT 68167
3831	Shaft Assemblies 2003975-021, Electro Products E515
3836	Transistor 1006323 (2004184-004), Fairchild R37 EFT 68786, 68787, 68788
3843	Dual Nor Gate 1006321 (1004301-001), Philco 26627 EFT 68781
3844	Dual Nor Gate 1006321 (1004301-001), Philco 26627 EFT 68782
3845	Dual Nor Gate 1006394 (1004301-002), Philco 06097, 25619 EFT 68783
3846	Dual Nor Gate 1006321 (1004301-001), Philco 26627 EFT 68784
3847	Resistor 1OR37 1006750-15, CGW EFT 70702
3850	Diode 1006399-C, Continental Devices ID 361A01, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3851	Diode 1006399-C, Continental Devices ID 361A01, Analysis of Reburn-in
3852	Resistor 1OR36 1006750-15, CGW EFT 70703
3890	Expander Gate 1006394 (2004301-002), Philco 13748 EFT 68792
3891	Expander Gate 1006394 (2004301-002), Philco 13748 Z7896 EFT 68793
3892	Dual Nor Gate 1006321 (2004301-001), Philco 03738 6740 EFT 68796
3893	Dual Nor Gate 1006321 (2004301-001), Philco 41740 6742 EFT 68798
3876	Sense Amplifier 1006769 (2004003-003), Signetics S61041, S61047
3877	Diode 1006399 (2004183-001) CDC CR 25 CR22 EFT 67596, 67597

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3914	Diode 1006399, Continental Devices ID 361A02, Analysis of Test 2
3915	Diode 1006399, Continental Devices ID 361A02, Analysis of Test 3
3916	Diode 1006399-C, Continental Devices ID 361A03, Analysis of Test 3
3917	Diode 106399-C, Continental Devices ID 361A03, Analysis of Test 1
3922	Transformer T22 1003084-011, Raytheon AFR 21766 EFT 68785
3923	Dual Nor Gate 1006321 (2004301-001), Philco 03738, 6740 EFT 68797
3924	Dual Nor Gate 1006321 (2004301-001), Philco 01735, 6738 EFT 68799
3925	Transistor 1006323 (2004184-001), Motorola 10Q18 638288 EFT 70701
3926	Dual Nor Gate 1006321 (2004301-001), Philco 03738 Z80322 EFT 7071E
3927	Dual Nor Gate 1006394(2004301-002), Philco 14720, Z28207, 6722 EFT 71311
3928	Dual Nor Gate 1006321 (2004301-001), Philco 06803 10042 EFT 71321
3929	Dual Nor Gate 1006321 Philco EFT 71322
3930	Dual Nor Gate 1006321 (2004301-001), Philco 41740 EFT 71323
3931	Dual Nor Gate 1006321 (2004301-001), Philco 41740 EFT 71324
3936	Diode 1006399, Continental Devices 817 ID 361A07, Analysis of Test 4
3937	Diode 1006399-C, Continental Devices ID 361A03, Analysis of Test 2
3938	Diode 1006399-C, Continental Devices ID 361A04, Analysis of Test 1
3939	Diode 1006399-C, Continental Devices ID 361A04, Analysis of Test 3

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3894	Dual Nor Gate 1006321 (2004301-001), Philco 15620 6622 EFT 70706
3895	Dual Nor Gate 1006321 (2004301-001), Philco 15620 6622 EFT 70707
3896	Dual Nor Gate 1006321 (2004301-001), Philco 15620 6622 EFT 70708
3897	Dual Nor Gate 1006321 (2004301-001), Philco 04621 6622 EFT 70709
3898	Dual Nor Gate 1006321 (2004301-001), Philco 15220 6622 EFT 70710
3899	Dual Nor Gate 1006321 (2004301-001), Philco 03738 6740 EFT 70717
3900	Dual Nor Gate 1006321 (2004301-001), Philco 22741 B71502 EFT 71308
3901	Dual Nor Gate 1006321 (2004301-001), Philco 33743 S46224 EFT 71309
3902	Dual Nor Gate 1006321 (2004301-001), Philco 12733 ID 6735 EFT 71310
3903	Dual Nor Gate 1006321 (2004301-001), Philco 03738 EFT 70726
3908	Diode 1006399-C, Continental Devices ID 361A01, Reburn-In
3909	Diode 1006399, Continental Devices ID 361A07, Analysis of Test 2
3910	Diode 1006399, Continental Devices 817 ID 361A06, Analysis of Test 4
3911	Diode 1006399, Continental Devices 817 ID 361A04, Analysis of Test 4
3912	Diode 1006399, Continental Devices 817 ID 361A02, Analysis of Test 4
3913	Diode 1006399-C, Continental Devices ID 361A02, Analysis of Test 1

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3940	Diode 1006399-C, Continental Devices ID 361A05, Analysis of Test 1
3941	Diode 1006399-C, Continental Devices ID 361A05, Analysis of Test 3
3942	Diode 1006399-C, Continental Devices ID 361A04, Analysis of Test 3
3943	Diode 1006399-C, Continental Devices ID 361A06, Analysis of Test 1
3944	Diode 1006399-C, Continental Devices ID 361A06, Analysis of Test 3
3945	Diode 1006399-C, Continental Devices ID 361A07, Analysis of Test 2
3946	Diode 1006399-C, Continental Devices ID 361A07, Analysis of Test 3
3947	Diode 1006399-C, Continental Devices ID 361A07, Analysis of Test 1
3948	Diode 1006399-C, Continental Devices ID 337014, Reburn-in, Test 8
3949	Diode 1006399-C, Continental Devices ID 386036, Analysis of Test 3
3950	Dual Nor Gate 1006321 (1004301-001), Philco 41801, L68905 EFT 68800
3951	Dual Nor Gate 1006394 (1004301-002), Philco 14720 EFT 71302
3952	Dual Nor Gate 1006321 (2004301-001), Philco 23728, Z60991, Z61025 EFT 71327, 71328
3953	Dual Nor Gate 1006321 (2004301-001), Philco 33743 EFT 71329, 71330
3973	Multilayer Boards 1006395, Electra Laboratories
3975	Dual Nor Gate 1006394 (1004301-002), Philco 14720, 6722 EFT 71340

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
3976	Dual Nor Gate 1006321 (1004301-001), Philco 33743, 6746 EFT 71352
3977	Dual Nor Gate 1006321 (1004301-002), Philco 33743, 6746 EFT 71358
3978	Dual Nor Gate 1006321 (1004301-001), Philco 33743, 6786 EFT 71359
3992	Dual Nor Gate 1006394, (2004301-002), Philco 14720 EFT 71341
3993	Dual Nor Gate 1006321 (1004301-001), Philco 23728 -57208, Z61094 EFT 71354, 71353
4001	Diode 1006399 (2004183-002), CDC EFT 65693
4002	Dual Nor Gate 1006321 (2004301-001), Philco 13709, 6712 EFT 71378
4006	Dual Nor Gate 1006321 (1004301-002), Philco 04621, G76711 EFT 71364
4007	Dual Nor Gate 1006321 (1004301-002), Philco 60626, K29711 EFT 71371
4008	Dual Nor Gate 1006321 (1004301-002), Philco 60626, K29940 EFT 71372
4018	Dual Nor Gate 1006394, (1004301-002), Philco 14720, Z29643 EFT 71363
4019	Dual Nor Gate 1006321 (1004301-001), Philco 60626, K30032 EFT 71365
4020	Dual Nor Gate 1006321 (1004301-001), Philco 60626 EFT 71370
4021	Dual Nor Gate 1006321 (1004301-001), Philco 32631, L01715 EFT 71373
4022	Dual Nor Gate 1006321 (1004301-001), Philco 32631, Z01845 EFT 71374
4023	Dual Nor Gate 1006321 (1004301-001), Philco 31631, L0156 EFT 71375
4029	Dual Nor Gate 1006394 (2004301-002), Philco Raytheon ID A81503 EFT 71379

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
4030	Dual Nor Gate 1006321 (2004301-001), Philco Raytheon ID B63504 EFT 71380
4031	Dual Nor Gate 1006321 (2004301-001), Philco ID B63504 EFT 71390
4032	Dual Nor Gate 1006394 (2004301-002), Philco Raytheon ID A81803 EFT 71391
4033	Dual Nor Gate 1006394 (2004301-002), Philco Raytheon ID A81803 EFT 71392
4034	Dual Nor Gate 1006394 (2004301-002), Philco Raytheon ID A81503 EFT 71393
4050	Dual Nor Gate 1006321 (1004301-002), Apollo EFT 65809
4051	Dual Nor Gate 1006321 (1004301-002), Philco EFT 65806
4064	Dual Nor Gate 1006321 (2004301-001), Philco Raytheon ID B49506 EFT 65805
4065	Diode 1006399 (2004183-001) CDC ID V21A02 EFT 71368
4080	Dual Nor Gate 1006321 (2004301-001), Philco EFT 65810
4088	Relay K1 2004688-1, Filters 6804 IC C29047 EFT 65812
4089	Diode 1006399 (2004183-002), CDC EFT 65875, 71866, 71867, 71868
4112	Transistor 1006310-1F, Motorola 835 ID 426019, Analysis of Test 1
4114	Transistor 1006323 (2004184-001), Motorola EFT 68301 ID G57327
4115	Transistor 1006323 (2004184-004) Motorola EFT 72365, 72366 ID G57327
4142	Transistor 1006310-F, Motorola 835, ID 426019, Analysis of Test 2
4143	Dual Nor Gate 1006321 (1004301-001), Philco EFT 68791 ID 741A07
4144	Dual Nor Gate 1006321 (2004301-001), Philco EFT 72367, 72368, 72369 ID 879M.8

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
4145	Dual Nor Gate 1006321 (2004301-001), Philco EFT 72368, 72367, 72369 ID 878M18
4146	Dual Nor Gate 1006321 (2004301-001), Philco EFT 72369, 72367, 72368 ID 879M18
4147	Transistor 1006323 (2004004-001), Motorola EFT 72379
4173	Dual Nor Gate 1006321 (2004301-001), Philco EFT 65801, 71400, 65802, 71399 ID 879M10
4174	Dual Nor Gate 1006321 (2004301-001), Philco EFT 65802, 71400, 65801, 71399 ID 879M10
4175	Dual Nor Gate 1006321 (1004301-001), Philco EFT 68789, 68790, 68791 ID 741A07
4176	Dual Nor Gate 1006321 (1004301-001), Philco EFT 70721 ID 741A01
4177	Dual Nor Gate 1006321 (1004301-001), Philco EFT 71312, 70716 ID 741A01
4178	Dual Nor Gate 1006321 (2004301-001), Philco EFT 71385, 71364, 71386 ID 833462
4179	Dual Nor Gate 1006321 (2004301-001), Philco EFT 71386, 71364, 71385 ID 833H02
4180	Dual Nor Gate 1006321 (2004301-001), Philco EFT 71399, 71400, 65801, 65802 ID 879M10
4181	Dual Nor Gate 1006321 (2004301-001), Philco EFT 71400, 71399, 65801, 65802 ID 879M10
4193	Diode 1006399-C, Continental Devices ID 520A02, Analysis of Test 2
4194	Diode 1006399-C, Continental Devices ID 520A02, Analysis of Test 1
4195	Diode 1006399-C, Continental Devices ID 520A02, Analysis of Test 3
4196	Diode 1006399-C, Continental Devices ID 520A02, Analysis of Vibration Test

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
4198	Diode 1006399-C, Continental Devices ID 520A02, 5 units, Analysis of Test ET-8
4213	Diode 1006399-C, Continental Devices ID 520A01, Analysis of Test 2
4220	Dual Nor Gate 1006321 (2004301-001), Philco EFT 72377, 72381 ID 125107
4221	Dual Nor Gate 1006321 (2004301-001), Philco EFT 72381, 72377 ID 125107
4229	Diode 1006399C, Continental Devices ID 520030, Analysis of Test 8
4230	Diode 1006399C, Continental Devices ID 520030, Analysis of Test 2
4231	Diode 1006399C, Continental Devices ID 520030, Analysis of Test 1
4235	Diode 1006399-C, Continental Devices ID 520A01, Shock and Vibration
4236	Diode 1006399-C, Continental Devices ID 520030, Shock and Vibration
4237	Diode 1006399C, Continental Devices ID 520030, Analysis of Test 3
4238	Diode 1006399C, Continental Devices ID 520A01, Analysis of Test 1
4239	Diode 1006399C, Continental Devices ID 520A01, Analysis of Test 8
4240	Diode 1006399C, Continental Devices ID 520A01, Analysis of Test 3
4241	Diode 1006399C, Continental Devices ID 530A01, Analysis of Test 2
4254	Transformer 1003084-011 T10 EFT 77134
4263	Dual Nor Gate 1006321 (1004301-001), Philco EFT 77135
4264	Dual Nor Gate 1006321 (1004301-001), Philco EFT 77136
4271	Diode 1006399-C, Continental Devices ID 520030, Reburn-In
4272	Diode 1006399-C, Continental Devices ID 520A01, Analysis of Test 5
4273	Diode 1006399-C, Continental Devices ID 520A01, Reburn-In
4274	Diode 1006399-C, Continental Devices ID 520030, Analysis of Test 5
4278	Core 1005021, Magnetics ID 554012

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
4279	Diode 1006399-C, Continental Devices ID 550A02, Shock and Vibration
4280	Diode 1006399-C, Continental Devices ID 550A01, Shock and Vibration
4281	Diode 1006399-C, Continental Devices ID 550A01, Analysis of Electrical Tests
4283	Diode 1006399C, Continental Devices ID 550040, Analysis of Test 2
4284	Diode 1006399C, Continental Devices ID 550040, Analysis of Test 2
4285	Diode 1006399C, Continental Devices ID 550A01, Burn-In
4286	Diode 1006399C, Continental Devices ID 550A01, Analysis of Test 2
4294	Diode 1006399-C, Continental Devices ID 550040, Analysis of Test 1
4295	Diode 1006399-C, Continental Devices ID 550A02, Analysis of Test 1
4296	Diode 1006399-C, Continental Devices ID 550A01, Analysis of Test 1
4297	Diode 1006399-C, Continental Devices ID 550A01, Analysis of Electrical Tests
4301	Diode 1006399-C, Continental Devices ID 550040, Vibration
4302	Diode 1006399-C, Continental Devices ID 550040, Analysis of Test 2
4303	Diode 1006399-C, Continental Devices ID 550040, Analysis of Test 3
4305	Diode 1006399-C, Continental Devices ID 550040, Analysis of Electrical Tests
4306	Diode 1006399, Continental Devices ID 550A02, Analysis of Test 3
4307	Diode 1006399-C, Continental Devices ID 550A02, Analysis of Electrical Tests

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
4308	Diode 1006399-C, Continental Devices ID 550A02, Analysis of Electrical Tests
4333	Core 266 1006320-1, Magnetics EFT 78323
4355	Transformer 5T3 1006319, Technitrol EFT 77636
4370	Dual Nor Gate 1006321, Philco EFT 67252
4409	Diode 1006399-C, Continental Devices ID 585001, Analysis of Test 2
4412	Diode 1006399, Continental Devices ID 585001, Analysis of Test 3
4433	Diode 1006399 (2004183-002), CDC EFT 79310
4452	Diode 1006399, Continental Devices ID 596004, Burn-In
4463	Diode 1006399, Continental Devices ID 596004, Analysis of Test 1
4454	Diode 1006399, Continental Devices ID 596004, Analysis of Test 3
4455	Diode 1006399, Continental Devices ID 596004, Analysis of Test 3
4456	Diode 1006399-C, Continental Devices ID 596004, Internal Visual after Shock and Vibration
4458	Magnetic Core 1005021
4459	Magnetic Core 1006021
4488	Diode 1006399, Continental Devices ID 626A02, Analysis of Test 1
4489	Diode 1006399, Continental Devices ID 626A01, Analysis of Test 1
4494	Needle Picking EX-A-0004, Sectioning of Wire Storage Needle
4500	Dual Nor Gate 1006321, (2004301-001), Philco EFT 77650
4529	Dual Nor Gate 2004301-001 (1006321), Philco EFT 77647, 79251, 79252
4555	Diode 1006399-0, Continental Devices ID 626010, Analysis of Burn-In

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
4556	Diode 1006399-0, Continental Devices ID 626010, Analysis of Electrical Tests
4557	Diode 1006399-0, Continental Devices ID 626010, Analysis of Test 3
4567	Diode 1006399, Continental Devices ID 626A01, Analysis of Test 3
4568	Diode 1006399, Continental Devices ID 626010, Analysis of Drift Test
4569	Diode 1006399, Continental Devices ID 626A01, Analysis of Test 1
M-100	A1-A16 Logic Stick, Determine Cause of Reported Short
M-106	Logic Stick A-17 1003174, Verify and Determine Short between Pin 18 and Output of Gate 2
M-107	Logic Stick A-27 1003174, Verify and Determine Short at Pin 3
M-111	DSKY Power Supply 1003532, Find Cause of Intermittent DC Bias on Q3-Q4
M-118	Rope Memory 1003733-031, FT 010658, FAR 4829
M-122	Logic A 21 1003174-28, FT 016371, Verify and Locate Short between Pins 21 and 57
M-123	Logic A-26 1003174-20, FT 015845, Verify and Locate Cause of Short
M-124	Rope Memory 1003733-051, FT 016086, Find Reason for Failure of Core 170A
M-125	Rope Memory 1003733-071, FT 016194, Find Reason for Weak Core 616
M-126	Logic A-32 1003174-17, FT 016359
M-127	Logic A-23 1003174-5, FT 016277, Locate Reported Short
M-128	Logic A-33, A-34 1003174-14, Find Cause of Short from Gate 100, Pin 1, to 0 Vdc
M-130	Erasable Memory B-9 1003069, FT-016261, Locate Open in Sense Line 5
M-136	Gated Flip Flop 1014079 Ser No. 1090 (A-3 Output Low)

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-138	Logic A1-A15 015707, Investigate Reported Vibration Failure
M-139	Logic A-37 103174-D, Investigate Suspected Short at Gate 106
M-140	Logic A20, A40, Verify 17CR1 Inserted Backwards
M-142	Nor Module 1014034, FT 021521, Verify and Determine Cause of High Resistance
M-143	Nor Module 1013034, FT 016308, Verify and Determine Cause of High Output Voltage
M-144	Gated Flip Flop 1014079, FT 016252, Verify and Determine Cause of Low Output
M-145	A1-A16 Logic Module 1003815, FT 02134, Check Open in Matrix between Gates 65-3 and 51
M-149	Nor Module 1014034 8188 Determine Cause of Failure
M-154	Logic Stick A1-A16 1003815, Reject Ticket 015844, Locate Short between A and B 3 Vdc Busses
M-155	Logic Stick A30-A31 1003174-12, Reject Ticket 015773, Phantom Short on Gate 18 B+, Pin 8 to 0 Vdc (Emitted)
M-156	Logic Stick A1-A16 1003815, EFT 01501, Phantom Short Analysis
M-157	Logic Stick A30 1003174-12, FAR 4722/5318, Locate Short at Gates 03 or 0
M-159	Logic Stick A17 1003813-1, EFT 015013, Phantom Short Analysis
M-160	Logic A-17 1003812-1, Phantom Short Analysis EFT 015761
M-161	Logic A-27 1003812-9, Half Marriage - 1003813-10, Locate Open in Matrix
M-163	Logic A1-A16 1003815, Half Marriage - 1003614-1, EFT 015762, Locate Phantom Short
M-164	Nor Module 1014034, Determine Cause of High Output Voltage to Gate III
M-167	Nor Module 1014034, 10686, Verify and Determine Cause of High Resistance

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-168	Nor Module 1014034, 9854, Find Cause of Low Output
M-171	Logic A-37, Fault Tag 020324, Determine Cause of Failure
M-172	Erasable Memory, Waltham, Final Test, Verify Short in X31 Line
M-173	Nor Gate 10440, Fault Tag 021691, Postspotting, Locate Open Circuit
M-174	Module A33-34, FT 015990, Locate Cause of Error
M-175	Logic Stick A1-16, FT 015842, Investigate Test Claim
M-176	Logic Stick A1-16, FT 015065, Investigate Test Claim
M-177	Logic Stick A28, FT 020024, Investigate Test Claim
M-179	Nor Module 1014034, FT 015427, Analysis of Failure
M-180	Logic Stick Half-Marriage A1-16, FT 019928, Investigate Test Claim
M-181	Logic Stick A33-A34, FT 021427, Investigate Test Claim
M-182	Transformer Driver 1014053, FT 016256, Investigate Test Claim
M-183	Logic A22 1003812-4, FT 019932, Investigate Test Claim
M-185	Logic A35 1003174-15, FT 015771, Investigate Test Claim
M-186	Transformer Driver 1014053, FT 24474, Investigate Test Claim
M-187	Logic A30-31 1003812-12, FT 021352, Investigate Test Claim
M-188	Logic A1-A16 1003074, FT 016345, Investigate Test Claim
M-189	Nor Module 1014034, FT 021764, Investigate Test Claim
M-190	Nor Module 1014034, FT 015270, Investigate Test Claim
M-193	Interface Receiver, FT 015437, Investigate Test Claim
M-197	Transformer Driver 1014053, FT 021665, Investigate Test Claim
M-198	Logic A1-A16 Half Marriage, FT 020180, Investigate Test Claim
M-199	Nor Module 1014034, FT 021683, Analyze Failure
M-200	Nor Module 1014034, FT 021688, Analyze Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-201	Nor Module 1014034, FT 021687, Analyze Failure
M-202	Nor Module 1014034, FT 021692, Analyze Failure
M-203	Rope Memory 185795-1, FT 020308, Determine the Mode of Diode Failure and if Diodes are Pottec with Silastic

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-204	Logic Module A-21 1003812-3, Raytheon FT 02481, Determine Cause of Observed Gate Shorting With Pressure
M-207	Filter Module AGC 117, Raytheon AFR 4735, Locate Short Circuit
M-206	Logic A1-16 1003815, Raytheon FT 018824, Error Lights 11-15 and Gate 73-5 Shorted, 0 Vdc
M-209	Logic A30-31 1003812-12, Raytheon FT 024360, Error Lights 12, 13, 9, 63, 22 and 23, Cannot Reproduce Errors at Vibration
M-210	Logic A-22 1003812-4, Raytheon FT 018932, Locate Short
M-211	Logic A-26, Raytheon FT 019025, Investigate Test Claim
M-212	Logic A-24 1003812-6, Raytheon FT 019933, Investigate Test Claim
M-213	Logic A1-A16 1003815, Raytheon FT 020086, Determine Cause of Stick Failure
M-214	Logic A1-A16(Half Marriage) 1003074, Raytheon FT 16347, Investigate Test Claim
M-215	Logic A1-A16 1003815, Raytheon FT 024359, Error Light 6, Could Not Verify After Depot of Gate 5
M-216	Logic Half Marriage A1-A16, Raytheon FT 018825, Locate Wiring Error
M-219	Relay AFT 6267
M-220	Nor Module 1014034, FT 023767, Analysis of Failure
M-222	Resistor 3.9 k 1014065-1, Locate Open
M-223	Flip Flop FT 16036, Verify Fault
M-224	Gated Flip Flop, Raytheon FT 024037, Investigate Test Claim
M-225	Nor Module FT 02376, Investigate Test Claim
M-226	Diode 1014064 FT 16338, 21696, 21543, 15679, 16396, 16336, 16334, 16333, 16332, 16330, 16323, 16321, 16337, Investigate Open Circuit and High Resistances
M-227	Logic Half Marriage 1003813-1, Raytheon FT 021990, Determine Cause of Short

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-228	Logic A21 1003174-28, Raytheon FT 013952 FAR 6404, Fault Not Verified
M-229	Logic A1-16 1003815-1, Raytheon FT 019019, Loose Metal Particle in Can Could Have Caused Failure
M-230	Interface 1014230 1026, FT 01543, Investigate Test Claim
M-231	Transformer Driver, Raytheon FT 01284 FAR 8150, Locate Short
M-232	GSF Driver 1014095 FT 016142, Verify and Determine Cause of P44s Reading High
M-233	Nor Module 1014034 A-2 FT 019479, Locate Short
M-235	Nor Module 1014034 A-3 FT 021684, Investigate Failure
M-236	Nor Module 1014034 A-3 FT 021667, Locate Fault
M-237	Rope Driver B32-B33, Raytheon FT 15362, Locate Short
M-238	Driver Module 1014096 FT 013436, Investigate Test Claim
M-239	Logic A-28 (Half Marriage), Raytheon FT 018935, Locate Short
M-240	Nor Module, FT 015373, Detect Error
M-242	Nor Module 1014034 FT 018837, Locate Short
M-243	Nor Module 1014034 FT 013777, Investigate Test Claim
M-245	Logic A1-A16 1003815, Raytheon FT 019027, Locate Short
M-246	Drive Modules 1014096 FT 015931, 016050, 016049, Locate Broken Diodes
M-247	Logic A25 1003812-7 FT 013958, Locate Open
M-248	Nor Module 1014034 FT 012324, 011715, 011716, 011718, Investigate High Saturation Voltage
M-252	Gated Flip Flop 1014079 FT 012344, Locate Short
M-253	Nor Module 1014034 FT 013493, Locate Short
M-256	Gated Flip Flop 1014079, Investigate Short
M-257	Buffered Flip Flop 2014000-011, FT 019159, Investigate Short

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-259	Gated Flip Flop 1014079 EFT 012345, 013262, 013260, Locate Opens
M-260	Gated Flip Flop 1014079 Six EFT's, Investigate Test Claim
M-263	Transformer Driver 1014053 FT 019118, 019114, Investigate Poor Fall
M-266	Nor Module 1014034, Raytheon EFT 011860, Locate Short
M-267	Gated Flip Flop 1014079 EFT 012887, Locate Open
M-268	Logic A-4 2411391, Raytheon EFT 011692, Locate Error
M-269	Erasure Memory E-9, 1003089 EFT AFR 5231, Locate Open
M-270	Interface Receiver 1014230 EFT 015064, Investigate Test Claim
M-271	Logic A1-16 1003074, Raytheon EFT 012407, 011943, FAR 6430, Locate Short
M-274	Logic A1-A16 1003815 EFT 012175, Locate Open
M-275	Transformer Driver 1006762-1 EFT 019113, Locate Error
M-276	Buffered Flip Flop 2014000-011 FT 019161, Locate Open
M-277	Buffered Flip Flop 2014000-011, FT 019164, Locate Short
M-278	Logic A23, Raytheon System 123 EFT FT 16572, Locate Error
M-279	Buffered Flip Flop 2014000-011, Locate Open
M-283	Driver Modules 1014096, Locate Error
M-285	Relay Module 1003824-011, Raytheon FT 013509, Locate Short
M-236	Transformer Driver 1014053, Raytheon EFT 017125, Locate Open
M-287	Resistor Module 1014065-3, EFT 016618, Locate Open
M-288	Transformer Driver 1014053, EFT 017130, Investigate High Fall Time
M-289	Buffered Flip Flop 2014000-011 EFT 016873, Locate Open
M-290	Logic A25 1003174-15 Half Marriage, Raytheon, Locate Short

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-294	Transformer Driver 1006762 EFT 019112, Locate Open
M-298	Interface Receiver, 1014230 EFT 016738, Locate Short
M-299	Cable Assembly 1014091, Raytheon EFT 013202, Locate Short
M-301	Diode Module 1006751 EFT 016475, 016496, Locate Opens
M-303	Interface Receiver 1014230 EFT 016737, Locate Short
M-304	Buffered Flip Flop 2014000-011 EFT 016808, Locate Error
M-309	Buffered Flip Flop 2014000-011 EFT 016868, Depot for IRB
M-314	Driver Module 1014096 EFT 018280, Locate Short
M-315	Gated Flip Flop 1014079 EFT 016724, Locate Short
M-318	Nor Module 1014034 EFT 012349, Locate Short
M-319	Gated Flip Flop 1014079, Locate Short
M-320	Nor Module 1014034, Raytheon EFT 018776, Locate Short
M-322	Logic A27 1003174-025, Raytheon EFT 017147, Locate Short
M-323	Buffered Flip Flop 2014000-011 EFT 016874, Investigate Test Claim
M-324	Buffered Flip Flop 2014000-011, EFT 016875, Investigate Test Claim
M-328	Nor Module 104034, EFT 016410, Locate Short
M-334	Digital to Analog Converter 1014219 EFT 021700, Locate Error
M-335	Transformer Driver 1014053 EFT 012795, Locate Open
M-337	Nor Module 1014034 EFT 011005 Reference FAR 11706, Locate Error
M-339	Navigation Keyboard 1003548, Analyze Failure
M-343	Logic A1 2003121-011 EFT 022368, Locate Error
M-345	Transformer Driver 1014053 EFT 012090, 012088, Locate Errors
M-348	Interface Connector 1014209 EFT 018808, Failure Analysis
M-351	Driver Module 1014086 FAR 11439, Locate Errors
M-354	Nor Module, EFT None FAR 12632, 12634, 12635, 12636, Investigate Failures

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-355	Gated Flip Flop 1014079 EFT 022234 FAR 12640, Investigate Failure
M-356	Nor Module 1014054 EFT 011099 FAR 12637, Investigate Failure
M-357	Interface Module 1014230 EFT 022318 FAR 7952, Investigate Failures
M-358	Nor Module 1014034 FAR 12633, Investigate Failure
M-359	Nor Module 1014034 FAR 12038, Failure Analysis
M-361	Driver Module 1014096 EFT 017927 FAR 12649, Failure Analysis
M-362	CDU Error Angle Counter 2007139-041, Raytheon EFT 014252 FAR 12642, Investigate Failure
M-363	Nor Module 1014034 EFT 017310 FAR 12645, Failure Analysis
M-364	Nor Module 1014034 EFT 020771, 023276, 023281, 023289, 023336, 023330, 023378, 023381, 023333, Failure Analysis
M-365	Nor Module 1014034 EFT 023379, 023337, 023335, 023288, 023282, 023338, 023276, 023380, Failure Analysis
M-366	Nor 1014034 EFT 021164, 022261, Locate Open
M-367	Nor Module 1014034 EFT 017203, Failure Analysis
M-368	Oscillator 1003527, Check Support Pads
M-369	APW Matrix 2003005-011, EFT 017939, Failure Analysis
M-370	Nor Module 1014034 EFT 017993, FAR 10562, Failure Analysis
M-371	Nor Module 1014034 EFT 023346, 023278, 023280, 023348, 023343, 023347, 023345, 023344, 023384, 023287, 023279, 023286, 023302, 023285, 023284, 020533, 023383, Failure Analysis
M-372	Nor Module 1014034, Failure Analysis
M-373	Nor Module 1014034, Failure Analysis
M-376	Interface Receiver 1014230 EFT 017650 FAR 12995, Failure Analysis
M-377	Driver 1014096 EFT 017202 FAR 12646, Failure Analysis
M-378	Driver Module 1014096 EFT 017995 FAR 13424, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-379	Nor Module 1014034 FAR 13421, Failure Analysis
M-380	Diode Module 1014064 EFT 02077, Locate Open
M-381	Nor Module 1014034 FAR 12957, Failure Analysis
M-382	Coaxial Driver 189851 AFR 10541, 10550, Failure Analysis
M-383	Nor Module 1014034, Raytheon EFT 30804 FAR 13425, Failure Analysis
M-391	Nor 1014034 EFT 39168, Failure Analysis
M-392	Nor 1014034 EFT 39170, Failure Analysis
M-393	Nor 1014034 EFT 39169, Failure Analysis
M-395	Sense Wiring 2003061-161 EFT 39052, Failure Analysis
M-396	CDU Error Angle Counter, Raytheon EFT 38799, Failure Analysis
M-397	Erasable Driver 1003139, Raytheon EFT 38764, 38763, AFR 9161, 13957, Failure Analysis
M-398	Quadrant 3 1007078-031 EFT 39184, Failure Analysis
M-399	Quadrant 4 2007081-021 EFT 011024, Failure Analysis
M-406	Erasable Memory 1003069, Raytheon, Locate Open
M-401	S-Band Amplifier 188030-4, Failure Analysis
M-402	Logic A26, Raytheon FAR 8459, Failure Analysis
M-403	Interface 1014230 L-1T 32246, Failure Analysis
M-404	Nor Module 1014034, Raytheon EFT 31060 FAR 15128, Failure Analysis
M-407	Logic A-26 1003812-8 FAR 8459, Failure Analysis
M-408	Nor Module 1014034, Raytheon EFT 39126 FAR 12065, Failure Analysis
M-409	Nor Module 1014034, Raytheon EFT 32245 FAR 10679, Failure Analysis
M-410	AGC 111, Determine Cause of System Failure in AGC 111

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-411	Logic Half-Marriage A1-16 1003813-1, EFT 28339, Failure Analysis
M-413	Nor Modules 1014034 EFT 32404, 32405, 32403, FAR 15126, 15127, 15129, Failure Analysis
M-415	Driver Module 1014096, Raytheon EFT 26565 FAR 12066, Failure Analysis
M-416	Alarm Indicator 1006387, EFT 28102, FAR 15152, Failure Analysis
M-418	Nor Module 1014034 EFT 27946 FAR 15136, Failure Analysis
M-420	Nor Module 1014034, Failure Analysis
M-421	Diode Module 1014064, Failure Analysis
M-423	Nor Module 1014034, Failure Analysis
M-424	Alarm Indicator 1006387, Failure Analysis
M-425	Nor Module 1014034 EFT 27945 FAR 15137, Failure Analysis
M-432	Logic A8-11 2003121-081, Raytheon EFT 18203 AFR 15023, Failure Analysis
M-434	Logic A8-A11 2003121-081 ID 844025 EFT 38345 Failure Analysis
M-435	Nor Module 1014034 EFT 38768 FAR 13012, Failure Analysis
M-437	Nor Module 1014034-F EFT 32258, Failure Analysis
M-438	Read Counter 2007140-130, Raytheon FAR 12152, Failure Analysis
M-440	Read Counter 2007140-130, Raytheon AFR 13487, 14154, Failure Analysis
M-441	Error Counter 2007139-041, Raytheon AFR 12172, Failure Analysis
M-443	Driver Module 1014096, Raytheon EFT 30239 FAR 15010, Failure Analysis
M-444	Rope Memory 2003060-121H EFT 30813, Failure Analysis
M-445	Digital to Analog Converter 1014210, Raytheon EFT 32512 FAR 12062, Failure Analysis
M-446	Relay Module 1003824-011, Raytheon EFT 32912 FAR 14963, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-446	Error Angle 2007139-041 EFT 35569, Failure Analysis
M-450	Nor Module 1014034-F EFT 32255 EFT 020438, Failure Analysis
M-451	Rope Memory 1003733-411 EFT 38307 FAR 15111, Failure Analysis
M-453	Module A-3 2003121-031 FAR 8467, 8470, Determine Cause of Failure
M-455	Digital to Analog Converter 1011219, Raytheon EFT 34137, Failure Analysis
M-456	Nor Module 1014034 EFT 35585, Failure Analysis
M-457	Read Counter 2007140-130, Raytheon FAR 13496, Failure Analysis
M-458	Read Counter 2007140-130, Raytheon AFR 11219, Failure Analysis
M-459	Error Angle Counter, Raytheon FAR 14152, 12169, Failure Analysis
M-461	Error Anglr Counter 2007139, Raytheon AFR 16402, Failure Analysis
M-467	Driver 1014096, Raytheon EFT 34143, Failure Analysis
M-471	Nor Module 1014034 EFT 28601 FAR 13055, Failure Analysis
M-472	Buffered Flip Flop 2014000-011, Failure Analysis
M-474	Gated Flip Flop 1014079 EFT 34145, Failure Analysis
M-475	Nor Module 1014034, Raytheon EFT 27947, Failure Analysis
M-476	Buffered Flip Flop 2014000-011, Failure Analysis
M-477	Clock Module 2411634, Failure Analysis
M-478	Read Counter 2007081, EFT 35420, Failure Analysis
M-479	Erasable Memory 2003111-021 EFT 26208, 35522, Failure Analysis
M-480	Fixed Memory Module 2003960-011, Raytheon EFT 38329 FAR 15058, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-482	Digital 1007141-031 AFR 14918, Failure Analysis
M-484	Error Angle Counter 2007139, Raytheon FAR 13170, Failure Analysis
M-485	Read Counter 2007140-031 EFT 27398, Failure Analysis
M-486	Nor Module 1014034 EFT 34142, 26423 32402, Failure Analysis
M-487	Gated Flip Flop 1014079 EFT 34140, Failure Analysis
M-489	EL Display 1006315 EFT 34213 FAR 17073, Determine Cause of Failure
M-490	Warning Rope B22 135795-2 EFT 34392, Failure Analysis
M-491	Logic A-37 1003812-17 EFT 32266, Failure Analysis
M-492	EL Display 1006315 EFT 37640
M-493	EL Panel 2003952-021 EFT 37641 FAR 15477, Determine Cause of Failure
M-494	Fixed Memory 1003733-471 EFT 17044 FAR 36641, Determine Cause of Failure
M-497	Logic A-14 2003121-121 EFT 35521, Determine Cause of Failure
M-500	Error Angle Counter 2007139-041, Raytheon AFR 14038, 14401, Determine Cause of Failure
M-507	Fixed Memory 2003960-021 EFT 27069, Determine Cause of Failure
M-511	Error Angle Quadrant 2 2007077-041 EFT 25531, Determine Cause of Failure
M-516	Warning Rope 186962-031 EFT 33544, Determine Cause of Failure
M-521	EL Light 1006315 EFT 018242, Determine Cause of Failure
M-522	Error Angle 2007139-051 EFT 29010, Determine Cause of Failure
M-523	Logic A-1 2003888-011, Raytheon EFT 51901, 29114, 29115, 29058, Determine Cause of Failure
M-525	Erasable Memory 2003111 EFT 29073, Determine Cause of Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-594	Logic A18 2003888-161, Raytheon EFT 47150, 54381
M-598	Sense Rope 2003060-331 EFT 36165
M-600	Erasable Memory 2003111-021, Raytheon EFT 43139
M-610	Read Counter 2007140-041 AFR 19479
M-612	Read Counter 2007140-041 EFT 43652
M-617	Erasable Memory Core Stack 2003109, Determine Cause for No Output from Address Location Y32, X44 Bit 11
M-621	Indicator Alarm 1006387 EFT 52859
M-624	Error Angle 2007139-051, Raytheon AFR 15241, 17951
M-626	Read Counter 2007140-031, Raytheon AFR 15234
M-627	Indicator Alarm 1006387 EFT 43255
M-628	EL Indicator 1006315 EFT 48450
M-632	Indicator Alarm 1006387, Raytheon EFT 55707
M-633	CDU Error Angle 1007139-051 EFT 53964, 47005
M-644	IL Indicator 1006387-001, Raytheon E and D A927
M-646	Indicator Alarm 1006387-2 37
M-647	Indicator Alarm 1006387-2 21
M-648	IL Indicator 1006387
M-649	Indicator Alarm 1006387-2
M-655	Indicator Alarm 1006387-003
M-657	CDU Read Counter 2007140-041 EFT 59369
M-680	Logic A4 2003888-041 EFT 36014
M-681	C36 Computer, Overvoltage on +4 Vdc Lines of B Tray
M-683	Erasable Memory 2003111-031X EFT 60263
M-693	Sense Wiring 214B, 218B, Sense Wiring Inhibitor 252A, Side 226A, EFT 64808, 64818, 64799

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
M-526	Erasable Memory 2003111 EFT 26449, Determine Cause of Failure
M-527	Erasable Memory 2003111 EFT 41257, Determine Cause of Failure
M-534	Erasable Memory 2003111-011 EFT 29066 AFR 18713, Determine Cause of Failure
M-535	Erasable Memory 2003111 EFT 52334, Determine Cause of Failure
M-536	Indicator Alarm 1006387, Raytheon EFT 29021, Determine Cause of Failure
M-537	Interrogator 2479696, Raytheon EFT 52063, Determine Cause of Failure
M-538	Read Counter 2007140-041 EFT 25752, Determine Cause of Failure
M-542	Fixed Memory Module 2663922-231, EFT 41211, Determine Cause of Failure
M-545	Oscillator 2003036-031 EFT 52025, Determine Cause of Failure
M-552	Flip Flop SM-B-529083, Philco, Determine Cause of Failure
M-553	Error Angle 2007139-041 EFT 19041, AFR 18528
M-554	Error Angle 2007139-041 AFR 18180
M-566	Erasable Memory 2003111, Analysis of Life Test Failures
M-575	Erasable Memory 2003111-021, Raytheon MDT 55807, EFT 32087, 32166, TFR M-549
M-576	Warning Rope 186962 EFT 34138
M-578	Read Counter 2007140-031, Raytheon EFT 52170, 44255, 44256, 44257, TFR 2436
M-584	Erasable Memory 2003111, Analysis of Vibration Life Test Failures
M-591	Module 1014034 AFR 19527 EFT 47569
M-592	Erasable Memory 2003111-021, Raytheon EFT 49103
M-593	Indicator Alarm 1006387-002, Raytheon AFR 18676, EFT 40878

SUMMARY OF FAILURE ANALYSIS REPORTS

RAYTHEON	
FAR NO.	DESCRIPTION
WM-01	Relay 1003098, Raytheon FAR 6437 EFT 016977, Failure Analysis
WM-02	Relay 1003824-011 EFT 012816, Failure Analysis
WM-03	Relay 110824-011, Clare 1006772, Failure Analysis
WM-04	Main DSKY 1003707-031, Raytheon FAR 9765, 10332, 10420, 10421, 11421, and 11424, Determine Cause of Pitting and Black Residue on Pin
W-25	Resistor 1006750-43, Corning EFT 011858, Failure Analysis
W-30	Relay 1006282, Babcock 6552N, Relay Life Test and Evaluation
W-34	Transformer 2411709, Bush 6518 EFT 013448, Determine Cause of Failure
W-35	Transformer 2318920, Pulse Engineering EFT 013715, Determine Cause of Failure
W-37	Transformers 1006319, Technitrol, Determine the Effect of Being Dropped
W-38	E.L. Panel 1003803, Sylvania EFT 024047, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS

RAYTHEON	
FAR NO.	DESCRIPTION
W-02	Fixed Memory B2 2003972-521, Raytheon EFT 63628
W-03	Rope Module 2003972-271
W-04	Fixed Memory 2003972-271
W-05	Fixed Memory 2003972-291
W-06	Relay, Babcock EFT 019266, Failure Analysis
W-07	Latching Relay, Babcock ID 100632-2, Determine Cause of Shorted Coil in Module Usage
W-08	Relay, Babcock ID 2003102-011, EFT 013544, Failure Analysis
W-09	Relay 1006282, Babcock 531 EFT 013254 ID 2003902-011, Raytheon, Failure Analysis
M-718	Relay 1006282, Babcock 531N EFT 013427, Failure Analysis
M-719	Logic Module A20 2003888-181, Raytheon EFT 67590
M-724	Fixed Memory 2003972-731 EFT 71112
M-726	Fixed Memory B2 2003972-731
M-730	Low Voltage 187631-2
M-736	Fixed Memory 2003972-221
M-741	Fixed Memory Panel 2003060-781 EFT 71461
M-753	Low Voltage 187631-2, LEM
M-764	Rope Driver 2003140-031
M-766	Erasable Memory 2003111-04 EFT 67576
M-768	Sense Wiring 2003061-911 EFT 72063
M-769	Fixed Memory 2003972-651 EFT 65677
M-771	Sense Wiring 2003051-821 EFT 65894
M-794	Indicator Alarm D5, 1006387-003 EFT 68303
M-799	Fixed Memory 2003972-971 EFT 78699
M-801	Sense Wiring B 2003061-1041
	Fixed Memory Module 2003972-1061 EFT 79117

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-40	Relay 1006772, Clare FAR 8480, Verification of Failure
W-47	Relay 1006772, Sigma, Failure Analysis of Qualification Test Specification
W-49	Core 1006320, Sprague, Indentification Analysis of Test 2 Rejects
W-58	Relay 1006282, C-5517 EFT 012388, Failure Analysis
W-59	Transformer 23181, Pulse Engineering PE4891-525 EFT 019333, Determine Cause of Failure
W-61	Relay 1006282-2B, Babcock 6605N ID 758038, Failure Analysis of Test 2
W-65	Relay 1006282, Babcock 6604 ID 751077, Failure Analysis of Test 2
W-70	Switch 1006259, Master Specialties 3-65, Failure Analysis
W-73	Relay 1006282, Babcock 6525, Determine Cause of Failure
W-75	Relay 1010784, Babcock 6602 ID 758027, Failure Analysis of Test 2
W-80	Resistor 1006750-62, Corning Glass EFT 017152, Failure Analysis
W-86	Relay 1006282, Babcock 6531N ID 717106, Failure Analysis of Test 1
W-88	Relay 1010784-9, Filtron 6605 ID 752109, Failure Analysis of Test 2
W-96	Relay 1010784-9, Babcock 6544 EFT 018291, Failure Analysis
W-97	Relay 1006282-2, Babcock 6523 EFT 018295, Failure Analysis
W-107	Resistor 1006750-62, Corning Glass EFT 018726, Failure Analysis
W-109	Resistor 1006750-72, Corning Glass EFT 018761, Determine Cause of Failure
W-110	Relay 1006772-4, C.P. Clare 6525 EFT 018764, Failure Analysis
W-113	Relay 1006772-1, C.P. Clare EFT 018606, Determine Cause of Failure
W-115	Relay 1006282, Babcock, Determine Cause of Failure
W-120	Relay 1006282-2, Babcock 6544 EFT 018721, Failure Analysis
W-105	Relay 1006282-2, Babcock 6525N EFT 016596, Failure Analysis
W-106	Switch 1006750A, Raytheon MFR 88556 FAR 8480, Determine Cause of Failure
W-107	Resistor 201202-23, Dale, MFR 201 EFT 016596, Determine Cause of Failure
W-142	Core 1010405-11, Dale 1010405-11, Determine Cause of Failure
W-157	Relay 1006772-4, C.P. Clare EFT 020616, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS

FAR NO.	DESCRIPTION
W 166	Relay 1006282, Babcock, Determine Cause of Failure Under Launch Vibration
W 170	Vibratile Inductor, Babcock EFT 012388, 010973 010982 Failure Analysis
W 171	Capacitor 1006706 7a, Sprague EFT 010326, Failure Analysis
W 176	Relay 1006282, Sigma 6616 ID 602536, Failure Analysis of Test 1
W 180	Relay 1006282, Babcock EFT 020442, Failure Analysis
W 204	Relay 1006304 063, Babcock 6620 ID 639013, Failure Analysis of Test 1
W 209	Transformer 2318320, Pulse Engineering EFT 020479, Determine Cause of Failure of Test 1
W 210	Capacitor 1006706 7a, Sprague ID 623079, Determine Cause of Failure
W 216	Multilayer Board 1006338, Dept. 1, Final Babcock Determine Cause of Failure Components of Various Temperature Tests
W 222	Capacitor 1006706 57, Babcock EFT 20278, Determine Cause of Failure
W 223	Relay 1006282, Babcock 6517 EFT 018291, Determine Cause of Failure
W 226	Relay 1006282 2, Babcock 6508 EFT 018291, Determine Cause of Failure
W 226	Component 1006282 2252, Part 1 of 1, Determine Cause of Failure
W 227	Relay 1006282, Babcock 6525 EFT 018606, Determine Cause of Failure
W 228	Relay 1006282 2, Babcock 6525 EFT 018606, Determine Cause of Failure
W 229	Relay 1006282 2, Babcock 6525 EFT 018606, Determine Cause of Failure
W 230	Relay 1006282 2, Babcock 6525 EFT 018606, Determine Cause of Failure
W 232	Relay 1006282, Babcock 6525 EFT 018606, Determine Cause of Failure
W 234	Transformer 2318320, Pulse Engineering EFT 018606, Determine Cause of Failure
W 236	Relay 1006282, Babcock 6525 EFT 018606, Determine Cause of Failure
W 238	Relay 1006282, Babcock 6525 EFT 018606, Determine Cause of Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-280	Relay 100 772-H-1, C. P. Clare, Determine Cause of Hard Short Failure
W-282	Relay 1006282, Babcock 6603 EFT 017909, Failure Analysis
W-283	Transformer 1006319, EFT 28734, Determine Cause of Failure
W-284	Relay 1006772-H, C. P. Clare FAR 6398, Determine Cause of Marginal Pull-In Currents
W-285	Resistor 1006750, Corning Glass ID 861141, Failure Analysis
W-287	EL Panel Assembly 1003803-011, Sylvania EFT 018472 FAR 12951, Failure Analysis
W-288	EL Light Assembly 1003803, Sylvania EFT 011501 FAR 10403, Failure Analysis
W-289	Relay 1010784-11, Babcock 6609N EFT 39160, Determine Cause of Failure
W-290	Multilayer Board 1006395, Melpar, Analysis of Plated Through Holes on 1/10 Coupons
W-291	Multilayer Board 1006395, Melpar, Analysis of Plated Through Holes on 1/10 Coupons
W-292	Relay 1006282-2, Babcock 6610 EFT 39037, Failure Analysis
W-293	Relay 1010784-9A, Filtrors EFT 34963, Failure Analysis
W-294	Relay 1005003-2, Filtrors ID 889049, Vendor Surveillance
W-296	Relay 1006282-2B, Babcock EFT 39146, Failure Analysis
W-297	Resistor 1066788, Dale ID 869057, 869976, 879068, 879075, Vendor Surveillance
W-298	Resistor 1006750, CGW ID 884023, 884024, 884025, 886020, Vendor Surveillance
W-299	Relay 1006772, C. P. Clare 6517, Determine Cause of Failure During Qualification Testing
W-300	Switch 1006296-A1-001, Microswitch 4-65 FAR 8416, Determine Cause of High Contact Resistance
W-307	Relay 1006304-3C, Babcock 6619 FAR 8421, Determine Cause of Failure
W-311	Mounting Housing 2004949, Raytheon EFT 010830, 011585, 014244, Determine Cause of Failure
W-314	Relay 1006282, Babcock 6530N EFT 014196, Determine Cause of Vibration Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-318	Inductor 1010406-10, Delevan EFT 32981, Failure Analysis
W-319	Switch 2003984-031, Raytheon EFT 014543, Failure Analysis
W-321	Inductor 1010406-7, Delevan 876141, Inductance Measurements
W-322	Multilayer Board 1006395, Melpar, Analysis of Plated Through Holes on 1/10 Coupons
W-323	Relay 1006282, Babcock EFT 32817 FAR 14989, Determine Cause of Failure
W-324	Relay 1006282, Babcock EFT 32999, Determine Cause of Failure
W-326	Relay 1006282, Babcock EFT 32953 FAR 14991, Determine Cause of Vibration Failure
W-327	Switch MS25089-3C, EFT 31038, Determine Cause of Failure
W-328	Multilayer Board 2003066, Melpar 1006395-027 EFT 28607, Failure Analysis
W-329	Relay 1006282, Babcock 6603N EFT 28161 FAR 14996, Determine Cause of Failure
W-330	Multilayer Board 2003086-7L, Melpar EFT 39062, Failure Analysis
W-331	Switch 1006405-001, Master Specialties 11-65 EFT 31036, Determine Cause of Failure
W-332	Switch 1006405-001, Master Specialties 11-65 EFT 28262, Determine Cause of Failure
W-333	Relay 1006282, Babcock EFT 32268, FAR 14987, Determine Cause of Failure
W-334	Relay 1005001-2, Filtrors ID 902033, 097165, Vendor Surveillance
W-335	Capacitor 1006755-21, Union Carbide ID 903007, Vendor Surveillance
W-341	Switch 1006292AW-001, Microswitch 4-65 FAR 15079, 15080, 15081, 15082, Determine Cause of Failure
W-343	Relay 1005001-1, ESC 6634 ID 886019, Determine Cause of Vibration Failure
W-351	Relay 1005003, Filtrors 6631 ID 873027, Determine Cause of Failure
W-352	Switch 1006573-001, Microswitch 9-65 EFT 014315, Determine Cause of Failure
W-353	Relay 1006282-2, Babcock 6606N EFT 28062, Failure Analysis
W-358	Relay 1005001-2, Filtrors 6638 ID 907165, Failure Analysis
W-361	Relay 1006282-2, Babcock EFT 28069, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-435	Relay 1006772, C.P. Clare EFT 014157, Failure Analysis
W-439	Relay 1006304, Babcock 6619 FAR 15076, Failure Analysis
W-441	K Core A4210, FAR 10560, Failure Analysis
W-444	Switch 1006296, Microswitch 4-65 FAR 15089, Failure Analysis
W-445	Relay 1005001, Filters 6631 FAR 66-059-1, Failure Analysis
W-448	Relay 1005001-2, Filters ID 931007, 932163, Failure Analysis
W-449	Relay 1006282, Babcock 6602N EFT 30533 FAR 15172, Failure Analysis
W-450	Relay 1010784-9, Babcock 6603 EFT 30427, Failure Analysis
W-451	Switch 1006471-001, Master Specialties EFT 32913 FAR 15151, Failure Analysis
W-463	Relay 1006282, Babcock EFT 34575 FAR 15183, Vibration Failure Analysis
W-464	Transformer 1006319, Technitrol 3502 JD 898005, Failure Analysis
W-468	Relay 1005003, Filters ID 912020, 915009, Failed Random Vibration
W-469	Meter 1006927, Hayden 6526 EFT 30264 FAR 15008, Failure Analysis
W-470	Relay 1006815-2, Sigma EFT 32459, Failure Analysis
W-474	Switch N/A, Raytheon AFR 16326, 16401, 16430, Failure Analysis
W-475	Relay 1006304, Babcock FAR 15084, Failure Analysis
W-480	Elapsed Time Indicator 1006927, Hayden 6526 FAR 15052 EFT 30343, Failure Analysis
W-482	Flasher 1006485, Master Specialties 12/65 EFT 30451 FAR 14972, Failure Analysis
W-483	Relay 1006282-2, Babcock 6603 EFT 35447, Failure Analysis
W-484	Relay 1006772-7, C.P. Clare 6643 ID 927101, Vibration Failure
W-485	Relay 1006772-4, C.P. Clare EFT 30937, Postpotting Failure
W-489	Relay 1005003-2, Filters 6634 ID 884063, Vibration Failures
W-490	Relay 1005001-2, Filters ID 907155
W-491	Relay 1006282-2, Babcock 6610 EFT 24577 FAR 15184, Failed Postvibration
W-493	Potentiometer 23188959-12, Dale EFT 25900, 25943, 25975, 25999
W-496	Relay 1005001-2, Filters ID 943062, Failed Random Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-362	Relay 1006282, Babcock 6551 EFT 28088, Failure Analysis
W-364	Relay 1006282-25, Babcock 6544N EFT 614189, Failure Analysis
W-371	Relay 1006282-2, Babcock EFT 39621, Failure Analysis
W-372	Relay 1006772-7, C.P. Clare 6638 ID 909157, Determine Cause of Failure Under Random Vibration
W-376	Relay 1005001-1, Electrical Specialties 6638, 6640 ID 915008, Determine Cause of Failure Under Random Vibration
W-378	Relay 1006282, Babcock 6604 EFT 014193, Failure Analysis
W-381	Relay 1006815-2E, Sigma 6639 ID 908125, Determine Cause of Vibration Failure
W-382	Multilayer Board 1006395, Melpar, Analysis of Plated Through Holes on 1/10 Coupons
W-383	Relay 1006282-2, Babcock 6602M EFT 26445, Failure Analysis
W-384	Relay 1006815-2, Sigma 6639 ID 910120, Determine Cause of Vibration Failures
W-385	Relay 1006282, Babcock 6611 EFT 28067, Failure Analysis
W-386	Relay 1006282-2, K18, Babcock 6610 EFT 25878, Failure Analysis
W-387	Switch 1006292A1-001, Microswitch 4-65 FAR 15083, 15085, Determine Cause of Failure
W-388	Relay 1005001-2, Filters 6637 ID 898044, Vendor Surveillance
W-396	Relay 1006282-2, Babcock 6611 EFT 25906, Failure Analysis
W-402	Inductors 1010406-1, Lennox-Fugle, Determine Cause of Failure
W-403	Relay 1006282, Babcock 6545 EFT 014130, Failure Analysis
W-411	Transformer 1006293, Technitrol 6-20 ID 64146, Internal Visual Catastrophic Failure
W-418	Relay 1005003-2, Filters 6639 ID 912020, 915009, Determine Cause of Vibration Failures
W-421	Resistor 1006788-209, Dale EFT 32520, Determine Cause of Failure
W-422	Relay 1010784-009C, Babcock EFT 2052, Determine Cause of Failure
W-423	Relay 1006772-7, C.P. Clare CCA494 ID 923007
W-425	Relay 1005001, Filters ID 925001, 927003, 928002, Vibration Failures
W-426	Relay 1005001-2, Filters ID 918018, Vibration Failure
W-431	Relay 1006772-1, C.P. Clare 6536 EFT 30939, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-498	Resistor 1006750-124, Corning Glass EFT 39417, Failure Analysis
W-500	Elapsed Time Meter 1006927, Hayden 6511 FAR 8475, Failure Analysis
W-508	Relay Circuit Assembly 2003910-021, Raytheon MDT 34978, Failure Analysis
W-518	Potentiometer 1006896, Waters FAR 12536, Failure Analysis
W-521	Switch 1006892-3, Technical Laboratory FAR 14955 EFT 32863, Failure Analysis
W-522	Switch 1006892-3, Technical Laboratory FAR 12972 EFT 32845, Failure Analysis
W-523	Capacitor 1006755-134, Kemet 6635 ID 960092, Test 1 Failure Analysis
W-535	Shaft Assembly 2003924-101, EFT 36189 FAR 14522, Failure Analysis
W-539	Multilayer Board 1006395, Melpar, Analysis of Plated Through Holes on 1/10 Coupons
W-544	Tin Oxide Resistor 1006750-25, Corning Glass EFT 33616, Failure Analysis
W-546	Relay 2004688-2, Filkor EFT 35, Failed Switching
W-547	Relay 2004688-2, Filkor EFT 33431, Postpotting Failure
W-552	Multilayer Board 1006395, Melpar, Analysis of Plated Through Holes on 1/10 Coupons
W-554	Relay 1005001-2, Filkor ID 964016, Vibration Failures
W-555	Relay 1005001-2, Filkor 6650 ID 967132, Vibration Failure
W-557	Relay 1005001, Filkor ID 964016
W-559	Relay 1005001-2, Filkor ID 972006, Random Vibration Failures
W-562	Relay 1005001-2, Filkor ID 943062, Random Vibration Failure
W-563	Relay 1005001-2, Filkor ID 950002, Random Vibration Failure
W-565	Relay 1005003, Filkor ID 910111, Random Vibration Failure
W-567	Potentiometer 2318959-12, Dale, Retex' 21 Units
W-569	Relay 1006772-7, C. P. Clare 6651 ID 564976, Random Vibration Failure
W-570	Relay 1005003-2, Filkor ID 910109, Random Vibration Failures
W-572	EL Panel 1006315, Lear Siegler FAR 15037, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-574	Relay 1005003-2, Filkor 6639 ID 910111, 910112, Inspection to Extended Life Samples for Wear
W-575	Relay 1005003-2, Filkor 6639 ID 903072, 910111, 910112, Inspection of Extended Life Samples for Wear
W-576	Relay 1005001-2, Filkor ID 920117, 925001, Inspection of Extended Life Samples for Wear
W-577	Relay 2004688-1, Filkor EFT 33780, Failure Analysis
W-578	Transformer 1006319, Technitrol 4302 ID 936039, Vendor Surveillance
W-588	Relay 1006282-2, Babcock EFT 36186 FAR 15165, Failure Analysis
W-589	Multilayer Board 1006395, Melpar, Analysis of Plated Through Holes on 1/10 Coupons
W-595	Capacitor, Kemet (Union Carbide) ID 993011, 993012, Vendor Surveillance
W-602	Relay 2004688-2, Filkor EFT 37498, 37636, 37635, 26793 FAR 17016, Failure Analysis
W-603	Multilayer Board 1006395, Melpar, Analysis of Plated Through Holes on 1/10 Coupons
W-604	Resistor 1006750-39, Corning Glass EFT 33440, Failure Analysis
W-605	Switch 1006404-011, Master Specification EFT 34574 FAR 15112, Failure Analysis
W-606	Switch MS035054-23, Raytheon EFT 33376 FAR 17067, Failure Analysis
W-607	Elapsed Time Meter 1006927, A.W. Hayden EFT 26903 FAR 16975, Failure Analysis
W-608	Switch S9 and S15, Master Specification EFT 34569, 34570 FAR 15114, Failure Analysis
W-609	Relay 1005003-2, Filkor ID 910112, Analysis of Vibration Failures
W-610	Relay 1005003-2, Filkor 915009, Failure Analysis of Vibration Failures
W-611	Capacitor 1006755-79, Kemet EFT 36889, Failure Analysis
W-615	Relay 2004688-2, Filkor 6643 EFT 27128 FAR 17001, Failure Analysis
W-620	Relay 1005001-1, ESC EFT 27304, Failure Analysis
W-622	Capacitor 1006755-19, Kemet EFT 36783, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-668	Relay 2004688-2, Filters DC1795 EFT 36187, Pull-in Failure Analysis
W-669	Relay 1005001-2, Filters DC2947 R28002, Random Vibration Failure Analysis
W-670	Relay, Filters MRDR 13646, Additional Internal Visual
W-671	Relay, Filters, Internal Visual of Unfinished Relays
W-672	Relay 1005001-2, Filters, Vibration Failure Analysis
W-673	Relay K6 2004688-2, Filters EFT 27209, Failure Analysis
W-675	Inductor 1010406-76, Delevan EFT 37093, Reliability Failure Analysis
W-676	Relay 2004688-2, Filters EFT 34558, Reliability Failure Analysis
W-678	Relay, Filters 6707, 6708 ID 010014, Internal Visual
W-679	Relay 2004688-2, Filters EFT 37C20 FAR 16986, Vibration Short, Reliability Failure Analysis
W-680	Relay 1005001-2, Filters, Random Vibration, Reliability Failure Analysis
W-681	Relay 1005001-2, Filters, Random Vibration, Reliability Failure Analysis
W-682	Relay 1005001-2, Filters, Random Vibration, Reliability Failure Analysis
W-683	Relay 1005001-2, Filters ID R31013, Random Vibration, Failure Analysis
W-694	Relay 1005001-2, Filters ID 977025, Random Vibration, Reliability Failure Analysis
W 685	Multilayer Board 1006395, Electrolab, Analysis of Plated Through Holes on 1/10 Coupon
W-686	Relay 1005001-2, Filters ID 092015, Vibration, Reliability Failure Analysis
W-687	Relay 1005001-2, Filters ID 996050, Random Vibration, Reliability Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-623	Relay 1005001-2, Filters ID 990A01, Failure Analysis of Vibration Failure
W-624	Relay 1005001-2, Filters ID 000018, Analysis of Vibration Failure
W-626	Relay 1005001-2, Filters ID 000149, Analysis of Vibration Failure
W-627	Relay 1005001-2, Filters ID 987A01, Analysis of Vibration Failures
W-632	Relay 1005003-2, Filters ID 912020, Analysis of Vibration Failures
W-633	Relay 1005001, Filter ID 903072, Analysis of Vibration Failures
W-634	K Core 1003084-011, Raytheon EFT 27244 FAR 17063, Failure Analysis
W-636	Relay 1005001-2, Filters ID 990014, Analysis of Vibration Failures
W-638	Relay 1005001-1, Electronic Specialties EFT 27306, Failure Analysis
W-640	Relay 2004688, Filters EFT 37411, Failure Analysis
W-641	Multilayer Board 1006395, Analysis of Plated Through Holes on 1/10 Coupons
W-644	Relay 1005001-2, Filter 705 ID 996050, Internal Visual
W-648	Relay 1005001-2, Filters EFT 37068 FAR 16931, Failure Analysis
W-649	Relay 1005001-2, Filters EFT 37917, Failure Analysis
W-650	Relay 1006282-2, Babcock EFT 27136 FAR 15194, Failure Analysis
W-651	Relay 1005001-2, Filters 6706, 6707 ID 000A01
W-652	Relay 1005001-2, Filters EFT 31433, Failure Analysis
W-653	Relay 1005001-2, Filters ID 991A01, Failure Analysis
W-655	Relay 1005001-2, Filters ID 991022, Failed Random Vibration
W-656	Capacitor 1006755-106, Kemet V25067 EFT 37465 FAR 15638, Failure Analysis
W-657	Relay 1005003-2, Filters 6639 ID R12020, Additional Internal Visual
W-658	Relay 1005001-2, Filters 6642 ID R25001, Additional Internal Visual
W-660	Relay 1005001-2, Filter 6639 ID R10108, Additional Internal Visual
W-661	Relay 1005001-2, Filters 6633 ID R18016, Additional Internal Visual
W-666	Relay 1006282, Babcock EFT 37595, 37596 FAR 15034 Failure Analysis
W-667	Relay 1006282-2, Babcock EFT 37594 FAR 15029, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-691	Transformer 1006319, Technical EFT 37767, FAR 16999, Failed Waveform, RF Analysis
W-692	Dual Nor Gate PP Philco 6641, 925615, Reliability Analysis of Test 1, 2, and 3 and Continuity Rejects
W-693	Relay 1005001-2, Filters ID 010013, Random Vibration, Reliability Failure Analysis
W-696	Relay 1005001-2, Filters ID 999009, Random Vibration, Reliability Failure Analysis
W-697	Relay 1005001-2, Electronic Specialties EFT 27308, Reliability Failure Analysis
W-698	Relay 1005001-2, Filters ID 009025, Random Vibration, Reliability Failure Analysis
W-699	Relay 1005001-2, Filters ID 010014, Random Vibration, Reliability Failure Analysis
W-700	Coil, Delevan ID S97114, Vendor Surveillance, Reliability Analysis
W-703	Relay 1005001-2, Filters ID 989046, Random Vibration, Reliability Failure Analysis
W-704	Relay 1005001-2, Filters ID 991021, Random Vibration, Reliability Failure Analysis
W-716	Relay Filters 6704 ID 988046, Additional Internal Visual
W-724	Relay, Filters 6705 ID 991A02, Random Vibration, Reliability Failure Analysis
W-727	Milene-B Wire, Special Test to Determine Reliability of Proposed Repair
W-728	Dual Nor Gate Flatpack, Philco 6642, 927017, Reliability Analysis of Test 1, two and three Rejects
W-729	Relay, Filter J 918016-919011, Additional Internal Visual
W-730	Dual Nor Gate Flatpack, Philco 6627 ID V42010, Test 2 and Burn-in Rejects
W-731	Dual Nor Gate Flatpack, Philco 6635 ID 989043, Test 4 and Burn-in Rejects

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-732	Relay, SCD 1005001-2 ESC, EFT 25318, Reliability Failure Analysis Crystal 2411988, Bliley, Reliability Failure Analysis
W-733	Crystal 2411988, Bliley, Reliability Failure Analysis
W-734	Inductor 1010406-17, 1003139, Delevan EFT 36735, FAR 17043, Failure Analysis
W-735	Dual Nor Gate, Philco 6632 ID 879016, Will Not Burn
W-740	Relay 1005001-2, Filters ID 031061, Random Vibration Failure
W-742	Dual Nor Gate, Philco 6624 ID 848020, Screen and Burn-In, Electrical Tests 1, 2, and 3
W-743	Relay 2004688-2, Filters EFT 37788 FAR 16915, Failure Analysis
W-747	Relay 1005001-2, Filters 6643, Special Internal Visual
W-751	Relay 2004688-2, Filters EFT 29332 FAR 15637, Failure Analysis
W-752	Relay 1005001-2, Filters 5708, 6712, ID 031061, Internal Visual
W-754	Relay 1006282-2S, Babcock EFT 26743, FAR 16367, Failure Analysis
W-758	Relay 1005001-2, Filters ID 034A01, Random Vibration
W-759	Relay 1005001-2, Filters ID 038077, Vibration Failure
W-760	Multilayer Board 1006395, Electrolab, Analysis of Plated Through Holes on 1/10 Coupons
W-761	Resistor 1006788, Dale IL 034111, Vendor Surveillance
W-763	Inductor 1010406-10, Delevan EFT 36606, 37116, 37117, Failure Analysis
W-764	Relay 1005001-2, Filters ID 036050, Random Vibration Failure
W-765	Insulated Wire 1006732, Special Test to Determine if Paragraph 3H of 1006732 is Met
W-771	Dual Nor Gate 1006374, Philco 6638 ID 906025, 906026, Test 2 and 3 and Burn-in Rejects
W-774	Dual Nor Gate 1004301, 1006321, Philco EFT 35795, FAR 16413, Failure Analysis

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-801	Relay 2004688-2, Filters ID 29070, 912033, Module Test
W-802	Relay 1005001-2, Filters ID 987A01, 988046, 988046, 999009, Life Test
W-803	Relay 2004689-2, Filters ID R03072, A/C Vibration
W-804	Dual Nor Gate 1006321, Philco ID 950052, Tests 1, 2, 3, and Continuity.
W-806	Relay 1005001-2, Filters ID 088077, 054A01, 054017, 054089, Vibration
W-808	Ground Sleeve 1008818-6, 1008919-2, Malco, Dissocccion and Analysis
W-809	Relay 2004688-1, Filters 6704 ID 29014, Postpotting
W-810	Relay 2004688-1, Filters 6708 ID 51937 Postassembly
W-811	Relay 2004689-2, Filters ID 41286, A/C Vibration
W-813	Resistor 1006750, Corning Glass ID 059033, Vendor Surveillance
W-814	Dual Nor Gate 1006394, Philco 6620 ID 825195, Test 4
W-815	Relay 1005001-2, Filters 6717 ID 054089, Internal Inspection
W-816	Relay 2004688-2, Filters ID 41292, A/C Vibration
W-817	Relay 1005001-2, Filters 6717 ID 054A01, Internal Visual Inspection
W-818	Capacitor 2622281, Marshall ID 67-06-2, Life Test
W-819	Dual Nor Gate 1006321, Philco 6644 ID 984005, Tests 1, 2, and 3
W-821	Resistor 1006750-24, Corning Glass ID 51952, Confirmation Test
W-823	Dual Nor Gate 1006321, Philco 6627 ID V42010, Test 4
W-824	Ground Sleeve and Pin 1008818, 1008818, Malco, Dissect Ground Sleeve
W-825	Inductor 1010406, Delevan ID 51909 Module Test
W-827	Capacitor 2318777-1, CDE ID 25344, Field Failure

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-775	Relay 1005001, Filters, Random Vibration Failures
W-775A	
W-779	Dual Nor Gate 1006321, Philco 6638-6639 ID 909025, 909026, Test 1, 2, and 3 and Continuity and Burn-In Rejects
W-780	Relay 1005001-2, Filters ID 034105, Random Vibration Failures
W-781	Transformer 1006319, Technitrol ID 25404, Electrical Interface
W-782	Relay 1005001-2, Filters 6707, 6708 ID 010013, Random Vibration
W-783	Expander Gate 1006394, Philco ID 858976, 858977, Test 4 and Burn-In
W-794	Dual Nor Gate 1006321, Philco ID 833009, Tes. 4 After Recentrifuge and Burn-In
W-786	Relay 1005001-2, Filters ID 990A01, Vibration
W-787	Transformer 1006293-0, Technitrol 10-5-25278, ID V25358, Output of 7SA2 Failed at 0°C Temperature Cycle
W-789	Relay 1005001-2, 1005003-2, Filters ID 030057, 036050, 036138, 906020, 994025, Random Vibration
W-790	Relay 2004689-2, Filters ID 29536
W-791	Relay 1005001, Filters ID 031061, 034A01, 00215, Vibration
W-792	Resistor 047153, Corning Glass 749 ID 047153, Vendor Surveillance
W-795	Relay 2004689-2, Filters ID 41242, A/C Vibration
W-796	Relay 1005001, Filters ID 036049, 034105, Vibration
W-797	Relay 2004689-2, Filters ID 41243, A/C Vibration
W-798	Inductor 1010406-10, Delevan 01632 ID 887097, Comparison of Inductance Measurements Before and After Welding
W-799	Dual Nor Gate 1006321, Philco 6643 ID 930015, 930016, Tests 1, 2, and 3 Burn-In
W-800	Capacitor 1006793-30, Corning Glass 6605 ID 038011, Vendor Surveillance

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-829	Relay 2004688-2, Filters ID 41293, A/C Vibration
W-830	Relay 2004688-2, Filters ID 41294, 41295, A/C Vibration
W-831	Capacitor, Aerovox ID 068094, Vendor Surveillance
W-832	Dual Nor Gate 1006321, Philco 6706 ID 007150, Tests 1, 2, and 3 and Burn-In
W-833	Relay 1005001-2, Filters 6717 ID 052065, Internal Inspection
W-834	Relay 2004688-2, Filters 6707 ID 52039, Vibration
W-836	Relay 1005001-2, ESC 6644 ID 29548, Prepotting
W-838	Relay 1005001-2, Filters ID 787002, 9840, 964010, 990014, 031061, Life Test
W-839	Capacitor 2318777-1 Cornell-Dubilier ID R866, Field Return
W-840	Relay 2004689-2, Filters 6634 ID 25750, Vibration
W-841	Dual Nor Gate Expander 1006394, Philco 6634 ID 885058, Test 3 and Continuity
W-842	Relay 2004688-2, Filters ID 25363, Vibration
W-843	Relay 2004688-2, Filters 6705 ID EFT 25799, A/C Vibration
W-844A	Inductor 1010406-10, Delevan ID 35633, Module Test
W-847	Relay 1005001-2, Filters 6717 ID 51035, Special Temperature Cycle
W-848	Dual Nor Gate 1006321, Philco 6631 ID 869064, Burn-In
W-850	Relay 2004688-2, Filters 6639 ID EFT 52042, A/C Vibration
W-851	Relay 2004688-2, Filters 6705 EFT 41297, A/C Vibration
W-852	Dual Nor Gate 1006321, Philco 6646 ID 985011, 983003, Tests 1, 2, and 3 and Burn-In
W-853	Relay 1005001-2, Filters 6705, 6716 ID 51036, Evaluate Coil Construction
W-855	Resistor 1006750-39, Corning Glass ID 25729, Interface
W-856	Relay 2004688-2, Filters 6708, 6712, Evaluate Coil Lead to Intermediate Lead Reliability

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-857	Relay 2004688-2, Filters 6705, Evaluation of Coil Construction
W-858	Relay 1005001-2, Filters ID 010013, Vibration
W-859	Relay 2004688-2, Filters EFT 52073, Field Failure
W-860	Miniature Contact Wrap Post 1006782-1, Malco EFT 25699, Interface
W-861	Relay Coil, Filters ID 141949, Evaluation of Coil Construction
W-863	K-Core 1003084-011, Raytheon EFT 25735, Confirmation Test
W-865	Reactor 1006325, Raytheon EFT 25752, Module Test
W-866	Relay 2004688-2, Filters EFT 41187, A/C Vibration
W-867	Dual Nor Gate 1006394, Philco ID 885057, Tests 1, 2, and 3, Continuity and HFE after Back Bias
W-868	Dual Nor Gate 1006321, Philco ID 886018, Fourth Electrical Test
W-870	Dual Nor Gate 1006321, Philco 6707 ID 011011, Internal Visual and Vendor Surveillance
W-871	Indicator Alarm 1006387-002, Oppenheimer ID AFR 18177
W-872	Dual Nor Gate 1006321, Philco ID 993011, 990013, Tests 1 and 2 and Burn-In
W-873	Dual Nor Gate 1006321, Philco ID 000021, Tests 1 and 2 and Continuity
W-876	Dual Nor Gate 1006321, Philco ID V36058, Fourth Electrical Test
W-877	Dual Nor Gate 1006321, Philco 6707 ID 011011, Tests 1, 2, and 3 Continuity
W-878	Relay 2004689-2, Filters EFT 41290, Vibration
W-879	Relay 2004688-2, Filters EFT 52399, Prepotting
W-882	Dual Nor Gate 1006321, Philco 6710 ID 024012, 024013, Tests 1 and 3, Continuity, and Burn-In
W-883	Relay 2004688-2, Filters EFT 25609, Postpotting
W-883	Relay 2004688-2, Filters EFT 44343, Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-884	Relay 2004688-2, Filters EFT 51925, Vibration
W-885	Relay 1006282-2S, Babcock EFT 52482, Vibration
W-886	Dual Nor Gate 1006321, Philco 6712 ID 033104, 033105, Tests 1, 2, 3, Continuity, and Burn-In
W-888	Relay 2004688-2, Filters EFT 52617, Vibration
W-889	Relay 2004688-2, Filters EFT 52613, Vibration
W-890	Relay 2004689-2, Filters EFT 52622, Vibration
W-891	Relay 2004688-2, Filters EFT 52389, Vibration
W-892	Relay 2004688-2, Filters EFT 52620, Vibration
W-893	Multilayer Board, Melpar ID 081A03, 081011, 081A02, 081A01, 081A0B, 1006395, Analysis of Plated Through Holes on 1/10 Coupons
W-894	Relay 2004689-2, Filters EFT 52612, Vibration
W-895	Relay 2004689-2, Filters EFT 41288, Vibration
W-896	Relay 1006282-2, Babcock EFT 52497, Field Return
W-897	Relay 2004688-2, Filters EFT 52390, Vibration
W-898	Relay 2004688-2, Filters EFT 52618, Vibration
W-899	Relay 2004688-2, Filters EFT 52346, Vibration
W-900	Relay 2004688-2, Filters ID 52615, Vibration
W-901	Relay 2004688-1, Filters EFT 52621, Vibration
W-902	Inductor 1010406-10, Delevan EFT 32001, Module Test
W-904	Relay 2004688-2, EFT 52391, Vibration
W-909	Capacitor 1006755-2, Union Carbide ID 1905, 1907, Thermal Cycle
W-914	Relay 1006282-2, Babcock EFT 52067, Vibration
W-915	Relay 2003975-021, EFT 44492, Vibration
W-916	Dual Nor Gate 1006394, Philco ID 791026
W-917	Relay 2004688-2, Filters EFT 44447, Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-918	Relay 1006282, Babcock EFT 52066, Vibration
W-919	Relay 1006282-2, Babcock EFT 52071, Vibration
W-920	Relay 1006282-2, Babcock EFT 52065, Vibration
W-921	Relay 1006282-2, Babcock EFT 52070, Vibration
W-922	Relay 1006282-2, Babcock EFT 52069, Vibration
W-925	Transformer 1003084-011, EFT 32028, Module Test
W-931	Resistor 1006950-215, EFT 32095, Module Test
W-935	Dual Nor Gate 1006321, ID 043018, Tests 2 and 3 and Continuity
W-943	Transformer 1010291-4, Triad EFT 52211, Interface System Test
W-945	Multilayer Board 1006395, Melpar ID 081A01, 081A03, 081A02, Analysis of Plated Through Holes on 1/10 Coupons
W-946	Resistor 1006788, ID V04108, 085112
W-954	Capacitor 2318777-1, CDE
W-961	Resistor 1006750-6, Corning Glass EFT 43947
W-971	Relay 1005003-2, Filters ID 117006
W-972	Relay 1005001-2, Filters ID 117007, Vibration
W-983	Resistor 1006250-24, Corning Glass EFT 37316
W-991	Relay 2004688-2, Filters EFT 25635
W-992	Capacitor 1006755-79, Union Carbide ID 120005
W-993	Capacitor 1006755-89, Union Carbide ID 125159
W-997	Dual Nor Gate 1006321, Philco ID 052071, Tests 1, 2, and 3, Burn-In, and Spike Indication
W-999	Relay 1005001-2, Filters 6716 ID 051113
W-1000	Relay 1005001-1, ESC EFT 44425, 25637
W-1002	Inductor 1010406-6, Delevan EFT 52133
W-1004	Relay 1005001-2, Filters 6717 ID 054089
W-1021	Relay 1005003-2, Filters ID 125018

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1065	Relay 1005001-2, Filters 6734 ID 126134, Internal Visual
W-1067	Relay SCD 2004688-2, Filters EFT 41037, Vibration
W-1069	Dual Nor Gate 1006321, Philco ID V02050, Tests 1, 2, and 3, Continuity, and Spike Indications
W-1072	Relay 1005001-2, Filters 6735 ID 132078, Internal Visual
W-1075	Relay 1005001-2, Filters 6736 ID 142116, Internal Visual
W-1076	Relay SCD 1005001-2, Filters ID 142116, Vibration
W-1077	Relay SCD 1005001, Filters ID 132078, Random Vibration
W-1078	Relay 1005003-2, Filters 6738 ID 147002, Internal Inspection
W-1079	Relay SCD 1005003, Filters ID 147002, Vibration
W-1086	Relay 1005001-2, Filters 6738 ID 145152, Internal Inspection
W-1087	Relay 1005001-2, Filters ID 147003, Vibration
W-1088	Relay 1005001-2, Filters ID 145152, Vibration
W-1094	Relay 1005001-2, Filters 6739 ID 148034, Internal Inspection
W-1095	Relay 1005003-2, Filters 6739, 6740 ID 150151, Internal Inspection
W-1096	Relay SCD 1005001-2, Filters ID 148034, Vibration
W-1097	Relay SCD 1005001-2, Filters ID 150151, Vibration
W-1098	Relay SCD 1005003-2, Filters EFT 49163, Vibration
W-1103	Relay 1005001-2, Filters ID 150152, Vibration
W-1104	Relay 1005001-2, Filters 6739 ID 150152, Internal Visual Inspection
W-1106	Dual Nor Gate 1006321, Philco ID 100042, Tests 1, 2, and 3, Continuity, Burn-In, and Spike Indication
W-1109	Capacitor 1006755-134, Sprague EFT 25704, Engineering Analysis
W-1114	Dual Nor Gate 1006321, Philco ID V07006, Screen and Burn-In
W-1116	Relay 1005003-2, Filters EFT 50378, Vibration
W-1117	Relay 2004689-2, Filters EFT 49152, Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1022	Relay 1005003-2, Filters 6734 ID 125028, Internal Visual
W-1023	Relay 1005001-2, Filters 6732 ID 117007, Internal Visual
W-1025	Dual Nor Gate Expander 1006394, Philco ID 081035, Test 3 and Burn-In
W-1026	Dual Nor Gate 1006621, Philco 6719 ID 076016, 076017, Tests 1, 2, and 3, Burn-In and Spike Indication
W-1029	Relay 1005001-2, Filters ID L00018
W-1030	Relay 1005001-2, Filters ID 984010
W-1033	Relay SCD-1005001-2, Filters ID 003071, Random Vibration
W-1034	Relay 1005001-2, Filters ID 123014, Internal Visual
W-1038	Dual Nor Gate 1006321, Philco ID 046108, Burn-In
W-1040	Dual Nor Gate 1006321, Philco ID 990011, Special Test
W-1042	Crystal 1006847, Biley 6729 ID 101A01
W-1046	Transformer SCD 1006293, EFT 50399, Confirmation Test
W-1047	Crystal SCD 1006847, Biley EFT 40904, Test Level 15
W-1052	Dual Nor Gate 1006321, Philco ID 024012, 024013, Internal Visual Reinspection at Low Magnification
W-1053	Relay SCD 2004688-2, Filters EFT 52639, Random Vibration
W-1055	Potentiometer, IRC, SCD 1006468-003, EFT 43988, Field Reject
W-1056	Relay SCD 1006947-000, C. P. Clare 16617 EFT 38476, FAR 18533, Field Return
W-1058	Relay, Filters 6734 ID 125029, Vibration
W-1059	Relay 1005003-2, Filters ID 145151, Internal Visual
W-1060	Relay SCD 1005003, Filters ID 145151, Vibration
W-1061	Relay SCD 1005001-2, Filters ID 123014, Vibration
W-1062	Relay 1005001-2, Filters 6734 ID 123026, Internal Visual
W-1063	Relay SCD 1005001-2, Filters ID 126134, Vibration
W-1064	Relay SCD 1005001-2, Filters ID 128026, Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1118	Relay 2004689-2, Filters EFT 50374, Vibration
W-1119	Relay 1005003-2, Filters 6740 ID 156111, Internal Visual
W-1120	Relay 1005001-2, Filters ID 156111, Vibration
W-1121	Coil 1006324, Delevan EFT 49378, 49446, Nominal Selection
W-1122	Relay 100500-2, Filters 6637 EFT 50369, Vibration
W-1123	Relay 1005001-2, Filters EFT 50377, Vibration
W-1126	Relay 1005001-2, Filters 6739 ID 152080, Internal Visual
W-1127	Relay 1005001-2, Filters ID 152080, Vibration
W-1128	Relay 1005003, Filters ID 150151, Thermal Cycling
W-1135	Transformer 1006319, EFT 47286, Surtesy Test
W-1139	Relay 1005001-2, Filters 6739 ID 156A01, Internal Visual
W-1141	Relay 1005001-2, Filters 6739 ID 156112, Internal Visual
W-1142	Relay 1005001-2, Filters 6739 ID 156112, Vibration
W-1146	Relay 1005001, Filters ID 156A01, Vibration
W-1149	Relay 2004688-2, Filters EFT 47597, Test Level 02 Postassembly
W-1150	Relay 1005001-2, Filters 6741 ID 164061, Internal Visual
W-1153	Relay Filters 6739 ID 152083, Internal Visual
W-1154	Relay 1005001-2, Filters ID 152083, Vibration
W-1156	Relay 1004689-031, Filters EFT 50373, Test Level 06
W-1157	Relay 1005003-1, Filters EFT 49149, Vibration
W-1159	Relay 1005001-2, Filters 6742 ID 164157, Internal Visual
W-1160	Relay 1005001-2, Filters ID 164157, Vibration
W-1163	Relay 1005001-2, Filters ID 164061, Vibration
W-1164	Relay 1005001-2, Filters 6742 ID 169038, Internal Visual Inspection
W-1165	Resistor 1006750-39, Corning EFT 51539, Postpotting
W-1168	Relay 1005001-2, Filters 6742 ID 169003, Internal Visual Inspection

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1169	Relay 1005001-2, Filters ID 169038, Vibration
W-1171	Relay 1005001-2, Filters ID 169003, Thermal Cycle
W-1172	Transformer 1010291-4, Lifton Industries 3779 ID 164037, Vendor Surveillance
W-1173	Relay 1005001-2, Filters ID 169003, Vibration
W-1174	Multilayer Board 1006395, Electrolab ID 174042, 174043, 174A01, 173135, 173A01, Analysis of Plated Through Holes on 1/10 Coupons
W-1177	Relay 1005001-2, Filters 6743 ID 172051, Precycle
W-1179	Relay 1005001, Filters 6743 ID 172051, Internal Visual Inspection
W-1180	Relay 1005001-2, Filters ID 17-032, Vibration
W-1181	Relay 1005001-2, Filters 6744 ID 174032, Internal Visual Inspection
W-1182	Relay 2004688-2, Filters EFT 49156, Vibration
W-1183	Relay 2004688-2, Filters EFT 51516, 47887, Vibration
W-1184	Dual Nor Gate 1006321, Philco ID 130026, Tests 1, 2, and 3, Burn-in, and Spike Detection
W-1187	Relay 1005001, Filters ID 174033, Vibration
W-1188	Relay 1005001-2, Filters 6744 ID 174033, Internal Visual Inspection
W-1189	Relay 1005001-2, Filters 6744 ID 174034, Internal Visual Inspection
W-1191	Relay 1005001, Filters ID 174034, Vibration
W-1194	Switch 1006405-001, Master Specialties EFT 48382, AFR 19593, Field Rejects
W-1196	Relay 1005001, Filters ID 178036, Vibration
W-1197	Relay 1005001-2, Filters 6744, 6745 ID 178036, Internal Visual Inspection
W-1200	Relay 1005001, Babcock, Qualification Testing
W-1201	Relay 1005003, Filters, Life Testing

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1238	Relay 1005001-2, Filters 6747 ID 188017, Internal Visual Inspection
W-1239	Relay 2004688-2, Filters EFT 49270, Test Level 03
W-1240	Relay 1005001-2, Filters 6747 ID 187094, Internal Visual Inspection
W-1244	Relay 1005001-2, Filters 6746 ID 187246, Internal Visual Inspection
W-1245	Relay 2004688-2, Filters EFT 51535, 51650, Vibration
W-1246	Relay 2004688-2, Filters EFT 43724, 43828, Vibration
W-1251	Inductor 1010406-7, Delevan EFT 47373, Test 03 Postpoking
W-1252	Relay 1005001-2, Filters ID 190035, Vibration
W-1253	Relay 1005001, Filters 6745, 6748 ID 190035, Internal Visual Inspection
W-1254	Relay 1005001, Filters 6748 ID 192140, Internal Visual Inspection
W-1255	Relay 1005001, Filters ID 192140, Vibration
W-1257	Dual Nor Gate 1006321, Philco ID 130026, Retest per MA Rejects 10604
W-1259	Relay 1005001, Filters 6747, 6748 ID 192141, Internal Visual Inspection
W-1260	Relay 1005001, Filters ID 192141, Vibration
W-1262	Relay 1005001, Filters 6748 ID 192142, Internal Visual Inspection
W-1263	Relay 1005001, Filters ID 192142, Vibration
W-1265	Relay 2004688-2, Filters 6645 EFT 51700, Test Level 03
W-1271	Relay 2004688-2, Filters EFT 43826, 43827, Vibration
W-1272	Resistor 1006750-39, Corning EFT 48560, Courtesy Test 07
W-1275	Relay 2004688-2, Filters EFT 48624, 43666, Vibration
W-1276	Relay 1005001, Filters 6748 ID 195047, Internal Visual Inspection
W-1277	Relay 1005001, Filters ID 195047, Vibration
W-1280	Relay 1005003, Filters ID 197027, Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1202	Switch 1006405-001, Master Specialties ID 19535, EFT 51555, System Test
W-1203	Relay 3321-5039G8, ID 5L164-5039G8, Test N/A
W-1204	Relay 2004688-2, Filters EFT 51534, Vibration
W-1205	Coil 1006324, Delevan EFT 43674
W-1206	Coil 1006324, Delevan EFT 43651
W-1208	Relay 1005001, Filters ID 178A01, Thermal Cycle
W-1209	Relay 1005001-2, Filters ID 178A01, Vibration
W-1210	Relay 1005001-2, Filters 6745 ID 178A01, Internal Visual Inspection
W-1212	Relay 1005001, Filters ID 182178, Vibration
W-1213	Relay 1005001-2, Filters 6745, 6744, 6746 ID 182178, Internal Visual Inspection
W-1215	Relay 1005001-2, Filters ID 182A02, Vibration
W-1216	Relay 1005001-2, Filters 6745, 6746 ID 182A02, Internal Visual Inspection
W-1219	Relay 1005001-2, Filters ID 182A01, Vibration
W-1220	Relay 1005001-2, Filters 6745, 6746 ID 182A01, Internal Visual Inspection
W-1221	Relay 1005001-2, Filters 6746 ID 186105, Internal Visual Inspection
W-1222	Relay 1005001-2, Filters ID 186105, Vibration
W-1226	Relay 1005003, Filters ID 190036, Vibration
W-1228	Dual Nor Gate 1006321, Philco ID 148081, Tests 1, 2, and 3, Continuity, and Spike Detection
W-1229	Relay 1005001-2, Filters EFT 43732, Test Level 07
W-1235	Relay 1005003, Filters 6741, 6742, 6747 ID 190036, Internal Visual Inspection
W-1236	Relay 1005001-2, Filters ID 187094, Vibration
W-1237	Relay 1005001-2, Filters ID 188017, Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1281	Relay 1005003, Filters 0747, 6748 ID 197027, Internal Visual Inspection
W-1283	Transformer 1006319, Technitrol EFT 43715, 43716, 43196, 43767, 43712, 43763, 43710, 43764, 43714, 43879, Failure Analysis
W-1284	Relay 1005001, Filters ID 197028, Vibration
W-1285	Relay 1005001, Filters 6748 ID 197028, Internal Visual
W-1286	Relay 1005001, Filters ID 198122, Vibration
W-1287	Relay 1005001, Filters 6748 ID 198122, Internal Visual Inspection
W-1288	Dual Nor Gate 1006321, Philco 149104, Tests 1, 2, and 3 Rejects, Continuity, and Spike Indication
W-1291	EL Light 2003875, EFT 43254, Test Level 07
W-1295	Relay 1005001-2, Filters ID 199146, Vibration
W-1296	Relay 1005001, Filters 6748 ID 199146, Internal Visual
W-1299	Relay 1005001, Filters ID 201106, Vibration
W-1300	Relay 1005001, Filters 6750 ID 201106, Internal Visual Inspection
W-1305	Relay 1005001, Filters 6750 ID 202076, Internal Visual Inspection
W-1306	Relay 1005001, Filters ID 202076, Vibration
W-1311	Relay 1005001, Filters 6749, 6750, 6751 ID 206039, Internal Visual Inspection
W-1312	Relay 1005001, Filters ID 206039, Vibration
W-1313	Relay 1005003, Filters ID 212428, Vibration
W-1314	Relay 1005003, Filters 6749, 6752 ID 212128, Internal Visual Inspection
W-1315	Dual Nor Gate 1006321, Philco ID 163031, Tests 1, 2, and 3 Rejects, Continuity, Burr-in, and Spike Indication
W-1321	Dual Nor Gate 1006321, Philco ID 171002, 171003, Tests 1, 2, and 3 Burr-in Rejects, Continuity, and Spike Indication
W-1322	Relay 1005001, Filters 6751 ID 209042, Internal Visual Inspection
W-1323	Relay 1005001, Filters ID 209042, Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1326	Relay 1005001, Filters 6752 ID 211077, Internal Visual Inspection
W-1327	Relay 1005001, Filters ID 211077, Vibration
W-1329	Relay 1005001, Filters ID 212129, Vibration
W-1330	Relay 1005001, Filters 6752 ID 212129
W-1333	Relay 1005001, Filters 6752, 6801, ID 218A01, Internal Visual Inspection
W-1334	Relay 1006282-28, Babcock 6546 EFT 47772, Test Level 03
W-1333	Capacitor 1008755-134, Sprague EFT 48542, Test Level 16
W-1338	Relay 1005001, Filters 6801 ID 213174, Internal Visual Inspection
W-1342	Relay 2004688-2, Filters EFT 53134, Vibration
W-1343	Relay 2004688-2, Filters EFT 52998, 53104, Robotest
W-1344	Relay 2004688-2, Filters EFT 53252, Vibration
W-1349	Relay 1005001, Filters ID 213174, Vibration
W-1353	Relay 2004688-2, Filters 6839 EFT 52858, Vibration
W-1356	Relay 1005001, Filters ID 213175, Vibration
W-1358	Relay 1005001, Filters 6801 ID 218009, Internal Visual Inspection
W-1359	Relay 1005001, Filters ID 219029, Vibration
W-1360	Relay 1005001, Filters 6752 ID 213175, Internal Visual Inspection
W-1361	Capacitor 1008755-106, Union Carbide 674420 ID 226135, Vendor Surveillance
W-1363	Dual Nor Gate 1006321, Philco ID 172055, Internal Visual and Vendor Surveillance
W-1364	Dual Nor Gate 1006321, Philco ID 172055, Test 1, 2, and 3, and Continuity Rejects
W-1366	Relay 2004688-2, Filters EFT 52658, Vibration
W-1367	Relay 1005001, Filters 6802 ID 221101, Internal Visual Inspection
W-1368	Relay 1005001, Filters 6802 ID 219029, Internal Visual Inspection
W-1370	Relay 2004688-2, Filters 6741 EFT 46629, Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1411	Relay 1005001, Filters 6804 ID 234079, Internal Visual Inspection
W-1412	Relay 1005001-2, Filters 6805 ID 235062, Internal Visual Inspection
W-1413	Dual Nor Gate Expander 1006394, Philco 6749 ID 182184, 202058, Electrical Tests 1, 2, and 3 Rejects
W-1415	Relay 1005003-2, Filters ID 246058, Vibration
W-1416	Relay 1005003-2, Filters 6806, 6807 ID 246058, Internal Visual Inspection
W-1417	Shaft Switch Assembly 2003975, Electro Products EFT 53967
W-1419	Dual Nor Gate 2004301-001, Philco EFT 53986, Test Level 16
W-1419A	Dual Nor Gate, EFT 53982
W-1421	Dual Nor Gate 2004301-001, Philco EFT 47005, Test Level 16 Failure
W-1422	Relay 1005001-2, Filters ID 235062, Vibration
W-1423	Relay 1005001, Filters 6805 ID 235063, Internal Visual Inspection
W-1427	Dual Nor Gate 2004301-001, Philco EFT 53986, Test Level 16 Failed
W-1428	Relay 2004688-2, Filters EFT 46628, 46630, Vibration
W-1430	Relay 1005001-2, Filters ID 235063, Vibration
W-1431	Transformer 1010291-4, Litton EFT 47019, Test Failed, QAP-1.15
W-1434	Dual Nor Gate 1006321, Philco ID 192145, Tests 1, 2, and 3 Rejects, Continuity, and Spike Detection
W-1435	Relay 1005001-2, Filters 6805, 6806 ID 238042, Internal Visual Inspection
W-1436	Shaft Assembly 2003975-021, Electro Products EFT 46517, 46518
W-1438	Relay 1005001-2, Filters ID 240106, Vibration
W-1439	Relay 1005001-2, Filters ID 243043, Vibration
W-1440	Shaft Assembly 2003975, Electro Products EFT 46642, Test Level 13

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1371	Transformer 1006293, EFT 46512, Test Level 03
W-1372	Relay 1005001, Filters ID 221101, Vibration
W-1373	Relay 2004688-2, Filters EFT 52644, Vibration
W-1376	Relay 1005001, Filters ID 221121, Vibration
W-1378	Relay 1005001, Filters 6802 ID 221121, Internal Visual Inspection
W-1380	Relay 1005001, Filters 6802 ID 221122, Internal Visual Inspection
W-1381	Relay 1005001, Filters ID 221122, Vibration
W-1383	Relay 1005001, Filters 6302-3 ID 222099, Internal Visual Inspection
W-1384	Relay 1005001, Filters 6803, 6804 ID 226121, Internal Visual Inspection
W-1387	Relay 1005003, Filters 6802, 6803 ID 237079, Internal Visual Inspection
W-1388	Relay 1005003, Filters ID 237079, Vibration
W-1389	Relay 1005001, Filters ID 226121, Vibration
W-1390	Relay 1005001, Filters ID 226123, Vibration
W-1391	Relay 1005001, Filters 6803 ID 226123, Internal Visual Inspection
W-1395	Resistor 1006750-39, Corning EFT 53958, 53960, Failure Not Verified
W-1397	Transformer 1006319, Technitrol EFT 46626
W-1398	Pulse Transformer, Technitrol ID 398085, EFT 46538
W-1403	SCD 1006319, Resistance Test, Level 16
W-1404	Relay 1005001, Filters 6804 ID 228083, Internal Visual Inspection
W-1405	Relay 1005001, Filters 6803, 6804 ID 227126, Internal Visual Inspection
W-1406	Relay 1005001, Filters ID 227126, Vibration
W-1407	Relay 1005001, Filters 6804 ID 229047, Internal Visual Inspection
W-1408	Relay 1005001, Filters ID 228083, Thermal Cycle
W-1409	Relay 1005001, Filters ID 234079, Thermal Cycle
W-1410	Relay 1005001, Filters ID 229047, Vibration

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1441	Transformer-Pulse 1006319, Technitrol EFT 43402, 56151, Test Level 02 Failed
W-1443	Relay 2004688-2, EFT 56138, Test Level 07 Failed
W-1444	Relay 1075001, Filtrors 6805, 6806 ID 240106, Internal Visual Inspection
W-1447	Relay 1005001, Filtrors ID 251031, Vibration
W-1448	Relay 1005001, Filtrors 6807, 6808 ID 251031, Internal Visual Inspection
W-1451	Relay 1005001, Filtrors 6808, 6809 ID 266456, Internal Visual Inspection
W-1452	Relay 2004688-2, Filtrors 6741 EFT 43573, Test Level 02
W-1453	IL Lamps 1006387, Analysis of Lamp Filaments (Yellow Segments)
W-1455	Shaft Assembly 2003975-021, Electro Products EFT 56200, Test Level 09 Failed
W-1456	Relay 1305001-2, Filtrors 6809 ID 256050, Internal Visual Inspection
W-1457	Relay 1005001-2, Filtrors ID 25604C, Vibration
W-1459	Relay 1005001-2, Filtrors ID 256050, Vibration
W-1460	Relay 1005003-2, Filtrors ID 262040, Vibration
W-1461	Relay 1005903-2, Filtrors 6808, 6809 ID 262040, Internal Visual Inspection
W-1464	Dual Nor Gate 1006321, Philco ID 234050 Tests 1, 2, and 3 Continuity, and Spike Detection
W-1466	Multilayer Board SCD 2004250-240, Electralab
W-1467	Multilayer Board SCD 2004250-040, Electralab
W-1469	Multilayer Board SCD 1006395, Electralab
W-1470	Multilayer Board SCD 1006395, Electralab
W-1471	Transformer 1006293, Technitrol EFT 61902, Test Level 03
W-1472	Dual Nor Gate 1006321, Philco ID 247087, Tests 1, 2, and 3. Continuity, Spike Detection and Prop Delay

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1478	Multilayer Board SCD 1006395, Electralab
W-1481	Relay 2004688-2, Filtrors EFT 62057
W-1482	Resistor 1006714, RCL EFT 56367
W-1483	Inductor 1010406-11, Delevan EFT 62062
W-1484	Multilayer Board 1006395, Electralab
W-1485	Dual Nor Gate 2004301-001, Philco ID AZ471, EFT 53954
W-1486	Dual Nor Gate 1006394, Philco ID 239111, Tests 1, 2, and 3 and Spike Detection
W-1487	Multilayer Board 1006395, Electralab
W-1492	Multilayer Board 1006395, Electralab
W-1494	Multilayer Board 1006395, Electralab
W-1496	Dual Nor Gate 1006321, Philco ID 254125, Electrical Tests 1, 2, 3, Continuity and Spike Detection
W-1497	Multilayer Board 1006395, Electralab
W-1498	Dual Nor Gate 1006321, Philco ID 254126, Electrical Tests 1, 2, 3, and Spike Detection
W-1500	Multilayer Board 1006395, Electralab
W-1505	Multilayer Board 1006395, Electralab
W-1507	Resistor 1006750-30, Corning Glass EFT 59635
W-1508	Multilayer Board 1006395, Electralab
W-1509	Multilayer Board 1006395, Electralab
W-1510	Multilayer Board 1006395, Electralab
W-1512	Multilayer Board 1006395, Electralab
W-1514	Shaft Assembly 2003975-011, Symbolic EFT 59389
W-1515	Multilayer Board 1006395, Electralab
W-1516	Multilayer Board 1006395, Electralab
W-1517	Dual Nor Gate Expander 1006394, Philco ID 239111

SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1518	Multilayer Board 1006395, Electralab
W-1519	IL Bulb M8-1187, Chicago Lamp Works MSCA-713
W-1520	Multilayer Boards 1006395, Electralab
W-1521	Multilayer Board 1006395, Electralab
W-1522	Relay 20046833, Potter Bromfield EFT 62357
W-1523	Dual Nor Gate Flatpack 1006321, Philco
W-1524	Multilayer Board 1006395, Electralab
W-1525	Resistor 1006750-30, Corning Glass 1338 ID 314057
W-1526	Transformer 1006319, Technitrol EFT 56346
W-1527	Wires (C4 to R11) C4-1006755-79, R11-1006788-10, EFT 59379, 59380
W-1528	Transformer 1010291-4, Utrad EFT 60797, 3779
W-1529	Transformer 1010291-4, Utrad EFT 60866
W-1530	Multilayer Board 1006395, Electralab
W-1533	Resistor 1006714, EFT 59154, RUL
W-1534	Multilayer Board 1006395, Electralab
W-1535	Switch MS25089-3C, EFT 56373
W-1536	Inductor 1010406-11, EFT 62063
W-1537	Coil 1006324 Delco, EFT 60770
W-1538	Capacitor 1006750, Kemet ID 234037, 321029
W-1539	Capacitor 1006755, Kemet ID V15034, V15003, 324042, 321029
W-1540	Coil SCD1006324, Delco EFT 59393
W-1545	Multilayer Board 1006395, Electralab
W-1549	Multilayer Board 1006395, Electralab
W-1551	Transformer 1006319, Technitrol EFT 59188
W-1552	Dual Nor Gate 1006321, Philco ID 283009, Tests 1, 2, and 3, and Continuity
SUMMARY OF FAILURE ANALYSIS REPORTS	
RAYTHEON	
FAR NO.	DESCRIPTION
W-1553	Multilayer Board 1006395, Electralab
W-1554	Inductor 1010406-11, EFT 59200
W-1557	Multilayer Board 1006395, Electralab
W-1559	Multilayer Board 1006395, Electralab
W-1562	Inductor 1010406-11, EFT 59361
W-1563	Multilayer Board 1006395, Electralab
W-1564	Dual Nor Gate 1006321, Philco ID 27409, Tests 1, 2, and 3, Continuity, and Spike Detection
W-1566	Shaft Assembly 2003979-021, Raytheon EFT 17164
W-1567	Multilayer Board 1006395, Electralab
W-1571	Multilayer Board 1006395, Electralab
W-1573	Dual Nor Gate 1006321, Philco ID 296034, Tests 1, 2, and 3, Continuity, and Spike Detection
W-1575	Inductor 1010406-7, Delevan EFT 62253
W-1576	Resistor 66714, EFT 58360
W-1578	Dual Nor Gate 1006321, Philco ID 317061
W-1585	Relay 204689-2, Potter Bromfield EFT 62558
W-1586	Crystal 1006847, Bliley EFT 58399
W-1588	Multilayer Board 1006395, Electralab
W-1589	Shaft Assembly 2003975, Electro EFT 55032
W-1592	Multilayer Board 1006395, Electralab
W-1593	Multilayer Board 1006395, Electralab
W-1594	Multilayer Board 1006395, Electralab
W-1595	Relay 2001686-3, Potter Bromfield