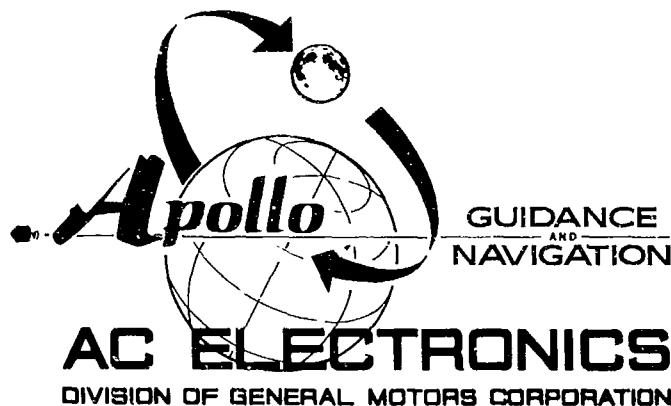


# APOLLO

## PRIMARY GUIDANCE NAVIGATION AND CONTROL SYSTEM (PGNCS)

### FINAL REPORT CONTRACT NAS9-497 ADDENDUM



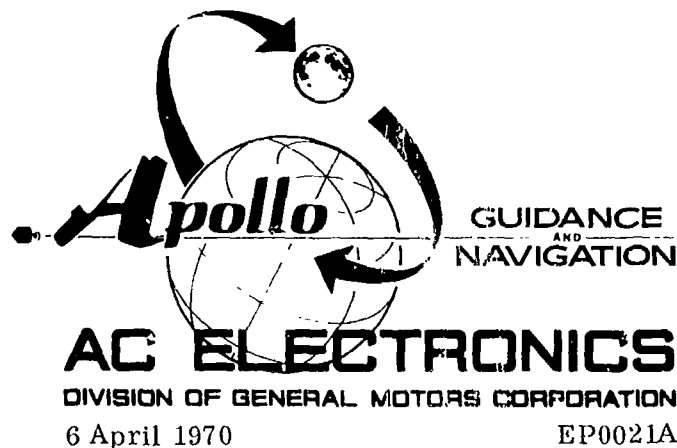
FACILITY FORM 602

N70-26083 (ACCESSION NUMBER) (THRU) \_\_\_\_\_  
143 (PAGES) \_\_\_\_\_  
CR-108391 (NASA CR OR TMX OR AD NUMBER) (CODE) \_\_\_\_\_  
\_\_\_\_\_ (CATEGORY) \_\_\_\_\_

CR 108391

**APOLLO**  
**PRIMARY GUIDANCE NAVIGATION**  
**AND CONTROL SYSTEM**  
**(PGNCS)**

**FINAL REPORT**  
**CONTRACT NAS9-497**  
**ADDENDUM**



## 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.

This addendum to AC Electronics EP0021 completes Section II, Paragraph 2.7, "Listing of Hardware DD-250's".

**CONTRACT NAS9-497**  
**STATEMENT OF WORK**  
**EXHIBIT A**

Contract NAS9-497 Statement of Work  
Exhibit A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1.1. (a)	Prototype System Less OSS	1	(Covered
(b)	Partial Block II G&N Prototype	1	in following
(c)	G&N Block II System Mechanical Gauge	1	paragraphs)
5.1.2 (a)	IMU Prototype for Para. 5.1.1.a	1	20845
(b)	IMU & PEA Non functional for Para. 5.1.1.c	1	16530 15868
(c)	IMU & PEA Functional Learner (Non Deliverable)	1	N/A
5.1.3. (a)	NVB Engineering Model (MIT/IL)	1	14153
(b)	NVB Prototype (MIT/IL System #200)	1	16732
(c)	NVB Learner (Non Deliverable)	1	N/A
(d)	NVB Prototype for Para. 5.1.1.a	1	19719
(e)	NVB Non Functional for Para. 5.1.1.c	1	16733

Statement of Work Para.

Equipment

Qty.

DD 250

5.1.4.	(a)	Modules for ECDU Channels (Active) MIT/IL - 2 sets Sub-contractor 1 set	3 sets	18747, 18654, 16739
	(b)	CDU Thermal Model(5 channels, Electrically Nonfunctional but Technically Equivalent)	1	16288
	(c)	CDU Vibration Model (5 channels, Electrically Nonfunctional but Technically Equivalent)	1	16734
	(d)	CDU Single Channel Prototype (Non deliverable)	1	N/A
	(e)	CDU Three Channel Prototype (Learners)	1	N/A
	(f)	CDU Prototype for Para. 5.1.1.a	1	20846
	(g)	CDU Prototype (5 channels) for Support of Para. 5.1.1.b	1	18716
	(h)	CDU Non-functional to support Para. 5.1.1.c	1	16731
5.1.5.	(a)	PSA Prototype Modules (Optical)	4 sets	18762, 18315, 17704
	(b)	PSA Thermal Model Non-functional but Thermally Equivalent	1	16329 16324 16290

Statement of Work Para.

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1.5. (c)	PSA Vibration Model Non-functional but Mechanically Equivalent	1	15443
(d)	PSA Learner (Non-deliverable)	1	N/A
(e)	PSA Prototype for Para. 5.1.1.a	1	20846
(f)	PSA Non-functional to support Para. 5.1.1.c	1 3	16545
5.1.6. (a)	D&C Group Prototype (MIT/IL System No. 200)	1	18682
(b)	D&C Group Prototype (MIT/IL D&C Lab)	1	19373
(c)	D&C Group Prototype (MIT/IL Development Testing)	1	19714
(d)	D&C Group Prototype Non-functional minus D&C Electronic Assembly & Control Electronic Assembly (MIT/IL Engr)	1	18657
(e)	D&C Prototype (in house engr.) (Non deliverable)	1	N/A

Statement of Work Para.DD 250Qty.Equipment

5.1.6	(f)	D&C Groups Partial (Optics Portion-MIT & KIC including mode switches, optics hand controller & required wiring)	2	17135, 16738, 08445
	(g)	D&C Learner Including G&N Harness (Non-deliverable)	1	N/A
	(h)	D&C Group Prototype including G&N Harness for Para. 5.1.1.a	1	20846
	(i)	D&C Group Prototype including G&N Harness to Support Para. 5.1.1.b	1	18692
	(j)	D&C Group Non-functional including G&N Harness to Support Para. 5.1.1.c	1	18730, 17297, 17867
	(k)	G&N Indicator Control Panels(1) Less Potting & Connections	3	20899, 19790, 19741
		Sextant Hand Controllers	3	20890, 19785, 19718
		Connector Mates for G&N Indicator Control Panels	3	19747, 19523



Statement of Work Para.

5.1.7

Equipment

Breadboard Modification Kits

OITS				
IMU Mounting Fixture	4		N/A	
PTA/PEA Mounting Fixture	4		N/A	
G&N Mounting Fixture	4		N/A	
Optics/Navigation Base Fixture	2		N/A	
Remote Optics Controller	2		N/A	
G&N Transport Cart	2		N/A	
IMU Lift & Handling Fixture	1		N/A	
G&N Connector Covers	2		N/A	Retrofit Accomplished by Engineering
Subsystem Mounting Fixture	1		N/A	
GSE Distribution Box	3		N/A	
PTA/PEA Test Point Adapter	3		N/A	
Resolver Circuit Tester	4		N/A	
Component Mounting Plate II	2		N/A	
Lifting Temperature Controller	3		N/A	
Hose Set ISS Kit	1		N/A	
Hose Set G&N Kit	3		N/A	
PSA - CDU - PEA Handling Fixture	2		N/A	
IMU Shipping Container	2		N/A	
Degausser	1		N/A	
CM Block II ISS Learner System (Non Deliverable)	2		N/A	
Signal Conditioner Nonfunctional Mech. Gage (NAA)	1		19381	
Signal Conditioner Preproduction Units (Operational)	3		18752, 19506, 19706	
Signal Conditioner Preproduction (Flight Qual.)	1		19390	

DD 250

Qty.

5.1.8.

5.1.9.1

5.1.9.2

5.1.9.3

Statement of Work Para.DD 250Qty.Equipment

5.2.1.	(a)	AGC Prototype with (2) Universal DSKY's for Para. 5.1.1.b.	1	WL 848
	(b)	AGC Thermal Model Block II with (2) Universal DSKY's	1	S-36
	(c)	AGC NonFunctional with (2) DSKY's for Para. 5.1.1.c	1	S-26
5.2.2.a	(a)	AGC Block II No. 200 with (2) DSKY's to MIT/IL in Parts, Subcontractor will deliver modules to MIT/IL for assembly & tests	1	S 74 WL-1753
	(b)	AGC Learner 200R -retain at Raytheon (Micrologic to be supplied by Raytheon TDR 3) with (2) DSKY's	1	Non Deliverable
	(b).(1)	AGC 200R Retrofit (Magnesium Trays Associated Parts, Foam Potting Mat'l)	1	Non Deliverable
	(b).(2)	AGC 200R Retrofit (Erasable Memory Module)	1	Non Deliverable
	(b).(3)	AGC 200R Retrofit (Power Supply Module)	1	Non Deliverable
	(b).(4)	AGC 200R Retrofit (Rope Driver & Erasable Driver Modules)	1	Non Deliverable
	(b).(5)	AGC 200R Engr. Retrofit (Sense Amplifiers)	1	Non Deliverable
	(b).(6)	AGC 200R Alarm Module Retrofit (Warning Integrator & Oscillator Fail Alarm Circuits)	1	Non Deliverable

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.2.2. (b). (7)	Test Connector Cover Retrofit (Ground Certain Gate Inputs)	1	Non Deliverable
(c)	AGC Prototype with (2) Universal DSKY's for Para. 5.1.1.a	1	28864, LVB3264, LVB2705
(d)	AGC Block II Equivalent No. 200M Modules & Sub-Ass'ys. to MIT/IL (Parts MIT/IL Supplied)	1	S-17
(e)	Fixed Memory Modules Preproduction per MIT/IL/NASA Directive (Parts MIT IL Supplied)	48	WL550, 730, 871, 912, 1129, 1198, 1215, 1297, 1459, 1553, 1903, 1896, 2238, 1761, 1808, 2043, 2027, 2128, LVB 2853
(f)	E-Memory Module (RCA Folded Core Stack Encapsulated in Sylgard)	1	Retained at Raytheon for Qual.
5.2.3	AGC Block II with (2) DSKY's - Support of Simulation at MIT/IL.	1	WL-395 WL-538
5.2.4.1	CDU Digital Modules Prototype (MIT/IL) 4 sets Set will consist of (5) logic modules, (5) counter modules, (1) mode & clock module	4 sets	N/A MIT/IL supplied parts except interconnection matrices

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.2.4.2	CDU Single Axis Digital - (1) Logic Module, (1) Counter Module & (1) Mode & Clock Module	1	See Para. 5.1.4.d
5.2.4.3	CDU Learner Three Axis Digital (3) Logic, (3) Counter & (1) Mode & Clock Modules	1	See Para 5.1.4.e.
5.2.4.4	CDU Two Axis Digital (2) MIT/IL, (1) KIC) - Total of (6) Logic, (6) Counter & (3) Mode	3	See Para. 5.1.4.a
5.2.4.5	CDU Prototype 5 Axis Digital Module for Para. 5.1.1.a	1	20846
5.2.4.6	CDU Prototype 5 Axis Digital Module for Para. 5.1.1.b	1	18716
5.2.4.7	CDU Nonfunctional 5 Axis Digital Module for Para. 5.1.1.c	1	16731
5.2.5	Breadboard Modification Kit for Breadboard Calibration Console	1	Supplied by Raytheon Engineering
5.2.6	Block I to Block II Prototype Mod Kit for CTS No. 3 - Block II AGC/GSE Compatibility & Comatability II Mod Kit for CTS No. 3	1	Supplied by Raytheon Engineering

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.2.7	Modification Kit for the Prototype Computer Simulator	1	WL-283
5.2.8	Block I to Block II Prototype Mod Kit to Modify AGC/GSE Interconnect Block II AGC/GSE Compatibility Mod Kit for G&N Cables Associated with CTS No. 3	1	Supplied by Raytheon Engineering
5.2.9	Block I to Block II Prototype Mod. Kits to Modify AGC Operations Console No. 1 & 3	2	
5.2.10	Block I to Block II Prototype Mod. Kit to Modify AGC/GSE Interconnection Kits Subsystem Test	2	Provided by Raytheon Engineering
5.2.11	Mod Kits to Incorporate the AGC/GSE Compatibility Changes into the Sub-system cable sets associated with Operation Consoles No. 1 & 3	2	S-66, 1 Kit by Raytheon Engineering
5.3.1	OUA Block II for Use with MIT System 200	1	K 254
5.3.2	OUA Non functional for Para. 5.1.1.c	1	K 190

Statement of Work Para.

DD 250

Qty.

Equipment

5.3.3	Resolver Trim Module Breadboard Dove Prism & Mount Assembly Piece Parts for MIT/IL	1	31549 KIC Invoice 24294
5.3.4	Sextant Index Head & 64 Speed Resolver (MIT/IL) Sextant Index Head with Dummy Modules	1	K 272
5.3.5	Optical Rangefinder Trainer Model	1	K 628
5.4	Residual Inventory	N/A	29093, 29084, 28977, 28690, 28812, 28896, 29081, 29072, LVB 3300
5.4.1.1	IMU & PEA	21	18280, 18711, 18763, 18765, 20455, 21547, 21233, 21636, 26786, 27219, 27465, 27538, 27771, 27663, 27960, 27958, 28209, 28489, 28783, 28910, 21553
5.4.1.2	Nav. Base	22	18280, 18711, 18763, 18765, 19794, 20499, 21124, 21233, 21636, 27193, 27218, 27219, 27465, 27771, 27663, 27960, 27958, 28209, 28292, 28444, 28459, 28529

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5. 4. 1. 3	CDU	21	18280, 18711, 18763, 18765, 20455, 21547, 21553, 21233, 21636, 22053, 27153, 27193, 27219, 27465, 27759, 27769, 27795, 27921, 28292, 28444, 28459
5. 4. 1. 4	PSA	22	18280, 18711, 18763, 18765, 20455, 21547, 21553, 21233, 21636, 27215, 27218, 27219, 27466, 27771, 27663, 27960, 27958, 28209, 28292, 28444, 28459, 28529
5. 4. 1. 5 (a)	Optics Shroud Assembly	22	18280, 18711, 18768, 18765, 19794, 20499, 21124, 21233, 21636, 27193, 27218, 27219, 27465, 27771, 27663, 27960, 27958, 28209, 28292, 28444, 28459, 28529

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.5 (b)	G&N Indicator Control Panel Assembly	22	18280, 18711, 18763, 18765, 20455, 21547, 21553, 21233, 21636, 27194, 27218, 27219, 27465, 27771, 22041, 27681, 27960, 27958, 28209, 28292, 28444, 28459
5.4.1.5 (c)	G&N Interconnect Harness Assembly	22	18720, 18711, 18763, 18765, 19494, 20499, 21553, 21233, 21636, 26786, 27193, 27218, 27219, 27465, 27771, 27663, 27960, 27958, 28209, 28292, 28459, 28529
5.4.1.6	Subsystem Assembly & Test	N/A	N/A
5.4.1.7.1	Block II Test Station		
5.4.1.7.1 (a)	Optical Inertial Test Set	1	18339
5.4.1.7.1 (a)(1)	Coolant and Power Supply	1	18339
5.4.1.7.1 (a)(2)	Optics Inertial Analyzer	1	18339
5.4.1.7.1 (a)(3)	Oscillograph Console	1	18339
5.4.1.7.1 (a)(4)	Basic Cable Set	1	18339



<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.7.1 (a)(5)	Block Peculiar Cable Set	1	17028
5.4.1.7.1 (a)(6)	Test Point Adapter	1	18843
5.4.1.7.1 (a)(7)	Ground Distribution Box	13	18339, 16559, 16640, 17005, 17023, 17820, 17853, 18326, 18376, 18809, 19416, 19421, 19875
5.4.1.7.1 (b)	Rotary Table	1	17015
5.4.1.7.1 (c)	IMU Mounting Fixture	1	18771
5.4.1.7.1 (d)	PTA/PEA Mounting Fixture	1	18790
5.4.1.7.1 (e)	Hose Set	1	17805
2.4.1.7.1 (f)	G&N Mounting Fixtures	2	1888, 19898
2.4.1.7.1 (g)	Portable Temperature Controllers	12	18323, 18896, 18801, 18445, 18880, 18898, 18770, 19847, 19897, 18781, 19846, 19849
5.4.1.7.1 (h)	PSA Adapter Module	8	19485, 19827, 19845, 20161, 20200, 20805, 21102, 21158
5.4.1.7.1 (i)	Breakout Box Adapter Cable Assemblies - Basic	5	19870, 19891, 19835, 19887, 19500

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.7.1. (k)	IMU Lift and Handling Fixture	7	19458, 19459, 19465, 19464, 19463, 19462, 18890
5.4.1.7.1. (l)	IMU Shipping Containers	6	18423, 18424, 18425, 18426, 18427, 18428
5.4.1.7.1. (m)	A/B System Connector Covers	1 set/A/B System	18829, 18830, 18841, 19449, 19844
5.4.1.7.1. (n)	Subsystem Mounting Fixture	12	17008, 17039, 17026, 17881, 18386, 18359, 18414, 18810 18412, 18404, 18882, 19811
5.4.1.7.1. (o)	Component Mounting Plates Blk II	11	17262, 17261, 17029, 19440, 17886, 18389, 18889, 18773, 18778, 18443, 19441
5.4.1.7.1. (p)	Cable Set Installation Command Module Block II	9	19492, 19493, 19494
5.4.1.7.1. (q)	Adapter Cable Assembly Set II/100 Peculiar	4	19466, 19467, 19832, 19848
5.4.1.7.1. (r)	Adapter Cable Assembly Set II Peculiar	4	19834, 19837, 19886, 19881
5.4.1.7.1. (s)	Optics Handling Fixture	3	19430, 19454, 19456
5.4.1.7.1. (t)	Jumper By Pass Tubes	10	18886, 19446, 19447, 19445, 18887, 19431

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.7.1 (u)	PEA Coldplate for G&N Vibration Fixture	1	18379
5.4.1.7.1 (v)	PSA Coldplate (Block II) for G&N Vibration Fix	1	18379
5.4.1.7.1 (w)	CDU Coldplate for G&N Vibration Fixture	1	18379
5.4.1.7.1 (v)	Optical Telescope Cover	9	20869, 26798, 27402
5.4.1.7.1 (y)	Optical Sextant Cover	9	20869, 21208, 21216
5.4.1.7.1 (z)	Crown-Optical Telescope Cover	7	21101, 21208, 22005
5.4.1.7.1 (aa)	Crown-Optical Sextant Cover	7	20869, 26796, 21223
5.4.1.7.1 (bb)	Ethylene Glycol Spillage Cleaning Kits	5	28166, 28167, 28168, 28169
5.4.1.7.1 (cc)	OUA Protective Cover Sets	10	28168, 28166, 28167, 28169, 28879
5.4.1.7.1 (dd)	Cable Ass'ys. to Reduce Noise Induced Restarts	2	29011 29011

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.7.2 (1)(a)	Block II Peculiar Cable Set	11	17882, 17824, 19833, 17885, 18390, 18320, 18775, 18774, 18779, 19420, 19476
5.4.1.7.2. (1)(b)	PSA Test Point Adapter	12	16623, 17006, 17024, 17038, 17828, 18385, 18449, 18860, 18894, 19418, 19473, 19809
5.4.1.7.2 (1)(c)	IMU Mounting Fixtures	9	16307, 17022, 17825, 18384, 18450, 18772, 18777, 19477, 19808
5.4.1.7.2 (1)(d)	PTA/PEA Mounting Fixture	17	16625, 17007, 17025, 17037, 17292, 17804, 17848, 17877, 18330, 18358, 18371, 18372, 18383, 18875, 19429, 19474, 19803
5.4.1.7.2	PTA/PTE Test Point Adapter	13	17841, 17888, 18321, 18328, 18360, 18387, 18393, 18861, 18862, 18893, 19411, 19419, 19810
5.4.1.7.2 (1)(f)	Universal Hose Set	8	17860, 17887, 18388 18394, 18803, 18804
5.4.1.7.2 (1)(g)	Panel Blank Lamp Retainer (Verb/Noun)	8	27767 27800 28126 29030
5.4.1.7.2 (1)(h)	Panel Blank Lamp Retainer (Star List)	8	27767 27800 28126 29030

Exhibit A

Page 17

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.7.2 (2)(a)	Optics Inertial Analyzer Mod Kit	12	16559, 16635, 16640, 17023, 17264, 17832, 18326, 18439, 18809, 19416, 19442, 20155
5.4.1.7.2 (2)(b)	Basic Cable Set Mod Kit	12	16559, 16640, 17012, 17023, 17269, 17869, 18326, 18796, 18804, 19416, 19442, 19839
5.4.1.7.2 (2)(c)	G&N Mounting Fixture Mod Kit	8	17866, 18444, 18807, 18855, 19451, 19816, 19829, 19855
5.4.1.7.2 (2)(d)	Degausser Mod Kit	6	16553, 16554, 16636, 16638, 17253, 17838
5.4.1.7.2 (2)(e)	G&N Transport Cart Mod Kit	11	18794, 18795, 18799, 18800, 18806, 18812, 18820, 18824, 18825
5.4.1.7.2 (2)(f)	IMU Shipping Container Mod Kit	13	16632, 18431, 18433, 18805
5.4.1.7.2 (2)(g)	Remote Optics Controller Mod Kit	7	17259, 17837, 18378, 18439, 18856, 18892, 19442
5.4.1.7.2 (2)(h)	ICTC Mod Kit	14	19707, 19878, 19899, 20473, 20478, 20801, 20806, 20813, 20841
5.4.1.7.2 (2)(i)	Optics Navigation Base Mounting Fixture Mod Kit	7	17267, 17268, 18381, 18439, 18785, 18891, 19442
5.4.1.7.2 (j)	Hose Kits	7	16618, 16627, 17259, 17265, 17832, 18329, 18418, 18439, 18869, 14442, 19850

Exhibit A

Page 18

2-326

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.7.2 (2)(k)	Hose Kits (G&N)	7	16627, 17259, 18418, 18439, 18854, 19442, 19443
5.4.1.7.2 (2)(l)	Coolant & Power Console Mod Kit	12	16559, 16609, 16640, 17023, 17259, 17832, 18326, 18368, 18809, 19416, 19442, 19806
5.4.1.7.2 (2)(m)	ICTC Retrofit Kit	14	22030
5.4.1.7.2 (2)(n)	Auxiliary Battery Packs Retrofit Kit	2	22032
5.4.1.7.2 (2)(o)	PSA Adapter Modules Retrofit	8	22061
5.4.1.7.2 (2)(p)	Block II Peculiar Cable Set Retrofit Kit	12	22065, 22066, 22067, 26791, 26793, 26794, 26795
5.4.1.7.2 (2)(q)	Apollo Optical Telescope Cover Retrofit Kit	2	26757
5.4.1.7.2 (2)(r)	PSA Handling Fixture Mod	13	21627
5.4.1.7.2 (2)(s)	G&N Mounting Fixture Mod	10	21242, 21243, 21250, 21539, 21540, 21541
5.4.1.7.2 (2)(t)	Block II Peculiar Cable Sets Mod	12	21214, 21218, 21219, 21220, 21221, 21222
5.4.1.7.2 (2)(u)	Adapter Cable Sets, Blk. II Peculiar Mod.	4	21235, 21236, 21238

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.7.2 (2)(v)	SCM/PSAAM Test & Calibration Console Retrofit	4	27199, 27208, 27209, 27210
5.4.1.7.2 (2)(w)	Portable Temperature Controller Retrofit	12	26775 26776 26778, 26783 27160
5.4.1.7.2 (2)(x)	G&N Mounting Fixtures Retrofit	10	27155, 27156, 27245 27246, 27247 27452, 27453, 27454
5.4.1.7.2 (2)(y)	Breadboard Breakout Box Adapter	5	27506, 27507, 27508 27509,
5.4.1.7.2 (2)(z)	IMU Mounting Fixture (New Bushing) Retrofit	21	20837, 20838, 20839, 20840, 20841, 21160, 20837, 21162, 20197, 20198, 20199, 20814, 20835, 20836,
5.4.1.7.2 (2)(aa)	Replace 2A fuses with 5A in Aux. Batt. Packs & ICTC	16	28713 28714, 28715 28716 28717
5.4.1.7.2 (2)(bb)	OIA Retrofit Buffer Resistors for Crossbar	21	27940 27941 27942, 27943 27944 27947 27951
5.4.1.7.2 (2)(cc)	Aux. Batt. Pack to Add 3 fuse Holders & Cable	2	28335

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.7.2 (2)(dd)	Retrofit 1 Prototype Life Batt Pack	1	N/A (Done by Engr.)
5.4.1.7.2 (2)(ee)	Retrofit Base Plate of 5 breakout Cables Inserts	5	28507, 28508, 28509, 28510
5.4.1.7.2 (2)(ff)	Retrofit Spacer Blocks II PSAAM	8	28956 28957
5.4.1.7.3	Apollo GSE Test Stations (Ref. Only)	N/A	N/A
5.4.1.8	Signal Conditioner Assembly	20	20844, 20170, 28459, 28529, 28444, 28292, 28209, 27958, 27960, 27663, 27771, 27465, 27219, 26759, 21701, 21191, 21126, 20847, 20855, 21170
5.4.1.9.1	Retrofit G&N 202 (Incorporate Thermal Sensor Harness)	1	N/A (Incorporated prior to Sale)
5.4.1.9.2	Retrofit PSA (G&N 202 thru 205 Redesign Pulse Torque Power Supply)	4	19798, 20825, 19753, 21239
5.4.1.9.3	PSA Connector Plates (Less than Class A)	18	18724
5.4.1.9.4	Retrofit G&N 202 & 203 (Painting)	2	20187, 20190, 28529, 20189, 19726, 19545, 19539, 19725



<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.9.5	Mechanical Adapter (Use in Field Retrofit)	1	N/A
5.4.1.9.6	Retrofit G&N 201 thru 206 (Non precision IMU Mounting Bolt)	6	19765, 19786, 20151, 20154, 20499
5.4.1.9.7	Retrofit Gimbal Servo Amplifier Module (PSA 202, 203, 204 Diodes)	3	19751, 19756, 19770
5.4.1.9.8	Retrofit G&N Indicator Control Panel (203 thru 207)	5	19711, 20176, 20177, 20180
5.4.1.9.9	Retrofit G&N 203, 204, 205 (Add Capacitor to Surface of PIP Amp.)	3	20167, 21188, 22004, 20804, 20877, 21114
5.4.1.9.10	Retrofit G&N 203, 204, 205 (Corrugated Steel Damper Plate Between CDU Trays X & S)	3	28529, 21122, 27531
5.4.1.9.11	Retrofit G&N 202, 203, 204, 205, (Select Resistor in Coarse System Assembly Module of the CDU)	4	21121, 21217, 27179, 21558
5.4.1.9.12	Retrofit G&N 202, 204, 205, 206 (Stainless Steel Bellows on Nav Base)	4	19525, 19526, 19537, 20499

Statement of Work Para.

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.9.13	Retrofit G&N Indicator Control Panel (G&N 204 thru 208 - Variable Resistor)	5	21699, 28343, 26746, 27193
5.4.1.9.14	Retrofit PIP Pre-amp Blk II & LM (New Capacitor)	17	22050, 22072, 27959, 28529, 22050, 22072, 27959 21734, 22050, 22072, 29078 21734, 22050, 22072, 28529
5.4.1.9.15	Retrofit G&N 203 thru 205 (Sealant) & Retrofit 202 thru 206 PSA (Shorten Jack Screws)	3 5	21103, 21206, 21545 22017, 21103, 21185
5.4.1.9.16	Telescope Seat Cover Sextant Cover Seat (Attach to APTPS to OUA S/N 23)	1 1	26771 26771
5.4.1.9.17	Retrofit PSA(202, 204, 205, 206, 207 Remove Anti Creep)	5	21561, 21696, 22015, 26786, 27566
5.4.1.9.18	Retrofit IMU (202 thru 208) Retrofit Hose Ass'y. (202 thru 210) (Remove Case Insulation)	7 9	22028, 22037, 22079, 27152, 27153, 27182, 28529
5.4.1.9.19	Retrofit PSA (204 thru 209 Redesigned Connector Plate)	6	22057, 27526, 26786, 28343, 27153

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.9.19	Retrofit PSA (204 thru 209 Redesigned Connector Plate)	6	22057, 27526, 26786, 28343, 27153
5.4.1.9.20	Retrofit GNIC Panel (202, 204 thru 209 - Flammability Etc.) Special Kit to Add Tracker-Star	7 2	21562, 21699, 26746, 26786, 27193, 28529, 28906
5.4.1.9.21	Retrofit Signal Conditioner (202, 204 thru 210 Aluminum Tape)	8	21698, 21732, 22019, 22028, 26756, 26786, 26790, 27153
5.4.1.9.22	Retrofit Interconnect Harness Assembly (202, 204 thru 209-tape)	7	26740, 21698, 21725, 22028, 27153, 27542, 28444
5.4.1.9.23	Retrofit Nav Base (202, 204 thru 209 - tape)	7	21696, 22028, 22069, 26786, 27153, 27248, 27456
5.4.1.9.24	Retrofit PIPA Electronics Ass'y. (PEA) 202, 204 thru 209 - tape	7	21696, 21710, 22028, 22071, 22072, 27152, 27153
5.4.1.9.25	Retrofit PSA (202, 204 thru 209 - tape)	7	22015, 22028, 26786, 27153, 27248, 27526, 27872

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.9.26	Retrofit ECDU (203 thru 209 more reliable resistor etc.)	7	21731, 22081, 26786, 27179, 27459, 27531, 27771
5.4.1.9.27	Retrofit G&N 203 thru 209 (IRIG End Cap)	7	21737, 22028, 22037
5.4.1.9.28	Retrofit G&N 202, 204 thru 209 with Redesigned Optics Shroud Ass'y. - 1 flame unit	8	26750, 26760, 26769, 27245 (2), 27461, 27545, 27546
5.4.1.9.29	Retrofit G&N 202, 204 thru 209 and Qual. Unit (Aluminum ESU)	7	27167, 27184, 26758, 26763, 26745, 27503, 28444
5.4.1.9.30	Retrofit IMU (202 thru 209 - Wiring Change)	8	27151, 27152, 27153, 27178, 27193, 27218, 27516, 28240
5.4.1.9.31	Pre-CARR for Retrofit for CM's 98, 101, 103, 104 and 106	N/A	N/A
5.4.1.9.32	Retrofit CDU (202 thru 211) Retrofit PSA (202, 204 thru 211) RTV 102 with Retrofit PEA (202, 204 thru 210 RTV 109	10 9 8	Part of flammibility retrofit kits

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.9.33	"B" Harness Replace Flat Wires "G" Harness	2 2	27153, 27542 26761, 27153
5.4.1.9.34	Retrofit IMU (202 thru 210 - IRIG's)	9	27193, 27218, 27241, 27516, 28240, 28529, 28686
5.4.1.9.35	Retrofit G&N Interconnect Harness Group (205, 206 - VHF Ranging)	2	27542, 28444
5.4.1.9.36	Flammability Model ESU - Class A Eyepieces - Blk. I less than Class A Optics Shroud - Class A plus closeout for OUA G&N Interconnect Harness - Flat Wire PSA - Less than Class A G&N Indicator Control Panel - Less than Class A Signal Conditioner Ass'y. - Less than Class B	1 1 1 1 1 1 1 1	Provided by Engr.
5.4.1.9.37	G&N System Mock-Ups (MSC-1 & MSC-2) DSKY's Signal Conditioner Ass'y. GNIC Panel OUA Panel (SCT&SXT Panels) SST & SXT Eyepieces SCT & SXT Long Relief Eyepieces SCT & SXT Housing GFP Optics Shroud GFP Eyepiece & Storage Unit	2 4 2 2 2 2 2 2 2 2	Provided by Engr.

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5. 4. 1. 9. 38	Retrofit IMU (203 thru 209 - IRIG's)	7	27153, 27178, 27193, 27213, 27516, 28240, 28529
5. 4. 1. 9. 39	Retrofit ESU S/N 1 (205-Teflon Inserts)	1	28805
5. 4. 1. 9. 40	Retrofit GNIC Panel (205, 206, 208, 209, 215 Engraving Fill)	5	27169 27193, 27214, 28529
5. 4. 1. 9. 41	Retrofit APTPS Blk I 100 Series (Dust Covers)	1	19542
5. 4. 1. 9. 42	Retrofit OUA & Bellows Ass'y. (202, 204 thru 208 - Narneplate)	6	21559, 21726, 27958, 27965, 28209, 28292,
5. 4. 1. 9. 43	Retrofit ECDU (203, 205, 210 thru 214)	7	N/A
5. 4. 1. 9. 44	Retrofit GNI C Panels (204, 205, 206, 208 - thru 215 - reidentify lamp retainer panels as GSE)	11	27533, 27804 (2), 27805 27807 27808
5. 4. 1. 9. 45	Panel Verb/Noun Retainers (CSM 101 & 103)	2	27533 27925
	Frame Assemblies (CSM 104 & 106)	6	28203, 28640, 28463, 28867, 28875,

Statement of Work Para.

DD 250

Qty.Equipment

5.4.1.9.45 (Continued)	Lamp Retainers	12	28203, 28640, 28463, 28867, 29032,
	Blank Panel (CSM 104)	1	28203
	Panel Lamp Retainer Star List	6	28867, 27925, 28203, 27533, 28463, 28640
	Decal Option Checklist & Alarm Codes	6	27925, 28231, 27533, 28905, 28640, 28463
	Replaceabl. Overlays - Sets	4	28283, 28474, 28640, 28647, 28867
5.4.1.9.46	ESU Update		
	GNIC Panel Update Modkup 28 to the S/C 1	1	Engr. Effort Only
	S/C 103 Handholds Update - Configuration		
5.4.1.9.47	Refurbish CDU & IMU from G&N 203	N/A	N/A
	Set of FIPA, Cal. Modules for the PEA	3	28517
	from G&N 207		
	Replace "A" Harness	1	28529
5.4.1.9.48	G&N Harness "A" S/N 7 Perform	1	Engr. Effort Only
	VHF Ranging		
5.4.1.9.49	Retrofit ESU (Add Tab to Retainer &	13	28901, 28902
	Replace Retainer Bracket)		
5.4.1.9.50	Retrofit GNIC (G&N 205, 213 thru 222	11	28900
	- Computer Tracking)		
5.4.1.9.51	Test, Refurbish & Retest (6) Cal. Modules	6	N/A
	for Reuse		
5.4.1.9.52	Protective Covers & Encapsulation of	1	N/A
	OUA & Bellows Ass'y. S/N 16		

Statement of Work Para.

Equipment

Qty.

DD 250

5.4.1.10.1	Eyepiece Storage Unit (G&N 201, 202, 204 thru 222)	21	27213, 27527, 27534, 27756, 27768, 27774, 27663, 27960, 27958, 28209, 28292, 28459, 28529, 20459, 20153, 20186, 20820, 20842, 20889, 21109, 21147
5.4.1.10.2	ESU Mockup	1	19732
5.4.1.10.3	ESU less than Class A - Simulation	3	21113, 20898, 20855
5.4.1.11	APTPS Kits Ejectable Cover Kits G&N 202, 204 thru 206, 208, 209, 211 - Incorporate APTPS	19	27153, 27192, 27219, 27465, 27771, 27663, 27960, 27958, 28209, 28292, 28444, 28459, 28529, 20853, 21123, 21135, 21614, 21708, 21117, 22012, 22013, 26741, 21135, 21173, 21614, 21708
5.4.1.12	Nav. Base Partial Optical Unit Bellows Installation Kit (Excluding Bellows	1	27198
5.4.1.13	OUA & Bellows Ass'y. (207 thru 222)	16	21124, 21233, 22028, 26786, 27153, 27193, 27219, 27465, 27777, 21636, 27218, 27663, 27960, 28444, 28459, 28529



Statement of Work Para.

5.5.1

Equipment

AGC

Qty.

21

DD 250

18280, 18711, 18765,  
20456, 21547, 21233,  
21636, 22028, 26786,  
27153, 27193, 27218,  
27465, 27771,  
27663, 28209, 28292,  
28444, 28459, 28529,  
28892

DSKY

39

18280 18711  
18765 LV2504, 19794,  
LV2471, 21547, 21245,  
21233, 21636, 26786,  
27153, 27193  
27218 27219  
27465 27771  
27663 27960  
27958 28209,  
28292 28444  
28459

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.2.1 (a)	AGC Test Set	4	WL-622, WL-706, WL-978, WL-1025
5.5.2.1 (b)	AGC Simulator Drawer	6	WL-259, WL-308, WL-331, WL-357, WL-402, WL-445
5.5.2.1 (c)	DSKY's Pedestal Assembly	2	WL-1643, WL-1645
5.5.2.1 (d)	AGC/GSE Interconnection Kit, G&N Test	4	WL-622, WL-706, WL-978, WL-1025
5.5.2.1 (e)	AGC, DSKY Handling Fixture	22	LV-02487, LV-02553, LV-02480, LV-02501, LV-02466, WL-1762, WL-1828, WL-1778, WL-1779, WL-1860, WL-1900, WL-1871, WL-1934, S-74, LV-02355, LV-02364, LV-02367, LV-2555, LV-02460, LVB-2568 WL-1843, WL-2471
5.5.2.1 (f)	AGC Handling Fixture	16	WL-1959, WL-2152, WL-2138, WL-2175, WL-2226, LV-02329, LV-02363, LV-02419, LV-02399, LV-02371, LV-02483, LV-02477, LV-02658, LV-02507, LV-02555, LV-2463

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.2.1. (g)	P&M Cable	6	WL-1013, WL-1019, WL-1021, WL-1023
5.5.2.1. (h)	A/B System, Connector Cover	1 set/System	Supplied with Para. 5.5.1
5.5.2.2. (a)	AGC Test Set	10	WL-1315, WL-1346, WL- 1374, WL-1409, WL- 1421, WL-1499, WL- 1511, WL-1729, WL- 1875, WL-2162
5.5.2.2. (b)	AGC Simulator Drawer	9	WL-606, WL-610, WL- 624, WL-725, WL-809, WL-859, WL-1282, WL-1566, WL-162
5.5.2.2. (c)	AGC/GSE Interconnection Kit, G&N Test	10	WL-1325, WL-1423, WL-1457, WL-1509, WL-1513, WL-1731, WL-1889, WL-2160
5.5.2.2. (d)	AGC/GSE Interconnection Kit, Subsystem Test	6	WL-1268, WL-1276, WL-1402, WL-1767, WL- 2038, LVB-2789

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.2.2. (e)	AGC DSKY Shipping Container	22	WL-1778, WL-1762, WL-1828, WL-2041, LV-2332, LV-2295, WL-1900, LV-2333, WL-2014, LV-2367, WL-1779, LV-2405, WL-1751, WL-1736, WL-1860, LV-2355, LV-2401, WL-1814, WL-2289, LV-2364
5.5.2.2. (f)	AGC Shipping Container	16	WL-686, WL-541, WL-1204, WL-843, WL-1030, S-58, WL-1269, WL-1370, WL-1959, WL-2091, WL-1805, WL-2138, WL-1874, S-74, WL-1123
5.5.2.2. (g)	AGC Calibration Console	5	WL-1136, WL-1155, WL-1228, WL-1134
5.5.2.2. (h)	AGC Operation Console	6	WL-1252, WL-1259, WL-1290, WL-1769, WL-2036 S-65
5.5.2.2. (i)	DSKY Pedestal Mount	8	WL-996, WL-1000, WL-998, WL-996, WL-1641

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.2.2 (j)	AGC Test Set for AGC/GSE Compatability	7	WL-964, WL-962, WL-1058, WL-1348, WL-1084, WL-1082
5.5.2.2 (k)	Interconnect Kit, G&N Test for AGC/GSE Compatability I	7	WL-945, WL-947, WL-101060, WL-1344, WL-1068 WL-1070, WL-1187
5.5.2.2 (l)	Interconnect Kit, Subsystem Test for AGC/GSE Com, atability I	4	WL-1006, WL-1004, WL-1008, WL-1176
5.5.2.2 (m)	AGC Test Set for AGC/GSE Compatability II	17	WL-1348, WL-1319, WL-1317, WL-1321, WL-1323, WL-1315, WL-1346, WL-1374, WL-1409, WL-1421, WL-1499, WL-1511, WL-1729, WL-1875 WL-2162
5.5.2.2 (n)	Computer Test Set - PIPA Fail Alarm Mod. Kit (Kits are for 100 Series Cts's being updated per para. 5.5.2.2.(a)	10	Part of 5.5.2.2.a
5.5.2.2 (o)	Computer Test Set (These kits are for 100 Series CTS's being updated per Para.5.5.2.2(a)	10	Part of 5.5.2.2.a

	<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.2.2	(p)	Retrofit Compute Test Set (Adding Resistor Etc.)	8	WL-962, WL-964, WL-1058 WL-1348, WL-1082, WL-1084
5.5.2.2	(q)	Computer Test Set for AGC/GSE Compatability III	18	WL-1202, WL-1203, WL-957, WL-1451, WL-1449, WL-1455, WL-1465, WL-1472, WL-1467, WL-1453, WL-1474, WL-1476, WL-1511, WL-1729, WL-1875 WL-2162,
5.5.2.2	(r)	AGC Handling Fixture Protective,	18	Accomplished during normal recycle of handling fixt.
5.5.2.2	(s)	AGC/GSE Interconnection Set-G&N Test (Protective Cover)	17	WL-1509, WL-1513, WL-1731, WL-1889, WL-2160, WL-1698, WL-1700, WL-1701, WL-1697, WL-1695
5.5.2.2	(t)	AGC/GSE Interconnection Set - Subsystem Test (Protective Cover)	10	WL-1767, WL-2038, WL-1704, WL-1699, WL-1702, WL-1703, S-66
5.5.2.2	(u)	AGC Handling Fixture(Remachined Handle Assemblies)	2	Accomplished prior to delivery
5.5.2.2	(v)	Retrofit Computer Test Set for AGC/GSE Compatability IV	18	WL-1796, WL-1801, WL-1795, WL-1798, WL-1797, WL-1800, WL-1799, WL-1875, WL-2162

Exhibit A

Page 35

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.2.2. (w)	Retrofit AGC/GSE Interconnection Kit G&N Test (Wiring Changes)	18	WL-1955, WL-1956, WL-1954, WL-1953, WL-2061, WL-1981, WL-2016, WL-2018, WL-2017, WL-2015, WL-2019, WL-2121
5.5.2.2. (x)	Retrofit Computer Test Set with AGC/GSE Compatibility V	18	WL-1875, WL-2162, WL-2211, WL-2210, WL-2207, WL-2208, WL-2212, WL-2209, WL-2206, WL-2214
5.5.2.2. (y)	Retrofit Computer Test Set (Wire Wrap Changes)	18	LVB2683, LVB2684, LVB-2685, LVB2686, LVB2688, LVB2689, LVB2690, LVB-2691
5.5.2.2. (z)	Retrofit AGC Handling Fixture (Reinforcing Aluminum Plate) for S/N's 3 thru 11, 13, 14, 15	12	LVB-2814
5.5.2.2. (aa)	Retrofit Computer Test Set (Add Resistors & Capacitors)	18	LVB-2772, LVB-2710, LVB-2780, LVB-2781, LVB-2782, LVB-2783, LVB-2784, LVB-2785, LVB-2727-LVB-2815
5.5.2.2. (bb)	Retrofit G&N Cable AGC/GSE Interconnection Set (Wiring Changes)	18	LVB-2684, LVB-2691, LVB-2690, LVB-2689, LVB-2688, LVB-2686, LVB-2685, LVB-2683

<u>Statement of Work Para.</u>	<u>Equip.</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.2.2 (cc)	Retrofit AGC/PAC Interconnection Kit (Noise Reduction Changes)	5	LVB-2822, LVB-2823, LVB-2824, LVB-2825, LVB-2698
5.5.2.2 (dd)	Retrofit Computer Simulators (Nameplate)	6	WL-1522, WL-1524, WL- 1526
5.5.2.2 (ee)	Retrofit Operation Console (Compatibility)	4	WL-1080, WL-1072, WL- 1074, WL-1147
5.5.2.2 (ff)	Retrofit Calibration & Auxiliary Console (Eliminate Heat Problem)	7	WL-1037, WL-1043, WL- 1039, WL-1043, WL-1041 WL-1045
5.5.3	CDU Digital Modules A set will consist of 11 modules Logic Modules (5) Counter Modules (5) Mode & Clock Module (1)	21 sets	See Paragraph 5.4.1.3



<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5	Fixed Memory Modules (as required)	152	WL1629, LVB2853, WL1425, LV2322, LV2489, LV2490, WL2145, WL2250, WL2261, WL1376, WL1515, WL1595, WL1668, WL1706, WL1811, WL2125, WL2265, LV2232, LV2279, WL2498, LV2647, LV2319, LV2647, LV2458, LV2440, LV2465, LV2484, LV2671, LV2496, LVB2950, LVB2960, LV2456, LV2491, LV2508, LV2509, LV2566, LV 2670, LV2732, LV2733, LV2767, LV2865, LV2768, LV2315, LV2640, LV2654, LV2497, LV02538, LVB2991, LV2918, LV2923, LV2936, LV2938, LVB2949, LVB3002, LVB3020, LVB 3026
5.5	Fixed Memory Modules	136	LVB3026, LV3036, LVB3051, LV3050, LV3079, LV3124, LV3066, LV3096, 28313, 28272, 28423, 28694, 28464, 28630, 28720, 28669, 28658, 28719, 28871, 28877, 28903, 28951
5.5	Fixed Memory Modules	40	28925, 28952, 29062, 29085, 29104, 29106

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.5.1	Jumper Module	60	WL2097, WL1446, WL1518, WL1706, WL1212, WL1311, WL1218, WL1665, WL1376, WL2097, WL1882, WL1885, WL2105, WL2107, WL2103, WL2108, WL2101, WL2106, WL2104
5.5.5.2	Retrofit Fixed Memory Jumper Module (Bonding of Resistors)	14	LV-02428, LV-2435, LV02451 LV02475,
5.5.5.3	Retrofit Jumper Modules (Clip Pins)	28	LVB-2882, LV2883, LVB2884, LVB2897, LVB2898, LVB2941, LVB2944, LVB2950, LVB2971, WL-1833 LVB3013
5.5.6.1	AGC (204) - Longer Screws	1	
5.5.6.2	DSKY with New Indicator Drive Module Relay	8	27782 WL1859, WL1901, WL1935, WL2013, WL2096
5.5.6.3	Retrofit Rope Driver Module (204-Replace Resistor)	1	WL-1833
5.5.6.4	Retrofit AGC (C1, C2-Bonding Pads)	2	WL-1833, WL-1684
5.5.6.5	Deleted		

Exhibit A

Page 39

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.6.6	Retrofit AGC-Block II & LEM (Test Connector Covers -601, 602, 603, 201, PC-1 thru PC-4, C1 thru C4)	15	LV2376, LV2377 LV2378, LV2379, LV2380 LV2381 WL-2255
5.5.6.7	Retrofit AGC (C1, C2 - Jumper Wires)	2	WL1833, WL1684
5.5.6.8	Retrofit AGC (C1, C2, C4, C5 - Cutting Pins)	4	WL 1833
5.5.6.9	Retrofit AGC (C1, C2 - Painting)	2	WL 1833, WL1684
5.5.6.10	Retrofit AGC (Thermal Vac Testing)	3	WL-1881, WL1906, WL2092
5.5.6.11	Delete		
5.5.6.12	Retrofit AGC(Power Supply Modules, Wiring Changes)	12	LVB3052, 3127, 3158, 3159, 3160, 3161, 3170, 3001, 2888
5.5.6.13	Refurbish DSKY S/N 30	1	LV02364
5.5.6.14	Retrofit DSKY (Teflon Coating Shafts & Small Key Cpas	6	LV02405, LV02432 LV02433 LV02439
5.5.6.15	Retrofit AGC (C1 thru C11 - RTV 109)	11	Class II Change
5.5.6.16	DSKY	2	28529, LVB3146
5.5.6.17	DSKY	1	27782

2-347

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.6.18	Night Watchmen Module (Capacitor)	4	LVB2444, LVB2443
5.5.6.19	Retrofit DSKY (Glass & Al. Cover)	27	LVB2539 2542, 2560 2590 2591, 2592 2594, 2800, 2614 2615, 2692 2717, 2718, 2734 2736 2803
5.5.6.20	Retrofit DSKY (Push-button Cap & Leaf Spring)	28	same as 5.5.6.19
5.5.6.21	DSKY (Dummy - Flammability)	1	71677-2629
5.5.6.22	Retrofit AGC (Dampening Pad)	9	LVB3170, 3161, 3160, 3159, 3158, 3127, 3052
5.5.6.23	DSKY (IDM Screen)	38	Waiver-Raytheon C1129A
5.5.6.24	Retrofit Memory Module - Sundial	7	LV02458, 02440, 2465, 2484, 2496, LVB2671
5.5.6.25	Retrofit DSKY's (Safety Glass)	64	LVB2873 2887, 2901, 2902, 2919 2920, 2925, 2937 2942 2943, 2955, 2954, 2953, 2963 2964, 2972, 2980 2989 2981 2982, 2983, 2999 3000, 3038 3054, 3055, 3059, 3065, 3069, 3070, 3071, 3114 3111 3113, 3130, 3131 3132 3133 3202

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.6.26	Retrofit AGC's (Alarm Modules-Resistor Change	33	LVB2858 2875, 2927, 2930 3170
5.5.6.27	Recycle Cor.puters (C8, C9, C10, C12 & C20)	5	LVB3128, 3052, 3001, 3170, 2927
5.5.6.28	Use of GFP Logic Modules & their replacement	N/A	N/A
5.5.6.29	Retrofit DSKY's (Laminating with clear safety glass)	27	LVB3303 3230, 3219, 3218 3213 3201, 3195, 3194, 3193, 3183, 3182 3176, 3175, 3144 3138, 3137, 3136, 3135, 3134, 3126, 3125, 3117, 3116
5.6.1.1	OUA Block II	22	18318, 18711, K221, 18765, 19794, 20499, 21124, 21233, 21636, 22028, 27218, 26786, 27153, 27193, 27219, 27465, 27777, 27663, 27960, 28444, 21225, K-0622
5.6.1.2	Dummy Modules	23	DD 250 as part of above.

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.6.2.1 (a)	Portable Light Assembly	4	K-107
5.6.2.1. (b)	Alignment Mirror Assembly	1	K-222
5.6.2.1 (c)	Shaft Accuracy Tester	1	K-165
5.6.2.1. (d)	Autocollimator Plate Assembly	3	K-147, 148
5.6.2.1 (e)	45° Autocollimator Plate Assembly	2	K-108
5.6.2.1 (f)	Retroreflecting Prisms	2	K-185, 187
5.6.2.1 (g)	Optics Cleaners	6	K-116, 122, 155, 176, 189, 188
5.6.2.1 (h)	Optics NB Shipping Container	5	K389 284 324
5.6.2.1 (i)	Star & Horizon Simulator Cert. Fixture	6	K115, 152, 186 204, 203
5.6.2.1 (j)	SXT/SCT Lens Cover	1 set/ System	Shipped with A/B Hardware
5.6.2.1. (k)	Connector Covers	1 set/ System	
5.6.2.1. (l)	G&N Fixture Stands	8	K 94, K119, K135, K143, K144, K175, K174, K198
5.6.2.1. (m)	Theodolites with stands	2	K 235, 258
5.6.2.1. (n)	Adjustable Mirror Assembly	1	K 274
5.6.2.1 (o)	Air Focus Spacer	24	K561, 526, 544, 581, 598, 523, 578, 530, 589, 540, 524, 535, 552, 575, 0697, 515

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.6.2.2 (a)	Precision Test Fixture	2	K-140, 113
5.6.2.2 (b)	Functional Tester	2	K-299, 110
5.6.2.2 (c)	Precision Test Fixture Calibration Kit	2	K--113, K 140
5.6.2.2 (d)	Optics NB Shipping Container	8	K-0411, 350, 382, 356, 394, Inv. 94714
5.6.2.2 (e)	Retrofit OUA Shipping Containers (Spring Retainer)	8	K-0411, 350, 382, 356, 350, 394, 382 Inv. 94714
5.6.2.2 (f)	Retrofit Functional Tester	3	K-307 308
5.6.2.2 (g)	Retrofit Variable Deviation Wedges	9	K-0656, 658, 654, 653, 655, 657
5.6.3.1	Retrofit OUA (201, 201a, 202, 203, 204 - Bearing Plates)	5	K312, 318, 313, 302(2)
5.6.3.2	SXT Mirror Housing & Air Focusing Shim (SXT Mirror Housing)	16	K-306, K312, K313, K314, K317, K318, K319 K328 K360, K379 K387
5.6.3.2	SXT Eyepiece Ass'y. (SXT Eyepiece)	16	K306, K312, K313, K314, K317, K318, K319 K328 K369, K379 K387

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.6.3.2	SCT Prism Housing & Insulation Ass'y. (SCT Prism Housing)	16	K306, K312, K313, K314, K317, K318, K319 K328 K360, K379 K387
5.6.3.2	SCT Eyepiece(Adjustable Focus) (SCT Focusable Eyepiece)	16	K306, K312, K313, K314, K317, K318, K319 K328 K360 K379 K387
5.6.3.3	Update of Eyepieces	3	K0515
5.6.3.4	Long Eye Relief (LER) Eyepieces with Heaters	11	K275 283, 327 335 341, 344, 603, 620,
	LER	8	K327, 335 338 603, 619
	SXT LER (Mockup)	1	Engr. Unit Non-Del.
5.6.3.5	Refurbish OUA (S/N 201a-Qual)	1	K430
5.6.3.6	Retrofit OUA (Be Wedge)	5	K432, 571, 583, GB5000, GB5063
5.6.3.7	Retrofit OUA (Be Wedge OUA 111)	1	In-house Engr retrofit
5.6.3.8	Retrofit OUA (Chamfer, Spring, Spacer)	5	K0005, AB5000, RB5063, K571, 583



Exhibit A

Page 45

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>LD 250</u>
5.6.3.9	Refurbish OUA (S/N 11)	1	K 430
5.6.3.10	Retrofit & Refurbish OUA (Corrosion Protection)	4	GF5000, RB5063, K0571, 583
5.6.3.11	Retrofit OUA (Thermocouples)	1	26211
5.6.3.12	Retrofit SXT Mirror Housing & Air Focusing Shtr Ass'y. (Remove Spacer)	15	K302, K305, K313, K312, K31b, K317, K319, K275, K277, K283, K286, K291, K292
5.6.3.13	Spring & Collet OUA Mod	5	K571, 583, RB5015, 413 RB-5063
5.6.3.14	Retrofit SCT Eyepiece Adjustable	12	K598, 523 578, 530, 589, 524, 561, 526
	Retrofit SCT Prism	12	544, 581, 530, 524, 578, 589, 524, 561, 526
	Retrofit SXT Mirror Housing	12	544, 581, 578, 530, 589, 524, 561, 526
	Retrofit SCT LER	8	K515, 543, 553, 523 539,

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.6.3.15	Retrofit SXT Mirror Housing	19	K659 614 631 609 641 632 661
5.6.3.16	Modify SXT & SCT Cover Assemblies	32 sets	K546 545,555, 565. 566 586,585 ,584, 593 626 625, 629
5.6.3.17	Retrofit SXT Eyepiece Lockwashers & Flatwashers	16	K553, 558(3), 589, 562, 578. 554, 583, 549 561 562, 598 K562, 645, 0053, 552, 0051
5.6.3.18	Retrofit OUA's (Redesigned Limit Stop	13	K592, RB5063, K571, K583, RB5025, K0026, K588, K563, 27777, 28156, 28459, 28104, 27505, 27521
5.6.3.19	Molded Fiber Glass Containers with Metal Stands	10	K677
5.6.3.20	SCT Eyepiece High Density Filters Assemblies	17	K615, 621 638, 639, 643, 644, 648, 652, 663, 664 669 , 670 672
	SCT LER High Density Filter Assemblies	10	K615, 621 638, 639, 643, 644, 648, 652, 663

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.6.3.21	Retrofit SCT LER (Clamping Ring)	10	K615, 616 623
5.6.3.22	Optical Rangefinders	3	K630, 635, 636
5.6.3.23	Post Flight Analysis of OUA S/N 27 (SXT Shaft Read Counter)	1	N/A
5.6.3.24	Post Flight Analysis of OUA Motor Tachs S/N 27	1	N/A
5.6.3.25	Retrofit SCT Eyepiece Ass'y.	15	K667, K671, K673, K674
	Retrofit SXT Eyepiece Ass'y.	15	
	SCT Locking Ring	1	Engr. only no DD 250
	SXT Locking Ring	1	

Part A

Equipment of Work Para.

<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
Signal Conditioner Suppl. PSA	8102600	1	19754
	8102601	1	19754
Retrofit of GSE Block I Spares to 100 Series	8102078	4	16405, 16631
	8102079	4	16405, 16631
	8102080	4	16405, 16631
	8102081	4	16405, 16631
	8102082	2	16405, 16631
	8102097	2	16405, 16631
	8102038	2	16405
	8102095	2	16405, 16631
	8102084	2	16405, 16631
Nameplate Change (Block I-100 NVB)	8102622	1	18713
Difference Meter Replacement IMU Control Panel	8102627	1	18691
PSA Gaskets & Covers	8102650	3	18678, 18696
	8102651	3	18696
Retrofit of GSE Block 100 Spares to Blk II/LM	8102103	1	19410
	8102104	3	18325
	8102105	2	18325, 18811
	8102107	1	18419
	8102122	2	18419

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>	
5.7.1	Retrofit of GSE Block 100 Spares to Blk. II/LM	8102123	2	18419	
		8102115	1	19491	
		8102119	2	18419	
		8102120	2	18419	
		8102121	4	18419, 19893	
		8102117	1	18864	
		8102125	2	18419	
		8102118	1	19491	
		8102127	3	18419	
		8102129	1	18419	
		Screw Replacement Optics to NVB	8102624	2	19760
		IMU Blower Motor Resistor	8102621	2	18314, 18702
		Deletion of Horizon Photo meter & Star Tracker(GNIC)	8102654	1	18729
Replacement of CAM Shaft PIN on Attitude Impulse Switch	8102629	4	18760, 19740		
Panel Brightness Control (GNIC)	8102647	2	19360		
Add Capacitors to the Pulse Torque Power Supply - IMU	8102663	1	20821		
Add Capacitors to the Pulse Torque Power Supply - PSA	8102664	1	21239		
Qualification Test Fixture Harness	8102628	1	18312		

Statement of Work Para.

<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
5.7.1 Qualification Test Fixes-GNIC	8102643	1	19740
Qualification Test Fixes IMU Control Panel	8102639	1	18758
Replacement of Captive Screws D&C Electronics	8102640	4	19750, 19377
Replacement of Captive Screws - Optics Shroud	8102642	1	18722
Replacement of Captive Screws - GNIC	8102638	1	19739
Replacement of Captive Screws - IMU Control Panel	8102639	1	18758
Redesign of CIDU Frame & Panel Ass'y.	8102652	6	18704, 18721, 19375, 19387
Replace G&N Subsystem Filter Module - PSA PSA Toe Cap Qualification Fixes	8102635	3	18717, 19362, 19548
PSA Qualification Fix-PSA Trays 1-4	8102659	4	18699, 19711
PSA Qualification Fix- PSA Trays 5-10	8102660	4	18699, 19711

Statement of Work Para.

<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
5.7.1 PSA Qualification Fix - PSA Modules	8102662	183	19742, 20467, 18301, 18653, 18668, 18669, 18674, 18685, 18699, 18723, 18766, 18767 18768, 19360, 19396, 19513, 19533, 20813, 21201
PSA Qualification Fix - IMU	8102661	1	18731
G&N Harness & End Connector - Qualification Fix	8102646	2	19502, 19777
Quick Disconnect Eyepieces - NVB	8102671	2	20497
Mount Harness B Clamp on IMU	8102658	1	19737
Corrosion & Outgassing Protection-D&C	8102669	1	20467
Corrosion & Outgassing Protection-CDU	8102676	2	19721, 20185
Corrosion & Outgassing Protection-IMU	8102677	1	19522
Corrosion & Outgassing Protection-PSA	8102675 8102678	1 1	20190 19507

Statement of Work Para.

5.7.1

<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
Add Rubber Shims to ESU	8102679	1	19524
CDU Connector Engagement	8102686	10	20461, 20488, 20497, 22025
Signal Conditioner Noise Suppression	8102687	1	19723
Relay Change-Resolver Load Module	8102689	2	19752, 20462
Covers for Blk. II Switch Mechanisms GNIC	8102694	2	20182, 20181
ECDU Damper Plate	8102712	4	21121, 21143, 21217, 27179
ESU Latching Change	8102693	1	20181
Diode Replacement in Gimbal Servo Amp-PSA	8102696 8102699	3 4	20488, 27515, 27872 27515, 28507
Capacitor Replacement in PIP Preamplifier - IMU	8102709 8102713 8102715 8102717	2 1 1 2	21183, 22038 22005 220858 21720
Resistor Replacement-CSA Module - ECDU	8102720 8102719 8102718	2 2 2	27189 21187, 22002 27531, 28529



Statement of Work Para.

5.7.1

<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
Disable Zero Optics Coarse Channel-PSA	8102727	2	21192
CCRD Mounting Change	8102760	1	26773
180° Rotation of Harness Connector	1015086	1	RIB only - Field Retrofit
PSA Gaskets	8102758	3	26803, 27872, 28861
Harness Group Flammability Protection	8102742	1	26740
LEM Harness Flammability Protection	8102751	1	27460
PSA Header Flammability Protection	8102755	4	28542
SCA Header Flammability Protection	8102749	3	27757
IMU & FEA Flammability Protection	8102752	2	27248, 28529
PSA Flammability Protection	8102754	3	27241, 27515, 28737

Statement of Work Para.

5.7.1

<u>Equipment</u>	<u>F/N</u>	<u>Qty.</u>	<u>DD 250</u>
SCA Header Flammability Protection	8102731	2	27193, 27195
IRIG End Cap Replacement	8102757	12	22050, 22072
MSA Quadrature Rejection - Modules	8102741	2	28349
MSA Quadrature Rejection - Modules	8102748	2	28349
MSA Quadrature Rejection - ECDCU	8102743	3	28170, 28529
MSA Quadrature Rejection - ECDCU	8102744	3	27781, 27793, 27811
IMU Wiring Change - Preamp Oscillation	8102763	4	28529
Capacitor Addition Reduce Oscillation	8102773	4	29027
G&N Harness VHF Ranging	8102769	2	28549
IRIG End Cap Mounting Hdwe.	8102768	2	29028
Engraving Fill	8102776	2	28153
	8102778	1	28529

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
5.7.1	Delete Anti Creep Module-PSA	8102740	3	27872, 28343, 28861
	Boards with Buffer Resistors	8102300	2	27951
	Noise Susceptability	N/A	3	N/A
	Spare Header Extra		1 1	N/A N/A
	Temperature Soak Tests of all spare Signal Conditioner Modules		20	N/A
	Add (2) Capacitor in the Header Ass'y. of PSA	8102788	2	28334, 28482
	Retrofit PSA to Prevent Reverse Power Problem'	810787	3	29027
	LM CDU Mtg. Bolts	8102789	3	28541
	GNIC Computer Aided Tracking	8102791	1	28900

Statement of Work Para.

5.7.2

<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
G&N Failure Detect AGC Group	8104088	2	WL-397, WL-400
Replace Harness with EMI Fixes		1	LVB 2928
Retrofit Front Closeout Panel		1	WL-2361
Rework Power Switch F/S Module	8104114	5	WL-877, WL-1292 WL-1126
Rubber Isolators DSKY's		3	Provided by AC Engr.
New AGC Test Connector Cover P/N 1003230	8104220	2	WL-2298, WL-2300
Power Supply Retrofit for Use as GSE Spares	8104242	4	71677-3275
14 Legend Indicators on DSKY	8104252	2	LVB 3213, 3211
DSKY EL Safety Glass	8104255	7	LVB 3249, 3250, 3248 3251, 3252, 3304

Statement of Work Para.

5.7.3

<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
Eye-piece Heaters		1	K 292
Rework Reticle	8106033	1	K 237
SCT Eye-piece Modification to a Focusable Configuration		1	K 319, K 302
Quick Disconnect Eye-piece Block I/50 Series	8106045-001	1	K 319
Quick Disconnect Eye-piece Block I/100 Series	8106045-002	1	K 302
Quick Disconnect Eye-piece Block II	N/A		Incorporated in- line
Beryllium Protection on OUA & AOT			
Beryllium Wedge OUA		1	K 592
Reduce Stray Light OUA	8106024-002	1	K 237
Add Baffling Change	8106038	1	Incorporated in- line
Add Stiffening Plates	8106439	1	Incorporated in- line
Replace Spring & Collet Ass'y. in OUA	8106063	1	RIB 5063
Eye-piece Lock Washers	8106084	1	K 549

Statement of Work Para.

5.8

Equipment

QTY.

P/N

DD 250

Marriage Kits

**Block II & LEM-Marriage Kit 1 & 2**

8102163	3	19415, 20808
8102164	1	19415
8102172	1	19893
8102173	1	19893
8102176	1	19893
8102177	1	19893
8102202	1	19415
8102203	2	19415
8102226	1	19893
8102199	3	19415, 19893
8102220	1	19893
8102165	1	19893
8102221	1	19893
8102222	1	19893
8102223	1	19893
8102200	1	19415
8102229	1	19415
8102228	6	19415, 19893
8102254	1	20875
8102257	2	20880
8102260	1	20875

**Kit 3**

**100 Series Marriage Kit**

8102133	5	16402, 17296, 17818, 17870, 18823
8102012	5	13430, 14142, 14563, 15355, 17852
8102014	2	14022, 16272

Exhibit A

Page 59

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
5.8	100 Series Marriage Kit (Continued)	8102017 8102005 8102053	5 3 5	13430, 14142, 14146, 14563, 15778 18373 13430, 13795, 14142, 14563, 15778
	Blk/LM Marriage	8102160	19	17812, 17813, 17856, 17879, 17880, 18367, 18369, 18370, 18401, 18792, 18815, 18816, 18826, 18827, 18839, 18844, 18870, 18871, 18874
		8102161	19	17812, 17813, 17856, 17879, 17880, 18367, 18369, 18370, 18401, 18792, 18814, 18815, 18826, 18827, 18839, 18844, 18870, 18871, 18874
		8102168	12	18408, 18792, 18844, 18845, 18847, 18848, 18849, 18850, 18863, 18870, 18871
		8102179	13	17812, 17813, 17879, 17880, 18401, 18792, 18815, 18816, 18845, 18870, 18871, 18881,

Statement of Work Para.

Equipment

F/N

Qty.

DD 250

5.8	Blk/LM Marriage (Continued)	8102178	12	17856, 17880, 18367, 18370, 18815, 18826, 18827, 18839, 18844, 18870, 18871, 18874,
		8102184	18	17812, 17813, 17856, 17879, 17880, 18335, 18359, 18370, 18386, 18392, 18404, 18412, 18414, 18415, 18416, 18810, 18882, 19811
		8102185	13	17812, 17813, 17879, 17880, 18369, 18370, 18401, 18792, 18814, 18815, 18870, 18871, 18881
		8102174	12	17282, 17283, 17731, 17858
		8102196	19	18884, 18885, 18899, 18900, 19401, 19402, 19403, 19406, 19407, 19437, 19438, 19486, 19487, 19488, 19490, 19805, 19824, 19876, 19894
		8102194	18	18884, 18885, 18899, 18900, 19401, 19402, 19403, 19406, 19407, 19437, 19438, 19486, 19487, 19490, 19805, 19824, 19876, 19894



<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
5.8	Blk/LM Marriage (Continued)	8102192	12	1885, 1889, 19402, 19487, 19437, 19438, 19486, 19488, 19490, 19805, 19824, 19876, 18884, 18899, 18900, 19401, 19403, 19406, 19437, 19438, 19487, 19490, 19805, 19876, 19894
	Marriage Kit 3	8102247	19	21172, 21173, 21174, 21175, 21176, 21177, 21202, 21208
		8102248	12	20849, 20870, 20872, 20873, 20875, 20879
		8102249	13	21172, 21174, 21176, 21177, 21194, 21198, 21202
		8102258	12	21173, 21174, 21176, 21177, 21194, 21202
		8102246	4	21172, 21173, 21174
		8102250	17	20893, 20895, 21159, 21172, 21173, 21174, 21194, 21195
		8102255	19	20843, 20870, 20872, 20873, 20874, 20875, 20878, 20879,

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>P/N</u>	<u>Qty.</u>	<u>DD 250</u>
5.8	Marriage Kit 3 (Continued)	8102254	1	20875
		8102257	2	20880
		8102268	1	22335
		8102269	1	22335
		8102270	1	21721
		8102266	4	20831, 20832, 20833, 20834
		8102336	44	21198
		8102272	2	21164, 21168
		8102273	4	21164, 21168, 21169
		8102274	5	21164, 21167, 21168, 21169
		8102276	4	21167, 21168, 21169

Contract NAS9-497 Statement of Work  
Exhibit B

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1	<b>HARDWARE FABRICATION</b>		
5.1.1 (a)	Dummy G&N System	1	(Covered in following paragraphs)
5.1.1 (b)	G&N Prototype LM (CDU-3 Channel No AOT)	1	"
5.1.1 (c)	G&N System Partial (CDU-2 Channel Interconnecting Wiring)	1	"
5.1.2 (a)	IMU & PTA Dummy for Para. 5.1.1.a	1	16730, 15814
5.1.2 (b)	IMU & PTA Prototype for Para. 5.1.1.b	1	16743
5.1.2 (c)	IMU & PTA Mass Representative	1	19530
5.1.3 (a)	NVB Prototype for MIT/IL System 600	1	15445
5.1.3 (b)	NVB Prototype for MIT/IL Environmental Tests	1	15381
5.1.3 (c)	NVB Dummy for Para. 5.1.1.a	1	15815
5.1.3 (d)	NVB Prototype for Para. 5.1.1.b.	1	16743
5.1.3 (e)	NVB Mass Representative	1	19531

Exhibit B

Statement of Work Para.

	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1.4. (a)	CDU Dummy (5 channel) to Support Para. 5.1.1.a	1	16517
(b)	CDU Prototype (3 Channel) to Support Para. 5.1.1.b	1	16743
(c)	CDU Prototype (2 Channel) to Support Para. 5.1.1.c	1	18252
(d)	CDU Mass Representative	1	19530
5.1.5 (a)	CCRD Prototype Engineering Model for GAEC	2	19389, 19354
(b)	CCRD Prototype Design Evaluation MIT/IL	1	18689
(c)	CCRD Dummy for Para. 5.1.1.a	1	16511
(d)	CCRD Prototype for Para. 5.1.1.b	1	18283
(e)	CCRD Mass Representative	1	19530

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1.6 (a)	PSA Thermal Model-Thermally Equivalent, Non functional Electrically MIT/IL	1	16289 . 15444
(b)	PSA Vibration Model - Mechanically Equivalent, Non functional Electrically MIT/IL	1	15888, 15442, 15884
(c)	PSA Dummy for Para. 5.1.1.a	1	16730
(d)	PSA Prototype for Para. 5.1.1.b.	1	16743
(e)	ACC Filter & Multivibrator } 800 Cycle 1 Percent Amplifier } For Para. 1 G&N Subsystem Supply Filter } 5.1.1.c Heading & Mating Connectors }	1	18693
(f)	PSA Mass Representative	1	19530
(g)	PSA Cover for Retrofit-GAEC	1	19383

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1.7.1	Harness-Radar Integratio Para. 5.1.1.c	1	18708
5.1.7.2 (a)	G&N Interconnect Harness LM - Prototype for 5.1.1.b.	1	16743
(b)	G&N Interconnect Harness LM Non-deliverable	1	N/A
(c)	G&N Interconnect Harness LM Non-functional for 5.1.1.a	1	18656
5.1.7.3	G&N Harness Adapter Cable Group	1	17291
5.1.7.4	G&N Interconnect Harness LM Mass Representative	1	19530
5.1.8	Breadboard Modification Kit		
	Component Mounting Plate-LM G&N Connector Covers	3 1	N/A Retrofit accomplished by Engr.
5.1.9	Prototype Units will be subjected to G&N Testing	2	N/A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1.10.1	Signal Conditioner Assembly- Dummy Weight & Gravity Unit for GAEC	1	19530
5.1.10.2	Signal Conditioner Assembly- Dummy Weight, Center of Gravity & Moment of Inertia	2	19380, 19509
5.1.10.3	Signal Conditioner Assembly Preproduction	4	18753, 19504, 19734, 20452
5.1.10.4	Signal Conditioner Ass'y. Preproduction Installation Kit	4	18753, 19504 19734, 20452
5.2	<u>BREARDBOARDS</u>		
5.2.1	Universal DSKY-MIT/IL, Raytheon CDU Modules-(5) Counter (5) Logic, 1 Clock Module	1 1	S-27 Provided by Ray. Engr.
5.2.2	(a) LGC Dummy with DSKY for Para.5.1.1.a (b) LGC with DSKY Mass Representative	1 1	S-25 S-68

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.2.3. (a)	LGC Prototype with Universal DSKY S/N 600 to MIT/IL	1	S-57
(b)	Universal DSKY Prototype for GAEC Simulation	4	WL-470
(c)	Universal DSKY Prototype for GAEC FMES Tests	1	WL-470
(d)	LGC with DSKY Prototype for Para. 5.1.1.b	1	S-41
5.2.4.1	Program Analyzer Console	5	LV-02421, WL-392, S-50, S-54, S-56
5.2.4.2	Retrofit PAC S/N 2 to Incorporate Blk. II AGC/PAC Compatability I	1	WL-2170
5.2.4.3	Retrofit PAC S/N 2 & 3 to Incorporate Blk II AGC/PAC Compatability II	2	WL-2170, S-84
5.2.4.4	Retrofit PAC S/N 1, 2, 3, 4, 5, to Incorporate Blk I 100 Series AGC/PAC Compatability Mod	5	LV-02421, WL-2170, S-84, LV-02431



<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.2.5 (a)	CDU Dummy Modules to Support Para. 5.1.1.a (5 channel)	1 set	16517
(b)	CDU Dummy Modules to Support Para. 5.1.1.b (3 channel)	1 set	16743
(c)	CDU Prototype Modules to Support Para. 5.1.1.c (2 channel)	1 set	18252
5.2.6	Fixed Memory Modules	100	N/A (See Exhibit "A")
5.3. (a)	Dummy AOT for Para. 5.1.1.a	1	K 127
(b)	Modified Prototype AOT for GAEC Simulators	2	K 137, 163
(c)	Prototype Conical Sunshade - Qualification	1	K 0512
5.4.1.1	IMU & PTA	18	17740, 18308, 18735, 18680, 19511, 20471, 20824, 21546, 21704, 22077, 27154, 27220, 27781, 27775, 27862, 28129, 28210, 28320

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.2	Nav. Base	18	17740, 18308, 18735, 18791, 19511, 20471, 20824, 21546, 21704, 27154, 27220, 27241, 27775, 27862, 28128, 28210, 28320, 27781
5.4.1.3	CDU	18	17740, 18308, 18735, 18680, 19511, 19710, 21149, 21546, 21704, 22070, 26780, 27154, 27178, 27775, 27862, 28128, 28210, 28320
5.4.1.4	PSA	18	17740, 18308, 18735, 18680, 19511, 20471, 20824, 21546, 21704, 27154, 27178, 27220, 27781, 27775, 27862, 28128, 28210, 28320
5.4.1.5	Perform 18 Inertial Subsystem Tests & 17 G&N System Acceptance Tests.	N/A	N/A

Statement of Work Para.

5.4.1.6.1

Equipment

DD 250

Qty.

LM Test Stations

(a)

Optical Inertial Test Sets

(1)	Coolant & Power Supplies	6	17280, 17817, 17871, 17893, 18380, 18828
(2)	Optics Inertial Analyzer	6	17280, 17817, 17871, 17893, 18380, 18828
(3)	Oscilloscope Console Assembly	6	17280, 17817, 17871, 17893, 18380, 18828
(4)	Basic Cable Set Interconnect	6	17280, 17817, 17871, 17893, 18380, 18828
(5)	LM Peculiar Cable Set Interconnect	6	16621, 17032, 17863, 18333, 18355, 18361
(6)	Test Point Adapter	6	17829, 17861, 17889, 18357, 18391, 18331
(7)	Ground Distribution Box	6	17280, 17817, 17871, 17893, 18380, 18828
(8)	PTA/PEA Test Point Adapter	6	16624, 17009, 17027, 17035, 17306, 17823

Statement of Work Para.

	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.6.1 (b)	Rotary Table	6	17806, 17841, 17888, 18360, 18393, 18328
(c)	IMU Mounting Fixture	8	16612, 16613, 17801, 17857, 17890, 17272, 18398, 18332
(d)	Subsystem Mounting Fixture	6	16622, 17036, 17800, 17844, 18392, 18335
(e)	Rotary Table Calibration Kit	2	16557, 18842
(f)	Fill & Purge	1	17017
(g)	Degausser	1	17803
(h)	Portable Temperature Controller	5	17868, 18327, 18879, 18897, 19482
(i)	Lifting Temperature Control	4	18340, 18784, 18834, 19480
(j)	LM Peculiar Adapter Cable Assembly	4	19500, 19843, 1869, 19891
(k)	Connector Covers	22 sets	18813, 18857, 18895, 19444

Exhibit B

Page 11

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.6.1 (l)	Resolver & Circuit Testers	7	19413, 18797, 18780, 18382, 18377, 17821, 17802
(m)	IMU Pressure Seal Tester	1	18786
(n)	PSA/CDU/PEA Handling Fixture	13	19469, 19862, 19472, 19460, 19831
(o)	Component Mounting Plate Ass'y. LM	13	16626, 17010, 17033, 17842, 17864, 18334, 18353, 18356, 18396, 18858, 18859, 19438 19470
(p)	PSA Adapter Module	7	19432, 19457, 19495, 19851, 20482, 20194, 20871
(q)	PSA Coldplate(LM) for G&N Vibration Fixture	1	18379
5.4.1.6.2.1. (a)	Cable Sets LM Peculiar	7 sets	17884, 17892, 18395, 18776, 18873, 19475, 19807
(b)	Cable Installation	3	19483, 19484

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.6.2.2 (a)	Rotary Table Retrofit Kit	11	16609, 16616
(b)	Retrofit PSA Adapter Modules S/N 1 to 7 (Wiring Mod)	7	22083, 22084
(c)	Retrofit SCM/PSAAM Calibration & Test Console S/N 1 - 4 (Jumper Wire)	4	21721, 22045, 22046, 22047
(d)	Retrofit CDU Handling Fixtures (Protective Mod)	13	20454, 20478, 21125
(e)	Retrofit PSA Adapter Modules S/N 1 - 7 (Diodes)	7	22059, 22060
(f)	Portable Temperature Controllers Lifting Temperature Controllers (Variable Resistor)	5 4	26777 26775, 26776, 26777
(g)	Retrofit Interconnect Cable Set (Wire Change)	13	27235, 27236, 27237, 27238, 27239, 27240
(h)	Retrofit Electrical Connector Covers (Spacer)	22 sets	27693, 27780, 27808, 27881
5.4.1.6.3	Apollo GSE Test Stations (Ref. Only)	N/A	N/A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD250</u>
5.4.1.7.1	LM G&N Interconnect Harness	18	17740, 18308, 18735, 18694, 19511, 20471, 20824, 21546, 21719, 27178, 27220, 27241, 27781, 27775, 27862, 28128, 28153, 28320
2	Replace LM G&N Interconnect Harness (G&N 603 - Lacing Tape etc)	1	21151
3	Replace LM G&N Interconnect Harness (Uplink etc-G&N 602)	1	21228
4	Replace LM G&N Interconnect Harness (Uplink etc, G&N 605, 606, 607, spare)	4	27154, 22020, 22037, 26743
5	LM A Harness Scrap for Flammability	1	21612
5.4.1.8	Computer Control & Reticle Dimmer	18	17740, 18308, 18735, 18694, 19511, 20471, 20824, 21546, 21718, 27178, 27220, 27241, 27781, 27775, 27862, 28128, 28320, 28153
5.4.1.9.1	Signal Conditioner Ass'y.	16	20892, 21142, 21178, 27178, 27220, 27241, 27781, 27775, 28128, 28320, 28153, 20480, 20807, 20809, 21104, 27862

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.9.2	Signal Conditioner Ass'y. Installation Kits	16	20895, 21146, 21198, 27178, 27220, 27241, 27781, 27775, 27862, 28128, 28320, 28153, 20489, 20817, 20818, 21107
5.4.1.10.1	Rework G&N Harness A (Add Wires)	N/A	Done by Field Mod - No kit
2	Retrofit G&N 603 & 604 (Painting)	2	19709, 19540, 19541, 19539, 19398
3	Retrofit G&N 602 (Thermal Sensor Harness)	1	18737, 18732, WL-1906
4	Retrofit PTA(G&N 602 thru 606- Pulse Torque Power Supply)	5	19730, 19749, 19776, 20458, 20471
5	Retrofit IMU(G&N 603, 604 & One Dummy - Welding Cable Clamp)	3	18755, 19541, 19737,
6	Retrofit Nav. Base (G&N 601 thru 605 - Grounding Strap)	5	19743, 20152, 20154
7	Retrofit Pulse Torque Power Supply- Mechanical Adapter (at GAEC)	1	Provided by Engr.



<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.10.			
8	Retrofit G&N 601 thru 606 (Mounting Bolts)	6	20152, 20154
9	Retrofit Gimbal-Servo Amplifier Modules in PSA (G&N 602, 603, 604 605) Replace Diodes	4	19751, 19756, 19779, 20481
10	Retrofit G&N 603, 604, 605 (Capacitor PIP Preamp) Retrofit G&N 606 (Nameplate)	3	20816, 21188, 21114
11	Retrofit G&N 603 thru 606 (Steel Damper Plate)	1	21716
12	Retrofit G&N 602, 603, 605, & 606 (Resistor -CDU)	4	20195, 21187, 22002, 22003
13	Modify LM PSA & SCA Header (Flammability Model)	4	21122, 21143, 22003, 21723
14	Retrofit CCRD G&N 603, 605, 606, 607 (Resistor)	1	Provided by Engr.
15	Retrofit CCRD (G&N 602, 605 thru 609 AI Overlay etc)	4	27157, 27178, 27763, 28343
	Retrofit CCRD (G&N 605 thru 611 - Epoxy Engraving etc)	6	27763, 21637, 21735, 22037, 27157, 26762
		7	27190, 27178, 27203, 27244 27250, 27541

Statement of Work Para.

Equipment

Qty.

DD 250

5.4.1.10.

16	Retrofit IMU (G&N 602, 603, 605, 606, 607 & 609-Remove Case Insulation)	6	21619, 21634, 21696, 21710, 21737 - 1 kit included in Para. 5.4.1.9.14
17	Retrofit IMU(G&N 602, 605 thru 609 Wiring Change)	6	22037, 22050, 22071, 22072, 22079, 26780
18	Pre CARR for retrofit of LM 4, LM 2, LM3, LM5, LM6	N/A	N/A
19	Retrofit ECDCU (G&N 603, 605 thru 609-Resistor etc)	6	21718, 22002, 22003, 22040, 27220, 27241
20	Retrofit CDU's } Retrofit PSA's } RTV 109 Retrofit PTA's }	4 4 9	N/A Part of Flammability Retrofit Kits
21	Retrofit Signal Conditioner (G&N 602, 603, 605 thru 609 AI Tape)	7	21739, 22018, 22037, 26780, 27154, 27249, 27250
22	Retrofit PSA (G&N 602, 603, 605 thru 609-AI Tape)	7	27249, 21735, 22014, 22037, 22088, 26749, 26780
23	Retrofit G&N 603, 605, 606, 607, 609 -Redesigned Apollic End Cap	5	21696 21710

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.4.1.10.			
24	Retrofit IMU(G&N 602, 603, 605 thru 610 - IRIG's)	8	22050, 22071, 22072, 22079, 26780, 26806, 27151, 27152
25	Retrofit IMU/(G&N 603 - C-7 Cement)	1	27451
26	Retrofit IMU(G&N 605 thru 609 - IRIG's)	5	26780, 26806, 27151, 27152, 27178
27	Retrofit CCRD (G&N 605-Mount AOT Guard)	1	26773
28	Retrofit ECDU (G&N 602 - Flammability)	1	21723
29	Retrofit PSA Reverse Power (G&N 605 thru 618)	14	28098, 28103, 28131, 28159, 28160, 28190, 28220, 28234, 28257, 28278, 28332, 28353, 28482, 28492
30	Retrofit CDU Mounting Bolts 607, 609-618	11	28495, 28525, 28545 28536, 28546

Statement of Work Para.

Equipment

Qty.

DD 250

5.5.1

AGC LM

23

18269, 18308, 18735, 19515,  
20471, 21546, 21704, 21733,  
22037, 26748, 26780, 27154,  
27178, 27241, 27781, 27775,  
27862, 28540, WL1960,  
WL2149, 28637, 28628

DSKY

25

17740, 18308, 18735, 19516,  
21546, 21704, 21733, 22037,  
26780, 27154, 27178, 27220,  
27241, 27781, 27775, 27862,  
28128, WL1829, WL2011,  
LV 2438, 28627, 28638,  
28549, 28153, WL1951

5.5.2.1

AGC Test Set

3

WL-735, WL-846, WL-880

(a)

AGC Simulator Drawers

6

WL-286, WL-316, WL-358,  
WL-385, WL-430, WL-482

(c)

AGC/GSE Interconnect Kit, G&N Test

3

WL-735, WL-846, WL-880

(d)

AGC/GSE Interconnect Kit, Subsystem  
Test

4

WL-618, WL-691, WL-735,  
WL-850

Statement of Work Para.

Equipment

Qty.

DD 250

5.5.2.1

(e)	AGC DSKY Shipping Containers	10	WL-498, WL-541, WL-553, WL-686, WL-1204, S-58, S-74, WL-1030, WL-1370
(f)	AGC DSKY Handling Fixture	22	LVB 2665, WL-498, WL-591, LV-02409, S-58, WL-553, WL-686, LV-02401, WL-819, WL-843, WL-686, WL-843, WL-1030, WL-1104, WL-1370, WL-1269, WL-1751
(g)	AGC Handling Fixture	16	WL-541, WL-686, WL-819, WL-843, WL-1104, WL-1937, WL-1030, S-58, S-74, WL-1269, WL-1370, WL-1874, WL-1676, WL-1626, WL-1805, WL-2255
(h)	AGC Calibration Console	3	WL-491, WL-661, WL-1132
(i)	AGC Operations Console	4	WL-614, WL-689, WL-723, , WL-811

Statement of Work Para.

Equipment

Qty.

DD 250

5.5.2.1

(i)

AGC Calibration Console Auxiliary

9

WL-476, WL-489, WL-493,  
WL-518, WL-608, WL-617  
WL-823, WL-861

(k)

Connector Covers A/B System

24 sets

WL-541, WL-686, WL-819,  
WL-843, WL-1104, WL1030,  
S-58 WL-1370, LV-2565,  
LV-2546, LV-2507, LV2495  
LV-2483, LV-2477, LV-2463  
LVB-2642, LVB-2642,  
LVB-2644, LVB-2704,  
LV-2616, LV-2603,  
LVB 2753, LVB-2702  
LVB-2646

5.5.2.2

Modifications (Grounding)

N/A

N/A

Exhibit B

Page 21

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.3	CDU Digital Modules (11 Modules per Set)	18 sets	See Paragraph 5.4.1.3

5.5.4

Fixed Memory Modules

See Exhibit A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.5.5.1	Retrofit Simulation Computers (Comparability)	2	S 61, S 62
5.5.5.2	Retrofit AGC (Comparability)	1	S60
5.5.5.3	Retrofit AGC (G&N 605 - Longer Screws)	1	WL-1684
5.5.5.4	Retrofit Rope Driver Module (G&N 605 - Resistor)	1	WL-1684
5.5.5.5	Retrofit Simulation Computers (Resistors)	1	Incorporated by Raytheon Engr.
5.5.5.6	Update Simulation DSKY's (Incandescent Panel)	4	WL-2190, WL-2204 WL-2220,
5.5.5.7	Retrofit G&N 605, 606, 607 (Longer Bolts)	3	LV-02375 One Kit Furnished by Engr.
5.5.5.8	DSKY Face for Flammability Model	1	LV-02365
5.5.5.9	LGC Installation Kits	18	LVB 2650, LVB 2651, LVB 2652



Statement of Work Para.

DD 250

Qty.

Equipment

5.5.5.10	1	Retrofit AS206 Fixed Memory Module (B-3 Module)	LV-02538
5.5.5.11	19	Retrofit new 14 legend indicators	LVB 3210, LVB3157, LVB3151, LVB 3156, LVB 3155 LVB 3154, LVB 3153, LVB 3086, LVB 3085 LVB 3084, LVB 3083, LVB 3082, LVB 3081 LVB 3075, LVB 3074 LVB 3073
5.5.5.12	11	LM Computer Mfg. Bolts	LVB 2986, 3106
5.5.6	N/A	Test Modules from C2,4 and 6	N/A
5.5.7	2	Provide 2 Functional less than Class A AGC Using Assets from C2,4 and 6	LVB 3152 LVB 3048
5.6.1	18	LM Alignment Optical Telescope (601 thru 622)	K226, K264, K285, K330, K346, K357, K369, K383, K398, K401, K403, K426, K0046, K504, K507, K525 K538, K570

Statement of Work Para.

	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.6.2.1.			
(a)	Optics Cleaner	2	K173, K329
(b)	AOT Tester (One with 2 Accessory Theodolites)	2	K265, K358
(c)	AOT Shipping Containers	8	K208, K226, K264, K357, K369, K391
(d)	LENS Cover AOT	18	DD 250'd as part of 5.6.1
(e)	Connector Covers	18	DD 250'd as part of 5.6.1
(f)	Theodolite & Stand	1	K248
(g)	AOT Protective Dust Covers	22	K0434, K0435, K502
(h)	AOT Prism Protective Cover Assemblies	2	K0542, K570
(i)	Conical Sunshade Protective Covers	14	K686 K687. K688 K600
(j)	Sunshade Centering Fixtures	3	K556, K557 (1) In-house tooling at KIC
5.6.2.2.			
(a)	Retrofit AOT Testers (AOT Counter)	2	K520
(b)	Retrofit AOT Cleaning Kits (Add Valve)	2	K438, K441
(c)	Retrofit Shipping Container (AOT)	1	K330

Statement of Work Para.

<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
Retrofit AOT S/N 602 (Urethane Type LM Etc.)	1	K 303
Fluorasilicon Rubber AOT Seals	6	K 294
Retrofit G&N 605 thru 608 (Light Scatter Shield)	4	K 402
AOT Reticle	1	K 405
AOT Sun Filters	15	K 590, K0044, K0043, K 500, K 505, K 431 K 503, K 506, K 511 K 528 K 776
Retrofit G&N 604, 606 thru 611 (Red Lamps, Knob, Plug Insert etc)	7	K 510, K 518, K 527, K 509, K 513, K 508, K 427
Seal	1	Engr. Unit - Not DD 250'd
AOT Pressure Seal Guards (G&N 602, 605, 608 & LM 6 Flammability Models)	4	K 417, K 419, K 418, K420

5.6.3.1

5.6.3.2

5.6.3.3

5.6.3.4

5.6.3.5

5.6.3.6

5.6.3.7

Statement of Work Para.

<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
Retrofit G&N 605, 606, 607 609 thru 617 (Conical Sunshade)	12	K 587, K 606, K 541, K537, K591, K533, K558, K559, K577, K604, K617, K608 K572 K573 K 542
Retrofit AOT (Flammability Protection)	8	K510, K518, K527, K505, K 513, K 508, K 449, K303
Retrofit AOT's (S/N 4 & 5) Cam Lock, AOT Long Eye Relief, Radar Shield (less than Class A)	2	K 529, K 548
AOT Farness Shield 606-618	13	K 551, K 550(3), K 567 K 568

Contract NAS9-497 Statement of Work  
Exhibit C

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1	<u>BREADBOARDS</u>		
5.1.1	<u>IMU Breadboards</u>		
(a)	Learning Model IMU Gimbal Simulators	1 3	15637 05035, 05106
(b)	Build up & Align of PIP's (G&N 4&5)	6	12833, 12924, 12882, 13257, 13233, 13226
5.1.2	<u>Navigation Base Breadboards</u>		
(a)	Evaluation Model (Nondeliverable)	1	N/A
(b)	Nav. Base Units(Class B) Sys. 2 & 4	2	06413, 03700, 05662, 07610 06639, 09773, 08479, 09774
(c)	Sets of Nav Base Shock Mounts for Use on G&N 7 at NR	2	13404
5.1.3	<u>CDU Breadboards</u>		
(a)	CDU Learning Models	5	15637
(b)	CDU BB Units Mech. & Elec. Opera- tive (Nondeliverable)	6	N/A
(c)	CDU (Class B or Less)	14	05960, 06591, 06638, 06694, 06991, 07508, 07553, 07737, 07857
	CDU - (Class A)	1	07873

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1.3	CDU Breadboards		
(d)	CDU Frame G&N 4)	1	07551
(e)	CDU Spur Gears	4	05895
	CDU Fly Wheels	4	05895
(f)	Simulation Equipment (Less than Class A) Consisting of: CDU Assemblies Frame Front Panel Ass'y.	3 1 1	09656 09813 09656
(g)	CDU Equipment (Less than Class A)		
	(1) CDU Assembly	5	09034, 08485
	(2) CDU Frame Assembly	1	08485
	(3) CDU Front Panel Assembly	1	08485
	(4) CDU Motor Drive Amplifier	5	09679, 09710, 09515, 08485
(h)	Modify . Block I CDU BB Set to Block I-100 Series Conf. (Nondeliverable)	1	N/A
(i)	CDU Frame Assembly	1	10322
	CDU Panel Assembly	1	10322

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1.1.4	<u>PSA Breadboards</u>		
(a)	PSA BB for Circuit Optimization Studies (Non-deliverable)	1	N/A
(b)	PSA Thermally Simulated Trays Thermal Testing (G&N 1) Vib Testing (with mech. sim. modules)	2 2	06393 03624
(c)	PSA Nonfunctional for Sys. 5A PSA Mockup of New PSA Modules & Aux. Header to Update Sys. 5A to Series 100 Conf. (To be used as mechanical interface gauge)	1	05894, 05493
(d)	PSA Learning Model	1	14766
(e)	Set of Optical Electronics (Less than Class A)	1	15637
(f)	Set of Wiring Harnesses for Block I PSA Trays 1-10 G&N 5 to Class A Doc.	2	07807, 07944
(g)	Set of Horizon Photometer & Star Tracker Electronics Modules & Header (Class A)	1	07867
		1	17131

Statement of Work Para.

Equipment

Qty.

DD 250

5.1.4 (Continued)

- (h) Signal Conditioner Assembly  
Learner Model (Non-deliverable)  
Mechanical Gauge
- (i) Thermocouple Harness for G&N 20  
(Less than Class A)
- (j) Signa' Conditioner BB for G&N 121  
(Less than Class A)

5.1.5

Display & Control Breadboards

- (a) D&C Equipment for G&N Systems  
1, 2, & 4 (Less than Class A)
- D&C Equipment for G&N 5a  
(May be reject parts or wood)
- G&N Harness for G&N 4 & 5a  
(Wires, sleeving precut to length  
& marked) (G&N 5a Harness shall  
be nonfunctional)



<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1.5 (Continued)			
(b)	Breadboard D&C (Nondeliverable) Breadboard D&C (For Delivery to MIT/IL)	1 1	N/A 06881, 06590, 06588, 05826, 06683
(c)	D&C Learning Model	1	15637
(d)	(1) Optical Hand Controllers (2) Mode Switches, BB Mounted	4 4	06637, 06746, 05988 05398, 05725
(e)	Simulation Equipment for Test Facility at NR	1	09856, 08343, 09961, 10310, 11496, 10402, 10414, 09975, 09701, 09721, 09781, 09796, 09915
(f)	G&N Harness & End Connector Assembly Block I-100 Series (Testing & Evaluating at AC)	1	11496
(g)	Breadboard units to be used for Eng. testing at AC for Humidity & Vib.	4	N/A
5.1.6	<u>System Assembly &amp; Test of Simulation Equipment</u>	1	11519
5.1.7	<u>Ground Support Equipment Breadboards</u>		

Statement of Work Para.

5.1.7.1

EquipmentQty. DD 250

Optics Inertial Test Set Consisting of the following:			
1. AGE Coolant & Power Console			
2. Optic Inertial Analyzer			
3. Oscilloscope Console Assembly			
4. Cable Interconnect			
5. GSE Junction Box Assembly			
6. PSA Tray Extender Assembly			
7. PSA Test Point Adapter Assembly			
8. Cables, Interconnect, G&N			
Breadboards No. 1 & 2 (OITS)	Partial	06471, 09046, 09711, 13156, 08457	
Breadboards No. 3 (OITS)	1	07519, 09169, 07648, 07937	
G&N Mounting Fixtures No. 2 & 3	2	09046, 08344	
IMU Mounting Fixtures No. 1, 2, & 3	3	06471, 09046, 07637	
Optics/NB Mounting Fixtures No. 2 & 3	2	09046, 07938	
PSA Mounting Fixtures No. 2 & 3	2	09046, 10830	
Portable Remote Optic Controller No. 2 & 3	2	09046, 07554	
GSE/PSA Junction Box No. 2 & 3	2	08456, 07649	
Tool Alignment IMU Mounting Fixtures No. 1, 2, & 3	3	06471, 09046, 07637	

Statement of Work Para.

Equipment

Qty.

DD 250

5.1.7.1 (Continued)

Alignment Bar, Horizontal Reference, Nondeliverable 1 , N/A  
 G&N Connector Covers for BB GSE 1 set supplied by Engineering

5.1.7.2

Associated Test Equipment  
 Pressure Seal Tester 1 Non-deliverable  
 Purge & Fill 1  
 Load & Signal Simulator Set 1  
 Degausser 1

5.1.7.3

Ground Operating Equipment  
 IMU Shipping Container 1 08345  
 G&N Transport Cart 1 08932  
 Inertial Component Temp. Cont. 1 08260  
 Consisting of:  
 1. Portable Temp. Controller Ass'y.  
 2. Battery Power Pack & Inverter Ass'y.  
 Transfer Switch 2 09720  
 (2 Deliverable, 1 Nondeliverable)

Statement of Work Para.Equipment

DD 250

Qty.

## 5.2

BLOCK I HARDWARE  
(G&N Systems 5, 6, 7, 8, & 20  
are included in the R&D Block  
of Hardware)

## 5.2.1

Inertial Measurement Unit Systems  
6, 7, 8, & 20  
(G&N 6 shall be less than Class A)

11475, 13998, 13266, 14826,  
12969, 13268

Gimbal Mounted Electronics  
G&N 5 & 6

Part 5.2.1 above

## 5.2.2

Navigation Base G&N 5, 6, 7, 8, & 20

06993, 13266, 11475, 14826,  
12 69, 13268

## 5.2.3

CDU G&N 5, 6, 7, 8, & 20

07545, 07736, 07612, 11475,  
14826, 12969, 13268

CDU Frame Assembly

07635, 11475 14826,  
12969, 13266

CDU Front Panel Assembly

07635, 11475, 14826, 12969,  
13266

## 5.2.4

PSA

(a)

PSA for Systems 6, 7, 8, & 20  
(PSA for G&N 6 shall be less  
than Class A)

13998, 13260, 11475 14826,  
12969, 13266

Statement of Work Para.

5.2.4 (Continued)

- (b) 1) Gyro Calibration Module (Spare)  
(For Blk I & Learner System)
- 2) PIPA Calibration Module (Spare)  
(For Blk. I & Learner System)

- (c) Signal Conditioner Assembly  
G&N 6, 7, 8, & 20

5.2.5

- (a) D&C Group G&N 5, 6, 7, 8, 20  
(G&N 5 & 6 May be less than Class A)  
(The D&C for G&N 5 will not include the FSA End Connector)
- (b) D&C Electronics for G&N 6 to Class A Requirements
- (c) Modification of G&N Harness S/N ACSK 7 for Installation in G&N 8

DD 250

Qty.

Equipment

12396, 13449, 15863, 15865,  
15864, 15866, 18667, 16273,  
15867, 18666  
13450, 13237, 13236, 15380,  
17122, 17121, 15216, 13290,  
18719, 19514

16543, 15935, 15606, 16536  
16323

06990, 07616, 09677, 07994,  
07552, 11475, 13260, 14826,  
12969, 13266

Part of 5.2.5.(a) above

16720

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.2.6	<u>System Test</u>		
5.2.6.1	Assembly & Test of G&N Systems 6, 7, 8, & 20	4	11475, 14826, 12969, 13266
5.2.6.2	Update to Convert Block I Systems & GSE to Block I-100 (See Paragraph 5.3)		N/A
5.2.6.3	G&N 20 Provided with Thermal Instrumentation in IMU, CDU & PSA		13266
5.2.6.3.1	G&N 20 Retrofit to incorporate teflon wire harness in Condition Annunciator Ass'y. moisture proofing modification & rework to reseal PSA modules		14555, 15890, 15889, 15435, 15636, 15635, 15438, 15886
5.2.7	<u>Ground Support Equipment</u>		
5.2.7.1	Optics Inertial Test Set	12	08172, 08166, 09770, 08549, 09540, 10279, 07826, 07862, 10278, 09068, 10280, 09913, 09522, 09521, 09736, 09965, 09966, 10390, 10410, 10852, 10876, 10825, 10851, 10877, 11666, 12971, 11303, 11364, 11593, 11693, 13051, 13092, 12776, 13330, 13788, 12360

Statement of Work Para.

## 5.2.7.1 (Continued)

EquipmentDD 250Qty.

Rotary Table	11	10281, 10331, 10332, 11581, 10994, 09851, 09058, 09059, 09528, 07611, 07968
IMU Mounting Fixture	10	09948, 09970, 09971, 10339, 07862, 8453, 09060, 09248, 09246, 08813
G&N Mounting Fixture	8	09693, 09974, 10277, 10276, 09570, 11339, 10875, 10874
Optics/Nav. Base Mounting Fixture	7	09691, 09863, 08368, 09033, 09513, 12337, 11535
GSE/PSA Junction Box Assembly	10	09722, 09764, 09951, 10282, 09249, 08451, 09541, 11716, 11304, 09032
PSA Mounting Fixture	10	09782, 9981, 10829, 10832, 10831, 09233, 13238, 12897, 13264, 13755
Remote Optics Controller	7	09862, C9979, 08312, 08365 09213, 09250, 11306

Statement of Work Para.

5.2.7.1 (Continued)

<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
Hose, Coolant Interconnect	112	11468, 08315, 11467, 09028, 11469, 08366, 11466, 09067, 11465, 09247, 11464, 09244, 11463, 10267, 11462, 10268, 11305, 10957, 12359, 15615, 11666
Blank Panel Assembly	2	10352, 10355
<u>Associated Test Equipment:</u>		
Purge & Filling Equipment	5	09799, 09882, 09959, 10282, 10418
IMU Seal Tester	5	09734, 09735, 09819, 09533, 09531
Simulator Set, Load & Signal	5	09849, 09912, 10284, 10850, 10991
Degausser Assembly	5	07853, 07851, 08313, 09063, 09062
IMU Mounting Fixture Alignment Set	6	08311, 08449, 08450, 09539, 09532, 09171

5.2.7.2



Statement of Work Para.EquipmentQty.DD 250

5.2.7.2 (Continued)

Rotary Table Calibration Kit

5

09860, 09950, 10299, 09949,  
09188, 09520, 09714, 09823,  
09841, 09085, 09715, 09519,  
09240, 09084, 09040, 09822

5.2.7.3

Ground Operating Equipment

IMU Shipping Container

13

09501, 09502, 09503, 09504,  
09505, 09506, 09507, 09508,  
09172, 09173, 09066, 09065,  
09064

G&amp;N Transportation Cart

9

09776, 10266, 9984, 10400,  
10401, 10416, 10824, 09772,  
09573Snap-on Bellows  
(To Class B Documentation)

15

09740, 09741, 09742, 09743,  
09744, 09745, 09746, 09747,  
09536, 09535, 09534Nav. Base/Optics Assembly  
Handling & Installation Fixture

13

09748, 09577, 09576, 09575,  
10404, 10403, 09985, 09983,  
09944, 09945, 09943, 09942Inertial Component Temperature  
Controller

9

10286, 10298, 12844, 12339,  
08314, 09061, 12794, 14556,  
08337

Statement of Work Para.EquipmentQty.DD 250

## 5.2.7.3 (Continued)

Auxiliary Battery Power Pack  
(6-Hour Capacity)

2

12768, 11686

G&amp;N Harness Handling Fixture

14

13487, 14660, 14551, 13378,  
15807, 13239, 13091

Adaptor Cables

9

09727, 09728, 09729, 09730,  
09732, 09733, 09737, 09530

ICTC Adaptor

3

18783, 18846, 18878

(To mate with NR -Supplied P-2 Cables)

## 5.2.7.4

Grouted Surface Plates (Sets)  
(For Installation on Optics Pier)

3

08189, 07980

## 5.2.7.5

GSE Modification Kits

1. Kits to retrofit phase sensitive  
demodulator in Block I  
Oscilligraph Console assemblies

12

14010

2. Kits to retrofit Block I  
GSE to incorporate IRIG caging  
capabilities.

12

14668, 1333, 13082, 13116,  
12978, 12777, 12395, 12326,  
11694, 11477, 11302

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.2.8.1 (a)	AGC	5	S-1, WL-36, WL-31, WL-47, WL-110
(b)	Main: DSKY	5	WL-19, WL-36, WL-31, WL-47, WL-110
(c)	Nav. DSKY	5	S-1, WL-36, WL-31, WL-47, WL-110
(d)	Retrofit AGC (Add Sleeving)	4	S-3, 3 Kits (In-line Rework)
(e)	Retrofit AGC (Replace Strand Gate Modules)	4	WL-452, 3 Kits (In-line Rework)
(f)	Retrofit AGC-6 (Compatibility with PAC)	1	S-3
(g)	Retrofit DSKY (Improved Key Release)	3	In-Line Rework
(h)	DSKY Mod Kit (Improve life of EL's)	12	S-3, 10 Kits (In-Line Rework & BB)

Statement of Work Para.

Qty.

DD 250

Equipment

5.2.8.2	(a)	Core Rope Modules	60	70223-254, 70223-309, 70223-311, 70223-316,
	(b)	Core Rope Modules (AGC-4B)	12	70223-253, 71677-169, 71677-164, 70223-281,
	(c)	Core Rope Module (Simulator Computers)	18	71677-111, 70223-286, WL-4, WL-38, WL-74, WL-35, WL-45, WL-56, WL-122, WL-49, WL-48, WL-78, WL-86, WL-117, WL-135, WL-100, 71677- 3075
5.2.8.3.	a	AGC Test Set	6	70223-288, 70223-291, WL-14, WL-34, WL-53, WL-16
	b	AGC/GSE Interconnection Kit - G&N Test	6	70223-288, 70223-291, WL-14, WL-34, WL-53, WL-16.
	c	AGC Operation Console	6	70223-282, WL-9, WL-15, WL-23, WL-40, WL-132
	d.	AGC/GSE Interconnection Kit- Subsystem Test	6	70223-282, WL-9, WL-15, WL-23, WL-40, WL-132

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.2.8.3 (Continued) e	AGC Shipping Container	13	WL-31, S-1, WL-36, WL1204 WL-110, WL-47, WL-161, WL-97, WL-299, WL-115, WL-896, WL-221, WL-322,
f	Main DSKY Shipping Container	13	WL-161, S-3, WL-36, WL-115, S-7, WL-31, WL-97, S-5, WL-221, WL-110, WL-47, WL-299, WL-322
g	Nav. DSKY Shipping Container	13	WL-36, WL-221, S-1, WL-115, WL-47, WL-31, WL-97, WL-161, WL-103, S-5, S-7, WL-299, WL-322
h	AGC Handling Fixture	3	70223-260, -278, WL-36
i	Main DSKY Handling Fixture	13	WL-19, WL-110, WL-47, S-7, WL-36, WL-31, S-5, WL-79, WL-87, WL-115, WL-221, WL-188, WL-299
j	Nav. DSKY Handling Fixture	12	WL-47, S-1, WL-36, WL-31, S-7, S-5, WL-110, WL-79, WL-87, WL-115, WL-473, WL-221

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.2.8.3 (Continued)			
k	Simulation Computers	3	S-5, S-8, S-7
i	Core Rope Simulator	3	S-6, S-9, S-7
m	DSKY Pedestal Mount	8	WL-6, W-10, WL-11, WL-13, WL-28, WL-52, WL-59, WL-83
n	Computer Simulators	0	N/A
o	Calibration Console	0	N/A
p	Computer Simulator Retrofit (Power Failure Switch Circuitry)	9	WL-103, WL-104, WL-105, WL-145
q	Calibration Console Retrofit (Add Digital Ohmmeter)	6	WL-200, WL-206, WL-198, WL-199, WL-201, WL-284
r	CTS Retrofit (Relocate Logic Plates)	10	WL-192, WL-123, WL-119, WL-143, WL-318, WL-129, WL-124, WL-130, WL-69, (CTS S/N 3 by Ray. Engrg)
s	Digital Ohmmeter Retrofit (Correct Fit, etc.)	6	WL-1138, WL-1136, WL-1240, WL-486, WL-1331 (BB by Ray. Engr.)

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.1 9.1 a	OUA	5	K-1, K-16, K-48, K-32, K-22
b	MDV	5	K-21, K-24, K-51, K-45, K-29
c	MDV (G&N Simulator Program)	1	K-33
5.2.9.2. a	Variable Deviation Wedge	3	K-4, K-5
b	Azimuth Reference Fixture	5	K-35, K-40, K-101
c	G&N Installation Qualification Fixture	3	K-36, K-41
d	Alignment Certification Fixture	2	K-47
e	OUA/NB Shipping Container	8	K-22, K-37, K-165, K-48, K-53, K-78, K-145, K-153
f	MDV Shipping Container	4	K-8
g	G&N Installation Qualification Fixture & Certification Fixture	3	K-43, K-42
h	Shaft Accuracy Tester	2	K-12, K-26
i	Portable Light Assembly	2	K-3
j	Retroreflecting Prism	5	K-38, K-13, K-87, K-162
k	Retroreflecting Prism Certification Fixture	4	K-58, K-63, K-64, K-68

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3	BLOCK I-100 SERIES HARDWARE		
5.3.1	<u>IMU</u>		
5.3.1.1	Inertial Measurement Units	9	13810, 14571, 17287, 15103, 15463, 18318, 15790, 17725, 17726, 18305, 17139, 18748
5.3.1.2	Retrofit Kit to Replace 2 Resistors in Blower Circuit	9	17728, 17750, 17762, 18258, 18349, 18350, 18684, 1874
5.3.1.3	Retrofit G&N 121 to Replace 2 Saturable Reactors	1	Field Replacement No Kit Required
5.3.1.4	Retrofit G&N 122 to Replace the Precision Resolver Alignment Module	1	Field Replacement No Kit Required
5.3.1.5	Retrofit Kit for G&N 122 & 123 Replace Capacitor in PIP Preamplifier	2	20165, 20193
5.3.1.6	1. Retrofit of 3 PIP Preamplifiers with the Capacitor	3	21156
	Retrofit G&N 17 to Block I-100 Configuration by Incorporating Blower Circuit Resistors, & by Replacing the PIP Preamplifier	1	21183 & Kit from 5.3.1.2



<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.2	<u>Navigation Base</u>		
5.3.2.1	Nav. Base Assembly	9	13180, 14571, 17287, 15103, 18318, 15790, 17726, 18305, 18660
5.3.2.2	Retrofit Systems 12, 20, 109, 111, 121 thru 124 for Replacement of the 3 Cadmium Plated External Wrenching Bolt	8	17706, 17711, 17753, 18257, 18671, 18742, 19760
5.3.2.3	Retrofit G&N 12, 20, 109, 111, 121 thru 123 to incorporate a new nameplate as a result of the OUA Quick-Disconnect Modification	7	17712, 17747, 17900, 18257 18707
5.3.3	<u>CDU</u>		
5.3.3.1	CDU Sets Consisting of: 5 - CDU Units 1 - Frame 1 - Panel Assembly	9	13810, 14571, 17287, 17289, 16314, 15103, 18318, 15790, 17726, 18305, 17129, 17722, 17791
5.3.3.2	Replacement of CDU Frame & Panel Assembly for System 12, 110, 111, 121, 122, 123, 124 with new CDU Case & Panel Assembly	7	17713, 17703, 17755, 17898, 18313, 18714, 22055

Statement of Work Para.Equipment

DD 250

Qty.

5.3.3.3	Retrofit Seven CDU Case & Panel Assembly for G&N Systems 12, 110, 111, 121, 122, 123, 124 to Captivate the Mounting Screws & Enamel the Panel	7	No Kit, New Panels provided in in-plant modification. 123 & 124 in-line. All panels complete.
5.3.3.4	Retrofit CDU for Systems 12, 121, 122, 123 by reworking CDU Connector Brackets & Adding Shims During Reassembly	4	20461, 20488, 20497
5.3.3.5	Retrofit of CDU S/N 46 (Connector) for System 12 and Block I-100 Series	1	In-house Modification of Spare from -061 to -041. No Kit
5.3.4	<u>PSA</u>		
5.3.4.1	Power & Servo Assemblies Block I Series 100 Configuration	9	13810, 14571, 17287, 15630, 15103, 15428, 18318, 15970 17726, 18305, 17278
5.3.4.2	Horizon Photometer & Star Tracker Electronic Module & Header Sets for G&N System 121, 122, 123, 124, 109, 110, 111	7	17287, 15631, 18318, 15790, 18282, 18305, 17724
5.3.4.3	Signal Conditioner Assembly	5	16729, 18271, 18672, 18728, 18738
5.3.4.4	Modification of G&N 7 Tray Inserts to Accept a Block I-100 Series Computer	1	G&N 7 In-house System. Modification accomplished in-line by rework.

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.4.5	Retrofit of Tray 10 of PSA Units, to Add the Signal Conditioner Power Supply for Systems 6, 20, 17, 12	4	16547, 16737, 15437, 18348
5.3.4.6	Retrofit of PSA for Systems 12 & 17 to Incorporate Block I-1CJ Series 800 Hz 5% Amplifier	2	17730, 17702
5.3.4.7	Retrofit PSA for Systems 17, 12, 121 thru 124 to Incorporate New G&N Subsystem Filter Modules	6	17730, 17770, 17895, 18306, 18712, 17702
5.3.4.8	Retrofit PSA for Systems 12, 110, 121 thru 124 to remove the Temperature Monitor Output from Tray 7	6	17730, 17770, 17895, 18306, 18712, 17763
5.3.4.9	Retrofit PSA for Systems 12, 110, 121 thru 124 by Cleaning, Painting & Adding Moisture-proofing Gaskets and Grease as Required	6	17730, 17763, 17770, 17895, 18306, 18712
5.3.4.10	Retrofit PSA System 20 by Installing Conn. Face Gaskets & Silicone Grease to All PSA Trays.	1	17772, 18293

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.4.11	Retrofit PSA Systems 12, 17, 20, 109, 110, 111, 121, 122, 123, & 124 to add moisture-proofing Type Conn. Covers & Gaskets	10	18292, 18294, 18291, 18263 18296, 18297, 18298, 18299, 18300, 18316, 18345, 18346, 18678
5.3.4.12	Gyro Calibration Modules and PIPA Calibration Modules for Spares for Four Block I-100 Series Systems	4 4	19518, 19703, 18767, 18766 19353, 21623, 21707, 21711
5.3.4.13	Retrofit PSA System 121 & 122 to Replace the 2 Speed Switch Modules	2	Field Replacement No Kit Required.
5.3.4.14	Retrofit Signal Conditioner Assemblies for Systems 12, 121, 122, & 123 by adding Noise Suppression 564F Capacitor	4	19549, 19701, 19702, 19723
5.3.4.15	Retrofit PSA System 121 to Add Resolver Load Module with Filter Relays	1	20462
5.3.4.16	Retrofit PSA Systems 122 & 123 by Clipping Pins 1 & 9 from 2 SP Switch Assembly	2	21183, 21192

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.5	<u>D&amp;C</u>		
5.3.5.1	D&C Equipment for Block I-100 Series	7	17287, 15103, 14993, 18318, 19385, 16286, 15790, 17726, 18305, 17275, 17138, 17277, 17276, 17721, 19729
5.3.5.2	D&C Equipment for block I-50 Series	2	13810, 14571
5.3.5.3	Deleted (ESU Change)	-	
5.3.5.4	Retrofit D&C Systems 12 & 17 to Incorporate the Time Delay Assembly with Greater Delay	2	17701, 17708
5.3.5.5	Retrofit D&C System 12 for a New IMU-CDU Difference Meter	1	17710
5.3.5.6	Retrofit G&N Harness for Systems 109, 110, 121, 122, 123, 124 by Replacing per C/M Interface Control Dwg. Requirements	6	19384, 19755, 18725, 17769, 17754, 18697
5.3.5.7	Retrofit GNIC Panel for Systems 110, 111, 121, 122, 123, 124 by Replacing cam in Panel Brightness Potentiometer	6	17736, 17760, 17799, 18259, 18686, 18729

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.5.8	Retrofit D&C Electronics Ass'y. for Systems 17, 12, 110, 111, 121, 122, 123, 124 to Add New Relay & Diode Module	8	17236, 17768, 17796, 18261, 18695, 17709, 19355
5.3.5.9	Retrofit D&C Groups for Systems 12, 110, 111, 121, 122, 123, 124 to Replace Captive Screws on All Assemblies & Rework the Handles on GNIC Panel	7	17735, 17734, 17733, 17736, 17737, 17738, 17739, 17756, 17758, 17759, 17750, 17794, 17799, 17797, 17798, 18254, 18255, 18259, 18262, 18341, 18681, 18686, 18695, 18729, 18736, 19355
5.3.5.10	Retrofit G&N Harness & PSA End Connector Ass'y. for Systems 12, 111, 121, 122, 123, 124 by Installing Strengthening Hardware & Treating With ECCO Bond Material	6	17717, 17744, 17754, 17769, 18697, 18725
5.3.5.11	Retrofit GNIC Panel for System 12 to Install Handle Assemblies	1	17715
5.3.5.12	Retrofit GNIC Panel for System 12, 20, 110, 111, 121, 122, 123, 124 to Supply 28 VDC to ESU Assembly	8	17715, 17757, 17736, 17760, 17799, 18259, 18686, 18729

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.5.13	Retrofit GNIC Panel for Systems 12, 110, 111, 121, 122, 123, 124 by Replacing the cam Shaft Pin on the Attitude Impulse Switch	7	17714, 17736, 17760, 17799, 18259, 18686, 18729
5.3.5.14	Retrofit GNIC Panel for Block I-100 Series to Deactivate the Tracker Power & Track Switches	7	18683, 18706, 18707, 18709, 18729, 18294
5.3.5.15	Retrofit G&N Harness for Systems 121, 122, 123 by Rotating the 56P9/SCA Connector 180°	3	No Kit Rework 121, 122 per NR MRBR, 123 Reworked at AC During Repair
5.3.5.16	Retrofit GNIC Panel & IMU Control Panels on Systems 12 & 121 by Wrapping Switch Activator Housing with Teflon Tape	2	No. Kit. Installation Accomplished Per ECP-ACSK-444 R2.
5.3.5.17	Retrofit D&C Group for System 121 by Incorporating the New Relay & Diode Module with Filter Relays	1	19753

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.6	<u>SAT</u>		
5.3.6.1	Assembly & Test of Block I-100 Series System and Inertial Sub-System	7	13810, 14571, 17716, 17287, 18318, 15790, 17726, 18305 15103
5.3.6.2	Retrofit G&N Systems 12, 121, 122 Optics & Nav. Bases by Coating All Exposed Beryllium Surfaces	3	17899, 18745
5.3.6.3	Retrofit G&N Systems 122 & 123 to Incorporate a Shorter Flex Hose Assembly in NB & OUA Assembly	2	21190, 21211
5.3.6.4	Performance of Post Flight Analysis for C °N 122	-	N/A
5.3.6.5	Performance of Post Flight Analysis on G&N 123 OUA & N/B Assembly	-	N/A



Statement of Work Para.

Equipment

DD 250

Qty.

5.3.7

GSE

5.3.7.1

Production GSE

(a)

Optics Inertial Test Set

- 1. Coolant & Power Supply 3 15102, 15006, 15614
- 2. Optic Inertial Analyzer 3 15102, 15006, 15614
- 3. Oscillograph Console Ass'y. 3 15102, 15006, 15614
- 4. GSE Junction Box 3 15102, 15006, 15614
- 5. Sets Cable Interconnects 3 15102, 15006, 15614
- 6. Set Cable Interconnects 3 Part of 5.3.7.(a).5 above
- 7. PSA Tray Extenders 3 15102, 15006, 15614
- 8. PSA Test Point Adaptor 3 15102, 15006, 15614

(b)

Rotary Tables

4 14566, 15056, 15191, 15829

(c)

IMU Mounting Fixture

4 15028, 15123, 15616, 15834

(d)

PSA Mounting Fixture

4 14773, 15052, 15202, 15203

(e)

Hose Coolant Interconnect

28 18363, 14771, 15055

(f)

G&N Mounting Fixture

1 18888

(g)

Optics Nav Base Mtg. Fixture

1 15121

(h)

Set per Airborne Sys. Connector Covers

7 18840, 19C15

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.7.1 (Continued)			
(i)	Rotary Table Calibration Kit	1	15818
(j)	Fill & Purge	1	14561
(k)	Degausser	1	15201
(l)	Load & Signal Simulator	1	15891
(m)	IMU Mtg. Fixture Alignment Set	1	15058
(n)	G&N Transportation Cart	2	15601, 15602
(o)	Inertial Comp. Temp. Controller	4	15860, 15892, 16401
(p)	Series 100 Peculiar Adaptor Cables	2	19825, 19826
(q)	SCM/PSAAM Cal. & Test Console	4	19448, 19481, 19836, 19889
(r)	Block I-50 Series PSA Adaptor Modules	2	16639, 17836
(s)	Block I-100 Series PSA Adaptor Modules	4	17846, 17865, 18417, 19400
(t)	GSE APTPS Covers (To Less Than Class "A" Requirements)	2	Supplied by Engineering

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.7.2	GSE Modification Kits for 15 Block I-100 Series Test Stations & Misc. Site Support		
(a)	Coolant & Power Supply	15	14155, 14563, 15180, 14994, 15006, 14142, 13430, 15102, 15181, 15614, 15797, 16268, 16559, 17274, 17831
(b)	Optics Inertial Analyzer	15	14155, 14563, 15180, 14142, 13430, 14774, 14094, 15006, 15102, 15614, 16265, 16266, 16559, 17295, 17831
(c)	Cable Interconnect Set	15	14155, 14563, 15180, 14142, 13430, 14994, 15003, 15102, 15179, 15614, 15624, 16559, 17263, 17331, 17852
(d)	GSE/PSA Junction Box	13	13430, 14142, 14155, 14563, 14985, 14994, 15027, 15180, 15618, 15788, 15880, 16406 18434
(e)	Cable Interconnect Set	15	Combined with (c) above

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.7.2 (Continued) (f)	Test Point Adaptors	13	14155, 14563, 15180, 14142, 13430, 14767, 14994, 15006, 15102, 15614, 16267, 17268, 17831
(g)	G&N Mounting Fixture	9	14563, 13372, 13466, 14994, 15054, 15753, 15893, 16291, 16556
(h)	Remote Optics Controller	8	14563, 14994, 15060, 15619, 15789, 16407, 16408, 16409,
(i)	Fill & Purge	5	14568, 15110, 15178, 15353, 15861
(j)	Lead & Signal Simulator	5	14567, 15088, 15223, 15354, 16292
(k)	G&N Transport Cart	10	14757, 15086, 15092, 15603, 15604, 15605, 16294, 16311
(l)	Hose Assembly Kits	9	16617, 16627, 17260, 17847, : 18365, 18366, 18400, 18410, 19443
(m)	Hose Assembly Kits	14	16617, 16627, 17014, 17255, 17265, 17814, 17847, 18336 18364, 18365, 18366, 18418, 18869, 19850

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
5.3.7.2 (Continued) (n)	GSE J-Box	15	13430, 14142, 14155, 14563, 14994, 15006, 15102, 15111, 15180, 15614, 15882, 16559, 17260, 17831, 18833
(o)	G&N Harness & Handling Fixture Kits	12	14756, 15047, 15803, 15870, 15871, 15872, 15873, 17011, 17255, 17849, 17850, 18402,
(p)	Auxiliary Battery Pack	2	15859
(q)	PSA Mounting Fixture	14	14155, 14563, 15180, 14142 13430, 14773, 14994, 15052, 15202, 15203, 15394, 15817, 17255, 17827
(r)	Battery Power Pack Assembly	9	14756, 15048, 15396, 16267, 16302, 16312
(s)	GSE/PSA Junction Box & Cable Kits to Make Block I-50 Series GSE Compatible with Block I-100 Series GSE	2	20494
(t)	Optics Navigation Base Mounting Fixture Assembly	8	14563, 14994, 15053, 15121, 15394, 17267, 17274, 18381
(u)	Retrofit Block I-GSE/PSA Junction Boxes to be Compatible with Block I-100 Series	8	14022, 15100, 16277, 17270, 17894, 18866, 18867, 18868

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.7.3	Retrofit of Block I and Block I-100 Series GSE as follows:		
5.3.7.3.1	Deleted (Block II)		
5.3.7.3.2	Retrofit G&N Harness Handling Fixture S/N 1-14 to Mount Shock Recorders	14	20171
5.3.7.3.3	Retrofit Battery Power Pack S/N 1-14 to Add Remote Alarm Capabilities	14	18409, 18410, 18435, 18436 18437
5.3.7.3.4	Retrofit Two Block I-50 Series PSA Adapter Modules by Replacing 3 Pair of Resistors in Attenuator Circuit	2	17705
5.3.7.3.5	Retrofit Transportation Carts per new Coupling Display Ass'y. Mounting Requirements	12	20181
5.3.7.3.6	Retrofit GSE/PSA Junction Boxes Reworking Tray Stops & Adding a Switch Guard. This includes 2 Block I-50 Series & 2 Breadboards	9	20494, 20497, 20493, 20496, 19880, 19879

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.7.3.7	Retrofit PSA Tray Extender Sets to Add a Device to Maintain a Firm Electrical Contact	9	19858, 19859, 19861, 20884, 19860
5.3.7.3.8	Retrofit G&N Harness Handling Fixture to Handle Strengthening Hardware Added to the Harness	5	20163
5.3.7.3.9	Retrofit G&N Mounting Fixtures by Adding Clamp for Modified Harness CDU Connectors	8	19865, 20463, 20464, 20465, 20896
5.3.7.3.10	Retrofit G&N Transport Carts with Addition of 2 Stowage Assembly Brackets (Includes/Breadboard)	12	Incorporated with 5.3.7.3.5
5.3.7.3.11	Retrofit Test Stations for Shielding of Cable (Stations P-1, P-2, P-3, P-5, P-6, P-7, P-9, P-10, P-11, P-12, P-13, P-14).	12	18885, 18899, 18900, 19401, 19407, 19437, 19438, 19488, 19490, 19824, 19876, 19894
5.3.7.3.12	Retrofit PSA Adaptor Module S/N 3; 4, 5, & 6 to Add Wiring Change to Wires A 269 and A 272	4	19863, 19864

Statement of Work Para.

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.7.3.13	Retrofit sets of Connector Covers to Modify Attachment to the Connector	7	20875
5.3.7.3.14	Retrofit PEA Adapter Modules by Adding a Jumper Wire to Accomodate Switching Between Block I & Block II	4	20495, 20497, 20487
5.3.7.3.15	Retrofit G&N Installation & Qualification Test Fixtures by Moving the Autocollimator to an Angle of 40°	3	RIB only - Retrofit accomplished at Field Sites by Engr.
5.3.8	<u>Apollo Guidance Computer</u>		
5.3.8.1	Apollo Guidance Computer with Main & Navigation DSKY's Modified from Block I to Block I-100 Series Conf.	5	WL-322, WL-115, WL-87, WL-79, WL-161
5.3.8.2	Apollo Guidance Computer with Main & Nav. DSKY's Block I-100 Series	6	WL-251, WL-221, WL-446, WL-733, WL-761, WL-893, WL-299
5.3.8.3	Fixed Memory Module	90	WL-2111, WL-1944, WL-1943, WL-1849, WL-1763, WL-1478, WL-776, WL-1034, WL-646, WL-840, WL-658, WL-585, WL-466, WL-463, WL-432, WL-405, WL-335, WL-412, WL-325, WL-278, WL-250, WL-228, WL-222, WL-204, WL-202, WL-160(S/N 122 Scrapped)



<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.8.3.1	Parts for 30 Additional Fixed Memory Modules for Block I-100 Series Computer		LongLead Procurement- Included in above.
5.3.8.3.2	Assemble & Deliver Fixed Memory using above parts	4	See Para. 5.3.8.3 above (included in DD 250 Qty.)
5.3.8.4	The following GSE Equipment to be Provided:		
5.3.8.4.1	New Equipment		
(a)	AGC Test Set	3	WL-301, WL-327, WL-353
(b)	AGC Simulator Drawer	4	WL-225, WL-226, WL-242, WL-257
(c)	DSKY, Pedestal Assembly	2	WL-191
(d)	AGC/GSE Interconnection Kit G&N System	3	WL-352, WL-354, WL-938, WL-307
(e)	AGC/GSE Interconnection Kit G&N Sub-System	1	WL-283
(f)	AGC Main DSKY Shipping Container	6	WL-188, WL-1146, WL-703, WL-761, WL-473
(g)	AGC Nav. DSKY Shipping Cont.	6	WL-188, WL-1146, WL-446 WL-473, WL-761
(h)	AGC Shipping Container	6	WL-188, WL-1146, WL-473, WL-761
(i)	AGC Main DSKY Handling Fixture	8	WL-761, WL-473, WL-703, WL-322, WL-893, WL-1598

Statement of Work Para.EquipmentQty.Remarks

5.3.8.4.1 (Continued)	(j)	AGC Nav. DSKY Handling Fixture	8	WL-188, WL-446, WL-322 WL-299, WL-588, WL-893, WL-1598
	(k)	AGC Handling Fixture	15	WL-31, WL-47, WL-110, WL-87, WL-79, WL-221, WL-115, WL-188, WL-299, WL-322, WL-703, WL-893 WL-473, WL-761, WL-1598
	(l)	AGC Operations Console	1	WL-288
	(m)	Set per A/B System Connector Covers	8	WL-231, WL-299, WL-322, WL-473, WL-703, WL-761, WL-893, WL-733, WL-446
	(n)	DSKY Installation Alignment Fixture	4	WL-111, WL-112
5.3.8.4.2		Modification Kits		
	(a)	AGC Test Set	13	WL-60, WL-106, WL-119, WL-129, WL-130, WL-143, WL-254, WL-183, WL-318, WL-192, WL-195
		Breadboard	1	Raytheon Engr.
	(b)	DSKY Pedestal Assembly	8	WL-154, WL-120, WL-128, WL-136, WL-142

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.8.4.2 (Continued)	(c) AGC/GSE Interconnect Kit-G&N Test	12	WL-60, WL-106, WL-119, WL-129, WL-130, WL-143, WL-254, WL-183, WL-318, WL-192, WL-195
	Breadboard	1	Raytheon Engineering
	(d) AGC/GSE Interconnect Kit Subsystem Test	6	WL-63, WL-73, WL-106, WL-118, WL-150, WL-165
	(e) AGC Handling Fixture	3	WL-218, WL-404, WL-656
	(f) AGC Operations Console	6	WL-62, WL-72, WL-106, WL-118, WL-155, WL-181
5.3.8.5	Inhibit Wire Jumper Assemblies	34	WL-45, WL-48, WL-74, WL-86, WL-78, WL-160, WL-117, WL-135, WL-278, WL-222, WL-325, WL-658, WL-463, WL-466, WL-2075
5.3.8.6	Provide Modification & New Equipment for Block I-100 Series		
5.3.8.6.1	Modify AGC S/N 6 for NR Simulation Studies	1	S-3
5.3.8.6.2	Modify AGC S/N 20 To a Block I-100 Series & Re-number to S/N 107	1	WL-97
5.3.8.6.3	Retrofit Simulation Computer S/N 2 to Block I-100 Series Conf.	1	S-62

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.8.6.4	Retrofit AGC Group #120, 117, 112, 108 & 107 with the Redesign Trap Circuit in Logic Module A-37 and New Key Reset in the DSKY's	5	WL-424, WL-389, WL-582
5.3.8.6.5	Retrofit Wiring Harness PSA to AGC & G&N to Spacecraft S/N 120, 117, 108 to Add Wire & Connector Gasket	3	WL-390, WL-409, WL-564
5.3.8.6.6	Retrofit AGC's 108, 109, 110, 111 112, 117, 120, 121, 122, 123, 124 to incorporate the Failure-Detect Module (Night Watchman) AGC 110B shall require a Prototype Module & AGC 107 Mounting Holes Only	12	WL-394, WL-399, WL-461 WL-381, WL-547 WL-396, WL-398,
	The Following GSE Equipment shall require Retrofit to Provide Test Capabilities for this Modification		
	Subsystem Cable Kits S/N 1 thru 6 & S/N 9	7	WL-380, WL-715, WL-982, WL-992, WL-994
	Main DSKY Pedestal Mount S/N 2 Thru 11	10	WL-379, WL-713, WL-807, WL-984, WL-980 WL-990, WL-986, WL-988, WL-1501
	Simulator Computer #2	1	S-62

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.8.6.7	Decoder Modules for G&N 12 & 17 to Class "A"	12	WL-389, WL-424
5.3.8.6.8	Retrofit Main DSKY Handling Fix. Retrofit Nav. DSKY Handling Fix. (To Mount Shock Recorders)	22 22	Incorporated during normal recycle of handling fixture subsequently re-moved per TDRR WL-582
5.3.8.6.9	Retrofit AGC 120 to Incorporate Thermocouple	1	WL-389, WL-424, WL-582
5.3.8.6.10	Replace Standby Power Switch in Tray B of AGC's #108, 112, 117, 120	4	WL-389, WL-424, WL-582, WL-896, WL-1362
5.3.8.6.11	Retrofit AGC #120, 117, 112, 108, 107 110A, 111, 121 Provide Vibration Damping Material	8	WL-389, WL-424, WL-582, WL-733, WL-896, WL-1362 WL-2361
5.3.8.6.12	Retrofit AGC 117, 112, 109, 110, 111, 120 121, 122 Provide Grounding of O VDC to Chassis of Tray B	8	WL-389, WL-424, WL-582 WL-733, WL-896, WL-1362 WL-2361
5.3.8.6.13	Retrofit AGC 120, 117, 112, 109, 110, 111 121, 122 with Front Close-out Panel	8	WL-389, WL-424, WL-582 WL-733, WL-896, WL-1362 WL-2361
5.3.8.6.14	Retrofit Wire Harness PSA to AGC & G&N to Spacecraft #112, 117, 120. To Add Jumper Wires for Night Watchman Modification	3	WL-390, WL-434, WL-564
5.3.8.6.15	Retrofit AGC 110, 112, 117, 120 Potting Power Switch Module to Protect Against Moisture	4	WL-389, WL-424, WL-582

Statement of Work Para.

Equipment

Qty.

Remarks

5.3.8.6.16	Retrofit DSKY's 117, 112, 120 to Eliminate Button Travel Interference	6	WL-389, WL-424, WL-582
5.3.8.6.17	Retrofit AGC 117, 112, 120 Add Resistor to Tray A	3	WL-389, WL-424, WL-582
5.3.8.6.18	Retrofit AGC 112, 117, 120 Add Moisture Seal Gaskets to Computer Tray	3	WL-389, WL-424, WL-582
5.3.8.6.19	Retrofit Main DSKY #109, 110, 111, 112, 117, 120, 121, & 122	8	WL-389, WL-424, WL-582 WL-896, WL-733, WL-1362
	Retrofit Nav. DSKY #109, 110, 111, 112, 117, 120, 121, 122	8	WL-389, WL-424, WL-582, WL-896, WL-733, WL1362
	To Incorporate Rubber Vibration Damping Materials In Keyboard		
5.3.8.6.20	Retrofit Main DSKY #109, 110, 111, 112, 117, 120, 121, 122	8	WL-389, WL-424, WL-582, WL-733, WL-896, WL1362
	Retrofit Nav. DSKY #109, 110, 111, 112, 117, 120, 121, 122	8	WL-389, WL-424, WL-582, WL-733, WL-896, WL1362
	To Incorporate Electrical Bonding, Mounting Hardware, & Mechanical Interface Changes per ICD MH01-0135-116		

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.8.6.21	Retrofit Nav. DSKY #109, 110, 111, 112, 117, 120, 121, 122	8	WL-389, WL-424, WL-582, WL-733, WL-896, WL1362
5.3.8.6.22	Incorporates New Guide Pins Retrofit AGC #120, 117, .12 109, 111, 121, 122, 123 to Install a New Y Harness	8	WL-593, WL-600, WL-612, WL-649, WL-785, WL-789, WL-792, WL-835
5.3.8.6.23	Retrofit Computer Subsystem 112 & 117	2	WL-389, WL-424
5.3.8.6.24	Incorporate 16 Retrofits on Package Basis Retrofit Computer Subsystem 120	1	WL-582
5.3.8.6.25	Incorporate 14 Retrofits on Package Basis Main DSKY #120, 112, 111, 110A, 121 Nav. DSKY 120, 112, 111, 110A, 121 1 Qual. Keyboard Module	5 5 1	Readjustment & Retest Only - No Kit

Statement of Work Para.

	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.8.6.26	Main DSKY 109, 111, 121	3	WL-896, WL-1362
	NAV. DSKY 109, 111, 121	3	WL-896, WL-1362
	To Incorporate New Electroluminous Lights		
5.3.8.6.27	Retrofit Computer Subsystem 111, 121, 122	3	WL-703, WI -896, WL-1362
	Incorporate Nine Retrofits		
5.3.8.6.28	Retrofit 2 DSKY's for Systems 117 Incorporate Rubber Insulator	2	Field Retrofit per ECP ACSK-425 R1
5.3.8.6.29	Retrofit Nav. DSKY #109, 111, 121 Incorporate Redesigned EL Alarm Panel	3	WL-896, WL-1362
5.3.8.6.30	Main DSKY 12, 121, 122, 123	4	Accomplished per ECP ACSK 441
	Nav. DSKY 12, 121, 122, 123	4	
	Add Rubber Insulators & Perform Vibration Screening of Relay Modules		
5.3.8.6.31	Retrofit Nav. DSKY 2, 3, 7, 8, 9, 10	6	19761, 19769, 19772
	Add Ground Strap & Longer Holdown Screws		



<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.8.6.32	Retrofit AGC Group 110A to Add 4 Modifications	1	Accomplished by Raytheon Engr. - See DD 1149 - 307/67
5.3.8.6.33	Retrofit Computer #12, 121, 122, 123 Add New Test Connector Covers which Ground Certain Gate Inputs	4	WL-2299
	Retrofit by Engineering of These Covers on 2 Block I-100 Series Prototype Computers	2	Completed by Ray Engr.
5.3.8.6.34	Retrofit Computer Subsystem #110 to Incorporate 3 Modifications	1	Accomplished by Ray. Engr. See DD 1149 - 307/67
	<ol style="list-style-type: none"> <li>1. Grounding of O-VDC to Chassis of Tray B</li> <li>2. Potting of Power Switch Modules to Protect Against Moisture</li> <li>3. Electrical Bonding, Mounting Hardware Change, &amp; Mechanical Interference per ICD MH01-01305-116</li> </ol>		
5.3.8.6.35	Retrofit AGC Handling Fixture #1, 2, 3, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.	15	WL-940 WL-2219
	Add Improved Mounting Hardware		
5.3.8.6.36	Retrofit Main DSKY #12 & 121	2	Field Retrofit-No Kit
	Retrofit Nav. DSKY #12 & 121	2	
	Wrap Switch Actuator Housing as Required with Teflon Tape		

Statement of Work Para.EquipmentQty.Remarks

## 5.3.9

Apollo Optics Equipment

5.3.9.1	Optical Unit Assembly S/N 101 & 102 Block I-100 Series less than Class A	2	Invoice 33247, 31327
5.3.9.2	Optical Unit Assembly Blk I-100 Series	6	K-146, K-145, K-178, K-191, K-117, K-205
5.3.9.3	Star & Horizon Photometer Electronics Assembly	3	Invoice 28308, 30141, 31545
5.3.9.4	New GSE Equipment		
(a)	Precision Test Fixture Includes Autocollimator #1017410	1	K-142
(b)	Functional Tester	1	K-299
(c)	Star & Horizon Simulator	2	K-114, K-253
(d)	Variable Deviation Wedge	3	K-128, K-129
(e)	O-Degree Autocollimator Plate Assembly	5	K-1-7, K-148, K-151
(f)	45-Degree Autocollimator Plate Assembly	2	K-108
(g)	SCT, SXT Lens Cover	8 sets	Invoice 33247, 31327 K-146, K-145, K-178, K-191, K-117, K-205

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.9.4 (Continued)	(h) Connector Covers	8 sets	Invoice 33247, 31327 K-146, K-145, K-178, K-191, K117, K-205
5.3.9.4.2	Modification Kits		
(a)	Portable Light Assembly	5	K-224, K-223, K-225 Invoice 52327
(b)	Retrofit of Portable Light Assembly S/N 1 thru 9 Addition of an Adaptor to Lengthen Threaded Portion of Assembly	9	K-370, K-371, K-372, K-373, K-374
5.3.9.5	Modification and/or New Equipment for Block I-100 Series Equipment		
5.3.9.5.1	Retrofit OUA for G&N 12, 17, 20 To Incorporate a Double Reticle, Replacement of Purge Valve, Addition of Heaters on Eyepiece Addition of Interchangeable Shims	3	K-179, K-237, (S/N 12 Reworked prior to Sale)
5.3.9.5.2	Star Tracker Photometer Protective Covers.	3	K-254
5.3.9.5.3	Retrofit OUA for G&N 17, 12, 121 Incorporate Stray Light & Heat Modification (Black Anodizing)	3	K-141, K-164, K-179,

Statement of Work Para.

Equipment

Qty.

Remarks

5.3.9.5.4	Retrofit of OUA Learner System Incorporate Double Reticle Assembly (Non-Deliverable)	1	N/A
5.3.9.5.5	Retrofit of OUA for G&N 101, 102, 110, 111, Incorporate Additional Baffling	4	K-261, K-262, K-263
5.3.9.5.6	Rework Alignment Mirror Assembly Certification Fixture S/N 1 thru 5 by Remachining of Parts to -011 Configuration	5	K-561, K-380, K-249, K-241, K-217
5.3.9.5.7	Rework G&N Installation Qual. Fixture S/N 1 to -011 Configuration by Exchanging the Porro Prism Subassembly with the -011 Prism in Azimuth Reference Fixture S/N 5	1	K-195
5.3.9.5.8	Rework G&N Installation Qual. Fixture S/N 2 & 3 to -011 Configuration	2	K-246, K-245
5.3.9.5.8	Rework Azimuth Reference Fixture S/N 1 to -011 Configuration, S/N 4 & 5 to -001 Configuration by Exchanging Porro Prism Sub-Assembly	3	K-196 (S/N 4 & 5 by KIC Engr.)
5.3.9.5.9	Retrofit Star & Horizon Simulator Certification Fixture S/N 1 & 2 by Replacing the Retainer Electrical Connector on the Photovolt Multiplier	2	K-320, K-290

Statement of Work Para.

<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.9.5.10 Retrofit OUA #12, 20, 109, 110 111, 121, 122, 123 to Incorporate SXT Eyeguard Ass'y & Holder & Filter Ass'y.	8	K-292, K-291, K-286, K-283, K-277, K-275, K-319, K-317
5.3.9.5.11 Deleted (Block II)		
5.3.9.5.12 Retrofit OUA Systems 12, 20, 109, 110, 111, 121, 122, & 123 to Incorporate New Bearing Plate for Quick Disconnect Eyepiece	8	K-292, K-291, K-286, K-283, K-277, K-275, K-319, K-317
5.3.9.5.13 Supply the following Assemblies for Systems 12, 20, 109, 111, 121, 122, 123, & Qual. Test Unit		
1. SXT Mirror Housing & Air Focusing Shim Assembly (S&F Mirror Housing)	9	K-275, K-283, K-286, K-292, K-293, K-302 K-308
2. SXT Eyepiece Ass'y(SXT Eyepiece)	9	
3. SCT Prism Housing & Insulation Assembly (SCT Prism Housing)	9	
4. SCT Eyepiece (Adjustable Focus)	9	

Statement of Work Para.

Equipment

Qty.

Remarks

5.3.9.5.14

OJA's to be Made Inoperative as follows:

S/N 123 - Replace with Dumimy Electronics

1

(In-line)

S/N 122 - Installed but Isolated from Ground & Not Performance Tested

1

(In-line)

S/N 109 - Installed but Isolated from Ground & Not Performance Tested

1

(In-line)

5.3.9.5.15

Retrofit OJA Functional Tester (GSE 2, 3, & EP-1) Rework Motor Drive Amplifier Assemblies & Control Panel to Increase Quadrature Rejection Ratio

2

K-307, K-308

5.3.9.5.16

Retrofit SXT Mirror Housing & Air Focusing Shim Assembly by Removing Present Shim

9

K-515, K-544, K-533, K-552, K-523, K-561 K-544, K-530, K-598

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Remarks</u>
5.3.9.5.17	Retrofit SCT Eyepiece(Adjustable	8	K-535, K-515, K-544,
	SCT Prism	8	K-552, K-575, K-561,
	SXT Mirror Housing	8	K-540 K-515, K-544, K-533, K-552, K-523, K-561, K-544, K-530
	To Incorporate Anodized Metallic Covers for OUA Eyepiece Heater Pads, a Restraint Capability in Eyepiece Heater Cable, and Fuse in Heater Circuit		
5.3.9.5.18	Retrofit SXT Eyepiece Add Lockwasher & Flatwasher	8	K-575, K-547, K-552, K-551, K-558, K-589
5.3.9.5.19	Retrofit OUA S/N 11 Add 2 Stiffener Connector Flanges to Prevent Leakage	1	K-237
5.3.9.5.20	Retrofit OUA S/N 9 Replace the Male Connector Used to Connect Thermocouples on OUA to the Interconnect Harness with a Female Connector	1	(Retrofit at NR per ECP ACSK 328)
5.3.9.5.21	Retrofit Optics Cover for G&N 12 Add Velcro Strips on Face Cover, Modify Mounting Hardware to Allow Clearance for Quick Disconnect Eyepieces	1	19764

Statement of Work Para.EquipmentQty.Remarks

5.3.10

Eyepiece Stowage Assembly

5.3.10.1

Eyepiece Stowage Ass'y for  
System 12, 20, 110, 111, 121, 122,  
123, 124

8

17771, 18260, 18272,  
18724, 18727, 18739,  
18741, 20891

5.3.10.2

Retrofit Eyepiece Stowage Ass'y.  
for 12, 20, 110, 111, 121, 122, 123  
124. Incorporate Rubber Shim  
Inside Pockets

8

19512, 19520, 19524,  
19527, 19534, 20891

5.3.10.3

Retrofit Eyepiece Stowage Ass'y.  
for 12, 111, 121, & 124  
Rework Latches

4

19766, 19767, 20181,  
20891

5.3.11

APTIPS Retrofit Kits for G&N 121,  
122, 123, One Partial, 2 Backup,  
for Thermal/Structural Qual. Testing

6

19542, 19713, 20828,  
20169, 20485, 20870APTIPS Ejectable Covers Retrofit Kits  
for G&N 12 & 121 & Qual

3

20490, 20495, 19775



APOLLO LORS Statement of Work  
 Dated 16 March 1966

EP0021A

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
4.1	Airborne Equipment - Optical Tracker		
4.1.1	Mechanical Mockup	2	HC001, HC002
	WT, CG, Moment of Inertia	2	HC004
	Breadboard	1	HC015, HC005
	Engineering Model	2	HC007, HC021
	Production Prototype	5	HC026
	Production Unit	18	
4.1.2	Airborne Equipment - Luminous Beacon		
	Mechanical Mockup	2	HC002, HC003
	WT, CG, Moment of Inertia	1	HC004
	Breadboard	1	HC005
	Engineering Model	2	HC006, HC016
	Production Prototype	4	HC025
	Production Unit	18	

APOLLO LORS Statement of Work  
 Dated 16 March 1966

<u>Statement of Work Para.</u>	<u>Equipment</u>	<u>Qty.</u>	<u>DD 250</u>
4.1.3	LORS GSE - Tracker & Beacon		
	TRACKER		
1.	Rate Table	7	HC008, HC019
2.	Tracker Control Console w/cables	7	HC008, HC019
3.	Resolver Circuit Tester	N/A	
4.	Tracker Recorder/Monitor Console	3	HC008, HC020
5.	Target Simulator	7	HC010, HC022, HC009
6.	Simulator Holding Fixture	7	HC019, HC009
7.	Rate Table Stand	4	HC019
8.	Tracker/Rate Table Holding Fixture Set	7	
9.	Optical Tracker Shipping Container	12	
10.	Dust & Connector Covers		
11.	Granite Slab	3	
	BEACON		
1.	Test Console	2	HC012, HC024
2.	Beacon One Point Tester	4	HC011
3.	Beacon Shipping Container	12	

The above constitutes the hardware delivered prior to the LORS termination on May 27, 1966