

N. Hamilton

MEMO

Notes on Self Test Failure at KSC - Apollo 12

SUMMARY - Self-Test was initiated on Apollo 12, <sup>LM 6</sup> ~~Star~~  
4 Restarts occurred with 237 failures of S/T  
recorded in ERCOUNT. LUMINARY 99 Rev 1 ropes.

Procedure: V36E WAIT 31 seconds  
- 0 → SMODE (V21N27E?)  
RESTART AT 70 seconds  
3 More restarts within 9 seconds

Results

First Restart

RSBBQ 66102

3627

where #3, 3626 is CCS SKEEP7

FAIL REG, +1 = 1102, 41102

Second Restart

RSBBQ 52001

00001

FAIL REG, +1, 12 = 1102, 41102, 1107

1107 should have terminated self-test. It did not. With control in Bank 25 the computer activity light should have gone on. It did not.

Third Restart - Data lost due to

Fourth Restart occurring immediately after the third

Fourth Restart

RSBBQ 66102

03333

SFAIL = 03411

ERCOUNT = 533 (= 347 Decimal)

Suggestions

Harano: Use V91 E, rather than option 5 so that self check will terminate at failure.

If RESTART occurs:

1374 (SKEEP4) contains Bank number

1373 (SKEEP3) " Displacement

B. McCoy: A failure in sense amplifier or G-register logic.

R. Sheridan - The LUMINARY ropes being used were known defective (bad weld) and since repaired

Estabrook Run Marvin, T. at lowered fuse voltage to see if problem reappears. This was done. No failure

AC/Florida has an octal Dump which shows:

|       |              |      |         |            |
|-------|--------------|------|---------|------------|
| Times | Turn on time | 16 h | 13 mins |            |
|       | Restart 1    | 16 h | 15 m    | 21.59 sec  |
|       | Restart 2    | 16 h | 15 m    | 23.636 sec |
|       | Restart 3    | 16 h | 15 m    | 29.436 sec |
|       | Restart 4    | 16 h | 15 m    | 29.75 sec  |

2. Downlink. Downlink produced 20 words (ten double precision words) of garbage before the second restart. Also, the downlink list did not terminate properly, it overran the end of the list by 2 words (1 DP word). Restart then occurred.

Turn on Temperature -  $62^{\circ}$  which was lower than usual but well within spec.

There have been no failures since this time.

D. Estabrook  
X580