DATE: 01-07-86

OMI NO. - S9005
REV. - L

```
**********************************************************
*                                                        *
*     GROUND LAUNCH SEQUENCER DESCRIPTION DOCUMENT       *
*                    LAUNCH COUNTDOWN                    *
*                                                        *
**********************************************************
*  EFFECTIVITY              CATEGORY: B                  *
*                                     NB-V1              *
*     CENTER:     KSC                                    *
*                              SYSTEM:    INTEG          *
*     SITE: PAD A&B                                      *
*                                                        *
*     VEHICLE:    ALL                                    *
*                                                        *
*     FLOW: ALL                                          *
**********************************************************
```

```
************************************
*                                  *
*     ***PUBLICATION NOTICE***     *
*                                  *
* RETAIN THIS OMI FOR FUTURE USE   *
* UNTIL SUPERSEDED.                *
************************************
```

THIS DOCUMENT DOES NOT CONTAIN HAZARDOUS OPERATIONS

NASA

National Aeronautics and Space Administration

SPACE SHUTTLE

USAF

Department of the Air Force
United States of America

Kennedy Space Center/Vandenberg Air Force Base

OMI NO. - S9005
REV. - L

DATE: 01-07-86

LOCKHEED SPACE OPERATIONS COMPANY

****
*
* GROUND LAUNCH SEQUENCER DESCRIPTION DOCUMENT *
* LAUNCH COUNTDOWN *
*
****
* EFFECTIVITY CATEGORY: B *
* NB-VT *
* CENTER: KSC *
* SYSTEM: INTEG *
* SITE: PAD A&B *
* *
* VEHICLE: ALL *
* *
* FLOW: ALL *
****

PREPARED BY:

Bill Reeves 1-8-86
LSOC TEST DOCUMENTATION

APPROVED BY:

CONTRACTOR

LSOC-625
Janiene L. Pape 1-8-86
SPC ROR

GOVERNMENT

1/8/86
SE-PEO
SM

THIS PROCEDURE DOES NOT CONTAIN HAZARDOUS OPERATIONS

DATE: 01-07-86

UMI NO. - S9005
REV. - L

REVISION RECORD PAGE

REV-CHANGE	DATE	PAGES	REASON	EFFECTIVITY
G	08-08-84	ALL	INCORPORATES ICR GLS16-001 THRU -005 (PUST STS-14 ABORT CHANGES)	STS-16 & SUBS
G-1	11-13-84	17,23,129	INCORPORATES ICR GLS20-001	STS-20 & SUBS
H	02-11-85	12,37,41, 49,57,58, 52,65,86, 87,93-95, 101, 117 THRU 122	INCORPORATES ICR GLS22-001, GLS22-002	STS-22 & SUBS
H-1	03-28-85	36,37,62, 73,83	INCORPORATES ICR GLS23-001	STS-23 & SUBS
I	07-09-85	ALL	INCORPORATES JOINT KSC/VLS ICR GLS26-00	STS-26 & SUBS
I-1	08-06-85	ALL	INCORPORATES ICR GLS27-002	STS-27 & SUBS
J	09-04-85	ALL	CORRECTS REV I-1	STS-28 & SUBS
K	10-11-85	ALL	INCORPORATES ICR GLS30-000	STS-30 & SUBS
K-1	11-07-85	39,40,49, 50,63,64, 99,100, 137-142, 147,148	INCORPORATES ICR GLS31-000 GLS31-001	STS-31 & SUBS
K-2	12-13-85	ALL	INCORPORATES ICR GLS32-001 ESR K49156	STS-32 & SUBS
L	01-07-86	ALL	INCORPORATES ICR GLS33-000	STS-33 & SUBS

INSTRUCTION CHANGE REQUEST

(1) INSTRUCTION CHANGE REQUEST FOR:	(2) ICR NUMBER	(3)
(X) OMI ( ) S/W	GLS33-000	SHEET 1 OF 2

(4) OMI/CAP NUMBER	(5) REV/EFFECTIVITY	(6)
S9005	L/STS-33	THIS ICR DOES ( ) DOES NOT (X) INCREASE HAZARD LEVEL OF OMI.

(7) SYSTEM	(8) DOCUMENTS AFFECTED?
GROUND LAUNCH SEQUENCER	~~OMP~~ : YES ( ) ~~NO~~ (X) OMRSD: YES ( ) NO (X)

(9) OMI/CAP TITLE

GROUND LAUNCH SEQUENCER DESCRIPTION DOCUMENT LCD-33

(10) PAGE	(11) STEP	(12) CHANGE	(13) REASON
16.		Add a message to enter the CDT Interrupt time for CENTAUR Pressurization.	
23.	040-12 040-15	Add RBUS PIC CAP Voltage msmnt.s to assure they aren't charged.	
25.	046-15 046-20	Add Centaur HIM/HER Checks.	
57.	199-05 199-06	Add "START CU CCLS TERMINAL SEQ" commands sent to CENTAUR.	
57.	199-07 199-12	Add commands to Deadface the CENT. LO2 Vent Heaters at T-2/55.	
60.	218-00 218-01	Add T-1/57 & Counting commands sent to CENTAUR.	
63.	231-06 231-09	Add RBUS PIC CAP Voltage msmnt.s to assure they are charged.	
68.	251-00	Add T-0/35 sec. Time Check.	
68.	251-01 251-02	Add check for CENTAUR at Flight Pressure.	
68.	252-08 252-09	Add T-0/31 sec & Counting commands sent to CENTAUR.	
84.	320-16 320-25	Add cmnd.s to reset CENTAUR LO2 vent heaters & CDT commands during post lift-off safing.	

(14) APPROVAL

** Signatures as required per Block 6 on Page 2.

CONTRACTOR	DATE	GOVERNMENT	DATE	SAFETY	DATE
XXXXXXXXXXXXXXX	XXXX	XXXXXXXXXXXXXXXX	XXXXX	XXXXXXXXXXXXXXXXXXXXX	XXXXXXX
XXXXXXXXXXXXXXX	XXXX	XXXXXXXXXXXXXXXX	XXXXX	XXXXXXXXXXXXXXXXXXXXX	XXXXXXX
XXXXXXXXXXXXXXX	XXXX	XXXXXXXXXXXXXXXX	XXXXX	XXXXXXXXXXXXXXXXXXXXX	XXXXXXX

DOCUMENT NO(S)	KENNEDY SPACE CENTER	2. PAGE 2 OF 2
ICR #GLS33-000	DOCUMENT CONTINUATION SHEET	3. OFFICE KSC Complex "D"
4. DOCUMENT GROUND LAUNCH SEQUENCER DESCRIPTION DOCUMENT LCD-33		5. DATE 12/06/85

6.

Continued from blocks 10, 11, & 12 on Page 1.

86.	501-02 501-03	Add cmnd.s to inform CENTAUR of GLS Breakout/Safing
103.	568-05 568-10	Add cmnd.s to turn on CENTAUR LO2 Vent Heaters during Breakout Safing.
106.	583-00 585-00	Add seq.s to put Vent Door 6 in Purge 2 position for CENTAUR and resequence existing code.
109.	594-00 595-00	Add seq.s to turn off the Vent Door 6, Purge 2 commands and resequence existing code.
115.	618-44 618-47	Add code to verify RBUS PIC CAPs are not charged.
137.	717-00 717-08	Add code to check for a pending hold before issuing an automatic "Go for CENTAUR Pressurization."

SIGNATURES

TPE 12/10/85
KSC TPE/GLS

KSC TPE/CENTAUR

12/9/85
KSC PEO/GLS NASA

Warren K. Lackie 12/10/85
KSC PEO/CENTAUR - NASA

ENGINEERING SUPPORT REQUEST

ENGINEERING SUPPORT REQUEST	1. DATE 12-10-85	2. PROGRAM NO.	3. ESR NO. K49172 REV.	4. SHEET 1 OF
5. LOCATION KSC COMPLEX "D"	6. EFFECTIVITY STS-33	7. EVENT REQ'D BY S0017	8. USER NEED DATE	9. CATEGORY II
10. FACILITY/SYSTEM/EQUIPMENT GLS	11. PART	12. PART NO.	13. REF. DES/FIND	14. LEVEL INTERFACE AFFECTED

15. TITLE

Incorporate CENTAUR changes per GLSDD (S9005)

17. MANUFACTURER

16. DESCRIPTION OF REQUIREMENT/CONDITION/EVENT

Add the appropriate changes as detailed in blocks 11 & 12 of ICR# GLS33-000 to the GLSDD and the appropriate software.

18. TYPE OF ACTION

19. SCHEDULE IMPACT

20. ACTION REQUESTED

Approval of the indicated CENTAUR changes.

21. JUSTIFICATION

The following additions are required for monitoring and sending commands to a CENTAUR payload.

22. COMMENTS AND ACTION ITEMS

23. TECHNICAL CONTACT			24. APPROVAL			25. DE APPROVAL		
NAME	ORG.	PHONE	SIGNATURE	ORG.	DATE	SIGNATURE	ORG.	DATE
K. E. LOLLEY (signed K.E. Lolley 12/6/84 LSOC/GLS)	LSOC	6684	Kathleen M Seraphine (signature)	1733	12/11/85			

ATTACHMENT 1
December 30, 1985

GLSDD DEFINITION GUIDE

NOTE: This guide is included only as an aid to the reader. It is not a specification or controlling document.

I. FIELD DEFINITION

1. SEQ - Sequence Number. An automatically assigned numerical identifier unique for each step which consists of a sequence group number followed by a sequence step number. Successive sequence numbers are in ascending order.

2. TIME - Countdown Time (CDT). Earliest time at which the step may be executed. Should be the only step of a GLS sequence. If the sequence encounters a CDT reference later than the permitted time, normal sequencing will stop and a breakout will be automatically initiated. Countdown Time format: -MM:SS or -SS.00

3. SITE - Identifies site at which GLS sequence is performed.

   K - KSC Unique Requirement (Pad A and Pad B)
   V - VLS Unique Requirement
   A - KSC Pad A Unique Requirement
   B - KSC Pad B Unique Requirement
   (Blank) - Common Requirement to all sites

4. FUNC - Function. Defines the type of operation which is to be performed.

   TYPES

   A. ACL - Active Control Logic. The Reactive Control Logic Limits for the indicated measurement are set to the specified limits. Reactive Control Logic for the measurement is then activated. Subsequent failure of the measurement to meet these limits will result in the measurement's Control Logic Sequence being executed.

   B. _____ - Comment. A blank Function Field indicates the rest of the line entry is not in software and is a comment only. The comment should be started and ended with a dollar sign ($) and reside in the nomenclature column.

   C. CMD - Command. Issue command to GSE, vehicle or pseudo command to CCMS CDBFR. Two LPS system retries on a Class 3 error response is standard.

   D. CRSY - Change Responsible System (Console). The Function Designator's FEP responsible console for CCMS processing is changed as indicated.

   E. CVFY - Continuous Verify. This function operates similarly to the VFY function; however, the sequence continues to verify a parameter at the measurement sample rate in parallel to the test sequence. If ever, over the interrogation period, the test condition fails, the ELSE option is taken. Parameters are changed when the CVFY is restated. In most cases, FEP GOAL limits are set to the GLS Limits at GLS initiation.

I. FIELD DEFINITION - (Continued)

Note: All CVFY monitoring sets a Commit Criteria Monitoring (CCM) flag in the FEP which prevents the responsible Firing Room console from modifying GOAL Notification parameters for the specified function designator.

F. END - End of sequence or sequence routine.

G. ICL - Inhibit Control Logic. Reactive Control Logic (execution) for the indicated measurement is inhibited. No other action is taken.

H. LABL - Label. Must be first step of a sequence group. Four characters in length, first is alphabetic.

I. MMSG - Milestone Message. The text contained in the nomenclature field is displayed on the Integration Console CRT as the next milestone to occur and the time at which it is scheduled.

J. MSG - Message. The text contained in the nomenclature field is displayed on the integration Console CRT as the current function being performed in the sequence.

K. OMSG - Operator Message. The text contained in the nomenclature field is displayed on the Integration Console CRT to alert the GLS operator of exceptions or required actions.

L. SUM N - (Where N is a unique numerical identifier) all SUM's of series N within $ are totaled and the SUM appears in Function Designator Column preceeding the series.

M. VFY - Verify. Tests a condition to determine if it is in the proper configuration. Test Failure always carries a penalty unless there is an alternate test which is successful. No other steps are executed until the condition is met, the duration option is over, or the else option is exercised.

N. COM - Communication Interrupt. A console to console interrupt (listed in FD column) is sent to the indicated system (in single/low comm) for notification of the start or completion of the event listed in the nomenclature field.

5. DISC - The system that this function is related to. See Appendix IV.

6. NOMENCLATURE - CCMS Data Bank - 34 Character Text Descriptor.

I. FIELD DEFINITION - (Continued)

7. FUNCTION DESIGNATOR - CCMS Data Bank Function Designator.

8. VALUE

A. SINGL/LO - Single Value or low value of a low/high range. No relational symbols are used.

Format of Low/Value or Single Value:

State: ON/OFF, OPEN/CLOSE, WET/DRY, TRUE/FALSE
Analog: Decimal Number.
Digital Pattern: Xhhhh - hexidecimal
Tttttt - octal utilize additional first space of "High" field
ddddd - decimal
Bzzzzzzzzzzzzzzz - Binary utilize additional "high" and unit field.

Where: h = 0-9 or A-F
t = 0-7
d = 0-9
z = 0-1

B. HIGH - High value for low/high range analog. No rational symbol is used.

NOTE: When or notation is desired, use the following:

	VALUE	
	LOW	HIGH
QUAN	Quan	No Hi
QUAN	No Lo	Quan

C. An "FD" notation next to a LO or HIGH value parameter indicates a comparative measurement with function designator appearing on the following line.

D. UNITS - CCMS Data Bank Engineering units. One to seven characters.

I. FIELD DEFINITION - (Continued)

9. ELSE - Action to take on test failure of a VFY or CVFY function.

ELSE - Options (Penalty Options)

A. Voting Logic (for VFY or CVFY)

1) OR - Denotes an alternate test follows. Any successful alternate test is sufficient. The alternate(s) should follow in successive steps. An OR in one step indicates the next step is an alternate. The test penalty is listed at the end of the last sequence.

2) X OF Y - A group of Y CVFY or VFY parameters are tested. Sequence will continue if X sequences are successful. If X sequences are not successful, the last ELSE option in the group of Y will be executed.

B. INHB Mxxx (Inhibit A Milestone. Ex INHB MAPU) - Line item remains in effect until time of the milestone is reached. Upon test failure, this option allows the sequencer to continue, but places a constraint against the milestone identified by the Mxxx. When that Mxxx or any previous unattained milestone is reached, normal sequencing will stop and will enter the HOLD state. An added "TIL" statement identifies a non-standard time at which a line item is no longer valid.

MILESTONE/LABELS

LABEL	FUNCTION	APPROX. CDT
M009	Go for T-9 GLS Sequence	T-9 Min.
MOAA*	Orbiter Access Arm Retract Milestone	T-7 Min. 30 Sec.
MAPU	Orbiter APU Start Milestone	T-5 Min.
MPS4	Purge Sequence 4	T-4 Min.
MLOX*	ET LO2 Pressurizing Milestone	T-2 Min. 55 Sec.
MLH2*	ET LH2 Pressurizing Milestone	T-1 Min. 57 Sec.
MSEQ	LPS Go for Auto Sequence Start Milestone	T-31 Sec.
MENG**	LPS Go for Main Engine Start Milestone	T-10 Sec.

I. FIELD DEFINITION - (Continued)

MSRB** SRB Ignition Milestone T-0

* Hold at these Milestones only for items with ELSE equal to that specific Milestone.

** After T-0/31 CDT failure of these Milestones results in an automatic breakout.

C. EXIT - Upon test failure, the normal sequence is immediately suspended. Breakout occurs and the safing routine is performed. An added "TIL" statement identifies the time at which the line item is no longer valid.

D. CPER Label - Upon test failure, a routine identified by the label is performed in parallel to the normal sequence. An added "TIL" statement identifies the time at which the line item is no longer valid.

E. GOTO Label - Upon test failure, branch to the sequence identified by the label located within the same routine as the GOTO option.

F. SKIP STEP . Upon test failure, the next step will not be performed.

G. SKIP SEQ . Upon test failure, the next numerical sequence block will not be performed.

H. LCC-1 - Launch Commit Criteria valid prior to T-9 Minutes. Failure of an LCC-1 item places a constraint against continuing past T-9 Minutes. FEP Interrupt and Snapshot Verify monitored.

LCC-2 - Launch Commit Criteria valid until APU start. Failure of an LCC-2 places a constraint against continuing past T-5 Minutes. FEP Interrupt monitored.

LCC-3 - Launch Commit Criteria valid until last hold point at T-31 Seconds. Failure of an LCC-3 places a constraint against continuing past T-31 Seconds. FEP Interrupt monitored.

LCC-4 - Launch Commit Criteria valid until T-10 Seconds. Failure of an LCC-4 places a constraint against continuing past T-31 Seconds. A failure of an LCC-4 after T-31 Seconds will cause a breakout immediately. FEP Interrupt monitored.

I. WAIT - Wait until condition satisfied.

J. HOLD - Hold at current milestone.

K. DISPLAY - Display to operator.

10. DURATION - Specifies additional effectivity constraints to the "ELSE" action.

11. LCC PAGE - Page in the LCC for which this is a violation.

12. Not Used

13. Not Used

14. SS FD - Super Set Function Designator

    A. AS - Ascent

    B. PL - Pre-Launch

II. GROUND LAUNCH SEQUENCE OPERATIONAL NOTES:

1. "Breakout" is defined as an automatic GLS software response to a condition which will not allow the terminal count to progress any closer to T-0 and must, therefore, be recycled to a point no closer than T-20 minutes from launch. At breakout, the GLS mainline program will be automatically suspended and a safing sequence will take its place.

2. "Cutoff" is defined as manually (PFPK) initiated command to the GLS software which will cause a GLS breakout.

3. "Hold" as applied to the GLS is defined as that condition in which the countdown clock and progressive mainline sequencing stops, while the capability is retained to continue the countdown towards T-0 via a manual resume input from the integration console PFPK.

4. After T-31 seconds, all measurement failures annotated with "ELSE" actions agains MENG, MSRB, or LCC-4 will cause the sequencer to go immediately into a breakout sequence.

5. At breakout, a remote Comm Interrupt will be sent to each subsystem console and will indicate that breakout has occurred. Another remote Comm Interrupt will be sent to indicate to the systems that the CCM Flags have been changed back to the system. A final remote Comm Interrupt is sent to indicate GLS safing is complete.

III. DEFINED LABELS

G001	RSLS HOLD/ABORT INDICATION ROUTINE
G002	SSME 1 LH2 PRE-VALVE PRESSURE RELIEF
G003	SSME 2 LH2 PRE-VALVE PRESSURE RELIEF
G004	SSME 3 LH2 PRE-VALVE PRESSURE RELIEF
G005	BFS MTU ACCUMULATOR SOURCE SWITCH DETECTION
G006	REPLACE FAILED ET LH2 PRESSURE TRANSDUCER 1
G007	REPLACE FAILED ET LH2 PRESSURE TRANSDUCER 2
G008	REPLACE FAILED ET LH2 PRESSURE TRANSDUCER 3
G009	REPLACE FAILED ET LO2 PRESSURE TRANSDUCER 1
G010	REPLACE FAILED ET LO2 PRESSURE TRANSDUCER 2
G011	REPLACE FAILED ET LO2 PRESSURE TRANSDUCER 3
G012	PASS FSM OR BFS GPC ERROR DECODE
G013	TERMINATE ET LO2 REPLENISH
G014	INITIATE KSC SSME HEATSHIELD WATER
G015	BACKUP CONSOLE CRASH
G016	INITIATE VLS SSME HEATSHIELD WATER
G017	GO FOR CENTAUR PRESSURIZATION
P001	AERO-SURFACE PROFILE EVALUATION
P002	MPS GIMBAL PROFILE EVALUATION
P003	SRB GIMBAL PROFILE EVALUATION
P004	ET GO2 VENT ARM RETRACT
P005	OAA RECONFIGURE FOR EXTEND AND HYD ACCUMULATOR RECHARGE
S012	MPS/SSME SAFING
S013	VENT DOOR MANAGEMENT

IV. FIRING ROOM CONSOLE DISCIPLINES

FIELD ENTRY

APU	ORBITER AUX POWER UNIT
ARMS	ORBITER ACCESS ARM
BELE	SRB ELECTRICAL
BHYD	SRB HYDRAULICS
BINS	SRB INSTRUMENTATION
BPYR	SRB PYROS
BRS	SRB RANGE SAFETY
COMM	COMMUNICATION
DPS	FLT DATA PROCESSING SOFTWARE
ECLS	ENVIRONMENTAL CONTROL & LIFE SUPPORT
EPDC	ELECTRICAL POWER DISTRIBUTION & CONTROL
FCL	FLIGHT CONTROLS
FCP	FUEL CELL POWER
GNS	GUIDANCE & NAVIGATION SYSTEMS
GOX	GOX ARM SYS
HYD	ORBITER HYDRAULICS
HYFU	HYPERGOLIC FUEL
HYOX	HYPERGOLIC OXIDIZER
INST	ORBITER INSTRUMENTATION
INTG	INTEGRATION
LH2	LIQUID HYDROGEN
LO2	LIQUID OXYGEN
MECH	ORBITER MECHANISMS
MPS	ORBITER MAIN PROPULSION SYSTEM
NAVA	NAVIGATION AIDS
PVD	ORBITER PURGE, VENT AND DRAIN SYSTEM
SSME	SPACE SHUTTLE MAIN ENGINES
TINS	ET INSTRUMENTATION
TRS	ET RANGE SAFETY
WATR	SOUND SUPPRESSION WATER SYSTEM

*NOTE: A "C" preceding a system implies a Centaur Requirement.

SEQ	TIME CD CLOCK	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD

SEQ GLS SEQUENCE NUMBERS

TIME GLS TIME CHECKS

SITE IDENTIFIES SITE REQUIREMENT FOR A GIVEN GLS SEQUENCE
- K ------ KSC UNIQUE CODE (PAD A & PAD B)
- V ------ VLS UNIQUE CODE
- A ------ KSC PAD A UNIQUE CODE
- B ------ KSC PAD B UNIQUE CODE
- (BLANK) ------ COMMON TO ALL SITES

FUNC FUNCTION PERFORMED AT GIVEN GLS SEQUENCE.
- ACL --- ACTIVATE CONTROL LOGIC
- CMD --- COMMAND
- CVFY --- CONTINUOUS FFP MONITORING
- ICL --- INHIBIT CONTROL LOGIC
- ISSU --- COMMAND ISSUANCE
- LABL --- STATEMENT LABLE
- MMSG --- NEXT MILESTONE MESSAGE
- MSG --- CURRENT FUNCTION MILESTONE MESSAGE
- VFY --- ONE TIME BUFFER READ
- CMLT --- COMMAND MULTIPLES

DISC THE SYSTEM TO WHICH THE FD BELONGS.
AN ALPHA C PRECEDING A SYSTEM,(WITH THE EXCEPTION OF COMM),
IMPLIES A CENTAUR UNIQUE REQUIREMENT.

ELSE GLS MILESTONE INHIBITED
- M009 (T-9/00) LCC-1 (T-9/00)
- MOAA (T-7/30)
- MAPU (T-5/00) LCC-2 (T-5/00)
- MPS4 (T-4/00)
- MLO2 (T-2/55)
- MLH2 (T-1/57)
- MSEQ (T-0/31) LCC-3 (T-0/31)
- MENG (T-0/10) LCC-4 (T-0/10)
- MSRB (T-0/00)

LCC-PAGE PAGE IN LCC FOR VIOLATION

SS FD SUPER SET FUNCTION DESIGNATOR

SEQ	TIME CD CLOCK	S I T F	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D

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CONTENTS

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SD
					$ GROUND LAUNCH SEQUENCER OPERATIONS BEGIN WITH GLS INITIALIZATION. INITIALIZATION TIME IS PER THE CONTROLLING OMI. THIS IS GENERALLY T-2 HOURS. $								
					$ FUEL CELL STATUS CHECK $								
001-00			CVFY	FCP	PRSD O2 TK 1 HTR CUR SENR 1A-TRI	V45X1185E1	OFF			2 OF 2		6.5.1-6	
001-01			CVFY	FCP	PRSD O2 TK 1 HTR CUR SENR 1B-TRI	V45X1187E1	OFF			OR		6.5.1-6	
001-02			CVFY	FCP	PRSD O2 TK 1 HTR CUR SENR 2A-TRI	V45X1186E1	OFF			2 OF 2		6.5.1-6	
001-03			CVFY	FCP	PRSD O2 TK 1 HTR CUR SENR 2B-TRI	V45X1188E1	OFF			LCC-3		6.5.1-6	
001-04			CVFY	FCP	PRSD O2 TK 2 HTR CUR SENR 1A-TRI	V45X1285E1	OFF			2 OF 2		6.5.1-6	
001-05			CVFY	FCP	PRSD O2 TK 2 HTR CUR SENR 1B-TRI	V45X1287E1	OFF			OR		6.5.1-6	
001-06			CVFY	FCP	PRSD O2 TK 2 HTR CUR SENR 2A-TRI	V45X1286E1	OFF			2 OF 2		6.5.1-6	
001-07			CVFY	FCP	PRSD O2 TK 2 HTR CUR SENR 2B-TRI	V45X1288E1	OFF			LCC-3		6.5.1-6	
001-08			CVFY	FCP	PRSD O2 TK 3 HTR CUR SENR 1A-TRI	V45X1385E1	OFF			2 OF 2		6.5.1-6	AS
001-09			CVFY	FCP	PRSD O2 TK 3 HTR CUR SENR 1B-TRI	V45X1387E1	OFF			OR		6.5.1-6	AS
001-10			CVFY	FCP	PRSD O2 TK 3 HTR CUR SENR 2A-TRI	V45X1386E1	OFF			2 OF 2		6.5.1-6	AS
001-11			CVFY	FCP	PRSD O2 TK 3 HTR CUR SENR 2B-TRI	V45X1388E1	OFF			LCC-3		6.5.1-6	AS
001-12			CVFY	FCP	PRSD O2 TK 4 HTR CUR SENR 1A-TRI	V45X1485E1	OFF			2 OF 2		6.5.1-6	AS
001-13			CVFY	FCP	PRSD O2 TK 4/5 HTR CUR SENR 1B/1A	V45X1487E1	OFF			OR		6.5.1-6	AS
001-14			CVFY	FCP	PRSD O2 TK 4 HTR CUR SENR 2A-TRI	V45X1486E1	OFF			2 OF 2		6.5.1-6	AS
001-15			CVFY	FCP	PRSD O2 TK 4/5 HTR CUR SENR 2B/2A	V45X1488E1	OFF			LCC-3		6.5.1-6	AS
001-16					$ DELETED $								
001-17					$ DELETED $								
001-18					$ DELETED $								
001-19					$ DELETED $								
001-20			CVFY	FCP	PRSD FCP 1 O2 REAC VLV - OPEN	V45X1150E1	ON			LCC-3		6.5.1-5	
001-21			CVFY	FCP	PRSD FCP 1 H2 REAC VLV - OPEN	V45X2150E1	ON			LCC-3		6.5.1-5	
001-22			CVFY	FCP	PRSD FCP 2 O2 REAC VLV - OPEN	V45X1155E1	ON			LCC-3		6.5.1-5	
001-23			CVFY	FCP	PRSD FCP 2 H2 REAC VLV - OPEN	V45X2155E1	ON			LCC-3		6.5.1-5	
001-24			CVFY	FCP	PRSD FCP 3 O2 REAC VLV - OPEN	V45X1160E1	ON			LCC-3		6.5.1-5	
001-25			CVFY	FCP	PRSD FCP 3 H2 REAC VLV - OPEN	V45X2160E1	ON			LCC-3		6.5.1-5	
001-26			CVFY	FCP	FUEL CELL NO. 1 COOLANT PRESSURE	V45P0147A1	55	75	PSIA	LCC-3		6.5.2-4	
001-27			CVFY	FCP	FUEL CELL NO. 2 COOLANT PRESSURE	V45P0247A1	55	75	PSIA	LCC-3		6.5.2-4	
001-28			CVFY	FCP	FUEL CELL NO. 3 COOLANT PRESSURE	V45P0347A1	55	75	PSIA	LCC-3		6.5.2-4	
001-29			CVFY	FCP	FUEL CELL NO 1 COOLANT PUMP STAT	V45X0143E1	ON			LCC-3		6.5.2-8	
001-30			CVFY	FCP	FUEL CELL NO 2 COOLANT PUMP STAT	V45X0243E1	ON			LCC-3		6.5.2-8	
001-31			CVFY	FCP	FUEL CELL NO 3 COOLANT PUMP STAT	V45X0343E1	ON			LCC-3		6.5.2-8	
001-32			CVFY	FCP	FCP H2O RELIEF NOZZLE TEMP B	V45T0456A1	157	235	DEGF	LCC-1		6.5.2-10	
001-33			CVFY	FCP	FC1 H2O RELIEF VALVE TEMP	V45T0412A1	65	NOHI	DEGF	2 OF 3		6.5.2-10	
001-34			CVFY	FCP	FC2 H2O RELIEF VALVE TEMP	V45T0422A1	65	NOHI	DEGF	2 OF 3		6.5.2-10	
001-35			CVFY	FCP	FC3 H2O RELIEF VALVE TEMP	V45T0432A1	65	NOHI	DEGF	LCC-1		6.5.2-10	

SEQ	TIME / CD CLOCK	SI / T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
001-36			CVFY	FCP	H2O RELIEF LINE TEMP	V45T0450A1	65	NOHI	DEGF	LCC-1		6.5.2-10	
001-37			CVFY	FCP	FCP NO 1 SUBSTACK 1 DELTA VOLTAGE	V45V0102A1	NOLO	150	MV	LCC-1		6.5.2-7A	
001-38			CVFY	FCP	FCP NO 1 SUBSTACK 2 DELTA VOLTAGE	V45V0103A1	NOLO	150	MV	LCC-1		6.5.2-7A	
001-39			CVFY	FCP	FCP NO 1 SUBSTACK 3 DELTA VOLTAGE	V45V0104A1	NOLO	150	MV	LCC-1		6.5.2-7A	
001-40			CVFY	FCP	FCP NO 2 SUBSTACK 1 DELTA VOLTAGE	V45V0202A1	NOLO	150	MV	LCC-1		6.5.2-7A	
001-41			CVFY	FCP	FCP NO 2 SUBSTACK 2 DELTA VOLTAGE	V45V0203A1	NOLO	150	MV	LCC-1		6.5.2-7A	
001-42			CVFY	FCP	FCP NO 2 SUBSTACK 3 DELTA VOLTAGE	V45V0204A1	NOLO	150	MV	LCC-1		6.5.2-7A	
001-43			CVFY	FCP	FCP NO 3 SUBSTACK 1 DELTA VOLTAGE	V45V0302A1	NOLO	150	MV	LCC-1		6.5.2-7A	
001-44			CVFY	FCP	FCP NO 3 SUBSTACK 2 DELTA VOLTAGE	V45V0303A1	NOLO	150	MV	LCC-1		6.5.2-7A	
001-45			CVFY	FCP	FCP NO 3 SUBSTACK 3 DELTA VOLTAGE	V45V0304A1	NOLO	150	MV	LCC-1		6.5.2-7A	
					$ SRB APU STATUS CHECK $								
002-00			CVFY	BHYD	LH EVENT APU A ISLN VALVE CLOSED	B46X1853X1	ON			1 OF 2		2.1-10	
002-01			CVFY	BHYD	LH EVENT APU A ISLN VALVE OPEN	B46X1851X1	OFF			LCC-3		2.1-10	
002-02			CVFY	BHYD	LH EVENT APU B ISLN VALVE CLOSED	B46X1854X1	ON			1 OF 2		2.1-10	
002-03			CVFY	BHYD	LH EVENT APU B ISLN VALVE OPEN	B46X1852X1	OFF			LCC-3		2.1-10	
002-04			CVFY	BHYD	RH EVENT APU A ISLN VALVE CLOSED	B46X2853X1	ON			1 OF 2		2.1-10	
002-05			CVFY	BHYD	RH EVENT APU A ISLN VALVE OPEN	B46X2851X1	OFF			LCC-3		2.1-10	
002-06			CVFY	BHYD	RH EVENT APU B ISLN VALVE CLOSED	B46X2854X1	ON			1 OF 2		2.1-10	
002-07			CVFY	BHYD	RH EVENT APU B ISLN VALVE OPEN	B46X2852X1	OFF			LCC-3		2.1-10	
002-08			CVFY	BHYD	RH EV APU SEC SP CON VLV CLD SYS B	B46X2863X1	ON			LCC-3		2.1-10	
002-09			CVFY	BHYD	LH EV APU SEC SP CON VLV CLD SYS A	B46X1861X1	ON			LCC-3		2.1-10	
002-10			CVFY	BHYD	LH EV APU SEC SP CON VLV CLD SYS B	B46X1863X1	ON			LCC-3		2.1-10	
002-11			CVFY	BHYD	RH EV APU SEC SP CON VLV CLD SYS A	B46X2861X1	ON			LCC-3		2.1-10	
					$ G/N STATUS CHECK $								
003-00			CVFY	GNS	IMU 1 GOOD	V71X2021B1	ON			LCC-3		6.9.10-26	
003-01			CVFY	GNS	IMU 2 GOOD	V71X3021B1	ON			LCC-3		6.9.10-26	
003-02			CVFY	GNS	IMU 3 GOOD	V71X4021B1	ON			LCC-3		6.9.10-26	
003-03			CVFY	GNS	IMU 1 REDUNDANT RATE FAIL	V95X0033X1	OFF			LCC-3		6.9.10-32	
003-04			CVFY	GNS	IMU 1 INNER RESOLVER NULL FAIL	V95X0034X1	OFF			LCC-3		6.9.10-32	
003-05			CVFY	GNS	IMU 1 VELOCITY LIMIT FAIL	V95X0035X1	OFF			LCC-3		6.9.10-32	
003-06			CVFY	GNS	IMU 1 RESOLVER LIMIT FAIL	V95X0037X1	OFF			LCC-3		6.9.10-32	
003-07			CVFY	GNS	IMU 1 PLATFORM TEMP SAFE	V71X2405X1	ON			LCC-3		6.9.10-29	
003-08			CVFY	GNS	IMU 1 CAPRI TEMP SAFE	V71X2407X1	ON			LCC-3		6.9.10-29	
003-09			CVFY	GNS	IMU 2 REDUNDANT RATE FAIL	V95X1033X1	OFF			LCC-3		6.9.10-32	
003-10			CVFY	GNS	IMU 2 INNER RESOLVER NULL FAIL	V95X1034X1	OFF			LCC-3		6.9.10-32	
003-11			CVFY	GNS	IMU 2 VELOCITY LIMIT FAIL	V95X1035X1	OFF			LCC-3		6.9.10-32	
003-12			CVFY	GNS	IMU 2 RESOLVER LIMIT FAIL	V95X1037X1	OFF			LCC-3		6.9.10-32	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
003-13			CVFY	GNS	IMU 2 PLATFORM TEMP SAFE	V71X3405X1	ON			LCC-3		6.9.10-29	
003-14			CVFY	GNS	IMU 2 CAPRI TEMP SAFE	V71X3407X1	ON			LCC-3		6.9.10-29	
003-15			CVFY	GNS	IMU 3 REDUNDANT RATE FAIL	V95X2033X1	OFF			LCC-3		6.9.10-32	
003-16			CVFY	GNS	IMU 3 INNER RESOLVER NULL FAIL	V95X2034X1	OFF			LCC-3		6.9.10-32	
003-17			CVFY	GNS	IMU 3 VELOCITY LIMIT FAIL	V95X2035X1	OFF			LCC-3		6.9.10-32	
003-18			CVFY	GNS	IMU 3 RESOLVER LIMIT FAIL	V95X2037X1	OFF			LCC-3		6.9.10-32	
003-19			CVFY	GNS	IMU 3 PLATFORM TEMP SAFE	V71X4405X1	ON			LCC-3		6.9.10-29	
003-20			CVFY	GNS	IMU 3 CAPRI SAFE	V71X4407X1	ON			LCC-3		6.9.10-29	
003-21			CVFY	GNS	IMU FAILURE	V72X4560X1	OFF			LCC-3			
003-22			CVFY	GNS	IMU 1 WORD 13 ECHO FAIL	V95X0030X1	OFF			LCC-3		6.9.10-32	
003-23			CVFY	GNS	IMU 2 WORD 13 ECHO FAIL	V95X1030X1	OFF			LCC-3		6.9.10-32	
003-24			CVFY	GNS	IMU 3 WORD 13 ECHO FAIL	V95X2030X1	OFF			LCC-3		6.9.10-32	
003-25			CVFY	GNS	IMU 1 PLATFORM TEMP READY	V71X2404X1	ON			LCC-3		6.9.10-28	
003-26			CVFY	GNS	IMU 1 CAPRI TEMP READY	V71X2406X1	ON			LCC-3		6.9.10-28	
003-27			CVFY	GNS	IMU 2 PLATFORM TEMP READY	V71X3404X1	ON			LCC-3		6.9.10-28	
003-28			CVFY	GNS	IMU 2 CAPRI TEMP READY	V71X3406X1	ON			LCC-3		6.9.10-28	
003-29			CVFY	GNS	IMU 3 PLATFORM TEMP READY	V71X4404X1	ON			LCC-3		6.9.10-28	
003-30			CVFY	GNS	IMU 3 CAPRI TEMP READY	V71X4406X1	ON			LCC-3		6.9.10-28	
003-31			CVFY	GNS	IMU 1 WORD 14 ECHO FAIL	V95X0031X1	OFF			LCC-3		6.9.10-32	
003-32			CVFY	GNS	IMU 2 WORD 14 ECHO FAIL	V95X1031X1	OFF			LCC-3		6.9.10-32	
003-33			CVFY	GNS	IMU 3 WORD 14 ECHO FAIL	V95X2031X1	OFF			LCC-3		6.9.10-32	
					$ ORB RGA CHECKS $								
004-00			CVFY	GNS	RGA 1 ROLL SRMD IND	V79X1860X1	ON			LCC-3		6.9.10-41	
004-01			CVFY	GNS	RGA 1 PITCH SMRD IND	V79X1861X1	ON			LCC-3		6.9.10-41	
004-02			CVFY	GNS	RGA 1 YAW SMRD IND	V79X1862X1	ON			LCC-3		6.9.10-41	
004-03			CVFY	GNS	RGA 2 ROLL SMRD IND	V79X1865X1	ON			LCC-3		6.9.10-41	
004-04			CVFY	GNS	RGA 2 PITCH SMRD IND	V79X1866X1	ON			LCC-3		6.9.10-41	
004-05			CVFY	GNS	RGA 2 YAW SMRD IND	V79X1867X1	ON			LCC-3		6.9.10-41	
004-06			CVFY	GNS	RGA 3 ROLL SMRD IND	V79X1870X1	ON			LCC-3		6.9.10-41	
004-07			CVFY	GNS	RGA 3 PITCH SMRD IND	V79X1871X1	ON			LCC-3		6.9.10-41	
004-08			CVFY	GNS	RGA 3 YAW SMRD IND	V79X1872X1	ON			LCC-3		6.9.10-41	
004-09			CVFY	GNS	RGA 4 ROLL SMRD IND	V79X1875X1	ON			LCC-3		6.9.10-41	
004-10			CVFY	GNS	RGA 4 PITCH SMRD IND	V79X1876X1	ON			LCC-3		6.9.10-41	
004-11			CVFY	GNS	RGA 4 YAW SMRD IND	V79X1877X1	ON			LCC-3		6.9.10-41	
					$ KSC SS WATER SYSTEM STATUS CHECK $								
005-00		K	CVFY	WATR	SS PNEUMATIC PRESSURE PT1 STATUS	GWDPPT01A	1200	1600	PSIG	1 OF 2		3.1-18	
005-01		K	CVFY	WATR	SS PNEUMATIC PRESSURE PT2 STATUS	GWDPPT02A	1200	1600	PSIG	LCC-3		3.1-18	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
005-02		K	CVFY	WATR	SS PRE L/O VLV - LS V27 CL IND	GWDXPT71E	ON			LCC-1			
005-03		K	CVFY	WATR	SS PRE L/O VLV - LS V26 CL IND	GWDXPT73E	ON			LCC-1			
005-04		K	CVFY	WATR	SS PRE L/O VLV - LS V25 CL IND	GWDXPT75E	ON			LCC-1			
005-05		K	CVFY	WATR	SS POST L/O VLV - LS V30 CL IND	GWDXPT65E	ON			LCC-1			
005-06		K	CVFY	WATR	SS POST L/O VLV - LS V29 CL IND	GWDXPT67E	ON			LCC-1			
005-07		K	CVFY	WATR	SS POST L/O VLV - LS V28 CL IND	GWDXPT69E	ON			LCC-1			
005-08		K	CVFY	WATR	SS PRE L/O VLVS - OPEN CMD	GWDKPT30ER	OFF			LCC-1			
005-09		K	CVFY	WATR	SS PRE L/O VLVS - OPEN CMD	GWDKPT32ER	OFF			LCC-1			
005-10		K	CVFY	WATR	SS POST/LO VLVS OP - CMD IND	GWDXPT49E	OFF			LCC-1			
005-11		K	CVFY	WATR	SS PRE/LO VLVS OP - CMD IND	GWDXPT33E	OFF			LCC-1			
005-12		K	CVFY	WATR	SS PRE L/O VLVS CLOSE CMD IND	GWDXPT42E	ON			LCC-1			
005-13		K	CVFY	WATR	SS POST L/O VLVS CLOSE CMD IND	GWDXPT43E	ON			LCC-1			
005-14		K	CVFY	WATR	SS TANK WATER LEVEL	GWDQPT83A	258.2	NOHI	FT	1 OF 2		3.1-19	
005-15		K	CVFY	WATR	SS TANK WATER LEVEL	GWDQPT84A	258.2	NOHI	FT	LCC-1		3.1-19	
005-16		K	CVFY	WATR	SS SOL PWR BUS ON IND	GWDXPT29E	ON			1 OF 2		3.1-21	
005-17		K	CVFY	WATR	SS SOL PWR BUS ON IND	GWDXPT53E	ON			LCC-3		3.1-21	
					$ VLS SS WATER SYSTEM STATUS CHECK $								
005-50		V	CVFY	WATR	SSW PRI WATER LEVEL IND	XWDQVF04A	305.1	NOHI	FT	1 OF 2			
005-51		V	CVFY	WATR	SSW SEC WATER LEVEL IND	XWDQVF14A	305.1	NOHI	FT	LCC-1			
005-52		V	CVFY	WATR	SSW PRI GN2 SUPPLY PRESS	XWDPVF24A	1500	NOHI	PSIG	1 OF 2			
005-53		V	CVFY	WATR	SSW SEC GN2 SUPPLY PRESS	XWDPVF34A	1500	NOHI	PSIG	LCC-3			
005-54		V	CVFY	WATR	SSW PRI GN2 VLV CLOSING PRESS	XWDPVF44A	1500	NOHI	PSIG	1 OF 2			
005-55		V	CVFY	WATR	SSW SEC GN2 VLV CLOSING PRESS	XWDPVF54A	1500	NOHI	PSIG	LCC-2			
					$ NAV STATUS CHECK $								
006-00			CVFY	NAVA	TACAN NO 1 POWER STATUS	V74X0071X1	ON			2 OF 3		6.9.5-2	
006-01			CVFY	NAVA	TACAN NO 2 POWER STATUS	V74X0081X1	ON			2 OF 3		6.9.5-2	
006-02			CVFY	NAVA	TACAN NO 3 POWER STATUS	V74X0091X1	ON			LCC-1		6.9.5-2	
					$ SSME LEAK CHECK MONITORING $								
007-00			CVFY	SSME	ME-1 OPOV LOX SUPPLY LINE TEMP#1	E41T1151A1	-160	NOHI	DEGF	1 OF 2		6.2.2-17	
007-01			CVFY	SSME	ME-1 OPOV LOX SUPPLY LINE TEMP#2	E41T1152A1	-160	NOHI	DEGF	LCC-3		6.2.2-17	
007-02			CVFY	SSME	ME-2 OPOV LOX SUPPLY LINE TEMP#1	E41T2151A1	-160	NOHI	DEGF	1 OF 2		6.2.2-17	
007-03			CVFY	SSME	ME-2 OPOV LOX SUPPLY LINE TEMP#2	E41T2152A1	-160	NOHI	DEGF	LCC-3		6.2.2-17	
007-04			CVFY	SSME	ME-3 OPOV LOX SUPPLY LINE TEMP#1	E41T3151A1	-160	NOHI	DEGF	1 OF 2		6.2.2-17	

SEQ	TIME CD CLOCK	SI TE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SD
007-05			CVFY	SSME	ME-3 OPOV LOX SUPPLY LINE TEMP#2	E41T3152A1	-160	NOHI	DEGF	LCC-3		6.2.2-17	
007-06			CVFY	SSME	ME-1 MFV NO1 DNSTREAM SKIN TEMP	E41T1153A1	-250	NOHI	DEGF	1 OF 2		6.2.2-18	
007-07			CVFY	SSME	ME-1 MFV NO2 DNSTREAM SKIN TEMP	E41T1154A1	-250	NOHI	DEGF	LCC-3	TIL T-1M	6.2.2-18	
007-08			CVFY	SSME	ME-2 MFV NO1 DNSTREAM SKIN TEMP	E41T2153A1	-250	NOHI	DEGF	1 OF 2		6.2.2-18	
007-09			CVFY	SSME	ME-2 MFV NO2 DNSTREAM SKIN TEMP	E41T2154A1	-250	NOHI	DEGF	LCC-3	TIL T-1M	6.2.2-18	
007-10			CVFY	SSME	ME-3 MFV NO1 DNSTREAM SKIN TEMP	E41T3153A1	-250	NOHI	DEGF	1 OF 2		6.2.2-18	
007-11			CVFY	SSME	ME-3 MFV NO2 DNSTREAM SKIN TEMP	E41T3154A1	-250	NOHI	DEGF	LCC-3	TIL T-1M	6.2.2-18	
					$ DPS STATUS CHECK $								
008-00			CVFY	DPS	GPC 1 FAIL	V72X7011E1	OFF			LCC-4		6.9.3-3	
008-01			CVFY	DPS	GPC 2 FAIL	V72X7012E1	OFF			LCC-4		6.9.3-3	
008-02			CVFY	DPS	GPC 3 FAIL	V72X7013E1	OFF			LCC-4		6.9.3-3	
008-03			CVFY	DPS	GPC 4 FAIL	V72X7014E1	OFF			LCC-4		6.9.3-3	
008-04			CVFY	DPS	GPC 5 FAIL	V72X7015E1	OFF			LCC-4		6.9.24-12	
008-05			CVFY	DPS	FF1 INPUT PROM SEQ 1/2 BYP (MFE)	V91X2242XX	OFF			LCC-3		6.9.3-5	
008-06			CVFY	DPS	FF2 INPUT PROM SEQ 1/2 BYP (MFE)	V91X2243XX	OFF			LCC-3		6.9.3-5	
008-07			CVFY	DPS	FF3 INPUT PROM SEQ 1/2 BYP (MFE)	V91X2244XX	OFF			LCC-3		6.9.3-5	
008-08			CVFY	DPS	FF4 INPUT PROM SEQ 1/2 BYP (HFE)	V91X2245XX	OFF			LCC-3		6.9.3-5	
008-09			CVFY	DPS	FF1 INPUT PROM SEQ 2/6 BYPASS	V91X2246XX	OFF			LCC-3		6.9.3-5	
008-10			CVFY	DPS	FF2 INPUT PROM SEQ 2/6 BYPASS	V91X2247XX	OFF			LCC-3		6.9.3-5	
008-11			CVFY	DPS	FF3 INPUT PROM SEQ 2/6 BYPASS	V91X2248XX	OFF			LCC-3		6.9.3-5	
008-12			CVFY	DPS	FF4 INPUT PROM SEQ 2/6 BYPASS	V91X2249XX	OFF			LCC-3		6.9.3-5	
008-13			CVFY	DPS	FF1 TACAN/RA BYPASS	V91X2253XX	OFF			LCC-3		6.9.3-5	
008-14			CVFY	DPS	FF2 TACAN/RA BYPASS	V91X2254XX	OFF			LCC-3		6.9.3-5	
008-15			CVFY	DPS	FF3 TACAN/RA BYPASS	V91X2255XX	OFF			LCC-3		6.9.3-5	
008-16			CVFY	DPS	FF1 ADTA BYPASS	V91X2261XX	OFF			LCC-3		6.9.3-5	
008-17			CVFY	DPS	FF2 ADTA BYPASS	V91X2262XX	OFF			LCC-3		6.9.3-5	
008-18			CVFY	DPS	FF3 ADTA BYPASS	V91X2263XX	OFF			LCC-3		6.9.3-5	
008-19			CVFY	DPS	FF4 ADTA BYPASS	V91X2264XX	OFF			LCC-3		6.9.3-5	
008-20			CVFY	DPS	FF1 MTU BYPASS	V91X2277XX	OFF			2 OF 3		6.9.3-5	
008-21			CVFY	DPS	FF2 MTU BYPASS	V91X2278XX	OFF			2 OF 3		6.9.3-5	
008-22			CVFY	DPS	FF3 MTU BYPASS	V91X2279XX	OFF			LCC-3		6.9.3-5	
008-23			CVFY	DPS	FA1 INPUT PROM SEQ 1/2 BYP(MFE)	V91X2802XX	OFF			LCC-3		6.9.3-5	
008-24			CVFY	DPS	FA2 INPUT PROM SEQ 1/2 BYP(MFE)	V91X2803XX	OFF			LCC-3		6.9.3-5	
008-25			CVFY	DPS	FA3 INPUT PROM SEQ 1/2 BYP(MFE)	V91X2804XX	OFF			LCC-3		6.9.3-5	
008-26			CVFY	DPS	FA4 INPUT PROM SEQ 1/2 BYP(MFE)	V91X2805XX	OFF			LCC-3		6.9.3-5	
008-27			CVFY	DPS	FA1 INPUT PROM SEQ3-10 BYPASS(HF	V91X2806XX	OFF			LCC-3		6.9.3-5	
008-28			CVFY	DPS	FA2 INPUT PROM SEQ3-10 BYPASS(HF	V91X2807XX	OFF			LCC-3		6.9.3-5	
008-29			CVFY	DPS	FA3 INPUT PROM SEQ3-10 BYPASS(HF	V91X2808XX	OFF			LCC-3		6.9.3-5	
008-30			CVFY	DPS	FA4 INPUT PROM SEQ3-10 BYPASS(HF	V91X2809XX	OFF			LCC-3		6.9.3-5	
008-31			CVFY	DPS	LL1/P1-P2 SRB PROM BYPASS (SRB)	V91X2831XX	OFF			LCC-4		2.3-14	

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
008-32			CVFY	DPS	LL2/P1-P2 SRB PROM BYPASS (SRB)	V91X2833XX	OFF			LCC-4		2.3-14	
008-33			CVFY	DPS	LR1/P1-P2 SRB PROM BYPASS (SRB)	V91X2835XX	OFF			LCC-4		2.3-14	
008-34			CVFY	DPS	LR2/P1-P2 SRB PROM BYPASS (SRB)	V91X2837XX	OFF			LCC-4		2.3-14	
008-35			CVFY	DPS	FF1 NSP DISCRETES BYPASS	V91X2900XX	OFF			LCC-3		6.9.3-5	
008-36			CVFY	DPS	FF3 NSP DISCRETES BYPASS	V91X2901XX	OFF			LCC-3		6.9.3-5	
008-37			CVFY	DPS	FF1 NSP DATA BYPASS	V91X2902XX	OFF			1 OF 2		6.9.3-5	
008-38			CVFY	DPS	FF3 NSP DATA BYPASS	V91X2903XX	OFF			LCC-3		6.9.3-5	
008-39			CVFY	DPS	FF1 MDM RETURN WORD BYPASS(HFE)	V91X2904XX	OFF			LCC-3		6.9.3-6	
008-40			CVFY	DPS	FF2 MDM RETURN WORD BYPASS(HFE)	V91X2905XX	OFF			LCC-3		6.9.3-6	
008-41			CVFY	DPS	FF3 MDM RETURN WORD BYPASS(HFE)	V91X2906XX	OFF			LCC-3		6.9.3-6	
008-42			CVFY	DPS	FF4 MDM RETURN WORD BYPASS(HFE)	V91X2907XX	OFF			LCC-3		6.9.3-6	
008-43			CVFY	DPS	FA2 HYDR SYS PRESS C BYPASS	V91X2917XX	OFF			LCC-3		6.9.3-6	
008-44			CVFY	DPS	FA3 OMS CHAMBER PRESS LEFT BYPAS	V91X2918XX	OFF			LCC-3		6.9.3-6	
008-45			CVFY	DPS	FA4 OMS CHAMBER PRESS RIGHT BYP	V91X2919XX	OFF			LCC-3		6.9.3-6	
008-46			CVFY	DPS	FA1 MDM RETURN WORD BYPASS(HFE)	V91X2920XX	OFF			LCC-3		6.9.3-6	
008-47			CVFY	DPS	FA2 MDM RETURN WORD BYPASS(HFE)	V91X2921XX	OFF			LCC-3		6.9.3-6	
008-48			CVFY	DPS	FA3 MDM RETURN WORD BYPASS(HFE)	V91X2922XX	OFF			LCC-3		6.9.3-6	
008-49			CVFY	DPS	FA4 MDM RETURN WORD BYPASS(HFE)	V91X2923XX	OFF			LCC-3		6.9.3-6	
008-50			CVFY	DPS	FF1 IMU DSCRS BYPASS (IMU INPUT)	V91X2924XX	OFF			LCC-3		6.9.3-6	
008-51			CVFY	DPS	FF2 IMU DSCRS BYPASS (IMU INPUT)	V91X2925XX	OFF			LCC-3		6.9.3-6	
008-52			CVFY	DPS	FF3 IMU DSCRS BYPASS (IMU INPUT)	V91X2926XX	OFF			LCC-3		6.9.3-6	
008-53			CVFY	DPS	EIU1/P1 DATA BYPASS (HFE INPUT)	V91X2928XX	OFF			LCC-3		6.9.3-6	
008-54			CVFY	DPS	EIU2/P1 DATA BYPASS (HFE INPUT)	V91X2931XX	OFF			LCC-3		6.9.3-6	
008-55			CVFY	DPS	EIU3/P1 DATA BYPASS (HFE INPUT)	V91X2934XX	OFF			LCC-3		6.9.3-6	
008-56					$ DELETED $								
008-57					$ DELETED $								
008-58			CVFY	DPS	GPC 1 TIME SOURCE GPC/MTU	V91X1716XX	ON			LCC-3			
008-59			CVFY	DPS	GPC 2 TIME SOURCE GPC/MTU	V91X1717XX	ON			LCC-3			
008-60			CVFY	DPS	GPC 3 TIME SOURCE GPC/MTU	V91X1718XX	ON			LCC-3			
008-61			CVFY	DPS	GPC 4 TIME SOURCE GPC/MTU	V91X1719XX	ON			LCC-3			
008-62			CVFY	DPS	GPC 1 TMP SOURCE	V91Q1710CX	B001	B010		LCC-3			
008-63			CVFY	DPS	GPC 2 TMP SOURCE	V91Q1711CX	B001	B010		LCC-3			
008-64			CVFY	DPS	GPC 3 TMP SOURCE	V91Q1712CX	B001	B010		LCC-3			
008-65			CVFY	DPS	GPC 4 TMP SOURCE	V91Q1713CX	B001	B010		LCC-3			
008-66			CVFY	DPS	DEU #1 BITE STATUS PRESENT B14	V92X6722XX	OFF			LCC-3			
008-67			CVFY	DPS	DEU #2 BITE STATUS PRESENT B14	V92X6781XX	OFF			LCC-3			
008-68			CVFY	DPS	GPC1 MMU1 READY	V92X7368XX	ON			3 OF 4		6.9.3-10	
008-69			CVFY	DPS	GPC2 MMU1 READY	V92X7428XX	ON			3 OF 4		6.9.3-10	
008-70			CVFY	DPS	GPC3 MMU1 READY	V92X7488XX	ON			3 OF 4		6.9.3-10	
008-71			CVFY	DPS	GPC4 MMU1 READY	V92X7548XX	ON			LCC-3		6.9.3-10	
008-72			CVFY	DPS	GPC1 MMU2 READY	V92X7369XX	ON			3 OF 4		6.9.3-10	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS F D
008-73			CVFY	DPS	GPC2 MMU2 READY	V92X7429XX	ON			3 OF 4		6.9.3-10	
008-74			CVFY	DPS	GPC3 MMU2 READY	V92X7489XX	ON			3 OF 4		6.9.3-10	
008-75			CVFY	DPS	GPC4 MMU2 READY	V92X7549XX	ON			LCC-3		6.9.3-10	
008-76			CVFY	DPS	GPC1 MMU1 IPL SELECT	V92X7366XX	OFF			2 OF 4		6.9.3-11	
008-77			CVFY	DPS	GPC2 MMU1 IPL SELECT	V92X7426XX	OFF			2 OF 4		6.9.3-11	
008-78			CVFY	DPS	GPC3 MMU1 IPL SELECT	V92X7486XX	OFF			2 OF 4		6.9.3-11	
008-79			CVFY	DPS	GPC4 MMU1 IPL SELECT	V92X7546XX	OFF			LCC-3		6.9.3-11	
008-80			CVFY	DPS	GPC1 MMU2 IPL SELECT	V92X7367XX	OFF			2 OF 4		6.9.3-11	
008-81			CVFY	DPS	GPC2 MMU2 IPL SELECT	V92X7427XX	OFF			2 OF 4		6.9.3-11	
008-82			CVFY	DPS	GPC3 MMU2 IPL SELECT	V92X7487XX	OFF			2 OF 4		6.9.3-11	
008-83			CVFY	DPS	GPC4 MMU2 IPL SELECT	V92X7547XX	OFF			LCC-3		6.9.3-11	
					$ SRB ORDNANCE SYSTEMS STATUS CHECK $								
009-00			CVFY	BELE	LH VOLTAGE OPERATIONAL BUS A	B76V1600H	24.8	32.0	V	1 OF 2		2.3-4	
009-01			CVFY	BELE	LH VOLTAGE OPERATIONAL BUS A	B76V1600C1	25.5	31.3	V	LCC-3		2.3-4	
009-02			CVFY	BELE	RH VOLTAGE OPERATIONAL BUS A	B76V2600H	24.8	32.0	V	1 OF 2		2.3-4	
009-03			CVFY	BELE	RH VOLTAGE OPERATIONAL BUS A	B76V2600C1	25.5	31.3	V	LCC-3		2.3-4	
009-04			CVFY	BELE	LH VOLTAGE OPERATIONAL BUS B	B76V1601H	24.8	32.0	V	1 OF 2		2.3-4	
009-05			CVFY	BELE	LH VOLTAGE OPERATIONAL BUS B	B76V1601C1	25.5	31.3	V	LCC-3		2.3-4	
009-06			CVFY	BELE	RH VOLTAGE OPERATIONAL BUS B	B76V2601H	24.8	32.0	V	1 OF 2		2.3-4	
009-07			CVFY	BELE	RH VOLTAGE OPERATIONAL BUS B	B76V2601C1	25.5	31.3	V	LCC-3		2.3-4	
009-08			CVFY	BPYR	RH VOLTAGE FWD THR PIN PIC CAP A	B55V2605C1	NOLO	1.5	V	LCC-3		2.6-4	
009-09			CVFY	BPYR	LH VOLTAGE FWD THR PIN PIC CAP B	B55V1606C1	NOLO	1.5	V	LCC-3		2.6-4	
009-10			CVFY	BPYR	RH VOLTAGE FWD THR PIN PIC CAP B	B55V2606C1	NOLO	1.5	V	LCC-3		2.6-4	
009-11			CVFY	BPYR	LH VOLTAGE AFT UPR BRC PIC CAP A	B55V1607C1	NOLO	1.5	V	LCC-3		2.6-5	
009-12			CVFY	BPYR	RH VOLTAGE AFT UPR BRC PIC CAP A	B55V2607C1	NOLO	1.5	V	LCC-3		2.6-5	
009-13			CVFY	BPYR	LH VOLTAGE AFT UPR BRC PIC CAP B	B55V1608C1	NOLO	1.5	V	LCC-3		2.6-5	
009-14			CVFY	BPYR	LH VOLTAGE AFT MID BRC PIC CAP A	B55V1609C1	NOLO	1.5	V	LCC-3		2.6-5	
009-15			CVFY	BPYR	RH VOLTAGE AFT MID BRC PIC CAP A	B55V2609C1	NOLO	1.5	V	LCC-3		2.6-5	
009-16			CVFY	BPYR	RH VOLTAGE AFT MID BRC PIC CAP B	B55V2610C1	NOLO	1.5	V	LCC-3		2.6-5	
009-17			CVFY	BPYR	LH VOLTAGE AFT LWR BRC PIC CAP A	B55V1611C1	NOLO	1.5	V	LCC-3		2.6-5	
009-18			CVFY	BPYR	RH VOLTAGE AFT LWR BRC PIC CAP A	B55V2611C1	NOLO	1.5	V	LCC-3		2.6-5	
009-19			CVFY	BPYR	LH VOLTAGE AFT LWR BRC PIC CAB B	B55V1612C1	NOLO	1.5	V	LCC-3		2.6-5	
009-20			CVFY	BPYR	RH VOLTAGE AFT LWR BRC PIC CAB B	B55V2612C1	NOLO	1.5	V	LCC-3		2.6-5	
009-21			CVFY	BPYR	LH VOLTAGE FWD SEP MOT PIC CAP A	B55V1613C1	NOLO	1.5	V	LCC-3		2.6-6	
009-22			CVFY	BPYR	LH VOLTAGE FWD SEP MOT PIC CAP B	B55V1614C1	NOLO	1.5	V	LCC-3		2.6-6	
009-23			CVFY	BPYR	RH VOLTAGE FWD SEP MOT PIC CAP B	B55V2614C1	NOLO	1.5	V	LCC-3		2.6-6	
009-24			CVFY	BPYR	LH VOLTAGE AFT SEP MOT PIC CAP A	B55V1615C1	NOLO	1.5	V	LCC-3		2.6-7	
009-25			CVFY	BPYR	RH VOLTAGE AFT SEP MOT PIC CAP A	B55V2615C1	NOLO	1.5	V	LCC-3		2.6-7	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SSFD
009-26			CVFY	BPYR	LH VOLTAGE AFT SEP MOT PIC CAP B	B55V1616C1	NOLO	1.5	V	LCC-3		2.6-7	
009-27			CVFY	BPYR	RH VOLTAGE AFT SEP MOT PIC CAP B	B55V2616C1	NOLO	1.5	V	LCC-3		2.6-7	
009-28			CVFY	BPYR	LH VOLTAGE NOSE CAP RLSE PIC CAP	B55V1617C1	NOLO	1.5	V	LCC-3		2.7-6	
009-29			CVFY	BPYR	RH VOLTAGE NOSE CAP RLSE PIC CAP	B55V2617C1	NOLO	1.5	V	LCC-3		2.7-6	
009-30			CVFY	BPYR	LH VOLTAGE FRUSTRUM RLSE PIC CAP	B55V1618C1	NOLO	1.5	V	LCC-3		2.7-7	
009-31			CVFY	BPYR	RH VOLTAGE FRUSTRUM RLSE PIC CAP	B55V2618C1	NOLO	1.5	V	LCC-3		2.7-7	
009-32			CVFY	BPYR	LH VOLTAGE MN CHUTE DISC PIC CAP	B55V1620C1	NOLO	1.5	V	LCC-3		2.7-4	
009-33			CVFY	BPYR	RH VOLTAGE MN CHUTE DISC PIC CAP	B55V2620C1	NOLO	1.5	V	LCC-3		2.7-4	
009-34			CVFY	BPYR	LH VOLTAGE NOZ EXT SEV PIC CAP	B55V1619C1	NOLO	1.5	V	LCC-3		2.7-5	
009-35			CVFY	BPYR	RH VOLTAGE NOZ EXT SEV PIC CAP	B55V2619C1	NOLO	1.5	V	LCC-3		2.7-5	
					$ EPDC STATUS CHECK $								
010-00					$ DELETED $								
010-01			CVFY	EPDC	AC BUS 1 PHASE A VOLTS	V76V1500A1	115	120	VAC	LCC-3		6.9.7-6	
010-02					$ DELETED $								
010-03			CVFY	EPDC	AC BUS 1 PHASE B VOLTS	V76V1501A1	115	120	VAC	LCC-3		6.9.7-6	
010-04					$ DELETED $								
010-05			CVFY	EPDC	AC BUS 1 PHASE C VOLTS	V76V1502A1	115	120	VAC	LCC-3		6.9.7-6	
010-06					$ DELETED $								
010-07			CVFY	EPDC	AC BUS 2 PHASE A VOLTS	V76V1600A1	115	120	VAC	LCC-3		6.9.7-6	
010-08					$ DELETED $								
010-09			CVFY	EPDC	AC BUS 2 PHASE B VOLTS	V76V1601A1	115	120	VAC	LCC-3		6.9.7-6	
010-10					$ DELETED $								
010-11			CVFY	EPDC	AC BUS 2 PHASE C VOLTS	V76V1602A1	115	120	VAC	LCC-3		6.9.7-6	
010-12					$ DELETED $								
010-13			CVFY	EPDC	AC BUS 3 PHASE A VOLTS	V76V1700A1	115	120	VAC	LCC-3		6.9.7-6	
010-14					$ DELETED $								
010-15			CVFY	EPDC	AC BUS 3 PHASE B VOLTS	V76V1701A1	115	120	VAC	LCC-3		6.9.7-6	
010-16					$ DELETED $								
010-17			CVFY	EPDC	AC BUS 3 PHASE C VOLTS	V76V1702A1	115	120	VAC	LCC-3		6.9.7-6	
010-18			CVFY	EPDC	MN BUS A VOLTAGE	V76V0100A1	NOLO	32.0	V	1 OF 2		6.5.2-2	
010-19			CVFY	FCP	FUEL CELL NO 1 VOLTAGE	V45V0100A1	NOLO	32.0	V	LCC-3		6.5.2-2	PL
010-20			CVFY	EPDC	MN BUS B VOLTAGE	V76V0200A1	NOLO	32.0	V	1 OF 2		6.5.2-2	
010-21			CVFY	FCP	FUEL CELL NO 2 VOLTAGE	V45V0200A1	NOLO	32.0	V	LCC-3		6.5.2-2	PL
010-22			CVFY	EPDC	MN BUS C VOLTAGE	V76V0300A1	NOLO	32.0	V	1 OF 2		6.5.2-2	
010-23			CVFY	FCP	FUEL CELL NO 3 VOLTAGE	V45V0300A1	NOLO	32.0	V	LCC-3		6.5.2-2	PL
010-24			CVFY	EPDC	L SRB BUS A BACKUP PWR ON	V76X6775E1	OFF			LCC-3		6.9.7-9	
010-25			CVFY	EPDC	R SRB BUS A BACKUP PWR ON	V76X6776E1	OFF			LCC-3		6.9.7-9	
010-26			CVFY	EPDC	L SRB BUS B BACKUP PWR ON	V76X6777E1	OFF			LCC-3		6.9.7-9	
010-27			CVFY	EPDC	R SRB BUS B BACKUP PWR ON	V76X6778E1	OFF			LCC-3		6.9.7-9	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS F D
010-28			CVFY	EPDC	AFT PCA-5 VOLTAGE	V76V3092A1	26.5	32.0	V	1 OF 2		2.3-5	
010-29			CVFY	EPDC	AFT PCA-6 VOLTAGE	V76V3093A1	26.5	32.0	V	LCC-3		2.3-5	
010-30					$ DELETED $								
010-31					$ DELETED $								
010-32			CVFY	EPDC	MAIN BUS A CONT BUS AB2/CA2 RPC	V76X0125E1	ON			2 OF 3		6.9.7-4	
010-33			CVFY	EPDC	MAIN BUS B CONT BUS AB2/BC2 RPC	V76X0225E1	ON			2 OF 3		6.9.7-4	
010-34			CVFY	EPDC	MAIN BUS C CONT BUS BC2/CA2 RPC	V76X0325E1	ON			LCC-4		6.9.7-4	
010-35			CVFY	EPDC	MAIN BUS A CONT BUS AB3/CA3 RPC	V76X0126E1	ON			2 OF 3		6.9.7-4	
010-36			CVFY	EPDC	MAIN BUS B CONT BUS AB3/BC3 RPC	V76X0226E1	ON			2 OF 3		6.9.7-4	
010-37			CVFY	EPDC	MAIN BUS C CONT BUS BC3/CA3 RPC	V76X0326E1	ON			LCC-4		6.9.7-4	
010-38			CVFY	EPDC	MAIN BUS B CONT BUS AB1/BC1 RPC	V76X0224E1	ON			2 OF 3		6.9.7-4	
010-39			CVFY	EPDC	MAIN BUS C CONT BUS BC1/CA1 RPC	V76X0324E1	ON			2 OF 3		6.9.7-4	
010-40			CVFY	EPDC	MAIN BUS A CONT BUS AB1/CA1 RPC	V76X0124E1	ON			LCC-4		6.9.7-4	
010-41					$ 010-41 MOVED TO 010-34, 010-34 WAS DELETED $								
010-42					$ DELETED $								
010-43					$ 010-43 MOVED TO 010-37, 010-37 WAS DELETED $								
010-44					$ DELETED $								
010-45					$ 010-45 MOVED TO 010-40, 010-40 WAS DELETED $								
010-46					$ DELETED $								
010-47					$ DELETED $								
010-48			CVFY	EPDC	FC1 TO ESS1BC SWITCH ON	V76S0163E1	ON			2 OF 3		6.9.7-11	
010-49			CVFY	EPDC	MNB TO ESS1BC RPC ON	V76X0236E1	ON			2 OF 3		6.9.7-11	
010-50			CVFY	EPDC	MNC TO ESS1BC RPC ON	V76X0335E1	ON			LCC-3		6.9.7-11	
010-51			CVFY	EPDC	FC2 TO ESS2CA SWITCH ON	V76S0263E1	ON			2 OF 3		6.9.7-11	
010-52			CVFY	EPDC	MNC TO ESS2CA RPC ON	V76X0336E1	ON			2 OF 3		6.9.7-11	
010-53			CVFY	EPDC	MNA TO ESS2CA RPC ON	V76X0136E1	ON			LCC-3		6.9.7-11	
010-54			CVFY	EPDC	FC3 TO ESS3AB SWITCH ON	V76S0363E1	ON			2 OF 3		6.9.7-11	
010-55			CVFY	EPDC	MNA TO ESS3AB RPC ON	V76X0135E1	ON			2 OF 3		6.9.7-11	
010-56			CVFY	EPDC	MNB TO ESS3AB RPC ON	V76X0235E1	ON			LCC-3		6.9.7-11	
					$ COMM STATUS CHECK $								
011-00			CVFY	COMM	NSP 1 - FRAME SYNC LOCK	V74X5176E1	ON			1 OF 2		6.9.5-7	
011-01			CVFY	COMM	NSP 2 - FRAME SYNC LOCK	V74X5177E1	ON			LCC-3		6.9.5-7	
011-02			CVFY	COMM	GCIL ACTIVE	V74X5052E1	ON			1 OF 3		6.9.5-6	
011-03			CVFY	COMM	GCIL POWER SUPPLY 1 ON	V74X4730E1	ON			1 OF 3		6.9.5-6	
011-04			CVFY	COMM	GCIL POWER SUPPLY 2 ON	V74X4731E1	ON			LCC-3		6.9.5-6	
					$ INSTRUMENTATION STATUS CHECK $								
012-00			CVFY	INST	PCMMU BSR PWR GOOD	V75X2121D1	ON			LCC-3		6.9.6-2	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SSfD
012-01			CVFY	INST	PCMMU BSR MIU GOOD	V75X2122D1	ON			LCC-3		6.9.6-2	
012-02			CVFY	INST	PCMMU BSR PROM PAR GOOD	V75X2123D1	ON			LCC-3		6.9.6-2	
012-03			CVFY	INST	PCMMU BSR 128 KBS DNLK GOOD	V75X2124D1	ON			LCC-3		6.9.6-2	
012-04			CVFY	INST	PCMMU BSR 64 KBS DNLK GOOD	V75X2125D1	ON			LCC-3		6.9.6-2	
012-05			CVFY	INST	PCMMU BSR 128 KBS TLM PAR GOOD	V75X2126D1	ON			LCC-3		6.9.6-2	
012-06			CVFY	INST	PCMMU BSR 128 KBPS COUNTERS GOOD	V75X2127D1	ON			LCC-3		6.9.6-2	
012-07			CVFY	INST	PCMMU BSR 64 KBS COUNTERS GOOD	V75X2128D1	ON			LCC-3		6.9.6-2	
012-08			CVFY	INST	PCMMU BSR INPUT DATA VALID	V75X2130D1	ON			LCC-3		6.9.6-2	
012-09			CVFY	INST	OI RAM PARITY GOOD	V75X2131D1	ON			LCC-3		6.9.6-2	
012-10			CVFY	INST	PCMMU BSR PDI RAM GOOD	V75X2132D1	ON			LCC-3		6.9.6-2	
012-11			CVFY	INST	PCMMU BSR TOGGLE BUFFER GOOD	V75X2133D1	ON			LCC-3		6.9.6-2	
012-12			CVFY	INST	PCMMU BSR NO RESPONSE GPC	V75X2134D1	ON			LCC-3		6.9.6-2	
012-13					$ DELETED $								
					$ ENVIRONMENTAL CONTROL STATUS CHECK $								
013-00			CVFY	ECLS	O2 PARTIAL PRESSURE-A	V61P2511A1	2.8	3.43	PSIA	2 OF 3		6.8.1-17	
013-01			CVFY	ECLS	C2 PARTIAL PRESSURE-B	V61P2513A1	2.8	3.43	PSIA	2 OF 3		6.8.1-17	
013-02			CVFY	ECLS	O2 PARTIAL PRESSURE-C	V61P2515A1	2.8	3.43	PSIA	LCC-1		6.8.1-17	
013-03			CVFY	ECLS	CABIN FAN DELTA PRESS	V61P2556A1	4.2	6.8	INH2O	LCC-3		6.8.1-19	
013-04			CVFY	ECLS	H2O LOOP 1 PUMP OUTLET PRESS	V61P2600A1	55	73	PSIA	1 OF 3		6.8.1-23	
013-05			CVFY	ECLS	H2O LOOP 1 INTERCHANGER FLOW	V61R2742A1	667	NOHI	LBM/HR	1 OF 3		6.8.1-23	
013-06			CVFY	ECLS	H2O LOOP 1 DUMP DELTA PRESS	V61P2605A1	33	46	PSID	OR		6.8.1-23	
013-07			CVFY	ECLS	H2O LOOP 2 PUMP OUTLET PRESS	V61P2700A1	55	73	PSIA	1 OF 3		6.8.1-23	
013-08			CVFY	ECLS	H2O LOOP 2 INTERCHANGER FLOW	V61R2722A1	667	NOHI	LBM/HR	1 OF 3		6.8.1-23	
013-09			CVFY	ECLS	H2O LOOP 2 PUMP DELTA PRESS	V61P2705A1	33	46	PSID	LCC-3		6.8.1-23	
013-10			CVFY	ECLS	AVIONICS BAY 1 DELTA PRESS	V61P2642A1	1.46	4.00	INH2O	LCC-3		6.8.1-25	
013-11			CVFY	ECLS	AVIONICS BAY 2 DELTA PRESS	V61P2647A1	1.46	4.00	INH2O	LCC-3		6.8.1-25	
013-12			CVFY	ECLS	AVIONICS BAY 3 DELTA PRESS	V61P2658A1	2.16	4.50	INH2O	LCC-3		6.8.1-25	
013-13			CVFY	ECLS	IMU FAN B NORM SPD	V61X2861E1	ON			3 OF 3		6.8.1-28	
013-14			CVFY	ECLS	IMU FAN A NORM SPD	V61X2860E1	OFF			3 OF 3		6.8.1-28	
013-15			CVFY	ECLS	IMU FAN C NORM SPD	V61X2862E1	OFF			OR		6.8.1-28	
013-16			CVFY	ECLS	IMU DELTA PRESS	V61P2869A1	3	5	INH2O	LCC-3		6.8.1-28	
013-17			CVFY	ECLS	SMOKE DET-RTN AIR TO CAB HX	V62X0596E1	OFF			LCC-3		6.8.2-9	
013-18			CVFY	ECLS	SMOKE DETECTOR-LEFT FLIGHT DECK	V62X0606E1	OFF			LCC-3		6.8.2-9	
013-19			CVFY	ECLS	SMOKE DETECTOR-RIGHT FLIGHT DECK	V62X0607E1	OFF			LCC-3		6.8.2-9	
013-20			CVFY	ECLS	SMOKE DETECTOR-A AV BAY-2	V62X0610E1	OFF			LCC-3		6.8.2-10	
013-21			CVFY	ECLS	SMOKE DETECTOR-B AV BAY-2	V62X0611E1	OFF			LCC-3		6.8.2-10	
013-22			CVFY	ECLS	FIRE BOTTLE AV BAY 1 FULL/EMPTY	V62X0612E1	OFF			LCC-3		6.8.2-11	

SEQ	TIME CD CLOCK	SI	TE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	FD
013-23				CVFY	ECLS	SMOKE DETECTOR-A AV BAY-1	V62X0620E1	OFF			LCC-3		6.8.2-10		
013-24				CVFY	ECLS	SMOKE DETECTOR-B AV BAY-1	V62X0621E1	OFF			LCC-3		6.8.2-10		
013-25				CVFY	ECLS	FIRE BOTTLE AV BAY 2 FULL/EMPTY	V62X0622E1	OFF			LCC-3		6.8.2-11		
013-26				CVFY	ECLS	SMOKE DETECTOR-A AV BAY 3	V62X0630E1	OFF			LCC-3		6.8.2-10		
013-27				CVFY	ECLS	SMOKE DETECTOR-B AV BAY 3	V62X0631E1	OFF			LCC-3		6.8.2-10		
013-28				CVFY	ECLS	FIRE BOTTLE AV BAY 3 FULL/EMPTY	V62X0632E1	OFF			LCC-3		6.8.2-11		
013-29				CVFY	ECLS	PRI FLASH EVAP H2O ACCUM NORM	V63X1751E1	ON			1 OF 2		6.8.2-12		
013-30				CVFY	ECLS	SEC FLASH EVAP H2O ACCUM NORM	V63X1761E1	ON			LCC-1		6.8.2-12		
013-31				CVFY	ECLS	SYS 1 N2 SUPPLY PRESSURE	V61P2301A1	100	3300	PSIA	1 OF 2		6.8.1-10		
013-32				CVFY	ECLS	SYS 2 N2 SUPPLY PRESSURE	V61P2309A1	100	3300	PSIA	LCC-1		6.8.1-10		
013-33				CVFY	ECLS	SYS 1 N2 TANK 1 TEMP	V61T2406A1	20	150	DEGF	1 OF 4		6.8.1-10		
013-34				CVFY	ECLS	SYS 1 N2 TANK 2 TEMP	V61T2407A1	20	150	DEGF	1 OF 4		6.8.1-10		
013-35				CVFY	ECLS	SYS 2 N2 TANK 1 TEMP	V61T2408A1	20	150	DEGF	1 OF 4		6.8.1-10		
013-36				CVFY	ECLS	SYS 2 N2 TANK 2 TEMP	V61T2409A1	20	150	DEGF	LCC-1		6.8.1-10		
013-37				CVFY	ECLS	FCL 1 INTERCHANGER FLOWRATE	V63R1100A1	2150	NOHI	LBM/HR	2 OF 3		6.8.3-2		PL
013-38				CVFY	ECLS	FCL 1 PAYLOAD HX FLOWRATE	V63R1103A1	190	NOHI	LBM/HR	2 OF 3		6.8.3-2		PL
013-39				CVFY	ECLS	FCL 1 COLDPLATE NETWORK FLOWRATE	V63R1105A1	265	NOHI	LBM/HR	LCC-3		6.8.3-2		PL
013-40				CVFY	ECLS	FCL 1 PUMP INLET PRESS	V63P1108A1	92	117	PSIA	1 OF 2		6.8.3-4		
013-41				CVFY	ECLS	FCL 1 ACCUMULATOR QUANTITY	V63Q1130A1	23	39	PCT	LCC-3		6.8.3-4		
013-42				CVFY	ECLS	NH3 SYS A TANK TEMP	V63T1180A1	-50	170	DEGF	1 OF 2		6.8.3-6		
013-43				CVFY	ECLS	NH3 SYS B TANK TEMP	V63T1188A1	-50	170	DEGF	LCC-1		6.8.3-6		
013-44				CVFY	ECLS	NH3 SYS A TANK PRESS	V63P1196A1	5	505	PSIA	LCC-1		6.8.3-6		
013-45				CVFY	ECLS	NH3 SYS B TANK PRESS	V63P1197A1	5	505	PSIA	LCC-1		6.8.3-6		
013-46				CVFY	ECLS	FCL 1 EVAP OUT TEMP	V63T1207A1	30	50	DEGF	1 OF 2		6.8.3-9		
013-47				CVFY	ECLS	FCL 2 EVAP OUT TEMP	V63T1407A1	30	50	DEGF	LCC-3		6.8.3-9		
013-48				CVFY	ECLS	FCL 2 INTERCHANGER FLOWRATE	V63R1300A1	2150	NOHI	LBM/HR	2 OF 3		6.8.3-2		PL
013-49				CVFY	ECLS	FCL 2 PAYLOAD HX FLOWRATE	V63R1303A1	190	NOHI	LBM/HR	2 OF 3		6.8.3-2		PL
013-50				CVFY	ECLS	FCL 2 COLDPLATE NETWORK FLOWRATE	V63R1305A1	265	NOHI	LBM/HR	LCC-3		6.8.3-2		PL
013-51				CVFY	ECLS	FCL 2 PUMP INLET PRESS	V63P1308A1	77	100	PSIA	1 OF 2		6.8.3-4		
013-52				CVFY	ECLS	FCL 2 ACCUMULATOR QUANTITY	V63Q1330A1	23	39	PCT	LCC-3		6.8.3-4		
						$ KSC PVD STATUS CHECKS $									
014-00		K		CVFY	PVD	ORB FWD I/F PRESS	GECP2400A	30	86	INH2O	1 OF 2		3.1-4		
014-01		K		CVFY	PVD	ORB FWD DUCT PRESS	GECP4401A	35	96	INH2O	LCC-3		3.1-4		
014-02		K		CVFY	PVD	ORB PLB I/F PRESS	GECP2200A	20	86	INH2O	1 OF 2		3.1-5		PL
014-03		K		CVFY	PVD	ORB PLB DUCT PRESS	GECP4201A	24	96	INH2O	LCC-3		3.1-5		PL
014-04		K		CVFY	PVD	ORB AFT I/F PRESS	GECP2300A	24	86	INH2O	1 OF 2		3.1-3		

SEQ	TIME CD CLOCK	SI	T	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
014-05		K		CVFY	PVD	ORB AFT DUCT PRESS	GECP4301A	31	110	INH2O	LCC-3		3.1-3			
						$ VLS PVD STATUS CHECKS $										
014-50		V		CVFY	PVD	ECPT603 ORB FWD I/F PRESS	XECPVH09A	1.4	2.7.	PSI	1 OF 2					
014-51		V		CVFY	PVD	ECPT604 ORB FWD I/F PRESS	XECPVH29A	1.4	2.7	PSI	LCC-3					
014-52		V		CVFY	PVD	ECPT503 ORB PLB I/F PRESS	XECPVH59A	.4	2.5	PSI	1 OF 2					PL
014-53		V		CVFY	PVD	ECPT504 ORB PLB I/F PRESS	XECPVH69A	.4	2.5	PSI	LCC-3					PL
014-54		V		CVFY	PVD	ECPT605 ORB AFT I/F PRESS	XECPVH19A	.8	2.7	PSI	1 OF 2					
014-55		V		CVFY	PVD	ECPT606 ORB AFT I/F PRESS	XECPVH39A	.8	2.7	PSI	LCC-3					
						$ HYDRAULICS STATUS CHECKS $										
015-00				CVFY	HYD	HYD PWR SYS 1 RVSR FLUID VOLUME	V58Q0102A1	40	100	PCT	LCC-3		6.7.2-2			
015-01				CVFY	HYD	HYD PWR SYS 2 RVSR FLUID VOLUME	V58Q0202A1	40	100	PCT	LCC-3		6.7.2-2			
015-02				CVFY	HYD	HYD PWR SYS 3 RVSR FLUID VOLUME	V58Q0302A1	40	100	PCT	LCC-3		6.7.2-2			
						$ HYD H2O BLR TEMP CHECK $										
015-03				CVFY	HYD	HYD SYS1 H2O BLR TEMP NO.1	V58T0162A1	40	100	DEGF	LCC-1		6.7.2-8			
015-04				CVFY	HYD	HYD SYS1 H2O BLR TEMP NO.2	V58T0163A1	40	100	DEGF	LCC-1		6.7.2-8			
015-05				CVFY	HYD	HYD SYS2 H2O BLR TEMP NO.1	V58T0262A1	40	100	DEGF	LCC-1		6.7.2-8			
015-06				CVFY	HYD	HYD SYS2 H2O BLR TEMP NO.2	V58T0263A1	40	100	DEGF	LCC-1		6.7.2-8			
015-07				CVFY	HYD	HYD SYS3 H2O BLR TEMP NO.1	V58T0362A1	40	100	DEGF	LCC-1		6.7.2-8			
015-08				CVFY	HYD	HYD SYS3 H2O BLR TEMP NO.2	V58T0363A1	40	100	DEGF	LCC-1		6.7.2-8			
015-09						$ DELETED $										
015-10						$ DELETED $										
015-11						$ DELETED $										
015-12						$ DELETED $										
015-13						$ DELETED $										
015-14						$ DELETED $										
						$ APU STATUS CHECK $										
						$ APU GAS GENERATOR READY $										
016-00				CVFY	APU	APU1 GAS GENERATOR BED TEMP	V46T0122A1	204	436	DEGF	1 OF 2		6.6-13			
016-01				CVFY	APU	APU1 INJECT TUBE TEMP	V46T0174A1	204	436	DEGF	LCC-2		6.6-13			
016-02				CVFY	APU	APU2 GAS GENERATOR BED TEMP	V46T0222A1	204	436	DEGF	1 OF 2		6.6-13			
016-03				CVFY	APU	APU2 INJECT TUBE TEMP	V46T0274A1	204	436	DEGF	LCC-2		6.6-13			
016-04				CVFY	APU	APU3 GAS GENERATOR BED TEMP	V46T0322A1	204	436	DEGF	1 OF 2		6.6-13			

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	SF	SD
016-05			CVFY	APU	APU3 INJECT TUBE TEMP	V46T0374A1	204	436	DEGF	LCC-2		6.6-13			
					$ APU FUEL PUMP SEAL CHECK $										
016-06			CVFY	APU	APU 1 FU PMP DRN LN P-1	V46P0190A1	NOLO	25	PSIA	1 OF 2		6.6-32			
016-07			CVFY	APU	APU 1 FU PMP DRN LN P-2	V46P0191A1	NOLO	25	PSIA	LCC-3		6.6-32			
016-08			CVFY	APU	APU 2 FU PMP DRN LN P-1	V46P0290A1	NOLO	25	PSIA	1 OF 2		6.6-32			
016-09			CVFY	APU	APU 2 FU PMP DRN LN P-2	V46P0291A1	NOLO	25	PSIA	LCC-3		6.6-32			
016-10			CVFY	APU	APU 3 FU PMP DRN LN P-1	V46P0390A1	NOLO	25	PSIA	1 OF 2		6.6-32			
016-11			CVFY	APU	APU 3 FU PMP DRN LN P-2	V46P0391A1	NOLO	25	PSIA	LCC-3		6.6-32			
					$ APU GEARBOX GN2 SUPPLY CK $										
016-12			CVFY	APU	APU 1 GN2 BOTTLE PRESS	V46P0152A1	115	NOHI	PSIA	LCC-3		6.6-25			
016-13			CVFY	APU	APU 2 GN2 BOTTLE PRESS	V46P0252A1	115	NOHI	PSIA	LCC-3		6.6-25			
016-14			CVFY	APU	APU 3 GN2 BOTTLE PRESS	V46P0352A1	115	NOHI	PSIA	LCC-3		6.6-25			

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D

```
$*************************INTG SET CDT INTERRUPT TO INITIATE TERMINATE LOX REPLENISH***************
*                                                                                                  *
*AT INT   CMD  INTG  START G013 TERMINATE LOX REPLENISH G013      ON                               *
*                                                                                                  *
************************************************************************************************$
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$*************************INTG SET CDT INTERRUPT TO INITIATE CENTAUR PRESSURIZATION ***************
*                                                                                                  *
*AT INT   CMD  CINTG START G017 CENTAUR PRESSURIZATION  G017      ON                               *
*                                                                                                  *
************************************************************************************************$
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SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S F D
017-00	-26:00												
					$ CHECK RANGE-SAFETY CLOSE LOOP TEST $								
018-00	ST005		VFY	BRS	LH EV RSS DCDR A ON/CHK TONE OFF	B55X1871X1	ON			7 OF 7			
018-01			VFY	BRS	LH EV RSS DCDR B ON/CHK TONE OFF	B55X1872X1	ON			7 OF 7			
018-02			VFY	TRS	ET RSS DCDR PWR ON/CHK TONE OFF	T55X1925E1	ON			7 OF 7			
018-03			VFY	BRS	RH EV RSS DCDR A ON/CHK TONE OFF	B55X2871X1	ON			7 OF 7			
018-04			VFY	BRS	RH EV RSS DCDR B ON/CHK TONE OFF	B55X2872X1	ON			7 OF 7			
018-05			VFY	BRS	SYS A ENCODER RELAY ENABLE IND	GRSX2130E	OFF			7 OF 7			
018-06			VFY	BRS	SYS B ENCODER RELAY ENABLE IND	GRSX2124E	OFF			GTO ST005			
019-00			CVFY	BRS	LH VOLTAGE RSS PIC CAP A	B55V1623C1	NOLO	1.5	V	LCC-4		2.2-16	
019-01			CVFY	BRS	LH VOLTAGE RSS PIC CAP B	B55V1624C1	NOLO	1.5	V	LCC-4		2.2-16	
019-02			CVFY	BRS	RH VOLTAGE RSS PIC CAP A	B55V2623C1	NOLO	1.5	V	LCC-4		2.2-16	
019-03			CVFY	BRS	RH VOLTAGE RSS PIC CAP B	B55V2624C1	NOLO	1.5	V	LCC-4		2.2-16	
019-04			CVFY	TRS	ET RSS PIC CAP A VOLTAGE	T55V1730A1	NOLO	1.5	V	LCC-4		5.2-14	
019-05			CVFY	TRS	ET RSS PIC CAP B VOLTAGE	T55V1731A1	NOLO	1.5	V	LCC-4		5.2-14	
			CMON	BRS	RANGE SAFETY LAUNCH PROCEED	GRSX2100E	ON			1 OF 2			
			CMON	BRS	RANGE SAFETY LAUNCH PROCEED	GRSX2102E	ON			RSS HOLD TIL MENG			
020-00	-22:00												
					$ PASS-BFS DATA TRANSFER $								
021-00			VFY	INTG	OPERATIONS CONSOLE #12 GO MODE	SC12GO	ON			GTO ST010			
			COM	INTG	START ONE-SHOT DATA TRANSFER	N020INTGR	DPS						
	ST010		VFY	INTG	INTEGRATION CONSOLE GO MODE	SINTGGO	ON			GTO ST020			
			COM	INTG	START ONE-SHOT DATA TRANSFER	N020INTGR	INTG						
	ST020		VFY	INTG	MASTER CONSOLE GO MODE	SMSTRGO	ON			GTO ST030			
			COM	INTG	START ONE-SHOT DATA TRANSFER	N020INTGR	SW						
	ST030		VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			GTO ST040			
			COM	INTG	START ONE-SHOT DATA TRANSFER	N020INTGR	BKUP						
	ST040		LABL	INTG									

SEQ	TIME CD CLOCK	T/E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S/F/D
022-00	-21:00		VFY	INTG	ONE-SHOT DATA ACKNOWLEDGE	N03IS016E	OFF			WAIT			
			MMSG	INTG	ONE SHOT DATA XFER COMPLETE								
			MSG	INTG	GO FOR OPS 101 TRANSITION								
023-00	-20:00												
023-01			CMD	INTG	COUNTDOWN CLOCK HOLD								
					$ T-20 MINUTE BUILT IN HOLD $								
			CMD	INTG	SET 10 MIN HOLD TIMER	TIMER	10						
			VFY	INTG	HOLD TIMER EXPIRED	TIMER			MIN/SEC	WAIT			
023-02			VFY	INTG	ONE-SHOT DATA ACKOWLEDGE	N03IS016E	OFF			WAIT			
023-03			VFY	GNS	PREFLIGHT ALIGN COMPLETE	V95X0010X1	ON			WAIT			
					$ INTEGRATION CONSOLE FAILURE FROM T-20 MIN TO T-9 MIN WILL$								
					$ RESULT IN COUNTDOWN HOLD AT T-9 MIN. $								
024-00	-20:00		CVFY	INTG	INTEGRATION CONSOLE GO MODE	SINTGGO	ON			HOLD AT T-9 MIN			
024-01			CMD	INTG	COUNTDOWN CLOCK COUNT								
025-00	-19:59												
					$ GPC G9 TO G1 TRANSITION $								
026-00			CMD	INTG	GPC DUMP COMP ACKNOWLEDGE	N03IS018E	OFF						PL
			VFY	INTG	OPERATIONS CONSOLE #12 GO MODE	SC12GO	ON			GTO ST060			
			COM	INTG	START OPS TRANSITION	N022INTGR	DPS						PL
	ST060		VFY	INTG	INTEGRATION CONSOLE GO MODE	SINTGGO	ON			GTO ST070			
			COM	INTG	START OPS TRANSITION	N022INTGR	INTG						PL
	ST070		VFY	INTG	MASTER CONSOLE GO MODE	SMSTRGO	ON			GTO ST080			
			COM	INTG	START OPS TRANSITION	N022INTGR	SW						PL
	ST080		VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			GTO ST090			
			COM	INTG	START OPS TRANSITION	N022INTGR	BKUP						PL
	ST090		LABL	INTG									
			MMSG	INTG	CPS 101 TRANSITION STARTEDATA XFER STARTED								
			MSG	INTG	GO FOR GPC DUMP AND COMPARE								

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
027-00	-19:00												
028-00			VFY	INTG	OPS 101 TRANSITION ACKNOWLEDGE	N03IS017E	OFF			INHB M009			PL
028-01			CMD	INTG	IMU HOLD AVAILABLE TIMER ACTIV.	GCDKTIM1E	ON						
					$ COMMAND LS JTOY OF LIFTOFF $								
029-00	ST100		VFY	INTG	CURRENT LDB GPC MEMORY CONFIG	NGPCLMCNFG	1			GTO ST100			
029-01					$ DELETED $								
029-02			CMD	INTG	JTOY OF LIFTOFF	CMD-LS			JTOY				
029-03			CMD	INTG	RSLS RESUME COUNT	CMD-LS	ON						
030-00			VFY	INTG	OPERATIONS CONSOLE #12 GO MODE	SC12GO	ON			GTO ST110			
			CMD	INTG	START GPC DUMP AND COMPARE	N024INTGR	DPS						PL
	ST110		VFY	INTG	INTEGRATION CONSOLE GO MODE	SINTGGO	ON			GTO ST120			
			CMD	INTG	START GPC DUMP AND COMPARE	N024INTGR	INTG						PL
	ST120		VFY	INTG	MASTER CONSOLE GO MODE	SMSTRGO	ON			GTO ST130			
			CMD	INTG	START GPC DUMP AND COMPARE	N024INTGR	SW						PL
	ST130		VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			GTO ST140			
			CMD	INTG	START GPC DUMP AND COMPARE	N024INTGR	BKUP						PL
	ST140		VFY	INTG	GPC DUMP COMP ACKNOWLEDGE	N03IS018E	ON						PL
			MMSG	INTG	GPC DUMP AND COMPARE STARTED								
			MSG	INTG	GO FOR T-9 GLS SEQUENCE								
031-00			VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			GTO ST150			
			CMD	INTG	PERFORM MIP 1	MIP1	ON						
			CMD	INTG	PERFORM MIP 2	MIP2	ON						
					GTO ST170								
	ST150		VFY	INTG	INTEGRATION CONSOLE GO MODE	SINTGGO	ON			GTO ST160			
			CMD	INTG	PERFORM MIP 1	MIP1							
			CMD	INTG	PERFORM MIP 2	MIP2							
					GTO ST170								
	ST160		VFY	INTG	MASTER CONSOLE GO MODE	SMSTRGO	ON			GTO ST170			
			CMD	INTG	PERFORM MIP 1	MIP1							
			CMD	INTG	PERFORM MIP 2	MIP2							
					$ SRB HPU FUEL PRESS MONITOR $								
032-00	ST170		CVFY	BHYD	LH N2H4 BTL GN2 PRESS SYS A	B46P1305C1	350	415	PSIA	INHB MENG		2.1-4	
032-01			CVFY	BHYD	LH N2H4 BTL GN2 PRESS SYS B	B46P1306C1	350	415	PSIA	INHB MENG		2.1-4	
032-02			CVFY	BHYD	RH N2H4 BTL GN2 PRESS SYS A	B46P2305C1	350	415	PSIA	INHB MENG		2.1-4	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
032-03			CVFY	BHYD	RH N2H4 BTL GN2 PRESS SYS B	B46P2306C1	350	415	PSIA	INHB MENG		2.1-4		
033-00			ACL	BHYD	LH TEMP GAS GENERATOR BED SYS A	B46T1503C1	200	220	DEGF			2.1-7		
033-01			ACL	BHYD	LH TEMP GAS GENERATOR BED SYS B	B46T1504C1	200	220	DEGF			2.1-7		
033-02			ACL	BHYD	RH TEMP GAS GENERATOR BED SYS A	B46T2503C1	200	220	DEGF			2.1-7		
033-03			ACL	BHYD	RH TEMP GAS GENERATOR BED SYS B	B46T2504C1	200	220	DEGF			2.1-7		
					$ PURGE SEQ 3 AND LEAK CHECK MONITOR $									
034-00			CVFY	SSME	ME-1 OPERATING MODE	E41J1513B1	B011			INHB MPS4				
034-01			CVFY	SSME	ME-2 OPERATING MODE	E41J2513B1	B011			INHB MPS4				
034-02			CVFY	SSME	ME-3 OPERATING MODE	E41J3513B1	B011			INHB MPS4				
034-03			CVFY	SSME	ME-1 HPFT DISCH TEMP (CHA)	E41T1010B1	360	NOHI	DEGR	1 OF 2		6.2.2-19		
034-04			CVFY	SSME	ME-1 HPFT DISCH TEMP (CHB)	E41T1011B1	360	NOHI	DEGR	INHB MSEQ		6.2.2-19		
034-05			CVFY	SSME	ME-2 HPFT DISCH TEMP (CHA)	E41T2010B1	360	NOHI	DEGR	1 OF 2		6.2.2-19		
034-06			CVFY	SSME	ME-2 HPFT DISCH TEMP (CHB)	E41T2011B1	360	NOHI	DEGR	INHB MSEQ		6.2.2-19		
034-07			CVFY	SSME	ME-3 HPFT DISCH TEMP (CHA)	E41T3010B1	360	NOHI	DEGR	1 OF 2		6.2.2-19		
034-08			CVFY	SSME	ME-3 HPFT DISCH TEMP (CHB)	E41T3011B1	360	NOHI	DEGR	INHB MSEQ		6.2.2-19		
					$ DPS STATUS MONITOR $									
035-00			CVFY	DPS	PASS FSM OR BFS GPC ERR	N039INTGR	OFF			CPER G012 TIL MENG		6.9.3-2		
035-01			CVFY	DPS	BFS TRKG F/C 1	V98X2752X1	ON			INHB MENG		6.9.24-9		
035-02			CVFY	DPS	BFS TRKG F/C 2	V98X2753X1	ON			INHB MENG		6.9.24-9		
035-03			CVFY	DPS	BFS TRKG F/C 3	V98X2754X1	ON			INHB MENG		6.9.24-9		
035-04			CVFY	DPS	BFS TRKG F/C 4	V98X2755X1	ON			INHB MENG		6.9.24-9		
035-05			CVFY	DPS	BFS TERM B	V98X0594X1	ON			INHB MENG		6.9.24-2		
035-06			CVFY	DPS	BFS ENGAGE 1	V98X0604X1	OFF			INHB MENG		6.9.24-3		
035-07			CVFY	DPS	BFS ENGAGE 2	V98X0605X1	OFF			INHB MENG		6.9.24-3		
035-08			CVFY	DPS	BFS ENGAGE 3	V98X0606X1	OFF			INHB MENG		6.9.24-3		
035-09			CVFY	DPS	LH DDU PWR SUPPLY A GOOD	V73X3001X1	ON			INHB M009		6.9.10-35		
035-10			CVFY	DPS	LH DDU PWR SUPPLY B GOOD	V73X3002X1	ON			INHB M009		6.9.10-35		
035-11			CVFY	DPS	LH DDU PWR SUPPLY C GOOD	V73X3003X1	ON			INHB M009		6.9.10-35		
035-12			CVFY	DPS	RH DDU PWR SUPPLY A GOOD	V73X3011X1	ON			INHB M009		6.9.10-35		
035-13			CVFY	DPS	RH DDU PWR SUPPLY B GOOD	V73X3012X1	ON			INHB M009		6.9.10-35		
035-14			CVFY	DPS	RH DDU PWR SUPPLY C GOOD	V73X3013X1	ON			INHB M009		6.9.10-35		
035-15			CVFY	DPS	FF1 IMU BYPASS	V91X2273XX	OFF			INHB MSEQ		6.9.3-5		
035-16			CVFY	DPS	FF2 IMU BYPASS	V91X2274XX	OFF			INHB MSEQ		6.9.3-5		
035-17			CVFY	DPS	FF3 IMU BYPASS	V91X2275XX	OFF			INHB MSEQ		6.9.3-5		
035-18			CVFY	DPS	EIU1/P4 DATA BYP (HFE INPUT)	V91X2813XX	OFF			INHB MSEQ		6.9.3-5		
035-19			CVFY	DPS	EIU2/P4 DATA BYP (HFE INPUT)	V91X2817XX	OFF			INHB MSEQ		6.9.3-5		
035-20			CVFY	DPS	EIU3/P4 DATA BYP (HFE INPUT)	V91X2821XX	OFF			INHB MSEQ		6.9.3-5		
035-21			CVFY	DPS	EIU1/P1 DATA BYPASS (HFE INPUT)	V91X2927XX	OFF			INHB MSEQ		6.9.3-6		

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
035-22			CVFY	DPS	EIU2/P1 DATA BYPASS (HFE INPUT)	V91X2930XX	OFF			INHB	MSEQ	6.9.3-6			
035-23			CVFY	DPS	EIU3/P1 DATA BYPASS (HFE INPUT)	V91X2933XX	OFF			INHB	MSEQ	6.9.3-6			
035-24			CVFY	DPS	MTU ACCUMULATOR SOURCE	V98J0615C1	B001	B010		CPER	G005 TIL MSEQ	6.9.24-4			
035-25			CVFY	DPS	PAYLOAD 1B PF1	V98X0961X1	OFF			INHB	MSEQ	6.9.24-13			
035-26			CVFY	DPS	PAYLOAD 1B PF2	V98X0965X1	OFF			INHB	MSEQ	6.9.24-13			
					$ IMU RGA AA FAILURE MONITOR $										
036-00			CVFY	GNS	IMU 1 FAIL	V90X2601X1	OFF			INHB	MSEQ	6.9.10-31			
036-01			CVFY	GNS	IMU 2 FAIL	V9CX2701X1	OFF			INHB	MSEQ	6.9.10-31			
036-02			CVFY	GNS	IMU 3 FAIL	V9CX2801X1	OFF			INHB	MSEQ	6.9.10-31			
036-03			CVFY	GNS	RGA 1 FAIL	V90X5401X1	OFF			INHB	MSEQ	6.9.10-43			
036-04			CVFY	GNS	RGA 2 FAIL	V90X5501X1	OFF			INHB	MSEQ	6.9.10-43			
036-05			CVFY	GNS	RGA 3 FAIL	V90X5601X1	OFF			INHB	MSEQ	6.9.10-43			
036-06			CVFY	GNS	AA 1 FAIL	V90X5701X1	OFF			INHB	MSEQ	6.9.10-44			
036-07			CVFY	GNS	AA 2 FAIL	V90X5801X1	OFF			INHB	MSEQ	6.9.10-44			
036-08			CVFY	GNS	AA 3 FAIL	V9CX5901X1	OFF			INHB	MSEQ	6.9.10-44			
036-09			CVFY	GNS	LH SRB COMP PITCH RATE 1	V95R4181C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-10			CVFY	GNS	LH SRB COMP PITCH RATE 2	V95R4182C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-11			CVFY	GNS	LH SRB COMP PITCH RATE 3	V95R4183C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-12			CVFY	GNS	LH SRB COMP YAW RATE 1	V95R4191C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-13			CVFY	GNS	LH SRB COMP YAW RATE 2	V95R4192C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-14			CVFY	GNS	LH SRB COMP YAW RATE 3	V95R4193C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-15			CVFY	GNS	RH SRB COMP PITCH RATE 1	V95R4211C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-16			CVFY	GNS	RH SRB COMP PITCH RATE 2	V95R4212C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-17			CVFY	GNS	RH SRB COMP PITCH RATE 3	V95R4213C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-18			CVFY	GNS	RH SRB COMP YAW RATE 1	V95R4221C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-19			CVFY	GNS	RH SRB COMP YAW RATE 2	V95R4222C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-20			CVFY	GNS	RH SRB COMP YAW RATE 3	V95R4223C1	-0.45	+0.45	DEG/S	INHB	MSEQ	6.9.10-45			
036-21					$ DELETED $										
036-22					$ DELETED $										
036-23					$ DELETED $										
036-24					$ DELETED $										
036-25					$ DELETED $										
036-26			CVFY	GNS	AA4 FAIL	V90X5951X1	OFF			INHB	MSEQ	6.9.10-44			

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
036-27			CVFY	GNS	RGA4 FAIL	V90X5651X1	OFF			INHB MSEQ		6.9.10-43		
					$ CONTROLLERS STATUS CHECK $									
					$ IN THE FOLLOWING 18 SEQUENCES THE ELSE ACTION HAS SPECIAL SIGNIFICANCE. 3 OF 2 $									
					$ LOGIC INDICATES THAT IF ALL 3 MSMTS ARE OUT OF TOLERANCE A FAILURE DOES NOT $									
					$ EXIST AND MONITORING IS RESUMED. ONE OR TWO MSMTS OUT OF TOLERANCE IS A $									
					$ FAILURE AND IS SO ANNUNCIATED $									
037-00			CVFY	FCL	LEFT RHC ROLL CMD A	V72K1155C1	-6.8	6.8	DEG	3 OF 2		6.9.10-2		
037-01			CVFY	FCL	LEFT RHC ROLL CMD B	V72K1170C1	-6.8	6.8	DEG	3 OF 2		6.9.10-2		
037-02			CVFY	FCL	LEFT RHC ROLL CMD C	V72K1185C1	-6.8	6.8	DEG	INHB M009		6.9.10-2		
037-03			CVFY	FCL	LEFT RHC PITCH CMD A	V72K1156C1	-5.1	5.1	DEG	3 OF 2		6.9.10-2		
037-04			CVFY	FCL	LEFT RHC PITCH CMD B	V72K1171C1	-5.1	5.1	DEG	3 OF 2		6.9.10-2		
037-05			CVFY	FCL	LEFT RHC PITCH CMD C	V72K1186C1	-5.1	5.1	DEG	INHB M009		6.9.10-2		
037-06			CVFY	FCL	LEFT RHC YAW CMD A	V72K1157C1	-2.8	2.8	DEG	3 OF 2		6.9.10-2		
037-07			CVFY	FCL	LEFT RHC YAW CMD B	V72K1172C1	-2.8	2.8	DEG	3 OF 2		6.9.10-2		
037-08			CVFY	FCL	LEFT RHC YAW CMD C	V72K1187C1	-2.8	2.8	DEG	INHB M009		6.9.10-2		
037-09			CVFY	FCL	RIGHT RHC ROLL CMD A	V72K1205C1	-6.8	6.8	DEG	3 OF 2		6.9.10-2		
037-10			CVFY	FCL	RIGHT RHC ROLL CMD B	V72K1220C1	-6.8	6.8	DEG	3 OF 2		6.9.10-2		
037-11			CVFY	FCL	RIGHT RHC ROLL CMD C	V72K1235C1	-6.8	6.8	DEG	INHB M009		6.9.10-2		
037-12			CVFY	FCL	RIGHT RHC PITCH CMD A	V72K1206C1	-5.1	5.1	DEG	3 OF 2		6.9.10-2		
037-13			CVFY	FCL	RIGHT RHC PITCH CMD B	V72K1221C1	-5.1	5.1	DEG	3 OF 2		6.9.10-2		
037-14			CVFY	FCL	RIGHT RHC PITCH CMD C	V72K1236C1	-5.1	5.1	DEG	INHB M009		6.9.10-2		
037-15			CVFY	FCL	RIGHT RHC YAW CMD A	V72K1207C1	-2.8	2.8	DEG	3 OF 2		6.9.10-2		
037-16			CVFY	FCL	RIGHT RHC YAW CMD B	V72K1222C1	-2.8	2.8	DEG	3 OF 2		6.9.10-2		
037-17			CVFY	FCL	RIGHT RHC YAW CMD C	V72K1237C1	-2.8	2.8	DEG	INHB M009		6.9.10-2		
038-00			CVFY	FCL	FWD THC POS X OUTPUT A	V72K1315X1	OFF			2 OF 3		6.9.10-4		
038-01			CVFY	FCL	FWD THC POS X OUTPUT B	V72K1335X1	OFF			2 OF 3		6.9.10-4		
038-02			CVFY	FCL	FWD THC POS X OUTPUT C	V72K1355X1	OFF			INHB MSEQ		6.9.10-4		
038-03			CVFY	FCL	FWD THC NEG X OUTPUT A	V72K1316X1	OFF			2 OF 3		6.9.10-4		
038-04			CVFY	FCL	FWD THC NEG X OUTPUT B	V72K1336X1	OFF			2 OF 3		6.9.10-4		
038-05			CVFY	FCL	FWD THC NEG X OUTPUT C	V72K1356X1	OFF			INHB MSEQ		6.9.10-4		
038-06			CVFY	FCL	FWD THC POS Y OUTPUT A	V72K1320X1	OFF			2 OF 3		6.9.10-4		
038-07			CVFY	FCL	FWD THC POS Y OUTPUT B	V72K1340X1	OFF			2 OF 3		6.9.10-4		
038-08			CVFY	FCL	FWD THC POS Y OUTPUT C	V72K1360X1	OFF			INHB MSEQ		6.9.10-4		
038-09			CVFY	FCL	FWD THC NEG Y OUTPUT A	V72K1321X1	OFF			2 OF 3		6.9.10-4		
038-10			CVFY	FCL	FWD THC NEG Y OUTPUT B	V72K1341X1	OFF			2 OF 3		6.9.10-4		
038-11			CVFY	FCL	FWD THC NEG Y OUTPUT C	V72K1361X1	OFF			INHB MSEQ		6.9.10-4		
038-12			CVFY	FCL	FWD THC POS Z OUTPUT A	V72K1325X1	OFF			2 OF 3		6.9.10-4		
038-13			CVFY	FCL	FWD THC POS Z OUTPUT B	V72K1345X1	OFF			2 OF 3		6.9.10-4		

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
038-14			CVFY	FCL	FWD THC POS Z OUTPUT C	V72K1365X1	OFF			INHB MSEQ		6.9.10-4		
038-15			CVFY	FCL	FWD THC NEG Z OUTPUT A	V72K1326X1	OFF			2 OF 3		6.9.10-4		
038-16			CVFY	FCL	FWD THC NEG Z OUTPUT B	V72K1346X1	OFF			2 OF 3		6.9.10-4		
038-17			CVFY	FCL	FWD THC NEG Z OUTPUT C	V72K1366X1	OFF			INHB MSEQ		6.9.10-4		
039-00			CVFY	FCL	FLIGHT CONTROL CHANNEL FAILURE	V72X4550X1	OFF			INHB MENG		6.9.10-15		
					$ PYRO SYS STATUS MONITOR $									
040-00			CVFY	BPYR	LH EVENT IGN S/A DEVICE ARMED	B55X1842X1	OFF			INHB MAPU		2.4-4		
040-01			CVFY	BPYR	RH EVENT IGN S/A DEVICE ARMED	B55X2842X1	OFF			INHB MAPU		2.4-4		
040-02			CVFY	BPYR	LH EVENT IGN S/A DEVICE SAFED	B55X1843X1	ON			INHB MAPU		2.4-5		
040-03			CVFY	BPYR	RH EVENT IGN S/A DEVICE SAFED	B55X2843X1	ON			INHB MAPU		2.4-5		
040-04			CVFY	BPYR	LH VOLTAGE IGN PIC CAP A	B55V1603C1	NOLO	1.5	V	INHB MSEQ		2.4-8		
040-05			CVFY	BPYR	RH VOLTAGE IGN PIC CAP A	B55V2603C1	NOLO	1.5	V	INHB MSEQ		2.4-8		
040-06			CVFY	BPYR	LH VOLTAGE IGN PIC CAP B	B55V1604C1	NOLO	1.5	V	INHB MSEQ		2.4-8		
040-07			CVFY	BPYR	RH VOLTAGE IGN PIC CAP B	B55V2604C1	NOLO	1.5	V	INHB MSEQ		2.4-8		
040-08			CVFY	BPYR	LH VOLTAGE FWD THR PIN PIC CAP A	B55V1605C1	NOLO	1.5	V	INHB MSEQ		2.6-4		
040-09			CVFY	BPYR	RH VOLTAGE AFT UPR BRC PIC CAP B	B55V2608C1	NOLO	1.5	V	INHB MSEQ		2.6-5		
040-10			CVFY	BPYR	LH VOLTAGE AFT MID BRC PIC CAP B	B55V1610C1	NOLO	1.5	V	INHB MSEQ		2.6-5		
040-11			CVFY	BPYR	RH VOLTAGE FWD SEP MOT PIC CAP A	B55V2613C1	NOLO	1.5	V	INHB MSEQ		2.6-6		
					$ CENTAUR RBUS PIC CAP VOLTS - NOT CHARGED $									
040-12		K	CVFY	CEPDC	RBUS SYSA PIC CAP VOLTS	GMSV5503A	NOLO	1.5	V	1 OF 2				
040-13		K	CVFY	CEPDC	RBUS SYSA PIC CAP VOLTS	GMSV7503A	NOLO	1.5	V	INHB MLH2				
040-14		K	CVFY	CEPDC	RBUS SYSB PIC CAP VOLTS	GMSV6503A	NOLO	1.5	V	1 OF 2				
040-15		K	CVFY	CEPDC	RBUS SYSB PIC CAP VOLTS	GMSV8503A	NOLO	1.5	V	INHB MLH2				
041-00			CVFY	EPDC	SYS A CPA DC VOLTAGE	GMSV1313A	26	NOHI	V	1 OF 2		3.1-6		
041-01			CVFY	EPDC	SYS A CPA DC RED VOLTAGE	GMSV3313A	26	NOHI	V	INHB MSRB		3.1-6		
041-02			CVFY	EPDC	SYS B CPA DC VOLTAGE	GMSV2313A	26	NOHI	V	1 OF 2		3.1-6		
041-03			CVFY	EPDC	SYS B CPA DC RED VOLTAGE	GMSV4313A	26	NOHI	V	INHB MSRB		3.1-6		
041-04			CVFY	EPDC	H2 - BURN SYS A CPA DC VOLTS	GMSV5313A	26	NOHI	V	1 OF 2		3.1-10		
041-05			CVFY	EPDC	H2 - BURN SYS A CPA DC RED VOLTS	GMSV7313A	26	NOHI	V	INHB MSEQ		3.1-10		
041-06			CVFY	EPDC	H2 - BURN SYS B CPA DC VOLTS	GMSV6313A	26	NOHI	V	1 OF 2		3.1-10		
041-07			CVFY	EPDC	H2 - BURN SYS B CPA DC RED VOLTS	GMSV8313A	26	NOHI	V	INHB MSEQ		3.1-10		
					$ SRB CHAMBER PRESS TRANSDUCER MONITOR $									
042-00			CVFY	BINS	LH PRESS SRM CHAMBER A	B47P1300C1	3.8	45.5	PSIA	INHB MSEQ		2.4-11		
042-01			CVFY	BINS	LH PRESS SRM CHAMBER B	B47P1301C1	3.8	45.5	PSIA	INHB MSEQ		2.4-11		
042-02			CVFY	BINS	LH PRESS SRM CHAMBER C	B47P1302C1	3.8	45.5	PSIA	INHB MSEQ		2.4-11		
042-03			CVFY	BINS	RH PRESS SRM CHAMBER A	B47P2300C1	3.8	45.5	PSIA	INHB MSEQ		2.4-11		

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SSFD
042-04			CVFY	BINS	RH PRESS SRM CHAMBER B	B47P2301C1	3.8	45.5	PSIA	INHB MSEQ		2.4-11	
042-05			CVFY	BINS	RH PRESS SRM CHAMBER C	B47P2302C1	3.8	45.5	PSIA	INHB MSEQ		2.4-11	
					$ APU START CONSTRAINTS $								
043-00			CVFY	HYD	HYD SYS 1 RVSR FLUID PRESS	V58P0131A1	43	120	PSIA	1 OF 2		6.7.2-10	
043-01			CVFY	HYD	SYS 1 GN2 ACCUM PRESS	V58P0167A1	1906	3233	PSIA	INHB MAPU		6.7.2-10	
043-02			CVFY	HYD	HYD SYS 2 RVSR FLUID PRESS	V58P0231A1	43	120	PSIA	1 OF 2		6.7.2-10	
043-03			CVFY	HYD	SYS 2 GN2 ACCUM PRESS	V58P0267A1	1906	3233	PSIA	INHB MAPU		6.7.2-10	
043-04			CVFY	HYD	HYD SYS 3 RVSR FLUID PRESS	V58P0331A1	43	120	PSIA	1 OF 2		6.7.2-10	
043-05			CVFY	HYD	SYS 3 GN2 ACCUM PRESS	V58P0367A1	1906	3233	PSIA	INHB MAPU		6.7.2-10	
043-06			CVFY	HYD	HYD SYS 1 CIRC PUMP PRESS	V58P0137A1	330	NOHI	PSIA	INHB MAPU		6.7.2-5	
043-07			CVFY	HYD	HYD SYS 2 CIRC PUMP PRESS	V58P0237A1	330	NOHI	PSIA	INHB MAPU		6.7.2-5	
043-08			CVFY	HYD	HYD SYS 3 CIRC PUMP PRESS	V58P0337A1	330	NOHI	PSIA	INHB MAPU		6.7.2-5	
044-00					$ DELETED $								
044-01			CVFY	APU	APU 1 GRBX LUBE OIL OUTPRESS	V46P0153A1	NOLO	35	PSIA	INHB MAPU		6.6-22	
044-02					$ DELETED $								
044-03			CVFY	APU	APU 2 GRBX LUBE OIL OUTPRESS	V46P0253A1	NOLO	35	PSIA	INHB MAPU		6.6-22	
044-04					$ DELETED $								
044-05			CVFY	APU	APU 3 GRBX LUBE OIL OUTPRESS	V46P0353A1	NOLO	35	PSIA	INHB MAPU		6.6-22	
					$ VEHICLE HOLD FLAG MONITOR $								
045-00			CVFY	INTG	COUNTDOWN HOLD FLAG	V9CX8667X1	OFF			INHB MSRB CPER G001			
					$ SYSTEM VALIDITY FLAGS $								
046-00			CVFY	INTG	OPERATIONS CONSOLE #3 GO MODE	SC3GO	ON			INHB MSEQ		4-8	
046-01			CVFY	INTG	OPERATIONS CONSOLE #4 GO MODE	SC4GO	ON			INHB MSEQ		4-9	
046-02			CVFY	INTG	OPERATIONS CONSOLE #12 GO MODE	SC12GO	ON			INHB MSEQ		4-7	
046-03			CVFY	INTG	MASTER CONSOLE GO MODE	SMSTRGO	ON			INHB MSEQ		4-4	
046-04			CVFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			CPER G015 TIL MSRB		4-6	
046-05			CVFY	INTG	PROCESSING DATA RECORDER GO MODE	SPDRGO	ON			INHB MSEQ		4-17	
046-06			CVFY	INTG	LDB FEP ACTIVE DATA VALID	SLDBADATAV	ON			INHB MENG		4-12	
046-07			CVFY	INTG	GSE FEP #1 ACTIVE DATA VALID	SGS1ADATAV	ON			INHB MSRB		4-15	
046-08			CVFY	INTG	GSE FEP #2 ACTIVE DATA VALID	SGS2ADATAV	ON			INHB MSRB		4-16	
046-09			CVFY	INTG	GSE FEP #3 ACTIVE DATA VALID	SGS3DATAV	ON			INHB MSEQ			
046-10			CVFY	INTG	TIME CODE GEN PBIC=1 DATA VALID	STCG1DATAV	ON			1 OF 2		4-18	
046-11			CVFY	INTG	TIME CODE GEN PBIC=2 DATA VALID	STCG2DATAV	ON			INHB MSEQ		4-18	
046-12			CVFY	INTG	128 OI FEP ACTIVE DATA VALID SRB	SOIADATAV	ON			INHB MSRB		4-14	
046-13			CVFY	INTG	GPC FEP AREA 1 STATUS	SGPCAREA1	ON			INHB MSRB		4-13	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S	F	D
046-14			CVFY	INTG	GPC INVALID SWITCH SEQUENCE	SGPCISWSEQ	OFF			INHB MSRB					
					$ CENTAUR HIM/HER STATUS CHECKS $										
046-15		K	CVFY	CINTG	GCS QUALIFIER BIT - PRI	GCNX3003E	ON			3 OF 3					
046-16		K	CVFY	CINTG	CCE GO FLAG - PRI	GCNX3143E	ON			3 OF 3					
046-17		K	CVFY	CINTG	CCE NO-GO FLAG - PRI	GCNX3153E	OFF			OR					
046-18		K	CVFY	CINTG	GCS QUALIFIER BIT - SEC	GCNX3503E	ON			3 OF 3					
046-19		K	CVFY	CINTG	CCE GO FLAG - SEC	GCNX3643E	ON			3 OF 3					
046-20		K	CVFY	CINTG	CCE NO-GO FLAG - SEC	GCNX3653E	OFF			INHB MSRB					
046-21					$ DELETED $										
046-22					$ DELETED $										
046-23					$ DELETED $										
046-24					$ DELETED $										
046-25					$ DELETED $										
046-26					$ DELETED $										
046-27					$ DELETED $										
046-28					$ DELETED $										
046-29					$ DELETED $										
046-30					$ DELETED $										
046-31					$ DELETED $										
046-32					$ DELETED $										
046-33					$ DELETED $										
046-34					$ DELETED $										
046-35					$ DELETED $										
046-36					$ DELETED $										
046-37					$ DELETED $										
046-38					$ DELETED $										
047-00	-12:00														
048-00			CMD	INTG	RF SWITCH	PCMS									
			CMD	INTG	SWITCH ALT SOURCE RF/HIGH RATE	GPCA									
			CMD	INTG	SWITCH ALT SOURCE RF/HIGH RATE	OIA									
			CMD	INTG	SWITCH ALT SOURCE RF	ME1									
			CMD	INTG	SWITCH ALT SOURCE RF	ME2									
			CMD	INTG	SWITCH ALT SOURCE RF	ME3									

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
049-00	-09:30												
					$ SRB HPU STATUS CHECK $								
050-00			VFY	BHYD	LH N2H4 BTL TEMP SYS A	B46T1501C1	45.0	139.5	DEGF	1 OF 2		2.1-6	
050-01			VFY	BHYD	LH N2H4 BTL TEMP SYS B	B46T1502C1	45.0	139.5	DEGF	INHB M009		2.1-6	
050-02			VFY	BHYD	LH HYD FLUID RSVR LEVEL SYS A	B58Q1350C1	60	80	PCT	INHB M009		2.1-8	
050-03			VFY	BHYD	LH HYD FLUID RSVR LEVEL SYS B	B58Q1351C1	60	80	PCT	INHB M009		2.1-8	
050-04			VFY	BHYD	RH N2H4 BTL TEMP SYS A	B46T2501C1	45.0	139.5	DEGF	1 OF 2		2.1-6	
050-05			VFY	BHYD	RH N2H4 BTL TEMP SYS B	B46T2502C1	45.0	139.5	DEGF	INHB M009		2.1-6	
050-06			VFY	BHYD	RH HYD FLUID RSVR LEVEL SYS A	B58Q2350C1	60	80	PCT	INHB M009		2.1-8	
050-07			VFY	BHYD	RH HYD FLUID RSVR LEVEL SYS B	B58Q2351C1	60	80	PCT	INHB M009		2.1-8	
					$ KSC SS WATER SYSTEM STATUS CHECK $								
051-00		K	VFY	WATR	TS/CCS OP CMD LOCKOUT IND	GWDXPT47E	ON			INHB M009			
051-01		K	VFY	WATR	VO/LPS ENABLED IND	GWDXPT13E	ON			INHB M009			
					$ RANGE SAFETY STATUS CHECK $								
052-00			VFY	BRS	LH CURRENT RSS BATTERY NO 1	B55C1051C1	.02	.75	AMP	INHB M009		2.2-19	
052-01			VFY	BRS	LH CURRENT RECOV BATT	B76C1050C1	.02	.75	AMP	INHB M009		2.2-20	
052-02			VFY	BRS	RH CURRENT RSS BATTERY NO 1	B55C2051C1	.02	.75	AMP	INHB M009		2.2-19	
052-03			VFY	BRS	RH CURRENT RECOV BATT	B76C2050C1	.02	.75	AMP	INHB M009		2.2-20	
052-04			VFY	BPYR	LH VOLTAGE RSS BATTNO 1	B55V1625C1	26.7	32.3	V	INHB M009		2.2-14	
052-05			VFY	BELE	LH VOLTAGE RECOV BATT	B76V1602C1	26.7	39.8	V	INHB M009		2.2-15	
052-06			VFY	BPYR	RH VOLTAGE RSS BATT NO 1	B55V2625C1	26.7	32.3	V	INHB M009		2.2-14	
052-07			VFY	BELE	RH VOLTAGE RECOV BATT	B76V2602C1	26.7	39.8	V	INHB M009		2.2-15	
052-08					$ DELETED $								
052-09					$ DELETED $								
052-10			VFY	TRS	ET RSS BAT A V	T55V1735A1	26.7	32.3	V	INHB M009		5.2-12	
052-11			VFY	TRS	ET RSS BAT B V	T55V1736A1	26.7	32.3	V	INHB M009		5.2-13	
052-12			VFY	TRS	ET RSS DCDR PWR ON CHK TONE OFF	T55X1925E1	ON			INHB M009		5.2-15	
052-13			VFY	BRS	LH EV RSS DCDR A ON CHK TONE OFF	B55X1871X1	ON			INHB M009		2.2-17	
052-14			VFY	BRS	LH EV RSS DCDR B ON CHK TONE OFF	B55X1872X1	ON			INHB M009		2.2-17	
052-15			VFY	BRS	RH EV RSS DCDR A ON CHK TONE OFF	B55X2871X1	ON			INHB M009		2.2-17	
052-16			VFY	BRS	RH EV RSS DCDR B ON CHK TONE OFF	B55X2872X1	ON			INHB M009		2.2-17	
052-17			VFY	TRS	ET RSS ARM CMD FROM DCDR IND	T55X1931E1	OFF			INHB M009		5.2-22	
052-18			VFY	BRS	LH EV RSS ARM CMD FROM DCDR A	B55X1877X1	OFF			INHB M009		2.2-23	
052-19			VFY	BRS	LH EV RSS ARM CMD FROM DCDR B	B55X1878X1	OFF			INHB M009		2.2-23	
052-20			VFY	BRS	RH EV RSS ARM CMD FROM DCDR A	B55X2877X1	OFF			INHB M009		2.2-23	
052-21			VFY	BRS	RH EV RSS ARM CMD FROM DCDR B	B55X2878X1	OFF			INHB M009		2.2-23	
052-22			VFY	TRS	ET RSS FIRE CMD FROM DCDR IND	T55X1933E1	OFF			INHB M009		5.2-24	
052-23			VFY	BRS	LH EV RSS FIRE CMD FROM DCDR A	B55X1879X1	OFF			INHB M009		2.2-25	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
052-24			VFY	BRS	LH EV RSS FIRE CMD FROM DCDR B	B55X1880X1	OFF			INHB M009		2.2-25			
052-25			VFY	BRS	RH EV RSS FIRE CMD FROM DCDR A	B55X2879X1	OFF			INHB M009		2.2-25			
052-26			VFY	BRS	RH EV RSS FIRE CMD FROM DCDR B	B55X2880X1	OFF			INHB M009		2.2-25			
052-27			VFY	BRS	LH EVENT RSS S/A DEVICE ARMED	B55X1870X1	OFF			INHB M009		2.2-4			
052-28			VFY	BRS	RH EVENT RSS S/A DEVICE ARMED	B55X2870X1	OFF			INHB M009		2.2-4			
052-29			VFY	TRS	ET RSS S/A DVC ARMED	T55X1870X1	OFF			INHB M009		5.2-4			
052-30			VFY	BRS	LH EVENT RSS S/A DEVICE SAFED	B55X1869X1	ON			INHB M009		2.2-4			
052-31			VFY	BRS	RH EVENT RSS S/A DEVICE SAFED	B55X2869X1	ON			INHB M009		2.2-4			
052-32			VFY	TRS	ET RSS S/A DVC SAFED	T55X1869X1	ON			INHB M009		5.2-5			
					$ SRB FLIGHT CONTROL STATUS CHECK $										
053-00			VFY	BHYD	LH DELTA PRESS SECONDARY A ROCK	B58P1311A1	-237	+237	PSID	INHB M009		2.1-17			
053-01			VFY	BHYD	LH DELTA PRESS SECONDARY B ROCK	B58P1312A1	-237	+237	PSID	INHB M009		2.1-17			
053-02			VFY	BHYD	LH DELTA PRESS SECONDARY C ROCK	B58P1313A1	-237	+237	PSID	INHB M009		2.1-17			
053-03			VFY	BHYD	LH DELTA PRESS SECONDARY D ROCK	B58P1314A1	-237	+237	PSID	INHB M009		2.1-17			
053-04			VFY	BHYD	LH DELTA PRESS SECONDARY A TILT	B58P1315A1	-237	+237	PSID	INHB M009		2.1-17			
053-05			VFY	BHYD	LH DELTA PRESS SECONDARY B TILT	B58P1316A1	-237	+237	PSID	INHB M009		2.1-17			
053-06			VFY	BHYD	LH DELTA PRESS SECONDARY C TILT	B58P1317A1	-237	+237	PSID	INHB M009		2.1-17			
053-07			VFY	BHYD	LH DELTA PRESS SECONDARY D TILT	B58P1318A1	-237	+237	PSID	INHB M009		2.1-17			
053-08			VFY	BHYD	RH DELTA PRESS SECONDARY A ROCK	B58P2311A1	-237	+237	PSID	INHB M009		2.1-17			
053-09			VFY	BHYD	RH DELTA PRESS SECONDARY B ROCK	B58P2312A1	-237	+237	PSID	INHB M009		2.1-17			
053-10			VFY	BHYD	RH DELTA PRESS SECONDARY C ROCK	B58P2313A1	-237	+237	PSID	INHB M009		2.1-17			
053-11			VFY	BHYD	RH DELTA PRESS SECONDARY D ROCK	B58P2314A1	-237	+237	PSID	INHB M009		2.1-17			
053-12			VFY	BHYD	RH DELTA PRESS SECONDARY A TILT	B58P2315A1	-237	+237	PSID	INHB M009		2.1-17			
053-13			VFY	BHYD	RH DELTA PRESS SECONDARY B TILT	B58P2316A1	-237	+237	PSID	INHB M009		2.1-17			
053-14			VFY	BHYD	RH DELTA PRESS SECONDARY C TILT	B58P2317A1	-237	+237	PSID	INHB M009		2.1-17			
053-15			VFY	BHYD	RH DELTA PRESS SECONDARY D TILT	B58P2318A1	-237	+237	PSID	INHB M009		2.1-17			
					$ RUDDER PEDAL OUTPUT TRACKING CHECKS $ $ IN THE FOLLOWING 6 SEQUENCES THE VALUE OF THE FIRST MEASUREMENT$ $ IS VERIFIED TO BE WITHIN THE SPECIFIED BAND OF THE SECOND MEASUREMENT $										
054-00			VFY	FCL	LEFT RUDDER PEDAL CMD A	V72K1530C1 V72K1531C1	3.6FD	3.6FD	DEG	INHB M009		6.9.10-6			
054-01			VFY	FCL	LEFT RUDDER PEDAL CMD B	V72K1531C1 V72K1532C1	3.6FD	3.6FD	DEG	INHB M009		6.9.10-6			
054-02			VFY	FCL	LEFT RUDDER PEDAL CMD C	V72K1532C1 V72K1530C1	3.6FD	3.6FD	DEG	INHB M009		6.9.10-6			
054-03			VFY	FCL	RIGHT RUDDER PEDAL CMD A	V72K1540C1 V72K1541C1	3.6FD	3.6FD	DEG	INHB M009		6.9.10-6			

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
054-04			VFY	FCL	RIGHT RUDDER PEDAL CMD B	V72K1541C1 V72K1542C1	3.6FD	3.6FD	DEG	INHB M009		6.9.10-6		
054-05			VFY	FCL	RIGHT RUDDER PEDAL CMD C	V72K1542C1 V72K1540C1	3.6FD	3.6FD	DEG	INHB M009		6.9.10-6		
054-06					$ DELETED $									
054-07					$ DELETED $									
054-08					$ DELETED $									
054-09					$ DELETED $									
054-10					$ DELETED $									
054-11					$ DELETED $									
054-12					$ DELETED $									
054-13					$ DELETED $									
054-14					$ DELETED $									
054-15					$ DELETED $									
054-16					$ DELETED $									
054-17					$ DELETED $									
054-18					$ DELETED $									
054-19					$ DELETED $									
054-20					$ DELETED $									
054-21					$ DELETED $									
054-22					$ DELETED $									
054-23					$ DELETED $									
054-24					$ DELETED $									
054-25					$ DELETED $									
054-26					$ DELETED $									
054-27					$ DELETED $									
054-28					$ DELETED $									
054-29					$ DELETED $									
					$ ORDNANCE SYSTEMS STATUS CHECK $									
055-00			VFY	BELE	LH TEMPERATURE RECOVERY BATTERY	B76T1500C1	34.2	102.8	DEGF	INHB M009		2.2-6		
055-01			VFY	BELE	RH TEMPERATURE RECOVERY BATTERY	B76T2500C1	34.2	102.8	DEGF	INHB M009		2.2-6		
055-02			VFY	EPDC	SYS A ETVAS PIC CAP VOLTS	GMSV1311A	NOLO	1.5	V	1 OF 2				
055-03			VFY	EPDC	SYS A ETVAS PIC CAP RED VOLTS	GMSV3311A	NOLO	1.5	V	INHB M009				
055-04			VFY	EPDC	SYS B ETVAS PIC CAP VOLTS	GMSV2311A	NOLO	1.5	V	1 OF 2				
055-05			VFY	EPDC	SYS B ETVAS PIC CAP RED VOLTS	GMSV4311A	NOLO	1.5	V	INHB M009				
056-00			VFY	TINS	TUMBLE SYSTEM ARMED	T56X0002E1	OFF			INHB M009				
056-01					$ DELETED $									
056-02					$ DELETED $									
056-03					$ DELETED $									

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
056-04					$ DELETED $								
056-05					$ DELETED $								
056-06					$ DELETED $								
056-07					$ DELETED $								
					$ ENVIRONMENTAL CONTROL STATUS CHECK $								
057-00					$ DELETED $								
057-01			VFY	ECLS	POT TK D OR WASTE TK 2 QTY	V62Q0544A1	2	105	PCT	1 OF 3		6.8.2-6	
057-02			VFY	ECLS	POTABLE H2O TANK C QUANTITY	V62Q0548A1	2	105	PCT	1 OF 3		6.8.2-6	
057-03			VFY	ECLS	POTABLE H2O TANK B QUANTITY	V62Q0420A1	2	105	PCT	LCC-1		6.8.2-6	
057-04			VFY	ECLS	POTABLE H2O TANK A QUANTITY	V62Q0410A1	2	83.3	PCT	LCC-1		6.8.2-6	
					$ PURGE VENT AND DRAIN STATUS CHECKS $								
058-00			VFY	PVD	L FWD VENTS 1/2 PURGE IND 1	V59X3105X1	ON			INHB M009			
058-01			VFY	PVD	L FWD VENTS 1/2 PURGE IND 2	V59X3115X1	ON			INHB M009			
058-02			VFY	PVD	R FWD VENTS 1/2 PURGE IND 1	V59X4105X1	ON			INHB M009			
058-03			VFY	PVD	R FWD VENTS 1/2 PURGE IND 2	V59X4115X1	ON			INHB M009			
058-04			VFY	PVD	L PB VENT 3 CLOSED 1	V59X3205X1	ON			INHB M009			
058-05			VFY	PVD	L PB VENT 3 CLOSED 2	V59X3215X1	ON			INHB M009			
058-06			VFY	PVD	R PB VENT 3 CLOSED 1	V59X4205X1	ON			INHB M009			
058-07			VFY	PVD	R PB VENT 3 CLOSED 2	V59X4215X1	ON			INHB M009			
058-08			VFY	PVD	L PB VENT 5 CLOSED 1	V59X3405X1	ON			INHB M009			
058-09			VFY	PVD	L PB VENT 5 CLOSED 2	V59X3415X1	ON			INHB M009			
058-10			VFY	PVD	R PB VENT 5 CLOSED 1	V59X4405X1	ON			INHB M009			
058-11			VFY	PVD	R PB VENT 5 CLOSED 2	V59X4415X1	ON			INHB M009			
058-12			VFY	PVD	L PB/W VENT 4/7 CLOSED 1	V59X3305X1	ON			INHB M009			
058-13			VFY	PVD	L PB/W VENT 4/7 CLOSED 2	V59X3315X1	ON			INHB M009			
058-14			VFY	PVD	R PB/W VENT 4/7 CLOSED 1	V59X4305X1	ON			INHB M009			
058-15			VFY	PVD	R PB/W VENT 4/7 CLOSED 2	V59X4315X1	ON			INHB M009			
058-16			VFY	PVD	L PB VENT 6 CLOSED IND 1	V59X3505X1	ON			INHB M009			
058-17			VFY	PVD	L PB VENT 6 CLOSED IND 2	V59X3515X1	ON			INHB M009			
058-18			VFY	PVD	R PB VENT 6 CLOSED IND 1	V59X4505X1	ON			INHB M009			
058-19			VFY	PVD	R PB VENT 6 CLOSED IND 2	V59X4515X1	ON			INHB M009			
058-20			VFY	PVD	L AFT VENTS 8/9 PURGE IND 1	V59X3905X1	ON			INHB M009			
058-21			VFY	PVD	L AFT VENTS 8/9 PURGE IND 2	V59X3915X1	ON			INHB M009			
058-22			VFY	PVD	R AFT VENTS 8/9 PURGE IND 1	V59X4905X1	ON			INHB M009			
058-23			VFY	PVD	R AFT VENTS 8/9 PURGE IND 2	V59X4915X1	ON			INHB M009			
					$ VLS SSW REMOTE CONTROL CHECKS $								
059-00		V	VFY	WATR	SSW PRI DC POWER ON IND	XWDXV873E	ON			1 OF 2			

SEQ	TIME CD CLOCK	I	T	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S	S	F	D
059-01		V		VFY	WATR	SSW SEC DC POWER ON IND	XWDXV883E	ON			INHB M009						
059-02		V		VFY	WATR	SSW PRI DC POWER BUS ON IND	XWDXV803E	ON			1 OF 2						
059-03		V		VFY	WATR	SSW SEC DC POWER BUS ON IND	XWDXV813E	ON			INHB M009						
						$ KSC OOA ACCUM LEVEL CHECK $											
060-00		K		VFY	ARMS	ACCUM LEVEL SW NO. 1 LOW	GSAX7641E	OFF			2 OF 4						
060-01		K		VFY	ARMS	ACCUM LEVEL SW NO. 2 LOW	GSAX7661E	OFF			2 OF 4						
060-02		K		VFY	ARMS	ACCUM LEVEL SW NO. 3 LOW	GSAX7681E	OFF			2 OF 4						
060-03		K		VFY	ARMS	ACCUM LEVEL SW NO. 4 LOW	GSAX7701E	OFF			OR						
060-04		K		VFY	ARMS	ACCUM LEVEL SW NO. 1 LOW	GSAX7646E	OFF			2 OF 4						
060-05		K		VFY	ARMS	ACCUM LEVEL SW NO. 2 LOW	GSAX7666E	OFF			2 OF 4						
060-06		K		VFY	ARMS	ACCUM LEVEL SW NO. 3 LOW	GSAX7686E	OFF			2 OF 4						
060-07		K		VFY	ARMS	ACCUM LEVEL SW NO. 4 LOW	GSAX7706E	OFF			INHB M009						
						$ KSC OAA ACCUM PRESSURIZATION CHECK $											
060-10		K		VFY	ARMS	2700 PSI GN2 PRESS SW NORM	GSAX7731E	ON			1 OF 4		3.1-14				
060-11		K		VFY	ARMS	2700 PSI GN2 PRESS SW NORM	GSAX7736E	ON			1 OF 4		3.1-14				
060-12		K		VFY	ARMS	2700 PSI GN2 PRESS XDUCER	GSAP7801A	2000	2800	PSIA	1 OF 4		3.1-14				
060-13		K		VFY	ARMS	2700 PSI GN2 PRESS XDUCER	GSAP7806A	2000	2800	PSIA	INHB M009		3.1-14				
060-14		K		VFY	ARMS	750 PSI GN2 PRESS XDUCER	GSAP7811A	250	NOHI	PSIA	1 OF 2		3.1-14				
060-15		K		VFY	ARMS	750 PSI GN2 PRESS XDUCER	GSAP7816A	250	NOHI	PSIA	INHB M009		3.1-14				
						$ VLS CCAA REMOTE CONTROL CHECKS $											
060-50		V		VFY	ARMS	CCAA PRI DC POWER BUS ON IND	XEGXVA03E	ON			1 OF 2						
060-51		V		VFY	ARMS	CCAA SEC DC POWER BUS ON IND	XEGXVA13E	ON			INHB M009						
060-52		V		VFY	ARMS	CCAA PRI DC POWER ON IND	XEGXVA23E	ON			1 OF 2						
060-53		V		VFY	ARMS	CCAA SEC DC POWER ON IND	XEGXVA33E	ON			INHB M009						
061-00	-9:01																
062-00				MSG	INTG	$ DELETED $ GO FOR T-9 GLS SEQUENCE											
062-01	-9:00			LABL	INTG												

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
062-02		CMD	INTG		COUNTDOWN CLOCK HOLD								
		CMD	INTG		SET 10 MIN HOLD TIMER	TIMER	10		MIN				
		VFY	INTG		HOLD TIMER EXPIRED	TIMER			MIN/SEC WAIT				

$ CONTINUE INTO T-9 MIN MILESTONE.
IF MILESTONE FAILS DO NOT RESUME COUNT $

SEQ	TIME CD CLOCK	I/E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S/F/D
100-00	-09:00												
					**********								
101-00			LABL	INTG	T-9 MILESTONE	M009							
					**********								
101-01			VFY	INTG	GLS-GO FOR OAA RETRACT	MOAA	ON			INHB M009			
101-02			VFY	INTG	GLS-GO FOR APU START	MAPU	ON			INHB M009			
101-03			VFY	INTG	GLS-GO FOR PURGE SEQ. 4	MPS4	ON			INHB M009			
101-04			VFY	INTG	GLS-GO FOR ET LO2 PRE-PRESSURIZI	MLOX	ON			INHB M009			
101-05			VFY	INTG	GLS-GO FOR ET LH2 REPLN TERM	MLH2	ON			INHB M009			
101-06			VFY	INTG	GLS-GO FOR AUTO SEQ START	MSEQ	ON			INHB M009			
101-07			VFY	INTG	GLS-GO FOR SSME IGNITION	MENG	ON			INHB M009			
101-08			VFY	INTG	GLS-GO FOR SRB IGNITION	MSRB	ON			INHB M009			
101-09			VFY	INTG	RSS MANUAL HOLD		ON			INHB M009			
101-10			VFY	INTG	NTD MANUAL HOLD		ON			INHB M009			
101-11			VFY	INTG	GLS MANUAL HOLD		ON			INHB M009			
101-12			VFY	INTG	GO FOR T-9 GLS START	M009	ON			HOLD			
101-13			CMD	INTG	COUNTDOWN CLOCK COUNT								
101-14			MMSG	INTG	-07:30 GO FOR OAA RETRACT								
101-15			MSG	INTG	BEGIN TERM COUNT SEQUENCE								
102-00			CVFY	INTG	INTEGRATION CONSOLE GO MODE	SINTGGO	ON			EXIT	TIL MSRB		
					$ GLS EVENT COMPLETE = 540 $								
					$ BYPASS RSLS OTBD FILL VLV CHECK $								
103-00			CMD	INTG	LS BYPASS OF LO2 OTBD VALVE CLOS	CMD-LS	ON						
103-01			CMD	INTG	LS BYPASS OF LH2 OTBD VALVE CLOS	CMD-LS	ON						

SEQ	TIME	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS F D
	CD CLOCK	T E											
104-00	-08:50												
					$ CONTROL LOGIC MANAGEMENT $								
					$ THE CONTROL LOGIC MANAGEMENT SECTION SETS NO FEP LIMITS. IT HAS BYPASS (SYSTEM AND ELEMENT) CAPABILITY ONLY $								
105-00			ICL	FCL	BODY FLAP POSN FDBK-3	V57H0067C1							
105-01			ICL	FCL	BODY FLAP POSN FDBK-4	V57H0068C1							
105-02			ICL	FCL	L INBD ELEVON ATR CHAN 3 POSN	V58H0804A1							
105-03			ICL	FCL	L INBD ELEVON ATR CHAN 4 POSN	V58H0805A1							
105-04			ICL	FCL	L OUTBD ELEVON ATR CHAN 3 POSN	V58H0854A1							
105-05			ICL	FCL	L OUTBD ELEVON ATR CHAN 4 POSN	V58H0855A1							
105-06			ICL	FCL	R INBD ELEVON ACTR CHAN 3 POSN	V58H0904A1							
105-07			ICL	FCL	R INBD ELEVON ACTR CHAN 4 POSN	V58H0905A1							
105-08			ICL	FCL	R OUTBD ELEVON ACTR CHAN 3 POSN	V58H0954A1							
105-09			ICL	FCL	R OUTBD ELEVON ACTR CHAN 4 POSN	V58H0955A1							
106-00		K	ICL	PVD	L PB VENT 6 CLOSED 1	V59X3505X1							
106-01		K	ICL	PVD	L PB VENT 6 CLOSED 2	V59X3515X1							
106-02		K	ICL	PVD	R PB VENT 6 CLOSED 1	V59X4505X1							
106-03		K	ICL	PVD	R PB VENT 6 CLOSED 2	V59X4515X1							
107-00			ICL	HYD	6416 PUMP NO 1 PRESSURE	GHYP1185A							
107-01			ICL	HYD	6416 PUMP NO 2 PRESSURE	GHYP1187A							
107-02			ICL	HYD	6421 PUMP NO 1 PRESSURE	GHYP1785A							
107-03			ICL	HYD	6421 PUMP NO 2 PRESSURE	GHYP1787A							
107-04			ICL	HYD	6417 PUMP NO 1 PRESSURE	GHYP1485A							
107-05			ICL	HYD	6417 PUMP NO 2 PRESSURE	GHYP1487A							
107-06			ICL	HYD	MAIN BUS A VOLTAGE - MLP	D76V01001							
107-07			ICL	HYD	MAIN BUS B VOLTAGE - MLP	D76V02001							
107-08			ICL	HYD	MAIN BUS C VOLTAGE - MLP	D76V03001							
108-00					$ DELETED $								
108-01			ICL	MPS	MPS-PNEU VLV HE RGLTR OUTLET PRE	V41P1605A1							
108-02			ICL	MPS	MPS E1 HELIUM REG A OUTLET PRESS	V41P1154A1							
108-03			ICL	MPS	MPS E1 HELIUM REG B OUTLET PRESS	V41P1153A1							
108-04			ICL	MPS	MPS E2 HELIUM REG A OUTLET PRESS	V41P1254A1							
108-05			ICL	MPS	MPS E2 HELIUM REG B OUTLET PRESS	V41P1253A1							

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SSF D
108-06			ICL	MPS	MPS E3 HELIUM REG A OUTLET PRESS	V41P1354A1							
108-07			ICL	MPS	MPS E3 HELIUM REG B OUTLET PRESS	V41P1353A1							
108-08			ICL	MPS	MPS-LH2 ENG MANIFOLD PRESSURE	V41P1433C1							
108-09			ICL	MPS	MPS-ENG NO 1 HELIUM SUPPLY PRESS	V41P1150C1							
108-10			ICL	MPS	MPS-PNEUMATIC VLV HE SUPPLY PRES	V41P1600A1							
108-11			ICL	MPS	MPS-LOX ENGINE MANIFOLD PRESS	V41P1533C1							
109-00			ICL	FCP	PRSD O2 TK 1 HTR A1-ON	V45X1106E1							
109-01			ICL	FCP	PRSD O2 TK 1 HTR ASSY 1 TEMP	V45T1107A1							AS
109-02			ICL	FCP	PRSD O2 TK 1 HTR B1-ON	V45X1108E1							
109-03			ICL	FCP	PRSD O2 TK 1 HTR ASSY 2 TEMP	V45T1109A1							AS
109-04			ICL	FCP	PRSD O2 TK 1 HTR A2-ON	V45X1111E1							
109-05			ICL	FCP	PRSD O2 TK 1 HTR B2-ON	V45X1113E1							
109-06			ICL	FCP	PRSD O2 TK 2 HTR A1-ON	V45X1206E1							
109-07			ICL	FCP	PRSD O2 TK 2 HTR ASSY 1 TEMP	V45T1207A1							AS
109-08			ICL	FCP	PRSD O2 TK 2 HTR B1-ON	V45X1208E1							
109-09			ICL	FCP	PRSD O2 TK 2 HTR ASSY 2 TEMP	V45T1209A1							AS
109-10			ICL	FCP	PRSD O2 TK 2 HTR A2-ON	V45X1211E1							
109-11			ICL	FCP	PRSD O2 TK 2 HTR B2-ON	V45X1213E1							
109-12			ICL	FCP	PRSD H2 TK 1 HTR ASSY TEMP	V45T2107A1							AS
109-13			ICL	FCP	PRSD H2 TK 1 HTR A-ON	V45X2106E1							
109-14			ICL	FCP	PRSD H2 TK 1 HTR B-ON	V45X2108E1							
109-15			ICL	FCP	PRSD H2 TK 2 HTR ASSY TEMP	V45T2207A1							
109-16			ICL	FCP	PRSD H2 TK 2 HEATER A-ON	V45X2206E1							
109-17			ICL	FCP	PRSD H2 TK 2 HEATER B-ON	V45X2208E1							
109-18			ICL	FCP	PRSD O2 TK 3 HTR ASSY 1 TEMP(MBK)	V45T1307A1							AS
109-19			ICL	FCP	PRSD O2 TK 3 HTR ASSY 2 TEMP(MBK	V45T1309A1							AS
109-20			ICL	FCP	PRSD O2 TK 3 HTR A1-ON (MBK)	V45X1306E1							AS
109-21			ICL	FCP	PRSD O2 TK 3 HTR B1-ON (MBK)	V45X1308E1							AS
109-22			ICL	FCP	PRSD O2 TK 3 HTR A2-ON (MBK)	V45X1311E1							AS
109-23			ICL	FCP	PRSD O2 TK 3 HTR B2-ON (MBK)	V45X1313E1							AS
109-24			ICL	FCP	PRSD H2 TK 3 HTR ASSY TEMP(MBK)	V45T2307A1							AS
109-25			ICL	FCP	PRSD H2 TK 3 HTR A-ON(MBK)	V45X2306E1							AS
109-26			ICL	FCP	PRSD H2 TK 3 HTR B-ON(MBK)	V45X2308E1							AS
109-27			ICL	FCP	PRSD O2 TK 4 HTR ASSY 1 TEMP(MBK	V45T1407A1							AS
109-28			ICL	FCP	PRSD O2 TK 4 HTR ASSY 2 TEMP(MBK	V45T1409A1							AS
109-29			ICL	FCP	PRSD O2 TK 4 HTR A1-ON (MBK)	V45X1406E1							AS
109-30			ICL	FCP	PRSD O2 TK 4 HTR A2-ON (MBK)	V45X1411E1							AS
109-31			ICL	FCP	PRSD H2 TK 4 HTR ASSY TEMP(MBK)	V45T2407A1							AS
109-32			ICL	FCP	PRSD H2 TK 5 HTR A-ON (MBK)	V45X2456E1							AS
109-33			ICL	FCP	PRSD H2 TK 5 HTR B-ON (MBK)	V45X2458E1							AS

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
109-34			ICL	FCP	PRSD O2 TK 5 HTR ASSY 1 TEMP(MBK)	V45T1507A1							PL
109-35			ICL	FCP	PRSD O2 TK 5 HTR ASSY 2 TEMP(MBK)	V45T1509A1							PL
109-36			ICL	FCP	PRSD O2 TK 4/5 HTR B1/A1-ON	V45X1408E1							PL
109-37			ICL	FCP	PRSD O2 TK 4/5 HTR B2/A2-ON	V45X1413E1							AS
109-38			ICL	FCP	PRSD H2 TK 5 HTR ASSY TEMP(MBK)	V45T2507A1							PL
110-00			ICL	HYFU	OMS-L POD HE TANK PRESS 2	V43P4122C1							PL
110-01			ICL	HYOX	RCS L AFT HE OX TANK PRESS-2	V42P2112C1							
110-02			ICL	HYFU	OMS-L POD HE TANK PRESS 1	V43P4121C1							PL
110-03			ICL	HYOX	RCS L AFT HE OX TANK PRESS-1	V42P2110C1							
110-04			ICL	HYFU	OMS-R POD HE TANK PRESS 2	V43P5122C1							PL
110-05			ICL	HYOX	RCS R AFT HE OX TANK PRESS-2	V42P3112C1							
110-06			ICL	HYFU	OMS-R POD HE TANK PRESS 1	V43P5121C1							PL
110-07			ICL	HYOX	RCS R AFT HE OX TANK PRESS-1	V42P3110C1							
110-08			ICL	HYOX	RCS FWD HE OX TANK PRESS-2	V42P1112C1							
110-09			ICL	HYOX	RCS FWD HE OX TANK PRESS-1	V42P1110C1							
110-10			ICL	HYFU	RCS L AFT HE FU TANK PRESS-2	V42P2114C1							
110-11			ICL	HYFU	RCS L AFT HE FU TANK PRESS-1	V42P2113C1							
110-12			ICL	HYFU	RCS R AFT HE FU TANK PRESS-2	V42P3114C1							
110-13			ICL	HYFU	RCS R AFT HE FU TANK PRESS-1	V42P3113C1							
110-14			ICL	HYFU	RCS FWD HE FU TANK PRESS-2	V42P1114C1							
110-15			ICL	HYFU	RCS FWD HE FU TANK PRESS-1	V42P1113C1							
110-16			ICL	HYOX	RCS L AFT HE OX TANK TEM-1	V42T2100C1							
110-17			ICL	HYFU	RCS L AFT HE FU TANK TEM-1	V42T2104C1							
110-18			ICL	HYFU	OMS-L POD HE TANK TEM-UPPER	V43T4111C1							PL
110-19			ICL	HYOX	RCS R AFT HE OX TANK TEMP-1	V42T3100C1							
110-20			ICL	HYFU	RCS R AFT HE FU TANK TEMP-1	V42T3104C1							
110-21			ICL	HYFU	OMS-R POD HE TANK TEMP UPPER	V43T5111C1							PL
110-22			ICL	HYOX	RCS FWD HE OX TANK TEMP-1	V42T1100C1							
110-23			ICL	HYFU	RCS FWD HE FU TANK TEMP-1	V42T1104C1							
110-24					$ DELETED $								
110-25					$ DELETED $								
110-26					$ DELETED $								
110-27					$ DELETED $								
110-28		K	ICL	HYFU	RCS FWD FU TANK ULLAGE PRESS	V42P1116C1							
110-29		K	ICL	HYOX	RCS FWD OX TANK ULLAGE PRESS	V42P1115C1							
110-30		K	ICL	HYFU	RCS L AFT FU TANK ULLAGE PRESS	V42P2116C1							
110-31		K	ICL	HYOX	RCS L AFT OX TANK ULLAGE PRESS	V42P2115C1							
110-32		K	ICL	HYFU	RCS R AFT FU TANK ULLAGE PRESS	V42P3116C1							
110-33		K	ICL	HYOX	RCS R AFT OX TANK ULLAGE PRESS	V42P3115C1							
110-34		K	ICL	HYFU	A80497 FR FU PT743 PR	GMMP3029A							

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
110-35		K	ICL	HYFU	A80503 FR FU PT743 PR	GMMP3025A							
110-36		K	ICL	HYFU	A100531 PRT LHRO FU PT743 PR	GMMP3113A							
110-37		K	ICL	HYFU	A112269 RHR FU PT743 PR	GMMP3237A							
110-38		K	ICL	HYOX	A80498 FR OX PT742 PR	GNOP3029A							
110-39		K	ICL	HYOX	A80504 FR OX PT742 PR	GNOP3025A							
110-40		K	ICL	HYOX	A100532 PRT RHRO OX PT742 PR	GNOP3113A							
110-41		K	ICL	HYFU	A100523 PRT LHO FU PT743 PR	GMMP3115A							
110-42		K	ICL	HYFU	A100533 PRT LHO FU PT743 PR	GMMP3124A							
110-43		K	ICL	HYFU	A111727 LHR FU PT743 PR	GMMP3103A							
110-44		K	ICL	HYFU	A100573 PRT RHRO FU PT743 PR	GMMP3218A							
110-45		K	ICL	HYFU	A101097 PRT RHO FU PT743 PR	GMMP3211A							
110-46		K	ICL	HYOX	A100524 PRT RHO OX PT742 PR	GNOP3115A							
110-47		K	ICL	HYOX	A100534 PRT RHO OX PT742 PR	GNOP3124A							
110-48		K	ICL	HYOX	A111728 RHR OX PT742 PR	GNOP3103A							
110-49		K	ICL	HYOX	A112270 LHR OX PT742 PR	GNOP3237A							
110-50		K	ICL	HYFU	A100571 PRT RHO FU PT743 PR	GMMP3207A							
110-51		K	ICL	HYOX	A100574 PRT LHRO OX PT742 PR	GNOP3218A							
110-52		K	ICL	HYOX	A101098 PRT LHO OX PT742 PR	GNOP3211A							
110-53		K	ICL	HYOX	A100572 PRT LHO OX PT742 PR	GNOP3207A							
110-60		V	ICL	HYOX	FRCS PROP TK PRESS	V42P1210C1							
110-61		V	ICL	HYOX	LARC PROP TK PRESS	V42P2210C1							
110-62		V	ICL	HYOX	RARC PROP TK PRESS	V42P3210C1							
110-63		V	ICL	HYOX	LOMS PROP TK PRESS	V43P4221C1							
110-64		V	ICL	HYOX	ROMS PROP TK PRESS	V43P5221C1							
110-65		V	ICL	HYOX	RGN GN2 TANK PRESS	V43P5547C1							
110-66		V	ICL	HYOX	RGN GN2 TANK PRESS	V43P5548C1							
110-67		V	ICL	HYOX	LGN GN2 TANK PRESS	V43P4547C1							
110-68		V	ICL	HYOX	LGN GN2 TANK PRESS	V43P4548C1							
110-69		V	ICL	HYFU	FRCS PROP TK PRESS	V42P1310C1							
110-70		V	ICL	HYFU	LARC PROP TK PRESS	V42P2310C1							
110-71		V	ICL	HYFU	RARC PROP TK PRESS	V42P3310C1							
110-72		V	ICL	HYFU	LOMS PROP TK PRESS	V43P4321C1							
110-73		V	ICL	HYFU	ROMS PROP TK PRESS	V43P5321C1							
111-00			ICL	BELE	LH VOLTAGE OPERATIONAL BUS A	B76V1600H							
111-01			ICL	BELE	LH VOLTAGE OPERATIONAL BUS B	B76V1601H							
111-02			ICL	BELE	RH VOLTAGE OPERATIONAL BUS A	B76V2600H							
111-03			ICL	BELE	RH VOLTAGE OPERATIONAL BUS B	B76V2601H							
112-00		K	ACL	BHYD	6684 LOW FLOW GPM	GHYR2367A							
112-01		K	ACL	BHYD	6685 LOW FLOW GPM	GHYR2667A							

SEQ	TIME CD CLOCK	SI TE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF D
112-02		K	ACL	BHYD	6687 LOW FLOW GPM	GHYR2967A							
112-03		K	ACL	BHYD	6688 LOW FLOW GPM	GHYR3267A							
112-04			ACL	BHYD	HRS 6684 BYPASS VALVE OPEN CMD	GHYK2260ER							
112-05			ACL	BHYD	HRS 6684 BYPASS VALVE CLOSE CMD	GHYK2270ER							
112-06			ACL	BHYD	HRS 6685 BYPASS VALVE OPEN	GHYK2560ER							
112-07			ACL	BHYD	HRS 6685 BYPASS VALVE CLOSE	GHYK2570ER							
112-08			ACL	BHYD	HRS 6687 BYPASS VALVE OPEN	GHYK2860ER							
112-09			ACL	BHYD	HRS 6687 BYPASS VALVE CLOSE	GHYK2870ER							
112-10			ACL	BHYD	HRS 6688 BYPASS VALVE OPEN	GHYK3160ER							
112-11			ACL	BHYD	HRS 6688 BYPASS VALVE CLOSE	GHYK3170ER							
112-12			ACL	BHYD	6684 RETURN PRESSURE	GHYP2365A							
112-13			ACL	BHYD	6685 RETURN PRESSURE	GHYP2665A							
112-14			ACL	BHYD	6687 RETURN PRESSURE	GHYP2965A							
112-15			ACL	BHYD	6688 RETURN PRESSURE	GHYP3265A							
112-16			ACL	BHYD	6683 PUMP NO 1 TEMPERATURE	GHYT0286A							
112-17			ACL	BHYD	6683 PUMP NO 2 TEMPERATURE	GHYT0288A							
112-18			ACL	BHYD	6686 PUMP NO 1 TEMPERATURE	GHYT0586A							
112-19			ACL	BHYD	6686 PUMP NO 2 TEMPERATURE	GHYT0588A							
112-20			ACL	BHYD	6684 BYPASS VALVE OPEN	GHYX2262E							
112-21			ACL	BHYD	6684 BYPASS VALVE CLOSE	GHYX2263E							
112-22			ACL	BHYD	6685 BYPASS VALVE OPEN	GHYX2562E							
112-23			ACL	BHYD	6685 BYPASS VALVE CLOSE	GHYX2563E							
112-24			ACL	BHYD	6687 BYPASS VALVE OPEN	GHYX2862E							
112-25			ACL	BHYD	6687 BYPASS VALVE CLOSE	GHYX2863E							
112-26			ACL	BHYD	6688 BYPASS VALVE OPEN	GHYX3162E							
112-27			ACL	BHYD	6688 BYPASS VALVE CLOSE	GHYX3163E							
112-28			ACL	BHYD	LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1							
112-29			ACL	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1							
112-30			ACL	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1							
112-31			ACL	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1							
112-32			ACL	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1							
112-33			ACL	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1							
112-34			ACL	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1							
112-35			ACL	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1							
112-36					$ DELETED $								
112-37					$ DELETED $								
112-38					$ DELETED $								
112-39					$ DELETED $								
112-40			ACL	BHYD	AFT SKIRT GN2 PURGE TEMP	GHYT8013A							
112-41			ACL	BHYD	AFT SKIRT PURGE GN2 PRES	GHYP8014A							
112-42			ACL	BHYD	HRS 6430 AFT SKIRT PURG HTR ON C	GHYK8002ER							

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
112-43			ICL	BHYD	LH TEMP GAS GENERATOR BED SYS A	B46T1503C1							
112-44			ICL	BHYD	LH TEMP GAS GENERATOR BED SYS B	B46T1504C1							
112-45			ICL	BHYD	RH TEMP GAS GENERATOR BED SYS A	B46T2503C1							
112-46			ICL	BYHD	RH TEMP GAS GENERATOR BED SYS B	B46T2504C1							
112-47			CMD	BHYD	LH APU A GG HTR 2 ON CMD	B46K3023XL	OFF						
112-48			CMD	BHYD	LH APU B GG HTR 2 ON CMD	B46K3025XL	OFF						
112-49			CMD	BHYD	RH APU A GG HTR 2 ON CMD	B46K4023XL	OFF						
112-50			CMD	BHYD	RH APU B GG HTR 2 ON CMD	B46K4025XL	OFF						
112-51			CMD	BHYD	LH APU A GG HTR 1 ON CMD	B46K3022XL	ON						
112-52			CMD	BHYD	LH APU B GG HTR 1 ON CMD	B46K3024XL	ON						
112-53			CMD	BHYD	RH APU A GG HTR 1 ON CMD	B46K4022XL	ON						
112-54			CMD	BHYD	RH APU B GG HTR 1 ON CMD	B46K4024XL	ON						
114-00					$ DELETED $								
114-01					$ DELETED $								
114-02					$ DELETED $								
114-03			ACL	MPS	MPS-ENG NO 2 HELIUM SUPPLY PRESS	V41P1250C1							
114-04			ACL	MPS	MPS-ENG NO 3 HELIUM SUPPLY PRESS	V41P1350C1							
114-05					$ DELETED $								
114-06					$ DELETED $								
114-07					$ DELETED $								
114-08					$ DELETED $								
115-00			ACL	SSME	MPENG GN2 PRG OUT PRESS	GGNP1034A							
115-01			ACL	SSME	MPENG GN2 PRG OUT PRESS(R)	GGNP1139A							
116-00			ACL	PVD	L FWD VENTS 1/2 CLOSED 1	V59X3005X1							
116-01			ACL	PVD	L FWD VENTS 1/2 CLOSED 2	V59X3015X1							
116-02			ACL	PVD	L AFT VENTS 8/9 CLOSED 1	V59X3805X1							
116-03			ACL	PVD	L AFT VENTS 8/9 CLOSED 2	V59X3815X1							
116-04			ACL	PVD	R FWD VENTS 1/2 CLOSED 1	V59X4005X1							
116-05			ACL	PVD	R FWD VENTS 1/2 CLOSED 2	V59X4015X1							
116-06			ACL	PVD	R AFT VENTS 8/9 CLOSED 1	V59X4805X1							
116-07			ACL	PVD	R AFT VENTS 8/9 CLOSED 2	V59X4815X1							
116-08		K	ACL	PVD	N COIL INLET PRESS (PRI)IND	GECP2000A							
116-09		K	ACL	PVD	ORB B DUCT FLOW DIFF PRESS INC	GECP2261A							
116-10		A	ACL	GOX	GOX VENT PURGE CNTL TEMP IND	GECT2811A							
116-11		A	ACL	GOX	GOX VENT PURGE HEATER TNK TEMP I	GECT2816A							
116-12		K	ACL	PVD	N COIL INLET PRESS (SEC)IND	GECP4000A							
116-13		A	ACL	GOX	GOX VENT PURGE TEMP MONITOR IND	GECT4811A							
116-14		B	ACL	GOX	A138439 NE HOOD SEAL TEMP	GSAT9311A							

SEQ	TIME CD CLOCK	SI BT EE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
116-15		B	ACL	GOX	A138439 NE HOOD SEAL TEMP	GSAT9316A							
116-16		B	ACL	GOX	A138440 SW HOOD SEAL TEMP	GSAT9301A							
116-17		B	ACL	GOX	A138440 SW HOOD SEAL TEMP	GSAT9306A							
116-18		B	ACL	GOX	A151887 HTR CHAMBER TEMP	GSAT9141A							
116-19		B	ACL	GOX	A151887 HTR CHAMBER TEMP	GSAT9146A							
117-00			ACL	FCP	PRSD FCP 1 O2 REAC VLV-OPEN	V45X1150E1							
117-01			ACL	FCP	PRSD FCP 2 O2 REAC VLV-OPEN	V45X1155E1							
117-02			ACL	FCP	PRSD FCP 3 O2 REAC VLV-OPEN	V45X1160E1							
117-03			ACL	FCP	PRSD FCP 1 H2 REAC VLV-OPEN	V45X2150E1							
117-04			ACL	FCP	PRSD FCP 2 H2 REAC VLV-OPEN	V45X2155E1							
117-05			ACL	FCP	PRSD FCP 3 H2 REAC VLV-OPEN	V45X2160E1							
118-00			ACL	BRS	RSS OK TO LAUNCH IND NO. 1	GRSX2100E							
118-01			ACL	BRS	RSS OK TO LAUNCH IND NO. 2	GRSX2102E							

SEQ	TIME CD CLOCK	I/T/E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S/F/D
119-00	-07:40												
120-00		V	CMD	ARMS	A REMOTE POWER CONTROL	XEGKVP01E	ON						
120-01		V	CMD	ARMS	B REMOTE POWER CONTROL	XEGKVP11E	ON						
121-00	-07:37												
122-00		V	VFY	ARMS	A REMOTE CONTROL IND PRI	XEGXVB53E	ON			1 OF 2			
122-01		V	VFY	ARMS	B REMOTE CONTROL IND SEC	XEGXVC53E	ON			INHB MOAA			
124-00	-07:30												
					**********								
125-00			LABL	INTG	OAA MILESTONE	MOAA							
					**********								
					$ GLS EVENT COMPLETE = 450 $								
					$ NOTICE: THIS MILESTONE DOES NOT HOLD FOR DOWNSTREAM HOLD INDICATIONS $								
125-01			VFY	INTG	RSS MANUAL HOLD		ON			INHB MOAA			
125-02			VFY	INTG	NTD MANUAL HOLD		ON			INHB MOAA			
125-03			VFY	INTG	GLS MANUAL HOLD		ON			INHB MOAA			
125-04			VFY	INTG	INTG GLS-GO FOR OAA RETRACT	MOAA	ON			HOLD			
125-05			MMSG	INTG	-05:00 GO FOR APU START								
125-06			MSG	INTG	START OAA RETRACT								
126-00		K	CMD	ARMS	A LOCK PR1 EXTEND LOCK VLV	GSAK7130E	OFF						
126-01		K	CMD	ARMS	A LOCK SEC EXTEND LOCK VLV	GSAK7150E	OFF						
126-02		K	CMD	ARMS	A LOCK PR1 EXTEND LOCK VLV	GSAK7135E	OFF						
126-03		K	CMD	ARMS	A LOCK SEC EXTEND LOCK VLV	GSAK7155E	OFF						
126-50		V	CMD	ARMS	B LAUNCH POS RETR ENBL	XEGKVB01E	ON						
126-51		V	CMD	ARMS	A LAUNCH POS RETR ENBL	XEGKVC01E	ON						
					$ GLS EVENT COMPLETE = 449 $								

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
127-00	-07:28														
					$ UNLOCK OAA $										
128-00		K	CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7120E	ON								
128-01		K	CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7140E	ON								
128-02		K	CMD	ARMS	CAA UNLOCK PRI EXTEND LOCK V	GSAK7125E	ON								
128-03		K	CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7145E	ON								
128-04		K	CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7510E	ON								
128-05		K	CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7515E	ON								
					$ GLS EVENT COMPLETE = 447 $										
129-00	-07:26														
130-00		K	CMD	ARMS	OAA LCHBACK SPLY V UNLATCH	GSAK7510E	OFF								
130-01		K	CMD	ARMS	OAA LCHBACK SPLY V UNLATCH	GSAK7515E	OFF								
					$ VFY OAA UNLOCK $										
131-00		K	VFY	ARMS	A EXTEND TOP UNLOCKED SW	GSAX7551E	ON			1 OF 4		3.1-13			
131-01		K	VFY	ARMS	A EXTEND TOP UNLOCKED SW	GSAX7556E	ON			1 OF 4		3.1-13			
131-02		K	VFY	ARMS	A EXTEND TOP LOCKED SW	GSAX7541E	OFF			1 OF 4		3.1-13			
131-03		K	VFY	ARMS	A EXTEND TOP LOCKED SW	GSAX7546E	OFF			GTO ST200		3.1-13			
131-04		K	VFY	ARMS	A EXTEND BOTTOM UNLOCKED SW	GSAX7571E	ON			1 OF 4		3.1-12			
131-05		K	VFY	ARMS	A EXTEND BOTTOM UNLOCKED SW	GSAX7576E	ON			1 OF 4		3.1-12			
131-06		K	VFY	ARMS	A EXTEND BOTTOM LOCKED SW	GSAX7561E	OFF			1 OF 4		3.1-12			
131-07		K	VFY	ARMS	A EXTEND BOTTOM LOCKED SW	GSAX7566E	OFF			GTO ST200		3.1-12			
					$ VFY OAA UNLATCH $										
132-00		K	VFY	ARMS	A HINGESIDE LATCHED SW	GSAX7111E	OFF			1 OF 4					
132-01		K	VFY	ARMS	A HINGESIDE LATCHED SW	GSAX7116E	OFF			1 OF 4					
132-02		K	VFY	ARMS	A HINGESIDE UNLATCHED SW	GSAX7112E	ON			1 OF 4					
132-03		K	VFY	ARMS	A HINGESIDE UNLATCHED SW	GSAX7117E	ON			GTO ST200					
132-04		K	VFY	ARMS	A OUTSIDE LATCHED SW	GSAX7113E	OFF			1 OF 4					
132-05		K	VFY	ARMS	A OUTSIDE LATCHED SW	GSAX7118E	OFF			1 OF 4					
132-06		K	VFY	ARMS	A OUTSIDE UNLATCHED SW	GSAX7114E	ON			1 OF 4					
132-07		K	VFY	ARMS	A OUTSIDE UNLATCHED SW	GSAX7119E	ON			GTO ST200					
					$ CLOSE INHIBIT VALVE $										

SEQ	TIME CD CLOCK	SI TE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
132-08		K	CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7100E	ON						
132-09		K	CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7105E	ON						
					$ VFY CCAA RETRACT ENABLE $								
133-00		V	VFY	ARMS	B LAUNCH POS RETR ENABLE IND	XEGXVB03E	ON			1 OF 2			
133-01		V	VFY	ARMS	A LAUNCH POS RETR ENABLE IND	XEGXVC03E	ON			GTO ST200			
					$ BEGIN CCAA RETRACT $								
133-02		V	CMD	ARMS	B LAUNCH POS RETR	XEGKVB11E	ON						
133-03		V	CMD	ARMS	A LAUNCH POS RETR	XEGKVC11E	ON						
134-00	-07:24												
					$ GLS EVENT COMPLETE = 444 $								
					$ BEGIN OAA RETRACT $								
135-00		K	CMD	ARMS	OAA OPEN PRI RETRACT SUPPLY V	GSAK7210E	ON						
135-01		K	CMD	ARMS	OAA OPEN SEC RETRACT SUPPLY V	GSAK7250E	ON						
135-02		K	CMD	ARMS	OAA OPEN PRI RETRACT SUPPLY V	GSAK7215E	ON						
135-03		K	CMD	ARMS	OAA OPEN SEC RETRACT SUPPLY V	GSAK7255E	ON						
135-04		K	CMD	ARMS	OAA OPEN PRI RETRACT RETURN V	GSAK7230E	ON						
135-05		K	CMD	ARMS	OAA OPEN SEC RETRACT RETURN V	GSAK7270E	ON						
135-06		K	CMD	ARMS	OAA OPEN PRI RETRACT RETURN V	GSAK7235E	ON						
135-07		K	CMD	ARMS	OAA OPEN SEC RETRACT RETURN V	GSAK7275E	ON						
					$ GLS EVENT COMPLETE = 443 $								
136-00	ST200				$ OAA RETRACT BYPASS BRANCH POINT $								
					$ CONFIGURE OAA FOR EXTEND WHEN RETRACTED $								
136-01		K	CVFY	ARMS	A FULLY RETRACTED SWITCH-RET	GSAX7626E	OFF			1 OF 4			
136-02		K	CVFY	ARMS	A FULLY RETRACTED SWITCH-RET	GSAX7621E	OFF			1 OF 4			
136-03		K	CVFY	ARMS	A FULLY RETRACTED SW-NOT SW	GSAX7636E	ON			1 OF 4			
136-04		K	CVFY	ARMS	A FULLY RETRACTED SW-NO SW	GSAX7631E	ON			CPER P005			
136-50	-05:55												
					$ CCAA RETRACTION VERIFICATION $								
136-51		V	VFY	ARMS	CCAA B LAUNCH POSN LIMIT STOP IND	XEGXVB13E	ON			1 OF 3			
136-52		V	VFY	ARMS	CCAA A LAUNCH POSN LIMIT STOP IND	XEGXVC13E	ON			1 OF 3			

SEQ	TIME / CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC / PAGE	S	S	F	D
136-53		V	VFY	ARMS	CCAA POSITION INDICATOR	XEGPVQ09A	NOLO	26.5	FT	INHB MAPU						
137-00	-05:15															
					$ APU PRE-START STATUS $											
138-00			VFY	HYD	HYD SYS 1 H2O BOILER OK	V58X0182E1	ON			INHB MAPU		6.7.2-9				
138-01			VFY	HYD	HYD SYS 2 H2O BOILER OK	V58X0282E1	ON			INHB MAPU		6.7.2-9				
138-02			VFY	HYD	HYD SYS 3 H2O BOILER OK	V58X0382E1	ON			INHB MAPU		6.7.2-9				
138-03			VFY	HYD	HYD SYS 1 MN PUMP DEPRESS ENBL A	V58S0172E1	ON			INHB MAPU						
138-04			VFY	HYD	HYD SYS 2 MN PUMP DEPRESS ENBL A	V58S0272E1	ON			INHB MAPU						
138-05			VFY	HYD	HYD SYS 3 MN PUMP DEPRESS ENBL A	V58S0372E1	ON			INHB MAPU						
138-06			VFY	HYD	HYD SYS 1 MN PUMP DEPRESS ENBL B	V58S0173E1	ON			INHB MAPU						
138-07			VFY	HYD	HYD SYS 2 MN PUMP DEPRESS ENBL B	V58S0273E1	ON			INHB MAPU						
138-08			VFY	HYD	HYD SYS 3 MN PUMP DEPRESS ENBL B	V58S0373E1	ON			INHB MAPU						
					$ APU PERFORMANCE GUARDS $											
139-00			CVFY	APU	APU-1 TURBINE EXHAUST TEMP NO. 1	V46T0142A1	NOLO	1260	DEGF	1 OF 2		6.6-18				
139-01			CVFY	APU	APU-1 TURBINE EXHAUST TEMP NO. 2	V46T0140A1	NOLO	1260	DEGF	INHB MSEQ		6.6-18				
139-02			CVFY	APU	APU-2 TURBINE EXHAUST TEMP NO. 1	V46T0242A1	NOLO	1260	DEGF	1 OF 2		6.6-18				
139-03			CVFY	APU	APU-2 TURBINE EXHAUST TEMP NO. 2	V46T0240A1	NOLO	1260	DEGF	INHB MSEQ		6.6-18				
139-04			CVFY	APU	APU-3 TURBINE EXHAUST TEMP NO. 1	V46T0342A1	NOLO	1260	DEGF	1 OF 2		6.6-18				
139-05			CVFY	APU	APU-3 TURBINE EXHAUST TEMP NO. 2	V46T0340A1	NOLO	1260	DEGF	INHB MSEQ		6.6-18				
139-06			CVFY	APU	APU-1 GEARBOX LUBE OIL OUT TEMP	V46T0154A1	NOLO	310	DEGF	1 OF 2		6.6-20				
139-07			CVFY	APU	APU-1 GEARBOX LUBE OIL RETURN TE	V46T0150A1	NOLO	280	DEGF	INHB MSEQ		6.6-20				
139-08			CVFY	APU	APU-2 GEARBOX LUBE OIL OUT TEMP	V46T0254A1	NOLO	310	DEGF	1 OF 2		6.6-20				
139-09			CVFY	APU	APU-2 GEARBOX LUBE OIL RETURN TE	V46T0250A1	NOLO	280	DEGF	INHB MSEQ		6.6-20				
139-10			CVFY	APU	APU-3 GEARBOX LUBE OIL OUT TEMP	V46T0354A1	NOLO	310	DEGF	1 OF 2		6.6-20				
139-11			CVFY	APU	APU-3 GEARBOX LUBE OIL RETURN TE	V46T0350A1	NOLO	280	DEGF	INHB MSEQ		6.6-20				
140-00					$ DELETED $											
					$ JSC UPLINK OPS 1 AND OPS 2 RCDRS ON FROM MCCH $											
141-00					$ MOVED TO SEQ 136-01 $											
141-01					$ MOVED TO SEQ 136-02 $											
141-02					$ MOVED TO SEQ 136-03 $											
141-03					$ MOVED TO SEQ 136-04 $											

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
142-00					$ MOVED TO SEQ 186-01 $								
142-01					$ MOVED TO SEQ 186-02 $								
142-02					$ MOVED TO SEQ 186-03 $								
142-03					$ MOVED TO SEQ 186-04 $								
142-04					$ MOVED TO SEQ 186-05 $								
143-00	-05:03												
					$RECORDER STATUS $								
144-00			VFY	INST	RCDR OPS1 BITE	V75X2529E1	ON			3 OF 3		6.9.6-5	
144-01			VFY	INST	RCDR OPS1 HEADTEMP	V75T2517A1	NOLO	120	DEGF	3 OF 3		6.9.6-5	
144-02			VFY	INST	RCDR OPS 1 TAPE MOTION	V75X2523E1	ON			OR		6.9.6-5	
144-03			VFY	INST	RCDR OPS2 BITE	V75X2629E1	ON			3 OF 3		6.9.6-5	
144-04			VFY	INST	RCDR OPS2 HEADTEMP	V75T2617A1	NOLO	120	DEGF	3 OF 3		6.9.6-5	
144-05			VFY	INST	RCDR OPS 2 TAPE MOTION	V75X2623E1	ON			INHB MAPU		6.9.6-5	
					$ OAA RETRACTION VERIFICATION $								
145-00		K	VFY	ARMS	A FULLY RETRACTED SWITCH - RET	GSAX7626E	ON			1 OF 4		3.1-16	
145-01		K	VFY	ARMS	A FULLY RETRACTED SWITCH - RLT	GSAX7621E	ON			1 OF 4		3.1-16	
145-02		K	VFY	ARMS	OAA POSITION INDICATION	GSAH7831A	NOLO	2	DEG	1 OF 4		3.1-16	
145-03		K	VFY	ARMS	OAA POSITION INDICATOR	GSAH7836A	NOLO	2	DEG	INHB MAPU		3.1-16	
146-00	-05:00												
					$ GLS EVENT COMPLETE = 300 $								
					**********								
147-00			LABL	INTG	APU START MILESTONE	MAPU							
					**********								
147-01			VFY	INTG	GLS-GO FOR PURGE SEQ. 4	MPS4	ON			INHB MAPU			
147-02			VFY	INTG	GLS-GO FOR ET LO2 PRE-PRESSURIZI	MLOX	ON			INHB MAPU			
147-03			VFY	INTG	GLS-GO FOR ET LH2 REPLN TERM	MLH2	ON			INHB MAPU			
147-04			VFY	INTG	GLS-GO FOR AUTO SEQ START	MSEQ	ON			INHB MAPU			
147-05			VFY	INTG	GLS-GO FOR SSME IGNITION	MENG	ON			INHB MAPU			
147-06			VFY	INTG	GLS-GO FOR SRB IGNITION	MSRB	ON			INHB MAPU			
147-07			VFY	INTG	RSS MANUAL HOLD		ON			INHB MAPU			
147-08			VFY	INTG	NTD MANUAL HOLD		ON			INHB MAPU			
147-09			VFY	INTG	GLS MANUAL HOLD		ON			INHB MAPU			

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
147-10			VFY	INTG	INTG GLS-GO FOR APU START	MAPU	ON			HOLD			
147-11			MMSG	INTG	-04:00 GO FOR PURGE SEQ 4								
147-12			OMSG	INTG	*** GLS GO FOR APU START ***								
147-13			MSG	INTG	APU START								
147-14			CMD	INTG	APU HOLD AVAILABLE TIMER ACTIV.	GCDKTIM2E	ON						
					$//////////////// CREW CMD APU 1/2/3 START ////////////////$								
					$ GLS EVENT COMPLETE = 299 $								
					$ ARM SRB AND ET S/A $								
148-00			CMD	BRS	LH RSS S/A DEVICE ARM CMD	B55K3044XL	ON						
148-01			CMD	BRS	RH RSS S/A DEVICE ARM CMD	B55K4044XL	ON						
148-02			CMD	TRS	ET RSS S/A DEVICE ARM CMD	T55K3110XL	ON						
					$ GLS EVENT COMPLETE = 298 $								
149-00			CMD	BPYR	LH IGNITION S/A DEVICE ARM CMD	B55K3000XL	ON						
149-01			CMD	BPYR	RH IGNITION S/A DEVICE ARM CMD	B55K4000XL	ON						
					$ GLS EVENT COMPLETE = 297 $								
150-00	-04:55												
151-00			CMD	BRS	LH RSS S/A DEVICE ARM CMD	B55K3044XL	OFF						
151-01			CMD	BRS	RH RSS S/A DEVICE ARM CMD	B55K4044XL	OFF						
151-02			CMD	TRS	ET RSS S/A DEVICE ARM CMD	T55K3110XL	OFF						
151-03			CMD	BPYR	LH IGNITION S/A DEVICE ARM CMD	B55K3000XL	OFF						
151-04			CMD	BPYR	RH IGNITION S/A DEVICE ARM CMD	B55K4000XL	OFF						
					$ GLS EVENT COMPLETE = 294 $								
152-00	-04:50												
					$ IGN AND RSS S/A ARM CHECK $								
153-00			VFY	BRS	LH EVENT RSS S/A DEVICE ARMED	B55X1870X1	ON			INHB MPS4		2.2-17	
153-01			VFY	BRS	RH EVENT RSS S/A DEVICE ARMED	B55X2870X1	ON			INHB MPS4		2.2-17	
153-02			VFY	TRS	ET RSS S/A DVC ARMED	T55X1870X1	ON			INHB MPS4		5.2-26	
153-03			VFY	BRS	LH EVENT RSS S/A DEVICE SAFED	B55X1869X1	OFF			INHB MPS4		2.2-28	
153-04			VFY	BRS	RH EVENT RSS S/A DEVICE SAFED	B55X2869X1	OFF			INHB MPS4		2.2-28	
153-05			VFY	TRS	ET RSS S/A DVC SAFED	T55X1869X1	OFF			INHB MPS4		5.2-25	

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
153-06			CVFY	BPYR	LH EVENT IGN S/A DEVICE ARMED	B55X1842X1	ON			INHB MSRB		2.4-6	
153-07			CVFY	BPYR	RH EVENT IGN S/A DEVICE ARMED	B55X2842X1	ON			INHB MSRB		2.4-6	
153-08			VFY	BPYR	LH EVENT IGN S/A DEVICE SAFED	B55X1843X1	OFF			INHB MPS4		2.4-7	
153-09			VFY	BPYR	RH EVENT IGN S/A DEVICE SAFED	B55X2843X1	OFF			INHB MPS4		2.4-7	
153-10			VFY	BRS	LH CURRENT RSS BATTERY NO 1	B55C1051C1	.02	.75	AMP	INHB MPS4		2.4-19	
153-11			VFY	BRS	RH CURRENT RSS BATTERY NO 1	B55C2051C1	.02	.75	AMP	INHB MPS4		2.4-19	
153-12					$ DELETED $								
154-00	-04:30												
					$ GLS EVENT COMPLETE = 270 $								
					$ TURN OFF MAIN FUEL VALVE HEATERS $								
155-00			CMD	SSME	ME-1 MFV HEATER PWR ON CMD	GGNK1020E	OFF						
155-01			CMD	SSME	ME-1 MFV HEATER PWR ON (R) CMD	GGNK1110E	OFF						
155-02			CMD	SSME	ME-1 MFV HEATER PWR OFF CMD	GGNK1021E	ON						
155-03			CMD	SSME	ME-1 MFV HEATER PWR OFF (R) CMD	GGNK1141E	ON						
155-04			CMD	SSME	ME-2 MFV HEATER PWR ON CMD	GGNK1040E	OFF						
155-05			CMD	SSME	ME-2 MFV HEATER PWR ON (R) CMD	GGNK1150E	OFF						
155-06			CMD	SSME	ME-2 MFV HEATER PWR OFF CMD	GGNK1041E	ON						
155-07			CMD	SSME	ME-2 MFV HEATER PWR OFF (R) CMD	GGNK1151E	ON						
155-08			CMD	SSME	ME-3 MFV HEATER PWR ON CMD	GGNK1060E	OFF						
155-09			CMD	SSME	ME-3 MFV HEATER PWR ON (R) CMD	GGNK1170E	OFF						
155-10			CMD	SSME	ME-3 MFV HEATER PWR OFF CMD	GGNK1061E	ON						
155-11			CMD	SSME	ME-3 MFV HEATER PWR OFF (R) CMD	GGNK1161E	ON						
					$ GLS EVENT COMPLETE = 268 $								
156-00	-04:15												
					$ ENGINE HE SUPPLY TEMP CHECK $								
157-00			VFY	MPS	E-1 AFT FUSLG HELIUM SUPPLY TEMP	V41T1151A1	10	95	DEGF	1 OF 3		6.2.1-4	
157-01			VFY	MPS	E-2 AFT FUSLG HELIUM SUPPLY TEMP	V41T1251A1	10	95	DEGF	1 OF 3		6.2.1-4	
157-02			VFY	MPS	E-3 AFT FUSLG HELIUM SUPPLY TEMP	V41T1351A1	10	95	DEGF	INHB MPS4		6.2.1-4	
157-03			VFY	MPS	E-1 MID FUSLG HELIUM SUPPLY TEMP	V41T1152A1	60	145	DEGF	1 OF 3		6.2.1-4	
157-04			VFY	MPS	E-2 MID FUSLG HELIUM SUPPLY TEMP	V41T1252A1	60	145	DEGF	1 OF 3		6.2.1-4	
157-05			VFY	MPS	E-3 MID FUSLG HELIUM SUPPLY TEMP	V41T1352A1	60	145	DEGF	INHB MPS4		6.2.1-4	

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS DF
158-00	-04:05												
					$ ORB HYD SUPPLY PRESS CHECK $								
159-00			VFY	HYD	HYD SYS 1 SUPPLY PRESS B	V58P0115A1	2850	3400	PSIA	INHB MPS4		6.7.2-3	
159-01			VFY	HYD	HYD SYS 1 SUPPLY PRESS C	V58P0116C1	2800	3400	PSIA	INHB MPS4		6.7.2-3	
159-02			VFY	HYD	HYD SYS 2 SUPPLY PRESS B	V58P0215A1	2850	3400	PSIA	INHB MPS4		6.7.2-3	
159-03			VFY	HYD	HYD SYS 2 SUPPLY PRESS C	V58P0216C1	2800	3400	PSIA	INHB MPS4		6.7.2-3	
159-04			VFY	HYD	HYD SYS 3 SUPPLY PRESS B	V58P0315A1	2850	3400	PSIA	INHB MPS4		6.7.2-3	
159-05			VFY	HYD	HYD SYS 3 SUPPLY PRESS C	V58P0316C1	2800	3400	PSIA	INHB MPS4		6.7.2-3	
160-00			VFY	SSME	ME-1 HYDRAULIC PRESSURE	E41P1054B1	2700	NOHI	PSIA	INHB MPS4		6.2.2-15	
160-01			VFY	SSME	ME-2 HYDRAULIC PRESSURE	E41P2054B1	2700	NOHI	PSIA	INHB MPS4		6.2.2-15	
160-02			VFY	SSME	ME-3 HYDRAULIC PRESSURE	E41P3054B1	2700	NOHI	PSIA	INHB MPS4		6.2.2-15	
					$ HYD CIRC PUMP LEAKAGE CHECK $								
161-00			CVFY	HYD	HYD SYS 1 CIRC PUMP PRESS	V58P0137A1	NOLO	140	PSIA	INHB MSEQ		6.7.2-5	
161-01			CVFY	HYD	HYD SYS 2 CIRC PUMP PRESS	V58P0237A1	NOLO	140	PSIA	INHB MSEQ		6.7.2-5	
161-02			CVFY	HYD	HYD SYS 3 CIRC PUMP PRESS	V58P0337A1	NOLO	140	PSIA	INHB MSEQ		6.7.2-5	
					$ APU LUBE SYS CK-POST START $								
162-00			CVFY	APU	APU 1 GRBX GN2 PRESS	V46P0151A1	5.5	29.5	PSIA	INHB MSEQ		6.6-22	
162-01			CVFY	APU	APU 1 GRBX LUBE OIL OUTPRESS	V46P0153A1	NOLO	140	PSIA	INHB MSEQ		6.6-22	
162-02			CVFY	APU	APU 2 GRBX GN2 PRESS	V46P0251A1	5.5	29.5	PSIA	INHB MSEQ		6.6-22	
162-03			CVFY	APU	APU 2 GRBX LUBE OIL OUTPRESS	V46P0253A1	NOLO	140	PSIA	INHB MSEQ		6.6-22	
162-04			CVFY	APU	APU 3 GRBX GN2 PRESS	V46P0351A1	5.5	29.5	PSIA	INHB MSEQ		6.6-22	
162-05			CVFY	APU	APU 3 GRBX LUBE OIL OUTPRESS	V46P0353A1	NOLO	140	PSIA	INHB MSEQ		6.6-22	
163-00	-04:00												
					**********								
164-00			LABL	INTG	PURGE SEQ 4 MILESTONE	MPS4							
					**********								
					$ GLS EVENT COMPLETE = 240 $								
164-01			VFY	INTG	GLS-GO FOR ET LO2 PRE-PRESSURIZI	MLOX	ON			INHB MPS4			
164-02			VFY	INTG	GLS-GO FOR ET LH2 REPLN TERM	MLH2	ON			INHB MPS4			
164-03			VFY	INTG	GLS-GO FOR AUTO SEQ START	MSEQ	ON			INHB MPS4			

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	D
164-04			VFY	INTG	GLS-GO FOR SSME IGNITION	MENG	ON			INHB MPS4				
164-05			VFY	INTG	GLS-GO FOR SRB IGNITION	MSRB	ON			INHB MPS4				
164-06			VFY	INTG	RSS MANUAL HOLD		ON			INHB MPS4				
164-07			VFY	INTG	NTD MANUAL HOLD		ON			INHB MPS4				
164-08			VFY	INTG	GLS MANUAL HOLD		ON			INHB MPS4				
164-09			VFY	INTG	GLS-GO FOR PURGE SEQ 4	MPS4	ON			HOLD				
164-10			MMSG	INTG	-02:55 GO FOR ET LO2 PRE-PRESS									
164-11			MSG		GO FOR PURGE SEQ. 4									
					$ PURGE SEQ 4 $									
					$ GLS EVENT COMPLETE = 239 $									
165-00			ISSU	SSME	ME-1 PURGE SEQ NO. 4 (ISSUE FD)	E41K1216BL	ON							
165-01			ISSU	SSME	ME-2 PURGE SEQ NO. 4 (ISSUE FD)	E41K2216BL	ON							
165-02			ISSU	SSME	ME-3 PURGE SEQ NO. 4 (ISSUE FD)	E41K3216BL	ON							
					$ GLS EVENT COMPLETE = 238 $									
					$ LANDING GEAR DEPLOYABLE CK $									
166-00			VFY	MECH	LMG STR ACTR SHUTTLE V GR DN RDY	V58X1725E1	ON			INHB MSEQ		6.7.1-28		
166-01			VFY	MECH	RMG STR ACTR SHUTTLE V GR DN RDY	V58X1775E1	ON			INHB MSEQ		6.7.1-28		
166-02			VFY	MECH	NMG STR ACTR SHUTTLE V GR DN RDY	V58X1825E1	ON			INHB MSEQ		6.7.1-28		
167-00	-03:55													
					$ CHECK SSME FOR PURGE SEQUENCE NO.4 $									
168-00			CVFY	SSME	ME-1 OPERATING MODE	E41J1513B1	B100			INHB MSEQ TIL MLH2				
168-01			CVFY	SSME	ME-2 OPERATING MODE	E41J2513B1	B100			INHB MSEQ TIL MLH2				
168-02			CVFY	SSME	ME-3 OPERATING MODE	E41J3513B1	B100			INHB MSEQ TIL MLH2				
168-03			CVFY	SSME	ME-1 PHASE IN EFFECT	E41J1512B1	B010			INHB MSEQ				
168-04			CVFY	SSME	ME-2 PHASE IN EFFECT	E41J2512B1	B010			INHB MSEQ				
168-05			CVFY	SSME	ME-3 PHASE IN EFFECT	E41J3512B1	B010			INHB MSEQ				
					$ HYD SYS CHECKS $									
169-00			CVFY	HYD	HYD SYS 1 RVSR FLUID PRESS	V58P0131A1	60	NOHI	PSIA	1 OF 2		6.7.2-10		
169-01			CVFY	HYD	SYS 1 GN2 ACCUM PRESS	V58P0167A1	2706	NOHI	PSIA	INHB MSEQ		6.7.2-10		
169-02			CVFY	HYD	HYD SYS 2 RVSR FLUID PRESS	V58P0231A1	60	NOHI	PSIA	1 OF 2		6.7.2-10		
169-03			CVFY	HYD	SYS 2 GN2 ACCUM PRESS	V58P0267A1	2706	NOHI	PSIA	INHB MSEQ		6.7.2-10		

SEQ	TIME CD CLOCK	I	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
169-04			CVFY	HYD	HYD SYS 3 RVSR FLUID PRESS	V58P0331A1	60	NOHI	PSIA	1 OF 2		6.7.2-10	
169-05			CVFY	HYD	SYS 3 GN2 ACCUM PRESS	V58P0367A1	2706	NOHI	PSIA	INHB MSEQ		6.7.2-10	
					$ GLS EVENT COMPLETE = 234 $								
					$ START AERO-SURFACE PROFILE $								
170-00			CMD	FCL	INITIATE AERO-SURFACE DRIVE CHEC	P001	ON						
170-01			CMD	FCL	AERO-SURFACE PROFILE EVAL	P001	ON						
170-02			CVFY	APU	APU 1 GRBX BEARING TEMP NO 1	V46T0161A1	NOLO	335	DEGF	1 OF 2		6.6-24A	
170-03			CVFY	APU	APU 1 GRBX BEARING TEMP NO 2	V46T0162A1	NOLO	335	DEGF	INHB MSEQ		6.6-24A	
170-04			CVFY	APU	APU 2 GRBX BEARING TEMP NO 1	V46T0261A1	NOLO	335	DEGF	1 OF 2		6.6-24A	
170-05			CVFY	APU	APU 2 GRBX BEARING TEMP NO 2	V46T0262A1	NOLO	335	DEGF	INHB MSEQ		6.6-24A	
170-06			CVFY	APU	APU 3 GRBX BEARING TEMP NO 1	V46T0361A1	NOLO	335	DEGF	1 OF 2		6.6-24A	
170-07			CVFY	APU	APU 3 GRBX BEARING TEMP NO 2	V46T0362A1	NOLO	335	DEGF	INHB MSEQ		6.6-24A	
170-08					$ DELETED $								
170-09					$ DELETED $								
170-10					$ DELETED $								
170-11					$ DELETED $								
170-12					$ DELETED $								
170-13					$ DELETED $								
170-14					$ DELETED $								
170-15					$ DELETED $								
170-16					$ DELETED $								
170-17					$ DELETED $								
170-18					$ DELETED $								
170-19					$ DELETED $								
170-20					$ DELETED $								
170-21					$ DELETED $								
170-22					$ DELETED $								
170-23					$ DELETED $								
170-24					$ DELETED $								
170-25					$ DELETED $								
171-00	-03:45												
					$ MPS HELIUM SYSTEM MONITOR $								
172-00			CVFY	MPS	MPS E-1 HE REG A OUTLET PRESS	V41P1154A1	715	800	PSIA	INHB MSEQ		6.2.1-5	
172-01			CVFY	MPS	MPS E-1 HE REG B OUTLET PRESS	V41P1153A1	715	800	PSIA	INHB MSEQ		6.2.1-5	
172-02			CVFY	MPS	MPS E-2 HE REG A OUTLET PRESS	V41P1254A1	715	800	PSIA	INHB MSEQ		6.2.1-5	
172-03			CVFY	MPS	MPS E-2 HE REG B OUTLET PRESS	V41P1253A1	715	800	PSIA	INHB MSEQ		6.2.1-5	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SS EF D
172-04			CVFY	MPS	MPS E-3 HE REG A OUTLET PRESS	V41P1354A1	715	800	PSIA	INHB MSEQ		6.2.1-5	
172-05			CVFY	MPS	MPS E-3 HE REG B OUTLET PRESS	V41P1353A1	715	800	PSIA	INHB MSEQ		6.2.1-5	
172-06			CVFY	MPS	PNEU VLV HE RGLTR OUTLET PRESS	V41P1605A1	715	800	PSIA	INHB MSEQ		6.2.1-5	
172-07			CVFY	MPS	PNEU HELIUM SUPPLY PRESS	V41P1600A1	4000	4500	PSIA	3 OF 4		6.2.1-2	
172-08			CVFY	MPS	ENG 1 HELIUM SUPPLY PRESS	V41P1150C1	4000	4500	PSIA	3 OF 4		6.2.1-2	
172-09			CVFY	MPS	ENG 2 HELIUM SUPPLY PRESS	V41P1250C1	4000	4500	PSIA	3 OF 4		6.2.1-2	
172-10			CVFY	MPS	ENG 3 HELIUM SUPPLY PRESS	V41P1350C1	4000	4500	PSIA	INHB MSEQ		6.2.1-2	
172-11					$ DELETED $								
172-12					$ DELETED $								
172-13					$ DELETED $								
172-14					$ DELETED $								
172-15					$ DELETED $								
172-16					$ DELETED $								
172-17					$ DELETED $								
172-18					$ DELETED $								
172-19					$ DELETED $								
172-20					$ DELETED $								
172-21					$ DELETED $								
172-22					$ DELETED $								
172-23					$ DELETED $								
172-24					$ DELETED $								
172-25					$ DELETED $								
172-26					$ DELETED $								
172-27					$ DELETED $								
172-28					$ DELETED $								
172-29					$ DELETED $								
172-30					$ DELETED $								
172-31					$ DELETED $								
172-32					$ DELETED $								
172-33					$ DELETED $								
172-34					$ DELETED $								
173-00	-03:30												
					$ GROUND POWER REMOVAL $								
174-00			CMD	EPDC	GSE PWR MN BUS A OFF CMD	V76K0192W	ON						
174-01			CMD	EPDC	GSE PWR MN BUS B OFF CMD	V76K0292W	ON						
174-02			CMD	EPDC	GSE PWR MN BUS C OFF CMD	V76K0392W	ON						
					$ START MPS GIMBAL PROFILE $								

SEQ	TIME CD CLOCK	SI T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
175-00			CMD	FCL	INITIATE MPS GIMBAL CHECK	P002	ON						
175-01			CMD	FCL	MPS GIMBAL PROFILE EVAL	P002	ON						
					$ GLS EVENT COMPLETE = 209 $								
176-00	-03:25												
177-00			CMD	EPDC	GSE PWR MN BUS A OFF CMD	V76K0192W	OFF						
177-01			CMD	EPDC	GSE PWR MN BUS B OFF CMD	V76K0292W	OFF						
177-02			CMD	EPDC	GSE PWR MN BUS C OFF CMD	V76K0392W	OFF						
177-03			CMD	EPDC	ORB GND PWR MN BUS A CMD PRI	G76K0180E	OFF						
177-04			CMD	EPDC	ORB GND PWR MN BUS A CMD SEC	G76K0181E	OFF						
177-05			CMD	EPDC	ORB GND PWR MN BUS B CMD PRI	G76K0280E	OFF						
177-06			CMD	EPDC	ORB GND PWR MN BUS B CMD SEC	G76K0281E	OFF						
177-07			CMD	EPDC	ORB GND PWR MN BUS C CMD PRI	G76K0380E	OFF						
177-08			CMD	EPDC	ORB GND PWR MN BUS C CMD SEC	G76K0381E	OFF						
					$ GLS EVENT COMPLETE = 204 $								
178-00	-03:20												
					$ VFY ON ORBITER POWER $								
179-00			VFY	EPDC	GSE PWR MN BUS A ON IND	V76X0190W	OFF			INHB	MSEQ		
179-01			VFY	EPDC	GSE PWR MN BUS B ON IND	V76X0290W	OFF			INHB	MSEQ		
179-02			VFY	EPDC	GSE PWR MN BUS C ON IND	V76X0390W	OFF			INHB	MSEQ		
					$ GLS EVENT COMPLETE = 199 $								
					$ ORB AEROSURFACE ACTUATOR HEALTH MONITOR $								
180-00			CVFY	FCL	RUDDER DELTA PRESS 1	V57P0160A1	-850	850	PSID	INHB	MSEQ		6.9.10-8
180-01			CVFY	FCL	RUDDER DELTA PRESS 2	V57P0161A1	-850	850	PSID	INHB	MSEQ		6.9.10-8
180-02			CVFY	FCL	RUDDER DELTA PRESS 3	V57P0162A1	-850	850	PSID	INHB	MSEQ		6.9.10-8
180-03			CVFY	FCL	RUDDER DELTA PRESS 4	V57P0163A1	-850	850	PSID	INHB	MSEQ		6.9.10-8
180-04			CVFY	FCL	SPEEDBRAKE DELTA PRESS 1	V57P0260A1	-850	850	PSID	INHB	MSEQ		6.9.10-8
180-05			CVFY	FCL	SPEEDBRAKE DELTA PRESS 2	V57P0261A1	-850	850	PSID	INHB	MSEQ		6.9.10-8
180-06			CVFY	FCL	SPEEDBRAKE DELTA PRESS 3	V57P0262A1	-850	850	PSID	INHB	MSEQ		6.9.10-8
180-07			CVFY	FCL	SPEEDBRAKE DELTA PRESS 4	V57P0263A1	-850	850	PSID	INHB	MSEQ		6.9.10-8
180-08			CVFY	FCL	R INBD ELEVON SEC DELTA PRESS 1	V58P0912A1	-850	850	PSID	INHB	MSEQ		6.9.10-13
180-09			CVFY	FCL	R INBD ELEVON SEC DELTA PRESS 2	V58P0913A1	-850	850	PSID	INHB	MSEQ		6.9.10-13
180-10			CVFY	FCL	R INBD ELEVON SEC DELTA PRESS 3	V58P0914A1	-850	850	PSID	INHB	MSEQ		6.9.10-13
180-11			CVFY	FCL	R INBD ELEVON SEC DELTA PRESS 4	V58P0915A1	-850	850	PSID	INHB	MSEQ		6.9.10-13
180-12			CVFY	FCL	R OUTBD ELEVON SEC DELTA PRESS 1	V58P0962A1	-850	850	PSID	INHB	MSEQ		6.9.10-13
180-13			CVFY	FCL	R OUTBD ELEVON SEC DELTA PRESS 2	V58P0963A1	-850	850	PSID	INHB	MSEQ		6.9.10-13

SEQ	TIME CD CLOCK	SI TE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SS F D
180-14			CVFY	FCL	R OUTBD ELEVON SEC DELTA PRESS 3	V58P0964A1	-850	850	PSID	INHB MSEQ		6.9.10-13	
180-15			CVFY	FCL	R OUTBD ELEVON SEC DELTA PRESS 4	V58P0965A1	-850	850	PSID	INHB MSEQ		6.9.10-13	
180-16			CVFY	FCL	L INBD ELEVON SEC DELTA PRESS 1	V58P0812A1	-850	850	PSID	INHB MSEQ		6.9.10-13	
180-17			CVFY	FCL	L INBD ELEVON SEC DELTA PRESS 2	V58P0813A1	-850	850	PSID	INHB MSEQ		6.9.10-13	
180-18			CVFY	FCL	L INBD ELEVON SEC DELTA PRESS 3	V58P0814A1	-850	850	PSID	INHB MSEQ		6.9.10-13	
180-19			CVFY	FCL	L INBD ELEVON SEC DELTA PRESS 4	V58P0815A1	-850	850	PSID	INHB MSEQ		6.9.10-13	
180-20			CVFY	FCL	L OUTBD ELEVON SEC DELTA PRESS 1	V58P0862A1	-850	850	PSID	INHB MSEQ		6.9.10-13	
180-21			CVFY	FCL	L OUTBD ELEVON SEC DELTA PRESS 2	V58P0863A1	-850	850	PSID	INHB MSEQ		6.9.10-13	
180-22			CVFY	FCL	L OUTBD ELEVON SEC DELTA PRESS 3	V58P0864A1	-850	850	PSID	INHB MSEQ		6.9.10-13	
180-23			CVFY	FCL	L OUTBD ELEVON SEC DELTA PRESS 4	V58P0865A1	-850	850	PSID	INHB MSEQ		6.9.10-13	
180-24			CVFY	FCL	R INBD ELEVON PRI DELTA PRESS 1	V58P0916C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-25			CVFY	FCL	R INBD ELEVON PRI DELTA PRESS 2	V58P0917C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-26			CVFY	FCL	R INBD ELEVON PRI DELTA PRESS 3	V58P0918C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-27			CVFY	FCL	R INBD ELEVON PRI DELTA PRESS 4	V58P0919C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-28			CVFY	FCL	R OUTBD ELEVON PRI DELTA PRESS 1	V58P0966C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-29			CVFY	FCL	R OUTBD ELEVON PRI DELTA PRESS 2	V58P0967C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-30			CVFY	FCL	R OUTBD ELEVON PRI DELTA PRESS 3	V58P0968C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-31			CVFY	FCL	R OUTBD ELEVON PRI DELTA PRESS 4	V58P0969C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-32			CVFY	FCL	L INBD ELEVON PRI DELTA PRESS 1	V58P0816C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-33			CVFY	FCL	L INBD ELEVON PRI DELTA PRESS 2	V58P0817C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-34			CVFY	FCL	L INBD ELEVON PRI DELTA PRESS 3	V58P0818C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-35			CVFY	FCL	L INBD ELEVON PRI DELTA PRESS 4	V58P0819C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-36			CVFY	FCL	L OUTBD ELEVON PRI DELTA PRESS 1	V58P0866C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-37			CVFY	FCL	L OUTBD ELEVON PRI DELTA PRESS 2	V58P0867C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-38			CVFY	FCL	L OUTBD ELEVON PRI DELTA PRESS 3	V58P0868C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
180-39			CVFY	FCL	L OUTBD ELEVON PRI DELTA PRESS 4	V58P0869C1	-230	230	PSID	INHB MSEQ		6.9.10-12	
181-00			VFY	FCL	RUDDER DELTA PRESS	SUM7	-350	350	PSID	INHB MSEQ		6.9.10-8	
			SUM		RUDDER DELTA PRESS 1 SUM7	V57P0160A1							
			SUM		RUDDER DELTA PRESS 2 SUM7	V57P0161A1							
			SUM		RUDDER DELTA PRESS 3 SUM7	V57P0162A1							
			SUM		RUDDER DELTA PRESS 4 SUM7	V57P0163A1							

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS F D
182-00			VFY	FCL	SPEEDBRAKE DELTA PRESS	SUM8	-350	350	PSID	INHB MSEQ		6.9.10-8	
			SUM		SPEEDBRAKE DELTA PRESS 1 SUM8	V57P0260A1							
			SUM		SPEEDBRAKE DELTA PRESS 2 SUM8	V57P0261A1							
			SUM		SPEEDBRAKE DELTA PRESS 3 SUM8	V57P0262A1							
			SUM		SPEEDBRAKE DELTA PRESS 4 SUM8	V57P0263A1							
183-00			VFY	FCL	R INBD ELEV SEC DELTA P	SUM9	-350	350	PSID	INHB MSEQ		6.9.10-13	
			SUM		R INBD ELEV SEC DELTA P 1 SUM9	V58P0912A1							
			SUM		R INBD ELEV SEC DELTA P 2 SUM9	V58P0913A1							
			SUM		R INBD ELEV SEC DELTA P 3 SUM9	V58P0914A1							
			SUM		R INBD ELEV SEC DELTA P 4 SUM9	V58P0915A1							
184-00			VFY	FCL	R OUTBD ELEV SEC DELTA P	SUM10	-350	350	PSID	INHB MSEQ		6.9.10-13	
			SUM		R OUTBD ELEV SEC DELTA P 1 SUM10	V58P0962A1							
			SUM		R OUTBD ELEV SEC DELTA P 2 SUM10	V58P0963A1							
			SUM		R OUTBD ELEV SEC DELTA P 3 SUM10	V58P0964A1							
			SUM		R OUTBD ELEV SEC DELTA P 4 SUM10	V58P0965A1							
185-00			VFY	FCL	L INBD ELEV SEC DELTA P	SUM11	-350	350	PSID	INHB MSEQ		6.9.10-13	
			SUM		L INBD ELEV SEC DELTA P 1 SUM11	V58P0812A1							
			SUM		L INBD ELEV SEC DELTA P 2 SUM11	V58P0813A1							
			SUM		L INBD ELEV SEC DELTA P 3 SUM11	V58P0814A1							
			SUM		L INBD ELEV SEC DELTA P 4 SUM11	V58P0815A1							
186-00			VFY	FCL	L OUTBD ELEV SEC DELTA P	SUM12	-350	350	PSID	INHB MSEQ		6.9.10-13	
			SUM		L OUTBD ELEV SEC DELTA P 1 SUM12	V58P0862A1							
			SUM		L OUTBD ELEV SEC DELTA P 2 SUM12	V58P0863A1							
			SUM		L OUTBD ELEV SEC DELTA P 3 SUM12	V58P0864A1							
			SUM		L OUTBD ELEV SEC DELTA P 4 SUM12	V58P0865A1							
					$ VERIFICATION OF HELIUM BUBBLING TERM $								
186-01			VFY	LO2	ET LO2 TANK HE BUBBL DIFF PRESS	GLOP4644A	NOLO	.1	PSID	1 OF 3		5.1-5	
186-02			VFY	LO2	ET LO2 TANK HE BUBBL DIFF PRESS	GLOP4144A	NOLO	.1	PSID	1 OF 3		5.1-5	
186-03			VFY	LO2	HELIUM BUBBLING SUPPLY PRESS	GLOP4134A	NOLO	125	PSIG	OR		5.1-5	
186-04			VFY	LO2	HE BUBBLING FLO CNTL VLV(PRI) OP	GLOX4143E	OFF			2 OF 2		5.1-5	

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
186-05			VFY	LO2	HE BUBBL FL CNTL VLV (SEC) OP	GLOX4643E	OFF			INHB MSEQ		5.1-5	
					$ GLS EVENT COMPLETE = 190 $								
187-00	-03:03												
					$ ORB HYD SUPPLY PRESS CHECK $								
188-00			CVFY	HYD	HYD SYS 1 SUPPLY PRESS B	V58P0115A1	2850	3400	PSIA	INHB MSEQ		6.7.2-3	
188-01			CVFY	HYD	HYD SYS 1 SUPPLY PRESS C	V58P0116C1	2800	3400	PSIA	INHB MSEQ		6.7.2-3	
188-02			CVFY	HYD	HYD SYS 2 SUPPLY PRESS B	V58P0215A1	2850	3400	PSIA	INHB MSEQ		6.7.2-3	
188-03			CVFY	HYD	HYD SYS 2 SUPPLY PRESS C	V58P0216C1	2800	3400	PSIA	INHB MSEQ		6.7.2-3	
188-04			CVFY	HYD	HYD SYS 3 SUPPLY PRESS B	V58P0315A1	2850	3400	PSIA	INHB MSEQ		6.7.2-3	
188-05			CVFY	HYD	HYD SYS 3 SUPPLY PRESS C	V58P0316C1	2800	3400	PSIA	INHB MSEQ		6.7.2-3	
					$ MPS ENGINE GIMBAL POSITION MONITOR $								
189-00			CVFY	FCL	MPS ENG 1 P ACTR POSN	V58H1100A1	-1.12	.48	DEG	INHB MSEQ		6.9.10-20	
189-01			CVFY	FCL	MPS ENG 1 Y ACTR POSN	V58H1150A1	.98	-0.62	DEG	INHB MSEQ		6.9.10-20	
189-02			CVFY	FCL	MPS ENG 2 P ACTR POSN	V58H1200A1	1.12	-.48	DEG	INHB MSEQ		6.9.10-20	
189-03			CVFY	FCL	MPS ENG 2 Y ACTR POSN	V58H1250A1	1.01	-0.59	DEG	INHB MSEQ		6.9.10-20	
189-04			CVFY	FCL	MPS ENG 3 P ACTR POSN	V58H1300A1	-1.12	.48	DEG	INHB MSEQ		6.9.10-20	
189-05			CVFY	FCL	MPS ENG 3 Y ACTR POSN	V58H1350A1	1.01	-0.59	DEG	INHB MSEQ		6.9.10-20	
					$ AEROSURFACE POSITION MONITOR $								
190-00			CVFY	FCL	L INBD ELEVON ACTR CHAN 1 POSN	V58H0802A1	-0.52	1.18	DEG	INHB MSEQ		6.9.10-10	
190-01			CVFY	FCL	L INBD ELEVON ACTR CHAN 2 POSN	V58H0803A1	-0.52	1.18	DEG	INHB MSEQ		6.9.10-10	
190-02			CVFY	FCL	L INBD ELEVON ACTR CHAN 3 POSN	V58H0804A1	-0.52	1.18	DEG	INHB MSEQ		6.9.10-10	
190-03			CVFY	FCL	L INBD ELEVON ACTR CHAN 4 POSN	V58H0805A1	-0.52	1.18	DEG	INHB MSEQ		6.9.10-10	
190-04			CVFY	FCL	L OUTBD ELEVON ACTR CHAN 1 POSN	V58H0852A1	-0.36	1.34	DEG	INHB MSEQ		6.9.10-10	
190-05			CVFY	FCL	L OUTBD ELEVON ACTR CHAN 2 POSN	V58H0853A1	-0.36	1.34	DEG	INHB MSEQ		6.9.10-10	
190-06			CVFY	FCL	L OUTBD ELEVON ACTR CHAN 3 POSN	V58H0854A1	-0.36	1.34	DEG	INHB MSEQ		6.9.10-10	
190-07			CVFY	FCL	L OUTBD ELEVON ACTR CHAN 4 POSN	V58H0855A1	-0.36	1.34	DEG	INHB MSEQ		6.9.10-10	
190-08			CVFY	FCL	R INBD ELEVON ACTR CHAN 1 POSN	V58H0902A1	-0.52	1.18	DEG	INHB MSEQ		6.9.10-10	
190-09			CVFY	FCL	R INBD ELEVON ACTR CHAN 2 POSN	V58H0903A1	-0.52	1.18	DEG	INHB MSEQ		6.9.10-10	
190-10			CVFY	FCL	R INBD ELEVON ACTR CHAN 3 POSN	V58H0904A1	-0.52	1.18	DEG	INHB MSEQ		6.9.10-10	
190-11			CVFY	FCL	R INBD ELEVON ACTR CHAN 4 POSN	V58H0905A1	-0.52	1.18	DEG	INHB MSEQ		6.9.10-10	
190-12			CVFY	FCL	R OUTBD ELEVON ACTR CHAN 1 POSN	V58H0952A1	-0.36	1.34	DEG	INHB MSEQ		6.9.10-10	
190-13			CVFY	FCL	R OUTBD ELEVON ACTR CHAN 2 POSN	V58H0953A1	-0.36	1.34	DEG	INHB MSEQ		6.9.10-10	
190-14			CVFY	FCL	R OUTBD ELEVON ACTR CHAN 3 POSN	V58H0954A1	-0.36	1.34	DEG	INHB MSEQ		6.9.10-10	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SF D
190-15			CVFY	FCL	R OUTBD ELEVON ACTR CHAN 4 POSN	V58H0955A1	-0.36	1.34	DEG	INHB MSEQ		6.9.10-10	
190-16			VFY	FCL	RUDDER ACTR CHAN 1 POSN	V57H0150A1	-0.95	0.95	DEG	INHB MSEQ		6.9.10-19	
190-17			VFY	FCL	RUDDER ACTR CHAN 2 POSN	V57H0151A1	-0.95	0.95	DEG	INHB MSEQ		6.9.10-19	
190-18			VFY	FCL	RUDDER ACTR CHAN 3 POSN	V57H0152A1	-0.95	0.95	DEG	INHB MSEQ		6.9.10-19	
190-19			VFY	FCL	RUDDER ACTR CHAN 4 POSN	V57H0153A1	-0.95	0.95	DEG	INHB MSEQ		6.9.10-19	
190-20			VFY	FCL	SPEEDBRAKE ACTR CHAN 1 POSN	V57H0250A1	2.45	7.55	DEG	INHB MSEQ		6.9.10-19	
190-21			VFY	FCL	SPEEDBRAKE ACTR CHAN 2 POSN	V57H0251A1	2.45	7.55	DEG	INHB MSEQ		6.9.10-19	
190-22			VFY	FCL	SPEEDBRAKE ACTR CHAN 3 POSN	V57H0252A1	2.45	7.55	DEG	INHB MSEQ		6.9.10-19	
190-23			VFY	FCL	SPEEDBRAKE ACTR CHAN 4 POSN	V57H0253A1	2.45	7.55	DEG	INHB MSEQ		6.9.10-19	
190-24			VFY	FCL	SELECTED BODY FLAP FDBK	V90H6410C1	-1.41	1.41	DEG	INHB MSEQ		6.9.10-18	
					$ MPS GIMBAL ACTUATOR DELTA PRESSURE CHECK $								
191-00			CVFY	FCL	MPS ENG 1 PITCH SEC DELTA PRESS A	V58P1181A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-01			CVFY	FCL	MPS ENG 1 PITCH SEC DELTA PRESS B	V58P1182A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-02			CVFY	FCL	MPS ENG 1 PITCH SEC DELTA PRESS C	V58P1183A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-03			CVFY	FCL	MPS ENG 1 PITCH SEC DELTA PRESS D	V58P1184A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-04			CVFY	FCL	MPS ENG 1 YAW SEC DELTA PRESS A	V58P1186A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-05			CVFY	FCL	MPS ENG 1 YAW SEC DELTA PRESS B	V58P1187A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-06			CVFY	FCL	MPS ENG 1 YAW SEC DELTA PRESS C	V58P1188A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-07			CVFY	FCL	MPS ENG 1 YAW SEC DELTA PRESS D	V58P1189A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-08			CVFY	FCL	MPS ENG 2 PITCH SEC DELTA PRESS A	V58P1281A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-09			CVFY	FCL	MPS ENG 2 PITCH SEC DELTA PRESS B	V58P1282A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-10			CVFY	FCL	MPS ENG 2 PITCH SEC DELTA PRESS C	V58P1283A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-11			CVFY	FCL	MPS ENG 2 PITCH SEC DELTA PRESS D	V58P1284A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-12			CVFY	FCL	MPS ENG 2 YAW SEC DELTA PRESS A	V58P1286A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-13			CVFY	FCL	MPS ENG 2 YAW SEC DELTA PRESS B	V58P1287A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-14			CVFY	FCL	MPS ENG 2 YAW SEC DELTA PRESS C	V58P1288A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-15			CVFY	FCL	MPS ENG 2 YAW SEC DELTA PRESS D	V58P1289A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-16			CVFY	FCL	MPS ENG 3 PITCH SEC DELTA PRESS A	V58P1381A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-17			CVFY	FCL	MPS ENG 3 PITCH SEC DELTA PRESS B	V58P1382A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-18			CVFY	FCL	MPS ENG 3 PITCH SEC DELTA PRESS C	V58P1383A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-19			CVFY	FCL	MPS ENG 3 PITCH SEC DELTA PRESS D	V58P1384A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-20			CVFY	FCL	MPS ENG 3 YAW SEC DELTA PRESS A	V58P1386A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-21			CVFY	FCL	MPS ENG 3 YAW SEC DELTA PRESS B	V58P1387A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-22			CVFY	FCL	MPS ENG 3 YAW SEC DELTA PRESS C	V58P1388A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	
191-23			CVFY	FCL	MPS ENG 3 YAW SEC DELTA PRESS D	V58P1389A1	-1050	1050	PSID	INHB MSEQ		6.9.10-21	

SEQ	TIME CD CLOCK	I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
192-00			VFY	FCL	ENG 1 PITCH SEC DELTA PRESS	SUM1	-350	350	PSID	INHB MSEQ		6.9.10-21	
			SUM		ENG 1 PITCH SEC DELTA PRESS A SUM1	V58P1181A1							
			SUM		ENG 1 PITCH SEC DELTA PRESS B SUM1	V58P1182A1							
			SUM		ENG 1 PITCH SEC DELTA PRESS C SUM1	V58P1183A1							
			SUM		ENG 1 PITCH SEC DELTA PRESS D SUM1	V58P1184A1							
193-00			VFY	FCL	ENG 1 YAW SEC DELTA PRESS	SUM2	-350	350	PSID	INHB MSEQ		6.9.10-21	
			SUM		ENG 1 YAW SEC DELTA PRESS A SUM2	V58P1186A1							
			SUM		ENG 1 YAW SEC DELTA PRESS B SUM2	V58P1187A1							
			SUM		ENG 1 YAW SEC DELTA PRESS C SUM2	V58P1188A1							
			SUM		ENG 1 YAW SEC DELTA PRESS D SUM2	V58P1189A1							
194-00			VFY	FCL	ENG 2 PITCH SEC DELTA PRESS	SUM3	-350	350	PSID	INHB MSEQ		6.9.10-21	
			SUM		ENG 2 PITCH SEC DELTA PRESS A SUM3	V58P1281A1							
			SUM		ENG 2 PITCH SEC DELTA PRESS B SUM3	V58P1282A1							
			SUM		ENG 2 PITCH SEC DELTA PRESS C SUM3	V58P1283A1							
			SUM		ENG 2 PITCH SEC DELTA PRESS D SUM3	V58P1284A1							
195-00			VFY	FCL	ENG 2 YAW SEC DELTA PRESS	SUM4	-350	350	PSID	INHB MSEQ		6.9.10-21	
			SUM		ENG 2 YAW SEC DELTA PRESS A SUM4	V58P1286A1							
			SUM		ENG 2 YAW SEC DELTA PRESS B SUM4	V58P1287A1							
			SUM		ENG 2 YAW SEC DELTA PRESS C SUM4	V58P1288A1							
			SUM		ENG 2 YAW SEC DELTA PRESS D SUM4	V58P1289A1							
196-00			VFY	FCL	ENG 3 PITCH SEC DELTA PRESS	SUM5	-350	350	PSID	INHB MSEQ		6.9.10-21	
			SUM		ENG 3 PITCH SEC DELTA PRESS A SUM5	V58P1381A1							
			SUM		ENG 3 PITCH SEC DELTA PRESS B SUM5	V58P1382A1							
			SUM		ENG 3 PITCH SEC DELTA PRESS C SUM5	V58P1383A1							
			SUM		ENG 3 PITCH SEC DELTA PRESS D SUM5	V58P1384A1							
197-00			VFY	FCL	ENG 3 YAW SEC DELTA PRESS	SUM6	-350	350	PSID	INHB MSEQ		6.9.10-21	
			SUM		ENG 3 YAW SEC DELTA PRESS A SUM6	V58P1386A1							
			SUM		ENG 3 YAW SEC DELTA PRESS B SUM6	V58P1387A1							
			SUM		ENG 3 YAW SEC DELTA PRESS C SUM6	V58P1388A1							
			SUM		ENG 3 YAW SEC DELTA PRESS D SUM6	V58P1389A1							

SEQ	TIME	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE S S F D
	CD CLOCK											
198-00	-02:55											
					**********							
199-00			LABL	INTG	ET LOX PREPRESS MILESTONE	MLOX						
					**********							
					$ NOTICE: THIS MILESTONE DOES NOT HOLD FOR DOWNSTREAM HOLD INDICATIONS $							
199-01			VFY	INTG	RSS MANUAL HOLD		ON			INHB MLOX		
199-02			VFY	INTG	NTD MANUAL HOLD		ON			INHB MLOX		
199-03			VFY	INTG	GLS MANUAL HOLD		ON			INHB MLOX		
199-04			VFY	INTG	GLS-GO FOR ET LOX PRE-PRESSURIZI	MLOX	ON			HOLD		
					$ GLS EVENT COMPLETE = 174 $							
199-05		K	CMD	CINTG	CCE START CU CCLS TERMINAL SEQ - PRI		GCNK3121E	ON				
199-06		K	CMD	CINTG	CCE START CU CCLS TERMINAL SEQ - SEC		GCNK3621E	ON				
					$ DEADFACE/TURN-OFF CENTAUR LO2 VENT HEATERS $							
199-07		K	CMD	CMPS	CCE GOX VENT HTR CNTL ENABLE - PRI	GCNK4011E	OFF					
199-08		K	CMD	CMPS	CCE GOX VENT HTR DC MOD ON - PRI	GCNK6031E	OFF					
199-09		K	CMD	CMPS	CCE GOX VENT HTR DC MOD OFF - PRI	GCNK6030E	ON					
199-10		K	CMD	CMPS	CCE GOX VENT HTR CNTL ENABLE - SEC	GCNK4511E	OFF					
199-11		K	CMD	CMPS	CCE GOX VENT HTR DC MOD ON - SEC	GCNK6531E	OFF					
199-12		K	CMD	CMPS	CCE GOX VENT HTR DC MOD OFF - SEC	GCNK6530E	ON					
199-13			COM	LO2	GO FOR ET LOX PRE-PRESSURIZATION	NOO5INTGR	LO2					PL
199-14			MMSG	INTG	-01:57 GO FOR ET LH2 REPLN TERM							
199-15			MSG		ET LOX PRESS'G START							
					$ GLS EVENT COMPLETE = 173 $							
					$ TERM ENG GN2 PURGE SUPPLY $							
200-00			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD	GGNK1030E	ON					
200-01			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD(R)	GGNK1130E	ON					
200-02			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD OV	GGNK1037E	OFF					
200-03			CMD	SSME	MPENG GN2 PRG CNT CLD CMD OVR(R)	GGNK1137E	OFF					
200-04			CMD	SSME	MPENG GN2 PRG VNT OPN CMD	GGNK1050E	ON					

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	FD
200-05		CMD	SSME		MPENG GN2 PRG VNT OPN CMD	GGNK1140E	ON							
200-06		CMD	SSME		MPENG GN2 PRG VNT OPN CMD OVR	GGNK1057E	OFF							
200-07		CMD	SSME		MPENG GN2 PRG VNT OPN CMD OVR(R)	GGNK1147E	OFF							
					$ GLS EVENT COMPLETE = 172 $									
201-00	-02:50													
					$ GLS EVENT COMPLETE = 170 $									
202-00		CMD	GOX		START GOO2 VENT ARM RETRACT	P004								
203-00	-02:35													
					$ LOX PRESSURIZING STATUS $									
204-00		VFY	LO2		ET LOX PRESSURIZATION IN PROGRES	N03IS009E	ON			INHB MSEQ				PL
					$F/C GROUND REACTANT SUPPLY OFF$									
205-00		CMD	FCP		PRSD 02 GAS SUPPLY VLV - CLOSE	V45K1196NL	ON							
205-01		CMD	FCP		PRSD H2 GAS SUPPLY VLV - CLOSE	V45K2196NL	ON							
					$ GLS EVENT COMPLETE = 154 $									
206-00	-02:30													
207-00		VFY	FCP		PRSD 02 GAS SPLY VLV - CLOSED	V45X1195E1	ON			INHB MSEQ		6.5.1-7		
207-01		VFY	FCP		PRSD H2 GAS SPLY VLV - CLOSED	V45X2195E1	ON			INHB MSEQ		6.5.1-7		
208-00		VFY	FCL		BODY FLAP ENABLE 1 OUTPUT	V79X3201E1	OFF			INHB MSEQ		6.9.10-16		
208-01		VFY	FCL		BODY FLAP UP 1 OUTPUT	V79X3202E1	OFF			INHB MSEQ		6.9.10-16		
208-02		VFY	FCL		BODY FLAP DOWN 1 OUTPUT	V79X3203E1	OFF			INHB MSEQ		6.9.10-16		
208-03		VFY	FCL		BODY FLAP ENABLE 2 OUTPUT	V79X3204E1	OFF			INHB MSEQ		6.9.10-16		
208-04		VFY	FCL		BODY FLAP UP 2 OUTPUT	V79X3205E1	OFF			INHB MSEQ		6.9.10-16		
208-05		VFY	FCL		BODY FLAP DOWN 2 OUTPUT	V79X3206E1	OFF			INHB MSEQ		6.9.10-16		
208-06		VFY	FCL		BODY FLAP ENABLE 3 OUTPUT	V79X3207E1	OFF			INHB MSEQ		6.9.10-16		
208-07		VFY	FCL		BODY FLAP UP 3 OUTPUT	V79X3208E1	OFF			INHB MSEQ		6.9.10-16		
208-08		VFY	FCL		BODY FLAP DOWN 3 OUTPUT	V79X3209E1	OFF			INHB MSEQ		6.9.10-16		

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
209-00	-02:28												
210-00			CMD	FCP	T-0 POD ACT VLV CLOSE ENABLE	GFHK3546E	ON						
210-01			CMD	FCP	T-0 POD ACT VLV CLOSE CMD	GFHK3541E	ON						
210-02			CMD	FCP	T-0 POD ACT VLV CLOSE ENABLE	GFOK1546E	ON						
210-03			CMD	FCP	T-0 POD ACT VLV CLOSE CMD	GFOK1541E	ON						
210-04			CMD	FCP	PRSD O2 GAS SUPPLY VLV-CLOSE	V45K1196NL	OFF						
210-05			CMD	FCP	PRSD H2 GAS SUPPLY VLV-CLOSE	V45K2196NL	OFF						
					$ GLS EVENT COMPLETE = 147 $								
211-00	-02:20												
212-00			CMD	FCP	259 PSI GH2/GHE SUP VLV CLOSE CM	GFHK3550E	ON						
212-01					$ DELETED $								
212-02			CMD	FCP	PRIM GH2 T-0 VENT VLV OPEN CM	GFHK3110E	ON						
212-03			CMD	FCP	GH2 VENT ISO VLV CLOSE CMD	GFHK3520E	OFF						
212-04		K	CMD	FCP	6000 PSI GH2 SUPPLY VLV CLOSE CM	GFHK3040E	ON						
212-05		V	CMD	FCP	6000 PSI GH2 SUPPLY VLV CLOSE CM	GFHK3070E	ON						
212-06			CMD	FCP	6000 PSI SUPPLY VLV CLOSE	GFOK1070E	ON						
212-07			CMD	FCP	915 PSI SUPPLY VLV CLOSE	GFOK1550E	ON						
212-08					$ DELETED $								
212-09			CMD	FCP	PRIM GO2 T-0 VLV OPEN	GFOK1110E	ON						
212-10			CMD	FCP	GO2 VENT ISO VOV CLOSE CMD	GFOK1520E	OFF						
212-11			CMD	FCP	T-0 POD ACT VLV CLOSE ENABLE	GFHK3546E	OFF						
212-12			CMD	FCP	T-0 POD ACT VLV CLOSE CMD	GFHK3541E	OFF						
212-13			CMD	FCP	T-0 POD ACT VLV CLOSE ENABLE	GFOK1546E	OFF						
212-14			CMD	FCP	T-0 POD ACT VLV CLOSE CMD	GFOK1541E	OFF						
					$ GLS EVENT COMPLETE = 139 $								
213-00	-02:05												
					$ LOX PROPELLANT ULLAGE PRESS MONITOR $								
214-00			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.1	T41P1750C1	19.3	22.5	PSIG		CPER G009 TIL MENG 5.1-8		
214-01			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.2	T41P1751C1	19.3	22.5	PSIG		CPER G010 TIL MENG 5.1-8		

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
214-02			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.3	T41P1752C1	19.3	22.5	PSIG	CPER G011 TIL MENG 5.1-8			
215-00	-01:57												
216-00			VFY	LH2	LH2 FLIGHT MASS	NO3IS007E	ON			INHB MLH2			PL
			**********										
217-00			LABL	INTG	ET LH2 PREPRESS MILESTONE	MLH2							
			**********										
			$ NOTICE: THIS MILESTONE DOES NOT HOLD FOR DOWNSTREAM HOLD INDICATIONS $										
217-01			VFY	INTG	RSS MANUAL HOLD		ON			INHB MLH2			
217-02			VFY	INTG	NTD MANUAL HOLD		ON			INHB MLH2			
217-03			VFY	INTG	GLS MANUAL HOLD		ON			INHB MLH2			
217-04			VFY	INTG	GLS-GO FOR LH2 REPLENISH TERMINA	MLH2	ON			HOLD			
217-05			MMSG	INTG	GO FOR RS AUTO SEQ START								
217-06			MSG	INTG	ET LH2 PRESS'G START								
			$ GLS EVENT COMPLETE = 116 $										
218-00		K	CMD	CINTG	CCE T-1/57 AND COUNTING - PRI	GCNK3131E	ON						
218-01		K	CMD	CINTG	CCE T-1/57 AND COUNTING - SEC	GCNK3631E	ON						
218-02			COM	LH2	GO FOR LH2 REPLENISH TERM	NO04INTGR	LH2						
			$ GLS EVENT COMPLETE = 115 $										
			$ PROPELLANT S/W ISSUE LH2 TOPPING VLV OP CMD OFF <V41K1411XL> $										
219-00	-01:52												
220-00			VFY	LH2	LH2 REPL TERM IN PROGRESS	NO3IS006E	ON			INHB MSEQ			PL
			$ MONITOR ENG LOX INLET TEMPS $										

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F D
220-01			CVFY	MPS	MPS-1 LOX INLET TEMP	V41T1131C1	-291.4	NOHI	DEGF	2 OF 3		6.2.1-21		
220-02			CVFY	MPS	MPS-2 LOX INLET TEMP	V41T1231C1	-291.4	NOHI	DEGF	2 OF 3		6.2.1-21		
220-03			CVFY	MPS	MPS-3 LOX INLET TEMP	V41T1331C1	-291.4	NOHI	DEGF	INHB MSEQ		6.2.1-21		
221-00	-01:15													
					$ LH2 PROPELLANT ULLAGE PRESS MONITOR $									
222-00			CVFY	LH2	ET LH2 ULLAGE PRESS NO.1	T41P1700C1	40.9	44.1	PSIA	CPER G006 TIL MENG 5.1-7				
222-01			CVFY	LH2	ET LH2 ULLAGE PRESS NO.2	T41P1701C1	40.9	44.1	PSIA	CPER G007 TIL MENG 5.1-7				
222-02			CVFY	LH2	ET LH2 ULLAGE PRESS NO.3	T41P1702C1	40.9	44.1	PSIA	CPER G008 TIL MENG 5.1-7				
223-00	-01:00													
					$ PROPELLANT SENSOR CHECK $									
224-00			VFY	LH2	ET LH2 LOW LEVEL LIQ SENSOR NO.1	T41X1730X1	WET			INHB MSEQ		6.2.1-17		
224-01			VFY	LH2	ET LH2 LOW LEVEL LIQ SENSOR NO.2	T41X1731X1	WET			INHB MSEQ		6.2.1-17		
224-02			VFY	LH2	ET LH2 LOW LEVEL LIQ SENSOR NO.3	T41X1732X1	WET			INHB MSEQ		6.2.1-17		
224-03			VFY	LH2	ET LH2 LOW LEVEL LIQ SENSOR NO.4	T41X1733X1	WET			INHB MSEQ		6.2.1-17		
224-04			VFY	LO2	ET LO2 ECO SENSOR NO. 1	V41X1555X1	WET			INHB MSEQ		6.2.1-16		
224-05			VFY	LO2	ET LO2 ECO SENSOR NO. 2	V41X1556X1	WET			INHB MSEQ		6.2.1-16		
224-06			VFY	LO2	ET LO2 ECO SENSOR NO. 3	V41X1557X1	WET			INHB MSEQ		6.2.1-16		
224-07			VFY	LO2	ET LO2 ECO SENSOR NO. 4	V41X1558X1	WET			INHB MSEQ		6.2.1-16		
					$ MPS STATUS CHECK $									
225-00			VFY	MPS	MPS-LOX FEED DISC VLV OPEN PWR O	V41X1807E1	ON			2 OF 2		6.2.1-12		
225-01			VFY	MPS	MPS-LOX FEED DISC VLV CLOSE PWR	V41X1806E1	OFF			OR		6.2.1-12		
225-02			VFY	MPS	MPS-LOX FEED DISC VLV OPEN	V41X1529X1	ON			INHB MSEQ		6.2.1-12		
225-03			VFY	MPS	LOX DISCONNECT CLOSED A	V41X1530X1	OFF			INHB MSEQ		6.2.1-12		
225-04			VFY	MPS	LOX DISCONNECT CLOSED B	V41X1534X1	OFF			INHB MSEQ		6.2.1-12		
225-05			VFY	MPS	MPS-LH2 FEED DISC VLV OPEN PWR O	V41X1382E1	ON			2 OF 2		6.2.1-12		
225-06			VFY	MPS	MPS-LH2 FEED DISC VLV CLOSE PWR	V41X1381E1	OFF			OR		6.2.1-12		
225-07			VFY	MPS	MPS-LH2 FEED DISC VLV OPEN	V41X1429X1	ON			INHB MSEQ		6.2.1-12		
225-08			VFY	MPS	LH2 DISCONNECT CLOSED A	V41X1430X1	OFF			INHB MSEQ		6.2.1-12		
225-09			VFY	MPS	LH2 DISCONNECT CLOSED B	V41X1434X1	OFF			INHB MSEQ		6.2.1-12		
225-10			VFY	MPS	LH2 INBD FILL VALVE OPEN	V41X1409E1	OFF			3 OF 3		6.2.1-6		
225-11			VFY	MPS	LH2 INBD FILL VALVE OP PWR	V41X1406E1	OFF			3 OF 3		6.2.1-6		
225-12			VFY	MPS	LH2 INBD FILL VALVE CL PWR	V41X1405E1	ON			OR		6.2.1-6		
225-13			VFY	MPS	LH2 INBD FILL VALVE CLOSED	V41X1410X1	ON			INHB MSEQ		6.2.1-6		
225-14			VFY	MPS	LH2 TOPPING VALVE OPEN	V41X1453E1	OFF			2 OF 2		6.2.1-10		

SEQ	TIME CD CLOCK	I	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S
225-15			VFY	MPS	LH2 TOPPING VALVE OP PWR	V41X1458E1	OFF			OR		6.2.1-10	
225-16			VFY	MPS	LH2 TOPPING VALVE CLOSED	V41X1456X1	ON			INHB MSEQ		6.2.1-10	
225-17			VFY	MPS	LH2 FEEDLINE RELIEF SOV OPEN	V41X1441E1	OFF			2 OF 2		6.2.1-13	
225-18			VFY	MPS	LH2 FEEDLINE RELIEF SOV CL PWR	V41X1449E1	ON			OR		6.2.1-13	
225-19			VFY	MPS	LH2 FEEDLINE RELIEF SOV CLOSED	V41X1442E1	ON			INHB MSEQ		6.2.1-13	
225-20			VFY	MPS	LH2 RTLS OTBD D/V OPEN	V41X1917E1	OFF			2 OF 2		6.2.1-14	
225-21			VFY	MPS	LH2 RTLS OTBD D/V OP PWR	V41X1911E1	OFF			OR		6.2.1-14	
225-22			VFY	MPS	LH2 RTLS OTBD D/V CLOSED	V41X1919X1	ON			INHB MSEQ		6.2.1-14	
225-23			VFY	MPS	LH2 RTLS INBD D/V OPEN	V41X1927E1	OFF			2 OF 2		6.2.1-14	
225-24			VFY	MPS	LH2 RTLS INBD D/V OP PWR	V41X1921E1	OFF			OR		6.2.1-14	
225-25			VFY	MPS	LH2 RTLS INBD D/V CLOSED	V41X1929X1	ON			INHB MSEQ		6.2.1-14	
225-26			VFY	MPS	LO2 FEEDLINE RELIEF SOV OPEN	V41X1541E1	OFF			2 OF 2		6.2.1-13	
225-27			VFY	MPS	LO2 FEEDLINE RELIEF SOV CL PWR	V41X1549E1	ON			OR		6.2.1-13	
225-28			VFY	MPS	LO2 FEEDLINE RELIEF SOV CLOSED	V41X1542E1	ON			INHB MSEQ		6.2.1-13	
225-29			VFY	MPS	LO2 INBD FILL VALVE OPEN	V41X1510E1	OFF			3 OF 3		6.2.1-8	
225-30			VFY	MPS	LO2 INBD FILL VALVE OP PWR	V41X1506E1	OFF			3 OF 3		6.2.1-8	
225-31			VFY	MPS	LO2 INBD FILL VALVE CL PWR	V41X1505E1	ON			OR		6.2.1-8	
225-32			VFY	MPS	LO2 INBD FILL VALVE CLOSED	V41X1509X1	ON			INHB MSEQ		6.2.1-8	
225-33			VFY	MPS	LH2 FEED DISCONNECT TEMP	V41T1428A1	NOLO	-416.5	DEGF	1 OF 2		6.2.1-11	
225-34			VFY	MPS	HI PT BLEED TEMP	GLHT4119A	NOLO	-412	DEGF	INHB MSEQ		6.2.1-11	
					$ ARM SOUND SUP POWER BUS $								
226-00		K	CMD	WATR	PTCR VO/LPS CMD BUS ON CMD	GWDKPT08E	ON						
226-01		K	CMD	WATR	PTCR VO/LPS CMD BUS ON CMD	GWDKPT10E	ON						
					$ GLS EVENT COMPLETE = 56 $								
227-00	-55.00				$ GLS EVENT COMPLETE = 55 $								
					$ ARM H2 BURN PICS $								
228-00			CMD	EPDC	H2-BURN SYS A ARM	GMSK5012E	ON						
228-01			CMD	EPDC	H2-BURN SYS B ARM	GMSK6012E	ON						
					$ GLS EVENT COMPLETE = 54 $								
					$ SRB FWD MDM PRELOCK STATUS $								
229-00			CMD	INTG	EX DO BITE TEST 4 VIA PROM SLQ	LL1							
					$ BIT 11 IGN A F2 TEST PWR ON$								

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS DF
229-01			VFY	INTG	DO 0 CHAN 0	LL1	OFF			INHB MSEQ		2.4-9	
					$ BIT 05 LH RECOVERY SYSTEM RESET CMD$								
					$ BIT 11 IGN B F2 TEST PWR ON$								
229-02			VFY	INTG	DO 4 CHAN 0	LL1	OFF			INHB MSEQ		2.7-8	
												2.4-9	
229-03			CMD	INTG	READ LL1 BITE STATUS REGISTER	LL1							
229-04			VFY	INTG	BITE STATUS REGISTER	INTNAME	X0000			INHB MSEQ		2.3-10	
229-05			CMD	INTG	EX DO BITE TEST 4 VIA PROM SEQ	LR1							
					$ BIT 11 IGN A F2 TEST PWR ON$								
229-06			VFY	INTG	DO 0 CHAN 0	LR1	OFF			INHB MSEQ		2.4-9	
					$ BIT 05 RH RECOVERY SYSTEM RESET CMD$								
					$ BIT 11 IGN B F2 TEST PWR ON$								
229-07			VFY	INTG	DO 4 CHAN 0	LR1	OFF			INHB MSEQ		2.7-8	
												2.4-9	
229-08			CMD	INTG	READ LR1 BITE STATUS REGISTER	LR1							
229-09			VFY	INTG	BITE STATUS REGISTER	INTNAME	X0000			INHB MSEQ		2.3-10	
230-00	-50.00												
					$ VERIFY H2 BURN PIC VOLTS $								
231-00			CVFY	EPDC	H2 BURN SYS A ENG 1 CAP	GMSV5311A	35.7	NOHI	V	1 OF 2		3.1-11	
231-01			CVFY	EPDC	H2 BURN SYS B ENG 1 CAP	GMSV6311A	35.7	NOHI	V	INHB MSEQ		3.1-11	
231-02			CVFY	EPDC	H2 BURN SYS A ENG 2 CAP	GMSV5309A	35.7	NOHI	V	1 OF 2		3.1-11	
231-03			CVFY	EPDC	H2 BURN SYS B ENG 2 CAP	GMSV6309A	35.7	NOHI	V	INHB MSEQ		3.1-11	
231-04			CVFY	EPDC	H2 BURN SYS A ENG 3 CAP	GMSV5310A	35.7	NOHI	V	1 OF 2		3.1-11	
231-05			CVFY	EPDC	H2 BURN SYS B ENG 3 CAP	GMSV6310A	35.7	NOHI	V	INHB MSEQ		3.1-11	
					$ CENTAUR RBUS PIC CAP VOLTS - CHARGED $								
231-06		K	CVFY	CEPDC	RBUS SYSA PIC CAP VOLTS	GMSV5503A	35.7	NOHI	V	1 OF 2			
231-07		K	CVFY	CEPDC	RBUS SYSA PIC CAP VOLTS	GMSV7503A	35.7	NOHI	V	INHB MSRB			
231-08		K	CVFY	CEPDC	RBUS SYSB PIC CAP VOLTS	GMSV6503A	35.7	NOHI	V	1 OF 2			
231-09		K	CVFY	CEPDC	RBUS SYSB PIC CAP VOLTS	GMSV8503A	35.7	NOHI	V	INHB MSRB			
232-00		K	VFY	WATR	SS VO LCC BUS ARM IND	GWDXPT12E	ON			1 OF 2		3.1-20	
232-01		K	VFY	WATR	SS VO LCC BUS ARM IND	GWDXPT09E	ON			INHB MSEQ		3.1-20	
232-50		V	CMD	WATR	SSW PRI MAIN VLVS CLOSE CMD	XWDKVB20E	OFF						
232-51		V	CMD	WATR	SSW SEC MAIN VLVS CLOSE CMD	XWDKVF60E	OFF						

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
232-52		V	CMD	WATR	SSW PRI MAIN VLVS CLOSE ENABLE CMD	XWDKVD21E	OFF						
232-53		V	CMD	WATR	SSW SEC MAIN VLVS CLOSE ENABLE CMD	XWDKVF80E	OFF						
232-54		V	CMD	WATR	SSW PRI MAIN VLVS OPEN ENABLE	XWDKVC01E	ON						
232-55		V	CMD	WATR	SSW SEC MAIN VLVS OPEN ENABLE	XWDKVC11E	ON						
233-00			CVFY	DPS	AS5X ASC DAP 1ST CYCLE	V98X3514X1	ON			INHB MSEQ		6.9.24-10	
					$ SRB AFT MDM PRELOCK STATUS $								
234-00			CMD	INTG	EX DO BITE TEST 4 VIA PROM SEQ	LL2							
					$ BIT 11 SEP A F2 TEST PWR ON$								
234-01			VFY	INTG	DO 0 CHAN 0	LL2	OFF			INHB MSEQ		2.6-8	
					$ BIT 11 SEP B F2 TEST PWR ON$								
234-02			VFY	INTG	DO 4 CHAN 0	LL2	OFF			INHB MSEQ		2.6-8	
234-03			CMD	INTG	READ LL2 BITE STATUS REGISTER	LL2							
234-04			VFY	INTG	BITE STATUS REGISTER	INTNAME	X0000			INHB MSEQ		2.3-10	
234-05			CMD	INTG	EX DO BITE TEST 4 VIA PROM SEQ	LR2							
					$ BIT 11 SEP A F2 TEST PWR ON$								
234-06			VFY	INTG	DO 0 CHAN 0	LR2	OFF			INHB MSEQ		2.6-8	
					$ BIT 11 SEP B F2 TEST PWR ON$								
234-07			VFY	INTG	DO 4 CHAN 0	LR2	OFF			INHB MSEQ		2.6-8	
234-08			CMD	INTG	READ LR2 BITE STATUS REGISTER	LR2							
234-09			VFY	INTG	BITE STATUS REGISTER	INTNAME	X0000			INHB MSEQ		2.3-10	
					$ GLS EVENT COMPLETE = 48 $								
235-00			CMD	BINS	LH DFI FLT RCDR INHB CMD	B78K5003XL	OFF						
235-01			CMD	BINS	RH DFI FLT RCDR INHB CMD	B78K6003XL	OFF						
					$ GLS EVENT COMPLETE = 47 $								
					$ CLOSE MPS OUTBOARD FILL VALVES $								
236-00			CMD	MPS	MPS LO2 OTBD FILL VALVE CL CMD	V41K1515XL	ON						
236-01			CMD	MPS	MPS LO2 OTBD FILL VALVE OP CMD	V41K1518XL	OFF						
236-02			CMD	MPS	MPS LO2 OTBD FILL VALVE OP CMD	V41K1518NL	OFF						
236-03			CMD	MPS	MPS LH2 OTBD FILL VALVE CL CMD	V41K1393XL	ON						
236-04			CMD	MPS	MPS LH2 OTBD FILL VALVE OP CMD	V41K1391XL	OFF						
236-05			CMD	MPS	MPS LH2 OTBD FILL VALVE OP CMD	V41K1391NL	OFF						
236-10	-42.00												

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SD
237-00			CMD	BINS	LH FDM AUTO CAL CMD	B78K5002XL	ON						
237-01			CMD	BINS	RH FDM AUTO CAL CMD	B78K6002XL	ON						
238-00	-40.00												
238-50		V	VFY	WATR	SSW PRI MAIN V OPEN ENABLE IND	XWDXVC03E	ON			1 OF 2			
238-51		V	VFY	WATR	SSW SEC MAIN V OPEN ENABLE IND	XWDXVC13E	ON			INHB MSEQ			
238-52		V	CMD	WATR	ATWD ARM AREA A	XWDKVD71E	ON						
238-53		V	CMD	WATR	ATWD ARM AREA B	XWDKVD51E	ON						
239-00		V	CMD	BINS	LH FDM AUTO CAL CMD	B78K5002XL	OFF						
239-01		V	CMD	BINS	RH FDM AUTO CAL CMD	B78K6002XL	OFF						
					$ ENGINE READY CHECK $								
240-00			CVFY	SSME	ME-1 OPERATING MODE	E41J1513B1	B110			INHB MSEQ		6.2.2-2	
240-01			CVFY	SSME	ME-2 OPERATING MODE	E41J2513B1	B110			INHB MSEQ		6.2.2-2	
240-02			CVFY	SSME	ME-3 OPERATING MODE	E41J3513B1	B110			INHB MSEQ		6.2.2-2	
					$ GLS EVENT COMPLETE = 39 $								
					$ TERM ET HEATERS $								
241-00		K	CMD	EPDC	ET BIPOD HTR AC-1 ON CMD	G56K0015E	OFF						
241-01		K	CMD	EPDC	ET BIPOD HTR AC-2 ON CMD	G56K0025E	OFF						
241-02		K	CMD	EPDC	ET R BIPOD HTR PWR ON CMD	G56K0135E	OFF						
241-03		K	CMD	EPDC	ET L BIPOD HTR PWR ON CMD	G56K0145E	OFF						
241-04		V	CMD	EPDC	ET BIPOD HTR PWR OFF CMD	G56K0010E	ON						
241-05		V	CMD	EPDC	ET L BIPOD TEMP CONT OFF CMD	G56K0050E	ON						
241-06		V	CMD	EPDC	ET R BIPOD TEMP CONT OFF CMD	G56K0060E	ON						
241-07		V	CMD	EPDC	ET B/U BIPOD TEMP CONT OFF CMD	G56K0070E	ON						
241-08			CMD	EPDC	ET AFT HTR AC PWR OFF CMD	G56K0030E	ON						
241-09			CMD	EPDC	LH2 FDLN INBD HTR AC PWR ON CMD	G56K0210E	OFF						
241-10			CMD	EPDC	LH2 FDLN OTBD HTR AC PWR ON CMD	G56K0230E	OFF						
241-11			CMD	EPDC	LO2 EB INBD BKT HTR AC PWR ON C	G56K0250E	OFF						
241-12			CMD	EPDC	LO2 FDLN BKT HTR AC PWR ON CMD	G56K0270E	OFF						

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
241-13			CMD	EPDC	LO2 EB OTBD BKT HTR AC PWR ON C	G56K0290E	OFF						
					$ GLS EVENT COMPLETE = 38 $								
					$////////// T-38 SEC VENT DOORS 4/7 CMD OPEN (R/S) //////////$								
					$ PROPELLANTS PREPRESS CHECK $								
242-00			VFY	LH2	LH2 PREPRESS CYCLE FAIL	N03IS082E	OFF			INHB MSEQ		5.1-6	
					$ INHIBIT HPU TURBINE SPEED CONTROL LOGIC $								
243-00			ICL	BHYD	LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1	00.0	00.0	KRPM				
243-01			ICL	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1	00.0	00.0	KRPM				
243-02			ICL	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1	00.0	00.0	KRPM				
243-03			ICL	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1	00.0	00.0	KRPM				
					$ FWD MDM LOCKOUT COMMANDS $								
					$ GLS EVENT COMPLETE = 37 $								
244-00			CMD	INTG	LOCK SRB MDM LL1/LR1 CRITICAL	LL1/LR1	ON						
244-01			VFY	INTG	SRB MDM LOCKED	LL1/LR1	X0000			INHB MSEQ		2.3-12	
					$////////// T-33 SEC VENT DOOR 3 CMD OPEN (R/S) //////////$								
					$ GLS EVENT COMPLETE = 36 $								
					$ * * * VERIFICATION OF GOX ARM RETRACT * * * $								
245-00		K	VFY	GOX	6308A103 RETRACT SWITCH NO.1	GSAX8221E	ON			1 OF 3		3.1-17	
245-01		K	VFY	GOX	6308A102 RETRACT SWITCH NO.2	GSAX8222E	ON			1 OF 3		3.1-17	
245-02		K	VFY	GOX	A133566 ARM POSITION INDICATION	GSAH8191A	NOLO	2	DEG	INHB MSEQ		3.1-17	
245-50		V	VFY	GOX	6308A103 RETRACT SW NO 1	GSAX8221E	ON			1 OF 6			
245-51		V	VFY	GOX	6308A102 RETRACT SW NO 2	GSAX8222E	ON			1 OF 6			
245-52		V	VFY	GOX	A151111 ARM POS IND	GSAH8191A	NOLO	2	DEG	1 OF 6			
245-53		V	VFY	GOX	6308A103 RETRACT SW NO 1	GSAX8226E	ON			1 OF 6			
245-54		V	VFY	GOX	6308A102 RETRACT SW NO 2	GSAX8227E	ON			1 OF 6			
245-55		V	VFY	GOX	A151111 ARM POS IND	GSAH8196A	NOLO	2	DEG	INHB MSEQ			
					$ SRB RATE GYRO HEALTH CHECK $								
246-00			VFY	GNS	LH EVENT RATE GYRO A PITCH SMRD	B79X1844X1	ON			INHB MSEQ		2.3-6	

SEQ	TIME CD CLOCK	SI T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
246-01			VFY	GNS	LH EVENT RATE GYRO B PITCH SMRD	B79X1845X1	ON			INHB MSEQ		2.3-6	
246-02			VFY	GNS	LH EVENT RATE GYRO C PITCH SMRD	B79X1846X1	ON			INHB MSEQ		2.3-6	
246-03			VFY	GNS	LH EVENT RATE GYRO A YAW SMRD	B79X1847X1	ON			INHB MSEQ		2.3-6	
246-04			VFY	GNS	LH EVENT RATE GYRO B YAW SMRD	B79X1848X1	ON			INHB MSEQ		2.3-6	
246-05			VFY	GNS	LH EVENT RATE GYRO C YAW SMRD	B79X1849X1	ON			INHB MSEQ		2.3-6	
246-06			VFY	GNS	RH EVENT RATE GYRO A PITCH SMRD	B79X2844X1	ON			INHB MSEQ		2.3-6	
246-07			VFY	GNS	RH EVENT RATE GYRO B PITCH SMRD	B79X2845X1	ON			INHB MSEQ		2.3-6	
246-08			VFY	GNS	RH EVENT RATE GYRO C PITCH SMRD	B79X2846X1	ON			INHB MSEQ		2.3-6	
246-09			VFY	GNS	RH EVENT RATE GYRO A YAW SMRD	B79X2847X1	ON			INHB MSEQ		2.3-6	
246-10			VFY	GNS	RH EVENT RATE GYRO B YAW SMRD	B79X2848X1	ON			INHB MSEQ		2.3-6	
246-11			VFY	GNS	RH EVENT RATE GYRO C YAW SMRD	B79X2849X1	ON			INHB MSEQ		2.3-6	
					$ SRB HYD/FUEL SYSTEM STATUS CHECK $								
247-00			CVFY	BHYD	LH HYD FLUID RSVR LEVEL SYS A	B58Q1350C1	50	NOHI	PCT	INHB MENG		2.1-9	
247-01			CVFY	BHYD	LH HYD FLUID RSVR LEVEL SYS B	B58Q1351C1	50	NOHI	PCT	INHB MENG		2.1-9	
247-02			CVFY	BHYD	RH HYD FLUID RSVR LEVEL SYS A	B58Q2350C1	50	NOHI	PCT	INHB MENG		2.1-9	
247-03			CVFY	BHYD	RH HYD FLUID RSVR LEVEL SYS B	B58Q2351C1	50	NOHI	PCT	INHB MENG		2.1-9	
247-04			CVFY	BHYD	LH N2H4 BTL GN2 PRESS SYS A	B46P1305C1	300	NOHI	PSIA	INHB MENG		2.1-5	
247-05			CVFY	BHYD	LH N2H4 BTL GN2 PRESS SYS B	B46P1306C1	300	NOHI	PSIA	INHB MENG		2.1-5	
247-06			CVFY	BHYD	RH N2H4 BTL GN2 PRESS SYS A	B46P2305C1	300	NOHI	PSIA	INHB MENG		2.1-5	
247-07			CVFY	BHYD	RH N2H4 BTL GN2 PRESS SYS B	B46P2306C1	300	NOHI	PSIA	INHB MENG		2.1-5	
247-08					$ DELETED $								
247-09					$ DELETED $								
247-10					$ DELETED $								
247-11					$ DELETED $								
					$ INHIBIT VCH01 VCH02 VCH03 CONTROL LOGIC $								
248-00			ICL	FCP	PRSD FCP 1 O2 REAC VLV - OPEN	V45X1150E1	OFF						
248-01			ICL	FCP	PRSD FCP 1 H2 REAC VLV - OPEN	V45X2150E1	OFF						
248-02			ICL	FCP	PRSD FCP 2 O2 REAC VLV - OPEN	V45X1155E1	OFF						
248-03			ICL	FCP	PRSD FCP 2 H2 REAC VLV - OPEN	V45X2155E1	OFF						
248-04			ICL	FCP	PRSD FCP 3 O2 REAC VLV - OPEN	V45X1160E1	OFF						
248-05			ICL	FCP	PRSD FCP 3 H2 REAC VLV - OPEN	V45X2160E1	OFF						
					$ VERIFY OTBD F/D VLVS CLOSED $								
249-00			VFY	MPS	MPS LO2 OTBD FILL VLV OPEN	V41X1513E1	OFF			3 OF 3		6.2.1-9	
249-01			VFY	MPS	MPS LOX OTBD FILL VLV CLOSE PWR	V41X1507E1	ON			3 OF 3		6.2.1-9	
249-02			VFY	MPS	MPS LOX OTBD FILL VLV OPEN PWR O	V41X1508E1	OFF			OR		6.2.1-9	
249-03			VFY	MPS	MPS LO2 OTBD FILL VLV CLOSED	V41X1514X1	ON			INHB MSEQ		6.2.1-9	
249-20			VFY	MPS	MPS LH2 OUTBD FILL VLV OPEN	V41X1388E1	OFF			3 OF 3		6.2.1-7	

SEQ	TIME CD CLOCK	I	T	E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	SINGL OR LO	HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
249-21					VFY	MPS	MPS LH2 OUTBD FILL VLV CLOSE PWR	V41X1385E1	ON			3 OF 3		6.2.1-7	
249-22					VFY	MPS	MPS LH2 OUTBD FILL VLV OPEN PWR	V41X1386E1	OFF			OR		6.2.1-7	
249-23					VFY	MPS	MPS LH2 OUTBD FILL VLV CLOSED	V41X1389X1	ON			INHB MSEQ		6.2.1-7	
250-01		V			VFY	WATR	SSW PRI GN2 VLV CLOSING PRESS	XWDPVF44A	NOLO	50	PSIG	1 OF 2			
250-02		V			VFY	WATR	SSW SSEC GN2 VLV CLOSING PRESS	XWDPVF54A	NOLO	50	PSIG	INHB MSEQ			
251-00	-35.00														
251-01		K			VFY	CINTG	CCE FLIGHT PRESS OK - PRI	GCNX3123E	ON			1 OF 2			
251-02		K			VFY	CINTG	CCE FLIGHT PRESS OK - SEC	GCNX3623E	ON			INHB MSEQ			
251-03	-31.00														
							**********								
252-00					LABL	INTG	LAST HOLD MILESTONE	MSEQ							
							**********								
252-01					VFY	INTG	GLS-GO FOR SSME IGNITION	MENG	ON			INHB MSEQ			
252-02					VFY	INTG	GLS-GO FOR SRB IGNITION	MSRB	ON			INHB MSEQ			
252-03					VFY	INTG	RSS MANUAL HOLD		ON			INHB MSEQ			
252-04					VFY	INTG	NTD MANUAL HOLD		ON			INHB MSEQ			
252-05					VFY	INTG	GLS MANUAL HOLD		ON			INHB MSEQ			
252-06					VFY	INTG	GLS-GO FOR AUTO SEQ START	MSEQ	ON			HOLD			
							$ GLS EVENT COMPETE = 31 $								
252-07					CMD	INTG	LPS - GO FOR RS AUTO SEQ START	CMD-LS	ON						
252-08		K			CMD	CINTG	CCE T-31 SEC AND COUNTING - PRI	GCNK3111E	ON						
252-09		K			CMD	CINTG	CCE T-31 SEC AND COUNTING - SEC	GCNK3611E	ON						
252-10					MMSG	INTG	GO FOR SSME START								
252-11					MSG	INTG	HPU START								
252-12					CMD	INTG	SPARE CDT TIMER ACTIVATION	GCDKTIM4E	ON						
							$ GLS EVENT COMPLETE = 30 $								
							* * * * * * * * * *$ HOLD NO LONGER AVAILABLE $* * * * * * * * * *								
253-00							$ DELETED $								
253-01							$ DELETED $								

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
253-02					$ DELETED $								
253-03					$ DELETED $								
					$ LH APU A PRESTART GROUP $								
254-00			CMLT	BHYD	LH HYD PUMP A BYPASS VLV OPEN	B58K3020XL	ON						
			CMLT	BHYD	LH HPU SYSTEM A-1 START	B58K3016XL	ON						
254-01			CMLT	BHYD	LH APU A GG HTR 1 ON CMD	B46K3022XL	OFF						
			CMLT	BHYD	LH APU A GG HTR 2 ON CMD	B46K3023XL	OFF						
					$ LH APU B PRESTART GROUP $								
255-00			CMLT	BHYD	LH HYD PUMP B BYPASS VLV OPEN	B58K3021XL	ON						
			CMLT	BHYD	LH HPU SYSTEM B-1 START	B58K3018XL	ON						
255-01			CMLT	BHYD	LH APU B GG HTR 1 ON CMD	B46K3024XL	OFF						
			CMLT	BHYD	LH APU B GG HTR 2 ON CMD	B46K3025XL	OFF						
					$ RH APU A PRESTART GROUP $								
256-00			CMLT	BHYD	RH HYD PUMP A BYPASS VLV OPEN	B58K4020XL	ON						
			CMLT	BHYD	RH HPU SYSTEM A-1 START	B58K4016XL	ON						
256-01			CMLT	BHYD	RH APU A GG HTR 1 ON CMD	B46K4022XL	OFF						
			CMLT	BHYD	RH APU A GG HTR 2 ON CMD	B46K4023XL	OFF						
					$ RH APU B PRESTART GROUP $								
257-00			CMLT	BHYD	RH HYD PUMP B BYPASS VLV OPEN	B58K4021XL	ON						
			CMLT	BHYD	RH HPU SYSTEM B-1 START	B58K4018XL	ON						
257-01			CMLT	BHYD	RH APU B GG HTR 1 ON CMD	B46K4024XL	OFF						
			CMLT	BHYD	RH APU B GG HTR 2 ON CMD	B46K4025XL	OFF						
					$ GLS EVENT COMPLETE = 29 $								
258-00	-28.00												
					$////////// T-28 SEC VENT DOOR 6 CMD OPEN (R/S) //////////$								
					$ GLS EVENT COMPLETE = 28 $								
					$ START SRB HPU $								
259-00			CMD	BHYD	LH HPU SYSTEM A-2 START	B58K3017XL	ON						

SEQ	TIME / CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC / PAGE	SSFD
259-01			CMD	BHYD	LH HPU SYSTEM B-2 START	B58K3019XL	ON						
259-02			CMD	BHYD	RH HPU SYSTEM A-2 START	B58K4017XL	ON						
259-03			CMD	BHYD	RH HPU SYSTEM B-2 START	B58K4019XL	ON						
					$ GLS EVENT COMPLETE = 27 $								
260-00		K	CMD	WATR	SS PRE L/O VLVS VENT CMD	GWDKPT36E	ON						
260-01		K	CMD	WATR	SS PRE L/O VLVS VENT CMD	GWDKPT22E	ON						
261-00	-26.00												
					$ ACTIVATE HPU TURBINE SPEED CONTROL LOGIC $								
					$ CONTROL LOGIC EXECUTION CAUSES HPU SHUTDOWN $								
262-00			ACL	BHYD	LH APU A TURBINE SPEED 2	B46R1408C1	10.0	87.4	KRPM			2.1-12	
262-01			ACL	BHYD	LH APU B TURBINE SPEED 2	B46R1409C1	10.0	87.4	KRPM			2.1-12	
262-02			ACL	BHYD	RH APU A TURBINE SPEED 2	B46R2408C1	10.0	87.4	KRPM			2.1-12	
262-03			ACL	BHYD	RH APU B TURBINE SPEED 2	B46R2409C1	10.0	87.4	KRPM			2.1-12	
263-00	-23.00												
					$////////// T-23 SEC VENT DOOR 5 CMD OPEN (R/S) //////////$								
					$ SRB HYD PRESS TO SYSTEM $								
264-00			CMD	BHYD	LH HYD PUMP A BYPASS VLV OPEN	B58K3020XL	OFF						
264-01			CMD	BHYD	LH HYD PUMP B BYPASS VLV OPEN	B58K3021XL	OFF						
264-02			CMD	BHYD	RH HYD PUMP A BYPASS VLV OPEN	B58K4020XL	OFF						
264-03			CMD	BHYD	RH HYD PUMP B BYPASS VLV OPEN	B58K4021XL	OFF						
					$ GLS EVENT COMPLETE = 22 $								
265-00			CVFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	OFF			EXIT	CPER G001		
266-00	-21.00												
					$ START GIMBAL PROFILE $								

SEQ	TIME CD CLOCK	SI T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
267-00			CMD	BHYD	SRB FCS/HYD VERIF FLAG	P0C3	ON						
267-01			CMD	BHYD	SRB GIMBAL PROFILE EVAL	P003	ON					2.1-15	
					$ GLS EVENT COMPLETE = 20 $								
					$ ACTIVATE NOZZLE LIMIT CONTROL LOGIC $ $ CONTROL LOGIC EXECUTION CAUSES HPU SHUTDOWN $								
268-00			ACL	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	+1.88	-1.88	IN				
268-01			ACL	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	+1.88	-1.88	IN				
268-02			ACL	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	+1.88	-1.88	IN				
268-03			ACL	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	+1.88	-1.88	IN				
269-00			CVFY	BHYD	LH APU A TURBINE SPEED 2	B46R1408C1	55.0	NOHI	KRPM	EXIT		2.1-13	
269-01			CVFY	BHYD	LH APU B TURBINE SPEED 2	B46R1409C1	55.0	NOHI	KRPM	EXIT		2.1-13	
269-02			CVFY	BHYD	RH APU A TURBINE SPEED 2	B46R2408C1	55.0	NOHI	KRPM	EXIT		2.1-13	
269-03			CVFY	BHYD	RH APU B TURBINE SPEED 2	B46R2409C1	55.0	NOHI	KRPM	EXIT		2.1-13	
269-50	-20.00												
					$ ENABLE OPEN COMMANDS FOR ATWD $								
270-00		V	CMD	WATR	ATWD ET ARM OPEN CMD	XWDKV061E	ON						
270-01		V	CMD	WATR	LH2 AREA WASHDWN INITIATE CMD	XWDKV061E	ON						
270-02		V	CMD	WATR	LO2 AREA WASHDWN INITIATE CMD	XWDKV071E	ON						
					$////////// T-18 SEC VENT DOORS 1/2 CMD OPEN (R/S) //////////$								
271-00	-16.00												
271-01		K	CMD	WATR	SS PRE L/O VLVS OPEN CMD	GWDKPT30E	ON						
271-02		K	CMD	WATR	SS PRE L/O VLVS OPEN CMD	GWDKPT32E	ON						
271-50		V	CMD	WATR	SSW PRI MAIN VLVS OPEN CMD	XWDKVB21E	ON						
271-51		V	CMD	WATR	SSW SEC MAIN VLVS OPEN CMD	XWDKVC21E	ON						
272-00			MSG	INTG	SOUND SUPPRESSION WATER ON								
273-00		K	CMD	WATR	SS POST L/O VLVS VENT CMD	GWDKPT38E	ON						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SD
273-01		K	CMD	WATR	SS POST L/O VLVS VENT CMD	GWDKPT24E	ON						
					$ GLS EVENT COMPLETE = 15 $								
273-02			CVFY	BHYD	LH APU A TURBINE SPEED 2	B46R1408C1	55.0	79.2	KRPM	EXIT		2.1-13	
273-03			CVFY	BHYD	LH APU B TURBINE SPEED 2	B46R1409C1	55.0	79.2	KRPM	EXIT		2.1-13	
273-04			CVFY	BHYD	RH APU A TURBINE SPEED 2	B46R2408C1	55.0	79.2	KRPM	EXIT		2.1-13	
273-05			CVFY	BHYD	RH APU B TURBINE SPEED 2	B46R2409C1	55.0	79.2	KRPM	EXIT		2.1-13	
					$ VERIF SRB MOTORS IN NULL POSITION $								
274-00			CVFY	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	+.5	-.5	IN	EXIT	TIL MENG	2.1-20	
274-01			CVFY	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	+.5	-.5	IN	EXIT	TIL MENG	2.1-20	
274-02			CVFY	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	+.5	-.5	IN	EXIT	TIL MENG	2.1-20	
274-03			CVFY	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	+.5	-.5	IN	EXIT	TIL MENG	2.1-20	
					$ SRB HYD PRESS VERIF $								
275-00			CVFY	BHYD	LH PRESS HYD FLUID SUPPLY 1	B58P1303C1	2800	3363	PSIA	EXIT	TIL MENG	2.1-14	
275-01			CVFY	BHYD	LH PRESS HYD FLUID SUPPLY 2	B58P1304C1	2800	3363	PSIA	EXIT	TIL MENG	2.1-14	
275-02			CVFY	BHYD	RH PRESS HYD FLUID SUPPLY 1	B58P2303C1	2800	3363	PSIA	EXIT	TIL MENG	2.1-14	
275-03			CVFY	BHYD	RH PRESS HYD FLUID SUPPLY 2	B58P2304C1	2800	3363	PSIA	EXIT	TIL MENG	2.1-14	
					$ INHIBIT NOZZLE LIMIT CONTROL LOGIC $								
276-00			ICL	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	0.00	0.00	IN				
276-01			ICL	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	0.00	0.00	IN				
276-02			ICL	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	0.00	0.00	IN				
276-03			ICL	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	0.00	0.00	IN				
					$ GLS EVENT COMPLETE = 14 $								
					$ ORDNANCE ARMED VERIFICATION $								
277-00			CVFY	EPDC	SYS A RH SRB HDP M1 PIC CAP VOLT	GMSV1301A	35.7	NOHI	V	1 OF 2		3.1-9	
277-01			CVFY	EPDC	SYS A RH HDP M1 PIC CAP VOLT RED	GMSV3301A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-02			CVFY	EPDC	SYS A RH SRB HDP M2 PIC CAP VOLT	GMSV1302A	35.7	NOHI	V	1 OF 2		3.1-9	
277-03			CVFY	EPDC	SYS A RH HDP M2 PIC CAP VOLT RED	GMSV3302A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-04			CVFY	EPDC	SYS A RH SRB HDP M3 PIC CAP VOLT	GMSV1303A	35.7	NOHI	V	1 OF 2		3.1-9	
277-05			CVFY	EPDC	SYS A RH HDP M3 PIC CAP VOLT RED	GMSV3303A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-06			CVFY	EPDC	SYS A RH SRB HDP M4 PIC CAP VOLT	GMSV1304A	35.7	NOHI	V	1 OF 2		3.1-9	
277-07			CVFY	EPDC	SYS A RH HDP M4 PIC CAP VOLT RED	GMSV3304A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-08			CVFY	EPDC	SYS A LH SRB HDP M5 PIC CAP VOLT	GMSV1305A	35.7	NOHI	V	1 OF 2		3.1-9	

SEQ	TIME CD CLOCK	SI TF	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS F D
277-09			CVFY	EPDC	SYS A LH HDP M5 PIC CAP VOLT RED	GMSV3305A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-10			CVFY	EPDC	SYS A LH SRB HDP M6 PIC CAP VOLT	GMSV1306A	35.7	NOHI	V	1 OF 2		3.1-9	
277-11			CVFY	EPDC	SYS A LH HDP M6 PIC CAP VOLT RED	GMSV3306A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-12			CVFY	EPDC	SYS A LH SRB HDP M7 PIC CAP VOLT	GMSV1307A	35.7	NOHI	V	1 OF 2		3.1-9	
277-13			CVFY	EPDC	SYS A LH HDP M7 PIC CAP VOLT RED	GMSV3307A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-14			CVFY	EPDC	SYS A LH SRB HDP M8 PIC CAP VOLT	GMSV1308A	35.7	NOHI	V	1 OF 2		3.1-9	
277-15			CVFY	EPDC	SYS A LH HDP M8 PIC CAP VOLT RED	GMSV3308A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-16			CVFY	EPDC	SYS B RH SRB HDP M1 PIC CAP VOLT	GMSV2301A	35.7	NOHI	V	1 OF 2		3.1-9	
277-17			CVFY	EPDC	SYS B RH HDP M1 PIC CAP VOLT RED	GMSV4301A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-18			CVFY	EPDC	SYS B RH SRB HDP M2 PIC CAP VOLT	GMSV2302A	35.7	NOHI	V	1 OF 2		3.1-9	
277-19			CVFY	EPDC	SYS B RH HDP M2 PIC CAP VOLT RED	GMSV4302A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-20			CVFY	EPDC	SYS B RH SRB HDP M3 PIC CAP VOLT	GMSV2303A	35.7	NOHI	V	1 OF 2		3.1-9	
277-21			CVFY	EPDC	SYS B RH HDP M3 PIC CAP VOLT RED	GMSV4303A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-22			CVFY	EPDC	SYS B RH SRB HDP M4 PIC CAP VOLT	GMSV2304A	35.7	NOHI	V	1 OF 2		3.1-9	
277-23			CVFY	EPDC	SYS B RH HDP M4 PIC CAP VOLT RED	GMSV4304A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-24			CVFY	EPDC	SYS B LH SRB HDP M5 PIC CAP VOLT	GMSV2305A	35.7	NOHI	V	1 OF 2		3.1-9	
277-25			CVFY	EPDC	SYS B LH HDP M5 PIC CAP VOLT RED	GMSV4305A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-26			CVFY	EPDC	SYS B LH SRB HDP M6 PIC CAP VOLT	GMSV2306A	35.7	NOHI	V	1 OF 2		3.1-9	
277-27			CVFY	EPDC	SYS B LH HDP M6 PIC CAP VOLT RED	GMSV4306A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-28			CVFY	EPDC	SYS B LH SRB HDP M7 PIC CAP VOLT	GMSV2307A	35.7	NOHI	V	1 OF 2		3.1-9	
277-29			CVFY	EPDC	SYS B LH HDP M7 PIC CAP VOLT RED	GMSV4307A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-30			CVFY	EPDC	SYS B LH SRB HDP M8 PIC CAP VOLT	GMSV2308A	35.7	NOHI	V	1 OF 2		3.1-9	
277-31			CVFY	EPDC	SYS B LH HDP M8 PIC CAP VOLT RED	GMSV4308A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-9	
277-32			CVFY	EPDC	SYS A ETVAS PIC CAP VOLTS	GMSV1311A	35.7	NOHI	V	1 OF 2		3.1-8	
277-33			CVFY	EPDC	SYS A ETVAS PIC CAP RED VOLTS	GMSV3311A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-8	
277-34			CVFY	EPDC	SYS B ETVAS PIC CAP VOLTS	GMSV2311A	35.7	NOHI	V	1 OF 2		3.1-8	
277-35			CVFY	EPDC	SYS B ETVAS PIC CAP RED VOLTS	GMSV4311A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-8	
277-36			CVFY	EPDC	SYS A LH2 TSM PIC CAP VOLTS	GMSV1309A	35.7	NOHI	V	1 OF 2		3.1-7	
277-37			CVFY	EPDC	SYS A LH2 TSM PIC CAP RED VOLTS	GMSV3309A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-7	
277-38			CVFY	EPDC	SYS A LO2 TSM PIC CAP VOLTS	GMSV1310A	35.7	NOHI	V	1 OF 2		3.1-7	
277-39			CVFY	EPDC	SYS A LO2 TSM PIC CAP RED VOLTS	GMSV3310A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-7	
277-40			CVFY	EPDC	SYS B LH2 TSM PIC CAP VOLTS	GMSV2309A	35.7	NOHI	V	1 OF 2		3.1-7	
277-41			CVFY	EPDC	SYS B LH2 TSM PIC CAP RED VOLTS	GMSV4309A	35.7	NOHI	V	EXIT	TIL MSRB	3.1-7	
277-42			CVFY	EPDC	SYS B LO2 TSM PIC CAP VOLTS	GMSV2310A	35.7	NOHI	V	1 OF 2		3.1-7	

SEQ	TIME CD CLOCK	I	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S	S	F	D
277-43			CVFY	EPDC	SYS B LO2 TSM PIC CAP RED VOLTS	GMSV4310A	35.7	NOHI	V	EXIT		TIL MSRB 3.1-7				
					$////////// T-13 SEC VENT DOORS 8/9 CMD OPEN (R/S) //////////$											
					$ INHIBIT HPU TURBINE SPEED CONTROL LOGIC $											
278-00			ICL	BHYD	LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1	0.00	0.00	KRPM							
278-01			ICL	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1	0.00	0.00	KRPM							
278-02			ICL	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1	0.00	0.00	KRPM							
278-03			ICL	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1	0.00	0.00	KRPM							
					$ SECONDARY ROCK/TILT DELTA PRESS $											
279-00			VFY	BHYD	LH DELTA PRESS SECONDARY A ROCK	B58P1311A1	-990	+990	PSID	EXIT		2.1-19				
279-01			VFY	BHYD	LH DELTA PRESS SECONDARY B ROCK	B58P1312A1	-990	+990	PSID	EXIT		2.1-19				
279-02			VFY	BHYD	LH DELTA PRESS SECONDARY C ROCK	B58P1313A1	-990	+990	PSID	EXIT		2.1-19				
279-03			VFY	BHYD	LH DELTA PRESS SECONDARY D ROCK	B58P1314A1	-990	+990	PSID	EXIT		2.1-19				
279-04			VFY	BHYD	LH DELTA PRESS SECONDARY A TILT	B58P1315A1	-990	+990	PSID	EXIT		2.1-19				
279-05			VFY	BHYD	LH DELTA PRESS SECONDARY B TILT	B58P1316A1	-990	+990	PSID	EXIT		2.1-19				
279-06			VFY	BHYD	LH DELTA PRESS SECONDARY C TILT	B58P1317A1	-990	+990	PSID	EXIT		2.1-19				
279-07			VFY	BHYD	LH DELTA PRESS SECONDARY D TILT	B58P1318A1	-990	+990	PSID	EXIT		2.1-19				
279-08			VFY	BHYD	RH DELTA PRESS SECONDARY A ROCK	B58P2311A1	-990	+990	PSID	EXIT		2.1-19				
279-09			VFY	BHYD	RH DELTA PRESS SECONDARY B ROCK	B58P2312A1	-990	+990	PSID	EXIT		2.1-19				
279-10			VFY	BHYD	RH DELTA PRESS SECONDARY C ROCK	B58P2313A1	-990	+990	PSID	EXIT		2.1-19				
279-11			VFY	BHYD	RH DELTA PRESS SECONDARY D ROCK	B58P2314A1	-990	+990	PSID	EXIT		2.1-19				
279-12			VFY	BHYD	RH DELTA PRESS SECONDARY A TILT	B58P2315A1	-990	+990	PSID	EXIT		2.1-19				
279-13			VFY	BHYD	RH DELTA PRESS SECONDARY B TILT	B58P2316A1	-990	+990	PSID	EXIT		2.1-19				
279-14			VFY	BHYD	RH DELTA PRESS SECONDARY C TILT	B58P2317A1	-990	+990	PSID	EXIT		2.1-19				
279-15			VFY	BHYD	RH DELTA PRESS SECONDARY D TILT	B58P2318A1	-990	+990	PSID	EXIT		2.1-19				
					$ AFT MDM LOCKOUT COMMANDS $											
					$ GLS EVENT COMPLETE = 13 $											
280-00			CMD	INTG	LOCK SRB MDM LL2/LR2 CRITICAL	LL2/LR2	ON									

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S	S	F	D
280-01			VFY	INTG	SRB MDMS LOCKED	LL2/LR2	X0000			MARK/GO						
					$ TERMINATE HE FILL $											
281-00			CMD	MPS	MPHE FILL CLOSE OVR	GHEK1008E	OFF									
281-01			CMD	MPS	MPHE FILL CLOSE OVR (R)	GHEK1108E	OFF									
281-02			CMD	MPS	MPHE FILL SYS CLOSE CMD	GHEK1000E	ON									
281-03			CMD	MPS	MPHE FILL SYS CLOSE CMD (R)	GHEK1100E	ON									
281-04			CMD	MPS	MPHE FILL VENT OVR	GHEK1017E	OFF									
281-05			CMD	MPS	MPHE FILL VENT OVR (R)	GHEK1127E	OFF									
281-06			CMD	MPS	MPHE FILL OUTPUT VENT OPEN CMD	GHEK1010E	ON									
281-07			CMD	MPS	MPHE FILL OUTPUT VENT OPEN CMD(R	GHEK1120E	ON									
					$ GLS EVENT COMPLETE = 12 $											
					$ RSS INHB OFF $											
282-00			CMD	BRS	LH RSS A INHIBIT/RESET CMD	B55K3519E	ON									
282-01			CMD	BRS	RH RSS A INHIBIT/RESET CMD	B55K4519E	ON									
282-02			CMD	BRS	LH RSS B INHIBIT/RESET CMD	B55K3520E	ON									
282-03			CMD	BRS	RH RSS B INHIBIT/RESET CMD	B55K4520E	ON									
282-04			CMD	TRS	ET RSS INHIBIT/RESET CMD	T55K3001E	ON									
					$ MPS FIRE DETECTORS OFF $											
282-05			CMD	MPS	EXPOSED PRI FIRE DETS OFF CMD	GLHK7490E	ON									
282-06			CMD	MPS	EXPOSED SEC FIRE DETS OFF CMD	GLHK7500E	ON									
283-00	-10.00															
					$ INHIBIT AUTOMATED RESPONSE TO RANGE SAFETY HOLDS $											
284-00			IGL	*BRS	INHIBIT GOAL NOTIFICATION	GRSX2100E	*									
284-01			IGL	*BRS	INHIBIT GOAL NOTIFICATION	GRSX2102E	*									
					$ VERIF OF SS PRE L/O FLOW $											
285-00		K	VFY	WATR	SS PRE L/O VLV - LS V27 OP IND	GWDXPT70E	ON			2 OF 3		3.1-23				
285-01		K	VFY	WATR	SS PRE L/O VLV - LS V26 OP IND	GWDXPT72E	ON			2 OF 3		3.1-23				
285-02		K	VFY	WATR	SS PRE L/O VLV - LS V25 OP IND	GWDXPT74E	ON			EXIT		3.1-23				
					$ VERIF OF SS POST LO VENT $											
286-00		K	VFY	WATR	SS POSTLFTF VENT VLV SV8 OP IND	GWDXPT55E	ON			2 OF 3		3.1-22				
286-01		K	VFY	WATR	SS POSTLFTF VENT VLV SV9 OP IND	GWDXPT56E	ON			2 OF 3		3.1-22				

SEQ	TIME CD CLOCK	I	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR_LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S	F	D
286-02		K	VFY	WATR	SS POSTLFTF VENT VLV SV10 OP IND	GWDXPT57E	ON			EXIT		3.1-22			
					$ VERIFY OF SS PRE L/O FLOW $										
					$ VERIFY 4 OF 5 VALVES HAVE AT LEAST 1 OF 2 ON INDICATIONS ELSE EXIT $										
286-50		V	VFY	WATR	PRI MAIN VLV 1	XWDXVB23E	ON			1 OF 2					
286-51		V	VFY	WATR	SEC MAIN VLV 1	XWDXVC23E	ON			1 OF 2					
286-52		V	VFY	WATR	PRI MAIN VLV 2	XWDXVB33E	ON			1 OF 2					
286-53		V	VFY	WATR	SEC MAIN VLV 2	XWDXVC33E	ON			1 OF 2					
286-54		V	VFY	WATR	PRI MAIN VLV 3	XWDXVB43E	ON			1 OF 2					
286-55		V	VFY	WATR	SEC MAIN VLV 3	XWDXVC43E	ON			1 OF 2					
286-56		V	VFY	WATR	PRI MAIN VLV 4	XWDXVB53E	ON			1 OF 2					
286-57		V	VFY	WATR	SEC MAIN VLV 4	XWDXVC53E	ON			1 OF 2					
286-58		V	VFY	WATR	PRI MAIN VLV 5	XWDXVB63E	ON			1 OF 2					
286-59		V	VFY	WATR	SEC MAIN VLV 5	XWDXVC63E	ON			1 OF 2					
					**********										
287-00			LABL	INTG	GO FOR SSME START	MENG									
					**********										
288-00			VFY	INTG	RSS MANUAL HOLD		ON			INHB MENG					
288-01			VFY	INTG	NTD MANUAL HOLD		ON			INHB MENG					
288-02			VFY	INTG	GLS MANUAL HOLD		ON			INHB MENG					
288-03			VFY	INTG	GLS-GO FOR SRB IGNITION	MSRB	ON			EXIT					
288-04			VFY	INTG	GLS-GO FOR SSME IGNITION	MENG	ON			EXIT					
					$ GLS EVENT COMPLETE = 9 $										
					$ CMD HYDROGEN BURNOFF IGNITION START $										
289-00			CMD	EPDC	H2-BURN SYS A FIRE 1	GMSK5013E	ON								
289-01			CMD	EPDC	H2-BURN SYS B FIRE 1	GMSK6013E	ON								
289-02			CMD	EPDC	H2-BURN SYS A FIRE 2	GMSK5014E	ON								
289-03			CMD	EPDC	H2-BURN SYS B FIRE 2	GMSK6014E	ON								
					$ GLS EVENT COMPLETE = 8 $										
					$ GROUND TO VEHICLE GO FOR ENGINE START $										
290-00			CMD	INTG	LPS GO FOR ENG START	CMD-LS	ON								
290-01			MSG	INTG	GLS GO FOR MAIN ENG START										

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
290-02			MMSG	INTG	T-0 GO FOR SRB IGNITION								
290-03			OMSG	INTG	GO FOR MAIN ENGINE START								
					$ TERM FWD CMD DECODERS $								
291-00			CMD	DPS	FWD CMD DCDR LF01 PWR SPLY 1	V72K7968W	OFF						
291-01			CMD	DPS	FWD CMD DCDR LF01 PWR SPLY 2	V72K7969W	OFF						
					$ TURN OFF LH2 RECIRC PUMPS $								
292-00			CMD	MPS	IT111 LH2 PUMP1 PRI BUS CMD	GLHK0173E	OFF						
292-01			CMD	MPS	IT112 LH2 PUMP2 PRI BUS CMD	GLHK0174E	OFF						
292-02			CMD	MPS	IT113 LH2 PUMP3 PRI BUS CMD	GLHK0175E	OFF						
292-03			CMD	MPS	IT211 LH2 PUMP1 BUS CMD	GLHK0276E	OFF						
292-04			CMD	MPS	IT212 LH2 PUMP2 BUS CMD	GLHK0277E	OFF						
292-05			CMD	MPS	IT213 LH2 PUMP3 BUS CMD	GLHK0278E	OFF						
293-00			CMD	MPS	LH2 HI POINT BLEED VLV OPEN CMDA	V41K1465NL	OFF						
293-01			CMD	MPS	LH2 HI POINT BLEED VLV OPEN CMDB	V41K1466NL	OFF						
293-02			CMD	MPS	LH2 RECIRC VLVS OPEN CMD	V41K1111NL	OFF						
294-00			CMD	EPDC	IT110 BUS ON CMD	GASK0154E	OFF						
294-01			CMD	EPDC	IT210 BUS ON CMD	GASK0255E	OFF						
					$ TERM AFT CMD DECODERS $								
295-00			CMD	DPS	AFT CMD DCDR LA01 PWR SPLY 1	V72K7965W	OFF						
295-01			CMD	DPS	AFT CMD DCDR LA01 PWR SPLY 2	V72K7966W	OFF						
296-00		V	CMD	ARMS	A REMOTE POWER CONTROL	XEGKVP01E	OFF						
296-01		V	CMD	ARMS	B REMOTE POWER CONTROL	XEGKVP11E	OFF						
					$ GLS EVENT COMPLETE = 6 $								
296-02			VFY	ECLS	GCU1 SUPPLY VALVE OPEN IND	GFRX1217E	ON			GTO ST280			
296-03			CMD	ECLS	GCU1 SELECT	N03IS044E	ON						
					$ GCU PUMP TURN OFF AND VLV SAFING $								
297-00	ST280		CMD	ECLS	GCU1 PUMP1 STOP CMD	GFRK1030E	ON						
297-01			CMD	ECLS	GCU1 PUMP2 STOP CMD	GFRK1040E	ON						
297-02			CMD	ECLS	GCU1 PUMP3 STOP CMD	GFRK1050E	ON						

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SS FD
298-00			CMD	ECLS	GCU2 PUMP1 STOP CMD	GFRK2030E	ON						
298-01			CMD	ECLS	GCU2 PUMP2 STOP CMD	GFRK2040E	ON						
298-02			CMD	ECLS	GCU2 PUMP3 STOP CMD	GFRK2050E	ON						
299-00			CMD	ECLS	GCU1 SUPPLY COOLANT CMD	GFRK1140E	OFF						
299-01			CMD	ECLS	GCU2 SUPPLY COOLANT CMD	GFRK2140E	OFF						
299-02			CMD	ECLS	GCU1 BYP COOLANT CMD	GFRK1150E	ON						
299-03			CMD	ECLS	GCU2 BYP COOLANT CMD	GFRK2150E	ON						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SSDF
					$ * * * * * * * * * * * * * * * * $								
					$ $								
					$ IF INHIBIT OCCURS AGAINST $								
					$ SRB IGNITION BETWEEN LPS GO $								
					$ FOR SSME IGNITION (T-10) AND$								
					$ SRB IGNITION GLS WILL ISSUE $								
					$ AN RSLS CMD HOLD/CUTOFF. $								
					$ $								
					$ * * * * * * * * * * * * * * * * $								
					$ T-7.0 SEC GPC VENT DOOR STATUS CHECK $								
					$ ***** T-06.6 NOMINAL FOR KSC ***** $								
					$ ***** T-07.4 NOMINAL FOR VLS ***** $								
					$ ORBITER MAIN ENGINE START $								
					$ ORBITER MAIN ENGINES 90% THRUST $								
					$ NOTE: T-2 SECONDS IS NOT LATE CHECKED $								
300-00	-02.00												
					$ GLS EVENT COMPLETE = 2 $								
301-00					$ DELETED $								
301-01					$ DELETED $								
301-02					$ DELETED $								
302-00					$ DELETED $								
302-01					$ DELETED $								
302-02					$ DELETED $								
303-00		CMD	ECLS	GCU1 BYP COOLANT CMD		GFRK1150E	OFF						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F D
303-01			CMD	ECLS	GCU2 BYP COOLANT CMD	GFRK2150E	OFF							
					$ SRB IGNITION $									

SEQ	TIME CD CLOCK	SI	TFUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
310-00	ST290		VFY		SYSTEM A HDP T-0 BUS ON	GMSX1107E	ON			2 OF 3			
310-01			VFY		SYSTEM B HDP T-0 BUS ON	GMSX2107E	ON			2 OF 3			
310-02			VFY		SRB IGN CMD FLG	V90X8377X1	ON			GTO ST290			
310-03			MSG		$ SHUTTLE LIFTOFF $								
					$ STS LIFTOFF SIGNAL TO FR1 CONSOLES $								
311-00			COM	LO2	STS LIFTOFF COMM INTERRUPT	NO14INTGR	LO2						
311-01			COM	LH2	STS LIFTOFF COMM INTERRUPT	NO14INTGR	LH2						
311-02			CMD	INTG	STS LIFTOFF FLAG	NO3IS125E	ON						
					$**********$								
					$ $								
					$ POST LIFTOFF SAFING $								
					$ $								
					$**********$								
					$ LATCH ORBITER ACCESS ARM $								
312-00		K	CMD	ARMS	CAA LATCHBACK SPLY VLV-LTCH ENAB	GSAK7501E	ON						
312-01		K	CMD	ARMS	OAA LATCHBACK SPLY VLV-LTCH ENAB	GSAK7506E	ON						
312-02		K	CMD	ARMS	OAA LATCHBACK SPLY VALVE-LATCH	GSAK7500E	ON						
312-03		K	CMD	ARMS	OAA LATCHBACK SPLY VALVE-LATCH	GSAK7505E	ON						
					$ LATCH GOX ARM $								
313-00			CMD	GOX	LATCH BACK CMD	GSAK8140E	ON						
313-01			CMD	GOX	LATCH BACK CMD	GSAK8145E	ON						
313-50		V	CMD	WATR	MST WASHDOWN INITIATE CMD	XWDKV051E	ON						
313-51		V	CMD	WATR	AT WASHDOWN INITIATE CMD	XWDKV041E	ON						
313-52		V	CMD	WATR	CCAA/EGRESS ROUTE OPEN B CMD	XWKDVD31E	ON						
313-53		V	CMD	WATR	CCAA VALVES OPEN COMMAND	XWDKVA71E	ON						
					$ DELAY 1 SECOND KSC ONLY $								
314-00		K	CMD	ARMS	OAA LATCHBACK SPLY VLV-LATCH	GSAK7500E	OFF						
314-01		K	CMD	ARMS	OAA LATCHBACK SPLY VLV-LATCH	GSAK7505E	OFF						
314-02		K	CMD	ARMS	OAA LATCHBACK SPLY VLV-LTCH ENAB	GSAK7501E	OFF						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL	VALUE OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
314-03		K	CMD	ARMS	OAA LATCHBACK SPLY VLV-LTCH ENAB	GSAK7506E	OFF								
					$ RESET H2 BURN $										
315-00			CMD	EPDC	H2-BURN SYS A ARM	GMSK5012E	OFF								
315-01			CMD	EPDC	H2-BURN SYS B ARM	GMSK6012E	OFF								
315-02			CMD	EPDC	H2-BURN SYS A FIRE 1	GMSK5013E	OFF								
315-03			CMD	EPDC	H2-BURN SYS B FIRE 1	GMSK6013E	OFF								
315-04			CMD	EPDC	H2-BURN SYS A FIRE 2	GMSK5014E	OFF								
315-05			CMD	EPDC	H2-BURN SYS B FIRE 2	GMSK6014E	OFF								
					$ GCU REFRIG UNIT SHUTDOWN AND PUMP RETERMINATE INITIATION $										
316-00					$ DELETED $										
316-01					$ DELETED $										
316-02					$ DELETED $										
316-03			CMD	ECLS	GCU1 REFRIG UNIT STOP CMD	GFRK1070E	ON								
317-00					$ DELETED $										
317-01					$ DELETED $										
317-02					$ DELETED $										
317-03			CMD	ECLS	GCU2 REFRIG UNIT STOP CMD	GFRK2070E	ON								
					$ SS SECURING $										
318-00		K	CMD	WATR	SS PRE L/O VLVS VENT CMD	GWDKPT36E	OFF								
318-01		K	CMD	WATR	SS PRE L/O VLVS VENT CMD	GWDKPT22E	OFF								
318-02		K	CMD	WATR	SS PRE L/O VLVS OPEN CMD	GWDKPT30E	OFF								
318-03		K	CMD	WATR	SS PRE L/O VLVS OPEN CMD	GWDKPT32E	OFF								
318-04		K	CMD	WATR	SS POST L/O VLVS VENT CMD	GWDKPT38E	OFF								
318-05		K	CMD	WATR	SS POST L/O VLVS VENT CMD	GWDKPT24E	OFF								
318-06					$ MOVED TO SEQ 320-04 $										
318-07					$ MOVED TO SEQ 320-05 $										
318-08					$ MOVED TO SEQ 320-06 $										
318-09					$ MOVED TO SEQ 320-07 $										
318-10					$ MOVED TO SEQ 320-08 $										
318-11					$ MOVED TO SEQ 320-09 $										
318-12					$ MOVED TO SEQ 320-10 $										
318-13					$ MOVED TO SEQ 320-11 $										
318-14					$ MOVED TO SEQ 320-12 $										
318-15					$ MOVED TO SEQ 320-13 $										

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
318-16					$ MOVED TO SEQ 320-14 $								
318-17					$ MOVED TO SEQ 320-15 $								
					$ SS SECURING $								
					$ DELAY 25 SECONDS $								
319-00			CMD	ECLS	GCU1 PUMP1 STOP CMD	GFRK1030E	OFF						
319-01			CMD	ECLS	GCU1 PUMP2 STOP CMD	GFRK1040E	OFF						
319-02			CMD	ECLS	GCU1 PUMP3 STOP CMD	GFRK1050E	OFF						
319-03			CMD	ECLS	GCU1 REFRIG UNIT STOP CMD	GFRK1070E	OFF						
319-20			CMD	ECLS	GCU2 PUMP1 STOP CMD	GFRK2030E	OFF						
319-21			CMD	ECLS	GCU2 PUMP2 STOP CMD	GFRK2040E	OFF						
319-22			CMD	ECLS	GCU2 PUMP3 STOP CMD	GFRK2050E	OFF						
319-23			CMD	ECLS	GCU2 REFRIG UNIT STOP CMD	GFRK2070E	OFF						
					$ SS SECURING $								
					$ DELAY 18 SECONDS $								
320-00		V	CMD	WATR	SSW PRI MAIN VALVE OPEN CMD	XWDKVB21E	OFF						
320-01		V	CMD	WATR	SSW SEC MAIN VALVE OPEN CMD	XWDKVC21E	OFF						
320-02		V	CMD	WATR	SSW PRI MAIN VALVE OPEN ENBLE CMD	XWDKVC01E	OFF						
320-03		V	CMD	WATR	SSW SEC MAIN VALVE OPEN ENBLE CMD	XWDKVC11E	OFF						
					$ SS TRANSFER TO TS $								
320-04		K	CMD	WATR	PTCR VO/LPS CMD BUS ON CMD	GWDKPT08E	ON						
320-05		K	CMD	WATR	PTCR VO/LPS CMD BUS ON CMD	GWDKPT10E	ON						
					$ DELAY 1 SECOND $								
320-06		K	CMD	WATR	TS/VO CONTROL TS-ON/VO-OFF	GWDKPT34E	ON						
320-07		K	CMD	WATR	TS/VO CONTROL TS-ON/VO-OFF	GWDKPT35E	ON						
					$ DELAY 1 SECOND $								
320-08		K	CMD	WATR	PTCR VO/LPS CMD BUS ON CMD	GWDKPT08E	OFF						
320-09		K	CMD	WATR	PTCR VO/LPS CMD BUS ON CMD	GWDKPT10E	OFF						
					$ DELAY 1 SECOND $								
320-10		K	CMD	WATR	PTCR VO/LPS CMD BUS OFF	GWDKPT09E	ON						
320-11		K	CMD	WATR	PTCR VO/LPS CMD BUS OFF	GWDKPT13E	ON						
					$ DELAY 1 SECOND $								
320-12		K	CMD	WATR	TS/VO CONTROL TS-ON/VO-OFF	GWDKPT34E	OFF						
320-13		K	CMD	WATR	TS/VO CONTROL TS-ON/VO-OFF	GWDKPT35E	OFF						
					$ DELAY 1 SECOND $								
320-14		K	CMD	WATR	PTCR VO/LPS CMD BUS OFF	GWDKPT09E	OFF						

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
320-15		K	CMD	WATR	PTCR VO/LPS CMD BUS OFF	GWDKPT13E	OFF						
					$ RESET CENTAUR LO2 VENT HEATERS $								
320-16		K	CMD	CMPS	CCE GOX VENT HTR DC MOD OFF - PRI	GCNK6030E	OFF						
320-17		K	CMD	CMPS	CCE GOX VENT HTR DC MOD OFF - SEC	GCNK6530E	OFF						
					$ RESET CENTAUR CDT MILESTONES $								
320-18		K	CMD	CINTG	CCE START CU CCLS TERMINAL SEQ - PRI	GCNK3121E	OFF						
320-19		K	CMD	CINTG	CCE START CU CCLS TERMINAL SEQ - SEC	GCNK3621E	OFF						
320-20		K	CMD	CINTG	CCE T-1/57 AND COUNTING - PRI	GCNK3131E	OFF						
320-21		K	CMD	CINTG	CCE T-1/57 AND COUNTING - SEC	GCNK3631E	OFF						
320-22		K	CMD	CINTG	CCE T-31 SEC AND COUNTING - PRI	GCNK3111E	OFF						
320-23		K	CMD	CINTG	CCE T-31 SEC AND COUNTING - SEC	GCNK3611E	OFF						
320-24		K	CMD	CINTG	GO FOR CCE PRESSURIZATION - PRI	GCNK3051E	OFF						PL
320-25		K	CMD	CINTG	GO FOR CCE PRESSURIZATION - SEC	GCNK3551E	OFF						PL
					$ COMMIT CRITERIA MONITOR FLAGS RETURNED TO SYSTEMS $								
321-00			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	BHYD						
321-01			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	HYD						
321-02			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	APU						
321-03			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	HYFUEL						
321-04			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	HYOXID						
321-05			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	ARMS						
321-06			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	MECH						
321-07			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	LO2						
321-08			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	LH2						
321-09			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	MPS						
321-10			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	SSME						
321-11			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	GOXARM						
321-12			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	BRS						
321-13			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	TRS						
321-14			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	ECLSS						
321-15			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	FCP						
321-16			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	PLBD						
321-17			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	CARGO						
321-18			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	ECS						
321-19			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	WATER						
321-20			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	NAVAID						
321-21			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	COMM						
321-22			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	CEOA						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	SF	SD
321-23			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	INSTR								
321-24			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	EPDC								
321-25			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	PVD								
321-26			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	BPYRO								
321-27			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	BELEC								
321-28			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	TINST								
321-29			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	BINST								
321-30			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	GNC								
321-31			COM	INTG	SYSTEMS IN CONTROL	NO12INTGR	DPS								
					$ * RANGE SAFETY HOLD FD RSYS TRANSFER TO SYSTEM * $										
322-00			CRSY	BRS	RANGE SAFETY LAUNCH PROCEED	GRSX2100E									
322-01			CRSY	BRS	RANGE SAFETY LAUNCH PROCEED	GRSX2102E									
323-00			CMD	INTG	IMU HOLD AVAILABLE TIMER ACTIV.	GCDKTIM1E	OFF								
323-01			CMD	INTG	APU HOLD AVAILABLE TIMER ACTIV.	GCDKTIM2E	OFF								
323-02			CMD	INTG	LOX HOLD AVAILABLE TIMER ACTIV.	GCDKTIM3E	OFF								
323-03			CMD	INTG	SPARE CDT TIMER ACTIVATION	GCDKTIM4E	OFF								
324-00			END												

SEQ	TIME CD CLOCK	I	T	E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
							* * * * * * * * * * * * * * * * * * * *								
							* BREAKOUT PRIMARY SAFING AND NORMAL SAFING *								
							* * * * * * * * * * * * * * * * * * * *								
500-00					CMD	INTG	LAUNCH SEQUENCE HOLD	CMD-LS	ON						
500-01					CMD	INTG	RECYCLE	CMD-LS	ON						
							$ BREAKOUT NOTIFICATION TO ALL FR CONSOLES $								
							$ NOTE: THE FOLLOWING TWO COMMUNICATIONS INTERRUPTS ARE ISSUED TO ALL CONSOLES IN PARALLEL WITH THE GLS INITIATION OF ITS SAFING ROUTINE. THEY INDICATE THAT BREAKOUT HAS OCCURRED AND THAT SYSTEMS ARE NOW IN CONTROL OF THE FEP PROCESSING OF GLS CVFY MEASUREMENTS NOT APPEARING IN SAFING.								
							NOTICE: NO SYSTEM SAFING IS TO BE DONE UNTIL THE GLS SAFING COMPLETE FLAG IS ISSUED. $								
501-00					CMD	INTG	GLS BREAKOUT	N011INTGR	ON						
501-01					CMD	INTG	SYSTEMS IN CONTROL	N012INTGR	ON						
							$ NOTIFY CCE OF GLS BREAKOUT/SAFING $								
501-02		K			CMD	CINTG	GLS BREAKOUT FLAG - PRI	GCNK3081E	ON						
501-03		K			CMD	CINTG	GLS BREAKOUT FLAG - SEC	GCNK3581E	ON						
							$ VERIFY VEHICLE HOLDING $								
502-00					VFY	INTG	GO FOR MAIN ENG START		ON			GTO NEXT	SEQ		
502-01	ST300				VFY	INTG	COUNTDOWN TIME	V90W8380C1	-530	NOHI	SEC	GTO NEXT	SEQ		PL
502-02					VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	OFF			GTO NEXT	SEQ		
502-03					CMD	INTG	LAUNCH SEQUENCE HOLD	CMD-LS	ON						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
502-04			CMD	INTG	RECYCLE	CMD-LS	ON								
					GTO ST300										
					$ PERFORM PRIMARY SAFING IF IGNITION S/A'S ARE ARMED - ELSE GO TO NORMAL SAFING $										
					$ ********** $										
					$ ********** PRIMARY SAFING ********** $										
					$ ********** $										
					$ PERFORM NEXT 4 STEPS IF CMD DECODERS ARE OFF $										
					$ GLS EVENT COMPLETE LESS THAN 8 $										
					$ POWER UP CMD DECODERS $										
503-00			CMD	DPS	AFT CMD DCDR LA01 PWR SPLY 1	V72K7965W	ON								
503-01			CMD	DPS	AFT CMD DCDR LA01 PWR SPLY 2	V72K7966W	ON								
					$ DELAY .5 SEC $										
504-00			CMD	DPS	FWD CMD DCDR LF01 PWR SPLY 1	V72K7968W	ON								
504-01			CMD	DPS	FWD CMD DCDR LF01 PWR SPLY 2	V72K7969W	ON								
					$ PERFORM NEXT 4 STEPS IF SRB FWD MDMS ARE LOCKED $										
					$ GLS EVENT COMPLETE LESS THAN 38 $										
					$ UNLOCK SRB FWD MDMS $										
505-00			CMD	INTG	UNLOCK SRB MDM FOR	B75K3065XL	ON								
505-01			CMD	INTG	UNLOCK SRB MDM FOR	B75K3066XL	ON								
505-02			CMD	INTG	UNLOCK SRB MDM FOR	B75K4065XL	ON								
505-03			CMD	INTG	UNLOCK SRB MDM FOR	B75K4066XL	ON								
					$ SAFE SRB IGNITION S/A'S $										
					$ GLS EVENT COMPLETE LESS THAN 299 $										
506-00			CMD	BPYR	LH IGNITION S/A DEVICE ARM CMD	B55K3000XL	OFF								
506-01			CMD	BPYR	RH IGNITION S/A DEVICE ARM CMD	B55K4000XL	OFF								
506-02			CMD	BPYR	LH IGNITION S/A DEVICE 1 SAFE	B55K3001XL	ON								
506-03			CMD	BPYR	LH IGNITION S/A DEVICE 2 SAFE	B55K3002XL	ON								
506-04			CMD	BPYR	RH IGNITION S/A DEVICE 1 SAFE	B55K4001XL	ON								

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
506-05		CMD	BPYR		RH IGNITION S/A DEVICE 2 SAFE	B55K4002XL	ON								
					$ POWER DOWN GSE PIC RACKS $										
					$ GLS EVENT COMPLETE LESS THAN 21 $										
506-06		CMD	EPDC		SYS A PIC RACK DC PWR OFF	GMSK1108E	ON								
506-07		CMD	EPDC		SYS B PIC RACK DC PWR OFF	GMSK2108E	ON								
506-08		CMD	EPDC		H2-BURN SYS A PIC RACK DC PWR OFF	GMSK5108E	ON								
506-09		CMD	EPDC		H2-BURN SYS B PIC RACK DC PWR OFF	GMSK6108E	ON								
506-10		CMD	EPDC		SYS A CPA DC PWR OFF	GMSK1103E	ON								
506-11		CMD	EPDC		SYS B CPA DC PWR OFF	GMSK2103E	ON								
506-12		CMD	EPDC		H2-BURN SYS A CPA DC PWR OFF	GMSK5103E	ON								
506-13		CMD	EPDC		H2-BURN SYS B CPA DC PWR OFF	GMSK6103E	ON								
					$ DELAY 2 SEC $										
506-14		CMD	EPDC		SYS A PIC RACK DC PWR OFF	GMSK1108E	OFF								
506-15		CMD	EPDC		SYS B PIC RACK DC PWR OFF	GMSK2108E	OFF								
506-16		CMD	EPDC		H2-BURN SYS A PIC RACK DC PWR OFF	GMSK5108E	OFF								
506-17		CMD	EPDC		H2-BURN SYS B PIC RACK DC PWR OFF	GMSK6108E	OFF								
506-18		CMD	EPDC		SYS A CPA DC PWR OFF	GMSK1103E	OFF								
506-19		CMD	EPDC		SYS B CPA DC PWR OFF	GMSK2103E	OFF								
506-20		CMD	EPDC		H2-BURN SYS A CPA DC PWR OFF	GMSK5103E	OFF								
506-21		CMD	EPDC		H2-BURN SYS B CPA DC PWR OFF	GMSK6103E	OFF								
					$ PERFORM NEXT 3 STEPS IF LOX PREPRESS HAS BEEN INITIATED $										
					$ GLS EVENT COMPLETE LESS THAN 175 $										
					$ TERMINATE LOX PREPRESS $										
507-00		CMD	LO2		A75082 ET HE PRI PREPRESS VLV OP	GLOK2001E	OFF								
507-01		CMD	LO2		A75080 ET HE PREPRESS SHUTOFF VL	GLOK2031E	ON								
507-02		CMD	LO2		A75086 ET HE SEC PREPRESS VLV OP	GLOK3001E	OFF								
					$ PERFORM NEXT 3 STEPS IF LH2 PREPRESS HAS BEEN INITIATED $										
					$ GLS EVENT COMPLETE LESS THAN 117 $										
					$ TERMINATE LH2 PREPRESS $										
508-00		CMD	LH2		A75616 ET PRS PR CTL VLV O CMD	GLHK4521E	OFF								
508-01		CMD	LH2		A75617 ET PRESS SEC CTL VLV OP C	GLHK4531E	OFF								

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
508-02			CMD	LH2	A75610 ET PRESS SOV CL CMD	GLHK4541E	ON						
			$	**********	**********	**********	**********	**********	**********	**********	**********	**********	$
			$	**********	********** NORMAL SAFING **********	**********	**********	**********	**********	**********	**********	**********	$
			$	**********	**********	**********	**********	**********	**********	**********	**********	**********	$
			$	GO TO EVENT AT TIME OF BREAKOUT									$
			$ GLS EVENT COMPLETE LESS THAN 7 $										
			$ GCU COOLING RECONFIGURE $										
509-00			CMD	ECLS	GCU1 PUMP1 STOP CMD	GFRK1030E	OFF						
509-01			CMD	ECLS	GCU1 PUMP2 STOP CMD	GFRK1040E	OFF						
509-02			CMD	ECLS	GCU1 PUMP3 STOP CMD	GFRK1050E	OFF						
510-00			CMD	ECLS	GCU2 PUMP1 STOP CMD	GFRK2030E	OFF						
510-01			CMD	ECLS	GCU2 PUMP2 STOP CMD	GFRK2040E	OFF						
510-02			CMD	ECLS	GCU2 PUMP3 STOP CMD	GFRK2050E	OFF						
511-00			CMD	ECLS	GCU1 BYP COOLANT CMD	GFRK1150E	OFF						
511-01			CMD	ECLS	GCU2 BYP COOLANT CMD	GFRK2150E	OFF						
512-00			$ DELETED $										
512-01			$ DELETED $										
512-02			$ DELETED $										
512-03			$ DELETED $										
512-04			$ DELETED $										
512-05			$ DELETED $										
512-06			VFY	ECLS	GCU1 SELECT	N03IS044E	ON			GTO ST310			
			$ GCU 1 START UP $										
513-00			CMD	ECLS	GCU1 SUPPLY COOLANT CMD	GFRK1140E	ON						
513-01			CMD	INTG	GCU1 SELECT								
513-02			CMD	INTG						SKIP SEQ			
			$ GCU2 START UP $										
514-00	ST310		CMD	ECLS	GCU2 SUPPLY COOLANT CMD	GFRK2140E	ON						

SEQ	TIME / CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
514-01			CMD	INTG	GCU2 SELECT								
					$ GLS EVENT COMPLETE LESS THAN 9 $								
					$ TERM LH2 RECIRC AND CLOSE VLVS $								
515-01			CMD	MPS	IT111 LH2 PUMP 1 PRI BUS CMD	GLHK0173E	OFF						
515-02			CMD	MPS	IT112 LH2 PUMP 2 PRI BUS CMD	GLHK0174E	OFF						
515-03			CMD	MPS	IT113 LH2 PUMP 3 PRI BUS CMD	GLHK0175E	OFF						
515-04			CMD	MPS	IT211 LH2 PUMP 1 BUS CMD	GLHK0276E	OFF						
515-05			CMD	MPS	IT212 LH2 PUMP 2 BUS CMD	GLHK0277E	OFF						
515-06			CMD	MPS	IT213 LH2 PUMP 3 BUS CMD	GLHK0278E	OFF						
515-07			CMD	MPS	LH2 HI POINT BLEED VLV OPEN CMD A	V41K1465NL	OFF						
515-08			CMD	MPS	LH2 HI POINT BLEEN VLV OPEN CMD B	V41K1466NL	OFF						
515-09			CMD	MPS	LH2 RECIRC VLVS OPEN CMD	V41K1111NL	OFF						
515-10			CMD	EPDC	IT110 BUS ON CMD	GASK0154E	OFF						
515-11			CMD	EPDC	IT210 BUS ON CMD	GASK0255E	OFF						
					$ GLS EVENT COMPLETE LESS THAN 10 $								
					$ SAFE H2 BURN SYSTEM $								
516-00			CMD	EPDC	H2-BURN SYS A FIRE 1	GMSK5013E	OFF						
516-01			CMD	EPDC	H2-BURN SYS B FIRE 1	GMSK6013E	OFF						
516-02			CMD	EPDC	H2-BURN SYS A FIRE 2	GMSK5014E	OFF						
516-03			CMD	EPDC	H2-BURN SYS B FIRE 2	GMSK6014E	OFF						
$ -10.00 $													
					$ GLS EVENT COMPLETE LESS THAN 13 $								
					$ INHIBIT RSS $								
517-00			CMD	BRS	LH RSS A INHIBIT/RESET CMD	B55K3519E	OFF						
517-01			CMD	BRS	RH RSS A INHIBIT/RESET CMD	B55K4519E	OFF						
517-02			CMD	BRS	LH RSS B INHIBIT/RESET CMD	B55K3520E	OFF						
517-03			CMD	BRS	RH RSS B INHIBIT/RESET CMD	B55K4520E	OFF						
517-04			CMD	BRS	ET RSS INHIBIT/RESET CMD	T55K3001E	OFF						
					$ GLS EVENT COMPLETE LESS THAN 14 $								
					$ UNLOCK SRB AFT MDM'S $								
518-00			CMD	INTG	UNLOCK SRB MDM FOR	B75K3067XL	ON						
518-01			CMD	INTG	UNLOCK SRB MDM FOR	B75K3068XL	ON						

SEQ	TIME CD CLOCK	I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
518-02			CMD	INTG	UNLOCK SRB MDM FOR	B75K4067XL	ON						
518-03			CMD	INTG	UNLOCK SRB MDM FOR	B75K4068XL	ON						
	$ -28.00 $												
					$ GLS EVENT COMPLETE LESS THAN 29 $								
					$ SRB APU TURBINE SPEED LIMIT CHANGE $								
519-00			ACL	BHYD	LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1	NOLO	87.4	KRPM				
519-01			ACL	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1	NOLO	87.4	KRPM				
519-02			ACL	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1	NOLO	87.4	KRPM				
519-03			ACL	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1	NOLO	87.4	KRPM				
519-50		V	CMD	WATR	LH2 AREA WASHDOWN INITIATE CMD	XWDKV061E	OFF						
519-51		V	CMD	WATR	LO2 AREA WASHDOWN INITIATE CMD	XWDKV071E	OFF						
					$ STOP SRB APU $								
520-00			CMD	BHYD	LH HPU SYSTEM A-1 START	B58K3016XL	OFF						
520-01			CMD	BHYD	LH HPU SYSTEM A-2 START	B58K3017XL	OFF						
520-02			CMD	BHYD	LH HPU SYSTEM B-1 START	B58K3018XL	OFF						
520-03			CMD	BHYD	LH HPU SYSTEM B-2 START	B58K3019XL	OFF						
520-04			CMD	BHYD	RH HPU SYSTEM A-1 START	B58K4016XL	OFF						
520-05			CMD	BHYD	RH HPU SYSTEM A-2 START	B58K4017XL	OFF						
520-06			CMD	BHYD	RH HPU SYSTEM B-1 START	B58K4018XL	OFF						
520-07			CMD	BHYD	RH HPU SYSTEM B-2 START	B58K4019XL	OFF						
520-08			CMD	BHYD	LH HYD PUMP A BYPASS VLV OPEN	B58K3020XL	OFF						
520-09			CMD	BHYD	LH HYD PUMP B BYPASS VLV OPEN	B58K3021XL	OFF						
520-10			CMD	BHYD	RH HYD PUMP A BYPASS VLV OPEN	B58K4020XL	OFF						
520-11			CMD	BHYD	RH HYD PUMP B BYPASS VLV OPEN	B58K4021XL	OFF						
					$ GLS EVENT COMPLETE LESS THAN 32 $								
					$ OPEN LO2 OVERBOARD BLEED VALVES $								
522-00			CMD	MPS	LO2 OVERBOARD B/V CLOSE CMD A	V41K1584XL	OFF						
522-01			CMD	MPS	LO2 OVERBOARD B/V CLOSE CMD B	V41K1585XL	OFF						
522-02			CMD	MPS	LO2 OVERBOARD B/V CLOSE CMD C	V41K1586XL	OFF						
	$ -38.00 $												

SEQ	TIME CD CLOCK	I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
523-00			CMD	INTG	VENT DOOR SAFING ENABLED	S013	ON						
					$ GLS EVENT COMPLETE LESS THAN 49 $								
					$ TERM SRB RECORDERS $								
524-00			CMD	BINS	LH FDM AUTO CAL CMD	B78K5002XL	OFF						
524-01			CMD	BINS	RH FDM AUTO CAL CMD	B78K6002XL	OFF						
524-02			CMD	BINS	LH DFI FLT RCDR INHB CMD	B78K5003XL	ON						
524-03			CMD	BINS	RH DFI FLT RCDR INHB CMD	B78K6003XL	ON						
	$ -40.00 $												
					$ GLS EVENT COMPLETE LESS THAN 56 $								
					$ DISARM H2 BURN SYS $								
525-00			CMD	EPDC	H2-BURN SYS A ARM	GMSK5012E	OFF						
525-01			CMD	EPDC	H2-BURN SYS B ARM	GMSK6012E	OFF						
526-00			VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	OFF			GTO ST340			
					$ GLS EVENT COMPLETE LESS THAN 174 $								
					$ ACTIVATE ENGINE GN2 PURGE GSE $								
527-00			CMD	SSME	MPENG GN2 PRG VNT OPN CMD	GGNK1050E	OFF						
527-01			CMD	SSME	MPENG GN2 PRG VNT OPN CMD	GGNK1140E	OFF						
527-02			CMD	SSME	MPENG GN2 PRG VNT OPN CMD OVR	GGNK1057E	ON						
527-03			CMD	SSME	MPENG GN2 PRG VNT OPN CMD OVR(R)	GGNK1147E	ON						
527-04			CMD	SSME	MPENG GN2 PRG CNT CLD CMD	GGNK1030E	OFF						
527-05			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD(R)	GGNK1130E	OFF						
527-06			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD OV	GGNK1037E	ON						
527-07			CMD	SSME	MPENG GN2 PRG CNT CLD CMD OVR(R)	GGNK1137E	ON						
	$ -02:55 $												
					$ GLS EVENT COMPLETE LESS THAN 240 $								
					$ INITIATE PURGE SEQUENCE 3 $								
528-00			VFY	SSME	ME-1 PHASE IN EFFECT	E41J1512B1	B010			GTO ST320			
528-01			VFY	SSME	ME-1 OPERATING MODE	E41J1513B1	B011			GTO ST315			
					GTO ST320								
528-02	ST315		ISSU	SSME	ME-1 RESUME COMMAND	E41K1202BL	ON						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
528-03			ISSU	SSME	ME-1 LIMIT CONTROL ENABLE	E41K1211BL	ON							
528-04			ISSU	SSME	ME-1 RESUME COMMAND	E41K1202BL	ON							
528-05			ISSU	SSME	ME-1 PURGE SEQUENCE 3 CMD	E41K1215BL	ON							
528-06	ST320		VFY	SSME	ME-2 PHASE IN EFFECT	E41J2512B1	B010			GTO ST325				
528-07			VFY	SSME	ME-2 OPERATING MODE	E41J2513B1	B011			GTO ST321				
			GTO ST325											
528-08	ST321		ISSU	SSME	ME-2 RESUME COMMAND	E41K2202BL	ON							
528-09			ISSU	SSME	ME-2 LIMIT CONTROL ENABLE	E41K2211BL	ON							
528-10			ISSU	SSME	ME-2 RESUME COMMAND	E41K2202BL	ON							
528-11			ISSU	SSME	ME-2 PURGE SEQUENCE 3 CMD	E41K2215BL	ON							
528-12	ST325		VFY	SSME	ME-3 PHASE IN EFFECT	E41J3512B1	B010			GTO ST330				
528-13			VFY	SSME	ME-3 OPERATING MODE	E41J3513B1	B011			GTO ST326				
			GTO ST330											
528-14	ST326		ISSU	SSME	ME-3 RESUME COMMAND	E41K3202BL	ON							
528-15			ISSU	SSME	ME-3 LIMIT CONTROL ENABLE	E41K3211BL	ON							
528-16			ISSU	SSME	ME-3 RESUME COMMAND	E41K3202BL	ON							
528-17			ISSU	SSME	ME-3 PURGE SEQUENCE 3 CMD	E41K3215BL	ON							
528-18	ST330				$ CONTINUE $									
$ -04:00 $														
					$ GLS EVENT COMPLETE LESS THAN 271 $									
					$ MAIN FUEL VALVE HTRS ON $									
529-00			CMD	SSME	ME-1 MFV HEATER PWR ON CMD	GGNK1020E	ON							
529-02			CMD	SSME	ME-1 MFV HEATER PWR OFF CMD	GGNK1021E	OFF							
529-03			CMD	SSME	ME-1 MFV HEATER PWR OFF(R)CMD	GGNK1141E	OFF							
529-04			CMD	SSME	ME-2 MFV HEATER PWR ON CMD	GGNK1040E	ON							
529-06			CMD	SSME	ME-2 MFV HEATER PWR OFF CMD	GGNK1041E	OFF							
529-07			CMD	SSME	ME-2 MFV HEATER PWR OFF(R)CMD	GGNK1151E	OFF							
529-08			CMD	SSME	ME-3 MFV HEATER PWR ON CMD	GGNK1060E	ON							
529-10			CMD	SSME	ME-3 MFV HEATER PWR OFF CMD	GGNK1061E	OFF							
529-11			CMD	SSME	ME-3 MFV HEATER PWR OFF(R)CMD	GGNK1161E	OFF							
$ -04:30 $														
					$ GLS EVENT COMPLETE LESS THAN 300 $									
					$ RSS SAFING $									
530-00	ST340		CMD	BRS	LH RSS S/A DEVICE ARM CMD	B55K3044XL	OFF							
530-01			CMD	BRS	RH RSS S/A DEVICE ARM CMD	B55K4044XL	OFF							
530-02			CMD	TRS	ET RSS S/A DEVICE ARM CMD	T55K3110XL	OFF							
530-03			CMD	TRS	ET RSS S/A DEVICE SAFE 1	T55K3111XL	ON							

SEQ	TIME CD CLOCK	S I E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL: OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
530-04			CMD	TRS	ET RSS S/A DEVICE SAFE 2	T55K3112XL	ON						
					$ GCU 1 START $								
531-00					$ DELETED $								
532-00			CMD	ECLS	GCU1 PUMP 1 START CMD	GFRK1000E	ON						
532-01			CMD	ECLS	GCU1 PUMP 2 START CMD	GFRK1010E	ON						
532-02			CMD	ECLS	GCU2 PUMP 1 START CMD	GFRK2000E	ON						
					$ GCU2 START $								
533-00					$ DELETED $								
534-00					$ DELETED $								
534-01			CMD	ECLS	GCU2 PUMP 2 START CMD	GFRK2010E	ON						
534-02					$ DELETED $								
					$ DELAY 2 SECONDS $								
					$ GCU PUMP START CMDS OFF $								
535-00			CMD	ECLS	GCU1 PUMP 1 START CMD	GFRK1000E	OFF						
535-01			CMD	ECLS	GCU1 PUMP 2 START CMD	GFRK1010E	OFF						
535-02			CMD	ECLS	GCU2 PUMP 1 START CMD	GFRK2000E	OFF						
535-03			CMD	ECLS	GCU2 PUMP 2 START CMD	GFRK2010E	OFF						
535-04					$ MOVED TO SEQ 578-08 $								
535-05					$ MOVED TO SEQ 578-09 $								
					$ CHECK OVBV BLEED VALVE $								
537-00			VFY	MPS	LOX OVBD BLD VLV OP IND	V41X1587E1	ON					DISPLAY	
537-01			VFY	MPS	LOX OVBD BLD VLV CLA IND	V41X1580X1	OFF					1 OF 2	
537-02			VFY	MPS	LOX OVBD BLD VLV CLB IND	V41X1581X1	OFF					DISPLAY	
538-00	ST350		CMD	TRS	ET RSS S/A DEVICE SAFE 1	T55K3111XL	OFF						
538-01			CMD	TRS	ET RSS S/A DEVICE SAFE 2	T55K3112XL	OFF						
538-02			CMD	BPYR	LH IGNITION S/A DEVICE 1 SAFE	B55K3001XL	OFF						
538-03			CMD	BPYR	LH IGNITION S/A DEVICE 2 SAFE	B55K3002XL	OFF						
538-04			CMD	BPYR	RH IGNITION S/A DEVICE 1 SAFE	B55K4001XL	OFF						
538-05			CMD	BPYR	RH IGNITION S/A DEVICE 2 SAFE	B55K4002XL	OFF						
538-06			VFY	EPDC	LH VOLTAGE IGNITION PIC CAP A	B55V1603C1	NOLO	1.5	VDC			DISPLAY	
538-07			VFY	EPDC	LH VOLTAGE IGNITION PIC CAP B	B55V1604C1	NOLO	1.5	VDC			DISPLAY	
538-08			VFY	EPDC	RH VOLTAGE IGNITION PIC CAP A	B55V2603C1	NOLO	1.5	VDC			DISPLAY	
538-09			VFY	EPDC	RH VOLTAGE IGNITION PIC CAP B	B55V2604C1	NOLO	1.5	VDC			DISPLAY	

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
538-10			VFY	EPDC	LH VOLTAGE FWD THR PIN PIC CAP A	B55V1605C1	NOLO	1.5	VDC	DISPLAY				
538-11			VFY	EPDC	LH VOLTAGE FWD THR PIN PIC CAP B	B55V1606C1	NOLO	1.5	VDC	DISPLAY				
538-12			VFY	EPDC	RH VOLTAGE FWD THR PIN PIC CAP A	B55V2605C1	NOLO	1.5	VDC	DISPLAY				
538-13			VFY	EPDC	RH VOLTAGE FWD THR PIN PIC CAP B	B55V2606C1	NOLO	1.5	VDC	DISPLAY				
538-14			VFY	EPDC	RH VOLTAGE AFT UPPER BKT PIC CAP A	B55V2607C1	NOLO	1.5	VDC	DISPLAY				
538-15			VFY	EPDC	RH VOLTAGE AFT UPPER BKT PIC CAP B	B55V2608C1	NOLO	1.5	VDC	DISPLAY				
538-16			VFY	EPDC	RH VOLTAGE AFT MID BKT PIC CAP A	B55V2609C1	NOLO	1.5	VDC	DISPLAY				
538-17			VFY	EPDC	RH VOLTAGE AFT MID BKT PIC CAP B	B55V2610C1	NOLO	1.5	VDC	DISPLAY				
538-18			VFY	EPDC	RH VOLTAGE AFT LOWER BKT PIC CAP A	B55V2611C1	NOLO	1.5	VDC	DISPLAY				
538-19			VFY	EPDC	RH VOLTAGE AFT LOWER BKT PIC CAP B	B55V2612C1	NOLO	1.5	VDC	DISPLAY				
538-20			VFY	EPDC	LH VOLTAGE AFT UPPER BKT PIC CAP A	B55V1607C1	NOLO	1.5	VDC	DISPLAY				
538-21			VFY	EPDC	LH VOLTAGE AFT UPPER BKT PIC CAP B	B55V1608C1	NOLO	1.5	VDC	DISPLAY				
538-22			VFY	EPDC	LH VOLTAGE AFT MID BKT PIC CAP A	B55V1609C1	NOLO	1.5	VDC	DISPLAY				
538-23			VFY	EPDC	LH VOLTAGE AFT MID BKT PIC CAP B	B55V1610C1	NOLO	1.5	VDC	DISPLAY				
538-24			VFY	EPDC	LH VOLTAGE AFT LOWER BKT PIC CAP A	B55V1611C1	NOLO	1.5	VDC	DISPLAY				
538-25			VFY	EPDC	LH VOLTAGE AFT LOWER BKT PIC CAP B	B55V1612C1	NOLO	1.5	VDC	DISPLAY				
538-26			VFY	EPDC	LH VOLTAGE FWD SEP MOTOR PIC CAP A	B55V1613C1	NOLO	1.5	VDC	DISPLAY				
538-27			VFY	EPDC	LH VOLTAGE FWD SEP MOTOR PIC CAP B	B55V1614C1	NOLO	1.5	VDC	DISPLAY				
538-28			VFY	EPDC	RH VOLTAGE FWD SEP MOTOR PIC CAP A	B55V2613C1	NOLO	1.5	VDC	DISPLAY				
538-29			VFY	EPDC	RH VOLTAGE FWD SEP MOTOR PIC CAP B	B55V2614C1	NOLO	1.5	VDC	DISPLAY				
538-30			VFY	EPDC	LH VOLTAGE AFT SEP MOTOR PIC CAP A	B55V1615C1	NOLO	1.5	VDC	DISPLAY				
538-31			VFY	EPDC	LH VOLTAGE AFT SEP MOTOR PIC CAP B	B55V1616C1	NOLO	1.5	VDC	DISPLAY				
538-32			VFY	EPDC	RH VOLTAGE AFT SEP MOTOR PIC CAP A	B55V2615C1	NOLO	1.5	VDC	DISPLAY				
538-33			VFY	EPDC	RH VOLTAGE AFT SEP MOTOR PIC CAP B	B55V2616C1	NOLO	1.5	VDC	DISPLAY				
$ -05:00 $														
					$ GLS EVENT COMPLETE LESS THAN 445 $									
					$ EMERGENCY EXTEND ORBITER ACCESS ARM $									
539-00		K	CMD	ARMS	OAA OPEN PRI RETRACT SUPPLY V	GSAK7210E	OFF							
539-01		K	CMD	ARMS	OAA OPEN PRI RETRACT SUPPLY V	GSAK7215E	OFF							
539-02		K	CMD	ARMS	OAA OPEN PRI RETRACT RETURN V	GSAK7230E	OFF							
539-03		K	CMD	ARMS	OAA OPEN PRI RETRACT RETURN V	GSAK7235E	OFF							
540-00		K	CMD	ARMS	OAA OPEN SEC RETRACT SUPPLY V	GSAK7250E	OFF							
540-01		K	CMD	ARMS	OAA OPEN SEC RETRACT SUPPLY V	GSAK7255E	OFF							
540-02		K	CMD	ARMS	OAA OPEN SEC RETRACT RETURN V	GSAK7270E	OFF							
540-03		K	CMD	ARMS	OAA OPEN SEC RETRACT RETURN V	GSAK7275E	OFF							
541-00		K	CMD	ARMS	OAA RESET PRI EXTEND PILOT V	GSAK7160E	OFF							
541-01		K	CMD	ARMS	OAA RESET PRI EXTEND PILOT V	GSAK7165E	OFF							

SEQ	TIME CD CLOCK	SI T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS F D
541-02		K	CMD	ARMS	OAA RESET SEC EXTEND PILOT V	GSAK7180E	OFF						
541-03		K	CMD	ARMS	OAA RESET SEC EXTEND PILOT V	GSAK7185E	OFF						
542-00		K	CMD	ARMS	OAA CLOSE PRI RETRACT SUPPLY V	GSAK7200E	ON						
542-01		K	CMD	ARMS	OAA CLOSE PRI RETRACT SUPPLY V	GSAK7205E	ON						
542-02		K	CMD	ARMS	OAA CLOSE PRI RETRACT RETURN V	GSAK7220E	ON						
542-03		K	CMD	ARMS	OAA CLOSE PRI RETRACT RETURN V	GSAK7225E	ON						
543-00		K	CMD	ARMS	OAA CLOSE SEC RETRACT SUPPLY V	GSAK7240E	ON						
543-01		K	CMD	ARMS	OAA CLOSE SEC RETRACT SUPPLY V	GSAK7245E	ON						
543-02		K	CMD	ARMS	OAA CLOSE SEC RETRACT RETURN V	GSAK7260E	ON						
543-03		K	CMD	ARMS	OAA CLOSE SEC RETRACT RETURN V	GSAK7265E	ON						
544-00		K	CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7510E	ON						
544-01		K	CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7515E	ON						
545-00		K	CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7100E	ON						
545-01		K	CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7105E	ON						
546-00		K	CMD	ARMS	OAA LOCK PRI EXTEND LOCK V	GSAK7130E	OFF						
546-01		K	CMD	ARMS	OAA LOCK PRI EXTEND LOCK V	GSAK7135E	OFF						
546-02		K	CMD	ARMS	OAA LOCK SEC EXTEND LOCK V	GSAK7150E	OFF						
546-03		K	CMD	ARMS	OAA LOCK SEC EXTEND LOCK V	GSAK7155E	OFF						
547-00		K	CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7120E	ON						
547-01		K	CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7125E	ON						
547-02		K	CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7140E	ON						
547-03		K	CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7145E	ON						
548-00		K	CMD	ARMS	OAA OPEN PRI EXTEND PILOT V	GSAK7170E	ON						
548-01		K	CMD	ARMS	OAA OPEN PRI EXTEND PILOT V	GSAK7175E	ON						
548-02		K	CMD	ARMS	OAA OPEN SEC EXTEND PILOT V	GSAK7190E	ON						
548-03		K	CMD	ARMS	OAA OPEN SEC EXTEND PILOT V	GSAK7195E	ON						
549-00		K	CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7080E	ON						
549-01		K	CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7085E	ON						
549-02		K	CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7510E	OFF						

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
549-03		K	CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7515E	OFF						
					$ GLS EVENT COMPLETE LESS THAN 445 $								
					$ EMERGENCY EXTEND CREW CABIN ACCESS ARM $								
550-00		V	CMD	ARMS	A REMOTE POWER CONTROL	XEGKVP01E	ON						
550-01		V	CMD	ARMS	B REMOTE POWER CONTROL	XEGKVP11E	ON						
550-02		V	CMD	ARMS	B DR LAUNCH POS RETR	XEGKVB11E	OFF						
550-03		V	CMD	ARMS	A DR LAUNCH POS RETR	XEGKVC11E	OFF						
550-04		V	CMD	ARMS	B DR LAUNCH POS RETR ENBLE	XEGKVB01E	OFF						
550-05		V	CMD	ARMS	A DR LAUNCH POS RETR ENBLE	XEGKVC01E	OFF						
550-06		V	CMD	ARMS	B EMERGENCY EXTEND ENABLE CMD	XEGKVB21E	ON						
550-07		V	CMD	ARMS	A EMERGENCY EXTEND ENABLE CMD	XEGKVC21E	ON						
550-08		V	VFY	ARMS	B EMERGENCY EXTEND ENABLE IND	XEGXVB23E	ON			1 OF 2			
550-09		V	VFY	ARMS	A EMERGENCY EXTEND ENABLE IND	XEGXVC23E	ON			DISPLAY			
550-10		V	CMD	ARMS	B EMERGENCY EXTEND CMD	XEGKVB31E	ON						
550-11		V	CMD	ARMS	A EMERGENCY EXTEND CMD	XEGKVC31E	ON						
551-00			VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	ON			GTO ST379			
					$NOTE: ME PHASE IN EFFECT VALUES AND CORRESPONDING								
					STATUS FOR DISPLAY AS FOLLOWS:								
					B010 = START PREP								
					B011 = START								
					B100 = MAINSTAGE								
					B101 = SHUTDOWN								
					B110 = POST-SHUTDOWN								
					ME STATUS WILL BE DISPLAYED AND SAFING WILL NOT PROGRESS								
					INTO MPS/SSME OPERATIONS UNTIL ALL ME'S CAN BE VERIFIED TO								
					BE IN POST-SHUTDOWN STANDBY OR PURGE SEQUENCE 3. MANUAL								
					CAPABILITY WILL BE AVAILABLE TO FORCE THE START OF MPS/SSME								
					SAFING OPERATIONS OR TO BYPASS THESE OPERATIONS AND LEAVE								
					SAFING TO THE RESPONSIBLE SYSTEM ENGINEERS.$								
					$ COMMAND PURGE SEQUENCE 3 ON ANY SSME THAT DID NOT START $								
552-00			VFY	SSME	ME-1 PHASE IN EFFECT	E41J1512B1	B010			GTO ST353			
552-01			VFY	SSME	ME-1 OPERATING MODE	E41J1513B1	B011			GTO ST351			
					GTO ST352								
552-02	ST351		ISSU	SSME	ME-1 RESUME CMD	E41K1202BL	ON						

SEQ	TIME CD CLOCK	I/E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE
552-03		S	ISSU	SSME	ME-1 LIMIT CONTROL ENABLE CMD	E41K1211BL	ON					
552-04			ISSU	SSME	ME-1 RESUME CMD	E41K1202BL	ON					
552-05			ISSU	SSME	ME-1 PURGE SEQUENCE 3 CMD	E41K1215BL	ON					
552-06	ST352	T	CMD	INTG	ENABLE ME-1 SAFING		1					
553-00	ST353		VFY	SSME	ME-2 PHASE IN EFFECT	E41J2512B1	B010			GTO ST356		
553-01			VFY	SSME	ME-2 OPERATING MODE	E41J2513B1	B011			GTO ST354		
					GTO ST355							
553-02	ST354		ISSU	SSME	ME-2 RESUME CMD	E41K2202BL	ON					
553-03			ISSU	SSME	ME-2 LIMIT CONTROL ENABLE CMD	E41K2211BL	ON					
553-04			ISSU	SSME	ME-2 RESUME CMD	E41K2202BL	ON					
553-05			ISSU	SSME	ME-2 PURGE SEQUENCE 3 CMD	E41K2215BL	ON					
553-06	ST355		CMD	INTG	ENABLE ME-2 SAFING		1					
554-00	ST356		VFY	SSME	ME-3 PHASE IN EFFECT	E41J3512B1	B010			GTO ST359		
554-01			VFY	SSME	ME-3 OPERATING MODE	E41J3513B1	B011			GTO ST357		
					GTO ST358							
554-02	ST357		ISSU	SSME	ME-3 RESUME CMD	E41K3202BL	ON					
554-03			ISSU	SSME	ME-3 LIMIT CONTROL ENABLE CMD	E41K3211BL	ON					
554-04			ISSU	SSME	ME-3 RESUME CMD	E41K3202BL	ON					
554-05			ISSU	SSME	ME-3 PURGE SEQUENCE 3 CMD	E41K3215BL	ON					
554-06	ST358		CMD	INTG	ENABLE ME-3 SAFING		1					
					$ VERIFY SSME STATUS $							
555-00	ST359		VFY	INTG	ENABLE ME-1 SAFING		1			GTO ST360		
555-01			VFY	SSME	ME-1 OPERATING MODE	E41J1513B1	B011			GTO ST361		
555-02			CMD	INTG	ENABLE ME-1 SAFING		2					
					GTO 361							
555-03	ST360		VFY	SSME	ME-1 PHASE IN EFFECT	E41J1512B1	B110			GTO ST361		
555-04			CMD	INTG	ENABLE ME-1 SAFING		3					
556-00	ST361		VFY	INTG	ENABLE ME-2 SAFING		1			GTO ST362		
556-01			VFY	SSME	ME-2 OPERATING MODE	E41J2513B1	B011			GTO ST363		
556-02			CMD	INTG	ENABLE ME-2 SAFING		2					
					GTO ST363							
556-03	ST362		VFY	SSME	ME-2 PHASE IN EFFECT	E41J2512B1	B110			GTO ST363		

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
556-04		CMD	INTG		ENABLE ME-2 SAFING		3						
557-00	ST363	VFY	INTG		ENABLE ME-3 SAFING		1			GTO ST364			
557-01		VFY	SSME		ME-3 OPERATING MODE	E41J3513B1	B011			GTO ST365			
557-02		CMD	INTG		ENABLE ME-3 SAFING GTO ST365		2						
557-03	ST364	VFY	SSME		ME-3 PHASE IN EFFECT	E41J3512B1	B110			GTO ST365			
557-04		CMD	INTG		ENABLE ME-3 SAFING		3						
557-05	ST365	VFY	INTG		ENABLE ME-1 SAFING		2 / 3			GTO ST359			
557-06		VFY	INTG		ENABLE ME-2 SAFING		2 / 3			GTO ST359			
557-07		VFY	INTG		ENABLE ME-3 SAFING		2 / 3			GTO ST359			
					$ NOTE: FAILURE OF THE ABOVE 3 VFY'S WILL CAUSE SAFING TO REPEAT THE ENGINE STATUS VERIFICATIONS UNTIL ALL ARE SATISFIED OR UNTIL OPERATOR INPUT IS MADE TO CONTINUE INTO MPS/SSME SAFING OR TO BYPASS MPS/SSME SAFING. IF BYPASS IS SELECTED, THEN SAFING WILL BRANCH TO ST379. $								
					$ DELAY 3 SECONDS $								
560-00	ST370	VFY	MPS		ME-1 LO2 PREVLV CLOSE IND	V41X1135E1	OFF			GTO ST371			
560-01		CMD	MPS		E-1 LO2 PREVLV OPEN CMD A	V41K1136XL	ON						
560-02		CMD	MPS		E-1 LO2 PREVLV OPEN CMD B	V41K1137XL	ON						
560-03		CMD	MPS		E-1 LO2 PREVLV OPEN CMD C	V41K1138XL	ON						
560-04		CMD	MPS		E-1 LO2 PREVLV OPEN CMD D	V41K1143XL	ON						
					$ DELAY 3 SEC $								
560-05		CMD	MPS		E-1 LO2 PREVLV CLOSED CMD A	V41K1139XL	ON						
560-06		CMD	MPS		E-1 LO2 PREVLV CLOSED CMD B	V41K1140XL	ON						
560-07		CMD	MPS		E-1 LO2 PREVLV CLOSED CMD C	V41K1141XL	ON						
560-08		CMD	MPS		E-1 LO2 PREVLV CLOSED CMD D	V41K1142XL	ON						
560-09		CMD	MPS		E-1 LO2 PREVLV OPEN CMD A	V41K1136XL	OFF						
560-10		CMD	MPS		E-1 LO2 PREVLV OPEN CMD B	V41K1137XL	OFF						
560-11		CMD	MPS		E-1 LO2 PREVLV OPEN CMD C	V41K1138XL	OFF						
560-12		CMD	MPS		E-1 LO2 PREVLV OPEN CMD D	V41K1143XL	OFF						
560-13					$ DELETED $								
560-14					$ DELETED $								
560-15					$ DELETED $								
560-16					$ DELETED $								
561-00	ST371	VFY	MPS		E-1 LH2 PREVLV CLOSED IND	V41X1105E1	OFF			GTO ST372			

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SSFD
561-01			CMD	MPS	E-1 LH2 PREVLV OPEN CMD A	V41K1119XL	ON						
561-02			CMD	MPS	E-1 LH2 PREVLV OPEN CMD B	V41K1120XL	ON						
561-03			CMD	MPS	E-1 LH2 PREVLV OPEN CMD C	V41K1121XL	ON						
					$ DELAY 3 SEC $								
561-04			CMD	MPS	E-1 LH2 PREVLV CLOSE CMD A	V41K1122XL	ON						
561-05			CMD	MPS	E-1 LH2 PREVLV CLOSE CMD B	V41K1123XL	ON						
561-06			CMD	MPS	E-1 LH2 PREVLV CLOSE CMD C	V41K1124XL	ON						
561-07			CMD	MPS	E-1 LH2 PREVLV OPEN CMD A	V41K1119XL	OFF						
561-08			CMD	MPS	E-1 LH2 PREVLV OPEN CMD B	V41K1120XL	OFF						
561-09			CMD	MPS	E-1 LH2 PREVLV OPEN CMD C	V41K1121XL	OFF						
561-10					$ DELETED $								
561-11					$ DELETED $								
561-12					$ DELETED $								
561-13	ST372		CVFY	SSME	MPS ENG NO. 1 LH2 INLET PRESS	V41P1100C1	NOLO	90	PSIA	CPER GOO2			
561-14			VFY	MPS	ME-2 LO2 PREVLV CLOSE IND	V41X1235E1	OFF			GTO ST373			
561-15			CMD	MPS	E-2 LO2 PREVLV OPEN CMD A	V41K1236XL	ON						
561-16			CMD	MPS	E-2 LO2 PREVLV OPEN CMD B	V41K1237XL	ON						
561-17			CMD	MPS	E-2 LO2 PREVLV OPEN CMD C	V41K1238XL	ON						
561-18			CMD	MPS	E-2 LO2 PREVLV OPEN CMD D	V41K1243XL	ON						
					$ DELAY 3 SEC $								
561-19			CMD	MPS	E-2 LO2 PREVLV CLOSE CMD A	V41K1239XL	ON						
561-20			CMD	MPS	E-2 LO2 PREVLV CLOSE CMD B	V41K1240XL	ON						
561-21			CMD	MPS	E-2 LO2 PREVLV CLOSE CMD C	V41K1241XL	ON						
561-22			CMD	MPS	E-2 LO2 PREVLV CLOSE CMD D	V41K1242XL	ON						
561-23			CMD	MPS	E-2 LO2 PREVLV OPEN CMD A	V41K1236XL	OFF						
561-24			CMD	MPS	E-2 LO2 PREVLV OPEN CMD B	V41K1237XL	OFF						
561-25			CMD	MPS	E-2 LO2 PREVLV OPEN CMD C	V41K1238XL	OFF						
561-26			CMD	MPS	E-2 LO2 PREVLV OPEN CMD D	V41K1243XL	OFF						
561-27					$ DELETED $								
561-28					$ DELETED $								
561-29					$ DELETED $								
561-30					$ DELETED $								
562-00	ST373		VFY	MPS	ME-2 LH2 PREVLV CLOSE IND	V41X1205E1	OFF			GTO ST374			
562-01			CMD	MPS	E-2 LH2 PREVLV OPEN CMD A	V41K1219XL	ON						
562-03			CMD	MPS	E-2 LH2 PREVLV OPEN CMD B	V41K1220XL	ON						
562-04			CMD	MPS	E-2 LH2 PREVLV OPEN CMD C	V41K1221XL	ON						
					$ DELAY 3 SEC $								
562-05			CMD	MPS	E-2 LH2 PREVLV CLOSE CMD A	V41K1222XL	ON						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SS FD
562-06			CMD	MPS	E-2 LH2 PREVLV CLOSE CMD B	V41K1223XL	ON						
562-07			CMD	MPS	E-2 LH2 PREVLV CLOSE CMD C	V41K1224XL	ON						
562-08			CMD	MPS	E-2 LH2 PREVLV OPEN CMD A	V41K1219XL	OFF						
562-09			CMD	MPS	E-2 LH2 PREVLV OPEN CMD B	V41K1220XL	OFF						
562-10			CMD	MPS	E-2 LH2 PREVLV OPEN CMD C	V41K1221XL	OFF						
562-11					$ DELETED $								
562-12					$ DELETED $								
562-13					$ DELETED $								
562-14	ST374		CVFY	SSME	MPS ENG NO. 2 LH2 INLET PRESS	V41P1200C1	NOLO	90	PSIA	CPER G003			
562-15			OMSG	INTG	ENG 2 SAFING ENABLED								
563-00			VFY	MPS	ME-3 LO2 PREVLV CLOSE IND	V41X1335E1	OFF			GTO ST375			
563-01			CMD	MPS	E-3 LO2 PREVLV OPEN CMD A	V41K1336XL	ON						
563-02			CMD	MPS	E-3 LO2 PREVLV OPEN CMD B	V41K1337XL	ON						
563-03			CMD	MPS	E-3 LO2 PREVLV OPEN CMD C	V41K1338XL	ON						
563-04			CMD	MPS	E-3 LO2 PREVLV OPEN CMD D	V41K1343XL	ON						
					$ DELAY 3 SEC $								
563-05			CMD	MPS	E-3 LO2 PREVLV CLOSE CMD A	V41K1339XL	ON						
563-06			CMD	MPS	E-3 LO2 PREVLV CLOSE CMD B	V41K1340XL	ON						
563-07			CMD	MPS	E-3 LO2 PREVLV CLOSE CMD C	V41K1341XL	ON						
563-08			CMD	MPS	E-3 LO2 PREVLV CLOSE CMD D	V41K1342XL	ON						
563-09			CMD	MPS	E-3 LO2 PREVLV OPEN CMD A	V41K1336XL	OFF						
563-10			CMD	MPS	E-3 LO2 PREVLV OPEN CMD B	V41K1337XL	OFF						
563-11			CMD	MPS	E-3 LO2 PREVLV OPEN CMD C	V41K1338XL	OFF						
563-12			CMD	MPS	E-3 LO2 PREVLV OPEN CMD D	V41K1343XL	OFF						
563-13					$ DELETED $								
563-14					$ DELETED $								
563-15					$ DELETED $								
563-16					$ DELETED $								
564-00	ST375		VFY	MPS	ME-3 LH2 PREVLV CLOSE IND	V41X1305E1	OFF			GTO ST376			
564-01			CMD	MPS	E-3 LH2 PREVLV OPEN CMD A	V41K1319XL	ON						
564-02			CMD	MPS	E-3 LH2 PREVLV OPEN CMD B	V41K1320XL	ON						
564-03			CMD	MPS	E-3 LH2 PREVLV OPEN CMD C	V41K1321XL	ON						
					$ DELAY 3 SEC $								
564-04			CMD	MPS	E-3 LH2 PREVLV CLOSE CMD A	V41K1322XL	ON						
564-05			CMD	MPS	E-3 LH2 PREVLV CLOSE CMD B	V41K1323XL	ON						
564-06			CMD	MPS	E-3 LH2 PREVLV CLOSE CMD C	V41K1324XL	ON						
564-07			CMD	MPS	E-3 LH2 PREVLV OPEN CMD A	V41K1319XL	OFF						
564-08			CMD	MPS	E-3 LH2 PREVLV OPEN CMD B	V41K1320XL	OFF						

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
564-09			CMD	MPS	E-3 LH2 PREVLV OPEN CMD C	V41K1321XL	OFF						
564-10					$ DELETED $								
564-11					$ DELETED $								
564-12					$ DELETED $								
564-13	ST376		CVFY	SSME	MPS ENG NO. 3 LH2 INLET PRESS	V41P13000C1	NOLO	90	PSIA			CPER G004	
564-14			OMSG	INTG	ENG 3 SAFING ENABLED								
					$ ACTIVATE ENGINE GN2 PURGE GSE $								
565-00			CMD	SSME	MPENG GN2 PRG VNT OPN CMD	GGNK1050E	OFF						
565-01			CMD	SSME	MPENG GN2 PRG VNT OPN CMD	GGNK1140E	OFF						
565-02			CMD	SSME	MPENG GN2 PRG VNT OPN CMD OVR	GGNK1057E	ON						
565-03			CMD	SSME	MPENG GN2 PRG VNT OPN CMD OVR(R)	GGNK1147E	ON						
565-04			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD	GGNK1030E	OFF						
565-05			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD(R)	GGNK1130E	OFF						
565-06			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD OV	GGNK1037E	ON						
565-07			CMD	SSME	MPENG GN2 PRG CNT CLD CMD OVR(R)	GGNK1137E	ON						
					$ VFY OVBV OPEN ELSE CLOSE POGO VLVS $								
566-00			VFY	MPS	LOX OVBD BLD VLV OP IND	V41X1587E1	ON			GTO ST377			
566-01			VFY	MPS	LOX OVBD BLD VLV CLA IND	V41X1580X1	OFF			1 OF 2			
566-02			VFY	MPS	LOX OVBD BLD VLV CLB IND	V41X1581X1	OFF			GTO ST377			
					$ OVBD BLD VLV OPEN $								
					GTO ST378								
					$ LOX OVBV FAILED TO OPEN $								
567-00	ST377		CMD	MPS	MPS LO2 ACC RECIRC VLV 1 CL CMDA	V41K1815XL	ON						
567-01			CMD	MPS	MPS LO2 ACC RECIRC VLV 1 CL CMDB	V41K1816XL	ON						
567-02			CMD	MPS	MPS LO2 ACC RECIRC VLV 2 CL CMDA	V41K1825XL	ON						
567-03			CMD	MPS	MPS LO2 ACC RECIRC VLV 2 CL CMDB	V41K1826XL	ON						
567-04			OMSG	INTG	LO2 OVBV FAILED TO OPEN								
567-05			OMSG	INTG	LO2 ACCUMULATOR RECIRC VLVS CMD								
					$ CLOSE LH2 ET/ORB 4 INCH DISCONNECT $								
567-06	ST378		VFY	MPS	ET/ORB 4 IN DISCON PD 3 CLOSED IND	V41X1420E1	OFF			GTO ST379			
567-07		K	CMD	MPS	PD3 CTL OVERRIDE	NLHK0040X	ON						
567-08		K	CMD	MPS	GCH60 SHUTOFF	NLHK0062X	ON						
567-09		K	CMD	MPS	PV13 CTL OVERRIDE	NLHK0038X	ON						
567-10		K	CMD	MPS	GCH58 SHUTOFF	NLHK0060X	ON						
567-11		V	CMD	MPS	PD3 CTL OVERRIDE	NLHIX115E	ON						
567-12		V	CMD	MPS	GCH58V SHUTOFF	NLHK0062X	ON						

SEQ	TIME / CLOCK	SI / ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL / OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC / PAGE	SS / FD
567-13		V	CMD	MPS	PV13 CTL OVERRIDE	NLHIX118E	ON						
567-14		V	CMD	MPS	GCH56V SHUTOFF	NLHK0060X	ON						
567-15			CMD	MPS	ET/ORB 4 IN DISCON PD3 CLS CMD	V41K1422XL	ON						
567-16			CMD	MPS	ET/ORB 4 IN DISCON PD3 OPN CMD	V41K1421XL	OFF						
					$ SO13 LO2/LH2 GO FOR SAFING/VENT DOOR MANAGEMENT/APU SHUTDOWN $								
568-00	ST379		LABL	INTG		SO13							
568-01			CMD	LO2	GO FOR SAFING	NO13INTGR	ON						
568-02			CMD	LH2	GO FOR SAFING	NO13INTGR	ON						
568-03			CMD	MPS	EXPOSED PRI FIRE DETS OFF CMD	GLHK7490E	OFF						
568-04			CMD	MPS	EXPOSED SEC FIRE DETS OFF CMD	GLHK7500E	OFF						
					$ TURN-ON CENTAUR LO2 VENT HEATERS $								
568-05		K	CMD	CMPS	CCE GOX VENT HTR CNTL ENABLE - PRI	GCNK4011E	ON						
568-06		K	CMD	CMPS	CCE GOX VENT HTR DC MOD ON - PRI	GCNK6031E	ON						
568-07		K	CMD	CMPS	CCE GOX VENT HTR DC MOD OFF - PRI	GCNK603CE	OFF						
568-08		K	CMD	CMPS	CCE GOX VENT HTR CNTL ENABLE - SEC	GCNK4511E	ON						
568-09		K	CMD	CMPS	CCE GOX VENT HTR DC MOD ON - SEC	GCNK6531E	ON						
568-10		K	CMD	CMPS	CCE GOX VENT HTR DC MOD OFF - SEC	GCNK6530E	OFF						
569-00	ST370		VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	OFF			GTO ST380			
					$ MAIN ENGINE PRE-START STATUS CHECKS VERIFY PURGE SEQUENCE 3 $								
570-00			VFY	SSME	ME-1 OPERATING MODE	E41J1513B1	B011			DISPLAY	GTO ST390		
570-01			VFY	SSME	ME-2 OPERATING MODE	E41J2513B1	B011			DISPLAY	GTO ST390		
570-02			VFY	SSME	ME-3 OPERATING MODE	E41J3513B1	B011			DISPLAY	GTO ST390		
571-00	ST380		OMSG	INTG	*** GLS GO FOR APU SHUTDOWN ***								
571-01	ST390		LABL	INTG									
					$ DELAY 5 SEC $								
571-02			VFY	LH2	FD 35 ALARM ON IND	GLHX7343E	OFF			DISPLAY			
571-03			VFY	MPS	ORB AFT LFT VENT FD 36 ALARM ON	GLHX7453E	OFF			DISPLAY			
571-04			VFY	MPS	ORB AFT LFT VENT FD 37 ALARM ON	GLHX7463E	OFF			DISPLAY			
571-05			VFY	MPS	SSME C/O FD 38 ALARM ON	GLHX7473E	OFF			DISPLAY			
571-06			VFY	MPS	SSME C/O FD 39 ALARM ON	GLHX7483E	OFF			DISPLAY			
571-07			VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	ON			GTO ST395			
571-08			CVFY	MPS	SSME C/O FD 38 ALARM ON	GLHX7473E	OFF			CPER G014			
571-09			CVFY	MPS	SSME C/O FD 39 ALARM ON	GLHX7483E	OFF			CPER G014			
571-10	ST395		VFY	INTG	T-35 FLG SET - START VENT DOOR OPS		ON			GTO ST420			
572-00	ST400		VFY	PVD	L AFT VENTS 8/9 OPEN 1	V59X3855X1	ON			3 OF 4			

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
572-01		VFY	PVD	L	AFT VENTS 8/9 OPEN 2	V59X3865X1	ON			DELAY	1SEC		
572-02		VFY	PVD	R	AFT VENTS 8/9 OPEN 1	V59X4855X1	ON			GTO	ST400		
572-03		VFY	PVD	R	AFT VENTS 8/9 OPEN 2	V59X4865X1	ON			MAX OF 30 RETRIES CONTINUE			
					$ CLEANUP OF RSLS MINUS TIME VENT DOOR CMDS $								
573-00		CMD	PVD	L	PB/W VENTS 4/7 OPEN CMD 1A	V59K3350XL	OFF						
573-01		CMD	PVD	L	PB/W VENTS 4/7 OPEN CMD 1B	V59K3351XL	OFF						
573-02		CMD	PVD	L	PB/W VENTS 4/7 OPEN CMD 2A	V59K3360XL	OFF						
573-03		CMD	PVD	L	PB/W VENTS 4/7 OPEN CMD 2B	V59K3361XL	OFF						
573-04		CMD	PVD	R	PB/W VENTS 4/7 OPEN CMD 1A	V59K4350XL	OFF						
573-05		CMD	PVD	R	PB/W VENTS 4/7 OPEN CMD 1B	V59K4351XL	OFF						
573-06		CMD	PVD	R	PB/W VENTS 4/7 OPEN CMD 2A	V59K4360XL	OFF						
573-07		CMD	PVD	R	PB/W VENTS 4/7 OPEN CMD 2B	V59K4361XL	OFF						
574-00		CMD	PVD	L	PB VENT 3 OPEN CMD 1A	V59K3250XL	OFF						
574-01		CMD	PVD	L	PB VENT 3 OPEN CMD 1B	V59K3251XL	OFF						
574-02		CMD	PVD	L	PB VENT 3 OPEN CMD 2A	V59K3260XL	OFF						
574-03		CMD	PVD	L	PB VENT 3 OPEN CMD 2B	V59K3261XL	OFF						
574-04		CMD	PVD	R	PB VENT 3 OPEN CMD 1A	V59K4250XL	OFF						
574-05		CMD	PVD	R	PB VENT 3 OPEN CMD 1B	V59K4251XL	OFF						
574-06		CMD	PVD	R	PB VENT 3 OPEN CMD 2A	V59K4260XL	OFF						
574-07		CMD	PVD	R	PB VENT 3 OPEN CMD 2B	V59K4261XL	OFF						
575-00		CMD	PVD	L	PB VENT 6 OPEN CMD 1A	V59K3550XL	OFF						PL
575-01		CMD	PVD	L	PB VENT 6 OPEN CMD 1B	V59K3551XL	OFF						PL
575-02		CMD	PVD	L	PB VENT 6 OPEN CMD 2A	V59K3560XL	OFF						PL
575-03		CMD	PVD	L	PB VENT 6 OPEN CMD 2B	V59K3561XL	OFF						PL
575-04		CMD	PVD	R	PB VENT 6 OPEN CMD 1A	V59K4550XL	OFF						PL
575-05		CMD	PVD	R	PB VENT 6 OPEN CMD 1B	V59K4551XL	OFF						PL
575-06		CMD	PVD	R	PB VENT 6 OPEN CMD 2A	V59K4560XL	OFF						PL
575-07		CMD	PVD	R	PB VENT 6 OPEN CMD 2B	V59K4561XL	OFF						PL
576-00		CMD	PVD	L	PB VENT 5 OPEN CMD 1A	V59K3450XL	OFF						
576-01		CMD	PVD	L	PB VENT 5 OPEN CMD 1B	V59K3451XL	OFF						
576-02		CMD	PVD	L	PB VENT 5 OPEN CMD 2A	V59K3460XL	OFF						
576-03		CMD	PVD	L	PB VENT 5 OPEN CMD 2B	V59K3461XL	OFF						
576-04		CMD	PVD	R	PB VENT 5 OPEN CMD 1A	V59K4450XL	OFF						
576-05		CMD	PVD	R	PB VENT 5 OPEN CMD 1B	V59K4451XL	OFF						
576-06		CMD	PVD	R	PB VENT 5 OPEN CMD 2A	V59K4460XL	OFF						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	FD
576-07			CMD	PVD	R PB VENT 5 OPEN CMD 2B	V59K4461XL	OFF							
577-00			CMD	PVD	L FWD VENTS 1/2 OPEN CMD 1A	V59K3050XL	OFF							
577-01			CMD	PVD	L FWD VENTS 1/2 OPEN CMD 1B	V59K3051XL	OFF							
577-02			CMD	PVD	L FWD VENTS 1/2 OPEN CMD 2A	V59K3060XL	OFF							
577-03			CMD	PVD	L FWD VENTS 1/2 OPEN CMD 2B	V59K3061XL	OFF							
577-04			CMD	PVD	R FWD VENTS 1/2 OPEN CMD 1A	V59K4050XL	OFF							
577-05			CMD	PVD	R FWD VENTS 1/2 OPEN CMD 1B	V59K4051XL	OFF							
577-06			CMD	PVD	R FWD VENTS 1/2 OPEN CMD 2A	V59K4060XL	OFF							
577-07			CMD	PVD	R FWD VENTS 1/2 OPEN CMD 2B	V59K4061XL	OFF							
578-00			CMD	PVD	L AFT VENTS 8/9 OPEN CMD 1A	V59K3850XL	OFF							
578-01			CMD	PVD	L AFT VENTS 8/9 OPEN CMD 1B	V59K3851XL	OFF							
578-02			CMD	PVD	L AFT VENTS 8/9 OPEN CMD 2A	V59K3860XL	OFF							
578-03			CMD	PVD	L AFT VENTS 8/9 OPEN CMD 2B	V59K3861XL	OFF							
578-04			CMD	PVD	R AFT VENTS 8/9 OPEN CMD 1A	V59K4850XL	OFF							
578-05			CMD	PVD	R AFT VENTS 8/9 OPEN CMD 1B	V59K4851XL	OFF							
578-06			CMD	PVD	R AFT VENTS 8/9 OPEN CMD 2A	V59K4860XL	OFF							
578-07			CMD	PVD	R AFT VENTS 8/9 OPEN CMD 2B	V59K4861XL	OFF							
					$REMOVAL OF GCU#1 AND GCU#2 COOLANT COMMANDS$									
578-08			CMD	ECLS	GCU1 SUPPLY COOLANT CMD	GFRK1140E	OFF							
578-09			CMD	ECLS	GCU2 SUPPLY COOLANT CMD	GFRK2140E	OFF							
579-00			VFY	PVD	L PB/W VENT 4/7 CLOSED 1	V59X3305X1	OFF			1 OF 4				
579-01			VFY	PVD	L PB/W VENT 4/7 CLOSED 2	V59X3315X1	OFF			1 OF 4				
579-02			VFY	PVD	R PB/W VENT 4/7 CLOSED 1	V59X4305X1	OFF			1 OF 4				
579-03			VFY	PVD	R PB/W VENT 4/7 CLOSED 2	V59X4315X1	OFF			SKIP SEQ				
					$ POST IGN VENTS 4/7 $									
580-00			CMD	PVD	L PB/W VENTS 4/7 CLOSE CMD 1A	V59K3300XL	ON							
580-01			CMD	PVD	L PB/W VENTS 4/7 CLOSE CMD 1B	V59K3301XL	ON							
580-02			CMD	PVD	L PB/W VENTS 4/7 CLOSE CMD 2A	V59K3310XL	ON							
580-03			CMD	PVD	L PB/W VENTS 4/7 CLOSE CMD 2B	V59K3311XL	ON							
580-04			CMD	PVD	R PB/W VENTS 4/7 CLOSE CMD 1A	V59K4300XL	ON							
580-05			CMD	PVD	R PB/W VENTS 4/7 CLOSE CMD 1B	V59K4301XL	ON							
580-06			CMD	PVD	R PB/W VENTS 4/7 CLOSE CMD 2A	V59K4310XL	ON							
580-07			CMD	PVD	R PB/W VENTS 4/7 CLOSE CMD 2B	V59K4311XL	ON							
					$ DELAY 2 SECONDS $									
581-00			VFY	PVD	L PB VENT 3 CLOSED 1	V59X3205X1	OFF			1 OF 4				

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
581-01			VFY	PVD	L PB VENT 3 CLOSED 2	V59X3215X1	OFF			1 OF 4			
581-02			VFY	PVD	R PB VENT 3 CLOSED 1	V59X4205X1	OFF			1 OF 4			
581-03			VFY	PVD	R PB VENT 3 CLOSED 2	V59X4215X1	OFF			SKIP SEQ			
					$ POST IGN VENT 3 $								
582-00			CMD	PVD	L PB VENTS 3 CLOSE CMD 1A	V59K3200XL	ON						
582-01			CMD	PVD	L PB VENTS 3 CLOSE CMD 1B	V59K3201XL	ON						
582-02			CMD	PVD	L PB VENTS 3 CLOSE CMD 2A	V59K3210XL	ON						
582-03			CMD	PVD	L PB VENTS 3 CLOSE CMD 2B	V59K3211XL	ON						
582-04			CMD	PVD	R PB VENTS 3 CLOSE CMD 1A	V59K4200XL	ON						
582-05			CMD	PVD	R PB VENTS 3 CLOSE CMD 1B	V59K4201XL	ON						
582-06			CMD	PVD	R PB VENTS 3 CLOSE CMD 2A	V59K4210XL	ON						
582-07			CMD	PVD	R PB VENTS 3 CLOSE CMD 2B	V59K4211XL	ON						
					$ DELAY 2 SECONDS $								
					$ POST IGN VENT 6 POS. CHECK FOR CENTAUR $								
583-00		K	VFY	CPVD	L PB VENT 6 PURGE 2 IND 1	V59X3705X1	OFF			1 OF 4			PL
583-01		K	VFY	CPVD	L PB VENT 6 PURGE 2 IND 2	V59X3715X1	OFF			1 OF 4			PL
583-02		K	VFY	CPVD	R PB VENT 6 PURGE 2 IND 1	V59X4705X1	OFF			1 OF 4			PL
583-03		K	VFY	CPVD	R PB VENT 6 PURGE 2 IND 2	V59X4715X1	OFF			GTO ST410			PL
					$ POST IGN VENT 6 POSITIONING FOR CENTAUR $								
583-04		K	CMD	CPVD	PREREQUISITE CONTROL LOGIC	NECK9911X	OFF						
583-05		K	CMD	CPVD	L PB VENT 6 PURGE 2 CMD 1A	V59K3700XL	ON						PL
583-06		K	CMD	CPVD	L PB VENT 6 PURGE 2 CMD 1B	V59K3701XL	ON						PL
583-07		K	CMD	CPVD	L PB VENT 6 PURGE 2 CMD 2A	V59K3710XL	ON						PL
583-08		K	CMD	CPVD	L PB VENT 6 PURGE 2 CMD 2B	V59K3711XL	ON						PL
583-09		K	CMD	CPVD	R PB VENT 6 PURGE 2 CMD 1A	V59K4700XL	ON						PL
583-10		K	CMD	CPVD	R PB VENT 6 PURGE 2 CMD 1B	V59K4701XL	ON						PL
583-11		K	CMD	CPVD	R PB VENT 6 PURGE 2 CMD 2A	V59K4710XL	ON						PL
583-12		K	CMD	CPVD	R PB VENT 6 PURGE 2 CMD 2B	V59K4711XL	ON						PL
					$ DELAY 2 SECONDS - WITHIN CENTAUR LOOP $								
					GTO ST410								
					$ POST IGN VENT 6 $								
584-00			VFY	PVD	L PB VENT 6 CLOSED 1	V59X3505X1	OFF			1 OF 4			PL
584-01			VFY	PVD	L PB VENT 6 CLOSED 2	V59X3515X1	OFF			1 OF 4			PL
584-02			VFY	PVD	R PB VENT 6 CLOSED 1	V59X4505X1	OFF			1 OF 4			PL
584-03			VFY	PVD	R PB VENT 6 CLOSED 2	V59X4515X1	OFF			GTO ST 410			PL

SEQ	TIME CD CLOCK	I	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S/S/F/D
584-04			CMD	PVD	L PB VENT 6 CLOSE CMD 1A	V59K3500XL	ON						PL
584-05			CMD	PVD	L PB VENT 6 CLOSE CMD 1B	V59K3501XL	ON						PL
584-06			CMD	PVD	L PB VENT 6 CLOSE CMD 2A	V59K3510XL	ON						PL
584-07			CMD	PVD	L PB VENT 6 CLOSE CMD 2B	V59K3511XL	ON						PL
584-08			CMD	PVD	R PB VENT 6 CLOSE CMD 1A	V59K4500XL	ON						PL
584-09			CMD	PVD	R PB VENT 6 CLOSE CMD 1B	V59K4501XL	ON						PL
584-10			CMD	PVD	R PB VENT 6 CLOSE CMD 2A	V59K4510XL	ON						PL
584-11			CMD	PVD	R PB VENT 6 CLOSE CMD 2B	V59K4511XL	ON						PL
					$ DELAY 2 SECONDS $								
					$ POST IGN VENT 5 $								
585-00	ST 410		CMD	PVD	L PB VENT 5 CLOSE CMD 1A	V59K3400XL	ON						
585-01			CMD	PVD	L PB VENT 5 CLOSE CMD 1B	V59K3401XL	ON						
585-02			CMD	PVD	L PB VENT 5 CLOSE CMD 2A	V59K3410XL	ON						
585-03			CMD	PVD	L PB VENT 5 CLOSE CMD 2B	V59K3411XL	ON						
585-04			CMD	PVD	R PB VENT 5 CLOSE CMD 1A	V59K4400XL	ON						
585-05			CMD	PVD	R PB VENT 5 CLOSE CMD 1B	V59K4401XL	ON						
585-06			CMD	PVD	R PB VENT 5 CLOSE CMD 2A	V59K4410XL	ON						
585-07			CMD	PVD	R PB VENT 5 CLOSE CMD 2B	V59K4411XL	ON						
					$ DELAY 2 SECONDS $								
					$ POST IGN VENTS 1/2 $								
586-00			CMD	PVD	L FWD VENTS 1/2 PURGE CMD 1A	V59K3100XL	ON						
586-01			CMD	PVD	L FWD VENTS 1/2 PURGE CMD 1B	V59K3101XL	ON						
586-02			CMD	PVD	L FWD VENTS 1/2 PURGE CMD 2A	V59K3110XL	ON						
586-03			CMD	PVD	L FWD VENTS 1/2 PURGE CMD 2B	V59K3111XL	ON						
586-04			CMD	PVD	R FWD VENTS 1/2 PURGE CMD 1A	V59K4100XL	ON						
586-05			CMD	PVD	R FWD VENTS 1/2 PURGE CMD 1B	V59K4101XL	ON						
586-06			CMD	PVD	R FWD VENTS 1/2 PURGE CMD 2A	V59K4110XL	ON						
586-07			CMD	PVD	R FWD VENTS 1/2 PURGE CMD 2B	V59K4111XL	ON						
					$ DELAY 2 SECONDS $								
					$ POST IGN VENTS 8/9 $								
587-00			CMD	PVD	L AFT VENTS 8/9 PURGE CMD 1A	V59K3900XL	ON						
587-01			CMD	PVD	L AFT VENTS 8/9 PURGE CMD 1B	V59K3901XL	ON						
587-02			CMD	PVD	L AFT VENTS 8/9 PURGE CMD 2A	V59K3910XL	ON						
587-03			CMD	PVD	L AFT VENTS 8/9 PURGE CMD 2B	V59K3911XL	ON						
587-04			CMD	PVD	R AFT VENTS 8/9 PURGE CMD 1A	V59K4900XL	ON						
587-05			CMD	PVD	R AFT VENTS 8/9 PURGE CMD 1B	V59K4901XL	ON						

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
587-06			CMD	PVD	R AFT VENTS 8/9 PURGE CMD 2A	V59K4910XL	ON						
587-07			CMD	PVD	R AFT VENTS 8/9 PURGE CMD 2B	V59K4911XL	ON						
					$ DELAY 10 SECONDS $								
					$ S014 SAFING CLEAN-UP $								
588-00	ST420		LABL	INTG		S014							
589-00			CMD	EPDC	FWD LCA 1 FIRE 1 INHIBIT CMD	V76K6301NL	ON						
589-01			CMD	EPDC	FWD LCA 1 FIRE 2 INHIBIT CMD	V76K6302NL	ON						
589-02			CMD	EPDC	FWD LCA 2 FIRE 1 INHIBIT CMD	V76K6303NL	ON						
589-03			CMD	EPDC	FWD LCA 2 FIRE 2 INHIBIT CMD	V76K6304NL	ON						
589-04			CMD	EPDC	FWD LCA 3 FIRE 1 INHIBIT CMD	V76K6305NL	ON						
589-05			CMD	EPDC	FWD LCA 3 FIRE 2 INHIBIT CMD	V76K6306NL	ON						
					$ POWER DOWN SRB DFI $								
590-00			CMD	BINS	LH DFI SYS PWR OFF CMD	B78K5001XL	ON						
590-01			CMD	BINS	RH DFI SYS PWR OFF CMD	B78K6001XL	ON						
					$ DELAY 2 SEC $								
591-00			CMD	BINS	LH DFI SYS PWR OFF CMD	B78K5001XL	OFF						
591-01			CMD	BINS	RH DFI SYS PWR OFF CMD	B78K6001XL	OFF						
591-02			CMLT	BHYD	LH APU A GG HTR 1 ON CMD	B46K3022XL	OFF						
			CMLT	BHYD	LH APU A GG HTR 2 ON CMD	B46K3023XL	OFF						
591-03			CMLT	BHYD	LH APU B GG HTR 1 ON CMD	B46K3024XL	OFF						
			CMLT	BHYD	LH APU B GG HTR 2 ON CMD	B46K3025XL	OFF						
591-04			CMLT	BHYD	RH APU A GG HTR 1 ON CMD	B46K4022XL	OFF						
			CMLT	BHYD	RH APU A GG HTR 2 ON CMD	B46K4023XL	OFF						
591-05			CMLT	BHYD	RH APU B GG HTR 1 ON CMD	B46K4024XL	OFF						
			CMLT	BHYD	RH APU B GG HTR 2 ON CMD	B46K4025XL	OFF						
					$ VENTS 4/7 CLOSE CMD OFF $								
592-00			CMD	PVD	L PB/W VENTS 4/7 CLOSE CMD 1A	V59K3300XL	OFF						
592-01			CMD	PVD	L PB/W VENTS 4/7 CLOSE CMD 1B	V59K3301XL	OFF						
592-02			CMD	PVD	L PB/W VENTS 4/7 CLOSE CMD 2A	V59K3310XL	OFF						
592-03			CMD	PVD	L PB/W VENTS 4/7 CLOSE CMD 2B	V59K3311XL	OFF						
592-04			CMD	PVD	R PB/W VENTS 4/7 CLOSE CMD 1A	V59K4300XL	OFF						
592-05			CMD	PVD	R PB/W VENTS 4/7 CLOSE CMD 1B	V59K4301XL	OFF						
592-06			CMD	PVD	R PB/W VENTS 4/7 CLOSE CMD 2A	V59K4310XL	OFF						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
592-07			CMD	PVD	R PB/W VENTS 4/7 CLOSE CMD 2B	V59K4311XL	OFF								
					$ VENT 3 CLOSE CMD OFF $										
593-00			CMD	PVD	L PB VENTS 3 CLOSE CMD 1A	V59K3200XL	OFF								
593-01			CMD	PVD	L PB VENTS 3 CLOSE CMD 1B	V59K3201XL	OFF								
593-02			CMD	PVD	L PB VENTS 3 CLOSE CMD 2A	V59K3210XL	OFF								
593-03			CMD	PVD	L PB VENTS 3 CLOSE CMD 2B	V59K3211XL	OFF								
593-04			CMD	PVD	R PB VENTS 3 CLOSE CMD 1A	V59K4200XL	OFF								
593-05			CMD	PVD	R PB VENTS 3 CLOSE CMD 1B	V59K4201XL	OFF								
593-06			CMD	PVD	R PB VENTS 3 CLOSE CMD 2A	V59K4210XL	OFF								
593-07			CMD	PVD	R PB VENTS 3 CLOSE CMD 2B	V59K4211XL	OFF								
					$ VENT 6 PURGE 2 CMD OFF $										
594-00		K	CMD	CPVD	PREREQUISITE CONTROL LOGIC	NECK9911X	OFF								
594-01		K	CMD	CPVD	L PB VENT 6 PURGE 2 CMD 1A	V59K3700XL	OFF								PL
594-02		K	CMD	CPVD	L PB VENT 6 PURGE 2 CMD 1B	V59K3701XL	OFF								PL
594-03		K	CMD	CPVD	L PB VENT 6 PURGE 2 CMD 2A	V59K3710XL	OFF								PL
594-04		K	CMD	CPVD	L PB VENT 6 PURGE 2 CMD 2B	V59K3711XL	OFF								PL
594-05		K	CMD	CPVD	R PB VENT 6 PURGE 2 CMD 1A	V59K4700XL	OFF								PL
594-06		K	CMD	CPVD	R PB VENT 6 PURGE 2 CMD 1B	V59K4701XL	OFF								PL
594-07		K	CMD	CPVD	R PB VENT 6 PURGE 2 CMD 2A	V59K4710XL	OFF								PL
594-08		K	CMD	CPVD	R PB VENT 6 PURGE 2 CMD 2B GTO ST 426	V59K4711XL	OFF								PL
					$ VENT 6 CLOSE CMD OFF $										
594-09			CMD	PVD	L PB VENT 6 CLOSE CMD 1A	V59K3500XL	OFF								PL
594-10			CMD	PVD	L PB VENT 6 CLOSE CMD 1B	V59K3501XL	OFF								PL
594-11			CMD	PVD	L PB VENT 6 CLOSE CMD 2A	V59K3510XL	OFF								PL
594-12			CMD	PVD	L PB VENT 6 CLOSE CMD 2B	V59K3511XL	OFF								PL
594-13			CMD	PVD	R PB VENT 6 CLOSE CMD 1A	V59K4500XL	OFF								PL
594-14			CMD	PVD	R PB VENT 6 CLOSE CMD 1B	V59K4501XL	OFF								PL
594-15			CMD	PVD	R PB VENT 6 CLOSE CMD 2A	V59K4510XL	OFF								PL
594-16			CMD	PVD	R PB VENT 6 CLOSE CMD 2B	V59K4511XL	OFF								PL
					$ VENT 5 CLOSE CMD OFF $										
595-00	ST 426		CMD	PVD	L PB VENT 5 CLOSE CMD 1A	V59K3400XL	OFF								
595-01			CMD	PVD	L PB VENT 5 CLOSE CMD 1B	V59K3401XL	OFF								
595-02			CMD	PVD	L PB VENT 5 CLOSE CMD 2A	V59K3410XL	OFF								
595-03			CMD	PVD	L PB VENT 5 CLOSE CMD 2B	V59K3411XL	OFF								
595-04			CMD	PVD	R PB VENT 5 CLOSE CMD 1A	V59K4400XL	OFF								
595-05			CMD	PVD	R PB VENT 5 CLOSE CMD 1B	V59K4401XL	OFF								

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
595-06			CMD	PVD	R PB VENT 5 CLOSE CMD 2A	V59K4410XL	OFF						
595-07			CMD	PVD	R PB VENT 5 CLOSE CMD 2B	V59K4411XL	OFF						
					$ VENTS 1/2 PURGE CMD OFF $								
596-00			CMD	PVD	L FWD VENTS 1/2 PURGE CMD 1A	V59K3100XL	OFF						
596-01			CMD	PVD	L FWD VENTS 1/2 PURGE CMD 1B	V59K3101XL	OFF						
596-02			CMD	PVD	L FWD VENTS 1/2 PURGE CMD 2A	V59K3110XL	OFF						
596-03			CMD	PVD	L FWD VENTS 1/2 PURGE CMD 2B	V59K3111XL	OFF						
596-04			CMD	PVD	R FWD VENTS 1/2 PURGE CMD 1A	V59K4100XL	OFF						
596-05			CMD	PVD	R FWD VENTS 1/2 PURGE CMD 1B	V59K4101XL	OFF						
596-06			CMD	PVD	R FWD VENTS 1/2 PURGE CMD 2A	V59K4110XL	OFF						
596-07			CMD	PVD	R FWD VENTS 1/2 PURGE CMD 2B	V59K4111XL	OFF						
					$ VENTS 8/9 PURGE CMD OFF $								
597-00			CMD	PVD	L AFT VENTS 8/9 PURGE CMD 1A	V59K3900XL	OFF						
597-01			CMD	PVD	L AFT VENTS 8/9 PURGE CMD 1B	V59K3901XL	OFF						
597-02			CMD	PVD	L AFT VENTS 8/9 PURGE CMD 2A	V59K3910XL	OFF						
597-03			CMD	PVD	L AFT VENTS 8/9 PURGE CMD 2B	V59K3911XL	OFF						
597-04			CMD	PVD	R AFT VENTS 8/9 PURGE CMD 1A	V59K4900XL	OFF						
597-05			CMD	PVD	R AFT VENTS 8/9 PURGE CMD 1B	V59K4901XL	OFF						
597-06			CMD	PVD	R AFT VENTS 8/9 PURGE CMD 2A	V59K4910XL	OFF						
597-07			CMD	PVD	R AFT VENTS 8/9 PURGE CMD 2B	V59K4911XL	OFF						
					$ SS WATER SYSTEM SECURING $								
598-00		V	CMD	WATR	SSW PRI MAIN VALVE OPEN CMD	XWDKVB21E	OFF						
598-01		V	CMD	WATR	SSW SEC MAIN VALVE OPEN CMD	XWDKVC21E	OFF						
598-02		V	CMD	WATR	SSW PRI MAIN VALVE OPEN ENABLE CMD	XWDKVC01E	OFF						
598-03		V	CMD	WATR	SSW SEC MAIN VALVE OPEN ENABLE CMD	XWDKVC11E	OFF						
					$ SS WATER SYSTEM SECURING $								
					$ PRE L/O VLVS VENT CMD$								
599-00		K	CMD	WATR	SS PRE L/O VLVS VENT CMD	GWDKPT36E	OFF						
599-01		K	CMD	WATR	SS PRE L/O VLVS VENT CMD	GWDKPT22E	OFF						
					$ PRE L/O VLVS OPEN CMD $								

SEQ	TIME / CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC / PAGE	SS FD
599-02		K	CMD	WATR	SS PRE L/O VLVS OPEN CMD	GWDKPT30E	OFF						
599-03		K	CMD	WATR	SS PRE L/O VLVS OPEN CMD	GWDKPT32E	OFF						
					$ POST L/O VLVS VENT CMD $								
600-00		K	CMD	WATR	SS POST L/O VLVS VENT CMD	GWDKPT38E	OFF						
600-01		K	CMD	WATR	SS POST L/O VLVS VENT CMD	GWDKPT24E	OFF						
600-02		K	CMD	WATR	PTCR VO/LPS CMD BUS ON CMD	GWDKPT08E	OFF						
600-03		K	CMD	WATR	PTCR VO/LPS CMD BUS ON CMD	GWDKPT10E	OFF						
600-04		K	VFY	WATR	SS PRE L/O VLVS VENT	GWDXPT37E	ON			1 OF 3			
600-05		K	VFY	WATR	SS PRE L/O VLVS VENT	GWDXPT38E	ON			1 OF 3			
600-06		K	VFY	WATR	SS PRE L/O VLVS VENT	GWDXPT39E	ON			GTO ST430			
600-07		K	CMD	WATR	SS TURNAROUND CTR	GWDKPT12E	ON						
600-08		K	CMD	WATR	SS TURNAROUND CTR $ DELAY 1 SECOND $	GWDKPT14E	ON						
600-09		K	CMD	WATR	SS TURNAROUND CTR	GWDKPT12E	OFF						
600-10		K	CMD	WATR	SS TURNAROUND CTR	GWDKPT14E	OFF						
					$ SAFING VERIFICATION $								
601-00	ST430		VFY	DPS	HRS MDM LA1 PF BUS 1	V72K7965WR	ON			DISPLAY			
601-01			VFY	DPS	HRS MDM LA1 PF BUS 2	V72K7966WR	ON			DISPLAY			
601-02			VFY	DPS	HRS MDM LF1 PF BUS 1	V72K7968WR	ON			DISPLAY			
601-03			VFY	DPS	HRS MDM LF1 PF BUS 2	V72K7969WR	ON			DISPLAY			
602-00			VFY	TRS	ET RSS A INHIBIT/RESET IND	T55X1885X1	ON			DISPLAY			
602-01			VFY	TRS	ET RSS B INHIBIT/RESET IND	T55X2888X1	ON			DISPLAY			
602-02			VFY	BRS	LH RSS A INHIBIT/RESET IND	B55X1881X1	ON			DISPLAY			
602-03			VFY	BRS	LH RSS B INHIBIT/RESET IND	B55X1882X1	ON			DISPLAY			
602-04			VFY	BRS	RH RSS A INHIBIT/RESET IND	B55X2881X1	ON			DISPLAY			
602-05			VFY	BRS	RH RSS B INHIBIT/RESET IND	B55X2882X1	ON			DISPLAY			
603-00			VFY	BHYD	LH EVENT APU A ISLN VALVE OPEN	B46X1851X1	OFF			DISPLAY			
603-01			VFY	BHYD	LH EVENT APU A ISLN VALVE CLOSED	B46X1853X1	ON			DISPLAY			
603-02			VFY	BHYD	LH EV APU SEC SP CON VLV CLD SYS	B46X1861X1	ON			DISPLAY			

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SSFD
603-03			VFY	BHYD	LH EV APU PRI SP CON VLV OP SYS	B46X1862X1	ON			DISPLAY			
604-00			VFY	BHYD	LH EVENT APU B ISLN VALVE OPEN	B46X1852X1	OFF			DISPLAY			
604-01			VFY	BHYD	LH EVENT APU B ISLN VALVE CLOSED	B46X1854X1	ON			DISPLAY			
604-02			VFY	BHYD	LH EV APU SEC SP CON VLV CLD SYS	B46X1863X1	ON			DISPLAY			
604-03			VFY	BHYD	LH EV APU PRI SP CON VLV OP SYS	B46X1864X1	ON			DISPLAY			
605-00			VFY	BHYD	RH EVENT APU A ISLN VALVE OPEN	B46X2851X1	OFF			DISPLAY			
605-01			VFY	BHYD	RH EVENT APU A ISLN VALVE CLOSED	B46X2853X1	ON			DISPLAY			
605-02			VFY	BHYD	RH EV APU SEC SP CON VLV CLD SYS	B46X2861X1	ON			DISPLAY			
605-03			VFY	BHYD	RH EV APU PRI SP CON VLV OP SYS	B46X2862X1	ON			DISPLAY			
606-00			VFY	BHYD	RH EVENT APU B ISLN VALVE OPEN	B46X2852X1	OFF			DISPLAY			
606-01			VFY	BHYD	RH EVENT APU B ISLN VALVE CLOSED	B46X2854X1	ON			DISPLAY			
606-02			VFY	BHYD	RH EV APU SEC SP CON VLV CLD SYS	B46X2863X1	ON			DISPLAY			
606-03			VFY	BHYD	RH EV APU PRI SP CON VLV OP SYS	B46X2864X1	ON			DISPLAY			
607-00			VFY	PVD	L FWD VENTS 1/2 PURGE IND 1	V59X3105X1	ON			DISPLAY			
607-01			VFY	PVD	L FWD VENTS 1/2 PURGE IND 2	V59X3115X1	ON			DISPLAY			
607-02			VFY	PVD	R FWD VENTS 1/2 PURGE IND 1	V59X4105X1	ON			DISPLAY			
607-03			VFY	PVD	R FWD VENTS 1/2 PURGE IND 2	V59X4115X1	ON			DISPLAY			
608-00			VFY	PVD	L PB VENT 3 CLOSED 1	V59X3205X1	ON			DISPLAY			
608-01			VFY	PVD	L PB VENT 3 CLOSED 2	V59X3215X1	ON			DISPLAY			
608-02			VFY	PVD	R PB VENT 3 CLOSED 1	V59X4205X1	ON			DISPLAY			
608-03			VFY	PVD	R PB VENT 3 CLOSED 2	V59X4215X1	ON			DISPLAY			
609-00			VFY	PVD	L PB VENT 5 CLOSED 1	V59X3405X1	ON			DISPLAY			
609-01			VFY	PVD	L PB VENT 5 CLOSED 2	V59X3415X1	ON			DISPLAY			
609-02			VFY	PVD	R PB VENT 5 CLOSED 1	V59X4405X1	ON			DISPLAY			
609-03			VFY	PVD	R PB VENT 5 CLOSED 2	V59X4415X1	ON			DISPLAY			
610-00			VFY	PVD	L PB/W VENT 4/7 CLOSED 1	V59X3305X1	ON			DISPLAY			
610-01			VFY	PVD	L PB/W VENT 4/7 CLOSED 2	V59X3315X1	ON			DISPLAY			
610-02			VFY	PVD	R PB/W VENT 4/7 CLOSED 1	V59X4305X1	ON			DISPLAY			
610-03			VFY	PVD	R PB/W VENT 4/7 CLOSED 2	V59X4315X1	ON			DISPLAY			

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
611-00			VFY	PVD	L PB VENT 6 CLOSED 1	V59X3505X1	ON			DISPLAY				
611-01			VFY	PVD	L PB VENT 6 CLOSED 2	V59X3515X1	ON			DISPLAY				
611-02			VFY	PVD	R PB VENT 6 CLOSED 1	V59X4505X1	ON			DISPLAY				
611-03			VFY	PVD	R PB VENT 6 CLOSED 2	V59X4515X1	ON			DISPLAY				
612-00			VFY	PVD	L AFT VENTS 8/9 PURGE IND 1	V59X3905X1	ON			DISPLAY				
612-01			VFY	PVD	L AFT VENTS 8/9 PURGE IND 2	V59X3915X1	ON			DISPLAY				
612-02			VFY	PVD	R AFT VENTS 8/9 PURGE IND 1	V59X4905X1	ON			DISPLAY				
612-03			VFY	PVD	R AFT VENTS 8/9 PURGE IND 2	V59X4915X1	ON			DISPLAY				
613-00			VFY	TRS	ET RSS S/A DVC SAFED	T55X1869X1	ON			DISPLAY				
613-01			VFY	TRS	ET RSS S/A DVC ARMED	T55X1870X1	OFF			DISPLAY				
614-00			VFY	BPYR	LH EVENT IGN S/A DEVICE SAFED	B55X1843X1	ON			DISPLAY				
614-01			VFY	BPYR	RH EVENT IGN S/A DEVICE SAFED	B55X2843X1	ON			DISPLAY				
615-00			VFY	BPYR	LH VOLTAGE IGN PIC CAP A	B55V1603C1	NOLO	1.5	V	DISPLAY				
615-01			VFY	BPYR	RH VOLTAGE IGN PIC CAP A	B55V2603C1	NOLO	1.5	V	DISPLAY				
615-02			VFY	BPYR	LH VOLTAGE IGN PIC CAP B	B55V1604C1	NOLO	1.5	V	DISPLAY				
615-03			VFY	BPYR	RH VOLTAGE IGN PIC CAP B	B55V2604C1	NOLO	1.5	V	DISPLAY				
					$ MPS POST RSLS ABORT VERIFICATIONS $									
616-00			VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V9CX8382X1	ON			GTO ST465				
616-01			VFY	MPS	ET/ORB R IN DISCON PD3 CLOSED IND	V41X1420E1	ON			DISPLAY				
616-02			VFY	MPS	ME-1 LO2 PREVLV CLOSE IND	V41X1135E1	ON			DISPLAY				
616-03			VFY	MPS	ME-1 LH2 PREVLV CLOSE IND	V41X1105E1	ON			DISPLAY				
616-04			VFY	MPS	ME-2 LO2 PREVLV CLOSE IND	V41X1235E1	ON			DISPLAY				
616-05			VFY	MPS	ME-2 LH2 PREVLV CLOSE IND	V41X1205E1	ON			DISPLAY				
616-06			VFY	MPS	ME-3 LO2 PREVLV CLOSE IND	V41X1335E1	ON			DISPLAY				
616-07			VFY	MPS	ME-3 LH2 PREVLV CLOSE IND	V41X1305E1	ON			DISPLAY				
616-08			VFY	MPS	LO2 OVERBOARD BLEED VALVE OPEN	V41X1587E1	ON			OR				
616-09			VFY	MPS	LO2 ACC RECIRC VLV 1 CLOSED	V41X1818E1	ON			2 OF 2				
616-10			VFY	MPS	LO2 ACC RECIRC VLV 2 CLOSED	V41X1828E1	ON			DISPLAY				
					$VERIFY SSME OXIDIZER DOME PURGE $									
					$ VERIFY SSME HPOTP INT SEAL PURGE $									
617-00	ST465		VFY	SSME	MPENG GN2 PRG VNT CLD IND	GGNX1053E	ON			DISPLAY				

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	FD
617-01			VFY	SSME	MPENG GN2 PRG VNT CLD IND(R)	GGNX1143E	ON			DISPLAY				
617-02			VFY	SSME	MPENG GN2 PRG CNT VLV OPN IND	GGNX1033E	ON			OR				
617-03			VFY	SSME	MPENG GN2 PRG CNT VLV OPN IND(R)	GGNX1133E	ON			DISPLAY				
617-04			VFY	SSME	MPENG GN2 PRG S/O VLV OPN IND	GGNX1073E	ON			DISPLAY				
617-05			VFY	SSME	MPENG GN2 PRG S/O VLV OPN IND(R)	GGNX1163E	ON			DISPLAY				
617-06			VFY	SSME	MPENG GN2 PRG OUT PRESS	GGNP1034A	630	900	PSIG	OR				
617-07			VFY	SSME	MPENG GN2 PRG OUT PRESS(R)	GGNP1139A	630	900		DISPLAY				
					$ ORDNANCE NOT ARMED VERIFICATION $									
618-00			VFY	EPDC	SYS A RH SRB HDP M1 PIC CAP VOLT	GMSV1301A	NOLO	1.5	V	DISPLAY				
618-01			VFY	EPDC	SYS A RH HDP M1 PIC CAP VOLT RED	GMSV3301A	NOLO	1.5	V	DISPLAY				
618-02			VFY	EPDC	SYS A RH SRB HDP M2 PIC CAP VOLT	GMSV1302A	NOLO	1.5	V	DISPLAY				
618-03			VFY	EPDC	SYS A RH HDP M2 PIC CAP VOLT RED	GMSV3302A	NOLO	1.5	V	DISPLAY				
618-04			VFY	EPDC	SYS A RH SRB HDP M3 PIC CAP VOLT	GMSV1303A	NOLO	1.5	V	DISPLAY				
618-05			VFY	EPDC	SYS A RH HDP M3 PIC CAP VOLT RED	GMSV3303A	NOLO	1.5	V	DISPLAY				
618-06			VFY	EPDC	SYS A RH SRB HDP M4 PIC CAP VOLT	GMSV1304A	NOLO	1.5	V	DISPLAY				
618-07			VFY	EPDC	SYS A RH HDP M4 PIC CAP VOLT RED	GMSV3304A	NOLO	1.5	V	DISPLAY				
618-08			VFY	EPDC	SYS A LH SRB HDP M5 PIC CAP VOLT	GMSV1305A	NOLO	1.5	V	DISPLAY				
618-09			VFY	EPDC	SYS A LH HDP M5 PIC CAP VOLT RED	GMSV3305A	NOLO	1.5	V	DISPLAY				
618-10			VFY	EPDC	SYS A LH SRB HDP M6 PIC CAP VOLT	GMSV1306A	NOLO	1.5	V	DISPLAY				
618-11			VFY	EPDC	SYS A LH HDP M6 PIC CAP VOLT RED	GMSV3306A	NOLO	1.5	V	DISPLAY				
618-12			VFY	EPDC	SYS A LH SRB HDP M7 PIC CAP VOLT	GMSV1307A	NOLO	1.5	V	DISPLAY				
618-13			VFY	EPDC	SYS A LH HDP M7 PIC CAP VOLT RED	GMSV3307A	NOLO	1.5	V	DISPLAY				
618-14			VFY	EPDC	SYS A LH SRB HDP M8 PIC CAP VOLT	GMSV1308A	NOLO	1.5	V	DISPLAY				
618-15			VFY	EPDC	SYS A LH HDP M8 PIC CAP VOLT RED	GMSV3308A	NOLO	1.5	V	DISPLAY				
618-16			VFY	EPDC	SYS B RH SRB HDP M1 PIC CAP VOLT	GMSV2301A	NOLO	1.5	V	DISPLAY				
618-17			VFY	EPDC	SYS B RH HDP M1 PIC CAP VOLT RED	GMSV4301A	NOLO	1.5	V	DISPLAY				
618-18			VFY	EPDC	SYS B RH SRB HDP M2 PIC CAP VOLT	GMSV2302A	NOLO	1.5	V	DISPLAY				
618-19			VFY	EPDC	SYS B RH HDP M2 PIC CAP VOLT RED	GMSV4302A	NOLO	1.5	V	DISPLAY				
618-20			VFY	EPDC	SYS B RH SRB HDP M3 PIC CAP VOLT	GMSV2303A	NOLO	1.5	V	DISPLAY				
618-21			VFY	EPDC	SYS B RH HDP M3 PIC CAP VOLT RED	GMSV4303A	NOLO	1.5	V	DISPLAY				
618-22			VFY	EPDC	SYS B RH SRB HDP M4 PIC CAP VOLT	GMSV2304A	NOLO	1.5	V	DISPLAY				
618-23			VFY	EPDC	SYS B RH HDP M4 PIC CAP VOLT RED	GMSV4304A	NOLO	1.5	V	DISPLAY				
618-24			VFY	EPDC	SYS B LH SRB HDP M5 PIC CAP VOLT	GMSV2305A	NOLO	1.5	V	DISPLAY				
618-25			VFY	EPDC	SYS B LH HDP M5 PIC CAP VOLT RED	GMSV4305A	NOLO	1.5	V	DISPLAY				
618-26			VFY	EPDC	SYS B LH SRB HDP M6 PIC CAP VOLT	GMSV2306A	NOLO	1.5	V	DISPLAY				
618-27			VFY	EPDC	SYS B LH HDP M6 PIC CAP VOLT RED	GMSV4306A	NOLO	1.5	V	DISPLAY				
618-28			VFY	EPDC	SYS B LH SRB HDP M7 PIC CAP VOLT	GMSV2307A	NOLO	1.5	V	DISPLAY				
618-29			VFY	EPDC	SYS B LH HDP M7 PIC CAP VOLT RED	GMSV4307A	NOLO	1.5	V	DISPLAY				
618-30			VFY	EPDC	SYS B LH SRB HDP M8 PIC CAP VOLT	GMSV2308A	NOLO	1.5	V	DISPLAY				
618-31			VFY	EPDC	SYS B LH HDP M8 PIC CAP VOLT RED	GMSV4308A	NOLO	1.5	V	DISPLAY				

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
618-32			VFY	EPDC	SYS A ETVAS PIC CAP VOLTS	GMSV1311A	NOLO	1.5	V	DISPLAY				
618-33			VFY	EPDC	SYS A ETVAS PIC CAP RED VOLTS	GMSV3311A	NOLO	1.5	V	DISPLAY				
618-34			VFY	EPDC	SYS B ETVAS PIC CAP VOLTS	GMSV2311A	NOLO	1.5	V	DISPLAY				
618-35			VFY	EPDC	SYS B ETVAS PIC CAP RED VOLTS	GMSV4311A	NOLO	1.5	V	DISPLAY				
618-36			VFY	EPDC	SYS A LH2 TSM PIC CAP VOLTS	GMSV1309A	NOLO	1.5	V	DISPLAY				
618-37			VFY	EPDC	SYS A LH2 TSM PIC CAP RED VOLTS	GMSV3309A	NOLO	1.5	V	DISPLAY				
618-38			VFY	EPDC	SYS A LO2 TSM PIC CAP VOLTS	GMSV1310A	NOLO	1.5	V	DISPLAY				
618-39			VFY	EPDC	SYS A LO2 TSM PIC CAP RED VOLTS	GMSV3310A	NOLO	1.5	V	DISPLAY				
618-40			VFY	EPDC	SYS B LH2 TSM PIC CAP VOLTS	GMSV2309A	NOLO	1.5	V	DISPLAY				
618-41			VFY	EPDC	SYS B LH2 TSM PIC CAP RED VOLTS	GMSV4309A	NOLO	1.5	V	DISPLAY				
618-42			VFY	EPDC	SYS B LO2 TSM PIC CAP VOLTS	GMSV2310A	NOLO	1.5	V	DISPLAY				
618-43			VFY	EPDC	SYS B LO2 TSM PIC CAP RED VOLTS	GMSV4310A	NOLO	1.5	V	DISPLAY				
					$ CENTAUR RBUS PIC CAP VOLTS - NOT CHARGED $									
618-44		K	VFY	CEPDC	RBUS SYSA PIC CAP VOLTS	GMSV5503A	NOLO	1.5	V	DISPLAY				
618-45		K	VFY	CEPDC	RBUS SYSA PIC CAP VOLTS	GMSV7503A	NOLO	1.5	V	DISPLAY				
618-46		K	VFY	CEPDC	RBUS SYSB PIC CAP VOLTS	GMSV6503A	NOLO	1.5	V	DISPLAY				
618-47		K	VFY	CEPDC	RBUS SYSB PIC CAP VOLTS	GMSV8503A	NOLO	1.5	V	DISPLAY				
					$ OAA RECONFIGURATION $									
624-00	ST470	K	CMD	INTG	$ DELAY 1 SEC $									
624-01		K	VFY	ARMS	PRI FULLY EXTENDED SW	GSAX7581E	ON			1 OF 4				
624-02		K	VFY	ARMS	PRI FULLY EXTENDED SW	GSAX7586E	ON			1 OF 4				
624-03		K	VFY	ARMS	SEC FULLY EXTENDED SW	GSAX7601E	ON			1 OF 4				
624-04		K	VFY	ARMS	SEC FULLY EXTENDED SW	GSAX7606E	ON			GTO ST470				
625-00		K	CMD	ARMS	OAA UNLOCK PRI EXT LOCK VLV	GSAK7120E	OFF							
625-01		K	CMD	ARMS	OAA UNLOCK PRI EXT LOCK VLV	GSAK7125E	OFF							
625-02		K	CMD	ARMS	CAA UNLOCK SEC EXT LOCK VLV	GSAK7140E	OFF							
625-03		K	CMD	ARMS	OAA UNLOCK SEC EXT LOCK VLV	GSAK7145E	OFF							
626-00		K	CMD	ARMS	OAA LOCK PRI EXT LOCK VLV	GSAK7130E	ON							
626-01		K	CMD	ARMS	OAA LOCK PRI EXT LOCK VLV	GSAK7135E	ON							
626-02		K	CMD	ARMS	OAA LOCK SEC EXT LOCK VLV	GSAK7150E	ON							
626-03		K	CMD	ARMS	OAA LOCK SEC EXT LOCK VLV	GSAK7155E	ON							
627-00		K	CMD	ARMS	OAA PRI OPEN EXT PILOT VLV	GSAK7170E	OFF							
627-01		K	CMD	ARMS	OAA PRI OPEN EXT PILOT VLV	GSAK7175E	OFF							
627-02		K	CMD	ARMS	CAA SEC OPEN EXT PILOT VLV	GSAK7190E	OFF							
627-03		K	CMD	ARMS	OAA SEC OPEN EXT PILOT VLV	GSAK7195E	OFF							

SEQ	TIME CD CLOCK	I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
628-00		K	CMD	ARMS	OAA PRI RESET EXT PILOT VLV	GSAK7160E	ON						
628-01		K	CMD	ARMS	OAA PRI RESET EXT PILOT VLV	GSAK7165E	ON						
628-02		K	CMD	ARMS	OAA SEC RESET EXT PILOT VLV	GSAK7180E	ON						
628-03		K	CMD	ARMS	OAA SEC RESET EXT PILOT VLV	GSAK7185E	ON						
					$ DELAY 1 SEC $								
629-00		K	CMD	ARMS	OAA LOCK PRI EXT LOCK VLV	GSAK7130E	OFF						
629-01		K	CMD	ARMS	OAA LOCK PRI EXT LOCK VLV	GSAK7135E	OFF						
629-02		K	CMD	ARMS	OAA LOCK SEC EXT LOCK VLV	GSAK7150E	OFF						
629-03		K	CMD	ARMS	OAA LOCK SEC EXT LOCK VLV	GSAK7155E	OFF						
630-00		K	CMD	ARMS	OAA PRI RESET EXT PILOT VLV	GSAK7160E	OFF						
630-01		K	CMD	ARMS	OAA PRI RESET EXT PILOT VLV	GSAK7165E	OFF						
630-02		K	CMD	ARMS	OAA SEC RESET EXT PILOT VLV	GSAK7180E	OFF						
630-03		K	CMD	ARMS	OAA SEC RESET EXT PILOT VLV	GSAK7185E	OFF						
630-04		K	CMD	ARMS	OAA CLOSE PRI RETRACT SUP VLV	GSAK7200E	OFF						
630-05		K	CMD	ARMS	OAA CLOSE PRI RETRACT SUP VLV	GSAK7205E	OFF						
630-06		K	CMD	ARMS	OAA CLOSE PRI RETRACT RET VLV	GSAK7220E	OFF						
630-07		K	CMD	ARMS	OAA CLOSE PRI RETRACT RET VLV	GSAK7225E	OFF						
630-08		K	CMD	ARMS	OAA CLOSE PRI RETRACT SUP VLV	GSAK7240E	OFF						
630-09		K	CMD	ARMS	OAA CLOSE PRI RETRACT SUP VLV	GSAK7245E	OFF						
630-10		K	CMD	ARMS	OAA CLOSE PRI RETRACT RET VLV	GSAK7260E	OFF						
630-11		K	CMD	ARMS	OAA CLOSE PRI RETRACT RET VLV	GSAK7265E	OFF						
					$ DELAY 1 MIN 00 SEC $								
					$ VERIFY WITHIN 1 MIN 00 SEC ELSE DISPLAY AND CONTINUE $								
631-00	ST480	K	VFY	ARMS	OAA ACCUM LEVEL SW NO.1 NORMAL	GSAX7651E	ON			4 OF 4			
631-01		K	VFY	ARMS	OAA ACCUM LEVEL SW NO.2 NORMAL	GSAX7671E	ON			4 OF 4			
631-02		K	VFY	ARMS	OAA ACCUM LEVEL SW NO.3 NORMAL	GSAX7691E	ON			4 OF 4			
631-03		K	VFY	ARMS	OAA ACCUM LEVEL SW NO.4 NORMAL	GSAX7711E	ON			OR			
631-04		K	VFY	ARMS	OAA ACCUM LEVEL SW NO.1 NORMAL	GSAX7656E	ON			4 OF 4			
631-05		K	VFY	ARMS	OAA ACCUM LEVEL SW NO.2 NORMAL	GSAX7676E	ON			4 OF 4			
631-06		K	VFY	ARMS	OAA ACCUM LEVEL SW NO.3 NORMAL	GSAX7696E	ON			4 OF 4			
631-07		K	VFY	ARMS	OAA ACCUM LEVEL SW NO.4 NORMAL	GSAX7716E	ON			GTO ST480			
632-00		K	CMD	ARMS	OAA OPEN ACCUM CHARGING	GSAK7080E	OFF						
632-01		K	CMD	ARMS	OAA OPEN ACCUM CHARGING	GSAK7085E	OFF						
632-02		K	CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7100E	OFF						
632-03		K	CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7105E	OFF						
633-00	ST490	V	CMD	INTG	$ DELAY 1 SEC $								

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
633-01		V	VFY	ARMS	CCAA POSITION INDICATOR	XEGPVQ09A	63.5	NOHI	FT	1 OF 3					
633-02		V	VFY	ARMS	B FORWARD STOP LIMIT IND	XEGXVB33E	ON			1 OF 3					
633-03		V	VFY	ARMS	A FORWARD STOP LIMIT IND	XEGXVC43E	ON			GTO ST490					
633-04		V	CMD	ARMS	B EMERGENCY EXTEND CMD	XEGKVB31E	OFF								
633-05		V	CMD	ARMS	A EMERGENCY EXTEND CMD	XEGKVC31E	OFF								
633-06		V	CMD	ARMS	B EMERGENCY EXTEND ENABLE CMD	XEGKVB21E	OFF								
633-07		V	CMD	ARMS	A EMERGENCY EXTEND ENABLE CMD	XEGKVC21E	OFF								
633-08		V	VFY	ARMS	B EMERGENCY EXTEND ENABLE IND	XEGXVB23E	OFF			DISPLAY					
633-09		V	VFY	ARMS	A EMERGENCY EXTEND ENABLE IND	XEGXVC23E	OFF			DISPLAY					
633-10		V	CMD	ARMS	A REMOTE POWER CONTROL	XEGKVP01E	OFF								
633-11		V	CMD	ARMS	B REMOTE POWER CONTROL	XEGKVP11E	OFF								
					$ SAFING COMPLETE INTERRUPT TO ALL EXCEPT LO2/LH2 $										
634-00			CMD	INTG	GLS SAFING COMPLETE	NO13INTGR	ON								

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	VALUE FUNCTION DESIGNATOR	SINGL OR LO	HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
					* * * * * * * * * * * * * * * * * * * *								
					* POST G901 RECYCLE OPERATIONS *								
					* * * * * * * * * * * * * * * * * * * *								
650-00	ST500		VFY	INTG	CURRENT LDB GPC MEMORY CONFIG	NGPCLMCNFG 9				GTO ST500			
					$ GLS EVENT COMPLETE LESS THAT 300 $								
					$ SAFE SRB RSS S/A'S $								
651-00			CMD	BRS	LH RSS S/A DEVICE ARM CMD	B55K3044XL OFF							
651-01			CMD	BRS	RH RSS S/A DEVICE ARM CMD	B55K4044XL OFF							
					$ DELAY 1 SECOND $								
					$ NOTE: RANGE SAFETY S/A SAFE CMD'S ARE MEC CRITICAL AND REQUIRE THAT MEC CRITICAL CMD CAPABILITY BE ENABLED. THIS WILL BE ACCOMPLISHED VIA DEU EQUIVALENT. WHEN S/A SAFING IS COMPLETE, MEC CRITICAL CMD'S WILL BE DISABLED VIA DEU. S/A SAFE CMD'S WILL BE TURNED OFF VIA MEC MASTER RESET. $								
					$ ENABLE MEC CRITICAL CMD'S $								
					$ RETRY NEXT 3 SEQ NO MORE THAN ONCE $								
652-00	ST510		CMD	BRS	SPEC 100 PRO	DEU 1							
					$ DELAY 2 SEC $								
652-01			CMD	BRS	ITEM 25 EXECUTE	DEU 1							
					$ DELAY 2 SECONDS $								
					$ VERIFY MEC CRITICAL CMD'S ARE ENABLED $								
652-02			VFY	BRS	MEC INHB/ENABLE IND	V91X1491XX ON				GTO ST510			
					$ PRINT MSG IF FAILED AFTER RETRY AND GTO ST530 $								
					$ ISSUE S/A SAFE CMD'S $								
653-00			ISSU	BRS	MEC1 LH RSS SAFE 1 (ISSUE FD)	V76K7508BL ON							

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
653-01			ISSU	BRS	MEC1 RH RSS SAFE 2 (ISSUE FD)	V76K7509BL	ON						
					$ DELAY 1 SECOND $								
653-02			ISSU	BRS	MEC2 LH RSS SAFE 2 (ISSUE FD)	V76K7609BL	ON						
653-03			ISSU	BRS	MEC2 RH RSS SAFE 1 (ISSUE FD)	V76K7608BL	ON						
					$ DELAY 1 SECOND $								
					$ DISABLE MEC CRITICAL CMD'S $								
					$ RETRY NEXT SEQ NO MORE THAN ONCE $								
654-00	ST520		CMD	BRS	ITEM 26 EXECUTE	DEU 1							
					$ DELAY 2 SECONDS $								
					$ VERIFY MEC CRITICAL CMD'S ARE DISABLED $								
655-00			VFY	BRS	MEC INHB/ENABLE IND	V91X1491XX	OFF			GTO ST520			
					$ PRINT MSG IF FAILED AFTER RETRY $								
656-00			CMD	BRS	RESUME	DEU 1							
656-01			CMD	BRS	READ MEC PREFLIGHT BITE	MEC 1							
656-02			CMD	BRS	READ MEC PREFLIGHT BITE	MEC 2							
656-03			CMD	BRS	MEC MASTER RESET	MEC 1							
656-04			CMD	BRS	MEC MASTER RESET	MEC 2							
657-00	ST530		VFY	BRS	LH RSS S/A DEVICE ARMED IND	B55X1870X1	OFF			DISPLAY			
657-01			VFY	BRS	RH RSS S/A DEVICE ARMED IND	B55X2870X1	OFF			DISPLAY			
657-02			VFY	BRS	LH RSS S/A DEVICE SAFED IND	B55X1869X1	ON			DISPLAY			
657-03			VFY	BRS	RH RSS S/A DEVICE SAFED IND	B55X2869X1	ON			DISPLAY			
					$ POST G901 RECYCLE OPERATIONS COMPLETE $								

SEQ	TIME	CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	VALUE FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	ELSE	DURATION	LCC PAGE	SS FD

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* *
* CONTINGENT PROGRAMS *
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* * * * * * * * * * * * * * * * * * *

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
					$ G001 R/S HOLD INDICATION LOOK-UP $								
701-00			LABL	INTG		G001							
					$ DELAY 10 SECONDS $								
701-01			VFY	DPS	FA1 INPUT PROM SEQ3-10 BYPASS(HF	V91X2806XX	OFF			DISPLAY			
701-02			VFY	DPS	FA2 INPUT PROM SEQ3-10 BYPASS(HF	V91X2807XX	OFF			DISPLAY			
701-03			VFY	DPS	FA3 INPUT PROM SEQ3-10 BYPASS(HF	V91X2808XX	OFF			DISPLAY			
701-04			VFY	DPS	FA4 INPUT PROM SEQ3-10 BYPASS(HF	V91X2809XX	OFF			DISPLAY			
701-05			VFY	DPS	FF1 MDM RETURN WORD BYPASS(HFE)	V91X2904XX	OFF			DISPLAY			
701-06			VFY	DPS	FF2 MDM RETURN WORD BYPASS(HFE)	V91X2905XX	OFF			DISPLAY			
701-07			VFY	DPS	FF3 MDM RETURN WORD BYPASS(HFE)	V91X2906XX	OFF			DISPLAY			
701-08			VFY	DPS	FF4 MDM RETURN WORD BYPASS(HFE)	V91X2907XX	OFF			DISPLAY			
701-09			VFY	DPS	FLT-CRITICAL MDM HOLD/ABORT	V90X8767X1	OFF			DISPLAY			
701-10			VFY	EPDC	LH IGN PIC CAP A HOLD	V90X8383X1	OFF			DISPLAY			
701-11			VFY	EPDC	RH IGN PIC CAP A HOLD	V90X8385X1	OFF			DISPLAY			
701-12			VFY	EPDC	LH IGN PIC CAP B HOLD	V90X8384X1	OFF			DISPLAY			
701-13			VFY	EPDC	RH IGN PIC CAP B HOLD	V90X8386X1	OFF			DISPLAY			
701-14			VFY	MPS	MPS LH2 OUTBD FILL VLV HOLD	V90X8390X1	OFF			DISPLAY			
701-15			VFY	MPS	MPS LOX OUTBD FILL VLV HOLD	V90X8391X1	OFF			DISPLAY			
701-16			VFY	MPS	MPS LOX ACC RECIRC VLV HOLD	V90X8392X1	OFF			DISPLAY			
701-17			VFY	MPS	MPS LO2 OVBD B/V CLOSE HOLD	V90X8399X1	OFF			DISPLAY			
701-18			VFY	MPS	MPS E1 H2 PREVLV OPEN HOLD	V90X8396X1	OFF			DISPLAY			
701-19			VFY	MPS	MPS E2 H2 PREVLV OPEN HOLD	V90X8397X1	OFF			DISPLAY			
701-20			VFY	MPS	MPS E3 H2 PREVLV OPEN HOLD	V90X8398X1	OFF			DISPLAY			
701-21			VFY	MPS	MPS VLV POS COMM FAULT HOLD	V90X8769X1	OFF			DISPLAY			
701-22			VFY	SSME	ME1 PAD DATA PATH FAIL HOLD	V90X8670X1	OFF			DISPLAY			
701-23			VFY	SSME	ME2 PAD DATA PATH FAIL HOLD	V90X8671X1	OFF			DISPLAY			
701-24			VFY	SSME	ME3 PAD DATA PATH FAIL HOLD	V90X8672X1	OFF			DISPLAY			
701-25			VFY	SSME	ME1 CONTROL FAIL HOLD	V90X8679X1	ON			GTO ST10			
					$ ME-1 ELECTRONIC LOCKUP $								
701-26			VFY	SSME	ME-1 OPERATING MODE	E41J1513B1	B010	B100		2 OF 2			

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
701-27			VFY	SSME	ME-1 PHASE IN EFFECT	E41J1512B1	B010	B101		GTO ST01				
			MSG		ME-1 CONTROLLER ELECTRONIC LOCKUP									
					$ ME-1 HYDRAULIC LOCKUP $									
701-28	ST01		VFY	SSME	ME-1 OPERATING MODE	E41J1513B1	B011	B101		2 OF 2				
701-29			VFY	SSME	ME-1 PHASE IN EFFECT	E41J1512B1	B010	B101		GTO ST02				
			MSG		ME-1 CONTROLLER ELECTRONIC LOCKUP									
					$ ME-1 MAJOR COMPONENT FAIL $									
701-30	ST02		VFY	SSME	ME-1 OPERATING MODE	E41J1514B1	B001	B011		GTO ST03				
			MSG		ME-1 CONTROLLER MAJOR COMPONENT FAIL									
					$ ME-1 CONTROLLER CHANNEL FAIL $									
701-31	ST03		VFY	SSME	ME-1 CHANNEL STATUS P3B4-6	E41J1509B1	B000			DISPLAY				
701-32	ST10		VFY		ME2 CONTROL FAIL HOLD	V90X8680X1	ON			GTO ST20				
					$ ME-2 ELECTRONIC LOCKUP $									
701-33			VFY	SSME	ME-2 OPERATING MODE	E41J2513B1	B010	B100		2 OF 2				
701-34			VFY	SSME	ME-2 PHASE IN EFFECT	E41J2512B1	B010	B101		GTO ST11				
			MSG		ME-2 CONTROLLER ELECTRONIC LOCKUP									
					$ ME-2 HYDRAULIC LOCKUP $									
701-35	ST11		VFY	SSME	ME-2 OPERATING MODE	E41J2513B1	B011	B101		2 OF 2				
701-36			VFY	SSME	ME-2 PHASE IN EFFECT	E41J2512B1	B010	B101		GTO ST12				
			MSG		ME-2 CONTROLLER ELECTRONIC LOCKUP									
					$ ME-2 MAJOR COMPONENT FAIL $									
701-37	ST12		VFY	SSME	ME-2 OPERATING MODE	E41J2514B1	B001	B011		GTO ST13				
			MSG		ME-2 CONTROLLER MAJOR COMPONENT FAIL									
					$ ME-2 CONTROLLER CHANNEL FAIL $									
701-38	ST13		VFY	SSME	ME-2 CHANNEL STATUS P3B4-6	E41J2509B1	B000			DISPLAY				
701-39	ST20		VFY		ME3 CONTROL FAIL HOLD	V90X8681X1	ON			GTO ST30				
					$ ME-3 ELECTRONIC LOCKUP $									
701-40			VFY	SSME	ME-3 OPERATING MODE	E41J3513B1	B010	B100		2 OF 2				

SEQ	TIME CD CLOCK	ST	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	SF	SD
701-41			VFY	SSME	ME-3 PHASE IN EFFECT	E41J3512B1	B010	B101		GTO ST21					
			MSG		ME-3 CONTROLLER ELECTRONIC LOCKUP										
					$ ME-3 HYDRAULIC LOCKUP $										
701-42	ST21		VFY	SSME	ME-3 OPERATING MODE	E41J3513B1	B011	B101		2 OF 2					
701-43			VFY	SSME	ME-3 PHASE IN EFFECT	E41J3512B1	B010	B101		GTO ST22					
			MSG		ME-3 CONTROLLER ELECTRONIC LOCKUP										
					$ ME-3 MAJOR COMPONENT FAIL $										
701-44	ST22		VFY	SSME	ME-3 OPERATING MODE	E41J3514B1	B001	B011		GTO ST30					
			MSG		ME-3 CONTROLLER MAJOR COMPONENT FAIL										
					$ ME-3 CONTROLLER CHANNEL FAIL $										
701-45			VFY	SSME	ME-3 CHANNEL STATUS P3B4-6	E41J3509B1	B000			DISPLAY					
701-46	ST30		VFY	INTG	LPS GO FOR AUTO SEQ START HOLD	V90X8393X1	OFF			DISPLAY				PL	
701-47			VFY	INTG	R/S SEQ SSME GO FOR LAUNCH HOLD	V90X8395X1	OFF			DISPLAY					
701-48			VFY	INTG	LPS GO FOR ENGINE START HOLD	V90X8394X1	OFF			DISPLAY				PL	
701-49			VFY	INTG	LPS COUNTDOWN HOLD	V90X8768X1	OFF			DISPLAY					
701-50			VFY	INTG	VENT DOOR POS HOLD	V90X8770X1	ON			GTO ST35					
			MSG		VENT DOOR POSITION HOLD										
701-51			VFY	INTG	ORBITER VENT DOORS STATUS WORD	V90J8201C1	INTAME1		STORE						
701-52			VFY	INTG	LPS ORBITER VENT DOORS OVRD WORD	V99J8836C1	INTAME2		STORE						
701-53			VFY	INTG	COMPUTE NAME1 OR NAME2	INTNAME	XFFFF	XFF00		DISPLAY					
701-54	ST35		VFY	INTG	LAUNCH SEQUENCE ABORT	V90X8382X1	ON			GTO ST40					
					$ ENGINE START - ABORT FLAG ON $										
701-55			VFY	FCL	MPS ENG 1P ACTR A FAIL	V79X1170X1	OFF			DISPLAY					
701-56			VFY	FCL	MPS ENG 1Y ACTR A FAIL	V79X1171X1	OFF			DISPLAY					
701-57			VFY	FCL	MPS ENG 1P ACTR B FAIL	V79X1173X1	OFF			DISPLAY					
701-58			VFY	FCL	MPS ENG 1Y ACTR B FAIL	V79X1174X1	OFF			DISPLAY					
701-59			VFY	FCL	MPS ENG 1P ACTR C FAIL	V79X1176X1	OFF			DISPLAY					
701-60			VFY	FCL	MPS ENG 1Y ACTR C FAIL	V79X1177X1	OFF			DISPLAY					
701-61			VFY	FCL	MPS ENG 1P ACTR D FAIL	V79X1178X1	OFF			DISPLAY					
701-62			VFY	FCL	MPS ENG 1Y ACTR D FAIL	V79X1179X1	OFF			DISPLAY					
701-63			VFY	FCL	MPS ENG 2P ACTR A FAIL	V79X1270X1	OFF			DISPLAY					
701-64			VFY	FCL	MPS ENG 2Y ACTR A FAIL	V79X1271X1	OFF			DISPLAY					
701-65			VFY	FCL	MPS ENG 2P ACTR B FAIL	V79X1273X1	OFF			DISPLAY					

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SSF D
701-66			VFY	FCL	MPS ENG 2Y ACTR B FAIL	V79X1274X1	OFF			DISPLAY			
701-67			VFY	FCL	MPS ENG 2P ACTR C FAIL	V79X1276X1	OFF			DISPLAY			
701-68			VFY	FCL	MPS ENG 2Y ACTR C FAIL	V79X1277X1	OFF			DISPLAY			
701-69			VFY	FCL	MPS ENG 2P ACTR D FAIL	V79X1278X1	OFF			DISPLAY			
701-70			VFY	FCL	MPS ENG 2Y ACTR D FAIL	V79X1279X1	OFF			DISPLAY			
701-71			VFY	FCL	MPS ENG 3P ACTR A FAIL	V79X1370X1	OFF			DISPLAY			
701-72			VFY	FCL	MPS ENG 3Y ACTR A FAIL	V79X1371X1	OFF			DISPLAY			
701-73			VFY	FCL	MPS ENG 3P ACTR B FAIL	V79X1373X1	OFF			DISPLAY			
701-74			VFY	FCL	MPS ENG 3Y ACTR B FAIL	V79X1374X1	OFF			DISPLAY			
701-75			VFY	FCL	MPS ENG 3P ACTR C FAIL	V79X1376X1	OFF			DISPLAY			
701-76			VFY	FCL	MPS ENG 3Y ACTR C FAIL	V79X1377X1	OFF			DISPLAY			
701-77			VFY	FCL	MPS ENG 3P ACTR D FAIL	V79X1378X1	OFF			DISPLAY			
701-78			VFY	FCL	MPS ENG 3Y ACTR D FAIL	V79X1379X1	OFF			DISPLAY			
701-79			VFY	SSME	ENG1 SELF TEST STATUS	E41J1514B1	B01			DISPLAY			
701-80			VFY	SSME	ENG2 SELF TEST STATUS	E41J2514B1	B01			DISPLAY			
701-81			VFY	SSME	ENG3 SELF TEST STATUS	E41J3514B1	B01			DISPLAY			
701-82			VFY	SSME	ENG SHUTDOWN VERIFICATION HOLD	V90X8389X1	OFF			DISPLAY			
701-83			VFY	SSME	UNCOMMANDED ENG SHUTDOWN ABORT	V90X8771X1	OFF			DISPLAY			
701-84			VFY	SSME	MPS ACT PORT COMM FAULT ABORT	V90X8772X1	OFF			DISPLAY			
701-85			VFY	SSME	ME-1 LOW CHAMBER PRESS ABORT	V90X8773X1	OFF			DISPLAY			
701-86			VFY	SSME	ME-2 LOW CHAMBER PRESS ABORT	V90X8774X1	OFF			DISPLAY			
701-87			VFY	SSME	ME-3 LOW CHAMBER PRESS ABORT	V90X8775X1	OFF			DISPLAY			
701-88			VFY	SSME	ME-1 ACT PORT FAIL ABORT	V90X8776X1	OFF			DISPLAY			
701-89			VFY	SSME	ME-2 ACT PORT FAIL ABORT	V90X8777X1	OFF			DISPLAY			
701-90			VFY	SSME	ME-3 ACT PORT FAIL ABORT	V90X8778X1	OFF			DISPLAY			
701-91	ST40				END G001								

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	FD
					$ IN THE EVENT OF A POST-ABORT ENGINE LH2 INLET PRESSURE GREATER THAN 90 PSIA GLS WILL REMOVE THE ENGINE LH2 PREVALVE CLOSE COMMANDS IN AN ATTEMPT TO DECREASE PRESSURE (REF. G002,3,4). A CONTINUED OVER PRESSURE CONDITION WILL REQUIRE LH2 PREVALVE OPENING AT THE DISCRETION OF THE RESPONSIBLE MPS ENGINEER. $									
					$ G002 ENG 1 LH2 INLET PRESSURE RELIEF $									
702-00			LABL	INTG					G002					
702-01			CMD	MPS	MPS E-1 LH2 PREVALVE CLOSE CMD A				V41K1122XL	OFF				
702-02			CMD	MPS	MPS E-1 LH2 PREVALVE CLOSE CMD B				V41K1123XL	OFF				
702-03			CMD	MPS	MPS E-1 LH2 PREVALVE CLOSE CMD C				V41K1124XL	OFF				
702-04			OMSG	INTG	E-1 LH2 INLET OVERPRESS - G002 EXECUTED									
702-05			END	G002										
					$ G003 ENG 2 LH2 INLET PRESSURE RELIEF $									
703-00			LABL	INTG					G003					
703-01			CMD	MPS	MPS E-2 LH2 PREVALVE CLOSE CMD A				V41K1222XL	OFF				
703-02			CMD	MPS	MPS E-2 LH2 PREVALVE CLOSE CMD B				V41K1223XL	OFF				
703-03			CMD	MPS	MPS E-2 LH2 PREVALVE CLOSE CMD C				V41K1224XL	OFF				
703-04			OMSG	INTG	E-2 LH2 INLET OVERPRESS - G003 EXECUTED									
703-05			END	G003										
					$ G004 ENG 3 LH2 INLET PRESSURE RELIEF $									
704-00			LABL	INTG					G004					
704-01			CMD	MPS	MPS E-3 LH2 PREVALVE CLOSE CMD A				V41K1322XL	OFF				
704-02			CMD	MPS	MPS E-3 LH2 PREVALVE CLOSE CMD B				V41K1323XL	OFF				
704-03			CMD	MPS	MPS E-3 LH2 PREVALVE CLOSE CMD C				V41K1324XL	OFF				
704-04			OMSG	INTG	E-3 LH2 INLET OVERPRESS - G004 EXECUTED									

SEQ	TIME CD CLOCK	I/E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S/F/D
704-05			END	G004									
					$ G005 BFS MTU ACCUMULATOR DETECTION $								
705-00			LABL	INTG		G005							
705-01			VFY	DPS	MTU ACCUMULATOR SOURCE	V98J0615C1 B001	B011			INHB MSEQ END G005			
705-02			CVFY	DPS	MTU ACCUMULATOR SOURCE	V98J0615C1 B001	B011			CPER G005 TIL MSEQ			
705-03			END	G005									
					$ G006 REPLACE FAILED ET LH2 PRESS NO. 1 $								
706-00			LABL	INTG		G006							
706-01			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO1 XDC	N41K1700X OFF				DISPLAY GTO ST10			
706-02			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO2 XDC	N41K1701X OFF				DISPLAY GTO ST10			
706-03			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO3 XDC	N41K1702X OFF				DISPLAY GTO ST10			
706-04			CMD	LH2	REPLACE LH2 ULLAGE PRESS NO1 XDC	V41K1700XL ON							
706-05			CMD	LH2	REPLACE LH2 ULLAGE PRESS NO1 XDC	N41K1700X ON							
					$ DELAY .5 SEC $								
706-06	ST10		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MSEQ $					GTO ST11			
					$ 3 OF 3 ULLAGE PRESS XDCRS REQD $								
706-07			CVFY	LH2	ET LH2 ULLAGE PRESS NO.1	T41P1700C1 40.9	44.1		PSIA	INHB MSEQ			
706-08			CVFY	LH2	ET LH2 ULLAGE PRESS NO.2	T41P1701C1 40.9	44.1		PSIA	INHB MSEQ			
706-09			CVFY	LH2	ET LH2 ULLAGE PRESS NO.3	T41P1702C1 40.9	44.1		PSIA	INHB MSEQ			
					GTO ST12								
706-10	ST11		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MENG $					GTO ST12			
					$ 2 OF 3 ULLAGE PRESS XDCRS REQD $								
706-11			CVFY	LH2	ET LH2 ULLAGE PRESS NO.1	T41P1700C1 40.9	44.1		PSIA	2 OF 3			
706-12			CVFY	LH2	ET LH2 ULLAGE PRESS NO.2	T41P1701C1 40.9	44.1		PSIA	2 OF 3			
706-13			CVFY	LH2	ET LH2 ULLAGE PRESS NO.3	T41P1702C1 40.9	44.1		PSIA	EXIT TIL MENG			
706-14	ST12		END	G006									
					$ G007 REPLACE FAILED ET LH2 PRESS NO.2 $								

SEQ	TIME / CD / CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION / DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC / PAGE	SS	F	D
707-00			LABL	INTG		G007									
707-01			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO1 XDC	N41K1700X	OFF			DISPLAY GTO ST10					
707-02			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO2 XDC	N41K1701X	OFF			DISPLAY GTO ST10					
707-03			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO3 XDC	N41K1702X	OFF			DISPLAY GTO ST10					
707-04			CMD	LH2	REPLACE LH2 ULLAGE PRESS NO2 XDC	V41K1701XL	ON								
707-05			CMD	LH2	REPLACE LH2 ULLAGE PRESS NO2 XDC	N41K1701X	ON								
					$ DELAY .5 SEC $										
707-06	ST10		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MSEQ $					GTO ST11					
					$ 3 OF 3 ULLAGE PRESS XDCRS REQD $										
707-07			CVFY	LH2	ET LH2 ULLAGE PRESS NO.1	T41P1700C1	40.9	44.1	PSIA	INHB MSEQ					
707-08			CVFY	LH2	ET LH2 ULLAGE PRESS NO.2	T41P1701C1	40.9	44.1	PSIA	INHB MSEQ					
707-09			CVFY	LH2	ET LH2 ULLAGE PRESS NO.3	T41P1702C1	40.9	44.1	PSIA	INHB MSEQ					
					GTO ST12										
707-10	ST11		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MENG $					GTO ST12					
					$ 2 OF 3 ULLAGE PRESS XDCRS REQD $										
707-11			CVFY	LH2	ET LH2 ULLAGE PRESS NO.1	T41P1700C1	40.9	44.1	PSIA	2 OF 3					
707-12			CVFY	LH2	ET LH2 ULLAGE PRESS NO.2	T41P1701C1	40.9	44.1	PSIA	2 OF 3					
707-13			CVFY	LH2	ET LH2 ULLAGE PRESS NO.3	T41P1702C1	40.9	44.1	PSIA	EXIT TIL MENG					
707-14	ST12		END	G007											
					$ G008 REPLACE FAILED ET LH2 PRESS NO.3 $										
708-00			LABL	INTG		G008									
708-01			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO1 XDC	N41K1700X	OFF			DISPLAY GTO ST10					
708-02			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO2 XDC	N41K1701X	OFF			DISPLAY GTO ST10					
708-03			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO3 XDC	N41K1702X	OFF			DISPLAY GTO ST10					
708-04			CMD	LH2	REPLACE LH2 ULLAGE PRESS NO3 XDC	V41K1702XL	ON								
708-05			CMD	LH2	REPLACE LH2 ULLAGE PRESS NO3 XDC	N41K1702X	ON								
					$ DELAY .5 SEC $										
708-06	ST10		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MSEQ $					GTO ST11					
					$ 3 OF 3 ULLAGE PRESS XDCRS REQD $										
708-07			CVFY	LH2	ET LH2 ULLAGE PRESS NO.1	T41P1700C1	40.9	44.1	PSIA	INHB MSEQ					
708-08			CVFY	LH2	ET LH2 ULLAGE PRESS NO.2	T41P1701C1	40.9	44.1	PSIA	INHB MSEQ					
708-09			CVFY	LH2	ET LH2 ULLAGE PRESS NO.3	T41P1702C1	40.9	44.1	PSIA	INHB MSEQ					
					GTO ST12										

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S F D
708-10	ST11		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MENG $					GTO ST12			
					$ 2 OF 3 ULLAGE PRESS XDCRS REQD $								
708-11			CVFY	LH2	ET LH2 ULLAGE PRESS NO.1	T41P1700C1	40.9	44.1	PSIA	2 OF 3			
708-12			CVFY	LH2	ET LH2 ULLAGE PRESS NO.2	T41P1701C1	40.9	44.1	PSIA	2 OF 3			
708-13			CVFY	LH2	ET LH2 ULLAGE PRESS NO.3	T41P1702C1	40.9	44.1	PSIA	EXIT	TIL MENG		
708-14	ST12		END	G008									
					$ G009 REPLACE FAILED ET LO2 PRESS NO.1 $								
709-00			LABL	INTG		G0C9							
709-01			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO1 XDC	N41K1750X	OFF			DISPLAY	GTO ST10		
709-02			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO2 XDC	N41K1751X	OFF			DISPLAY	GTO ST10		
709-03			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO3 XDC	N41K1752X	OFF			DISPLAY	GTO ST10		
709-04			CMD	LO2	REPLACE LO2 ULLAGE PRESS NO1 XDC	V41K1750XL	ON						
709-05			CMD	LO2	REPLACE LO2 ULLAGE PRESS NO1 XDC	N41K1750X	ON						
					$ DELAY .5 SEC $								
709-06	ST10		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MSEQ $					GTO ST11			
					$ 3 OF 3 ULLAGE PRESS XDCRS REQD $								
709-07			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.1	T41P1750C1	19.3	22.5	PSIG	INHB MSEQ			
709-08			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.2	T41P1751C1	19.3	22.5	PSIG	INHB MSEQ			
709-09			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.3	T41P1752C1	19.3	22.5	PSIG	INHB MSEQ			
					GTO ST12								
709-10	ST11		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MENG $					GTO ST12			
					$ 2 OF 3 ULLAGE PRESS XDCRS REQD $								
709-11			CVFY	LO2	ET LO2 ULLAGE PRESS NO.1	T41P1750C1	19.3	22.5	PSIG	2 OF 3			
709-12			CVFY	LO2	ET LO2 ULLAGE PRESS NO.2	T41P1751C1	19.3	22.5	PSIG	2 OF 3			
709-13			CVFY	LO2	ET LO2 ULLAGE PRESS NO.3	T41P1752C1	19.3	22.5	PSIG	EXIT	TIL MENG		
709-14	ST12		END	G009									
					$ G010 REPLACE FAILED ET LO2 PRESS NO.2 $								
710-00			LABL	INTG		G010							
710-01			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO1 XDC	N41K1750X	OFF			DISPLAY	GTO ST10		
710-02			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO2 XDC	N41K1751X	OFF			DISPLAY	GTO ST10		
710-03			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO3 XDC	N41K1752X	OFF			DISPLAY	GTO ST10		

SEQ	TIME CD CLOCK	S I E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
710-04			CMD	LO2	REPLACE LO2 ULLAGE PRESS NO2 XDC	V41K1751XL	ON						
710-05			CMD	LO2	REPLACE LO2 ULLAGE PRESS NO2 XDC	N41K1751X	ON						
					$ DELAY .5 SEC $								
710-06	ST10		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MSEQ $					GTO ST11			
					$ 3 OF 3 ULLAGE PRESS XDCRS REQD $								
710-07			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.1	T41P1750C1	19.3	22.5	PSIG	INHB MSEQ			
710-08			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.2	T41P1751C1	19.3	22.5	PSIG	INHB MSEQ			
710-09			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.3	T41P1752C1	19.3	22.5	PSIG	INHB MSEQ			
				GTO ST12									
710-10	ST11		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MENG $					GTO ST12			
					$ 2 OF 3 ULLAGE PRESS XDCRS REQD $								
710-11			CVFY	LO2	ET LO2 ULLAGE PRESS NO.1	T41P1750C1	19.3	22.5	PSIG	2 OF 3			
710-12			CVFY	LO2	ET LO2 ULLAGE PRESS NO.2	T41P1751C1	19.3	22.5	PSIG	2 OF 3			
710-13			CVFY	LO2	ET LO2 ULLAGE PRESS NO.3	T41P1752C1	19.3	22.5	PSIG	EXIT	TIL MENG		
710-14	ST12		END	GO10									
					$ G011 REPLACE FAILED ET LO2 PRESS NO.3 $								
711-00			LABL	INTG		G011							
711-01			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO1 XDC	N41K1750X	OFF			DISPLAY	GTO ST10		
711-02			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO2 XDC	N41K1751X	OFF			DISPLAY	GTO ST10		
711-03			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO3 XDC	N41K1752X	OFF			DISPLAY	GTO ST10		
711-04			CMD	LO2	REPLACE LO2 ULLAGE PRESS NO3 XDC	V41K1752XL	ON						
711-05			CMD	LO2	REPLACE LO2 ULLAGE PRESS NO3 XDC	N41K1752X	ON						
					$ DELAY .5 SEC $								
711-06	ST10		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MSEQ $					GTO ST11			
					$ 3 OF 3 ULLAGE PRESS XDCRS REQD $								
711-07			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.1	T41P1750C1	19.3	22.5	PSIG	INHB MSEQ			
711-08			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.2	T41P1751C1	19.3	22.5	PSIG	INHB MSEQ			
711-09			CVFY	LO2	ET LO2 ULLAGE PRESSURE NO.3	T41P1752C1	19.3	22.5	PSIG	INHB MSEQ			
					GTO ST12								
711-10	ST11		VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST MENG $					GTO ST12			
					$ 2 OF 3 ULLAGE PRESS XDCRS REQD $								
711-11			CVFY	LO2	ET LO2 ULLAGE PRESS NO.1	T41P1750C1	19.3	22.5	PSIG	2 OF 3			
711-12			CVFY	LO2	ET LO2 ULLAGE PRESS NO.2	T41P1751C1	19.3	22.5	PSIG	2 OF 3			

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SF	SD
711-13			CVFY	LO2	ET LO2 ULLAGE PRESS NO.3	T41P1752C1	19.3	22.5	PSIG	EXIT	TIL MENG			
711-14	ST12		END	GO11										

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
					$ G012 PASS FSM OR BFS GPC ERR $								
712-00			LABL	INTG		G012							
					$ DPS ERROR DECODE $								
712-01			VFY	INTG	DPS I/O FAILURE	NO3IS168D				DISPLAY		6.9.3-7	
					$ GPC BITE (PASS) ERROR	NO3IS168D	1			INHB MENG $			
					$ I/O ERROR CRT1 OR CRT3	NO3IS168D	2			INHB MSEQ $			
					$ GPC ERROR (BFS)	NO3IS168D	500			INHB MSEQ $			
712-02			END	G012									
					**********								
					*								
					* THE FOLLOWING DPS ERROR ENCODE SEQUENCE DEPICTS								
					* SOFTWARE USED TO ENCODE THE DPS I/O FAILURE FOR G012. PROGRAM DETAILS ARE								
					* NOT SHOWN. THIS INCLUSION INTO THE GLSDD IS FOR INFORMATION ONLY AND MAY								
					* NOT NECESSARILY SHOW PROPER PROGRAM FLOW.								
					*								
					**********								
					$ BEGIN DPS ERROR ENCODE (INFO ONLY) $								
712-03	ST10		VFY	DPS	FSP MSG 1 MAJOR ID	V92U7001CX	102			GTO ST12			
712-04			VFY	DPS	FSP MSG 1 MINOR ID	V92U7003CX	48			GTO ST12			
					GTO ST100								
712-05	ST12		VFY	DPS	FSP MSG 1 MAJOR ID	V92U7001CX	103			GTO ST20			
712-06			VFY	DPS	FSP MSG 1 MINOR ID	V92U7003CX	24			GTO ST14			
					GTO ST101								
712-07	ST14		VFY	DPS	FSP MSG1 MINOR ID	V92U7003CX	145			GTO ST20			
					GTO ST101								
712-08	ST20		VFY	DPS	FSP MSG2 MAJOR ID	V92U7016CX	102			GTO ST22			
712-09			VFY	DPS	FSP MSG2 MINOR ID	V92U7018CX	48			GTO ST22			
					GTO ST100								
712-10	ST22		VFY	DPS	FSP MSG2 MAJOR ID	V92U7016CX	103			GTO ST30			
712-11			VFY	DPS	FSP MSG2 MINOR ID	V92U7018CX	24			GTO ST34			
					GTO ST101								
712-12	ST24		VFY	DPS	FSP MSG2 MINOR ID	V92U7018CX	45			GTO ST30			
					GTO ST101								
712-13	ST30		VFY	DPS	FSP MSG3 MAJOR ID	V92U7030CX	102			GTO ST32			

SEQ	TIME CD CLOCK	SI TE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
712-14			VFY	DPS	FSP MSG3 MINOR ID	V92U7032CX	48			GTO ST32			
					GTO ST100								
712-15	ST32		VFY	DPS	FSP MSG3 MAJOR ID	V92U7030CX	103			GTO ST40			
712-16			VFY	DPS	FSP MSG3 MINOR ID	V92U7032CX	24			GTO ST34			
					GTO ST101								
712-17	ST34		VFY	DPS	FSP MSG3 MINOR ID	V92U7032CX	45			GTO ST40			
					GTO ST101								
712-18	ST40		VFY	DPS	FSP MSG4 MAJOR ID	V92U7045CX	102			GTO ST42			
712-19			VFY	DPS	FSP MSG4 MINOR ID	V92U7047CX	48			GTO ST42			
					GTO ST100								
712-20	ST42		VFY	DPS	FSP MSG4 MAJOR ID	V92U7045CX	103			GTO ST50			
712-21			VFY	DPS	FSP MSG4 MINOR ID	V92U7047CX	24			GTO ST54			
					GTO ST101								
712-22	ST44		VFY	DPS	FSP MSG4 MINOR ID	V92U7047CX	45			GTO ST50			
					GTO ST101								
712-23	ST50		VFY	DPS	FSP MSG5 MAJOR ID	V92U7060CX	102			GTO ST52			
712-24			VFY	DPS	FSP MSG5 MINOR ID	V92U7062CX	48			GTO ST52			
					GTO ST100								
712-25	ST52		VFY	DPS	FSP MSG5 MAJOR ID	V92U7060CX	103			GTO ST60			
712-26			VFY	DPS	FSP MSG5 MINOR ID	V92U7062CX	24			GTO ST54			
					GTO ST101								
712-27	ST54		VFY	DPS	FSP MSG5 MINOR ID	V92U7062CX	45			GTO ST60			
					GTO ST101								
712-28	ST60		VFY	DPS	GPC ERROR LOG1-ERROR CODE BFS	V98J2509C1				NOTE A		GTO ST61 6.9.24-6	
712-29	ST61		VFY	DPS	GPC ERROR LOG2-ERROR CODE BFS	V98J2525C1				NOTE A		GTO ST62 6.9.24-6	
712-30	ST62		VFY	DPS	GPC ERROR LOG3-ERROR CODE BFS	V98J2541C1				NOTE A		GTO ST63 6.9.24-6	
712-31	ST63		VFY	DPS	GPC ERROR LOG4-ERROR CODE BFS	V98J2557C1				NOTE A		GTO ST64 6.9.24-6	

SEQ	TIME CD CLOCK	I	FUNC	DISC	S T E	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
712-32	ST64		VFY	DPS		GPC ERROR LOG5-ERROR CODE BFS GTO ST100	V98J2573C1				NOTE A	GTO ST10 6.9.24-6		

$ NOTE A: IF THE DESIGNATED SEQUENCES EQUAL ANY OF THE FOLLOWING GOTO ST102.

ERROR LOG CODE (HEX)	ERROR
01	PCI PARITY
02	DMA WRITE PARITY
03	DMA ADDR SPEC
04	DMA STORE PROTECT
05	DMA ADDR PARITY
08	PCI/PCC PARITY
09	DMA INSTR PARITY
0A	DMA DATA PARITY
0C	DMA QUEUE OVERFLOW
0D	DMA TIMEOUT
0F	POWER TRANSIENT
40	SUMCHECK FAIL
41	ILLEGAL ENGAGE/TERM B
43	ENGAGED OPS 000/101
44	STRING(S) DOWNMODE: 2 CONSECUTIVE LSN ERRORS
45	STRING(S) DOWNMODE: NON-MATCHING TRANSFER DATA
46	STRING(S) DOWNMODE: PFS/BFS XFER ELEMENT DISCREPANCY
47	STRING DOWNMODE: LAST STRING
81	ADDR PARITY
82	DATA PARITY
83	DATA PARITY
84	DATA PARITY
85	ROS PARITY
90	ILLEGAL INSTR
91	PRIVILEGE VIOLATION
93	ILLEGAL ADDR
94	FXD PT OVERFLOW
96	UNNORMALIZED DIVIDE
97	STORE PROTECT
9A	EXPONENT OVERFLOW
9B	EXPONENT OVERFLOW
9C	INVALID FLT PT DIVIDE
B2	SVC RESTART

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	VALUE FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
712-32 CONT'D						C0		MAX RATE OVERLOAD					
						C1		ALT RATE OVERLOAD					
						E0		UNPROTECTED INSTR					
						F0		WATCHDOG TIMEOUT					
						F1		GPC FAIL					
						F2		CONTROL MONITOR IDLE					
						F3		IOP POS PARITY					
						F4		IOP FAULT					
					END NOTE A								$
712-33	ST100		CMD	DPS	DPS I/O ERROR			N03IS168D	1				
712-34			CMD	DPS	PASS FSM OR BFS GPC ERR GTO ST10			N039INTGR	ON				
712-35	ST101		CMD	DPS	DPS I/O ERROR			N03IS168D	2				
712-36			CMD	DPS	PASS FSM OR BFS GPC ERR GTO ST10			N039INTGR	ON				
712-37	ST102		CMD	DPS	DPS I/O ERROR			N03IS168D	500				
712-38			CMD	DPS	PASS FSM OR BFS GPC ERR GTO ST10			N039INTGR	ON				
712-39			END	DPS	ERROR ENCODE (INFO ONLY)								

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
					$ G013 TERMINATE LOX REPLENISH $								
713-00			LABL	INTG		G013							
713-01			VFY	LO2	LOX FLIGHT MASS	N03IS008E	ON			INHB MPS4			PL
713-02			VFY	INTG	GLS-GO FOR T-9 GLS START	M009	ON			GTO ST10			
713-03			VFY	INTG	GLS-GO FOR OAA RETRACT	M00A	ON			GTO ST10			
713-04			VFY	INTG	GLS-GO FOR APU START	MAPU	ON			GTO ST10			
713-05			VFY	INTG	GLS-GO FOR PURGE SEQ.4	MPS4	ON			GTO ST10			
713-06			VFY	INTG	GLS-GO ET LO2 PRE-PRESSURIZATION	MLOX	ON			GTO ST10			
713-07			VFY	INTG	GLS-GO FOR ET LH2 REPLN TERM	MLH2	ON			GTO ST10			
713-08			VFY	INTG	GLS-GO FOR AUTO SEQ START	MSEQ	ON			GTO ST10			
713-09			VFY	INTG	GLS-GO FOR SSME IGNITION	MENG	ON			GTO ST10			
713-10			VFY	INTG	GLS-GO FOR SRB IGNITION	MSRB	ON			GTO ST10			
713-11			VFY	INTG	GLS-NO LCC-1 FAILURES	LCC-1	ON			GTO ST10			
713-12			VFY	INTG	GLS-NO LCC-2 FAILURES	LCC-2	ON			GTO ST10			
713-13			VFY	INTG	GLS-NO LCC-3 FAILURES	LCC-3	ON			GTO ST10			
713-14			VFY	INTG	GLS-NO LCC-4 FAILURES	LCC-4	ON			GTO ST10			
713-15			VFY	INTG	MANUAL HOLD		ON			GTO ST10			
713-16			CMD	LO2	GO FOR TERMINATE LOX REPLENISH	N0C7INTGR	ON						PL
713-17			MSG	INTG	START TERM LOX RPL								
					$$ PROPELLANT S/W ISSUES LO2 I/B FILL VLV CL CMD ON <V41K1512XL> $$								
					$$ PROPELLANT S/W ISSUES LO2 I/B FILL VLV OP CMD A OFF <V41K1501XL> $$								
					$$ PROPELLANT S/W ISSUES LO2 I/B FILL VLV OP CMD B OFF <V41K1502XL> $$								
					$ DELAY 10 SECONDS $								
713-18			VFY	LO2	LOX REPL TERMINATE IN PROGRESS	N03IS010E	ON			INHB MPS4			PL
713-19			CMD	INTG	LOX HOLD AVAILABLE TIMER ACTIV.	GCDKTIM3E	ON						
713-20			END	G013									
713-21	ST10		MSG	INTG	SKIPPED LOX REPLENISH TERM								
713-22			END	G013									

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	VALUE FUNCTION DESIGNATOR	SINGL OR LO	HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
					$ G014 INITIATE KSC SSME HEATSHIELD WATER $								
714-00		K	LABL	INTG									
					$ ARM HEATSHIELD WATER $								
714-01		K	CMD	WATR	PTCR VO/LPS CMD BUS ON CMD	GWDKPT08E	ON						
714-02		K	CMD	WATR	PTCR VO/LPS CMD BUS ON CMD	GWDKPT10E	ON						
714-03		K	CMD	WATR	PTCR VO/LPS CMD BUS OFF	GWDKPT13E	OFF						
714-04		K	CMD	WATR	PTCR VO/LPS CMD BUS OFF	GWDKPT09E	OFF						
714-05		K	CMD	WATR	MLP ORBR HS V336-337 ARM CMD	GWDKLU27E	ON						
					$ OPEN VLV 336 AND VLV 337 $								
714-06		K	CMD	WATR	MLP ORBR HS V336-337 OP CMD	GWDKLU28E	ON						
714-07		K	CMD	WATR	MLP ORBR HS V336-337 CL CMD	GWDKLU29E	OFF						
714-08		K	CMD	WATR	MLP ORBR HS V336-337 CL CMD	GWDKLU71E	OFF						
714-09			MSG	KINTG	SSME HEATSHIELD WATER SPRAY INITIATED								
					$ DELAY 5 SECONDS $								
714-10		K	CVFY	MPS	SSME C/O FD 38 ALARM ON	GLHX7473E	OFF					CPER G014	
714-11		K	CVFY	MPS	SSME C/O FD 39 ALARM ON	GLHX7483E	OFF					CPER G014	
714-12			END	G014									

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
					$ G015 BACKUP CONSOLE CRASH $										
715-00			LABL	INTG		G015									
715-01			VFY	INTG	GLS MAINLINE CONSOLE	N03IS270D	2			GTO ST11					
					$ MAINLINE RUNNING IN BACKUP CONSOLE $										
715-02			VFY	INTG	$ MAINLINE HAS NOT PROGRESSED PAST M009 $					GTO ST10					
715-03			VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			HOLD T-9					
					GTO ST12										
					$ MAINLINE IS PAST M009 $										
715-04	ST10		VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			EXIT	TIL MSRB				
					GTO ST12										
					$ BACKUP IS NOT MAINLINE CONSOLE $										
715-05	ST11		VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			INHB MSRB					
715-06	ST12		END	G015											
					$G016 INITIATE VLS SSME HEATSHIELD WATER - TBD$										
					$ G017 GO FOR CENTAUR PRESSURIZATION $										
					$ THIS OPER IS PERFORMED WHEN CDT = A TIME SPECIFIED DURING $										
					$ INITIALIZATION THAT MAY VARY BETWEEN T-1/35 AND T-1/05 $										
717-00		K	LABL	CINTG		G017									
717-01		K	VFY	CINTG	MANUAL HOLD	N03IS048E	ON			GTO ST10					
717-02		K	VFY	CINTG	TC HOLD/RESUME	N03IS347D	0			GTO ST10					
717-03		K	VFY	CINTG	MILESTONES		ON			GTO ST10					
717-04		K	CMD	CINTG	GO FOR CCE PRESSURIZATION - PRI	GCNK3051E	ON					PL			
717-05		K	CMD	CINTG	GO FOR CCE PRESSURIZATION - SEC	GCNK3551E	ON					PL			
717-06		K	MSG	CINTG	CENTAUR PRESS CMD SENT										
					GTO ST20										
717-07	ST10		MSG	INTG	SKIPPED CENTAUR PRESS										
717-08	ST20		END	G017											

SEQ	TIME CD CLOCK	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	HIGH	UNIT	ELSE	DURATION	LCC PAGE
					* * * CONCURRENT PROGRAMS * * *							
					$ P001 AERO-SURFACE PROFILE EVALUATION $							
801-00			LABL	FCL		P001						
					$ START AERO-SURFACE PROFILE $							
802-00			CMD	FCL	INITIATE AERO-SURFACE DRIVE CHEC	CMD-LS	ON					
					$ AERO-SURFACE MOVEMENT FROM INITIAL POSITION - FIRST 9 SECONDS OF PROFILE $							
803-00			VFY	FCL	L INBD ELEVON ACTR CHAN 1 POSN	V58H0802A1	1	NOHI	DEG	1 OF 4		
803-01			VFY	FCL	L INBD ELEVON ACTR CHAN 2 POSN	V58H0803A1	1	NOHI	DEG	1 OF 4		
803-02			VFY	FCL	L INBD ELEVON ACTR CHAN 3 POSN	V58H0804A1	1	NOHI	DEG	1 OF 4		
803-03			VFY	FCL	L INBD ELEVON ACTR CHAN 4 POSN	V58H0805A1	1	NOHI	DEG	INHB MSEQ		
803-04			VFY	FCL	L OUTBD ELEVON ACTR CHAN 1 POSN	V58H0852A1	1	NOHI	DEG	1 OF 4		
803-05			VFY	FCL	L OUTBD ELEVON ACTR CHAN 2 POSN	V58H0853A1	1	NOHI	DEG	1 OF 4		
803-06			VFY	FCL	L OUTBD ELEVON ACTR CHAN 3 POSN	V58H0854A1	1	NOHI	DEG	1 OF 4		
803-07			VFY	FCL	L OUTBD ELEVON ACTR CHAN 4 POSN	V58H0855A1	1	NOHI	DEG	INHB MSEQ		
803-08			VFY	FCL	R INBD ELEVON ACTR CHAN 1 POSN	V58H0902A1	1	NOHI	DEG	1 OF 4		
803-09			VFY	FCL	R INBD ELEVON ACTR CHAN 2 POSN	V58H0903A1	1	NOHI	DEG	1 OF 4		
803-10			VFY	FCL	R INBD ELEVON ACTR CHAN 3 POSN	V58H0904A1	1	NOHI	DEG	1 OF 4		
803-11			VFY	FCL	R INBD ELEVON ACTR CHAN 4 POSN	V58H0905A1	1	NOHI	DEG	INHB MSEQ		
803-12			VFY	FCL	R OUTBD ELEVON ACTR CHAN 1 POSN	V58H0952A1	1	NOHI	DEG	1 OF 4		
803-13			VFY	FCL	R OUTBD ELEVON ACTR CHAN 2 POSN	V58H0953A1	1	NOHI	DEG	1 OF 4		
803-14			VFY	FCL	R OUTBD ELEVON ACTR CHAN 3 POSN	V58H0954A1	1	NOHI	DEG	1 OF 4		
803-15			VFY	FCL	R OUTBD ELEVON ACTR CHAN 4 POSN	V58H0955A1	1	NOHI	DEG	INHB MSEQ		
803-16			VFY	FCL	RUDDER ACTR CHAN 1 POSN	V57H0150A1	1	NOHI	DEG	1 OF 4		
803-17			VFY	FCL	RUDDER ACTR CHAN 2 POSN	V57H0151A1	1	NOHI	DEG	1 OF 4		
803-18			VFY	FCL	RUDDER ACTR CHAN 3 POSN	V57H0152A1	1	NOHI	DEG	1 OF 4		
803-19			VFY	FCL	RUDDER ACTR CHAN 4 POSN	V57H0153A1	1	NOHI	DEG	INHB MSEQ		
803-20			VFY	FCL	SPEEDBRAKE ACTR CHAN 1 POSN	V57H0250A1	6	NOHI	DEG	1 OF 4		
803-21			VFY	FCL	SPEEDBRAKE ACTR CHAN 2 POSN	V57H0251A1	6	NOHI	DEG	1 OF 4		
803-22			VFY	FCL	SPEEDBRAKE ACTR CHAN 3 POSN	V57H0252A1	6	NOHI	DEG	1 OF 4		
803-23			VFY	FCL	SPEEDBRAKE ACTR CHAN 4 POSN	V57H0253A1	6	NOHI	DEG	INHB MSEQ		
803-24			VFY	FCL	SELECTED BODY FLAP FDBK	V9CH6410C1	1.5	NOHI	DEG	INHB MSEQ		
					$ AERO-SURFACE MOVEMENT - LAST 11 SECONDS OF PROFILE $							

SEQ	TIME / CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	SF	SD
804-00			VFY	FCL	L INBD ELEVON ACTR CHAN 1 POSN	V58H0802A1	NOLO	-1	DEG	1 OF 4				
804-01			VFY	FCL	L INBD ELEVON ACTR CHAN 2 POSN	V58H0803A1	NOLO	-1	DEG	1 OF 4				
804-02			VFY	FCL	L INBD ELEVON ACTR CHAN 3 POSN	V58H0804A1	NOLO	-1	DEG	1 OF 4				
804-03			VFY	FCL	L INBD ELEVON ACTR CHAN 4 POSN	V58H0805A1	NOLO	-1	DEG	INHB MSEQ				
804-04			VFY	FCL	L OUTBD ELEVON ACTR CHAN 1 POSN	V58H0852A1	NOLO	-1	DEG	1 OF 4				
804-05			VFY	FCL	L OUTBD ELEVON ACTR CHAN 2 POSN	V58H0853A1	NOLO	-1	DEG	1 OF 4				
804-06			VFY	FCL	L OUTBD ELEVON ACTR CHAN 3 POSN	V58H0854A1	NOLO	-1	DEG	1 OF 4				
804-07			VFY	FCL	L OUTBD ELEVON ACTR CHAN 4 POSN	V58H0855A1	NOLO	-1	DEG	INHB MSEQ				
804-08			VFY	FCL	R INBD ELEVON ACTR CHAN 1 POSN	V58H0902A1	NOLO	-1	DEG	1 OF 4				
804-09			VFY	FCL	R INBD ELEVON ACTR CHAN 2 POSN	V58H0903A1	NOLO	-1	DEG	1 OF 4				
804-10			VFY	FCL	R INBD ELEVON ACTR CHAN 3 POSN	V58H0904A1	NOLO	-1	DEG	1 OF 4				
804-11			VFY	FCL	R INBD ELEVON ACTR CHAN 4 POSN	V58H0905A1	NOLO	-1	DEG	INHB MSEQ				
804-12			VFY	FCL	R OUTBD ELEVON ACTR CHAN 1 POSN	V58H0952A1	NOLO	-1	DEG	1 OF 4				
804-13			VFY	FCL	R OUTBD ELEVON ACTR CHAN 2 POSN	V58H0953A1	NOLO	-1	DEG	1 OF 4				
804-14			VFY	FCL	R OUTBD ELEVON ACTR CHAN 3 POSN	V58H0954A1	NOLO	-1	DEG	1 OF 4				
804-15			VFY	FCL	R OUTBD ELEVON ACTR CHAN 4 POSN	V58H0955A1	NOLO	-1	DEG	INHB MSEQ				
804-16			VFY	FCL	RUDDER ACTR CHAN 1 POSN	V57H0150A1	NOLO	-1	DEG	1 OF 4				
804-17			VFY	FCL	RUDDER ACTR CHAN 2 POSN	V57H0151A1	NOLO	-1	DEG	1 OF 4				
804-18			VFY	FCL	RUDDER ACTR CHAN 3 POSN	V57H0152A1	NOLO	-1	DEG	1 OF 4				
804-19			VFY	FCL	RUDDER ACTR CHAN 4 POSN	V57H0153A1	NOLO	-1	DEG	INHB MSEQ				
804-20			VFY	FCL	SPEEDBRAKE ACTR CHAN 1 POSN	V57H0250A1	NOLO	4	DEG	1 OF 4				
804-21			VFY	FCL	SPEEDBRAKE ACTR CHAN 2 POSN	V57H0251A1	NOLO	4	DEG	1 OF 4				
804-22			VFY	FCL	SPEEDBRAKE ACTR CHAN 3 POSN	V57H0252A1	NOLO	4	DEG	1 OF 4				
804-23			VFY	FCL	SPEEDBRAKE ACTR CHAN 4 POSN	V57H0253A1	NOLO	4	DEG	INHB MSEQ				
804-24			VFY	FCL	SELECTED BODY FLAP FDBK	V90H6410C1	NOLO	-1.5	DEG	INHB MSEQ				
					$ AERO-SURFACE NULL CHECK AT PROFILE COMPLETION $									
805-00			VFY	FCL	L INBD ELEVON ACTR CHAN 1 POSN	V58H0802A1	-.52	1.18	DEG	1 OF 4				
805-01			VFY	FCL	L INBD ELEVON ACTR CHAN 2 POSN	V58H0803A1	-.52	1.18	DEG	1 OF 4				
805-02			VFY	FCL	L INBD ELEVON ACTR CHAN 3 POSN	V58H0804A1	-.52	1.18	DEG	1 OF 4				
805-03			VFY	FCL	L INBD ELEVON ACTR CHAN 4 POSN	V58H0805A1	-.52	1.18	DEG	INHB MSEQ				
805-04			VFY	FCL	L OUTBD ELEVON ACTR CHAN 1 POSN	V58H0852A1	-.36	1.34	DEG	1 OF 4				
805-05			VFY	FCL	L OUTBD ELEVON ACTR CHAN 2 POSN	V58H0853A1	-.36	1.34	DEG	1 OF 4				
805-06			VFY	FCL	L OUTBD ELEVON ACTR CHAN 3 POSN	V58H0854A1	-.36	1.34	DEG	1 OF 4				
805-07			VFY	FCL	L OUTBD ELEVON ACTR CHAN 4 POSN	V58H0855A1	-.36	1.34	DEG	INHB MSEQ				
805-08			VFY	FCL	R INBD ELEVON ACTR CHAN 1 POSN	V58H0902A1	-.52	1.18	DEG	1 OF 4				
805-09			VFY	FCL	R INBD ELEVON ACTR CHAN 2 POSN	V58H0903A1	-.52	1.18	DEG	1 OF 4				
805-10			VFY	FCL	R INBD ELEVON ACTR CHAN 3 POSN	V58H0904A1	-.52	1.18	DEG	1 OF 4				
805-11			VFY	FCL	R INBD ELEVON ACTR CHAN 4 POSN	V58H0905A1	-.52	1.18	DEG	INHB MSEQ				
805-12			VFY	FCL	R OUTBD ELEVON ACTR CHAN 1 POSN	V58H0952A1	-.36	1.34	DEG	1 OF 4				

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
805-13			VFY	FCL	R OUTBD ELEVON ACTR CHAN 2 POSN	V58H0953A1	-.36	1.34	DEG	1 OF 4			
805-14			VFY	FCL	R OUTBD ELEVON ACTR CHAN 3 POSN	V58H0954A1	-.36	1.34	DEG	1 OF 4			
805-15			VFY	FCL	R OUTBD ELEVON ACTR CHAN 4 POSN	V58H0955A1	-.36	1.34	DEG	INHB MSEQ			
805-16			VFY	FCL	RUDDER ACTR CHAN 1 POSN	V57H0150A1	-0.95	0.95	DEG	1 OF 4			
805-17			VFY	FCL	RUDDER ACTR CHAN 2 POSN	V57H0151A1	-0.95	0.95	DEG	1 OF 4			
805-18			VFY	FCL	RUDDER ACTR CHAN 3 POSN	V57H0152A1	-0.95	0.95	DEG	1 OF 4			
805-19			VFY	FCL	RUDDER ACTR CHAN 4 POSN	V57H0153A1	-0.95	0.95	DEG	INHB MSEQ			
805-20			VFY	FCL	SPEEDBRAKE ACTR CHAN 1 POSN	V57H0250A1	2.45	7.55	DEG	1 OF 4			
805-21			VFY	FCL	SPEEDBRAKE ACTR CHAN 2 POSN	V57H0251A1	2.45	7.55	DEG	1 OF 4			
805-22			VFY	FCL	SPEEDBRAKE ACTR CHAN 3 POSN	V57H0252A1	2.45	7.55	DEG	1 OF 4			
805-23			VFY	FCL	SPEEDBRAKE ACTR CHAN 4 POSN	V57H0253A1	2.45	7.55	DEG	INHB MSEQ			
805-24			VFY	FCL	SELECTED BODY FLAP FDBK	V9CH6410C1	-1.41	1.41	DEG	INHB MSEQ			
805-25			END	P001									

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF D
					$ P002 MPS GIMBAL PROFILE EVALUATION $								
806-00			LABL	FCL		P002							
					$ START MPS GIMBAL PROFILE $								
807-00			CMD	FCL	INITIATE MPS GIMBAL CHECK	CMD-LS	ON						
					$ 7 SECONDS AFTER THE INITIATING CMD-LS - AVG 25 SAMPLES NEXT 6 MEAS. $								
808-00			VFY	FCL	MPS ENG 1 P ACTR POSN	V58H1100A1	4.5	7.5	DEG	INHB MSEQ			
808-01			VFY	FCL	MPS ENG 1 Y ACTR POSN	V58H1150A1	4.5	7.5	DEG	INHB MSEQ			
808-02			VFY	FCL	MPS ENG 2 P ACTR POSN	V58H1200A1	4.5	7.5	DEG	INHB MSEQ			
808-03			VFY	FCL	MPS ENG 2 Y ACTR POSN	V58H1250A1	4.5	7.5	DEG	INHB MSEQ			
808-04			VFY	FCL	MPS ENG 3 P ACTR POSN	V58H1300A1	4.5	7.5	DEG	INHB MSEQ			
808-05			VFY	FCL	MPS ENG 3 Y ACTR POSN	V58H1350A1	4.5	7.5	DEG	INHB MSEQ			
					$ 17 SECONDS AFTER THE INITIATING CMD-LS - AVG 25 SAMPLES OF NEXT 6 MEAS. $								
809-00			VFY	FCL	MPS ENG 1 P ACTR POSN	V58H1100A1	-7.5	-4.5	DEG	INHB MSEQ			
809-01			VFY	FCL	MPS ENG 1 Y ACTR POSN	V58H1150A1	-7.5	-4.5	DEG	INHB MSEQ			
809-02			VFY	FCL	MPS ENG 2 P ACTR POSN	V58H1200A1	-7.5	-4.5	DEG	INHB MSEQ			
809-03			VFY	FCL	MPS ENG 2 Y ACTR POSN	V58H1250A1	-7.5	-4.5	DEG	INHB MSEQ			
809-04			VFY	FCL	MPS ENG 3 P ACTR POSN	V58H1300A1	-7.5	-4.5	DEG	INHB MSEQ			
809-05			VFY	FCL	MPS ENG 3 Y ACTR POSN	V58H1350A1	-7.5	-4.5	DEG	INHB MSEQ			
809-06			END	P002									

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SSFD
					$ P003 SRB GIMBAL PROFILE EVALUATION $								
810-00			LABL	BHYD		P003							
					$ START GIMBAL PROFILE $								
811-00			CMD	BHYD	SRB FCS/HYD VERIF FLAG	CMD-LS	ON						
					$ ACTUATOR MOVEMENT FROM INITIAL POSITION - FIRST 2 SECONDS OF PROFILE $								
812-00			VFY	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	.63	NOHI	IN	EXIT			
812-01			VFY	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	.63	NOHI	IN	EXIT			
812-02			VFY	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	.63	NOHI	IN	EXIT			
812-03			VFY	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	.63	NOHI	IN	EXIT			
					$ ACTUATOR MOVEMENT - LAST 2 SECONDS OF PROFILE $								
813-00			VFY	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	NOLO	-.63	IN	EXIT			
813-01			VFY	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	NOLO	-.63	IN	EXIT			
813-02			VFY	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	NOLO	-.63	IN	EXIT			
813-03			VFY	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	NOLO	-.63	IN	EXIT			
					$ ACTUATOR NULL CHECK AT PROFILE COMPLETION $								
814-00			VFY	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	-.5	.5	IN	EXIT			
814-01			VFY	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	-.5	.5	IN	EXIT			
814-02			VFY	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	-.5	.5	IN	EXIT			
814-03			VFY	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	-.5	.5	IN	EXIT			
814-04			END	P003									

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
					$ P004 GOX VENT ARM RETRACT $								
					$**********$								
					$ PAD A - KSC $								
					$**********$								
815-00			LABL	GOX		P004							
815-01			VFY	INTG	SITE			KSCA		GTO S70			
816-00		A	CMD	GOX	GOX VENT PURGE HTR BANK #2 ON CM	GECK1662E	OFF						
816-01		A	CMD	GOX	GOX VENT PURGE HTR BANK #1 ON CM	GECK3662E	OFF						
816-02		A	CMD	GOX	REG SENSE SEL I/F PRESS PRI CMD	GECK1666E	OFF						
816-03		A	CMD	GOX	REG SENSE SEL I/F PRESS SEC CMD	GECK3666E	OFF						
816-04		A	CMD	GOX	REG SENSE SEL SEC VLV CMD	GECK3670E	OFF						
816-05		A	CMD	GOX	GOX VENT PURGE OUT PRI VLV CLS C	GECK1668E	ON						
					$ VERIFY WITHIN 2 SECS $								
817-00		A	VFY	GOX	GOX VENT PURGE OUT PRI VLV CLS I	GECX1669E	ON			GTO S8			
					GTO S10								
818-00	S8	A	CMD	GOX	PRGE OUT SEL SEC FLOW CNTL VLV C	GECK3672E	ON						
818-01		A	CMD	GOX	GOX VENT PURGE OUT SEC VLV CLS C	GECK3668E	ON						
					$ VERIFY WITHIN 2 SECS $								
819-00		A	VFY	GOX	PRGE OUT SEL SEC FLOW CNTL VLV I	GECX3673E	ON			2 OF 2			
819-01		A	VFY	GOX	GOX VENT PURGE OUT SEC VLV CLS I	GECX3669E	ON			GTO S9			
					GTO S10								
820-00	S9	A	CMD	GOX	GOX VENT PURGE IN PRI VLV CLS CM	GECK1664E	ON						
820-01		A	CMD	GOX	GOX VENT PURGE IN SEC VLV CLS CM	GECK3664E	ON						
					$ HEATED PURGE OFF $								
821-00	S10	A			DELAY 20 SEC								
					$ PRIMARY LOOP - HOOD UP $								
822-00		A	VFY	GOX	HOOD SECONDARY MODE SELECTED	NSAK0002X	OFF			GTO S20			
822-01		A	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	ON						

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS FD
822-02		A	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	ON						
					$ VERIFY WITHIN 5 SECS $								
823-00		A	VFY	GOX	6308A202 HOOD DOWN SWITCH NO.1	GSAX8331E	OFF			1 OF 3			
823-01		A	VFY	GOX	6308A203 HOOD DOWN SWITCH NO.3	GSAX8333E	OFF			1 OF 3			
823-02		A	VFY	GOX	A133716 HOOD POSITION INDICATION	GSAH8531A	5	NOHI	DEG	GTO S20			
					$ REPEAT FOR NO MORE THAN 30 SECS ELSE GO TO S18 $								
824-00	S15	A	VFY	GOX	6308A200 HOOD UP SWITCH NO.1	GSAX8321E	ON			2 OF 3			
824-01		A	VFY	GOX	A133716 HOOD POSITION INDICATOR	GSAH8531A	45	NOHI	DEG	2 OF 3			
824-02		A	VFY	GOX	6308A201 HOOD UP SWITCH NO.3	GSAX8323E	ON			GTO S15			
					GTO S19								
825-00	S18	A	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						
825-01		A	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						
825-02		A	MSG		PRIMARY SYSTEM FAILED GO TO SECONDARY								
					GTO S20								
826-00	S19	A	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						
826-01		A	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						
					GTO S30								
					$ SECONDARY LOOP - HOOD UP $								
827-00	S20	A	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						
827-01		A	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						
827-02		A	CMD	GOX	HOOD SECONDARY MODE SELECTED	NSAK0002X	ON						
827-03		A	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	ON						
827-04		A	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	ON						
					$ REPEAT FOR NO MORE THAN 30 SECS ELSE GO TO S26 INHB MSEQ$								
828-00	S25	A	VFY	GOX	6308A200 HOOD UP SWITCH NO.2	GSAX8327E	ON			2 OF 3			
828-01		A	VFY	GOX	A133716 HOOD POSITION INDICATOR	GSAH8536A	45	NOHI	DEG	2 OF 3			
828-02		A	VFY	GOX	6308A201 HOOD UP SWITCH NO.4	GSAX8329E	ON			GTO S25			
					GTO S28					INHB MSEQ			
829-00	S26	A	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	OFF						
829-01		A	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	OFF						
					GTO S200								

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SF	SD
830-00	S28	A	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	OFF							
830-01		A	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	OFF							
831-00	S30	A	CMD	GOX	A133680 EXTEND LOCK VALVE-CLOSE	GSAK8090E	ON							
831-01		A	CMD	GOX	A133680 EXTEND LOCK VALVE-CLOSE	GSAK8095E	ON							
831-02		A	CMD	GOX	A133501 PRIMARY RETRACT VLV-RESE	GSAK8170E	OFF							
831-03		A	CMD	GOX	A133501 PRIMARY RETRACT VLV-RESE	GSAK8175E	OFF							
831-04		A	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8160E	ON							
831-05		A	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8165E	ON							
					$ VERIFY WITHIN 3 SECS $									
832-00		A	VFY	GOX	A133508 PRI RETRACT VLV RETRACT	GSAX8162E	ON			2 OF 2				
832-01		A	VFY	GOX	A133509 PRI RETRACT VLV RETRACT	GSAX8163E	ON			GTO S50				
					$ VERIFY WITHIN 9 SECS $									
833-00		A	VFY	GOX	6308A109 ARM FULLY EXTENDED	GSAX8231E	OFF			GTO S50				
					$ VERIFY WITHIN 50 SECS $									
834-00		A	VFY	GOX	6308A103 RETRACT SWITCH NO.1	GSAX8221E	ON			1 OF 3				
834-01		A	VFY	GOX	6308A103 RETRACT SWITCH NO.1	GSAX8222E	ON			1 OF 3				
834-02		A	VFY	GOX	A133566 ARM POSITION INDICATION	GSAH8191A	NOLO	2	DEG	GTO S50				
					GTO S200									
835-00	S50	A	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8160E	OFF							
835-01		A	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8165E	OFF							
835-02		A	CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8170E	ON							
835-03		A	CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8175E	ON							
					$ DELAY 2 SEC $									
836-00		A	CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8170E	OFF							
836-01		A	CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8175E	OFF							
836-02		A	CMD	GOX	A133507 SECONDARY RETRACT-RETRACT	GSAK8180E	ON							
836-03		A	CMD	GOX	A133507 SECONDARY RETRACT-RETRACT	GSAK8185E	ON							
					$ VERIFY WITHIN 50 SECS $									
837-00		A	VFY	GOX	6308A103 RETRACT SWITCH NO.1	GSAX8221E	ON			1 OF 3				
837-01		A	VFY	GOX	6308A102 RETRACT SWITCH NO.2	GSAX8222E	ON			1 OF 3				

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	VALUE FUNCTION DESIGNATOR	SINGL OR LO	HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
837-02		A	VFY	GOX	A133566 ARM POSITION INDICATION	GSAH8191A	NOLO	2	DEG	INHB MSEQ			
					GTO S200								
					$**********$								
					$ PAD B - KSC $								
					$**********$								
838-00	S70		VFY	INTG	SITE					KSCB	GTO S90		
839-00		B	CMD	GOX	HIR CTL NO.2 LOAD CONNECT	GSAK9210E	OFF						
839-01		B	CMD	GOX	HTR CTL NO.2 LOAD CONNECT	GSAK9215E	OFF						
839-02		B	CMD	GOX	HIR CTL NO.1 LOAD CONNECT	GSAK9160E	OFF						
839-03		B	CMD	GOX	HTR CTL NO.1 LOAD CONNECT	GSAK9165E	OFF						
839-04		B	CMD	GOX	HIR CTL NO.2 AC ON	GSAK9200E	OFF						
839-05		B	CMD	GOX	HTR CTL NO.2 AC ON	GSAK9205E	OFF						
839-06		B	CMD	GOX	HIR CTL NO.1 AC ON	GSAK9150E	OFF						
839-07		B	CMD	GOX	HTR CTL NO.1 AC ON	GSAK9155E	OFF						
839-08		B	CMD	GOX	A135918 INLET VLV PRI CTL-OPEN	GSAK9050E	ON						
839-09		B	CMD	GOX	A135918 INLET VLV PRI CTL-OPEN	GSAK9055E	ON						
					$ VERIFY WITHIN 2 SECS $								
840-00		B	VFY	GOX	A135918 INLET VLV PRI CTL-OPEN	GSAX9051E	ON				GTO S108		
					GTO S110								
841-00	S108	B	CMD	GOX	A135920 IN VLV CTL SEL-SEC SEL	GSAK9060E	ON						
841-01		B	CMD	GOX	A135920 IN VLV CTL SEL-SEC SEL	GSAK9065E	ON						
841-02		B	CMD	GOX	A135916 IN VLV SEC CTL-OPEN	GSAK9040E	ON						
841-03		B	CMD	GOX	A135916 IN VLV SEC CTL-OPEN	GSAK9045E	ON						
					$ VERIFY WITHIN 2 SECS $								
842-00		B	VFY	GOX	A135920 IN VLV CTL SEL	GSAX9066E	ON				2 OF 2		
842-01		B	VFY	GOX	A135916 IN VLV SEC CTL-OPEN	GSAX9046E	ON				GTO S109		
					GTO S110								
843-00	S109	B	CMD	GOX	A135900 PRI REG FLOW VLV-OPEN	GSAK9020E	ON						
843-01		B	CMD	GOX	A135900 PRI REG FLOW VLV-OPEN	GSAK9025E	ON						
843-02		B	CMD	GOX	A135903 SEC REG FLOW VLV-OPEN	GSAK9030E	ON						

SEQ	TIME CD CLOCK	SI ET	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS F D
343-03		B	CMD	GOX	A135903 SEC REG FLOW VLV-OPEN	GSAK9035E	ON						
					$ HEATED PURGE OFF $								
844-00	S110	B			DELAY 20 SEC								
					$ PRIMARY LOOP - HOOD UP $								
345-00		B	VFY	GOX	HOOD SECONDARY MODE SELECTED	NSAK0002X	OFF			GTO S120			
345-01		B	CMD	GOX	A133524 PRI HOOD UP VALVE-OPEN	GSAK8310E	ON						
345-02		B	CMD	GOX	A133524 PRI HOOD UP VALVE-OPEN	GSAK8315E	ON						
					$ VERIFY WITHIN 5 SEC $								
846-00		B	VFY	GOX	6308A202 HOOD DOWN SWITCH NO.1	GSAX8331E	OFF			1 OF 4			
846-01		B	VFY	GOX	6308A203 HOOD DOWN SWITCH NO.2	GSAX8332E	OFF			1 OF 4			
846-02		B	VFY	GOX	6308A206 HOOD DOWN SWITCH NO.3	GSAX8333E	OFF			1 OF 4			
846-03		B	VFY	GOX	A133716 HOOD POSITION INDICATION	GSAH8531A	5	NOHI	DEG	GTO S120			
					$ REPEAT FOR NO MORE THAN 30 SECS ELSE GO TO S118 $								
847-00	S115	B	VFY	GOX	6308A200 HOOD UP SWITCH NO.1	GSAX8321E	ON			2 OF 4			
847-01		B	VFY	GOX	6308A201 HOOD UP SWITCH NO.2	GSAX8322E	ON			2 OF 4			
847-02		B	VFY	GOX	A133716 HOOD POSITION INDICATOR	GSAH8531A	45	NOHI	DEG	2 OF 4			
847-03		B	VFY	GOX	6308A205 HOOD UP SWITCH NO.3 GTO S119	GSAX8323E	ON			GTO S115			
848-00	S118	B	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						
848-01		B	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						
848-02		B	MSG		PRIMARY SYSTEM FAILED GO TO SECONDARY GTO S120								
849-00	S119	B	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						
849-01		B	CMD	GOX	A133524 PRI HOOD VLV-OPEN GTO S130	GSAK8315E	OFF						
					$ SECONDARY LOOP - HOOD UP $								
850-00	S120	B	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						
850-01		B	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						
850-02		B	CMD	GOX	HOOD SECONDARY MODE SELECTED	NSAK0002X	ON						
850-03		B	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	ON						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
850-04		B	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	ON						
					$ REPEAT FOR NO MORE THAN 30 SECS ELSE GO TO S126 INHB MSEQ $								
854-00	S125	B	VFY	GOX	6308A200 HOOD UP SWITCH NO.1	GSAX8326E	ON			2 OF 4			
854-01		B	VFY	GOX	6308A201 HOOD UP SWITCH NO.2	GSAX8327E	ON			2 OF 4			
854-02		B	VFY	GOX	A133716 HOOD POSITION INDICATOR	GSAH8536A	45	NOHI	DEG	2 OF 4			
854-03		B	VFY	GOX	6308A205 HOOD UP SWITCH NO.3	GSAX8328E	ON			GTO S125			
					GTO S128					INHB MSEQ			
855-00	S126	B	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	OFF						
855-01		B	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	OFF						
					GTO S200								
856-00	S128	B	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	OFF						
856-01		B	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	OFF						
857-00	S130	B	CMD	GOX	A133680 EXTEND LOCK VALVE-CLOSE	GSAK8090E	ON						
857-01		B	CMD	GOX	A133680 EXTEND LOCK VALVE-CLOSE	GSAK8095E	ON						
857-02		B	CMD	GOX	A133501 PRI RETRACT VLV-RESE	GSAK8170E	OFF						
857-03		B	CMD	GOX	A133501 PRI RETRACT VLV-RESE	GSAK8175E	OFF						
857-04		B	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8160E	ON						
857-05		B	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8165E	ON						
					$ VERIFY WITHIN 3 SECS $								
858-00		B	VFY	GOX	A133508 PRI RETRACT VLV-RETRACT	GSAX8162E	ON			2 OF 2			
858-01		B	VFY	GOX	A133509 PRI RETRACT VLV-RETRACT	GSAX8163E	ON			GTO S150			
					$ VERIFY WITHIN 9 SECS $								
859-00		B	VFY	GOX	6308A109 ARM FULLY EXTENDED	GSAX8231E	OFF			GTO S150			
					$ VERIFY WITHIN 50 SECS $								
860-00		B	VFY	GOX	6308A103 RETRACT SWITCH NO.1	GSAX8221E	ON			1 OF 3			
860-01		B	VFY	GOX	6308A103 RETRACT SWITCH NO.1	GSAX8222E	ON			1 OF 3			
860-02		B	VFY	GOX	A133566 ARM POSITION INDICATION	GSAH8191A	NOLO	2	DEG	GTO S150			
					GTO S200								
862-00	S150	B	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8160E	OFF						
862-01		B	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8165E	OFF						
862-02		B	CMD	GOX	A133501 PRI RETRACT VLV-RESET	GSAK8170E	ON						

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
862-03		B	CMD	GOX	A133501 PRI RETRACT VLV-RESET	GSAK8175E	ON						
					$ DELAY 2 SEC $								
863-00		B	CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8170E	OFF						
863-01		B	CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8175E	OFF						
863-02		B	CMD	GOX	A133507 SECONDARY RETRACT-RETRACT	GSAK8180E	ON						
863-03		B	CMD	GOX	A133507 SECONDARY RETRACT-RETRACT	GSAK8185E	ON						
					$ VERIFY WITHIN 50 SECS $								
864-00		B	VFY	GOX	6308A103 RETRACT SWITCH NO.1	GSAX8221E	ON			1 OF 3			
864-01		B	VFY	GOX	6308A102 RETRACT SWITCH NO.2	GSAX8222E	ON			1 OF 3			
864-02		B	VFY	GOX	A133566 ARM POSITION INDICATION	GSAH8191A	NOLO	2	DEG	INHB MSEQ			
					GTO S200								
					$**********$								
					$ VAFB $								
					$**********$								
865-00	S90		VFY	INTG	SITE	VLS				GTO S200			
866-00		V	CMD	GOX	HTR CNTL NO.3 - AC ON	GSAK9550E	OFF						
866-01		V	CMD	GOX	HTR CNTL NO.3 - AC ON	GSAK9555E	OFF						
866-02		V	CMD	GOX	HTR CNTL NO.3 - LOAD CONNECT	GSAK9560E	OFF						
866-03		V	CMD	GOX	HTR CNTL NO.3 - LOAD CONNECT	GSAK9565E	OFF						
866-04		V	CMD	GOX	HTR CNTL NO.2 - AC ON	GSAK9200E	OFF						
866-05		V	CMD	GOX	HTR CNTL NO.2 - AC ON	GSAK9205E	OFF						
866-06		V	CMD	GOX	HTR CNTL NO.2 - LOAD CONNECT	GSAK9210E	OFF						
866-07		V	CMD	GOX	HTR CNTL NO.2 - LOAD CONNECT	GSAK9215E	OFF						
866-08		V	CMD	GOX	HTR CNTL NO.1 - AC ON	GSAK9150E	OFF						
866-09		V	CMD	GOX	HTR CNTL NO.1 - AC ON	GSAK9155E	OFF						
866-10		V	CMD	GOX	HTR CNTL NO.1 - LOAD CONNECT	GSAK9160E	OFF						
866-11		V	CMD	GOX	HTR CNTL NO.1 - LOAD CONNECT	GSAK9165E	OFF						
866-12		V	CMD	GOX	A135918 INLET VLV PRI CNTL-OPEN	GSAK9050E	ON						
866-13		V	CMD	GOX	A135918 INLET VLV PRI CNTL-OPEN	GSAK9055E	ON						
					$ VERIFY WITHIN 2 SEC $								
867-00		V	VFY	GOX	A135918 INLET VLV PRI CNTL-OPEN	GSAX9051E	ON			1 OF 2			
867-01		V	VFY	GOX	A135918 INLET VLV PRI CNTL-OPEN	GSAX9056E	ON			GTO S7			
					GTO S10								
868-00	S7	V	CMD	GOX	A135920 IN VLV CNTL SEL-SEC SEL	GSAK9060E	ON						

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	VALUE FUNCTION DESIGNATOR	SINGL OR LO	HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
868-01		V	CMD	GOX	A135920 IN VLV CNTL SEL-SEC SEL	GSAK9065E	ON						
868-02		V	CMD	GOX	A135916 IN VLV SEC CNTL-OPEN	GSAK9040E	ON						
868-03		V	CMD	GOX	A135916 IN VLV SEC CNTL-OPEN	GSAK9045E	ON						
					$ VERIFY WITHIN 2 SECS $								
869-00		V	VFY	GOX	A135920 IN VLV CNTL SEL-SEC SEL	GSAX9061E	ON			1 OF 2			
869-01		V	VFY	GOX	A135920 IN VLV CNTL SEL-SEC SEL	GSAX9066E	ON			AND			
869-02		V	VFY	GOX	A135916 IN VLV SEC CNTL-OPEN	GSAX9041E	ON			1 OF 2			
869-03		V	VFY	GOX	A135916 IN VLV SEC CNTL-OPEN	GSAX9046E	ON			GTO S9			
					GTO S10								
870-00	S9	V	CMD	GOX	A135900 PRI REG FLOW VLV-OPEN	GSAK9020E	ON						
870-01		V	CMD	GOX	A135900 PRI REG FLOW VLV-OPEN	GSAK9025E	ON						
870-02		V	CMD	GOX	A135903 SEC REG FLOW VLV-OPEN	GSAK9030E	ON						
870-03		V	CMD	GOX	A135903 SEC REG FLOW VLV-OPEN	GSAK9035E	ON						
					$ HEATED PURGE OFF $								
871-00	S10	V			DELAY 20 SEC								
					$ PRIMARY LOOP - HOOD UP $								
872-00		V	VFY	GOX	HOOD SECONDARY MODE SELECTED	NSAK0002X	OFF			GTO S20			
872-01		V	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	ON						
872-02		V	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	ON						
					$ VERIFY WITHIN 5 SECS $								
873-00		V	VFY	GOX	6308A202 HOOD DN SW NO. 1	GSAX8331E	OFF			1 OF 8			
873-01		V	VFY	GOX	6308A203 HOOD DN SW NO. 2	GSAX8332E	OFF			1 OF 8			
873-02		V	VFY	GOX	6308A206 HOOD DN SW NO. 3	GSAX8333E	OFF			1 OF 8			
873-03		V	VFY	GOX	A133716 HOOD POS INDICATOR	GSAH8531A	5	NOHI	DEG	1 OF 8			
873-04		V	VFY	GOX	6308A202 HOOD DN SW NO. 1	GSAX8336E	OFF			1 OF 8			
873-05		V	VFY	GOX	6308A203 HOOD DN SW NO. 2	GSAX8337E	OFF			1 OF 8			
873-06		V	VFY	GOX	6308A206 HOOD DN SW NO. 3	GSAX8338E	OFF			1 OF 8			
873-07		V	VFY	GOX	A133716 HOOD POS INDICATOR	GSAH8536A	5	NOHI	DEG	GTO S20			
					$ REPEAT FOR NO MORE THAN 30 SECS ELSE GO TO S18 $								
874-00	S15	V	VFY	GOX	6308A200 HOOD UP SW NO. 1	GSAX8321E	ON			3 OF 4			

SEQ	TIME CD CLOCK	SI TE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS F D
874-01		V	VFY	GOX	6308A201 HOOD UP SW NO. 2	GSAX8322E	ON			3 OF 4			
874-02		V	VFY	GOX	6308A205 HOOD UP SW NO. 3	GSAX8323E	ON			3 OF 4			
874-03		V	VFY	GOX	A133716 HOOD POS IND	GSAH8531A	45	51	DEG	GTO S16			
					GTO S19								
875-00	S16	V	VFY	GOX	6308A200 HOOD UP SW NO. 1	GSAX8326E	ON			3 OF 4			
875-01		V	VFY	GOX	6308A201 HOOD UP SW NO. 2	GSAX8327E	ON			3 OF 4			
875-02		V	VFY	GOX	6308A205 HOOD UP SW NO. 3	GSAX8328E	ON			3 OF 4			
875-03		V	VFY	GOX	A133716 HOOD POS IND	GSAH8536A	45	51	DEG	GTO S15			
					GTO S19								
876-00	S18	V	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						
876-01		V	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						
876-02		V	MSG	GOX	PRIMARY SYSTEM FAILED GO TO SECONDARY								
					GTO S20								
877-00	S19	V	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						
877-01		V	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						
					GTO S30								
					$ SECONDARY LOOP - HOOD UP $								
878-00	S20	V	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						
878-01		V	CMD	GOX	A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						
878-02		V	CMD	GOX	HOOD SECONDARY MODE SELECTED	NSAK0002X	ON						
878-03		V	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	ON						
878-04		V	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	ON						
					$ REPEAT FOR NO MORE THAN 30 SECS ELSE GO TO S27 INHB MSEQ $								
879-00	S25	V	VFY	GOX	6308A200 HOOD UP SW NO. 1	GSAX8321E	ON			3 OF 4			
879-01		V	VFY	GOX	6308A201 HOOD UP SW NO. 2	GSAX8322E	ON			3 OF 4			
879-02		V	VFY	GOX	6308A205 HOOD UP SW NO. 3	GSAX8323E	ON			3 OF 4			
879-03		V	VFY	GOX	A133716 HOOD POS IND	GSAH8531A	45	51	DEG	GTO S26			
					GTO S28								
879-04	S26	V	VFY	GOX	6308A200 HOOD UP SW NO. 1	GSAX8326E	ON			3 OF 4			
879-05		V	VFY	GOX	6308A201 HOOD UP SW NO. 2	GSAX8327E	ON			3 OF 4			
879-06		V	VFY	GOX	6308A205 HOOD UP SW NO. 3	GSAX8328E	ON			3 OF 4			
879-07		V	VFY	GOX	A133716 HOOD POS IND	GSAH8536A	45	51	DEG	GTO S25			
					GTO S28								

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	VALUE FUNCTION DESIGNATOR	SINGL OR LO	HIGH	UNIT	ELSE	DURATION	LCC PAGE	S S F D
880-00	S27	V	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	OFF						
880-01		V	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN GTO S200	GSAK8285E	OFF						
881-00	S28	V	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	OFF						
881-01		V	CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	OFF						
					$ EXTEND LOCK UNLOCK SEQUENCE (VLS) $								
882-00	S30	V	CMD	GOX	A LOCK PRI EXTEND LOCK VLV	GSAK6000E	OFF						
882-01		V	CMD	GOX	A LOCK SEC EXTEND LOCK VLV	GSAK6020E	OFF						
882-02		V	CMD	GOX	A LOCK PRI EXTEND LOCK VLV	GSAK6005E	OFF						
882-03		V	CMD	GOX	A LOCK SEC EXTEND LOCK VLV	GSAK6025E	OFF						
					$ UNLOCK GVA (VLS) $								
883-00		V	CMD	GOX	UNLOCK PRI EXTEND LOCK VLV	GSAK6010E	ON						
883-01		V	CMD	GOX	UNLOCK SEC EXTEND LOCK VLV	GSAK6030E	ON						
883-02		V	CMD	GOX	UNLOCK PRI EXTEND LOCK VLV	GSAK6015E	ON						
883-03		V	CMD	GOX	UNLOCK SEC EXTEND LOCK VLV	GSAK6035E	ON						
					$ VERIFY GVA UNLOCKED WITHIN 2 SECS (VLS) ESLE GTO S32 AND INHB MSEQ $								
884-00	S31	V	VFY	GOX	A EXTEND TOP UNLOCKED SW	GSAX6091E	ON			1 OF 4			
884-01		V	VFY	GOX	A EXTEND TOP UNLOCKED SW	GSAX6096E	ON			1 OF 4			
884-02		V	VFY	GOX	A EXTEND TOP LOCKED SW	GSAX6101E	OFF			1 OF 4			
884-03		V	VFY	GOX	A EXTEND TOP LOCKED SW	GSAX6106E	OFF			AND			
884-04		V	VFY	GOX	A EXTEND BOTTOM UNLOCKED SW	GSAX6111E	ON			1 OF 4			
884-05		V	VFY	GOX	A EXTEND BOTTOM UNLOCKED SW	GSAX6116E	ON			1 OF 4			
884-06		V	VFY	GOX	A EXTEND BOTTOM LOCKED SW	GSAX6121E	OFF			1 OF 4			
884-07		V	VFY	GOX	A EXTEND BOTTOM LOCKED SW GTO S33	GSAX6126E	OFF			GTO S31			
885-00	S32	V	CMD	GOX	UNLOCK PRI EXTEND LOCK VLV	GSAK6010E	OFF						
885-01		V	CMD	GOX	UNLOCK SEC EXTEND LOCK VLV	GSAK6030E	OFF						
885-02		V	CMD	GOX	UNLOCK PRI EXTEND LOCK VLV	GSAK6015E	OFF						
885-03		V	CMD	GOX	UNLOCK SEC EXTEND LOCK VLV	GSAK6035E	OFF						
885-04		V	CMD	GOX	A LOCK PRI EXTEND LOCK VLV	GSAK6000E	ON						
885-05		V	CMD	GOX	A LOCK SEC EXTEND LOCK VLV	GSAK6020E	ON						
885-06		V	CMD	GOX	A LOCK PRI EXTEND LOCK VLV	GSAK6005E	ON						

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
885-07		V	CMD	GOX	A LOCK SEC EXTEND LOCK VLV	GSAK6025E	ON								
					GTO S200										
886-00	S33	V	CMD	GOX	A133501 PRI RETRACT VLV-RSET	GSAK8170E	OFF								
886-01		V	CMD	GOX	A133501 PRI RETRACT VLV-RSET	GSAK8175E	OFF								
886-02		V	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8160E	ON								
886-03		V	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8165E	ON								
					$ VERIFY WITHIN 3 SECS $										
887-00		V	VFY	GOX	A133508 PRI RETRACT VLV RETRACT	GSAX8162E	ON			1 OF 2					
887-01		V	VFY	GOX	A133508 PRI RETRACT VLV RETRACT	GSAX8167E	ON			AND					
887-02		V	VFY	GOX	A133509 PRI RETRACT VLV RETRACT	GSAX8163E	ON			1 OF 2					
887-03		V	VFY	GOX	A133509 PRI RETRACT VLV RETRACT	GSAX8168E	ON			GTO S50					
					$ VERIFY WITHIN 9 SECS $										
888-00		V	VFY	GOX	6308A109 ARM FULLY EXTENDED SW 1	GSAX6071E	OFF			1 OF 4					
888-01		V	VFY	GOX	6308A120 ARM FULLY EXTENDED SW 2	GSAX6081E	OFF			1 OF 4					
888-02		V	VFY	GOX	6308A109 ARM FULLY EXTENDED SW 1	GSAX6076E	OFF			1 OF 4					
888-03		V	VFY	GOX	6308A120 ARM FULLY EXTENDED SW 2	GSAX6086E	OFF			GTO S50					
					$ VERIFY WITHIN 50 SECS $										
889-00		V	VFY	GOX	6308A103 RETRACT SW NO. 1	GSAX8221E	ON			1 OF 6					
889-01		V	VFY	GOX	6308A102 RETRACT SW NO. 2	GSAX8222E	ON			1 OF 6					
889-02		V	VFY	GOX	A151111 ARM POS IND	GSAH8191A	NOLO	2	DEG	1 OF 6					
889-03		V	VFY	GOX	6308A103 RETRACT SW NO. 1	GSAX8226E	ON			1 OF 6					
889-04		V	VFY	GOX	6308A102 RETRACT SW NO. 2	GSAX8227E	ON			1 OF 6					
889-05		V	VFY	GOX	A151111 ARM POS IND	GSAH8196A	NOLO	2	DEG	GTO S50					
					GTO S 200										
890-00	S50	V	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8160E	OFF								
890-01		V	CMD	GOX	A133501 PRI RETRACT VLV-RETRACT	GSAK8165E	OFF								
890-02		V	CMD	GOX	A133501 PRI RETRACT VLV-RESET	GSAK8170E	ON								
890-03		V	CMD	GOX	A133501 PRI RETRACT VLV-RESET	GSAK8175E	ON								
					$ DELAY 2 SECS $										
891-00		V	CMD	GOX	A133501 PRI RETRACT VLV-RESET	GSAK8170E	OFF								
891-01		V	CMD	GOX	A133501 PRI RETRACT VLV-RESET	GSAK8175E	OFF								

SEQ	TIME CD CLOCK	S I T E	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	S S F D
891-02		V	CMD	GOX	A133507 SEC RETRACT-RETRACT	GSAK8180E	ON						
891-03		V	CMD	GOX	A133507 SEC RETRACT-RETRACT	GSAK8185E	ON						
					$ VERIFY WITHIN 50 SECS $								
892-00		V	VFY	GOX	6308A103 RETRACT SW NO. 1	GSAX8221E	ON			1 OF 6			
892-01		V	VFY	GOX	6208A102 RETRACT SW NO. 2	GSAX8222E	ON			1 OF 6			
892-02		V	VFY	GOX	A15111 ARM POS IND	GSAH8191A	NOLO	2	DEG	1 OF 6			
892-03		V	VFY	GOX	6308A103 RETRACT SW NO. 1	GSAX8226E	ON			1 OF 6			
892-04		V	VFY	GOX	6308A102 RETRACT SW NO. 2	GSAX8227E	ON			1 OF 6			
892-05		V	VFY	GOX	A151111 ARM POS IND	GSAH8196A	NOLO	2	DEG	INHB MSEQ			
893-00	S200				TERMINATE								
893-01			END	P004									

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
					$ P005 OAA CONFIGURE FOR EXTEND AND HYDRAULIC ACCUMULATOR RECHARGE $										
894-00		K	LABL	INTG		P005									
					$ OAA CONFIGURE FOR EXTEND $										
895-00		K	CMD	ARMS	OAA OPEN PRI RETRACT SUPPLY V	GSAK7210E	OFF								
895-01		K	CMD	ARMS	OAA OPEN PRI RETRACT SUPPLY V	GSAK7215E	OFF								
895-02		K	CMD	ARMS	OAA OPEN PRI RETRACT RETURN	GSAK7230E	OFF								
895-03		K	CMD	ARMS	OAA OPEN PRI RETRACT RETURN V	GSAK7235E	OFF								
895-04		K	CMD	ARMS	OAA OPEN SEC RETRACT SUPPLY V	GSAK7250E	OFF								
895-05		K	CMD	ARMS	OAA OPEN SEC RETRACT SUPPLY V	GSAK7255E	OFF								
895-06		K	CMD	ARMS	OAA OPEN SEC RETRACT RETURN V	GSAK7270E	OFF								
895-07		K	CMD	ARMS	OAA OPEN SEC RETRACT RETURN V	GSAK7275E	OFF								
896-00		K	CMD	ARMS	OAA RESET PRI RETRACT SUPPLY VLV	GSAK7200E	ON								
896-01		K	CMD	ARMS	OAA RESET PRI RETRACT SUPPLY VLV	GSAK7205E	ON								
896-02		K	CMD	ARMS	OAA RESET SEC RETRACT SUPPLY VLV	GSAK7240E	ON								
896-03		K	CMD	ARMS	OAA RESET SEC RETRACT SUPPLY VLV	GSAK7245E	ON								
896-04		K	CMD	ARMS	OAA RESET PRI RETRACT RETURN VLV	GSAK7220E	ON								
896-05		K	CMD	ARMS	OAA RESET PRI RETRACT RETURN VLV	GSAK7225E	ON								
896-06		K	CMD	ARMS	OAA RESET SEC RETRACT RETURN VLV	GSAK7260E	ON								
896-07		K	CMD	ARMS	OAA RESET SEC RETRACT RETURN VLV	GSAK7265E	ON								
					$ DELAY 1.0S $										
					$ VALVE POSITION CHECK $										
897-00		K	VFY	ARMS	OAA PRI RETR SUPPLY VLV RETR IND	GSAX7211E	OFF			1 OF 4					
897-01		K	VFY	ARMS	OAA PRI RETR SUPPLY VLV RETR IND	GSAX7216E	OFF			1 OF 4					
897-02		K	VFY	ARMS	OAA SEC RETR SUPPLY VLV RETR IND	GSAX7251E	OFF			1 OF 4					
897-03		K	VFY	ARMS	OAA SEC RETR SUPPLY VLV RETR IND	GSAX7256E	OFF			OR					
897-04		K	VFY	ARMS	OAA PRI RETR RETURN VLV RETR IND	GSAX7231E	OFF			1 OF 4					
897-05		K	VFY	ARMS	OAA PRI RETR RETURN VLV RETR IND	GSAX7236E	OFF			1 OF 4					
897-06		K	VFY	ARMS	OAA SEC RETR RETURN VLV RETR IND	GSAX7271E	OFF			1 OF 4					
897-07		K	VFY	ARMS	OAA SEC RETR RETURN VLV RETR IND	GSAX7276E	OFF			DISPLAY					
898-00		K	VFY	ARMS	OAA PRI RETR SUPPLY VLV RESET IND	GSAX7201E	ON			1 OF 4					
898-01		K	VFY	ARMS	OAA PRI RETR SUPPLY VLV RESET IND	GSAX7206E	ON			1 OF 4					
898-02		K	VFY	ARMS	OAA SEC RETR SUPPLY VLV RESET IND	GSAX7241E	ON			1 OF 4					
898-03		K	VFY	ARMS	OAA SEC RETR SUPPLY VLV RESET IND	GSAX7246E	ON			OR					
898-04		K	VFY	ARMS	OAA PRI RETR RETURN VLV RESET IND	GSAX7221E	ON			1 OF 4					
898-05		K	VFY	ARMS	OAA PRI RETR RETURN VLV RESET IND	GSAX7226E	ON			1 OF 4					
898-06		K	VFY	ARMS	OAA SEC RETR RETURN VLV RESET IND	GSAX7261E	ON			1 OF 4					

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	UNIT	ELSE	DURATION	LCC PAGE
898-07		K	VFY	ARMS	OAA SEC RETR RETURN VLV RESET IND	GSAX7266E	ON			DISPLAY		
899-00		K	CMD	ARMS	OAA RESET PRI RETRACT SUPPLY VLV	GSAK7200E	OFF					
899-01		K	CMD	ARMS	OAA RESET PRI RETRACT SUPPLY VLV	GSAK7205E	OFF					
899-02		K	CMD	ARMS	OAA RESET SEC RETRACT SUPPLY VLV	GSAK7240E	OFF					
899-03		K	CMD	ARMS	OAA RESET SEC RETRACT SUPPLY VLV	GSAK7245E	OFF					
899-04		K	CMD	ARMS	OAA RESET PRI RETRACT RETURN VLV	GSAK7220E	OFF					
899-05		K	CMD	ARMS	OAA RESET PRI RETRACT RETURN VLV	GSAK7225E	OFF					
899-06		K	CMD	ARMS	OAA RESET SEC RETRACT RETURN VLV	GSAK7260E	OFF					
899-07		K	CMD	ARMS	OAA RESET SEC RETRACT RETURN VLV	GSAK7265E	OFF					
					$ OAA PWR REMOVAL FROM EXTEND LOCK $							
900-00		K	CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7120E	OFF					
900-01		K	CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7125E	OFF					
900-02		K	CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7140E	OFF					
900-03		K	CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7145E	OFF					
					$ OAA POSITION MONITOR $							
901-00		K	CVFY	ARMS	A FULLY RETRACTED SWITCH - RET	GSAX7621E	ON			1 OF 4		3.1-16
901-01		K	CVFY	ARMS	A FULLY RETRACTED SWITCH - RET	GSAX7626E	ON			1 OF 4		3.1-16
901-02		K	CVFY	ARMS	KARMS RETRACTED POSITION SWITCH	GSAH7831A	NOLO	2	DEG	1 OF 4		3.1-16
901-03		K	CVFY	ARMS	OAA POSITION INDICATOR	GSAH7836A	NOLO	2	DEG	INHB MSEQ		3.1-16
					$ RETRY NEXT 2 SEQ NO MORE THAN ONCE $							
902-00	ST20	K	CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7080E	ON					
902-01		K	CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7085E	ON					
					$ DELAY 1.0S $							
903-00		K	VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE OPEN	GSAX7081E	ON			1 OF 4		
903-01		K	VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE OPEN	GSAX7086E	ON			1 OF 4		
903-02		K	VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE CLOSE	GSAX7082E	OFF			1 OF 4		
903-03		K	VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE CLOSE	GSAX7087E	OFF			GTO ST20		
					$ PRINT MSG IF FAILED AFTER RETRY $							
903-04		K	MSG									
					$ DELAY 1 MIN 00 SEC $							
					$ VERIFY WITHIN 1 MIN 00 SEC $							
904-00	ST30	K	VFY	ARMS	OAA ACCUM LEVEL SW NO. 1 NORMAL	GSAX7651E	ON			4 OF 4		
904-01		K	VFY	ARMS	OAA ACCUM LEVEL SW NO. 2 NORMAL	GSAX7671E	ON			4 OF 4		

SEQ	TIME CD CLOCK	SI	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGL OR LO	VALUE HIGH	VALUE UNIT	ELSE	DURATION	LCC PAGE	SS	F	D
904-02		K	VFY	ARMS	OAA ACCUM LEVEL SW NO. 3 NORMAL	GSAX7691E	ON			4 OF 4					
904-03		K	VFY	ARMS	OAA ACCUM LEVEL SW NO. 4 NORMAL	GSAX7711E	ON			OR					
904-04		K	VFY	ARMS	OAA ACCUM LEVEL SW NO. 1 NORMAL	GSAX7656E	ON			4 OF 4					
904-05		K	VFY	ARMS	OAA ACCUM LEVEL SW NO. 2 NORMAL	GSAX7676E	ON			4 OF 4					
904-06		K	VFY	ARMS	OAA ACCUM LEVEL SW NO. 3 NORMAL	GSAX7696E	ON			4 OF 4					
904-07		K	VFY	ARMS	OAA ACCUM LEVEL SW NO. 4 NORMAL	GSAX7716E	ON			GTO ST30					
					$ PRINT MSG IF FAILED AFTER TIME EXPIRED $										
904-08		K	MSG												
					$ HYD ACCUM RECHARGE SECURING $										
					$ RETRY NEXT 2 SEQUENCES NO MORE THAN ONCE $										
905-00	ST40	K	CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7080E	OFF								
905-01		K	CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7085E	OFF								
					$ DELAY 1.0S $										
906-00		K	VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE OPEN	GSAX7081E	OFF			1 OF 4					
906-01		K	VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE OPEN	GSAX7086E	OFF			1 OF 4					
906-02		K	VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE CLOSE	GSAX7082E	ON			1 OF 4					
906-03		K	VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE CLOSE	GSAX7087E	ON			GTO ST40					
					$ PRINT MSG IF FAILED AFTER RETRY $										
906-04		K	MSG												
					$ RETRY SEQ NO MORE THAN ONCE $										
907-00	ST50	K	CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7100E	OFF								
907-01		K	CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7105E	OFF								
					$ DELAY 1.0 SEC $										
907-02		K	VFY	ARMS	OAA GN2 INHIBIT V SW-VALVE OPEN	GSAX7101E	ON			1 OF 4					
907-03		K	VFY	ARMS	OAA GN2 INHIBIT V SW-VALVE OPEN	GSAX7106E	ON			1 OF 4					
907-04		K	VFY	ARMS	OAA GN2 INHIBIT V SW-VALVE CLOSE	GSAX7102E	OFF			1 OF 4					
907-05		K	VFY	ARMS	OAA GN2 INHIBIT V SW-VALVE CLOSE	GSAX7107E	OFF			GTO ST50					
					$ PRINT MSG IF FAILED AFTER RETRY $										
907-06		K	MSG												
908-00			END	P005											

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