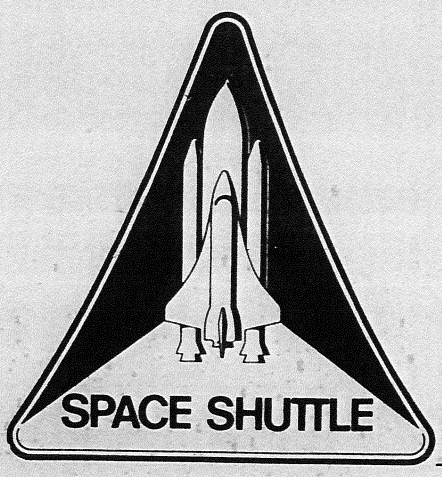
Date: JUNE, 1991

KLO-82-0071 Appendix A
Revision 3, Change A

GROUND LAUNCH SEQUENCER DESCRIPTION DOCUMENT

STS-43



National Aeronautics and
Space Administration

John F. Kennedy Space Center

NASA

KSC FORM 2-114 (REV. 4/77)

DATE: JUNE, 1991 KLO-82-0071

SOFTWARE APPLICATION SET

DOCUMENTATION CHANGE

INSTRUCTION SHEET

DOCUMENT NO: **KLO-82-0071, APPENDIX A**

REVISION: **3, GLSDD, STS-43**

CHANGE NO: **CHANGE A**

INSTRUCTION:

Change A of Appendix A (GLSDD) incorporates the following TRP approved packages:

PRCBD S52346G
PRCBD S52379B
PRCBD S52346L
PRCBD S52346P
ESR K49883

Effectivity: STS-43

ALL THIS PACKAGE IS REV 3, CHANGE A

DATE: JUNE, 1991

DOC. NO. KLO-82-0071
APPENDIX A
REV 3, CHG A

LOCKHEED SPACE OPERATIONS COMPANY

GROUND LAUNCH SEQUENCER DESCRIPTION DOCUMENT
LAUNCH COUNTDOWN

EFFECTIVITY: STS-43 CATEGORY: B
NB-VT

CENTER: KSC

SITE: PAD A&B SYSTEM: INTEG

VEHICLE: ALL

FLOW: ALL

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1. APPENDIX A

GROUND LAUNCH SEQUENCER DESCRIPTION DOCUMENTATION (GLSDD)

SECTION

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GROUND LAUNCH SEQUENCER DESCRIPTION DOCUMENT (GLSDD)

I. INTRODUCTION

1. PURPOSE

The purpose of this document is to present the GLS Description Document, and the Definition Guide which defines the document's format. The GLS Description Document formulates the GLS Functional Requirements. These Requirements are the basis for development of the GLS Software Specification (KLO-82-0072) which defines the Implementation Techniques utilized to satisfy those requirements.

2. SCOPE

This document contains requirement details for the monitoring and sequencing activities of all Shuttle Integrated test, Checkout and Launch Countdown functions that require time critical sequencing of nominal and contingency functions.

3. FORMAT REQUIREMENT

The GLS Description Document (GLSDD) is used as an input file to a software utility which automatically generates most of the GLS software from the GLSDD. This utility assists in the development and maintenance of the GLS Software Set and requires the fixed format as it exists today. The Labels and Fields in the GLSDD are not only requirements but also directives to the Automatic Generation utility. Any changes to the GLSDD field definition may impact the Automatic Generation Utility.

II. APPLICABLE DOCUMENTS

1. SOURCE REQUIREMENTS

A. Shuttle Launch Commit Criteria and Background (JSC-16007)

B. Operations Maintenance Requirement and Specification File II Volume I (NST08171)

2. REFERENCE DOCUMENTATION

A. Level C Functional Subsystems Software Requirements (STS 83-0026)

B. OFT LDB Software Interface Requirements (SS-P-0002-150)

C. Space Shuttle Main Propulsion System Liquid Oxygen Operation Criteria (79K05735)

D. Space Shuttle Main Propulsion System Liquid Hydrogen Operation Criteria (79K05896)

E. LO2/LH2/MPS/SSME/ Software Application Set Requirements Document (KLO-82-0014)

F. DPS Software Application Set Requirements Document (KLO-82-0059)

III. GROUND LAUNCH SEQUENCER (GLS) FUNCTIONAL DESCRIPTION

1. OVERVIEW

The GLS is a "Kennedy Delivered" fully Automated software set capable of performing Launch site common and unique functions. The software requires no operator action after initialization, except for unscheduled holds, failure dispositioning and contingency operations. All events of the GLS are scheduled by Countdown Time. Countdown activities will be suspended automatically for any requirement (i.e., LCC, OMRS) violations as defined in the GLSDD. Violations which occur after T-0/31 will result in a GLS "Breakout" and Safing will be automatically invoked.

2. GLS MAINLINE

This function provides the display and control of activities in the Terminal Countdown sequence. It manages the predetermined hold points (milestones) that reflect the status of all the GLS parameters. It also contains all holds and resume functions for the ground and on-board countdown clock.

3. BREAKOUT SAFING

In GLS Safing, the primary function is to stop the Redundant Set Launch Sequence (RSLS) and perform immediate critical tasks not handled by the ascent software. A mainline event complete indicator is maintained to track the progression of the Ground Launch Sequencer toward T-0. This indicator is then utilized by GLS Safing to determine the functions that must be performed. In addition to the GLS Mainline event complete indicator, the RSLS Abort Indication which is downlisted by the Vehicle will be used to determine any functions that must be performed if an SSME start sequence has been initiated.

The GLS event complete indication is documented in the Nomenclature Field of the GLSDD as a comment.

" $ GLS EVENT COMPLETE=XXX $ " or " $ GLS EVENT COMPLETE is less than XXX " where XXX is the integer value indicated.

There are currently no Safing Requirements Prior to T-9 minutes and counting.

IV. GLSDD FIELD DEFINITIONS

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

2. CDT/STEP (Countdown time (CDT)). - Earliest time at which the step may be executed. For GLS mainline sequencing from T-9 minutes to T-0 the following rules apply: if the sequence encounters a CDT later than the permitted time, normal sequencing stops and a breakout will be automatically initiated. For times between -9 minutes and -1 minute, a 1 percent delta will be allotted before processing a breakout.

   COUNTDOWN TIME FORMAT: +/- M:SS or
   +/- SS.SS

3. SITE - Specific site at which GLS sequence is performed.
   A - KSC Pad A unique requirement
   B - KSC Pad B unique requirement
   (BLANK) - Common to all sites

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

   TYPES:

   A. ACL - Activate Control Logic. The reactive Control Limits for the indicated measurements are set to the specified limit if applicable. Reactive Control Logic for the measurement is then activated. Subsequent failure of the measurement to meet these limits results in the measurement's Control Logic Sequence being executed.

   B. APL - Issue Analog Command. Issue analog command to the system under test. The value applied to the analog command will be specified in the single or low field.

   C. ---------- - Comment. A blank Function Field indicates the rest of the line is comment only. The comment is proceeded and ended with a dollar sign ($).

If the comment begins with a "$/////" then the function indicated is not performed by GLS and is provided for information only. The function is either performed by Cockpit Switch or the Redundant Set Launch Sequencer (indicated by (R/S)).

D. CMD - Command. Issue command to GSE or the vehicle or pseudo command to CCMS CDBFR.

E. CMLT - Command Multiple. Single LDB transaction that sends multiple commands (through consecutive channels).

F. CMON - Continuous Monitor. This is a unique function which identifies the continuous monitoring of the RSS okay to Launch indicators which are used by RSS to request a Hold. This function is similar to the CVFY function but is implemented differently in the GLS software.

G. COM - Communications Interrupts. An interrupt is sent via the FD specified, to the console indicated in the "singl or low" field.

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

I. CVFY - Continuous Verify. This function continues to verify a parameter (see Item 7) at the measurement sample rate in parallel to the test sequence. Parameter limits (see Item 8) are established at initialization. If the test condition fails, the ELSE (see Item 9) option is taken.

NOTE: All CVFY monitoring sets a Commit Criteria Monitoring (CCM) flag for the Function Designator in the FEP which prevents the responsible Firing Room console from modifying GOAL Notification parameters for the specific FD. GLS will maintain control of the GOAL parameters until the end of the run and then return control back to the RSYS.

In most cases CVFY's which occur after T-9/00 will establish limits when the sequence is encountered.

J. END - End of sequence or sequence routine.

K. ICL - Inhibit Control Logic. Reactive Control Logic (execution) for the indicated measurement is inhibited.

L. IGL - Inhibit GOAL Notification. Termination of the continuous verify/monitor function. Related to unique CMON's involving Clock Control rather than LCC monitoring.

M. ISSU - Issue Numerical Command. A numeric value issued via the LDB.

N. LABL - Label. Used to mark significant comments such as milestones, concurrent and contingency operations. (Directives used in Software Generation).

O. MMSG - Milestone Message. The text contained in the nomenclature field is the next milestone to occur and the time at which it scheduled.

P. MSG - Message. The text contained in the nomenclature field is the current function being performed in the sequence

Q. OMSG - Operator Message. The text contained in the nomenclature field is to alert the GLS console operator of exceptions or required actions.

R. SUM - Summation. Sum all FD's for that sequence number and store the value in Sum x. Sum x is then verified to be between the Low and High limits specified.

S. VFY - Verify. One time test to determine if the measurement is within proper limits. Test failure always results in an ELSE action (see Item 9).

5. DISC - Discipline. The RSYS that this function is related to.

6. NOMENCLATURE - A 34 Character Test Description from the CCMS Data Bank.

7. FUNCTION DESIGNATOR - A Function Designator from the CCMS Data Bank.

8. VALUE:

A. SINGL/LO - Single value or low value of a low/high range. No relational symbols are used. Format of LOW or SINGLE VALUE:

State: ON/OFF, OPEN/CLOSE, WET/DRY, TRUE/FALSE
Analog: Decimal Number
Digital
Pattern: Xhhhh - hexadecimal
Ttttt - octal
ddddd - decimal
Bzzz - Binary

NOTE: When greater than or equal to, or less than or equal to notation is desired, use the following:

VALUE		
LOW	HIGH	
QUAN	NO HI	For greater than or equal to QUAN.
NO LO	QUAN	For less than or equal to QUAN.

B. HIGH - High value for analog low/high range. No relational symbol is used. Same format as (A) above.

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

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

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

ELSE - Options are:

A. Voting Logic

1. OR - Denotes an alternative test follows. Any successful alternate test is sufficient. The alternate(s) follow in successive steps. An OR in one step indicates the next step is an alternate. The action to be taken upon test failure is listed at the end of the last step.

2. AND - Denotes an additional test follows. All tests must be successful. The additional test follows in successive steps. The step penalty is listed at the end of the last step.

3. X of Y - A group of Y CVFY or VFY sequence items are tested. The sequence will continue if at least X items are successful, otherwise the last ELSE option in the group of Y will be executed.

B. INHB Mxxx (Inhibit a milestone.) - Line items remain in effect until the time of the milestone is reached. Upon test failure, this option allows the sequence to continue, but places a constraint against the milestone identified by the Mxxx. When the Mxxx or any previously inhibited milestone is reached normal sequencing will stop and will enter the HOLD state. A parameter in the duration field identifies a nonstandard time at which a line is no longer valid.

MILESTONE/LABELS

LABL	FUNCTION	APPROX. CDT
M009	Go for T-9 Sequence	T-9 Min.
*M0AA	Orbiter Access Arm (Crew Access Arm) Retract Milestone	T-7 Min. 30 Sec.
MAPU	Orbiter APU Start Milestone	T-5 Min.
MPS4	Purge Sequence 4 Milestone.	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 (Redundant Set Launch Sequencer, RSLS) Milestone.	T-31 Sec.
**MENG	LPS Go for Main Engine Start Milestone	T-10 Sec.
**MSRB	SRB Ignition Milestone	T-0 Sec.

*Hold at these milestones only for items with "ELSE" equal to that specific milestone.

** After T-0/31 CDT, inhibits against 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. A parameter in the duration field identifies the time at which the line item is no longer valid.

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

E. GOTO - Upon test failure, branch to the sequence identified by the label.

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

G. SKIP SEQ - Upon test failure, the next sequence group will 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. These measurements are FEP Interrupt monitored.

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

LCC-3 - Launch Commit Criteria valid until last hold point at T-31 Sec. Failure of an LCC-3 item places a constraint against continuing past T-31 Sec. These measurements are FEP interrupt monitored.

LCC-4 - Launch Commit Criteria valid until T-10 Seconds. Failure of an LCC-4 item places a constraint against continuing past T-31 seconds. A failure of an LCC-4 after T-31 seconds causes a breakout immediately. These measurements are FEP interrupt monitored.

NOTE: LCC-X items in the GLSDD may not all be derived from the Launch Commit Criteria and Background Document (JSC-16007).

I. HOLD - Upon test failure, holds the CDC.

J. DISPLAY - Upon test failure, display to the CRT the FD indicated.

K. WAIT/PROCEED - Upon test failure, delays processing and waits for an operator input to continue.

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

11. *LCC REF. - Reference number of the LCC which addresses this requirement

12. *OMRSD - OMRSD Requirement Number.

    * These fields are reference only, and not intended for close-loop tracking of requirement implementation.

V. (GLS) 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 of 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 a 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" action against MENG, MSRB, or LCC-4 will cause the sequencer to go immediately into a breakout sequence.

5. At breakout, a remote communication (COM) interrupt will be sent to each subsystem console and will indicate that breakout has occurred. Other remote communication (COM) interrupts will be sent to indicate to the systems that the CCM Flags have changed back to the systems. A final remote communication (COM) interrupt is sent to indicate GLS Safing is complete.

VI. GLS CONTINGENCY AND CONCURRENTLY PERFORMED PROGRAMS

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-VAVLE PRESSURE RELIEF
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 SSME HEATSHIELD WATER
G015	BACKUP CONSOLE CRASH
GO16	RUDDER PEDAL TRACKING CHECK
GO17	LEFT RHC TRACKING CHECK
GO18	RIGHT RHC TRACKING CHECK
G019	SRB HPU SHUTDOWN
P001	AERO-SURFACE PROFILE EVALUATION
P002	MPS GIMBLE PROFILE EVALUATION
P003	SRB GIMBLE 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

VII. 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 AND LIFE SUPPORT
EPDC	ELECTRICAL POWER DISTRIBUTION AND CONTROL
FCL	FLIGHT CONTROLS
FCP	FUEL CELL POWER
GNS	GUIDANCE AND NAVIGATION SYSTEMS
GOX	GOX ARM SYSTEMS
HYD	ORBITER HYDRAULICS
HYFU	HYPERGOLICS FUEL
HYOX	HYPERGOLICS OXIDIZER
INST	ORBITER INSTRUMENTATION
INTG	INTEGRATION
LH2	LIQUID HYDROGEN

LO2	LIQUID OXYGEN
MECH	ORBITER MECHANISMS
MPS	ORBITER MAIN PROPULSION SYSTEM
NAVA	NAVIGATION AIDS
PLINTG	PAYLOADS INTEGRATION
PVD	ORBITER PURGE, VENT AND DRAIN SYSTEMS
SSME	SPACE SHUTTLE MAIN ENGINES
TINS	ET INSTRUMENTATION
TRS	ET RANGE SAFETY
WATR	SOUND SUPPRESSION WATER SYSTEMS

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				

SEQ — GLS SEQUENCE NUMBERS

TIME — GLS TIME CHECKS

SITE — IDENTIFIES SITE REQUIREMENT FOR A GIVEN GLS SEQUENCE

- 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
- APL --- ISSUE ANALOG COMMAND
- CMD --- COMMAND
- CMLT --- COMMAND MULTIPLES
- COM --- REMOTE COMM VARIABLE SENT FROM ML CONSOLE
- CVFY --- CONTINUOUS FEP MONITORING
- ICL --- INHIBIT CONTROL LOGIC
- ISSU --- COMMAND ISSUANCE
- LABL --- STATEMENT LABEL
- MMSG --- NEXT MILESTONE MESSAGE
- MSG --- CURRENT FUNCTION MILESTONE MESSAGE
- SUM --- A FOUR CHANNEL SUMMATION OF FCL PSID
- VFY --- ONE TIME BUFFER READ

DISC — THE SYSTEM TO WHICH THE FD BELONGS.

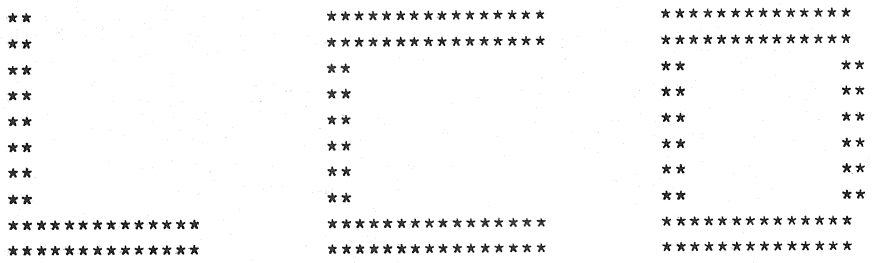
ELSE — GLS MILESTONE INHIBITED

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-REF — REF NUMBER IN LCC BOOK FOR VIOLATION

OMRSD — OMRSD NUMBER FOR VIOLATION

SOFTWARE CONTROL NUMBER: 43-01



CONTENTS

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ 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 CONTROL PRESS	V45P1110A1	791	993	PSIA	LCC-3			PRSD-01
001-01		CVFY	FCP		PRSD O2 TK 1 PRESSURE	V45P1100A1	779	981	PSIA	LCC-3			PRSD-01
001-02		CVFY	FCP		PRSD O2 TK 2 HTR CONTROL PRESS	V45P1210A1	791	993	PSIA	LCC-3			PRSD-01
001-03		CVFY	FCP		PRSD O2 TK 2 PRESSURE	V45P1200A1	779	981	PSIA	LCC-3			PRSD-01
001-04		CVFY	FCP		PRSD O2 TK 1 HTR CUR SNSR 1A-TRIP	V45X1185E1	OFF			LCC-3			PRSD-04
001-05		CVFY	FCP		PRSD O2 TK 1 HTR CUR SNSR 1B-TRIP	V45X1187E1	OFF			LCC-3			PRSD-04
001-06		CVFY	FCP		PRSD O2 TK 1 HTR CUR SNSR 2A-TRIP	V45X1186E1	OFF			LCC-3			PRSD-04
001-07		CVFY	FCP		PRSD O2 TK 1 HTR CUR SNSR 2B-TRIP	V45X1188E1	OFF			LCC-3			PRSD-04
001-08		CVFY	FCP		PRSD O2 TK 2 HTR CUR SNSR 1A-TRIP	V45X1285E1	OFF			LCC-3			PRSD-04
001-09		CVFY	FCP		PRSD O2 TK 2 HTR CUR SNSR 1B-TRIP	V45X1287E1	OFF			LCC-3			PRSD-04
001-10		CVFY	FCP		PRSD O2 TK 2 HTR CUR SNSR 2A-TRIP	V45X1286E1	OFF			LCC-3			PRSD-04
001-11		CVFY	FCP		PRSD O2 TK 2 HTR CUR SNSR 2B-TRIP	V45X1288E1	OFF			LCC-3			PRSD-04
001-12		CVFY	FCP		PRSD H2 TK 1 HTR CONTROL PRESS	V45P2110A1	196	298	PSIA	LCC-3			PRSD-06
001-13		CVFY	FCP		PRSD H2 TK1 PRESSURE	V45P2100A1	192	294	PSIA	LCC-3			PRSD-06
001-14		CVFY	FCP		PRSD H2 TK 2 HTR CONTROL PRESS	V45P2210A1	196	298	PSIA	LCC-3			PRSD-06
001-15		CVFY	FCP		PRSD H2 TK 2 PRESSURE	V45P2200A1	192	294	PSIA	LCC-3			PRSD-06
					$ PERFORM THE FOLLOWING 8 STEPS IF PRSD TANK SET 3 $ $ IS INSTALLED (NPRSDTSET3) = ON $								
001-16		CVFY	FCP		PRSD O2 TK 3 HTR CONT PRESS (MBK)	V45P1310A1	820	993	PSIA	LCC-3			PRSD-01
001-17		CVFY	FCP		PRSD O2 TK 3 PRESS (MID BODY KIT)	V45P1300A1	808	981	PSIA	LCC-3			PRSD-01
001-18		CVFY	FCP		PRSD O2 TK 3 HTR CUR SNSR 1A-TRIP	V45X1385E1	OFF			LCC-3			PRSD-04
001-19		CVFY	FCP		PRSD O2 TK 3 HTR CUR SNSR 1B-TRIP	V45X1387E1	OFF			LCC-3			PRSD-04
001-20		CVFY	FCP		PRSD O2 TK 3 HTR CUR SNSR 2A-TRIP	V45X1386E1	OFF			LCC-3			PRSD-04
001-21		CVFY	FCP		PRSD O2 TK 3 HTR CUR SNSR 2B-TRIP	V45X1388E1	OFF			LCC-3			PRSD-04
001-22		CVFY	FCP		PRSD H2 TK 3 HTR CONT PRESS (MBK)	V45P2310A1	213	298	PSIA	LCC-3			PRSD-06
001-23		CVFY	FCP		PRSD H2 TK 3 PRESS (MID BODY KIT)	V45P2300A1	209	294	PSIA	LCC-3			PRSD-06
					$ PERFORM THE FOLLOWING 8 STEPS IF PRSD TANK SET 4 $ $ IS INSTALLED (NPRSDTSET4) = ON $								
001-24		CVFY	FCP		PRSD O2 TK 4(&5) HTR CONT PRESS	V45P1410A1	820	993	PSIA	LCC-3			PRSD-01
001-25		CVFY	FCP		PRSD O2 TK 4 PRESS (MID BODY KIT)	V45P1400A1	808	981	PSIA	LCC-3			PRSD-01
001-26		CVFY	FCP		PRSD O2 TK 4 HTR CUR SNSR 1A-TRIP	V45X1485E1	OFF			LCC-3			PRSD-04
001-27		CVFY	FCP		PRSD O2 TK 4/5 HTR CUR SNSR 1B/1A	V45X1487E1	OFF			LCC-3			PRSD-04
001-28		CVFY	FCP		PRSD O2 TK 4 HTR CUR SNSR 2A-TRIP	V45X1486E1	OFF			LCC-3			PRSD-04
001-29		CVFY	FCP		PRSD O2 TK 4/5 HTR CUR SNSR 2B/2A	V45X1488E1	OFF			LCC-3			PRSD-04

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
001-30			CVFY	FCP	PRSD H2 TK 4(&5) HTR CONT PRESS	V45P2410A1	213	298	PSIA	LCC-3		PRSD-06	
001-31			CVFY	FCP	PRSD H2 TK 4 PRESS (MID BODY KIT)	V45P2400A1	209	294	PSIA	LCC-3		PRSD-06	
					$ PERFORM THE FOLLOWING 2 STEPS IF PRSD TANK SET 5 $								
					$ IS INSTALLED (NPRSDTSET5) = ON $								
001-32			CVFY	FCP	PRSD O2 TK 5 PRESS(MID BODY KIT)	V45P1500A1	808	981	PSIA	LCC-3		PRSD-01	
001-33			CVFY	FCP	PRSD H2 TK 5 PRESS(MID BODY KIT)	V45P2500A1	209	294	PSIA	LCC-3		PRSD-06	
001-34			CVFY	FCP	PRSD FCP 1 O2 REAC VLV-OPEN	V45X1150E1	ON			LCC-3		PRSD-03	
001-35			CVFY	FCP	PRSD FCP 1 H2 REAC VLV-OPEN	V45X2150E1	ON			LCC-3		PRSD-03	
001-36			CVFY	FCP	PRSD FCP 2 O2 REAC VLV-OPEN	V45X1155E1	ON			LCC-3		PRSD-03	
001-37			CVFY	FCP	PRSD FCP 2 H2 REAC VLV-OPEN	V45X2155E1	ON			LCC-3		PRSD-03	
001-38			CVFY	FCP	PRSD FCP 3 O2 REAC VLV-OPEN	V45X1160E1	ON			LCC-3		PRSD-03	
001-39			CVFY	FCP	PRSD FCP 3 H2 REAC VLV-OPEN	V45X2160E1	ON			LCC-3		PRSD-03	
001-40			CVFY	FCP	PRSD H2 MANF 1 ISLN VLV-OPEN	V45X2141E1	ON			LCC-3		PRSD-02	
001-41			CVFY	FCP	PRSD H2 MANF 2 ISLN VLV-OPEN	V45X2146E1	ON			LCC-3		PRSD-02	
001-42			CVFY	FCP	PRSD O2 MANF 1 ISLN VLV-OPEN	V45X1141E1	ON			LCC-3		PRSD-02	
001-43			CVFY	FCP	PRSD O2 MANF 2 ISLN VLV-OPEN	V45X1146E1	ON			LCC-3		PRSD-02	
001-44			CVFY	FCP	FUEL CELL NO 1 STACK INLET TEMP	V45T0113A1	176	191	DEGF	LCC-3		FCP-02	
001-45			CVFY	FCP	FUEL CELL 1 COOLANT PRESSURE	V45P0147A1	55	75	PSIA	LCC-3		FCP-02	
001-46			CVFY	FCP	FUEL CELL NO 2 STACK INLET TEMP	V45T0213A1	176	191	DEGF	LCC-3		FCP-02	
001-47			CVFY	FCP	FUEL CELL 2 COOLANT PRESSURE	V45P0247A1	55	75	PSIA	LCC-3		FCP-02	
001-48			CVFY	FCP	FUEL CELL NO 3 STACK INLET TEMP	V45T0313A1	176	191	DEGF	LCC-3		FCP-02	
001-49			CVFY	FCP	FUEL CELL 3 COOLANT PRESSURE	V45P0347A1	55	75	PSIA	LCC-3		FCP-02	
001-50			CVFY	FCP	FUEL CELL NO 1 COOLANT PUMP STATUS	V45X0143E1	ON			LCC-4		FCP-04	
001-51			CVFY	FCP	FUEL CELL NO 2 COOLANT PUMP STATUS	V45X0243E1	ON			LCC-4		FCP-04	
001-52			CVFY	FCP	FUEL CELL NO 3 COOLANT PUMP STATUS	V45X0343E1	ON			LCC-4		FCP-04	
001-53			CVFY	FCP	FCP NO 1 H2 PUMP MTR CONDITION	V45V0114A1	0.28	1.00	V	LCC-4		FCP-04	
001-54			CVFY	FCP	FCP NO 2 H2 PUMP MTR CONDITION	V45V0214A1	0.28	1.00	V	LCC-4		FCP-04	
001-55			CVFY	FCP	FCP NO 3 H2 PUMP MTR CONDITION	V45V0314A1	0.28	1.00	V	LCC-4		FCP-04	
001-56			CVFY	FCP	FCP NO 1 SUBSTACK 1 DELTA VOLTAGE	V45V0102A1	NOLO	150	MV	LCC-4		FCP-03	
001-57			CVFY	FCP	FCP NO 1 SUBSTACK 2 DELTA VOLTAGE	V45V0103A1	NOLO	150	MV	LCC-4		FCP-03	
001-58			CVFY	FCP	FCP NO 1 SUBSTACK 3 DELTA VOLTAGE	V45V0104A1	NOLO	150	MV	LCC-4		FCP-03	
001-59			CVFY	FCP	FCP NO 2 SUBSTACK 1 DELTA VOLTAGE	V45V0202A1	NOLO	150	MV	LCC-4		FCP-03	
001-60			CVFY	FCP	FCP NO 2 SUBSTACK 2 DELTA VOLTAGE	V45V0203A1	NOLO	150	MV	LCC-4		FCP-03	
001-61			CVFY	FCP	FCP NO 2 SUBSTACK 3 DELTA VOLTAGE	V45V0204A1	NOLO	150	MV	LCC-4		FCP-03	
001-62			CVFY	FCP	FCP NO 3 SUBSTACK 1 DELTA VOLTAGE	V45V0302A1	NOLO	150	MV	LCC-4		FCP-03	
001-63			CVFY	FCP	FCP NO 3 SUBSTACK 2 DELTA VOLTAGE	V45V0303A1	NOLO	150	MV	LCC-4		FCP-03	
001-64			CVFY	FCP	FCP NO 3 SUBSTACK 3 DELTA VOLTAGE	V45V0304A1	NOLO	150	MV	LCC-4		FCP-03	
001-65			CVFY	FCP	FUEL CELL NO 1 H2O CONDITION	V45X0410E1	OFF			LCC-3		FCP-05	
001-66			CVFY	FCP	FUEL CELL NO 2 H2O CONDITION	V45X0420E1	OFF			LCC-3		FCP-05	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
001-67			CVFY	FCP	FUEL CELL NO 3 H2O CONDITION	V45X0430E1	OFF			LCC-3		FCP-05	
001-68			CVFY	FCP	FUEL CELL H2O CONDUCTIVITY	V45X0462E1	OFF			LCC-3		FCP-05	
					$ SRB APU STATUS CHECK $								
002-00			CVFY	BHYD	RH EVENT APU A ISLN VALVE CLOSED	B46X2853X1	ON			1 OF 2		BTVC-05	S00FR0.050
002-01			CVFY	BHYD	RH EVENT APU A ISLN VALVE OPEN	B46X2851X1	OFF			LCC-3		BTVC-05	S00FR0.050
002-02			CVFY	BHYD	LH EVENT APU A ISLN VALVE CLOSED	B46X1853X1	ON			1 OF 2		BTVC-05	S00FR0.050
002-03			CVFY	BHYD	LH EVENT APU A ISLN VALVE OPEN	B46X1851X1	OFF			LCC-3		BTVC-05	S00FR0.050
002-04			CVFY	BHYD	RH EVENT APU B ISLN VALVE CLOSED	B46X2854X1	ON			1 OF 2		BTVC-05	S00FR0.050
002-05			CVFY	BHYD	RH EVENT APU B ISLN VALVE OPEN	B46X2852X1	OFF			LCC-3		BTVC-05	S00FR0.050
002-06			CVFY	BHYD	LH EVENT APU B ISLN VALVE CLOSED	B46X1854X1	ON			1 OF 2		BTVC-05	S00FR0.050
002-07			CVFY	BHYD	LH EVENT APU B ISLN VALVE OPEN	B46X1852X1	OFF			LCC-3		BTVC-05	S00FR0.050
002-08			CVFY	BHYD	LH EV APU SEC SP CON VLV CLD,SYS A	B46X1861X1	ON			LCC-3		BTVC-06	S00FR0.060
002-09			CVFY	BHYD	LH EV APU SEC SP CON VLV CLD,SYS B	B46X1863X1	ON			LCC-3		BTVC-06	S00FR0.060
002-10			CVFY	BHYD	RH EV APU SEC SP CON VLV CLD,SYS A	B46X2861X1	ON			LCC-3		BTVC-06	S00FR0.060
002-11			CVFY	BHYD	RH EV APU SEC SP CON VLV CLD,SYS B	B46X2863X1	ON			LCC-3		BTVC-06	S00FR0.060
					$ G/N STATUS CHECK $								
003-00			CVFY	GNS	IMU-1 GOOD	V71X2021B1	ON			LCC-3		GNC-56	
003-01			CVFY	GNS	IMU-2 GOOD	V71X3021B1	ON			LCC-3		GNC-56	
003-02			CVFY	GNS	IMU-3 GOOD	V71X4021B1	ON			LCC-3		GNC-56	
003-03			CVFY	GNS	IMU 1 REDUNDANT RATE FAIL	V95X0033X1	OFF			LCC-3		GNC-61	
003-04			CVFY	GNS	IMU 1 INNER RESOLVER NULL FAIL	V95X0034X1	OFF			LCC-3		GNC-61	
003-05			CVFY	GNS	IMU 1 VELOCITY LIMIT FAIL	V95X0035X1	OFF			LCC-3		GNC-61	
003-06			CVFY	GNS	IMU 1 RESOLVER LIMIT FAIL	V95X0037X1	OFF			LCC-3		GNC-61	
003-07			CVFY	GNS	IMU 1 PLATFORM TEMP SAFE	V71X2405X1	ON			LCC-3		GNC-59	
003-08			CVFY	GNS	IMU 1 CAPRI TEMP SAFE	V71X2407X1	ON			LCC-3		GNC-59	
003-09			CVFY	GNS	IMU 2 REDUNDANT RATE FAIL	V95X1033X1	OFF			LCC-3		GNC-61	
003-10			CVFY	GNS	IMU 2 INNER RESOLVER NULL FAIL	V95X1034X1	OFF			LCC-3		GNC-61	
003-11			CVFY	GNS	IMU 2 VELOCITY LIMIT FAIL	V95X1035X1	OFF			LCC-3		GNC-61	
003-12			CVFY	GNS	IMU 2 RESOLVER LIMIT FAIL	V95X1037X1	OFF			LCC-3		GNC-61	
003-13			CVFY	GNS	IMU 2 PLATFORM TEMP SAFE	V71X3405X1	ON			LCC-3		GNC-59	
003-14			CVFY	GNS	IMU 2 CAPRI TEMP SAFE	V71X3407X1	ON			LCC-3		GNC-59	
003-15			CVFY	GNS	IMU 3 REDUNDANT RATE FAIL	V95X2033X1	OFF			LCC-3		GNC-61	
003-16			CVFY	GNS	IMU 3 INNER RESOLVER NULL FAIL	V95X2034X1	OFF			LCC-3		GNC-61	
003-17			CVFY	GNS	IMU 3 VELOCITY LIMIT FAIL	V95X2035X1	OFF			LCC-3		GNC-61	
003-18			CVFY	GNS	IMU 3 RESOLVER LIMIT FAIL	V95X2037X1	OFF			LCC-3		GNC-61	
003-19			CVFY	GNS	IMU 3 PLATFORM TEMP SAFE	V71X4405X1	ON			LCC-3		GNC-59	
003-20			CVFY	GNS	IMU 3 CAPRI TEMP SAFE	V71X4407X1	ON			LCC-3		GNC-59	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
003-21			CVFY	GNS	IMU 1 WORD 13 ECHO FAIL	V95X0030X1	OFF			LCC-3		GNC-61	
003-22			CVFY	GNS	IMU 2 WORD 13 ECHO FAIL	V95X1030X1	OFF			LCC-3		GNC-61	
003-23			CVFY	GNS	IMU 3 WORD 13 ECHO FAIL	V95X2030X1	OFF			LCC-3		GNC-61	
003-24			CVFY	GNS	IMU 1 PLATFORM TEMP READY	V71X2404X1	ON			LCC-3		GNC-58	
003-25			CVFY	GNS	IMU 1 CAPRI TEMP READY	V71X2406X1	ON			LCC-3		GNC-58	
003-26			CVFY	GNS	IMU 2 PLATFORM TEMP READY	V71X3404X1	ON			LCC-3		GNC-58	
003-27			CVFY	GNS	IMU 2 CAPRI TEMP READY	V71X3406X1	ON			LCC-3		GNC-58	
003-28			CVFY	GNS	IMU 3 PLATFORM TEMP READY	V71X4404X1	ON			LCC-3		GNC-58	
003-29			CVFY	GNS	IMU 3 CAPRI TEMP READY	V71X4406X1	ON			LCC-3		GNC-58	
003-30			CVFY	GNS	IMU 1 WORD 14 ECHO FAIL	V95X0031X1	OFF			LCC-3		GNC-61	
003-31			CVFY	GNS	IMU 2 WORD 14 ECHO FAIL	V95X1031X1	OFF			LCC-3		GNC-61	
003-32			CVFY	GNS	IMU 3 WORD 14 ECHO FAIL	V95X2031X1	OFF			LCC-3		GNC-61	
003-33			CVFY	GNS	IMU 1 ACC/CAPRI SF FAIL	V95X0081X1	OFF			LCC-3		GNC-61	
003-34			CVFY	GNS	IMU 2 ACC/CAPRI SF FAIL	V95X1081X1	OFF			LCC-3		GNC-61	
003-35			CVFY	GNS	IMU 3 ACC/CAPRI SF FAIL	V95X2081X1	OFF			LCC-3		GNC-61	
003-36			CVFY	GNS	IMU-1 TRANS WD1 FAIL	V71X2030B1	OFF			LCC-3		GNC-66	
003-37			CVFY	GNS	IMU-2 TRANS WD1 FAIL	V71X3030B1	OFF			LCC-3		GNC-66	
003-38			CVFY	GNS	IMU-3 TRANS WD1 FAIL	V71X4030B1	OFF			LCC-3		GNC-66	
003-39			CVFY	GNS	IMU-1 TRANS WD2 FAIL	V71X2031B1	OFF			LCC-3		GNC-66	
003-40			CVFY	GNS	IMU-2 TRANS WD2 FAIL	V71X3031B1	OFF			LCC-3		GNC-66	
003-41			CVFY	GNS	IMU-3 TRANS WD2 FAIL	V71X4031B1	OFF			LCC-3		GNC-66	
003-42			CVFY	GNS	PCA IMU NO 1 RPC NO A ON	V76X4250E1	ON			5 OF 6		GNC-57	
003-43			CVFY	GNS	PCA IMU NO 1 RPC NO B ON	V76X4251E1	ON			5 OF 6		GNC-57	
003-44			CVFY	GNS	PCA IMU NO 2 RPC NO B ON	V76X4253E1	ON			5 OF 6		GNC-57	
003-45			CVFY	GNS	PCA IMU NO 2 RPC NO C ON	V76X4254E1	ON			5 OF 6		GNC-57	
003-46			CVFY	GNS	PCA IMU NO 3 RPC NO C ON	V76X4256E1	ON			5 OF 6		GNC-57	
003-47			CVFY	GNS	PCA IMU NO 3 RPC NO A ON	V76X4257E1	ON			LCC-3		GNC-57	
					$ ORB RGA CHECKS $								
004-00			CVFY	GNS	RGA 1 ROLL SRMD IND	V79X1860X1	ON			LCC-3		GNC-11	
004-01			CVFY	GNS	RGA 1 PITCH SMRD IND	V79X1861X1	ON			LCC-3		GNC-11	
004-02			CVFY	GNS	RGA 1 YAW SMRD IND	V79X1862X1	ON			LCC-3		GNC-11	
004-03			CVFY	GNS	RGA 2 ROLL SMRD IND	V79X1865X1	ON			LCC-3		GNC-11	
004-04			CVFY	GNS	RGA 2 PITCH SMRD IND	V79X1866X1	ON			LCC-3		GNC-11	
004-05			CVFY	GNS	RGA 2 YAW SMRD IND	V79X1867X1	ON			LCC-3		GNC-11	
004-06			CVFY	GNS	RGA 3 ROLL SMRD IND	V79X1870X1	ON			LCC-3		GNC-11	
004-07			CVFY	GNS	RGA 3 PITCH SMRD IND	V79X1871X1	ON			LCC-3		GNC-11	
004-08			CVFY	GNS	RGA 3 YAW SMRD IND	V79X1872X1	ON			LCC-3		GNC-11	
004-09			CVFY	GNS	RGA 4 ROLL SMRD IND	V79X1875X1	ON			LCC-3		GNC-11	
004-10			CVFY	GNS	RGA 4 PITCH SMRD IND	V79X1876X1	ON			LCC-3		GNC-11	
004-11			CVFY	GNS	RGA 4 YAW SMRD IND	V79X1877X1	ON			LCC-3		GNC-11	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ SRB RATE GYRO CHECKS $								
					$ SMRD DROPOUT DURATION WILL BE ANNOTATED FOR SINGULAR AND MULTIPLE OCCURRENCES $								
004-12			CVFY	GNS	SRGA 1 PITCH SMRD	B79X1845X1	ON			LCC-3		GNC-15	
004-13			CVFY	GNS	SRGA 3 PITCH SMRD	B79X1846X1	ON			LCC-3		GNC-15	
004-14			CVFY	GNS	SRGA 1 YAW SMRD	B79X1848X1	ON			LCC-3		GNC-15	
004-15			CVFY	GNS	SRGA 3 YAW SMRD	B79X1849X1	ON			LCC-3		GNC-15	
004-16			CVFY	GNS	SRGA 2 PITCH SMRD	B79X2845X1	ON			LCC-3		GNC-15	
004-17			CVFY	GNS	SRGA 4 PITCH SMRD	B79X2846X1	ON			LCC-3		GNC-15	
004-18			CVFY	GNS	SRGA 2 YAW SMRD	B79X2848X1	ON			LCC-3		GNC-15	
004-19			CVFY	GNS	SRGA 4 YAW SMRD	B79X2849X1	ON			LCC-3		GNC-15	
					$ ORBITER BRAKE POWER $								
004-20			CVFY	FCL	BRAKE/SKID SUB BUS C/A RPC PWR A	V76X5800E1	ON			LCC-2		GNC-80	
004-21			CVFY	FCL	BRAKE/SKID SUB BUS B/C RPC PWR B	V76X5805E1	ON			LCC-2		GNC-80	
004-22			CVFY	FCL	BRAKE/SKID SUB BUS B/C RPC PWR C	V76X5806E1	ON			LCC-2		GNC-80	
004-23			CVFY	FCL	BRAKE/SKID SUB BUS C/A RPC PWR C	V76X5811E1	ON			LCC-2		GNC-80	
					$ ORBITER NOSEWHEEL STEERING $								
004-24			CVFY	FCL	N/W STEERING FAILED	V51X0645E1	OFF			LCC-3		GNC-83	
					$ LANDING GEAR DOORS CLOSED $								
004-25			CVFY	MECH	LMG/DOOR UPLOCKED	V51X0115E1	ON			LCC-3		AFM-10	
004-26			CVFY	MECH	RMG/DOOR UPLOCKED	V51X0215E1	ON			LCC-3		AFM-10	
004-27			CVFY	MECH	NLG/DOOR UPLOCKED	V51X0315E1	ON			LCC-3		AFM-10	
					$ LANDING GEAR DEPLOYMENT CHECK $								
004-28			CVFY	MECH	LMG STR ACTR SHUTTLE V GR DN RDY	V58X1725E1	ON			LCC-3		AFM-11	
004-29			CVFY	MECH	RMG STR ACTR SHUTTLE V GR DN RDY	V58X1775E1	ON			LCC-3		AFM-11	
004-30			CVFY	MECH	NLG STR ACTR SHUTTLE V GR DN RDY	V58X1825E1	ON			LCC-3		AFM-11	
					$ MCA STATUS CHECK $								
004-31			CVFY	MECH	FWD MCA 1 OPERATIONAL STATUS 1	V76X2111E1	ON			LCC-3		AFM-16	
004-32			CVFY	MECH	FWD MCA 1 OPERATIONAL STATUS 2	V76X2112E1	ON			LCC-3		AFM-16	
004-33			CVFY	MECH	FWD MCA 1 OPERATIONAL STATUS 3	V76X2113E1	ON			LCC-3		AFM-16	
004-34			CVFY	MECH	FWD MCA 1 OPERATIONAL STATUS 4	V76X2114E1	ON			LCC-3		AFM-16	
004-35			CVFY	MECH	FWD MCA 2 OPERATIONAL STATUS 1	V76X2121E1	ON			LCC-3		AFM-16	
004-36			CVFY	MECH	FWD MCA 2 OPERATIONAL STATUS 2	V76X2122E1	ON			LCC-3		AFM-16	
004-37			CVFY	MECH	FWD MCA 2 OPERATIONAL STATUS 3	V76X2123E1	ON			LCC-3		AFM-16	
004-38			CVFY	MECH	FWD MCA 2 OPERATIONAL STATUS 4	V76X2124E1	ON			LCC-3		AFM-16	
004-39			CVFY	MECH	FWD MCA 3 OPERATIONAL STATUS 1	V76X2131E1	ON			LCC-3		AFM-16	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
004-40			CVFY	MECH	FWD MCA 3 OPERATIONAL STATUS 2	V76X2132E1	ON			LCC-3		AFM-16	
004-41			CVFY	MECH	FWD MCA 3 OPERATIONAL STATUS 3	V76X2133E1	ON			LCC-3		AFM-16	
004-42			CVFY	MECH	FWD MCA 3 OPERATIONAL STATUS 4	V76X2134E1	ON			LCC-3		AFM-16	
004-43			CVFY	MECH	MID MCA 1 OPERATIONAL STATUS 1	V76X2211E1	ON			LCC-3		AFM-17	
004-44			CVFY	MECH	MID MCA 1 OPERATIONAL STATUS 2	V76X2212E1	ON			LCC-3		AFM-17	
004-45			CVFY	MECH	MID MCA 1 OPERATIONAL STATUS 3	V76X2213E1	ON			LCC-3		AFM-17	
004-46			CVFY	MECH	MID MCA 1 OPERATIONAL STATUS 4	V76X2214E1	ON			LCC-3		AFM-17	
004-47			CVFY	MECH	MID MCA 1 OPERATIONAL STATUS 5	V76X2215E1	ON			LCC-3		AFM-17	
004-48			CVFY	MECH	MID MCA 1 OPERATIONAL STATUS 6	V76X2216E1	ON			LCC-3		AFM-17	
004-49			CVFY	MECH	MID MCA 1 OPERATIONAL STATUS 7	V76X2217E1	ON			LCC-3		AFM-17	
004-50			CVFY	MECH	MID MCA 1 OPERATIONAL STATUS 8	V76X2218E1	ON			LCC-3		AFM-17	
004-51			CVFY	MECH	MID MCA 2 OPERATIONAL STATUS 1	V76X2221E1	ON			LCC-3		AFM-17	
004-52			CVFY	MECH	MID MCA 2 OPERATIONAL STATUS 2	V76X2222E1	ON			LCC-3		AFM-17	
004-53			CVFY	MECH	MID MCA 2 OPERATIONAL STATUS 3	V76X2223E1	ON			LCC-3		AFM-17	
004-54			CVFY	MECH	MID MCA 2 OPERATIONAL STATUS 4	V76X2224E1	ON			LCC-3		AFM-17	
004-55			CVFY	MECH	MID MCA 2 OPERATIONAL STATUS 5	V76X2225E1	ON			LCC-3		AFM-17	
004-56			CVFY	MECH	MID MCA 2 OPERATIONAL STATUS 6	V76X2226E1	ON			LCC-3		AFM-17	
004-57			CVFY	MECH	MID MCA 2 OPERATIONAL STATUS 7	V76X2227E1	ON			LCC-3		AFM-17	
004-58			CVFY	MECH	MID MCA 2 OPERATIONAL STATUS 8	V76X2228E1	ON			LCC-3		AFM-17	
004-59			CVFY	MECH	MID MCA 3 OPERATIONAL STATUS 1	V76X2231E1	ON			LCC-3		AFM-17	
004-60			CVFY	MECH	MID MCA 3 OPERATIONAL STATUS 2	V76X2232E1	ON			LCC-3		AFM-17	
004-61			CVFY	MECH	MID MCA 3 OPERATIONAL STATUS 3	V76X2233E1	ON			LCC-3		AFM-17	
004-62			CVFY	MECH	MID MCA 3 OPERATIONAL STATUS 4	V76X2234E1	ON			LCC-3		AFM-17	
004-63			CVFY	MECH	MID MCA 3 OPERATIONAL STATUS 5	V76X2235E1	ON			LCC-3		AFM-17	
004-64			CVFY	MECH	MID MCA 3 OPERATIONAL STATUS 6	V76X2236E1	ON			LCC-3		AFM-17	
004-65			CVFY	MECH	MID MCA 3 OPERATIONAL STATUS 7	V76X2237E1	ON			LCC-3		AFM-17	
004-66			CVFY	MECH	MID MCA 3 OPERATIONAL STATUS 8	V76X2238E1	ON			LCC-3		AFM-17	
004-67			CVFY	MECH	MID MCA 4 OPERATIONAL STATUS 1	V76X2241E1	ON			LCC-3		AFM-17	
004-68			CVFY	MECH	MID MCA 4 OPERATIONAL STATUS 2	V76X2242E1	ON			LCC-3		AFM-17	
004-69			CVFY	MECH	MID MCA 4 OPERATIONAL STATUS 3	V76X2243E1	ON			LCC-3		AFM-17	
004-70			CVFY	MECH	MID MCA 4 OPERATIONAL STATUS 4	V76X2244E1	ON			LCC-3		AFM-17	
004-71			CVFY	MECH	MID MCA 4 OPERATIONAL STATUS 5	V76X2245E1	ON			LCC-3		AFM-17	
004-72			CVFY	MECH	MID MCA 4 OPERATIONAL STATUS 6	V76X2246E1	ON			LCC-3		AFM-17	
004-73			CVFY	MECH	MID MCA 4 OPERATIONAL STATUS 7	V76X2247E1	ON			LCC-3		AFM-17	
004-74			CVFY	MECH	MID MCA 4 OPERATIONAL STATUS 8	V76X2248E1	ON			LCC-3		AFM-17	
004-75			CVFY	MECH	AFT MCA 1 OPERATIONAL STATUS 1	V76X2251E1	ON			LCC-3		AFM-18	
004-76			CVFY	MECH	AFT MCA 1 OPERATIONAL STATUS 2	V76X2252E1	ON			LCC-3		AFM-18	
004-77			CVFY	MECH	AFT MCA 1 OPERATIONAL STATUS 3	V76X2253E1	ON			LCC-3		AFM-18	
004-78			CVFY	MECH	AFT MCA 1 OPERATIONAL STATUS 4	V76X2254E1	ON			LCC-3		AFM-18	
004-79			CVFY	MECH	AFT MCA 2 OPERATIONAL STATUS 1	V76X2261E1	ON			LCC-3		AFM-18	
004-80			CVFY	MECH	AFT MCA 2 OPERATIONAL STATUS 2	V76X2262E1	ON			LCC-3		AFM-18	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
004-81			CVFY	MECH	AFT MCA 2 OPERATIONAL STATUS 3	V76X2263E1	ON			LCC-3		AFM-18	
004-82			CVFY	MECH	AFT MCA 2 OPERATIONAL STATUS 4	V76X2264E1	ON			LCC-3		AFM-18	
004-83			CVFY	MECH	AFT MCA 3 OPERATIONAL STATUS 1	V76X2271E1	ON			LCC-3		AFM-18	
004-84			CVFY	MECH	AFT MCA 3 OPERATIONAL STATUS 2	V76X2272E1	ON			LCC-3		AFM-18	
004-85			CVFY	MECH	AFT MCA 3 OPERATIONAL STATUS 3	V76X2273E1	ON			LCC-3		AFM-18	
004-86			CVFY	MECH	AFT MCA 3 OPERATIONAL STATUS 4	V76X2274E1	ON			LCC-3		AFM-18	
					$ ORBITER BRAKE PRESSURE $								
005-00			CVFY	FCL	LDG GR LH OUTBD BRAKE PRESS NO 2A	V51P0722A1	NOLO	150	PSIA	LCC-3		GNC-79	
005-01			CVFY	FCL	LDG GR LH OUTBD BRAKE PRESS NO 4A	V51P0724A1	NOLO	150	PSIA	LCC-3		GNC-79	
005-02			CVFY	FCL	LDG GR LH INBD BRAKE PRESS NO 3A	V51P0726A1	NOLO	150	PSIA	LCC-3		GNC-79	
005-03			CVFY	FCL	LDG GR LH INBD BRAKE PRESS NO 1A	V51P0728A1	NOLO	150	PSIA	LCC-3		GNC-79	
005-04			CVFY	FCL	LDG GR RH OUTBD BRAKE PRESS NO 2A	V51P0742A1	NOLO	150	PSIA	LCC-3		GNC-79	
005-05			CVFY	FCL	LDG GR RH OUTBD BRAKE PRESS NO 4A	V51P0744A1	NOLO	150	PSIA	LCC-3		GNC-79	
005-06			CVFY	FCL	LDG GR RH INBD BRAKE PRESS NO 3A	V51P0746A1	NOLO	150	PSIA	LCC-3		GNC-79	
005-07			CVFY	FCL	LDG GR RH INBD BRAKE PRESS NO 1A	V51P0748A1	NOLO	150	PSIA	LCC-3		GNC-79	
					$ ASA POWER VERIFICATION $								
005-08			CVFY	FCL	PCA FLT CONT ASA 1 RPC A ON	V76X4201E1	ON			LCC-3		GNC-32	
005-09			CVFY	FCL	PCA FLT CONT ASA 1 RPC B ON	V76X4202E1	ON			LCC-3		GNC-32	
005-10			CVFY	FCL	PCA FLT CONT ASA 1 RPC 3 ON	V76X4203E1	ON			LCC-3		GNC-32	
005-11			CVFY	FCL	PCA FLT CONT ASA 2 RPC B ON	V76X4204E1	ON			LCC-3		GNC-32	
005-12			CVFY	FCL	PCA FLT CONT ASA 2 RPC C ON	V76X4205E1	ON			LCC-3		GNC-32	
005-13			CVFY	FCL	PCA FLT CONT ASA 2 RPC 3 ON	V76X4206E1	ON			LCC-3		GNC-32	
005-14			CVFY	FCL	PCA FLT CONT ASA 3 RPC C ON	V76X4207E1	ON			LCC-3		GNC-32	
005-15			CVFY	FCL	PCA FLT CONT ASA 3 RPC A ON	V76X4208E1	ON			LCC-3		GNC-32	
005-16			CVFY	FCL	PCA FLT CONT ASA 3 RPC 3 ON	V76X4209E1	ON			LCC-3		GNC-32	
005-17			CVFY	FCL	PCA FLT CONT ASA 4 RPC C ON	V76X4210E1	ON			LCC-3		GNC-32	
005-18			CVFY	FCL	PCA FLT CONT ASA 4 RPC A ON	V76X4211E1	ON			LCC-3		GNC-32	
					$ ATVC POWER VERIFICATION $								
005-19			CVFY	FCL	PCA FLT CONT ATVC 1 RPC A ON	V76X4285E1	ON			LCC-3		GNC-39	
005-20			CVFY	FCL	PCA FLT CONT ATVC 1 RPC B ON	V76X4286E1	ON			LCC-3		GNC-39	
005-21			CVFY	FCL	PCA FLT CONT ATVC 2 RPC B ON	V76X4287E1	ON			LCC-3		GNC-39	
005-22			CVFY	FCL	PCA FLT CONT ATVC 2 RPC C ON	V76X4288E1	ON			LCC-3		GNC-39	
005-23			CVFY	FCL	PCA FLT CONT ATVC 3 RPC A ON	V76X4289E1	ON			LCC-3		GNC-39	
005-24			CVFY	FCL	PCA FLT CONT ATVC 3 RPC C ON	V76X4290E1	ON			LCC-3		GNC-39	
005-25			CVFY	FCL	PCA FLT CONT ATVC 4 RPC C ON	V76X4291E1	ON			LCC-3		GNC-39	
005-26			CVFY	FCL	PCA FLT CONT ATVC 4 RPC A ON	V76X4292E1	ON			LCC-3		GNC-39	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ KSC SS WATER SYSTEM STATUS CHECK $								
006-00			CVFY	WATR	SS PNEU PRESS PT1 STATUS	GWDPPT01A	1200	1700	PSIG	1 OF 2		GSE-14	
006-01			CVFY	WATR	SS PNEU PRESS PT2 STATUS	GWDPPT02A	1200	1700	PSIG	LCC-3		GSE-14	
006-02			CVFY	WATR	SS TANK WATER LEVEL STATUS	GWDQPT83A	258.2	NOHI	FT	1 OF 2		GSE-15	
006-03			CVFY	WATR	SS TANK WATER LEVEL STATUS	GWDQPT84A	258.2	NOHI	FT	LCC-1		GSE-15	
006-04			CVFY	WATR	SS SOL PWR BUS ON IND	GWDXPT29E	ON			1 OF 2		GSE-17	
006-05			CVFY	WATR	SS SOL PWR BUS ON IND	GWDXPT53E	ON			LCC-3		GSE-17	
					$ NAV STATUS CHECK $								
007-00			CVFY	NAVA	TACAN NO 1 POWER STATUS	V74X0071X1	ON			2 OF 3		CT-01	
007-01			CVFY	NAVA	TACAN NO 2 POWER STATUS	V74X0081X1	ON			2 OF 3		CT-01	
007-02			CVFY	NAVA	TACAN NO 3 POWER STATUS	V74X0091X1	ON			LCC-3		CT-01	
					$ SSME LEAK CHECK MONITORING $								
008-00			CVFY	SSME	ME-1 OPOV LOX SUPPLY LINE TEMP #1	E41T1151A1	-40	NOHI	DEGF	LCC-3		SSME-01	
008-01			CVFY	SSME	ME-1 OPOV LOX SUPPLY LINE TEMP #2	E41T1152A1	-40	NOHI	DEGF	LCC-3		SSME-01	
008-02			CVFY	SSME	ME-2 OPOV LOX SUPPLY LINE TEMP #1	E41T2151A1	-40	NOHI	DEGF	LCC-3		SSME-01	
008-03			CVFY	SSME	ME-2 OPOV LOX SUPPLY LINE TEMP #2	E41T2152A1	-40	NOHI	DEGF	LCC-3		SSME-01	
008-04			CVFY	SSME	ME-3 OPOV LOX SUPPLY LINE TEMP #1	E41T3151A1	-40	NOHI	DEGF	LCC-3		SSME-01	
008-05			CVFY	SSME	ME-3 OPOV LOX SUPPLY LINE TEMP #2	E41T3152A1	-40	NOHI	DEGF	LCC-3		SSME-01	
008-06			CVFY	SSME	ME-1 MFV DOWNSTREAM TEMP #1	E41T1153A1	-250	NOHI	DEGF	LCC-3	T-75	SSME-02	
008-07			CVFY	SSME	ME-1 MFV DOWNSTREAM TEMP #2	E41T1154A1	-250	NOHI	DEGF	LCC-3	T-75	SSME-02	
008-08			CVFY	SSME	ME-2 MFV DOWNSTREAM TEMP #1	E41T2153A1	-250	NOHI	DEGF	LCC-3	T-75	SSME-02	
008-09			CVFY	SSME	ME-2 MFV DOWNSTREAM TEMP #2	E41T2154A1	-250	NOHI	DEGF	LCC-3	T-75	SSME-02	
008-10			CVFY	SSME	ME-3 MFV DOWNSTREAM TEMP #1	E41T3153A1	-250	NOHI	DEGF	LCC-3	T-75	SSME-02	
008-11			CVFY	SSME	ME-3 MFV DOWNSTREAM TEMP #2	E41T3154A1	-250	NOHI	DEGF	LCC-3	T-75	SSME-02	
008-12			CVFY	SSME	ME-1 AFV DOWNSTREAM TEMP #1	E41T1155A1	-160	NOHI	DEGF	LCC-3		SSME-04	
008-13			CVFY	SSME	ME-1 AFV DOWNSTREAM TEMP #2	E41T1156A1	-160	NOHI	DEGF	LCC-3		SSME-04	
008-14			CVFY	SSME	ME-2 AFV DOWNSTREAM TEMP #1	E41T2155A1	-160	NOHI	DEGF	LCC-3		SSME-04	
008-15			CVFY	SSME	ME-2 AFV DOWNSTREAM TEMP #2	E41T2156A1	-160	NOHI	DEGF	LCC-3		SSME-04	
008-16			CVFY	SSME	ME-3 AFV DOWNSTREAM TEMP #1	E41T3155A1	-110	NOHI	DEGF	LCC-3		SSME-04	
008-17			CVFY	SSME	ME-3 AFV DOWNSTREAM TEMP #2	E41T3156A1	-110	NOHI	DEGF	LCC-3		SSME-04	
					$ MPS LH2 RECIRCULATION PERFORMANCE $								
008-18			CVFY	SSME	ME-1 LPFT DISCH PRESS (AVG)	E41P1018B1	22.6	NOHI	PSIA	LCC-3	T-75	MPS-33	
008-19			CVFY	SSME	ME-2 LPFT DISCH PRESS (AVG)	E41P2018B1	22.6	NOHI	PSIA	LCC-3	T-75	MPS-33	
008-20			CVFY	SSME	ME-3 LPFT DISCH PRESS (AVG)	E41P3018B1	22.6	NOHI	PSIA	LCC-3	T-75	MPS-33	
					$ MPS LH2 PREVALVE POWER STATUS $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
009-00			CVFY	MPS	MPS E1 LH2 PREVLV OP PWR (LV18)	V41X1103E1	OFF			2 OF 3		MPS-27	
009-01			CVFY	MPS	PCA-MPS LH2 PREVLV 1 OP RPC A ON	V76X4110E1	OFF			2 OF 3		MPS-27	
009-02			CVFY	MPS	PCA-MPS LH2 PREVLV 1 OP RPC B ON	V76X4111E1	OFF			LCC-3	T-75	MPS-27	
009-03			CVFY	MPS	MPS E1 LH2 PREVLV CL PWR (LV19)	V41X1102E1	ON			2 OF 3		MPS-27	
009-04			CVFY	MPS	PCA-MPS LH2 PREVLV 1 CL RPC A ON	V76X4113E1	ON			2 OF 3		MPS-27	
009-05			CVFY	MPS	PCA-MPS LH2 PREVLV 1 CL RPC B ON	V76X4114E1	ON			LCC-3	T-75	MPS-27	
009-06			CVFY	MPS	MPS E2 LH2 PREVLV OP PWR (LV20)	V41X1203E1	OFF			2 OF 3		MPS-29	
009-07			CVFY	MPS	PCA-MPS LH2 PREVLV 2 OP RPC B ON	V76X4116E1	OFF			2 OF 3		MPS-29	
009-08			CVFY	MPS	PCA-MPS LH2 PREVLV 2 OP RPC C ON	V76X4117E1	OFF			LCC-3	T-75	MPS-29	
009-09			CVFY	MPS	MPS E2 LH2 PREVLV CL PWR (LV21)	V41X1202E1	ON			2 OF 3		MPS-29	
009-10			CVFY	MPS	PCA-MPS LH2 PREVLV 2 CL RPC B ON	V76X4119E1	ON			2 OF 3		MPS-29	
009-11			CVFY	MPS	PCA-MPS LH2 PREVLV 2 CL RPC C ON	V76X4120E1	ON			LCC-3	T-75	MPS-29	
009-12			CVFY	MPS	MPS E3 LH2 PREVLV OP PWR (LV22)	V41X1303E1	OFF			2 OF 3		MPS-31	
009-13			CVFY	MPS	PCA-MPS LH2 PREVLV 3 OP RPC C ON	V76X4122E1	OFF			2 OF 3		MPS-31	
009-14			CVFY	MPS	PCA-MPS LH2 PREVLV 3 OP RPC A ON	V76X4123E1	OFF			LCC-3	T-75	MPS-31	
009-15			CVFY	MPS	MPS E3 LH2 PREVLV CL PWR (LV23)	V41X1302E1	ON			2 OF 3		MPS-31	
009-16			CVFY	MPS	PCA-MPS LH2 PREVLV 3 CL RPC C ON	V76X4125E1	ON			2 OF 3		MPS-31	
009-17			CVFY	MPS	PCA-MPS LH2 PREVLV 3 CL RPC A ON	V76X4126E1	ON			LCC-3	T-75	MPS-31	
					$ MPS LH2 MANIFOLD PROPELLANT QUALITY $								
009-18			CVFY	MPS	MPS LH2 17IN FEED MANF DISC TEMP	V41T1428A1	NOLO	-416.5	DEGF	LCC-3		MPS-11	
					$ DPS STATUS CHECK $								
010-00			CVFY	DPS	FF1 INPUT PROM SEG 1,2 BYPASS(MFE)	V91X2242XX	OFF			LCC-3		DPS-03	
010-01			CVFY	DPS	FF2 INPUT PROM SEG 1,2 BYPASS(MFE)	V91X2243XX	OFF			LCC-3		DPS-03	
010-02			CVFY	DPS	FF3 INPUT PROM SEG 1,2 BYPASS(MFE)	V91X2244XX	OFF			LCC-3		DPS-03	
010-03			CVFY	DPS	FF4 INPUT PROM SEG 1,2 BYPASS(MFE)	V91X2245XX	OFF			LCC-3		DPS-03	
010-04			CVFY	DPS	FF1 INPUT PROM SEG 2,6 BYPASS	V91X2246XX	OFF			LCC-3		DPS-03	
010-05			CVFY	DPS	FF2 INPUT PROM SEG 2,6 BYPASS	V91X2247XX	OFF			LCC-3		DPS-03	
010-06			CVFY	DPS	FF3 INPUT PROM SEG 2,6 BYPASS	V91X2248XX	OFF			LCC-3		DPS-03	
010-07			CVFY	DPS	FF4 INPUT PROM SEG 2,6 BYPASS	V91X2249XX	OFF			LCC-3		DPS-03	
010-08			CVFY	DPS	FF1 TACAN/RA BYPASS	V91X2253XX	OFF			2 OF 3		DPS-17	
010-09			CVFY	DPS	FF2 TACAN/RA BYPASS	V91X2254XX	OFF			2 OF 3		DPS-17	
010-10			CVFY	DPS	FF3 TACAN/RA BYPASS	V91X2255XX	OFF			LCC-3		DPS-17	
010-11			CVFY	DPS	FF1 ADTA BYPASS	V91X2261XX	OFF			LCC-3		DPS-15	
010-12			CVFY	DPS	FF2 ADTA BYPASS	V91X2262XX	OFF			LCC-3		DPS-15	
010-13			CVFY	DPS	FF3 ADTA BYPASS	V91X2263XX	OFF			LCC-3		DPS-15	
010-14			CVFY	DPS	FF4 ADTA BYPASS	V91X2264XX	OFF			LCC-3		DPS-15	
010-15			CVFY	DPS	FF1 MTU BYPASS	V91X2277XX	OFF			LCC-3		DPS-16	
010-16			CVFY	DPS	FF2 MTU BYPASS	V91X2278XX	OFF			LCC-3		DPS-16	
010-17			CVFY	DPS	FF3 MTU BYPASS	V91X2279XX	OFF			LCC-3		DPS-16	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
010-18			CVFY	DPS	FA1 INPUT PROM SEG 1,2 BYPASS(MFE)	V91X2802XX	OFF			LCC-3		DPS-03	
010-19			CVFY	DPS	FA2 INPUT PROM SEG 1,2 BYPASS(MFE)	V91X2803XX	OFF			LCC-3		DPS-03	
010-20			CVFY	DPS	FA3 INPUT PROM SEG 1,2 BYPASS(MFE)	V91X2804XX	OFF			LCC-3		DPS-03	
010-21			CVFY	DPS	FA4 INPUT PROM SEG 1,2 BYPASS(MFE)	V91X2805XX	OFF			LCC-3		DPS-03	
010-22			CVFY	DPS	FA1 INPUT PROM SEG3-10 BYPASS(HFE)	V91X2806XX	OFF			LCC-3		DPS-03	
010-23			CVFY	DPS	FA2 INPUT PROM SEG3-10 BYPASS(HFE)	V91X2807XX	OFF			LCC-3		DPS-03	
010-24			CVFY	DPS	FA3 INPUT PROM SEG3-10 BYPASS(HFE)	V91X2808XX	OFF			LCC-3		DPS-03	
010-25			CVFY	DPS	FA4 INPUT PROM SEG3-10 BYPASS(HFE)	V91X2809XX	OFF			LCC-3		DPS-14	
010-26			CVFY	DPS	FF1 NSP DISCRETES BYPASS	V91X2900XX	OFF			LCC-3		DPS-14	
010-27			CVFY	DPS	FF3 NSP DISCRETES BYPASS	V91X2901XX	OFF			1 OF 2		DPS-14	
010-28			CVFY	DPS	FF1 NSP DATA BYPASS	V91X2902XX	OFF			LCC-3		DPS-14	
010-29			CVFY	DPS	FF3 NSP DATA BYPASS	V91X2903XX	OFF			LCC-3		DPS-03	
010-30			CVFY	DPS	FF1 MDM RETURN WORD BYPASS(HFE)	V91X2904XX	OFF			LCC-3		DPS-03	
010-31			CVFY	DPS	FF2 MDM RETURN WORD BYPASS(HFE)	V91X2905XX	OFF			LCC-3		DPS-03	
010-32			CVFY	DPS	FF3 MDM RETURN WORD BYPASS(HFE)	V91X2906XX	OFF			LCC-3		DPS-03	
010-33			CVFY	DPS	FF4 MDM RETURN WORD BYPASS(HFE)	V91X2907XX	OFF			LCC-3		DPS-03	
010-34			CVFY	DPS	FA2 HYDR SYS 3 PRESS C BYPASS	V91X2917XX	OFF			LCC-3		DPS-03	
010-35			CVFY	DPS	FA3 OMS CHAMBER PRESS LEFT BYPASS	V91X2918XX	OFF			LCC-3		DPS-03	
010-36			CVFY	DPS	FA4 OMS CHAMBER PRESS RIGHT BYPASS	V91X2919XX	OFF			LCC-3		DPS-03	
010-37			CVFY	DPS	FA1 MDM RETURN WORD BYPASS(HFE)	V91X2920XX	OFF			LCC-3		DPS-03	
010-38			CVFY	DPS	FA2 MDM RETURN WORD BYPASS(HFE)	V91X2921XX	OFF			LCC-3		DPS-03	
010-39			CVFY	DPS	FA3 MDM RETURN WORD BYPASS(HFE)	V91X2922XX	OFF			LCC-3		DPS-03	
010-40			CVFY	DPS	FA4 MDM RETURN WORD BYPASS(HFE)	V91X2923XX	OFF			LCC-3		DPS-03	
010-41			CVFY	DPS	GPC 1 TIME SOURCE GPC/MTU	V91X1716XX	ON			LCC-3		DPS-10	
010-42			CVFY	DPS	GPC 2 TIME SOURCE GPC/MTU	V91X1717XX	ON			LCC-3		DPS-10	
010-43			CVFY	DPS	GPC 3 TIME SOURCE GPC/MTU	V91X1718XX	ON			LCC-3		DPS-10	
010-44			CVFY	DPS	GPC 4 TIME SOURCE GPC/MTU	V91X1719XX	ON			LCC-3		DPS-10	
					$ FOR THE FOLLOWING FOUR STEPS, ANY FAULT $								
					$ FROM SOURCE 1 WILL RESULT IN A HOLD $								
010-45			CVFY	DPS	GPC 1 TMP SOURCE	V91Q1710CX	B001			LCC-3		DPS-10	
010-46			CVFY	DPS	GPC 2 TMP SOURCE	V91Q1711CX	B001			LCC-3		DPS-10	
010-47			CVFY	DPS	GPC 3 TMP SOURCE	V91Q1712CX	B001			LCC-3		DPS-10	
010-48			CVFY	DPS	GPC 4 TMP SOURCE	V91Q1713CX	B001			LCC-3		DPS-10	
010-49			CVFY	DPS	GPC 1 MM1 READY DI06	V92X7368XX	ON			3 OF 4		DPS-07	
010-50			CVFY	DPS	GPC 2 MM1 READY DI06	V92X7428XX	ON			3 OF 4		DPS-07	
010-51			CVFY	DPS	GPC 3 MM1 READY DI06	V92X7488XX	ON			3 OF 4		DPS-07	
010-52			CVFY	DPS	GPC 4 MM1 READY DI06	V92X7548XX	ON			LCC-3		DPS-07	
010-53			CVFY	DPS	GPC 1 MM2 READY DI07	V92X7369XX	ON			3 OF 4		DPS-07	
010-54			CVFY	DPS	GPC 2 MM2 READY DI07	V92X7429XX	ON			3 OF 4		DPS-07	
010-55			CVFY	DPS	GPC 3 MM2 READY DI07	V92X7489XX	ON			3 OF 4		DPS-07	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
010-56			CVFY	DPS	GPC 4 MM2 READY DI07	V92X7549XX	ON			LCC-3		DPS-07	
010-57			CVFY	DPS	GPC 1 MM1 IPL SELECT CMD DI04	V92X7366XX	OFF			3 OF 4		DPS-08	
010-58			CVFY	DPS	GPC 2 MM1 IPL SELECT CMD DI04	V92X7426XX	OFF			3 OF 4		DPS-08	
010-59			CVFY	DPS	GPC 3 MM1 IPL SELECT CMD DI04	V92X7486XX	OFF			3 OF 4		DPS-08	
010-60			CVFY	DPS	GPC 4 MM1 IPL SELECT CMD DI04	V92X7546XX	OFF			LCC-3		DPS-08	
010-61			CVFY	DPS	GPC 1 MM2 IPL SELECT CMD DI05	V92X7367XX	OFF			3 OF 4		DPS-08	
010-62			CVFY	DPS	GPC 2 MM2 IPL SELECT CMD DI05	V92X7427XX	OFF			3 OF 4		DPS-08	
010-63			CVFY	DPS	GPC 3 MM2 IPL SELECT CMD DI05	V92X7487XX	OFF			3 OF 4		DPS-08	
010-64			CVFY	DPS	GPC 4 MM2 IPL SELECT CMD DI05	V92X7547XX	OFF			LCC-3		DPS-08	
010-65			CVFY	DPS	GPC 1 BFS ENGAGE 1 DI35	V92X7381XX	OFF			11 OF 12		DPS-11	
010-66			CVFY	DPS	GPC 1 BFS ENGAGE 2 DI36	V92X7382XX	OFF			11 OF 12		DPS-11	
010-67			CVFY	DPS	GPC 1 BFS ENGAGE 3 DI37	V92X7383XX	OFF			11 OF 12		DPS-11	
010-68			CVFY	DPS	GPC 2 BFS ENGAGE 1 DI35	V92X7441XX	OFF			11 OF 12		DPS-11	
010-69			CVFY	DPS	GPC 2 BFS ENGAGE 2 DI36	V92X7442XX	OFF			11 OF 12		DPS-11	
010-70			CVFY	DPS	GPC 2 BFS ENGAGE 3 DI37	V92X7443XX	OFF			11 OF 12		DPS-11	
010-71			CVFY	DPS	GPC 3 BFS ENGAGE 1 DI35	V92X7501XX	OFF			11 OF 12		DPS-11	
010-72			CVFY	DPS	GPC 3 BFS ENGAGE 2 DI36	V92X7502XX	OFF			11 OF 12		DPS-11	
010-73			CVFY	DPS	GPC 3 BFS ENGAGE 3 DI37	V92X7503XX	OFF			11 OF 12		DPS-11	
010-74			CVFY	DPS	GPC 4 BFS ENGAGE 1 DI35	V92X7561XX	OFF			11 OF 12		DPS-11	
010-75			CVFY	DPS	GPC 4 BFS ENGAGE 2 DI36	V92X7562XX	OFF			11 OF 12		DPS-11	
010-76			CVFY	DPS	GPC 4 BFS ENGAGE 3 DI37	V92X7563XX	OFF			LCC-3		DPS-11	
					$ SRB ORDNANCE SYSTEMS STATUS CHECK $								
011-00			CVFY	BPYR	LH VOLTAGE FWD THR PIN PIC CAP A	B55V1605C1	NOLO	1.5	V	LCC-3		BSEP-01	
011-01			CVFY	BPYR	LH VOLTAGE FWD THR PIN PIC CAP B	B55V1606C1	NOLO	1.5	V	LCC-3		BSEP-01	
011-02			CVFY	BPYR	RH VOLTAGE FWD THR PIN PIC CAP A	B55V2605C1	NOLO	1.5	V	LCC-3		BSEP-01	
011-03			CVFY	BPYR	RH VOLTAGE FWD THR PIN PIC CAP B	B55V2606C1	NOLO	1.5	V	LCC-3		BSEP-01	
011-04			CVFY	BPYR	RH VOLTAGE AFT UPR BRC PIC CAP A	B55V2607C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-05			CVFY	BPYR	RH VOLTAGE AFT UPR BRC PIC CAP B	B55V2608C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-06			CVFY	BPYR	RH VOLTAGE AFT MID BRC PIC CAP A	B55V2609C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-07			CVFY	BPYR	RH VOLTAGE AFT MID BRC PIC CAP B	B55V2610C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-08			CVFY	BPYR	RH VOLTAGE AFT LWR BRC PIC CAP A	B55V2611C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-09			CVFY	BPYR	RH VOLTAGE AFT LWR BRC PIC CAP B	B55V2612C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-10			CVFY	BPYR	LH VOLTAGE AFT UPR BRC PIC CAP A	B55V1607C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-11			CVFY	BPYR	LH VOLTAGE AFT UPR BRC PIC CAP B	B55V1608C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-12			CVFY	BPYR	LH VOLTAGE AFT MID BRC PIC CAP A	B55V1609C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-13			CVFY	BPYR	LH VOLTAGE AFT MID BRC PIC CAP B	B55V1610C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-14			CVFY	BPYR	LH VOLTAGE AFT LWR BRC PIC CAP A	B55V1611C1	NOLO	1.5	V	LCC-3		BSEP-02	
011-15			CVFY	BPYR	LH VOLTAGE AFT LWR BRC PIC CAP B	B55V1612C1	NOLO	1.5	V	LCC-3		BSEP-02	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
011-16			CVFY	BPYR	LH VOLTAGE FWD SEPN MOT PIC CAP A	B55V1613C1	NOLO	1.5	V	LCC-3		BSEP-03	
011-17			CVFY	BPYR	LH VOLTAGE FWD SEPN MOT PIC CAP B	B55V1614C1	NOLO	1.5	V	LCC-3		BSEP-03	
011-18			CVFY	BPYR	RH VOLTAGE FWD SEPN MOT PIC CAP A	B55V2613C1	NOLO	1.5	V	LCC-3		BSEP-03	
011-19			CVFY	BPYR	RH VOLTAGE FWD SEPN MOT PIC CAP B	B55V2614C1	NOLO	1.5	V	LCC-3		BSEP-03	
011-20			CVFY	BPYR	LH VOLTAGE AFT SEPN MOT PIC CAP A	B55V1615C1	NOLO	1.5	V	LCC-3		BSEP-04	
011-21			CVFY	BPYR	LH VOLTAGE AFT SEPN MOT PIC CAP B	B55V1616C1	NOLO	1.5	V	LCC-3		BSEP-04	
011-22			CVFY	BPYR	RH VOLTAGE AFT SEPN MOT PIC CAP A	B55V2615C1	NOLO	1.5	V	LCC-3		BSEP-04	
011-23			CVFY	BPYR	RH VOLTAGE AFT SEPN MOT PIC CAP B	B55V2616C1	NOLO	1.5	V	LCC-3		BSEP-04	
011-24			CVFY	BPYR	LH VOLTAGE MN CHUTE DISC PIC CAP	B55V1620C1	NOLO	1.5	V	LCC-3		BREC-01	
011-25			CVFY	BPYR	RH VOLTAGE MN CHUTE DISC PIC CAP	B55V2620C1	NOLO	1.5	V	LCC-3		BREC-01	
011-26			CVFY	BPYR	LH VOLTAGE NOZ EXT SEV PIC CAP	B55V1619C1	NOLO	1.5	V	LCC-3		BREC-02	
011-27			CVFY	BPYR	RH VOLTAGE NOZ EXT SEV PIC CAP	B55V2619C1	NOLO	1.5	V	LCC-3		BREC-02	
011-28			CVFY	BPYR	LH VOLTAGE NOSE CAP RLSE PIC CAP	B55V1617C1	NOLO	1.5	V	LCC-3		BREC-03	
011-29			CVFY	BPYR	RH VOLTAGE NOSE CAP RLSE PIC CAP	B55V2617C1	NOLO	1.5	V	LCC-3		BREC-03	
011-30			CVFY	BPYR	LH VOLTAGE FRUSTUM RLSE PIC CAP	B55V1618C1	NOLO	1.5	V	LCC-3		BREC-04	
011-31			CVFY	BPYR	RH VOLTAGE FRUSTUM RLSE PIC CAP	B55V2618C1	NOLO	1.5	V	LCC-3		BREC-04	
					$ EPDC STATUS CHECK $								
012-00			CVFY	EPDC	AC BUS 1 PHASE A VOLT	V76V1500A1	115	120	VAC	LCC-3		EPDC-03	
012-01			CVFY	EPDC	AC BUS 1 PHASE B VOLT	V76V1501A1	115	120	VAC	LCC-3		EPDC-03	
012-02			CVFY	EPDC	AC BUS 1 PHASE C VOLT	V76V1502A1	115	120	VAC	LCC-3		EPDC-03	
012-03			CVFY	EPDC	AC BUS 2 PHASE A VOLT	V76V1600A1	115	120	VAC	LCC-3		EPDC-03	
012-04			CVFY	EPDC	AC BUS 2 PHASE B VOLT	V76V1601A1	115	120	VAC	LCC-3		EPDC-03	
012-05			CVFY	EPDC	AC BUS 2 PHASE C VOLT	V76V1602A1	115	120	VAC	LCC-3		EPDC-03	
012-06			CVFY	EPDC	AC BUS 3 PHASE A VOLT	V76V1700A1	115	120	VAC	LCC-3		EPDC-03	
012-07			CVFY	EPDC	AC BUS 3 PHASE B VOLT	V76V1701A1	115	120	VAC	LCC-3		EPDC-03	
012-08			CVFY	EPDC	AC BUS 3 PHASE C VOLT	V76V1702A1	115	120	VAC	LCC-3		EPDC-03	
012-09			CVFY	EPDC	AC BUS 1 PHASE A CURRENT	V76C1540A1	0.16	9.6	AMP	LCC-3		EPDC-04	
012-10			CVFY	EPDC	AC BUS 1 PHASE B CURRENT	V76C1541A1	0.16	9.6	AMP	LCC-3		EPDC-04	
012-11			CVFY	EPDC	AC BUS 1 PHASE C CURRENT	V76C1542A1	0.16	9.6	AMP	LCC-3		EPDC-04	
012-12			CVFY	EPDC	AC BUS 2 PHASE A CURRENT	V76C1640A1	0.16	9.6	AMP	LCC-3		EPDC-04	
012-13			CVFY	EPDC	AC BUS 2 PHASE B CURRENT	V76C1641A1	0.16	9.6	AMP	LCC-3		EPDC-04	
012-14			CVFY	EPDC	AC BUS 2 PHASE C CURRENT	V76C1642A1	0.16	9.6	AMP	LCC-3		EPDC-04	
012-15			CVFY	EPDC	AC BUS 3 PHASE A CURRENT	V76C1740A1	0.16	9.6	AMP	LCC-3		EPDC-04	
012-16			CVFY	EPDC	AC BUS 3 PHASE B CURRENT	V76C1741A1	0.16	9.6	AMP	LCC-3		EPDC-04	
012-17			CVFY	EPDC	AC BUS 3 PHASE C CURRENT	V76C1742A1	0.16	9.6	AMP	LCC-3		EPDC-04	
012-18			CVFY	EPDC	MAIN BUS A VOLTAGE	V76V0100A1	28.3	32.0	V	LCC-3		EPDC-01	
012-19			CVFY	FCP	FUEL CELL NO 1 VOLTAGE	V45V0100A1	28.3	32.0	V	LCC-3		EPDC-01	
012-20			CVFY	EPDC	MAIN BUS B VOLTAGE	V76V0200A1	28.3	32.0	V	LCC-3		EPDC-01	
012-21			CVFY	FCP	FUEL CELL NO 2 VOLTAGE	V45V0200A1	28.3	32.0	V	LCC-3		EPDC-01	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
012-22			CVFY	EPDC	MAIN BUS C VOLTAGE	V76V0300A1	28.3	32.0	V	LCC-3		EPDC-01	
012-23			CVFY	FCP	FUEL CELL NO 3 VOLTAGE	V45V0300A1	28.3	32.0	V	LCC-3		EPDC-01	
012-24			CVFY	EPDC	L SRB BUS A BU PWR ON	V76X6775E1	OFF			LCC-3		EPDC-05	
012-25			CVFY	EPDC	R SRB BUS A BU PWR ON	V76X6776E1	OFF			LCC-3		EPDC-05	
012-26			CVFY	EPDC	L SRB BUS B BU PWR ON	V76X6777E1	OFF			LCC-3		EPDC-05	
012-27			CVFY	EPDC	R SRB BUS B BU PWR ON	V76X6778E1	OFF			LCC-3		EPDC-05	
012-28			CVFY	EPDC	MAIN BUS A CONT BUS AB2/CA2 RPC ON	V76X0125E1	ON			LCC-4		EPDC-02	
012-29			CVFY	EPDC	MAIN BUS B CONT BUS AB2/BC2 RPC ON	V76X0225E1	ON			LCC-4		EPDC-02	
012-30			CVFY	EPDC	MAIN BUS C CONT BUS BC2/CA2 RPC ON	V76X0325E1	ON			LCC-4		EPDC-02	
012-31			CVFY	EPDC	MAIN BUS A CONT BUS AB3/CA3 RPC ON	V76X0126E1	ON			LCC-4		EPDC-02	
012-32			CVFY	EPDC	MAIN BUS B CONT BUS AB3/BC3 RPC ON	V76X0226E1	ON			LCC-4		EPDC-02	
012-33			CVFY	EPDC	MAIN BUS C CONT BUS BC3/CA3 RPC ON	V76X0326E1	ON			LCC-4		EPDC-02	
012-34			CVFY	EPDC	MAIN BUS B CONT BUS AB1/BC1 RPC ON	V76X0224E1	ON			LCC-4		EPDC-02	
012-35			CVFY	EPDC	MAIN BUS C CONT BUS BC1/CA1 RPC ON	V76X0324E1	ON			LCC-4		EPDC-02	
012-36			CVFY	EPDC	MAIN BUS A CONT BUS AB1/CA1 RPC ON	V76X0124E1	ON			LCC-4		EPDC-02	
012-37			CVFY	EPDC	MAIN BUS B ESS 1BC RPC ON	V76X0236E1	ON			5 OF 6		EPDC-06	
012-38			CVFY	EPDC	MAIN BUS C ESS 1BC RPC ON	V76X0335E1	ON			5 OF 6		EPDC-06	
012-39			CVFY	EPDC	MAIN BUS C ESS 2CA RPC ON	V76X0336E1	ON			5 OF 6		EPDC-06	
012-40			CVFY	EPDC	MAIN BUS A ESS 2CA RPC ON	V76X0136E1	ON			5 OF 6		EPDC-06	
012-41			CVFY	EPDC	MAIN BUS A ESS 3AB RPC ON	V76X0135E1	ON			5 OF 6		EPDC-06	
012-42			CVFY	EPDC	MAIN BUS B ESS 3AB RPC ON	V76X0235E1	ON			5 OF 6		EPDC-06	
012-43			CVFY	EPDC	MEC 1 CORE B RPC B ON	V76X4395E1	ON			LCC-3		EPDC-08	
012-44			CVFY	EPDC	MEC 1 CORE B RPC C ON	V76X4396E1	ON			LCC-3		EPDC-08	
012-45			CVFY	EPDC	MEC 2 CORE B RPC A ON	V76X4397E1	ON			LCC-3		EPDC-08	
012-46			CVFY	EPDC	MEC 2 CORE B RPC C ON	V76X4398E1	ON			LCC-3		EPDC-08	
012-47			CVFY	EPDC	AVN FEXT AV BAY 3A PYRO CAP VOLT	V76V4700A1	NOLO	1.5	V	LCC-3		EPDC-11	
012-48			CVFY	EPDC	AVN FEXT AV BAY 2 PYRO CAP VOLT	V76V4716A1	NOLO	1.5	V	LCC-3		EPDC-11	
012-49			CVFY	EPDC	AVN FEXT AV BAY 1 PYRO CAP VOLT	V76V4736A1	NOLO	1.5	V	LCC-3		EPDC-11	
012-50			CVFY	EPDC	NLG PYRO EXTEND ACTR-CAP VOLT-1	V76V4820A1	NOLO	1.5	V	LCC-3		EPDC-12	
012-51			CVFY	EPDC	NLG PYRO EXTEND ACTR-CAP VOLT-2	V76V4821A1	NOLO	1.5	V	LCC-3		EPDC-12	
012-52			CVFY	EPDC	NLG EMER EXT PYRO A CAP VOLT	V76V4830A1	NOLO	1.5	V	LCC-3		EPDC-12	
012-53			CVFY	EPDC	NLG EMER EXT PYRO B CAP VOLT	V76V4832A1	NOLO	1.5	V	LCC-3		EPDC-12	
012-54			CVFY	EPDC	LMG EMER EXT PYRO A CAP VOLT	V76V4900A1	NOLO	1.5	V	LCC-3		EPDC-12	
012-55			CVFY	EPDC	LMG EMER EXT PYRO B CAP VOLT	V76V4902A1	NOLO	1.5	V	LCC-3		EPDC-12	
012-56			CVFY	EPDC	RMG EMER EXT PYRO A CAP VOLT	V76V4950A1	NOLO	1.5	V	LCC-3		EPDC-12	
012-57			CVFY	EPDC	RMG EMER EXT PYRO B CAP VOLT	V76V4952A1	NOLO	1.5	V	LCC-3		EPDC-12	
					$ EFFECTIVE WHEN ET TUMBLE SYS IS ACTIVE $								
012-58			CVFY	EPDC	ET TUMBLE SYSTEM ARMED	T56X0002E1	OFF			LCC-3		ET-11	
					$ APPLICABLE ONLY ON MISSIONS REQUIRING $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ PAYLOAD ORBITER POWER -NEXT 2 STEPS $								
					$ ORBITER PAYLOAD POWER SUPPLY $								
012-59			CVFY	EPDC	PAYLOAD AUX RPC A ON	V76X2868E1	ON			LCC-3		PAY-02	
012-60			CVFY	EPDC	PAYLOAD AUX RPC B ON	V76X2869E1	ON			LCC-3		PAY-02	
					$ ET SEP DISCRETE CHECK $								
012-61			CVFY	EPDC	ET SEPARATION A	V76X9111X1	OFF			LCC-3		EPDC-13	
012-62			CVFY	EPDC	ET SEPARATION B	V76X9112X1	OFF			LCC-3		EPDC-13	
					$ COMM STATUS CHECK $								
013-00			CVFY	COMM	NSP FRAME SYNC LOCK 1	V74X5176E1	ON			1 OF 2		CT-04	
013-01			CVFY	COMM	NSP FRAME SYNC LOCK 2	V74X5177E1	ON			LCC-3		CT-04	
013-02			CVFY	COMM	GCIL ACTIVE	V74X5052E1	ON			LCC-3		CT-03	
					$ INSTRUMENTATION STATUS CHECK $								
014-00			CVFY	INST	PCM UNIT POWER STATUS GOOD PCM-BSR	V75X2121D1	ON			LCC-3		INS-01	
014-01			CVFY	INST	MTU GOOD PCM-BSR	V75X2122D1	ON			LCC-3		INS-01	
014-02			CVFY	INST	FETCH PROM PARITY GOOD PCM-BSR	V75X2123D1	ON			LCC-3		INS-01	
014-03			CVFY	INST	128 KBPS TLM DOWNLINK GOOD PCM-BSR	V75X2124D1	ON			LCC-3		INS-01	
014-04			CVFY	INST	128 KBPS TLM PARITY GOOD PCM-BSR	V75X2126D1	ON			LCC-3		INS-01	
014-05			CVFY	INST	128 KBPS TLM COUNTERS GOOD PCM-BSR	V75X2127D1	ON			LCC-3		INS-01	
014-06			CVFY	INST	INPUT DATA VALID PCM-BSR	V75X2130D1	ON			LCC-3		INS-01	
014-07			CVFY	INST	OI RAM PARITY GOOD PCM-BSR	V75X2131D1	ON			LCC-3		INS-01	
014-08			CVFY	INST	PDI RAM PARITY GOOD PCM-BSR	V75X2132D1	ON			LCC-3		INS-01	
014-09			CVFY	INST	TOGGLE BUFFER PARITY GOOD PCM-BSR	V75X2133D1	ON			LCC-3		INS-01	
014-10			CVFY	INST	NO RESPONSE COMPUTER BUS PCM-BSR	V75X2134D1	ON			LCC-3		INS-01	
014-11			CVFY	INST	MTU-PCM VOTED OSC NO 1 AMPTD FAIL	V75X3542D1	OFF			LCC-3		INS-03	
014-12			CVFY	INST	MTU-PCM VOTED OSC NO 2 AMPTD FAIL	V75X3543D1	OFF			LCC-3		INS-03	
014-13			CVFY	INST	MTU-PCM VOTED OSC FREQ DIFF FAIL	V75X3544D1	OFF			LCC-3		INS-03	
014-14			CVFY	INST	MTU-PCM VOTED OSC NO 1 TEMP FAIL	V75X3545D1	OFF			LCC-3		INS-03	
014-15			CVFY	INST	MTU-PCM VOTED OSC NO 2 TEMP FAIL	V75X3546D1	OFF			LCC-3		INS-03	
014-16			CVFY	INST	MTU-PCM VOTED PS 1 VOLT AMPTD FAIL	V75X3547D1	OFF			1 OF 2		INS-03	
014-17			CVFY	INST	MTU-PCM VOTED PS 2 VOLT AMPTD FAIL	V75X3548D1	OFF			LCC-3		INS-03	
014-18			CVFY	INST	MTU-PCM VOTED CMD CHANNEL A FAIL	V75X3549D1	OFF			2 OF 3		INS-03	
014-19			CVFY	INST	MTU-PCM VOTED CMD CHANNEL B FAIL	V75X3550D1	OFF			2 OF 3		INS-03	
014-20			CVFY	INST	MTU-PCM VOTED CMD CHANNEL C FAIL	V75X3551D1	OFF			LCC-3		INS-03	
014-21			CVFY	INST	MTU-PCM VOTED ANY IRIG B CHAN FAIL	V75X3552D1	OFF			LCC-3		INS-03	
014-22			CVFY	INST	MTU-PCM VOTED FREQ DIVIDER 1 FAIL	V75X3553D1	OFF			LCC-3		INS-03	
014-23			CVFY	INST	MTU-PCM VOTED FREQ DIVIDER 2 FAIL	V75X3554D1	OFF			LCC-3		INS-03	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
014-24			CVFY	INST	MTU-PCM VOTED FREQ DIVIDER 3 FAIL	V75X3555D1	OFF			LCC-3		INS-03	
014-25			CVFY	INST	BAY1 DSC	V75X2171E1	ON			LCC-3		INS-04	
014-26			CVFY	INST	BAY2 DSC	V75X2172E1	ON			LCC-3		INS-04	
014-27			CVFY	INST	BAY3 DSC	V75X2173E1	ON			LCC-3		INS-04	
014-28			CVFY	INST	BAY4 DSC	V75X2174E1	ON			LCC-3		INS-04	
014-29			CVFY	INST	BAY5 DSC	V75X2175E1	ON			LCC-3		INS-04	
014-30			CVFY	INST	BAY6 DSC	V75X2176E1	ON			LCC-3		INS-04	
014-31			CVFY	INST	MID 1 DSC (LH SIDE)	V75X2181E1	ON			LCC-3		INS-04	
014-32			CVFY	INST	MID 2 DSC (RT SIDE)	V75X2182E1	ON			LCC-3		INS-04	
014-33			CVFY	INST	RCS-FWD FU FILL LINE TEMP DSC OF4	D42V130411	30	NOHI	DEGF	1 OF 3		INS-04	
014-34			CVFY	INST	FWD L FU PR LINE TEMP BKUP DSC OF4	D42V130811	30	NOHI	DEGF	1 OF 3		INS-04	
014-35			CVFY	INST	RH FWD FUS RCS MOD SKIN T DSC OF4	D09V151011	30	NOHI	DEGF	LCC-3		INS-04	
014-36			CVFY	INST	RCS-L AFT OX MANF TEMP-1 DSC OL1	D42V220411	30	NOHI	DEGF	1 OF 3		INS-04	
014-37			CVFY	INST	OMS-L POD OX DRAIN PNL T-1 DSC OL1	D43V470411	30	NOHI	DEGF	1 OF 3		INS-04	
014-38			CVFY	INST	OMS-L POD OX/HE TP FTG T-1 DSC OL1	D43V470811	30	NOHI	DEGF	LCC-3		INS-04	
014-39			CVFY	INST	RCS-L AFT HSG THERM SW T-1 DSC OL2	D42V230411	30	NOHI	DEGF	1 OF 3		INS-04	
014-40			CVFY	INST	RCS-L AFT HSG THERM SW T-2 DSC OL2	D42V230511	30	NOHI	DEGF	1 OF 3		INS-04	
014-41			CVFY	INST	OMS-L POD ENG SVC PNL TEMP DSC OL2	D43V470711	30	NOHI	DEGF	LCC-3		INS-04	
014-42			CVFY	INST	RCS-R AFT OX MANF TEMP-1 DSC OR1	D42V320411	30	NOHI	DEGF	1 OF 3		INS-04	
014-43			CVFY	INST	OMS-R POD OX DRAIN PNL T-1 DSC OR1	D43V570411	30	NOHI	DEGF	1 OF 3		INS-04	
014-44			CVFY	INST	OMS-R POD OX/HE TP FTG T-1 DSC OR1	D43V570811	30	NOHI	DEGF	LCC-3		INS-04	
014-45			CVFY	INST	RCS-R AFT HSG THERM SW T-1 DSC OR2	D42V330411	30	NOHI	DEGF	1 OF 3		INS-04	
014-46			CVFY	INST	OMS-R POD ENG SVC PNL TEMP DSC OR2	D43V570711	30	NOHI	DEGF	1 OF 3		INS-04	
014-47			CVFY	INST	OMS-R RCS HSG VER CMPT T-2 DSC OR2	D43V571111	30	NOHI	DEGF	LCC-3		INS-04	
014-48			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OF01A	D75V4020A1	X55/AA			LCC-3		INS-05	
014-49			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OF01B	D75V4020B1	X55/AA			LCC-3		INS-05	
014-50			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OF02A	D75V4021A1	X55/AA			LCC-3		INS-05	
014-51			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OF02B	D75V4021B1	X55/AA			LCC-3		INS-05	
014-52			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OF03A	D75V4022A1	X55/AA			LCC-3		INS-05	
014-53			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OF03B	D75V4022B1	X55/AA			LCC-3		INS-05	
014-54			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OF04A	D75V4023A1	X55/AA			LCC-3		INS-05	
014-55			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OF04B	D75V4023B1	X55/AA			LCC-3		INS-05	
014-56			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OA01A	D75V4024A1	X55/AA			LCC-3		INS-05	
014-57			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OA01B	D75V4024B1	X55/AA			LCC-3		INS-05	
014-58			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OA02A	D75V4025A1	X55/AA			LCC-3		INS-05	
014-59			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OA02B	D75V4025B1	X55/AA			LCC-3		INS-05	
014-60			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OA03A	D75V4026A1	X55/AA			LCC-3		INS-05	
014-61			CVFY	INST	PCM DYNAMIC WRAPAROUND MDM OA03B	D75V4026B1	X55/AA			LCC-3		INS-05	
014-62			CVFY	INST	C/W MASTER ALARM TLM OUTPUT	V73X1567E1	OFF			LCC-3		INS-06	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ ENVIRONMENTAL CONTROL STATUS CHECK $								
015-00			CVFY	ECLS	O2 PARTIAL PRESSURE-A	V61P2511A1	2.8	3.4	PSIA	2 OF 3		ECL-06	
015-01			CVFY	ECLS	O2 PARTIAL PRESSURE-B	V61P2513A1	2.8	3.4	PSIA	2 OF 3		ECL-06	
015-02			CVFY	ECLS	O2 PARTIAL PRESSURE-C	V61P2515A1	2.8	3.4	PSIA	LCC-1		ECL-06	
015-03			CVFY	ECLS	CABIN FAN DELTA PRESS	V61P2556A1	4.2	6.8	INH2O	LCC-3		ECL-07	
015-04			CVFY	ECLS	H2O LOOP 1 PUMP OUTLET PRESS	V61P2600A1	55	73	PSIA	1 OF 3		ECL-09	
015-05			CVFY	ECLS	H2O LOOP 1 INTERCHANGER FLOW	V61R2742A1	649	NOHI	LBM/HR	1 OF 3		ECL-09	
015-06			CVFY	ECLS	H2O LOOP 1 PUMP DELTA PRESS	V61P2605A1	33	46	PSID	OR		ECL-09	
015-07			CVFY	ECLS	H2O LOOP 2 PUMP OUTLET PRESS	V61P2700A1	55	73	PSIA	1 OF 3		ECL-09	
015-08			CVFY	ECLS	H2O LOOP 2 INTERCHANGER FLOW	V61R2722A1	649	NOHI	LBM/HR	1 OF 3		ECL-09	
015-09			CVFY	ECLS	H2O LOOP 2 PUMP DELTA PRESS	V61P2705A1	33	46	PSID	LCC-4		ECL-09	
015-10			CVFY	ECLS	LOOP 1 AVNS BAY 1 HX OUTLET TEMP	V61T2615A1	NOLO	108	DEGF	LCC-3		ECL-10	
015-11			CVFY	ECLS	LOOP 2 AVNS BAY 1 HX OUTLET TEMP	V61T2616A1	NOLO	108	DEGF	LCC-3		ECL-10	
015-12			CVFY	ECLS	AVNS BAY 1 OUTLET AIR TEMP	V61T2645A1	NOLO	130	DEGF	LCC-3		ECL-10	
015-13			CVFY	ECLS	AVIONICS BAY 1 DELTA PRESS	V61P2642A1	2.60	4.30	INH2O	LCC-3		ECL-10	
015-14			CVFY	ECLS	LOOP 1 AVNS BAY 1 H2O OUTLET TEMP	V61T2624A1	NOLO	120	DEGF	LCC-3		ECL-10	
015-15			CVFY	ECLS	LOOP 2 AVNS BAY 1 H2O OUTLET TEMP	V61T2625A1	NOLO	120	DEGF	LCC-3		ECL-10	
015-16			CVFY	ECLS	LOOP 1 AVNS BAY 2 HX OUTLET TEMP	V61T2618A1	NOLO	108	DEGF	LCC-3		ECL-10	
015-17			CVFY	ECLS	LOOP 2 AVNS BAY 2 HX OUTLET TEMP	V61T2619A1	NOLO	108	DEGF	LCC-3		ECL-10	
015-18			CVFY	ECLS	AVNS BAY 2 OUTLET AIR TEMP	V61T2650A1	NOLO	130	DEGF	LCC-3		ECL-10	
015-19			CVFY	ECLS	AVIONICS BAY 2 DELTA PRESS	V61P2647A1	2.60	4.30	INH2O	LCC-3		ECL-10	
015-20			CVFY	ECLS	LOOP 1 AVNS BAY 2 H2O OUTLET TEMP	V61T2627A1	NOLO	120	DEGF	LCC-3		ECL-10	
015-21			CVFY	ECLS	LOOP 2 AVNS BAY 2 H2O OUTLET TEMP	V61T2628A1	NOLO	120	DEGF	LCC-3		ECL-10	
015-22			CVFY	ECLS	LOOP 1 AVNS BAY 3 HX OUT TEMP	V61T2621A1	NOLO	108	DEGF	LCC-3		ECL-10	
015-23			CVFY	ECLS	LOOP 2 AVNS BAY 3 HX OUT TEMP	V61T2622A1	NOLO	108	DEGF	LCC-3		ECL-10	
015-24			CVFY	ECLS	AVNS BAY 3 OUTLET AIR TEMP	V61T2661A1	NOLO	130	DEGF	LCC-3		ECL-10	
015-25			CVFY	ECLS	AVIONICS BAY 3 DELTA PRESS	V61P2658A1	2.60	4.30	INH2O	LCC-3		ECL-10	
015-26			CVFY	ECLS	LOOP 1 AVNS BAY 3A H2O OUTLET TEMP	V61T2630A1	NOLO	120	DEGF	LCC-3		ECL-10	
015-27			CVFY	ECLS	LOOP 2 AVNS BAY 3A H2O OUTLET TEMP	V61T2631A1	NOLO	120	DEGF	LCC-3		ECL-10	
015-28			CVFY	ECLS	IMU DELTA PRESS	V61P2869A1	3.7	4.95	INH2O	LCC-2		ECL-11	
015-29			CVFY	ECLS	SMOKE DET-RTN AIR TO CAB HX	V62X0596E1	OFF			LCC-4		ECL-31	
015-30			CVFY	ECLS	SMOKE DETECTOR-LEFT FLIGHT DECK	V62X0606E1	OFF			LCC-4		ECL-31	
015-31			CVFY	ECLS	SMOKE DETECTOR-RIGHT FLIGHT DECK	V62X0607E1	OFF			LCC-4		ECL-31	
015-32			CVFY	ECLS	SMOKE DETECTOR-A AV BAY-2	V62X0610E1	OFF			LCC-4		ECL-33	
015-33			CVFY	ECLS	SMOKE DETECTOR-B AV BAY-2	V62X0611E1	OFF			LCC-4		ECL-33	
015-34			CVFY	ECLS	FIRE BOTTLE AV BAY 1 FULL/EMPTY	V62X0612E1	OFF			LCC-3		ECL-34	
015-35			CVFY	ECLS	SMOKE DETECTOR-A AV BAY-1	V62X0620E1	OFF			LCC-4		ECL-33	
015-36			CVFY	ECLS	SMOKE DETECTOR-B AV BAY-1	V62X0621E1	OFF			LCC-4		ECL-33	
015-37			CVFY	ECLS	FIRE BOTTLE AV BAY 2 FULL/EMPTY	V62X0622E1	OFF			LCC-3		ECL-34	
015-38			CVFY	ECLS	SMOKE DETECTOR-A AV BAY 3	V62X0630E1	OFF			LCC-4		ECL-33	
015-39			CVFY	ECLS	SMOKE DETECTOR-B AV BAY 3	V62X0631E1	OFF			LCC-4		ECL-33	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
015-40			CVFY	ECLS	FIRE BOTTLE AV BAY 3 FULL/EMPTY	V62X0632E1	OFF			LCC-3		ECL-34	
015-41			CVFY	ECLS	SYS 1 N2 SUPPLY PRESSURE	V61P2301A1	100	3300	PSIA	1 OF 2		ECL-02	
015-42			CVFY	ECLS	SYS 2 N2 SUPPLY PRESSURE	V61P2309A1	100	3300	PSIA	LCC-1		ECL-02	
015-43			CVFY	ECLS	SYS 1 N2 TANK 1 TEMP	V61T2406A1	20	150	DEGF	1 OF 4		ECL-02	
015-44			CVFY	ECLS	SYS 1 N2 TANK 2 TEMP	V61T2407A1	20	150	DEGF	1 OF 4		ECL-02	
015-45			CVFY	ECLS	SYS 2 N2 TANK 1 TEMP	V61T2408A1	20	150	DEGF	1 OF 4		ECL-02	
015-46			CVFY	ECLS	SYS 2 N2 TANK 2 TEMP	V61T2409A1	20	150	DEGF	LCC-1		ECL-02	
015-47			CVFY	ECLS	FCL 1 INTERCHANGER FLOWRATE	V63R1100A1	2150	NOHI	LBM/HR	2 OF 3		ECL-40	
015-48			CVFY	ECLS	FCL 1 PAYLOAD HX FLOWRATE	V63R1103A1	1090	NOHI	LBM/HR	2 OF 3		ECL-40	
015-49			CVFY	ECLS	FCL 1 COLDPLATE NETWORK FLOWRATE	V63R1105A1	265	NOHI	LBM/HR	LCC-4		ECL-40	
015-50			CVFY	ECLS	FCL 1 PUMP INLET PRESS	V63P1108A1	92	117	PSIA	LCC-4		ECL-41	
015-51			CVFY	ECLS	FCL 1 ACCUMULATOR QUANTITY	V63Q1130A1	23	39	PCT	LCC-4		ECL-41	
015-52			CVFY	ECLS	NH3 SYS A TANK TEMP	V63T1180A1	-50	170	DEGF	LCC-1		ECL-42	
015-53			CVFY	ECLS	NH3 SYS B TANK TEMP	V63T1188A1	-50	170	DEGF	LCC-1		ECL-42	
015-54			CVFY	ECLS	NH3 SYS A TANK PRESS	V63P1196A1	5	505	PSIA	LCC-1		ECL-42	
015-55			CVFY	ECLS	NH3 SYS B TANK PRESS	V63P1197A1	5	505	PSIA	LCC-1		ECL-42	
015-56			CVFY	ECLS	FCL 1 EVAP OUT TEMP	V63T1207A1	33	50	DEGF	LCC-3		ECL-43	
015-57			CVFY	ECLS	FCL 2 EVAP OUT TEMP	V63T1407A1	33	50	DEGF	LCC-3		ECL-43	
015-58			CVFY	ECLS	FCL 2 INTERCHANGER FLOWRATE	V63R1300A1	2150	NOHI	LBM/HR	2 OF 3		ECL-40	
015-59			CVFY	ECLS	FCL 2 PAYLOAD HX FLOWRATE	V63R1303A1	1090	NOHI	LBM/HR	2 OF 3		ECL-40	
015-60			CVFY	ECLS	FCL 2 COLDPLATE NETWORK FLOWRATE	V63R1305A1	265	NOHI	LBM/HR	LCC-4		ECL-40	
015-61			CVFY	ECLS	FCL 2 PUMP INLET PRESS	V63P1308A1	77	100	PSIA	LCC-4		ECL-41	
015-62			CVFY	ECLS	FCL 2 ACCUMULATOR QUANTITY	V63Q1330A1	23	39	PCT	LCC-4		ECL-41	
015-63			CVFY	ECLS	FCL 1 INTERCHANGER FLOWRATE	V63R1100A1	2150	NOHI	LBM/HR	1 OF 2		ECL-40	
015-64			CVFY	ECLS	FCL 2 INTERCHANGER FLOWRATE	V63R1300A1	2150	NOHI	LBM/HR	LCC-4		ECL-40	
					$ PVD STATUS CHECKS $								
016-00		B	CVFY	PVD	ORB FWD INTERFACE PRESS IND	GECP2400A	30	86	INH2O	1 OF 2		GSE-02	
016-01		B	CVFY	PVD	ORB FWD DUCT PRESS IND	GECP4401A	35	96	INH2O	LCC-3		GSE-02	
016-02		B	CVFY	PVD	ORB PLB INTERFACE PRESS IND	GECP2200A	20	86	INH2O	1 OF 2		GSE-03	
016-03		B	CVFY	PVD	ORB PLB DUCT PRESS IND	GECP4201A	24	96	INH2O	LCC-3		GSE-03	
016-04		B	CVFY	PVD	ORB AFT INTERFACE PRESS IND	GECP2300A	24	86	INH2O	1 OF 2		GSE-01	
016-05		B	CVFY	PVD	ORB AFT DUCT PRESS IND	GECP4301A	50	110	INH2O	LCC-3		GSE-01	
016-06		A	CVFY	PVD	ORB FWD I/F PRESS IND	GECP5F07A	30	86	INH2O	1 OF 2		GSE-02	
016-07		A	CVFY	PVD	ORB FWD DUCT PRESS IND	GECP8F03A	35	96	INH2O	LCC-3		GSE-02	
016-08		A	CVFY	PVD	ORB PLB I/F PRESS IND	GECP5P07A	20	86	INH2O	1 OF 2		GSE-03	
016-09		A	CVFY	PVD	ORB PLB DUCT PRESS IND	GECP8P03A	24	96	INH2O	LCC-3		GSE-03	
016-10		A	CVFY	PVD	ORB AFT I/F PRESS IND	GECP5A07A	24	86	INH2O	1 OF 2		GSE-01	
016-11		A	CVFY	PVD	ORB AFT DUCT PRESS IND	GECP8A03A	50	110	INH2O	LCC-3		GSE-01	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ HYDRAULICS STATUS CHECKS $								
017-00			CVFY	HYD	HYD SYS 1 RSVR FLUID VOLUME	V58Q0102A1	46	NOHI	PCT	LCC-3		HYD-01	
017-01			CVFY	HYD	HYD SYS 2 RSVR FLUID VOLUME	V58Q0202A1	46	NOHI	PCT	LCC-3		HYD-01	
017-02			CVFY	HYD	HYD SYS 3 RSVR FLUID VOLUME	V58Q0302A1	46	NOHI	PCT	LCC-3		HYD-01	
					$ APU ISO VALVE TEMPERATURE CHECK $								
017-03			CVFY	APU	APU 1 ISO VALVE B TEMP 1	V46T1173A1	45	160	DEGF	1 OF 2		APU-21	
017-04			CVFY	APU	APU 1 ISO VALVE B TEMP 2	V46T1174A1	45	160	DEGF	LCC-3		APU-21	
017-05			CVFY	APU	APU 1 ISO VALVE A TEMP 1	V46T1175A1	45	160	DEGF	1 OF 2		APU-21	
017-06			CVFY	APU	APU 1 ISO VALVE A TEMP 2	V46T1176A1	45	160	DEGF	LCC-3		APU-21	
017-07			CVFY	APU	APU 2 ISO VALVE B TEMP 1	V46T1273A1	45	160	DEGF	1 OF 2		APU-21	
017-08			CVFY	APU	APU 2 ISO VALVE B TEMP 2	V46T1274A1	45	160	DEGF	LCC-3		APU-21	
017-09			CVFY	APU	APU 2 ISO VALVE A TEMP 1	V46T1275A1	45	160	DEGF	1 OF 2		APU-21	
017-10			CVFY	APU	APU 2 ISO VALVE A TEMP 2	V46T1276A1	45	160	DEGF	LCC-3		APU-21	
017-11			CVFY	APU	APU 3 ISO VALVE B TEMP 1	V46T1373A1	45	160	DEGF	1 OF 2		APU-21	
017-12			CVFY	APU	APU 3 ISO VALVE B TEMP 2	V46T1374A1	45	160	DEGF	LCC-3		APU-21	
017-13			CVFY	APU	APU 3 ISO VALVE A TEMP 1	V46T1375A1	45	160	DEGF	1 OF 2		APU-21	
017-14			CVFY	APU	APU 3 ISO VALVE A TEMP 2	V46T1376A1	45	160	DEGF	LCC-3		APU-21	
					$ HYD LDG GEAR ISO VL CHECK $								
017-15			CVFY	HYD	HYDR SYS 1 LDG GR ISLN VLV CL IND	V58X0190E1	ON			LCC-3		HYD-08	
					$ APU STATUS CHECK $								
					$ APU GAS GENERATOR READY $								
018-00			CVFY	APU	APU 1 GAS GENERATOR BED TEMP	V46T0122A1	258	436	DEGF	1 OF 2		APU-04	
018-01			CVFY	APU	APU 1 INJ TUBE TEMP	V46T0174A1	258	436	DEGF	LCC-2		APU-04	
018-02			CVFY	APU	APU 2 GAS GENERATOR BED TEMP	V46T0222A1	258	436	DEGF	1 OF 2		APU-04	
018-03			CVFY	APU	APU 2 INJ TUBE TEMP	V46T0274A1	258	436	DEGF	LCC-2		APU-04	
018-04			CVFY	APU	APU 3 GAS GENERATOR BED TEMP	V46T0322A1	258	436	DEGF	1 OF 2		APU-04	
018-05			CVFY	APU	APU 3 INJ TUBE TEMP	V46T0374A1	258	436	DEGF	LCC-2		APU-04	
					$ APU FUEL PUMP SEAL CHECK $								
018-06			CVFY	APU	APU 1 FUEL PUMP DRAIN LINE PRESS 1	V46P0190A1	NOLO	25	PSIA	1 OF 2		APU-16	
018-07			CVFY	APU	APU 1 FUEL PUMP DRAIN LINE PRESS 2	V46P0191A1	NOLO	25	PSIA	LCC-3		APU-16	
018-08			CVFY	APU	APU 2 FUEL PUMP DRAIN LINE PRESS 1	V46P0290A1	NOLO	25	PSIA	1 OF 2		APU-16	
018-09			CVFY	APU	APU 2 FUEL PUMP DRAIN LINE PRESS 2	V46P0291A1	NOLO	25	PSIA	LCC-3		APU-16	
018-10			CVFY	APU	APU 3 FUEL PUMP DRAIN LINE PRESS 1	V46P0390A1	NOLO	25	PSIA	1 OF 2		APU-16	
018-11			CVFY	APU	APU 3 FUEL PUMP DRAIN LINE PRESS 2	V46P0391A1	NOLO	25	PSIA	LCC-3		APU-16	
					$ APU GEARBOX GN2 SUPPLY CK $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
018-12			CVFY	APU	APU 1 GN2 BOTTLE PRESS	V46P0152A1	115	NOHI	PSIA	LCC-3		APU-13	
018-13			CVFY	APU	APU 2 GN2 BOTTLE PRESS	V46P0252A1	115	NOHI	PSIA	LCC-3		APU-13	
018-14			CVFY	APU	APU 3 GN2 BOTTLE PRESS	V46P0352A1	115	NOHI	PSIA	LCC-3		APU-13	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				

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$*************************INTG SET CDT INTERRUPT TO INITIATE TERMINATE LOX REPLENISH***************
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SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
019-00	-26:00												
					$ CHECK RANGE-SAFETY CLOSE LOOP TEST $								
020-00	ST005	VFY	BRS		LH EV RSS DCDR A ON/CHK TONE OFF	B55X1871X1	ON			7 OF 7			
020-01		VFY	BRS		LH EV RSS DCDR B ON/CHK TONE OFF	B55X1872X1	ON			7 OF 7			
020-02		VFY	TRS		ET RSS DCDR PWR ON/CHK TONE OFF	T55X1925E1	ON			7 OF 7			
020-03		VFY	BRS		RH EV RSS DCDR A ON/CHK TONE OFF	B55X2871X1	ON			7 OF 7			
020-04		VFY	BRS		RH EV RSS DCDR B ON/CHK TONE OFF	B55X2872X1	ON			7 OF 7			
020-05		VFY	BRS		SYS A ENCODER RELAY ENABLED IND	GRSX2130E	OFF			7 OF 7			
020-06		VFY	BRS		SYS B ENCODER RELAY ENABLED IND	GRSX2124E	OFF			GTO ST005			
					$ SRB/ET RSS MONITOR $								
021-00		CVFY	BRS		LH EVENT RSS A INHIBIT	B55X1881X1	ON			LCC-3		BRSS-05	S00FH0.031
021-01		CVFY	BRS		LH EVENT RSS B INHIBIT	B55X1882X1	ON			LCC-3		BRSS-05	S00FH0.031
021-02		CVFY	BRS		RH EVENT RSS A INHIBIT	B55X2881X1	ON			LCC-3		BRSS-05	S00FH0.031
021-03		CVFY	BRS		RH EVENT RSS B INHIBIT	B55X2882X1	ON			LCC-3		BRSS-05	S00FH0.031
021-04		CVFY	TRS		ET RSS A INHIBIT IND	T55X1885X1	ON			LCC-3		TRSS-04	S00FH0.031
021-05		CVFY	TRS		ET RSS B INHIBIT IND	T55X2888X1	ON			LCC-3		TRSS-04	S00FH0.031
022-00		CVFY	BRS		LH VOLTAGE RSS PIC CAP A	B55V1623C1	NOLO	1.5	V	LCC-4		BRSS-09	
022-01		CVFY	BRS		LH VOLTAGE RSS PIC CAP B	B55V1624C1	NOLO	1.5	V	LCC-4		BRSS-09	
022-02		CVFY	BRS		RH VOLTAGE RSS PIC CAP A	B55V2623C1	NOLO	1.5	V	LCC-4		BRSS-09	
022-03		CVFY	BRS		RH VOLTAGE RSS PIC CAP B	B55V2624C1	NOLO	1.5	V	LCC-4		BRSS-09	
022-04		CVFY	TRS		ET RSS PIC CAP A	T55V1730A1	NOLO	1.5	V	LCC-4		TRSS-06	
022-05		CVFY	TRS		ET RSS PIC CAP B	T55V1731A1	NOLO	1.5	V	LCC-4		TRSS-06	
022-06		CVFY	BRS		LH CURRENT RECOVERY BATTERY	B76C1050C1	.40	.59	AMP	LCC-3		BRSS-12	S00FH0.031
022-07		CVFY	BRS		RH CURRENT RECOVERY BATTERY	B76C2050C1	.40	.59	AMP	LCC-3		BRSS-12	S00FH0.031
022-08		CVFY	TRS		ET RSS BAT A V	T55V1735A1	27.5	29.0	V	LCC-3		TRSS-05	S00FH0.031
022-09		CVFY	TRS		ET RSS BAT B V	T55V1736A1	27.5	29.0	V	LCC-3		TRSS-05	S00FH0.031
022-10		CVFY	TRS		ET RSS ARM CMD FROM DCDR	T55X1931E1	OFF			LCC-4		TRSS-10	
022-11		CVFY	BRS		LH EV RSS ARM CMD FROM DCDR A	B55X1877X1	OFF			LCC-4		BRSS-13	
022-12		CVFY	BRS		LH EV RSS ARM CMD FROM DCDR B	B55X1878X1	OFF			LCC-4		BRSS-13	
022-13		CVFY	BRS		RH EV RSS ARM CMD FROM DCDR A	B55X2877X1	OFF			LCC-4		BRSS-13	
022-14		CVFY	BRS		RH EV RSS ARM CMD FROM DCDR B	B55X2878X1	OFF			LCC-4		BRSS-13	
022-15		CVFY	TRS		ET RSS FIRE CMD FROM DCDR	T55X1933E1	OFF			LCC-4		TRSS-11	
022-16		CVFY	BRS		LH EV RSS FIRE CMD FROM DCDR A	B55X1879X1	OFF			LCC-4		BRSS-14	
022-17		CVFY	BRS		LH EV RSS FIRE CMD FROM DCDR B	B55X1880X1	OFF			LCC-4		BRSS-14	
022-18		CVFY	BRS		RH EV RSS FIRE CMD FROM DCDR A	B55X2879X1	OFF			LCC-4		BRSS-14	
022-19		CVFY	BRS		RH EV RSS FIRE CMD FROM DCDR B	B55X2880X1	OFF			LCC-4		BRSS-14	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-26:00		CMON	BRS	RSS OK TO LAUNCH IND NO.1	GRSX2100E	ON			1 OF 2			
	CONT'D		CMON	BRS	RSS OK TO LAUNCH IND NO.2	GRSX2102E	ON			RSS HOLD	MENG		
023-00	-22:00				$ PASS-BFS DATA TRANSFER $								
024-00			VFY	INTG	OPERATIONS CONSOLE #12 GO MODE	SC12GO	ON			GTO ST010			S00FJ0.010
			COM	INTG	START ONE-SHOT DATA TRANSFER	N020INTGR	DPS						
	ST010		VFY	INTG	INTEGRATION CONSOLE GO MODE	SINTGGO	ON			GTO ST020			S00FJ0.010
			COM	INTG	START ONE-SHOT DATA TRANSFER	N020INTGR	INTG						
	ST020		VFY	INTG	MASTER CONSOLE GO MODE	SMSTRGO	ON			GTO ST030			S00FJ0.010
			COM	INTG	START ONE-SHOT DATA TRANSFER	N020INTGR	SW						
	ST030		VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			GTO ST040			S00FJ0.010
			COM	INTG	START ONE-SHOT DATA TRANSFER	N020INTGR	BKUP						
	ST040		LABL	INTG									
025-00	-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								
026-00	-20:00												
026-01			CMD	INTG	COUNTDOWN CLOCK HOLD $ T-20 MINUTE BUILT IN HOLD $								S00E00.960
			CMD	INTG	SET 10 MIN HOLD TIMER	TIMER	10		MIN				
			VFY	INTG	HOLD TIMER EXPIRED	TIMER			MIN	WAIT			
026-02			VFY	INTG	ONE-SHOT DATA ACKNOWLEDGE	N03IS016E	OFF			WAIT			
026-03			VFY	GNS	ALIGN COMPLETE	V95X0010X1	ON			WAIT			S00FK0.010
026-04			VFY	GNS	IMU 1 TILT INIT FAIL	V95X0025X1	OFF			WAIT	GNC-63		
026-05			VFY	GNS	IMU 2 TILT INIT FAIL	V95X1025X1	OFF			WAIT	GNC-63		
026-06			VFY	GNS	IMU 3 TILT INIT FAIL	V95X2025X1	OFF			WAIT	GNC-63		
027-00	-20:00		CVFY	INTG	INTEGRATION CONSOLE GO MODE	SINTGGO	ON			HOLD AT T-9 MIN			S00FM0.020
027-01			CMD	INTG	COUNTDOWN CLOCK COUNT								
028-00	-19:59												

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-19:59 CONT'D				$ GPC G9 TO G1 TRANSITION $								
029-00			VFY	INTG	OPERATIONS CONSOLE #12 GO MODE	SC12GO	ON			GTO ST060			
			COM	INTG	START OPS TRANSITION	N022INTGR	DPS						
	ST060		VFY	INTG	INTEGRATION CONSOLE GO MODE	SINTGGO	ON			GTO ST070			
			COM	INTG	START OPS TRANSITION	N022INTGR	INTG						
	ST070		VFY	INTG	MASTER CONSOLE GO MODE	SMSTRGO	ON			GTO ST080			
			COM	INTG	START OPS TRANSITION	N022INTGR	SW						
	ST080		VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			GTO ST090			
			COM	INTG	START OPS TRANSITION	N022INTGR	BKUP						
	ST090		LABL	INTG									
			MMSG	INTG	OPS 101 TRANSITION STARTED								
			MSG	INTG	GO FOR GPC DUMP AND COMPARE								
030-00	-19:00												
031-00			VFY	INTG	OPS 101 TRANSITION ACKNOWLEDGE	N03IS017E	OFF			INHB M009			
031-01			CMD	INTG	IMU HOLD AVAILABLE TIMER ACTIV.	GCDKTIM1E	ON						
					$ COMMAND LS JTOY OF LIFTOFF $								
032-00	ST100		VFY	INTG	CURRENT LDB GPC MEMORY CONFIG	NGPCLMCNFG	1			GTO ST100			
032-01			CMD	INTG	JTOY OF LIFTOFF	CMD-LS			JTOY				S00FM0.020
032-02			CMD	INTG	RSLS RESUME COUNT	CMD-LS	ON						S00FM0.020
033-00			CMD	INTG	GPC DUMP COMP ACKNOWLEDGE	N03IS018E	OFF						
			VFY	INTG	OPERATIONS CONSOLE #12 GO MODE	SC12GO	ON			GTO ST110			
			CMD	INTG	START GPC DUMP AND COMPARE	N024INTGR	DPS						
	ST110		VFY	INTG	INTEGRATION CONSOLE GO MODE	SINTGGO	ON			GTO ST120			
			CMD	INTG	START GPC DUMP AND COMPARE	N024INTGR	INTG						
	ST120		VFY	INTG	MASTER CONSOLE GO MODE	SMSTRGO	ON			GTO ST130			
			CMD	INTG	START GPC DUMP AND COMPARE	N024INTGR	SW						
	ST130		VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			GTO ST140			
			CMD	INTG	START GPC DUMP AND COMPARE	N024INTGR	BKUP						
	ST140		VFY	INTG	GPC DUMP COMP ACKNOWLEDGE	N03IS018E	ON						
			MMSG	INTG	GPC DUMP AND COMPARE STARTED								
			MSG	INTG	GO FOR T-9 GLS SEQUENCE								
034-00			VFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			GTO ST150			

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
			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 $								
035-00	ST170		CVFY	BHYD	LH PRESS N2H4/GN2 BOTTLE OUT SYS A	B46P1305C1	325	425	PSIA	INHB MENG		BTVC-01	S00FR0.030
035-01			CVFY	BHYD	LH PRESS N2H4/GN2 BOTTLE OUT SYS B	B46P1306C1	325	425	PSIA	INHB MENG		BTVC-01	S00FR0.030
035-02			CVFY	BHYD	RH PRESS N2H4/GN2 BOTTLE OUT SYS A	B46P2305C1	325	425	PSIA	INHB MENG		BTVC-01	S00FR0.030
035-03			CVFY	BHYD	RH PRESS N2H4/GN2 BOTTLE OUT SYS B	B46P2306C1	325	425	PSIA	INHB MENG		BTVC-01	S00FR0.030
037-00	-19:00												
					$ SSME PURGE SEQ 3 MONITOR $								
038-00			CVFY	SSME	ME-1 OPERATING MODE P3B12-14	E41J1513B1	B011			INHB MPS4		SSME-07	
038-01			CVFY	SSME	ME-2 OPERATING MODE P3B12-14	E41J2513B1	B011			INHB MPS4		SSME-07	
038-02			CVFY	SSME	ME-3 OPERATING MODE P3B12-14	E41J3513B1	B011			INHB MPS4		SSME-07	
					$ DPS STATUS MONITOR $								
039-00			CVFY	DPS	DPS TO GLS HOLD REQUEST	N039INTGR	OFF			CPER G012 MENG			
039-01			CVFY	DPS	TRKG PASS STAT-TRKG FC STNG 1	V98X2752X1	ON			INHB MENG		BFS-06	S00FK0.030
039-02			CVFY	DPS	TRKG PASS STAT-TRKG FC STNG 2	V98X2753X1	ON			INHB MENG		BFS-06	S00FK0.030
039-03			CVFY	DPS	TRKG PASS STAT-TRKG FC STNG 3	V98X2754X1	ON			INHB MENG		BFS-06	S00FK0.030
039-04			CVFY	DPS	TRKG PASS STAT-TRKG FC STNG 4	V98X2755X1	ON			INHB MENG		BFS-06	S00FK0.030
039-05			CVFY	DPS	I/O TERMINATE B	V98X0594X1	ON			INHB MENG		BFS-01	
039-06			CVFY	DPS	BFS ENGAGE 1	V98X0604X1	OFF			INHB MENG		BFS-02	
039-07			CVFY	DPS	BFS ENGAGE 2	V98X0605X1	OFF			INHB MENG		BFS-02	
039-08			CVFY	DPS	BFS ENGAGE 3	V98X0606X1	OFF			INHB MENG		BFS-02	
039-09			CVFY	DPS	LH DDU PWR SPLY A GOOD	V73X3001X1	ON			INHB MSEQ		DPS-24	
039-10			CVFY	DPS	LH DDU PWR SPLY B GOOD	V73X3002X1	ON			INHB MSEQ		DPS-24	
039-11			CVFY	DPS	LH DDU PWR SPLY C GOOD	V73X3003X1	ON			INHB MSEQ		DPS-24	
039-12			CVFY	DPS	RH DDU PWR SPLY A GOOD	V73X3011X1	ON			INHB MSEQ		DPS-24	
039-13			CVFY	DPS	RH DDU PWR SPLY B GOOD	V73X3012X1	ON			INHB MSEQ		DPS-24	
039-14			CVFY	DPS	RH DDU PWR SPLY C GOOD	V73X3013X1	ON			INHB MSEQ		DPS-24	
039-15			CVFY	DPS	LH DDU GOOD	V73X3050X1	ON			INHB MSEQ		DPS-23	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
039-16	-19:00		CVFY	DPS	RH DDU GOOD	V73X3051X1	ON			INHB MSEQ		DPS-23	
039-17	CONT'D		CVFY	DPS	FF1 IMU BYPASS(MFE)	V91X2273XX	OFF			INHB MSEQ		DPS-13	
039-18			CVFY	DPS	FF2 IMU BYPASS(MFE)	V91X2274XX	OFF			INHB MSEQ		DPS-13	
039-19			CVFY	DPS	FF3 IMU BYPASS(MFE)	V91X2275XX	OFF			INHB MSEQ		DPS-13	
039-20			CVFY	DPS	GPC FEP AREA 2 STATUS	SGPCAREA2	ON			INHB MENG		BFS-08	
039-21			CVFY	DPS	MTU ACCUMULATOR SOURCE	V98J0615C1	B001	B011		INHB MSEQ		BFS-03	
039-22			CVFY	DPS	PAYLOAD 1B PF1	V98X0961X1	OFF			INHB MSEQ		BFS-09	
039-23			CVFY	DPS	PAYLOAD 1B PF2	V98X0965X1	OFF			INHB MSEQ		BFS-09	
039-24			CVFY	DPS	GPC SOFT ERROR COUNT 0-128K	V98Q2577B1	X0000			INHB MSEQ		BFS-14	
					$ FOR THE NEXT STEP, ANY CHANGE IN VALUE WILL $								
					$ RESULT IN A HOLD. $								
039-25			CVFY	DPS	GPC ERROR COUNT	V98J2299C1	B000			INHB MENG		BFS-05	
039-26			CVFY	DPS	LL1/P1-P2 SRB PROM BYPASS(SRB)	V91X2831XX	OFF			INHB MSRB		BEI-04	
039-27			CVFY	DPS	LL2/P1-P2 SRB PROM BYPASS(SRB)	V91X2833XX	OFF			INHB MSRB		BEI-04	
039-28			CVFY	DPS	LR1/P1-P2 SRB PROM BYPASS(SRB)	V91X2835XX	OFF			INHB MSRB		BEI-04	
039-29			CVFY	DPS	LR2/P1-P2 SRB PROM BYPASS(SRB)	V91X2837XX	OFF			INHB MSRB		BEI-04	
					$ BFS TRANSMITTER CHECK $								
039-30			CVFY	DPS	MIA 6 ENABLED (DK1)	V98X2806X1	OFF			INHB MENG		BFS-13	
039-31			CVFY	DPS	MIA 7 ENABLED (DK2)	V98X2807X1	OFF			INHB MENG		BFS-13	
039-32			CVFY	DPS	MIA 14 ENABLED (FC5)	V98X2814X1	OFF			INHB MENG		BFS-13	
039-33			CVFY	DPS	MIA 15 ENABLED (FC6)	V98X2815X1	OFF			INHB MENG		BFS-13	
039-34			CVFY	DPS	MIA 16 ENABLED (FC7)	V98X2820X1	OFF			INHB MENG		BFS-13	
039-35			CVFY	DPS	MIA 17 ENABLED (FC8)	V98X2821X1	OFF			INHB MENG		BFS-13	
039-36			CVFY	DPS	MIA 20 ENABLED (FC1)	V98X2824X1	OFF			INHB MENG		BFS-13	
039-37			CVFY	DPS	MIA 21 ENABLED (FC2)	V98X2825X1	OFF			INHB MENG		BFS-13	
039-38			CVFY	DPS	MIA 22 ENABLED (FC3)	V98X2826X1	OFF			INHB MENG		BFS-13	
039-39			CVFY	DPS	MIA 23 ENABLED (FC4)	V98X2827X1	OFF			INHB MENG		BFS-13	
					$ IMU RGA AA FAILURE MONITOR $								
040-00			CVFY	GNS	IMU 1 FAIL	V90X2601X1	OFF			INHB MSEQ		GNC-60	
040-01			CVFY	GNS	IMU 2 FAIL	V90X2701X1	OFF			INHB MSEQ		GNC-60	
040-02			CVFY	GNS	IMU 3 FAIL	V90X2801X1	OFF			INHB MSEQ		GNC-60	
040-03			CVFY	GNS	RGA 1 DES CMD/FAIL	V93X4516X1	OFF			INHB MSEQ		GNC-12	
040-04			CVFY	GNS	RGA 2 DES CMD/FAIL	V93X4518X1	OFF			INHB MSEQ		GNC-12	
040-05			CVFY	GNS	RGA 3 DES CMD/FAIL	V93X4520X1	OFF			INHB MSEQ		GNC-12	
040-06			CVFY	GNS	RGA 4 DES CMD/FAIL	V93X4522X1	OFF			INHB MSEQ		GNC-12	
040-07			CVFY	GNS	AA 1 DES CMD/FAIL	V93X4435X1	OFF			INHB MSEQ		GNC-13	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
040-08	-19:00		CVFY	GNS	AA 2 DES CMD/FAIL	V93X4436X1	OFF			INHB MSEQ		GNC-13	
040-09	CONT'D		CVFY	GNS	AA 3 DES CMD/FAIL	V93X4437X1	OFF			INHB MSEQ		GNC-13	
040-10			CVFY	GNS	AA 4 DES CMD/FAIL	V93X4438X1	OFF			INHB MSEQ		GNC-13	
040-11			CVFY	GNS	STRING 1 SRGA FAIL	V90X6748X1	OFF			INHB MSEQ		GNC-14	
040-12			CVFY	GNS	STRING 2 SRGA FAIL	V90X6749X1	OFF			INHB MSEQ		GNC-14	
040-13			CVFY	GNS	STRING 3 SRGA FAIL	V90X6750X1	OFF			INHB MSEQ		GNC-14	
040-14			CVFY	GNS	STRING 4 SRGA FAIL	V90X6751X1	OFF			INHB MSEQ		GNC-14	
040-15			CVFY	GNS	PCA FLT CONT RGA 1 RPC A ON	V76X4293E1	ON			INHB MSEQ		GNC-08	
040-16			CVFY	GNS	PCA FLT CONT RGA 1 RPC B ON	V76X4294E1	ON			INHB MSEQ		GNC-08	
040-17			CVFY	GNS	PCA FLT CONT RGA 4 RPC A ON	V76X4295E1	ON			INHB MSEQ		GNC-08	
040-18			CVFY	GNS	PCA FLT CONT RGA 4 RPC C ON	V76X4296E1	ON			INHB MSEQ		GNC-08	
040-19			CVFY	GNS	PCA FLT CONT ACCEL 3 RPC A ON	V76X4297E1	ON			INHB MSEQ		GNC-09	
040-20			CVFY	GNS	PCA FLT CONT ACCEL 3 RPC C ON	V76X4298E1	ON			INHB MSEQ		GNC-09	
040-21			CVFY	GNS	PCA FLT CONT ACCEL 4 RPC C ON	V76X4299E1	ON			INHB MSEQ		GNC-09	
040-22			CVFY	GNS	PCA FLT CONT ACCEL 4 RPC B ON	V76X4300E1	ON			INHB MSEQ		GNC-09	
040-23			CVFY	GNS	ACCEL ASSY 1 PWR ON CMD A	V79S2004E1	ON			INHB MSEQ		GNC-09	
040-24			CVFY	GNS	ACCEL ASSY 2 PWR ON CMD B	V79S2007E1	ON			INHB MSEQ		GNC-09	
040-25			CVFY	GNS	PCA L SRB BUS C RPC A ON	V76X4399E1	ON			INHB MSEQ		GNC-10	
040-26			CVFY	GNS	PCA R SRB BUS C RPC A ON	V76X4390E1	ON			INHB MSEQ		GNC-10	
040-27			CVFY	GNS	PCA L SRB BUS C RPC C ON	V76X4393E1	ON			1 OF 2		GNC-10	
040-28			CVFY	GNS	PCA R SRB BUS C RPC C ON	V76X4394E1	ON			INHB MSEQ		GNC-10	
					$ CONTROLLERS STATUS CHECK $								
041-00			CVFY	FCL	LH RHC ROLL CMD-A	V72K1155C1	-6.8	6.8	DEG	CPER G017 MSEQ		GNC-01	
041-01			CVFY	FCL	LH RHC ROLL CMD-B	V72K1170C1	-6.8	6.8	DEG	CPER G017 MSEQ		GNC-01	
041-02			CVFY	FCL	LH RHC ROLL CMD-C	V72K1185C1	-6.8	6.8	DEG	CPER G017 MSEQ		GNC-01	
041-03			CVFY	FCL	LH RHC PITCH CMD-A	V72K1156C1	-5.1	5.1	DEG	CPER G017 MSEQ		GNC-01	
041-04			CVFY	FCL	LH RHC PITCH CMD-B	V72K1171C1	-5.1	5.1	DEG	CPER G017 MSEQ		GNC-01	
041-05			CVFY	FCL	LH RHC PITCH CMD-C	V72K1186C1	-5.1	5.1	DEG	CPER G017 MSEQ		GNC-01	
041-06			CVFY	FCL	LH RHC YAW CMD-A	V72K1157C1	-2.8	2.8	DEG	CPER G017 MSEQ		GNC-01	
041-07			CVFY	FCL	LH RHC YAW CMD-B	V72K1172C1	-2.8	2.8	DEG	CPER G017 MSEQ		GNC-01	
041-08			CVFY	FCL	LH RHC YAW CMD-C	V72K1187C1	-2.8	2.8	DEG	CPER G017 MSEQ		GNC-01	
041-09			CVFY	FCL	RH RHC ROLL CMD-A	V72K1205C1	-6.8	6.8	DEG	CPER G018 MSEQ		GNC-01	
041-10			CVFY	FCL	RH RHC ROLL CMD-B	V72K1220C1	-6.8	6.8	DEG	CPER G018 MSEQ		GNC-01	
041-11			CVFY	FCL	RH RHC ROLL CMD-C	V72K1235C1	-6.8	6.8	DEG	CPER G018 MSEQ		GNC-01	
041-12			CVFY	FCL	RH RHC PITCH CMD-A	V72K1206C1	-5.1	5.1	DEG	CPER G018 MSEQ		GNC-01	
041-13			CVFY	FCL	RH RHC PITCH CMD-B	V72K1221C1	-5.1	5.1	DEG	CPER G018 MSEQ		GNC-01	
041-14			CVFY	FCL	RH RHC PITCH CMD-C	V72K1236C1	-5.1	5.1	DEG	CPER G018 MSEQ		GNC-01	
041-15			CVFY	FCL	RH RHC YAW CMD-A	V72K1207C1	-2.8	2.8	DEG	CPER G018 MSEQ		GNC-01	
041-16			CVFY	FCL	RH RHC YAW CMD-B	V72K1222C1	-2.8	2.8	DEG	CPER G018 MSEQ		GNC-01	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
041-17	-19:00 CONT'D		CVFY	FCL	RH RHC YAW CMD-C	V72K1237C1	-2.8	2.8	DEG	CPER G018	MSEQ	GNC-01	
042-00			CVFY	FCL	FWD THC POS X OUTPUT-A	V72K1315X1	OFF			INHB	MSEQ	GNC-02	
042-01			CVFY	FCL	FWD THC POS X OUTPUT-B	V72K1335X1	OFF			INHB	MSEQ	GNC-02	
042-02			CVFY	FCL	FWD THC POS X OUTPUT-C	V72K1355X1	OFF			INHB	MSEQ	GNC-02	
042-03			CVFY	FCL	FWD THC NEG X OUTPUT-A	V72K1316X1	OFF			INHB	MSEQ	GNC-02	
042-04			CVFY	FCL	FWD THC NEG X OUTPUT-B	V72K1336X1	OFF			INHB	MSEQ	GNC-02	
042-05			CVFY	FCL	FWD THC NEG X OUTPUT-C	V72K1356X1	OFF			INHB	MSEQ	GNC-02	
042-06			CVFY	FCL	FWD THC POS Y OUTPUT-A	V72K1320X1	OFF			2 OF 3		GNC-02	
042-07			CVFY	FCL	FWD THC POS Y OUTPUT-B	V72K1340X1	OFF			2 OF 3		GNC-02	
042-08			CVFY	FCL	FWD THC POS Y OUTPUT-C	V72K1360X1	OFF			INHB	MSEQ	GNC-02	
042-09			CVFY	FCL	FWD THC NEG Y OUTPUT-A	V72K1321X1	OFF			2 OF 3		GNC-02	
042-10			CVFY	FCL	FWD THC NEG Y OUTPUT-B	V72K1341X1	OFF			2 OF 3		GNC-02	
042-11			CVFY	FCL	FWD THC NEG Y OUTPUT-C	V72K1361X1	OFF			INHB	MSEQ	GNC-02	
042-12			CVFY	FCL	FWD THC POS Z OUTPUT-A	V72K1325X1	OFF			INHB	MSEQ	GNC-02	
042-13			CVFY	FCL	FWD THC POS Z OUTPUT-B	V72K1345X1	OFF			INHB	MSEQ	GNC-02	
042-14			CVFY	FCL	FWD THC POS Z OUTPUT-C	V72K1365X1	OFF			INHB	MSEQ	GNC-02	
042-15			CVFY	FCL	FWD THC NEG Z OUTPUT-A	V72K1326X1	OFF			INHB	MSEQ	GNC-02	
042-16			CVFY	FCL	FWD THC NEG Z OUTPUT-B	V72K1346X1	OFF			INHB	MSEQ	GNC-02	
042-17			CVFY	FCL	FWD THC NEG Z OUTPUT-C	V72K1366X1	OFF			INHB	MSEQ	GNC-02	
					$ RUDDER PEDAL OUTPUT CHECKS $								
042-18			CVFY	FCL	LEFT RUDDER PEDAL CMD-A	V72K1530C1	3.6	-3.6	DEG	CPER G016	MSEQ	GNC-03	
042-19			CVFY	FCL	LEFT RUDDER PEDAL CMD-B	V72K1531C1	3.6	-3.6	DEG	CPER G016	MSEQ	GNC-03	
042-20			CVFY	FCL	LEFT RUDDER PEDAL CMD-C	V72K1532C1	3.6	-3.6	DEG	CPER G016	MSEQ	GNC-03	
042-21			CVFY	FCL	RIGHT RUDDER PEDAL CMD-A	V72K1540C1	3.6	-3.6	DEG	CPER G016	MSEQ	GNC-03	
042-22			CVFY	FCL	RIGHT RUDDER PEDAL CMD-B	V72K1541C1	3.6	-3.6	DEG	CPER G016	MSEQ	GNC-03	
042-23			CVFY	FCL	RIGHT RUDDER PEDAL CMD-C	V72K1542C1	3.6	-3.6	DEG	CPER G016	MSEQ	GNC-03	
043-00			CVFY	FCL	FLIGHT CONTROL CHANNEL FAILURE	V72X4550X1	OFF			INHB	MENG	GNC-38	
					$ PYRO SYS STATUS MONITOR $								
044-00			CVFY	BPYR	LH EVENT IGN S&A DEVICE ARMED	B55X1842X1	OFF			INHB	MAPU	SRM-01	
044-01			CVFY	BPYR	RH EVENT IGN S&A DEVICE ARMED	B55X2842X1	OFF			INHB	MAPU	SRM-01	
044-02			CVFY	BPYR	LH EVENT IGN S&A DEVICE SAFED	B55X1843X1	ON			INHB	MAPU	SRM-01	
044-03			CVFY	BPYR	RH EVENT IGN S&A DEVICE SAFED	B55X2843X1	ON			INHB	MAPU	SRM-01	
044-04			CVFY	BPYR	LH VOLTAGE IGN PIC CAP A	B55V1603C1	NOLO	1.5	V	INHB	MSEQ	SRM-03	
044-05			CVFY	BPYR	RH VOLTAGE IGN PIC CAP A	B55V2603C1	NOLO	1.5	V	INHB	MSEQ	SRM-03	
044-06			CVFY	BPYR	LH VOLTAGE IGN PIC CAP B	B55V1604C1	NOLO	1.5	V	INHB	MSEQ	SRM-03	
044-07			CVFY	BPYR	RH VOLTAGE IGN PIC CAP B	B55V2604C1	NOLO	1.5	V	INHB	MSEQ	SRM-03	
044-08			CVFY	BELE	LH VOLTAGE OPERATIONAL BUS A	B76V1600H	24.8	32.0	V	1 OF 2		BEI-01	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
044-09	-19:00		CVFY	BELE	LH VOLTAGE OPERATIONAL BUS A	B76V1600C1	25.5	31.3	V	INHB MSRB		BEI-01	
044-10	CONT'D		CVFY	BELE	RH VOLTAGE OPERATIONAL BUS A	B76V2600H	24.8	32.0	V	1 OF 2		BEI-01	
044-11			CVFY	BELE	RH VOLTAGE OPERATIONAL BUS A	B76V2600C1	25.5	31.3	V	INHB MSRB		BEI-01	
044-12			CVFY	BELE	LH VOLTAGE OPERATIONAL BUS B	B76V1601H	24.8	32.0	V	1 OF 2		BEI-01	
044-13			CVFY	BELE	LH VOLTAGE OPERATIONAL BUS B	B76V1601C1	25.5	31.3	V	INHB MSRB		BEI-01	
044-14			CVFY	BELE	RH VOLTAGE OPERATIONAL BUS B	B76V2601H	24.8	32.0	V	1 OF 2		BEI-01	
044-15			CVFY	BELE	RH VOLTAGE OPERATIONAL BUS B	B76V2601C1	25.5	31.3	V	INHB MSRB		BEI-01	
044-16			CVFY	BPYR	LH VOLTAGE RSS BATTERY NO 1	B55V1625C1	27.5	29.0	V	INHB MSEQ		BRSS-07	S00FH0.031
044-17			CVFY	BELE	LH VOLTAGE RECOVERY BATTERY	B76V1602C1	26.1	31.9	V	INHB MSEQ		BRSS-08	S00FH0.031
044-18			CVFY	BPYR	RH VOLTAGE RSS BATTERY NO 1	B55V2625C1	27.5	29.0	V	INHB MSEQ		BRSS-07	S00FH0.031
044-19			CVFY	BELE	RH VOLTAGE RECOVERY BATTERY	B76V2602C1	26.1	31.9	V	INHB MSEQ		BRSS-08	S00FH0.031
044-20			CVFY	BRS	LH CURRENT RSS BATTERY NO 1	B55C1051C1	0.42	0.57	AMP	INHB MAPU		BRSS-11	
044-21			CVFY	BRS	RH CURRENT RSS BATTERY NO 1	B55C2051C1	0.42	0.57	AMP	INHB MAPU		BRSS-11	
044-22			CVFY	TRS	ET RSS BAT A CUR IND	T55C1075A1	0.02	NOHI	AMP	INHB MSEQ		TRSS-08	
044-23			CVFY	TRS	ET RSS BAT B CUR IND	T55C1076A1	0.02	NOHI	AMP	INHB MSEQ		TRSS-08	
044-24			CVFY	BRS	LH EVENT RSS S&A DEVICE ARMED	B55X1870X1	OFF			INHB MAPU		BRSS-01	S00FH0.031
044-25			CVFY	BRS	RH EVENT RSS S&A DEVICE ARMED	B55X2870X1	OFF			INHB MAPU		BRSS-01	S00FH0.031
044-26			CVFY	TRS	ET RSS S&A DVC ARMED	T55X1870X1	OFF			INHB MAPU		TRSS-01	S00FH0.031
044-27			CVFY	BRS	LH EVENT RSS S&A DEVICE SAFED	B55X1869X1	ON			INHB MAPU		BRSS-01	S00FH0.031
044-28			CVFY	BRS	RH EVENT RSS S&A DEVICE SAFED	B55X2869X1	ON			INHB MAPU		BRSS-01	S00FH0.031
044-29			CVFY	TRS	ET RSS S&A DVC SAFED	T55X1869X1	ON			INHB MAPU		TRSS-01	S00FH0.031
045-00			CVFY	EPDC	SYS A CPA DC VOLTS	GMSV1313A	26	NOHI	V	1 OF 2		GSE-04	
045-01			CVFY	EPDC	SYS A CPA DC RED VOLTS	GMSV3313A	26	NOHI	V	INHB MSRB		GSE-04	
045-02			CVFY	EPDC	SYS B CPA DC VOLTS	GMSV2313A	26	NOHI	V	1 OF 2		GSE-04	
045-03			CVFY	EPDC	SYS B CPA DC RED VOLTS	GMSV4313A	26	NOHI	V	INHB MSRB		GSE-04	
045-04			CVFY	EPDC	H2-BURN SYS A CPA DC VOLTS	GMSV5313A	26	NOHI	V	1 OF 2		GSE-08	
045-05			CVFY	EPDC	SYS A H2-BURN CPA DC RED VOLTS	GMSV7313A	26	NOHI	V	INHB MENG		GSE-08	
045-06			CVFY	EPDC	H2-BURN SYS B CPA DC VOLTS	GMSV6313A	26	NOHI	V	1 OF 2		GSE-08	
045-07			CVFY	EPDC	SYS B H2-BURN CPA DC RED VOLTS	GMSV8313A	26	NOHI	V	INHB MENG		GSE-08	
					$ SRB CHAMBER PRESS TRANSDUCER MONITOR $								
046-00			CVFY	BINS	LH PRESS A SRM CHAMBER	B47P1300C1	-7.0	33.0	PSIA	INHB MSEQ		SRM-04	
046-01			CVFY	BINS	LH PRESS B SRM CHAMBER	B47P1301C1	-7.0	33.0	PSIA	INHB MSEQ		SRM-04	
046-02			CVFY	BINS	LH PRESS C SRM CHAMBER	B47P1302C1	-7.0	33.0	PSIA	INHB MSEQ		SRM-04	
046-03			CVFY	BINS	RH PRESS A SRM CHAMBER	B47P2300C1	-7.0	33.0	PSIA	INHB MSEQ		SRM-04	
046-04			CVFY	BINS	RH PRESS B SRM CHAMBER	B47P2301C1	-7.0	33.0	PSIA	INHB MSEQ		SRM-04	
046-05			CVFY	BINS	RH PRESS C SRM CHAMBER	B47P2302C1	-7.0	33.0	PSIA	INHB MSEQ		SRM-04	
					$ APU START CONSTRAINTS $								
047-00			CVFY	HYD	HYD SYS 1 RSVR FLUID PRESS	V58P0131A1	43	120	PSIA	INHB MAPU		HYD-07	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
047-01	-19:00		CVFY	HYD	HYD SYS 1 BOOTSTRAP ACCUM GN2 P	V58P0167A1	1906	3233	PSIA	INHB MAPU		HYD-07	
047-02	CONT'D		CVFY	HYD	HYD SYS 2 RSVR FLUID PRESS	V58P0231A1	43	120	PSIA	INHB MAPU		HYD-07	
047-03			CVFY	HYD	HYD SYS 2 BOOTSTRAP ACCUM GN2 P	V58P0267A1	1906	3233	PSIA	INHB MAPU		HYD-07	
047-04			CVFY	HYD	HYD SYS 3 RSVR FLUID PRESS	V58P0331A1	43	120	PSIA	INHB MAPU		HYD-07	
047-05			CVFY	HYD	HYD SYS 3 BOOTSTRAP ACCUM GN2 P	V58P0367A1	1906	3233	PSIA	INHB MAPU		HYD-07	
047-06			CVFY	HYD	HYD SYS 1 CIRC PUMP PRESS	V58P0137A1	330	NOHI	PSIA	INHB MAPU		HYD-03	
047-07			CVFY	HYD	HYD SYS 2 CIRC PUMP PRESS	V58P0237A1	330	NOHI	PSIA	INHB MAPU		HYD-03	
047-08			CVFY	HYD	HYD SYS 3 CIRC PUMP PRESS	V58P0337A1	330	NOHI	PSIA	INHB MAPU		HYD-03	
					$ VEHICLE HOLD FLAG MONITOR $								
048-00			CVFY	INTG	RS COUNTDOWN HOLD FLAG	V90X8667X1	OFF			INHB MSRB CPER		G001	
					$ SYSTEM VALIDITY FLAGS $								
049-00			CVFY	INTG	OPERATIONS CONSOLE #1 GO MODE	SC1GO	ON			INHB MAPU		LPS-04	
049-01			CVFY	INTG	OPERATIONS CONSOLE #2 GO MODE	SC2GO	ON			INHB MAPU		LPS-05	
049-02			CVFY	INTG	OPERATIONS CONSOLE #3 GO MODE	SC3GO	ON			INHB MENG		LPS-06	
049-03			CVFY	INTG	OPERATIONS CONSOLE #4 GO MODE	SC4GO	ON			INHB MENG		LPS-07	
049-04			CVFY	INTG	OPERATIONS CONSOLE #5 GO MODE	SC5GO	ON			INHB MSEQ		LPS-08	
049-05			CVFY	INTG	OPERATIONS CONSOLE #6 GO MODE	SC6GO	ON			INHB MAPU		LPS-09	
049-06			CVFY	INTG	OPERATIONS CONSOLE #7 GO MODE	SC7GO	ON			INHB MAPU		LPS-10	
049-07			CVFY	INTG	OPERATIONS CONSOLE #8 GO MODE	SC8GO	ON			INHB MAPU		LPS-11	
049-08			CVFY	INTG	OPERATIONS CONSOLE #9 GO MODE	SC9GO	ON			INHB MAPU		LPS-12	
049-09			CVFY	INTG	OPERATIONS CONSOLE #10 GO MODE	SC10GO	ON			INHB MAPU		LPS-13	
049-10			CVFY	INTG	OPERATIONS CONSOLE #11 GO MODE	SC11GO	ON			INHB MAPU		LPS-14	
049-11			CVFY	INTG	OPERATIONS CONSOLE #12 GO MODE	SC12GO	ON			INHB MSEQ		LPS-15	
049-12			CVFY	INTG	MASTER CONSOLE GO MODE	SMSTRGO	ON			INHB MSEQ		LPS-01	
049-13			CVFY	INTG	BACKUP TYPE II CONSOLE GO MODE	SBKUPGO	ON			CPER G015	MSRB	LPS-03	
049-14			CVFY	INTG	PROCESSING DATA RECORDER GO MODE	SPDRGO	ON			INHB MAPU		LPS-23	
049-15			CVFY	INTG	LDB FEP ACTIVE DATA VALID	SLDBADATAV	ON			INHB MENG		LPS-17	
049-16			CVFY	INTG	GSE FEP #1 ACTIVE DATA VALID	SGS1ADATAV	ON			INHB MSRB		LPS-20	
049-17			CVFY	INTG	GSE FEP #2 ACTIVE DATA VALID	SGS2ADATAV	ON			INHB MSRB		LPS-21	
049-18			CVFY	INTG	GSE FEP #3 ACTIVE DATA VALID	SGS3ADATAV	ON			INHB MSRB		LPS-25	
049-19			CVFY	INTG	TIME CODE GEN PBIC #1 DATA VALID	STCG1DATAV	ON			1 OF 2		LPS-22	
049-20			CVFY	INTG	TIME CODE GEN PBIC #2 DATA VALID	STCG2DATAV	ON			INHB MAPU		LPS-22	
049-21			CVFY	INTG	128 OI FEP ACTIVE DATA VALID	SOIADATAV	ON			INHB MSRB		LPS-19	
049-22			CVFY	INTG	GPC FEP AREA 1 STATUS	SGPCAREA1	ON			INHB MSRB		LPS-18	
051-00	-12:00												
052-00			CMD	INTG	RF SWITCH	PCMS							

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-12:00		CMD	INTG	SWITCH ALT SOURCE RF/HIGH RATE	GPCA							
	CONT'D		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							
053-00	-09:30												
					$ SRB HPU STATUS CHECK $								
054-00			VFY	BHYD	LH LEVEL HYDR FLUID RSVR SYS A	B58Q1350C1	65	85	PCT	INHB M009		BTVC-03	S00FK0.100
054-01			VFY	BHYD	LH LEVEL HYDR FLUID RSVR SYS B	B58Q1351C1	65	85	PCT	INHB M009		BTVC-03	S00FK0.100
054-02			VFY	BHYD	RH LEVEL HYDR FLUID RSVR SYS A	B58Q2350C1	65	85	PCT	INHB M009		BTVC-03	S00FK0.100
054-03			VFY	BHYD	RH LEVEL HYDR FLUID RSVR SYS B	B58Q2351C1	65	85	PCT	INHB M009		BTVC-03	S00FK0.100
					$ SS WATER SYSTEM STATUS CHECK $								
055-00			VFY	WATR	SS TS/CCS OPEN CMD LOCKOUT IND	GWDXPT47E	ON			INHB M009			
055-01			VFY	WATR	LNCH SP TRAN FR ENABLE IND	GWDXPT13E	ON			INHB M009			
					$ OAA ACCUM LEVEL CHECK $								
057-00			VFY	ARMS	OAA ACCUM LEVEL SW NO 1-NORMAL	GSAX7651E	ON			2 OF 4		GSE-11	
057-01			VFY	ARMS	OAA ACCUM LEVEL SW NO 2-NORMAL	GSAX7671E	ON			2 OF 4		GSE-11	
057-02			VFY	ARMS	OAA ACCUM LEVEL SW NO 3-NORMAL	GSAX7691E	ON			2 OF 4		GSE-11	
057-03			VFY	ARMS	OAA ACCUM LEVEL SW NO 4-NORMAL	GSAX7711E	ON			OR		GSE-11	
057-04			VFY	ARMS	OAA ACCUM LEVEL SW NO 1-NORMAL	GSAX7656E	ON			2 OF 4		GSE-11	
057-05			VFY	ARMS	OAA ACCUM LEVEL SW NO 2-NORMAL	GSAX7676E	ON			2 OF 4		GSE-11	
057-06			VFY	ARMS	OAA ACCUM LEVEL SW NO 3-NORMAL	GSAX7696E	ON			2 OF 4		GSE-11	
057-07			VFY	ARMS	OAA ACCUM LEVEL SW NO 4-NORMAL	GSAX7716E	ON			INHB M009		GSE-11	
					$ OAA ACCUM PRESSURIZATION CHECK $								
057-08			VFY	ARMS	OAA 3000 PSI GN2 PRESS SW-NORMAL	GSAX7731E	ON			1 OF 4		GSE-10	
057-09			VFY	ARMS	OAA 2700 PSI GN2 PRESS TRANSDUCER	GSAP7801A	2000	2800	PSIA	1 OF 4		GSE-10	
057-10			VFY	ARMS	OAA 3000 PSI GN2 PRESS SW-NORMAL	GSAX7736E	ON			1 OF 4		GSE-10	
057-11			VFY	ARMS	OAA 2700 PSI GN2 PRESS TRANSDUCER	GSAP7806A	2000	2800	PSIA	INHB M009		GSE-10	
057-12			VFY	ARMS	OAA 750 PSI GN2 PRESS SW-NORMAL	GSAX7751E	ON			1 OF 4			
057-13			VFY	ARMS	OAA 750 PSI GN2 PRESS TRANSDUCER	GSAP7811A	250	875	PSIA	1 OF 4			
057-14			VFY	ARMS	OAA 750 PSI GN2 PRESS SW-NORMAL	GSAX7756E	ON			1 OF 4			
057-15			VFY	ARMS	OAA 750 PSI GN2 PRESS TRANSDUCER	GSAP7816A	250	875	PSIA	INHB M009			
058-00			VFY	SSME	SEL MPS ME-1 SHUTDOWN CMD	V90X7551X1	OFF			INHB M009		SSME-36	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
058-01	-09:30		VFY	SSME	SEL MPS ME-2 SHUTDOWN CMD	V90X7552X1	OFF			INHB M009		SSME-36	
058-02	CONT'D		VFY	SSME	SEL MPS ME-3 SHUTDOWN CMD	V90X7553X1	OFF			INHB M009		SSME-36	
059-00	-9:01												
060-00			MSG	INTG	GO FOR T-9 GLS SEQUENCE								
060-01	-9:00		LABL	INTG									
060-02			CMD	INTG	COUNTDOWN CLOCK HOLD								
			CMD	INTG	SET 10 MIN HOLD TIMER	TIMER	10		MIN				
			VFY	INTG	HOLD TIMER EXPIRED	TIMER			MIN	WAIT			
					$ CONTINUE INTO T-9 MIN MILESTONE. IF MILESTONE FAILS DO NOT RESUME COUNT $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-9:00 CONT'D				$ GLS EVENT COMPLETE = 540 $								
100-00	-09:00												
					**********								
101-00			LABL	INTG	T-9 MILESTONE	M009							S00E00.960
					**********								
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-PRESS	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	LPS COUNTDOWN HOLD	V90X8768X1	OFF			INHB M009			
101-10			VFY	INTG	RSS MANUAL HOLD		ON			INHB M009			
101-11			VFY	INTG	NTD MANUAL HOLD		ON			INHB M009			
101-12			VFY	INTG	GLS MANUAL HOLD		ON			INHB M009			
101-13			VFY	INTG	GO FOR T-9 GLS START	M009	ON			HOLD			S00FM0.020
101-14			CMD	INTG	COUNTDOWN CLOCK COUNT								
101-15			MMSG	INTG	-07:30 GO FOR OAA RETRACT								
101-16			MSG	INTG	BEGIN TERM COUNT SEQUENCE								
					$ AN INTEGRATION CONSOLE FAILURE AFTER THIS $ $ POINT WILL RESULT IN A BREAKOUT. $								
					$ GLS EVENT COMPLETE = 530 $								
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							

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
105-02	-08:50		ICL	FCL	L INBD ELEVON ACTR CHAN 3 POSN	V58H0804A1							
105-03	CONT'D		ICL	FCL	L INBD ELEVON ACTR CHAN 4 POSN	V58H0805A1							
105-04			ICL	FCL	L OUTBD ELEVON ACTR CHAN 3 POSN	V58H0854A1							
105-05			ICL	FCL	L OUTBD ELEVON ACTR 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			ICL	MPS	MPS E1 HE SUPPLY BOTTLE PRESS	V41P1150C1							
106-01			ICL	MPS	MPS PNEU VLVS HE SUP BOTTLE PRESS	V41P1600A1							
107-00			ICL	FCP	PRSD O2 TK 1 HTR A1-ON	V45X1106E1							
107-01			ICL	FCP	PRSD O2 TK 1 HTR ASSY 1 TEMP	V45T1107A1							
107-02			ICL	FCP	PRSD O2 TK 1 HTR B1-ON	V45X1108E1							
107-03			ICL	FCP	PRSD O2 TK 1 HTR ASSY 2 TEMP	V45T1109A1							
107-04			ICL	FCP	PRSD O2 TK 1 HTR A2-ON	V45X1111E1							
107-05			ICL	FCP	PRSD O2 TK 1 HTR B2-ON	V45X1113E1							
107-06			ICL	FCP	PRSD O2 TK 2 HTR A1-ON	V45X1206E1							
107-07			ICL	FCP	PRSD O2 TK 2 HTR ASSY 1 TEMP	V45T1207A1							
107-08			ICL	FCP	PRSD O2 TK 2 HTR B1-ON	V45X1208E1							
107-09			ICL	FCP	PRSD O2 TK 2 HTR ASSY 2 TEMP	V45T1209A1							
107-10			ICL	FCP	PRSD O2 TK 2 HTR A2-ON	V45X1211E1							
107-11			ICL	FCP	PRSD O2 TK 2 HTR B2-ON	V45X1213E1							
107-12			ICL	FCP	PRSD H2 TK 1 HTR ASSY TEMP	V45T2107A1							
107-13			ICL	FCP	PRSD H2 TK 1 HTR A-ON	V45X2106E1							
107-14			ICL	FCP	PRSD H2 TK 1 HTR B-ON	V45X2108E1							
107-15			ICL	FCP	PRSD H2 TK 2 HTR ASSY TEMP	V45T2207A1							
107-16			ICL	FCP	PRSD H2 TK 2 HEATER A-ON	V45X2206E1							
107-17			ICL	FCP	PRSD H2 TK 2 HEATER B-ON	V45X2208E1							
107-18			ICL	FCP	PRSD O2 TK 3 HTR ASSY 1 TEMP (MBK)	V45T1307A1							
107-19			ICL	FCP	PRSD O2 TK 3 HTR ASSY 2 TEMP (MBK)	V45T1309A1							
107-20			ICL	FCP	PRSD O2 TK 3 HTR A1-ON (MBK)	V45X1306E1							
107-21			ICL	FCP	PRSD O2 TK 3 HTR B1-ON (MBK)	V45X1308E1							
107-22			ICL	FCP	PRSD O2 TK 3 HTR A2-ON (MBK)	V45X1311E1							
107-23			ICL	FCP	PRSD O2 TK 3 HTR B2-ON (MBK)	V45X1313E1							
107-24			ICL	FCP	PRSD H2 TK 3 HTR ASSY TEMP (MBK)	V45T2307A1							
107-25			ICL	FCP	PRSD H2 TK 3 HTR A-ON (MBK)	V45X2306E1							
107-26			ICL	FCP	PRSD H2 TK 3 HTR B-ON (MBK)	V45X2308E1							
107-27			ICL	FCP	PRSD O2 TK 4 HTR ASSY 1 TEMP (MBK)	V45T1407A1							
107-28			ICL	FCP	PRSD O2 TK 4 HTR ASSY 2 TEMP (MBK)	V45T1409A1							

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
107-29	-08:50		ICL	FCP	PRSD O2 TK 4 HTR A1-ON (MBK)	V45X1406E1							
107-30	CONT'D		ICL	FCP	PRSD O2 TK 4 HTR A2-ON (MBK)	V45X1411E1							
107-31			ICL	FCP	PRSD H2 TK 4 HTR ASSY TEMP (MBK)	V45T2407A1							
107-32			ICL	FCP	PRSD H2 TK 4(&5) HTR A-ON	V45X2456E1							
107-33			ICL	FCP	PRSD H2 TK 4(&5) HTR B-ON	V45X2458E1							
107-34			ICL	FCP	PRSD O2 TK 5 HTR ASSY 1 TEMP (MBK)	V45T1507A1							
107-35			ICL	FCP	PRSD O2 TK 5 HTR ASSY 2 TEMP (MBK)	V45T1509A1							
107-36			ICL	FCP	PRSD O2 TK 4/5 HTR B1/A1-ON	V45X1408E1							
107-37			ICL	FCP	PRSD O2 TK 4/5 HTR B2/A2-ON	V45X1413E1							
107-38			ICL	FCP	PRSD H2 TK 5 HTR ASSY TEMP (MBK)	V45T2507A1							
107-39			ACL	FCP	PRSD FCP 1 O2 REAC VLV-OPEN	V45X1150E1						PRSD-03	
107-40			ACL	FCP	PRSD FCP 2 O2 REAC VLV-OPEN	V45X1155E1						PRSD-03	
107-41			ACL	FCP	PRSD FCP 3 O2 REAC VLV-OPEN	V45X1160E1						PRSD-03	
107-42			ACL	FCP	PRSD FCP 1 H2 REAC VLV-OPEN	V45X2150E1						PRSD-03	
107-43			ACL	FCP	PRSD FCP 2 H2 REAC VLV-OPEN	V45X2155E1						PRSD-03	
107-44			ACL	FCP	PRSD FCP 3 H2 REAC VLV-OPEN	V45X2160E1						PRSD-03	
108-00			ICL	HYFU	OMS-L POD HE TANK PRESS 2	V43P4122C1							
108-01			ICL	HYFU	OMS-L POD HE TANK PRESS 1	V43P4121C1							
108-02			ICL	HYFU	OMS-R POD HE TANK PRESS 2	V43P5122C1							
108-03			ICL	HYFU	OMS-R POD HE TANK PRESS 1	V43P5121C1							
108-04			ICL	HYFU	RCS L AFT HE FU TANK PRESS-2	V42P2114C1							
108-05			ICL	HYFU	RCS L AFT HE FU TANK PRESS-1	V42P2113C1							
108-06			ICL	HYFU	RCS R AFT HE FU TANK PRESS-2	V42P3114C1							
108-07			ICL	HYFU	RCS R AFT HE FU TANK PRESS-1	V42P3113C1							
108-08			ICL	HYFU	RCS FWD HE FU TANK PRESS-2	V42P1114C1							
108-09			ICL	HYFU	RCS FWD HE FU TANK PRESS-1	V42P1113C1							
108-10			ICL	HYFU	RCS L AFT HE FU TANK TEMP-1	V42T2104C1							
108-11			ICL	HYFU	OMS-L POD HE TANK TEMP-UPPER	V43T4111C1							
108-12			ICL	HYFU	RCS R AFT HE FU TANK TEMP-1	V42T3104C1							
108-13			ICL	HYFU	OMS-R POD HE TANK TEMP-UPPER	V43T5111C1							
108-14			ICL	HYFU	RCS FWD HE FU TANK TEMP-1	V42T1104C1							
108-15			ICL	HYFU	RCS FWD FU TANK ULLAGE PRESS	V42P1116C1							
108-16			ICL	HYFU	RCS L AFT FU TANK ULLAGE PRESS	V42P2116C1							
108-17			ICL	HYFU	RCS R AFT FU TANK ULLAGE PRESS	V42P3116C1							
109-00			ICL	HYOX	RCS L AFT HE OX TANK PRESS-2	V42P2112C1							
109-01			ICL	HYOX	RCS L AFT HE OX TANK PRESS-1	V42P2110C1							
109-02			ICL	HYOX	RCS R AFT HE OX TANK PRESS-2	V42P3112C1							
109-03			ICL	HYOX	RCS R AFT HE OX TANK PRESS-1	V42P3110C1							
109-04			ICL	HYOX	RCS FWD HE OX TANK PRESS-2	V42P1112C1							

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
109-05	-08:50		ICL	HYOX	RCS FWD HE OX TANK PRESS-1	V42P1110C1							
109-06	CONT'D		ICL	HYOX	RCS L AFT HE OX TANK TEMP-1	V42T2100C1							
109-07			ICL	HYOX	RCS R AFT HE OX TANK TEMP-1	V42T3100C1							
109-08			ICL	HYOX	RCS FWD HE OX TANK TEMP-1	V42T1100C1							
109-09			ICL	HYOX	RCS FWD OX TANK ULLAGE PRESS	V42P1115C1							
109-10			ICL	HYOX	RCS L AFT OX TANK ULLAGE PRESS	V42P2115C1							
109-11			ICL	HYOX	RCS R AFT OX TANK ULLAGE PRESS	V42P3115C1							
110-00			ACL	BHYD	LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1							
110-01			ACL	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1							
110-02			ACL	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1							
110-03			ACL	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1							
110-04			ACL	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1							
110-05			ACL	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1							
110-06			ACL	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1							
110-07			ACL	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1							
111-00			ACL	PVD	L FWD VENTS 1&2 CLOSED 1	V59X3005X1							
111-01			ACL	PVD	L FWD VENTS 1&2 CLOSED 2	V59X3015X1							
111-02			ACL	PVD	L AFT VENTS 8&9 CLOSED 1	V59X3805X1							
111-03			ACL	PVD	L AFT VENTS 8&9 CLOSED 2	V59X3815X1							
111-04			ACL	PVD	R FWD VENTS 1&2 CLOSED 1	V59X4005X1							
111-05			ACL	PVD	R FWD VENTS 1&2 CLOSED 2	V59X4015X1							
111-06			ACL	PVD	R AFT VENTS 8&9 CLOSED 1	V59X4805X1							
111-07			ACL	PVD	R AFT VENTS 8&9 CLOSED 2	V59X4815X1							
112-00			ACL	BRS	RSS OK TO LAUNCH IND NO.1	GRSX2100E							
112-01			ACL	BRS	RSS OK TO LAUNCH IND NO.2	GRSX2102E							
					$ MDM POWER SEPARATION CHECK $								
113-00			VFY	DPS	RT AFT MDM PS SEP1 SW SEN VOLTS	B75V2632CL	2.02	3.8	V	INHB MAPU		BEI-06	
113-01			VFY	DPS	RT AFT MDM PS SEP2 SW SEN VOLTS	B75V2633CL	2.02	3.8	V	INHB MAPU		BEI-06	
113-02			VFY	DPS	LF AFT MDM PS SEP1 SW SEN VOLTS	B75V1632CL	2.02	3.8	V	INHB MAPU		BEI-06	
113-03			VFY	DPS	LF AFT MDM PS SEP2 SW SEN VOLTS	B75V1633CL	2.02	3.8	V	INHB MAPU		BEI-06	
113-04			VFY	BPYR	LH EVENT IGN A F2 TEST PWR ON CMD	B55X1916XL	OFF			INHB MAPU		SRM-09	
113-05			VFY	BPYR	RH EVENT IGN A F2 TEST PWR ON CMD	B55X2916XL	OFF			INHB MAPU		SRM-09	
113-06			VFY	BPYR	LH EVENT IGN B F2 TEST PWR ON CMD	B55X1917XL	OFF			INHB MAPU		SRM-09	
113-07			VFY	BPYR	RH EVENT IGN B F2 TEST PWR ON CMD	B55X2917XL	OFF			INHB MAPU		SRM-09	
113-08			VFY	BPYR	LH EVENT SEP A F2 TEST PWR ON CMD	B55X1914XL	OFF			INHB MAPU		BSEP-05	
113-09			VFY	BPYR	RH EVENT SEP A F2 TEST PWR ON CMD	B55X2914XL	OFF			INHB MAPU		BSEP-05	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
113-10			VFY	BPYR	LH EVENT SEP B F2 TEST PWR ON CMD	B55X1915XL	OFF			INHB MAPU		BSEP-05	
113-11			VFY	BPYR	RH EVENT SEP B F2 TEST PWR ON CMD	B55X2915XL	OFF			INHB MAPU		BSEP-05	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ GLS EVENT COMPLETE = 450 $								
114-00	-07:30												
					**********								
115-00			LABL	INTG	OAA MILESTONE	MOAA							S00E00.960
					**********								
					$ NOTICE: THIS MILESTONE DOES NOT HOLD FOR DOWNSTREAM HOLD INDICATIONS $								
115-01			VFY	INTG	RSS MANUAL HOLD		ON			INHB MOAA			
115-02			VFY	INTG	NTD MANUAL HOLD		ON			INHB MOAA			
115-03			VFY	INTG	GLS MANUAL HOLD		ON			INHB MOAA			
115-04			VFY	INTG	LPS COUNTDOWN HOLD	V90X8768X1	OFF			INHB MOAA			
115-05			VFY	INTG	GLS-GO FOR OAA RETRACT	MOAA	ON			HOLD			
115-06			MMSG	INTG	-05:00 GO FOR APU START								
115-07			MSG	INTG	START OAA RETRACT								
116-00			CMD	ARMS	INHB PRI LOCK VLV	GSAK7137E	ON						
116-01			CMD	ARMS	INHB SEC LOCK VLV	GSAK7157E	ON						
116-02			CMD	ARMS	OAA LOCK PRI EXTEND LOCK V	GSAK7130E	OFF						
116-03			CMD	ARMS	OAA LOCK SEC EXTEND LOCK V	GSAK7150E	OFF						
116-04			CMD	ARMS	OAA LOCK PRI EXTEND LOCK V	GSAK7135E	OFF						
116-05			CMD	ARMS	OAA LOCK SEC EXTEND LOCK V	GSAK7155E	OFF						
					$ GLS EVENT COMPLETE = 449 $								
117-00	-07:28												
					$ UNLOCK OAA $								
118-00			CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7120E	ON						
118-01			CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7140E	ON						
118-02			CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7125E	ON						
118-03			CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7145E	ON						
118-04			CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7510E	ON						
118-05			CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7515E	ON						
					$ GLS EVENT COMPLETE = 447 $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
119-00	-07:26												
120-00			CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7510E	OFF						
120-01			CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7515E	OFF						
					$ IN THE NEXT FOUR GROUPS OF VOTING LOGIC, $								
					$ IF ANY FAIL, A HOLD AT T-5 MIN WILL OCCUR $								
					$ VFY OAA UNLOCK $								
121-00			VFY	ARMS	OAA ARM EXTEND TOP UNLOCKED SWITCH	GSAX7551E	ON			1 OF 4			
121-01			VFY	ARMS	OAA ARM EXTEND TOP UNLOCKED SWITCH	GSAX7556E	ON			1 OF 4			
121-02			VFY	ARMS	OAA ARM EXTEND TOP LOCKED SWITCH	GSAX7541E	OFF			1 OF 4			
121-03			VFY	ARMS	OAA ARM EXTEND TOP LOCKED SWITCH	GSAX7546E	OFF			GTO ST200			
121-04			VFY	ARMS	OAA ARM EXTEND BOTTOM UNLOCKED SW	GSAX7571E	ON			1 OF 4			
121-05			VFY	ARMS	OAA ARM EXTEND BOTTOM UNLOCKED SW	GSAX7576E	ON			1 OF 4			
121-06			VFY	ARMS	OAA ARM EXTEND BOTTOM LOCKED SW	GSAX7561E	OFF			1 OF 4			
121-07			VFY	ARMS	OAA ARM EXTEND BOTTOM LOCKED SW	GSAX7566E	OFF			GTO ST200			
					$ VFY OAA UNLATCH $								
122-00			VFY	ARMS	OAA HINGESIDE LATCHED SWITCH	GSAX7111E	OFF			1 OF 4			
122-01			VFY	ARMS	OAA HINGESIDE LATCHED SWITCH	GSAX7116E	OFF			1 OF 4			
122-02			VFY	ARMS	OAA HINGESIDE UNLATCHED SWITCH	GSAX7112E	ON			1 OF 4			
122-03			VFY	ARMS	OAA HINGESIDE UNLATCHED SWITCH	GSAX7117E	ON			GTO ST200			
122-04			VFY	ARMS	OAA OUTSIDE LATCHED SWITCH	GSAX7113E	OFF			1 OF 4			
122-05			VFY	ARMS	OAA OUTSIDE LATCHED SWITCH	GSAX7118E	OFF			1 OF 4			
122-06			VFY	ARMS	OAA OUTSIDE UNLATCHED SWITCH	GSAX7114E	ON			1 OF 4			
122-07			VFY	ARMS	OAA OUTSIDE UNLATCHED SWITCH	GSAX7119E	ON			GTO ST200			
					$ CLOSE INHIBIT VALVE $								
123-00			CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7100E	ON						
123-01			CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7105E	ON						
					$ GLS EVENT COMPLETE = 444 $								
124-00	-07:24												
					$ BEGIN OAA RETRACT $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
125-00	-07:24		CMD	ARMS	OAA OPEN PRI RETRACT SUPPLY V	GSAK7210E	ON						
125-01	CONT'D		CMD	ARMS	OAA OPEN SEC RETRACT SUPPLY V	GSAK7250E	ON						
125-02			CMD	ARMS	OAA OPEN PRI RETRACT SUPPLY V	GSAK7215E	ON						
125-03			CMD	ARMS	OAA OPEN SEC RETRACT SUPPLY V	GSAK7255E	ON						
125-04			CMD	ARMS	OAA OPEN PRI RETRACT RETURN V	GSAK7230E	ON						
125-05			CMD	ARMS	OAA OPEN SEC RETRACT RETURN V	GSAK7270E	ON						
125-06			CMD	ARMS	OAA OPEN PRI RETRACT RETURN V	GSAK7235E	ON						
125-07			CMD	ARMS	OAA OPEN SEC RETRACT RETURN V	GSAK7275E	ON						
					$ GLS EVENT COMPLETE = 443 $								
					$ OAA RETRACT BYPASS BRANCH POINT $								
					$ CONFIGURE OAA FOR EXTEND WHEN RETRACTED $								
126-00	ST200		CVFY	ARMS	OAA PRI FULLY RTR SW-RETRACTED	GSAX7621E	OFF			3 OF 4			
126-01			CVFY	ARMS	OAA SEC FULLY RTR SW-RETRACTED	GSAX7622E	OFF			3 OF 4			
126-02			CVFY	ARMS	OAA PRI FULLY RTR SW-RETRACTED	GSAX7626E	OFF			3 OF 4			
126-03			CVFY	ARMS	OAA SEC FULLY RTR SW-RETRACTED	GSAX7627E	OFF			CPER P005			
127-00			CVFY	EPDC	FUEL CELL 1 TO ESS BUS 1BC-ON	V76S0163E1	ON			INHB MSEQ		EPDC-07	
127-01			CVFY	EPDC	FUEL CELL 2 TO ESS BUS 2CA-ON	V76S0263E1	ON			INHB MSEQ		EPDC-07	
127-02			CVFY	EPDC	FUEL CELL 3 TO ESS BUS 3AB-ON	V76S0363E1	ON			INHB MSEQ		EPDC-07	
128-00	-05:25												
					$ APU PRE-START STATUS $								
129-03			VFY	HYD	PCA HYDRAULIC PUMP 1 RPC A ON	V76X4020E1	ON			INHB MAPU		HYD-09	
129-04			VFY	HYD	PCA HYDRAULIC PUMP 1 RPC B ON	V76X4021E1	ON			INHB MAPU		HYD-09	
129-05			VFY	HYD	PCA HYDRAULIC PUMP 2 RPC B ON	V76X4024E1	ON			INHB MAPU		HYD-09	
129-06			VFY	HYD	PCA HYDRAULIC PUMP 2 RPC C ON	V76X4025E1	ON			INHB MAPU		HYD-09	
129-07			VFY	HYD	PCA HYDRAULIC PUMP 3 RPC C ON	V76X4027E1	ON			INHB MAPU		HYD-09	
129-08			VFY	HYD	PCA HYDRAULIC PUMP 3 RPC A ON	V76X4028E1	ON			INHB MAPU		HYD-09	
					$ APU FUEL TANK ISO VALVE CHECK $								
129-09			CVFY	APU	APU 1 FUEL ISLN VLV A POSITION	V46X0115E1	ON			INHB MSEQ		APU-23	
129-10			CVFY	APU	APU 1 FUEL ISLN VALVE B POSITION	V46X0134E1	ON			INHB MSEQ		APU-23	
129-11			CVFY	APU	APU 2 FUEL ISLN VLV A POSITION	V46X0215E1	ON			INHB MSEQ		APU-23	
129-12			CVFY	APU	APU 2 FUEL ISLN VALVE B POSITION	V46X0234E1	ON			INHB MSEQ		APU-23	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
129-13	-05:25		CVFY	APU	APU 3 FUEL ISLN VLV A POSITION	V46X0315E1	ON			INHB MSEQ		APU-23	
129-14	CONT'D		CVFY	APU	APU 3 FUEL ISLN VALVE B POSITION	V46X0334E1	ON			INHB MSEQ		APU-23	
					$ APU PERFORMANCE GUARDS $								
130-00			CVFY	APU	APU 1 GEARBOX LUBE OIL OUT TEMP	V46T0154A1	NOLO	275	DEGF	INHB MSEQ		APU-08	
130-01			CVFY	APU	APU 1 GEARBOX LUBE OIL RETURN TEMP	V46T0150A1	NOLO	260	DEGF	INHB MSEQ		APU-08	
130-02			CVFY	APU	APU 2 GEARBOX LUBE OIL OUT TEMP	V46T0254A1	NOLO	275	DEGF	INHB MSEQ		APU-08	
130-03			CVFY	APU	APU 2 GEARBOX LUBE OIL RETURN TEMP	V46T0250A1	NOLO	260	DEGF	INHB MSEQ		APU-08	
130-04			CVFY	APU	APU 3 GEARBOX LUBE OIL OUT TEMP	V46T0354A1	NOLO	275	DEGF	INHB MSEQ		APU-08	
130-05			CVFY	APU	APU 3 GEARBOX LUBE OIL RETURN TEMP	V46T0350A1	NOLO	260	DEGF	INHB MSEQ		APU-08	
					$ ENGINE HE SUPPLY TEMP CHECK $								
131-00			VFY	MPS	MPS E1 AFT FUSELAGE HE SUPPLY TEMP	V41T1151A1	-5	65	DEGF	1 OF 3		MPS-02	
131-01			VFY	MPS	MPS E2 AFT FUSELAGE HE SUPPLY TEMP	V41T1251A1	-5	65	DEGF	1 OF 3		MPS-02	
131-02			VFY	MPS	MPS E3 AFT FUSELAGE HE SUPPLY TEMP	V41T1351A1	-5	65	DEGF	INHB MAPU		MPS-02	
131-03			VFY	MPS	MPS E1 MID FUSELAGE HE SUPPLY TEMP	V41T1152A1	45	135	DEGF	1 OF 3		MPS-02	
131-04			VFY	MPS	MPS E2 MID FUSELAGE HE SUPPLY TEMP	V41T1252A1	45	135	DEGF	1 OF 3		MPS-02	
131-05			VFY	MPS	MPS E3 MID FUSELAGE HE SUPPLY TEMP	V41T1352A1	45	135	DEGF	INHB MAPU		MPS-02	
					$ MPS HELIUM SYSTEM MONITOR $								
132-00			CVFY	MPS	MPS E1 REG A HE OUTLET PRESS	V41P1154A1	730	785	PSIA	INHB MENG		MPS-03	
132-01			CVFY	MPS	MPS E1 REG B HE OUTLET PRESS	V41P1153A1	730	785	PSIA	INHB MENG		MPS-03	
132-02			CVFY	MPS	MPS E2 REG A HE OUTLET PRESS	V41P1254A1	730	785	PSIA	INHB MENG		MPS-03	
132-03			CVFY	MPS	MPS E2 REG B HE OUTLET PRESS	V41P1253A1	730	785	PSIA	INHB MENG		MPS-03	
132-04			CVFY	MPS	MPS E3 REG A HE OUTLET PRESS	V41P1354A1	730	785	PSIA	INHB MENG		MPS-03	
132-05			CVFY	MPS	MPS E3 REG B HE OUTLET PRESS	V41P1353A1	730	785	PSIA	INHB MENG		MPS-03	
132-06			CVFY	MPS	MPS PNEU VLVS REG HE OUTLET PRESS	V41P1605A1	715	785	PSIA	INHB MENG		MPS-03	
132-07			CVFY	MPS	MPS PNEU ACCUMULATOR PRESSURE	V41P1650A1	715	785	PSIA	INHB MENG		MPS-03	
132-08			CVFY	MPS	MPS PNEU VLVS HE SUP BOTTLE PRESS	V41P1600A1	4100	4500	PSIA	INHB MENG	T-13	MPS-01	
132-09			CVFY	MPS	MPS E1 HE SUPPLY BOTTLE PRESS	V41P1150C1	4100	4500	PSIA	INHB MENG	T-13	MPS-01	
132-10			CVFY	MPS	MPS E2 HE SUPPLY BOTTLE PRESS	V41P1250C1	4100	4500	PSIA	INHB MENG	T-13	MPS-01	
132-11			CVFY	MPS	MPS E3 HE SUPPLY BOTTLE PRESS	V41P1350C1	4100	4500	PSIA	INHB MENG	T-13	MPS-01	
					$ MPS/CRYO SYS SWITCH QUALIFICATION $								
133-00			CVFY	MPS	MPS E1 LH2 PREVLV (PV4) OP IND A	V41X1104X1	OFF			INHB MENG		MPS-26	
133-01			CVFY	MPS	MPS E1 LH2 PREVLV (PV4) OP IND B	V41X1106X1	OFF			INHB MENG		MPS-26	
133-02			CVFY	MPS	MPS E2 LH2 PREVLV (PV5) OP IND A	V41X1204X1	OFF			INHB MENG		MPS-28	
133-03			CVFY	MPS	MPS E2 LH2 PREVLV (PV5) OP IND B	V41X1206X1	OFF			INHB MENG		MPS-28	
133-04			CVFY	MPS	MPS E3 LH2 PREVLV (PV6) OP IND A	V41X1304X1	OFF			INHB MENG		MPS-30	
133-05			CVFY	MPS	MPS E3 LH2 PREVLV (PV6) OP IND B	V41X1306X1	OFF			INHB MENG		MPS-30	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
133-06	-05:25		VFY	MPS	MPS LH2 OTBD F/D VLV (PV11) CL IND	V41X1389X1	OFF			INHB MAPU		MPS-34	
133-07	CONT'D		VFY	MPS	MPS LH2 HI PT BL VLV (PV22) CL IND	V41X1469E1	OFF			INHB MAPU		MPS-34	
133-08			VFY	MPS	MPS LO2 INHB F/D VLV (PV10) CL IND	V41X1509X1	OFF			INHB MAPU		MPS-34	
133-09			VFY	MPS	MPS LO2 OTBD F/D VLV (PV9) CL IND	V41X1514X1	OFF			INHB MAPU		MPS-34	
133-10			VFY	LH2	A100680 TSM DRAIN VLV OPEN #1 IND	GLHX4323E	OFF			INHB MAPU		MPS-34	
133-11			VFY	LH2	A100680 TSM DRAIN VLV OPEN #2 IND	GLHX4333E	OFF			INHB MAPU		MPS-34	
133-12			VFY	LO2	A86462 TSM DRAIN VLV OPEN #1	GLOX2113E	OFF			INHB MAPU		MPS-34	
133-13			VFY	LO2	A86462 TSM DRAIN VLV OPEN #2	GLOX3113E	OFF			INHB MAPU		MPS-34	
133-14			VFY	LO2	A86462 TSM DRAIN VLV CLSD #1	GLOX2112E	ON			INHB MAPU		MPS-34	
133-15			VFY	LO2	A86462 TSM DRAIN VLV CLSD #2	GLOX3112E	ON			INHB MAPU		MPS-34	
133-16			VFY	MPS	MPS LH2 TOPPING VLV (PV13) CL IND	V41X1456X1	OFF			INHB MAPU		MPS-34	
133-17			VFY	MPS	MPS LO2 POGO RECRC 1 (PV20) OP IND	V41X1811X1	OFF			INHB MAPU		MPS-34	
133-18			VFY	MPS	MPS LO2 POGO RECRC 2 (PV21) OP IND	V41X1821X1	OFF			INHB MAPU		MPS-34	
					$ RECORDER STATUS $								
134-00			VFY	INST	RCDR OPS 2 BITE	V75X2629E1	ON			3 OF 3		INS-02	
134-01			VFY	INST	RCDR OPS 2 HEAD TEMPERATURE	V75T2617A1	NOLO	120	DEGF	3 OF 3		INS-02	
134-02			VFY	INST	RCDR OPS 2 TAPE MOTION	V75X2623E1	ON			INHB MAPU		INS-02	
					$ OAA RETRACTION VERIFICATION $								
135-00			VFY	ARMS	OAA PRI FULLY RTR SW-RETRACTED	GSAX7621E	ON			2 OF 3		GSE-12	
135-01			VFY	ARMS	OAA SEC FULLY RTR SW-RETRACTED	GSAX7622E	ON			2 OF 3		GSE-12	
135-02			VFY	ARMS	OAA POSITION INDICATION	GSAH7831A	NOLO	2	DEG	OR		GSE-12	
135-03			VFY	ARMS	OAA PRI FULLY RTR SW-RETRACTED	GSAX7626E	ON			2 OF 3		GSE-12	
135-04			VFY	ARMS	OAA SEC FULLY RTR SW-RETRACTED	GSAX7627E	ON			2 OF 3		GSE-12	
135-05			VFY	ARMS	OAA POSITION INDICATOR	GSAH7836A	NOLO	2	DEG	INHB MAPU		GSE-12	
					$ GLS EVENT COMPLETE = 300 $								
135-06	-05:05												
135-07			VFY	MPS	MPS E1 LO2 INLET TEMP	V41T1131C1	NOLO	-287.7	DEGF	2 OF 3		MPS-24	S00FM0.041
135-08			VFY	MPS	MPS E2 LO2 INLET TEMP	V41T1231C1	NOLO	-287.7	DEGF	2 OF 3		MPS-24	S00FM0.041
135-09			VFY	MPS	MPS E3 LO2 INLET TEMP	V41T1331C1	NOLO	-287.7	DEGF	INHB MAPU		MPS-24	S00FM0.041
136-00	-05:00												
137-00			VFY	LO2	LOX FLIGHT MASS	N03IS008E	ON			INHB MAPU		ET-10	S00FM0.043

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-05:00		**********										
138-00	CONT'D		LABL	INTG	APU START MILESTONE	MAPU							S00E00.960
			**********										
138-01			VFY	INTG	GLS-GO FOR PURGE SEQ. 4	MPS4	ON			INHB MAPU			
138-02			VFY	INTG	GLS-GO FOR ET LO2 PRE-PRESS	MLOX	ON			INHB MAPU			
138-03			VFY	INTG	GLS-GO FOR ET LH2 REPLN TERM	MLH2	ON			INHB MAPU			
138-04			VFY	INTG	LPS COUNTDOWN HOLD	V90X8768X1	OFF			INHB MAPU			
138-05			VFY	INTG	GLS-GO FOR AUTO SEQ START	MSEQ	ON			INHB MAPU			
138-06			VFY	INTG	GLS-GO FOR SSME IGNITION	MENG	ON			INHB MAPU			
138-07			VFY	INTG	GLS-GO FOR SRB IGNITION	MSRB	ON			INHB MAPU			
138-08			VFY	INTG	RSS MANUAL HOLD		ON			INHB MAPU			
138-09			VFY	INTG	NTD MANUAL HOLD		ON			INHB MAPU			
138-10			VFY	INTG	GLS MANUAL HOLD		ON			INHB MAPU			
138-11			VFY	INTG	GLS-GO FOR APU START	MAPU	ON			HOLD			
138-12			MMSG	INTG	-04:00 GO FOR PURGE SEQ 4								
138-13			OMSG	INTG	*** GLS GO FOR APU START ***								
138-14			MSG	INTG	APU START								
138-15			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 $								
139-00			CMD	BPYR	LH IGNITION S&A DEVICE,SAFE CMD 1	B55K3001XL	OFF						S00FM0.210
139-01			CMD	BPYR	LH IGNITION S&A DEVICE,SAFE CMD 2	B55K3002XL	OFF						S00FM0.210
139-02			CMD	BPYR	RH IGNITION S&A DEVICE,SAFE CMD 1	B55K4001XL	OFF						S00FM0.210
139-03			CMD	BPYR	RH IGNITION S&A DEVICE,SAFE CMD 2	B55K4002XL	OFF						S00FM0.210
139-04			CMD	TRS	ET RSS S&A DVC SAFE 1	T55K3111XL	OFF						S00FM0.210
139-05			CMD	TRS	ET RSS S&A DVC SAFE 2	T55K3112XL	OFF						S00FM0.210
					$ GLS EVENT COMPLETE = 298 $								
140-00			CMD	BRS	LH RSS S&A DEVICE ARM CMD	B55K3044XL	ON						S00FM0.210
140-01			CMD	BRS	RH RSS S&A DEVICE ARM CMD	B55K4044XL	ON						S00FM0.210
140-02			CMD	TRS	ET RSS S&A DVC ARM	T55K3110XL	ON						S00FM0.210
140-03			CMD	BPYR	LH IGNITION S&A DEVICE, ARM CMD	B55K3000XL	ON						S00FM0.210
140-04			CMD	BPYR	RH IGNITION S&A DEVICE, ARM CMD	B55K4000XL	ON						S00FM0.210

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ GLS EVENT COMPLETE = 297 $								
141-00	-04:55												
142-00		CMD	BRS		LH RSS S&A DEVICE ARM CMD	B55K3044XL	OFF						S00FM0.210
142-01		CMD	BRS		RH RSS S&A DEVICE ARM CMD	B55K4044XL	OFF						S00FM0.210
142-02		CMD	TRS		ET RSS S&A DVC ARM	T55K3110XL	OFF						S00FM0.210
142-03		CMD	BPYR		LH IGNITION S&A DEVICE, ARM CMD	B55K3000XL	OFF						S00FM0.210
142-04		CMD	BPYR		RH IGNITION S&A DEVICE, ARM CMD	B55K4000XL	OFF						S00FM0.210
					$ RSS S/A ARM CHECK $								
142-05		CVFY	BRS		LH EVENT RSS S&A DEVICE ARMED	B55X1870X1	ON			INHB MENG		BRSS-16	S00FM0.210
142-06		CVFY	BRS		RH EVENT RSS S&A DEVICE ARMED	B55X2870X1	ON			INHB MENG		BRSS-16	S00FM0.210
142-07		CVFY	TRS		ET RSS S&A DVC ARMED	T55X1870X1	ON			INHB MENG		TRSS-13	S00FM0.210
142-08		VFY	BRS		LH EVENT RSS S&A DEVICE SAFED	B55X1869X1	OFF			INHB MPS4		BRSS-17	S00FM0.210
142-09		VFY	BRS		RH EVENT RSS S&A DEVICE SAFED	B55X2869X1	OFF			INHB MPS4		BRSS-17	S00FM0.210
142-10		VFY	TRS		ET RSS S&A DVC SAFED	T55X1869X1	OFF			INHB MPS4		TRSS-12	S00FM0.210
142-11		CVFY	BRS		LH CURRENT RSS BATTERY NO 1	B55C1051C1	0.42	0.57	AMP	INHB MSEQ		BRSS-11	
142-12		CVFY	BRS		RH CURRENT RSS BATTERY NO 1	B55C2051C1	0.42	0.57	AMP	INHB MSEQ		BRSS-11	
					$ APU GEARBOX BEARING CHECKS $								
143-00		CVFY	APU		APU 1 GEARBOX BEARING TEMP NO1	V46T0161A1	NOLO	285	DEGF	INHB MSEQ		APU-12	
143-01		CVFY	APU		APU 1 GEARBOX BEARING TEMP NO2	V46T0162A1	NOLO	285	DEGF	INHB MSEQ		APU-12	
143-02		CVFY	APU		APU 2 GEARBOX BEARING TEMP NO1	V46T0261A1	NOLO	285	DEGF	INHB MSEQ		APU-12	
143-03		CVFY	APU		APU 2 GEARBOX BEARING TEMP NO2	V46T0262A1	NOLO	285	DEGF	INHB MSEQ		APU-12	
143-04		CVFY	APU		APU 3 GEARBOX BEARING TEMP NO1	V46T0361A1	NOLO	285	DEGF	INHB MSEQ		APU-12	
143-05		CVFY	APU		APU 3 GEARBOX BEARING TEMP NO2	V46T0362A1	NOLO	285	DEGF	INHB MSEQ		APU-12	
					$ GLS EVENT COMPLETE = 294 $								
144-00	-04:50												
					$ IGN S/A ARM CHECK $								
145-00		CVFY	BPYR		LH EVENT IGN S&A DEVICE ARMED	B55X1842X1	ON			INHB MSRB		SRM-02	S00FM0.210
145-01		CVFY	BPYR		RH EVENT IGN S&A DEVICE ARMED	B55X2842X1	ON			INHB MSRB		SRM-02	S00FM0.210
145-02		CVFY	BPYR		LH EVENT IGN S&A DEVICE SAFED	B55X1843X1	OFF			INHB MSRB		SRM-02	S00FM0.210
145-03		CVFY	BPYR		RH EVENT IGN S&A DEVICE SAFED	B55X2843X1	OFF			INHB MSRB		SRM-02	S00FM0.210
					$ GLS EVENT COMPLETE = 270 $								
146-00	-04:30												

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-04:30 CONT'D												
					$ TURN OFF MAIN FUEL VALVE HEATERS $								
147-00			CMD	SSME	MPENG MFV1 HEATER PWR ON CMD	GGNK1020E	OFF						S00FM0.040
147-01			CMD	SSME	MPENG MFV1 HEATER PWR ON CMD (R)	GGNK1110E	OFF						S00FM0.040
147-02			CMD	SSME	MPENG MFV1 HEATER PWR OFF CMD	GGNK1021E	ON						S00FM0.040
147-03			CMD	SSME	MPENG MFV1 HEATER PWR OFF CMD(R)	GGNK1141E	ON						S00FM0.040
147-04			CMD	SSME	MPENG MFV2 HEATER PWR ON CMD	GGNK1040E	OFF						S00FM0.040
147-05			CMD	SSME	MPENG MFV2 HEATER PWR ON CMD(R)	GGNK1150E	OFF						S00FM0.040
147-06			CMD	SSME	MPENG MFV2 HEATER PWR OFF CMD	GGNK1041E	ON						S00FM0.040
147-07			CMD	SSME	MPENG MFV2 HEATER PWR OFF CMD(R)	GGNK1151E	ON						S00FM0.040
147-08			CMD	SSME	MPENG MFV3 HEATER PWR ON CMD	GGNK1060E	OFF						S00FM0.040
147-09			CMD	SSME	MPENG MFV3 HEATER PWR ON CMD(R)	GGNK1170E	OFF						S00FM0.040
147-10			CMD	SSME	MPENG MFV3 HEATER PWR OFF CMD	GGNK1061E	ON						S00FM0.040
147-11			CMD	SSME	MPENG MFV3 HEATER PWR OFF CMD(R)	GGNK1161E	ON						S00FM0.040
					$ GLS EVENT COMPLETE = 245 $								
148-00	-04:05												
					$ HYD PUMP DEPRESS OFF $								
149-00			VFY	HYD	PCA HYDRAULIC PUMP 1 RPC A ON	V76X4020E1	OFF			INHB MPS4		HYD-09	
149-01			VFY	HYD	PCA HYDRAULIC PUMP 1 RPC B ON	V76X4021E1	OFF			INHB MPS4		HYD-09	
149-02			VFY	HYD	PCA HYDRAULIC PUMP 2 RPC B ON	V76X4024E1	OFF			INHB MPS4		HYD-09	
149-03			VFY	HYD	PCA HYDRAULIC PUMP 2 RPC C ON	V76X4025E1	OFF			INHB MPS4		HYD-09	
149-04			VFY	HYD	PCA HYDRAULIC PUMP 3 RPC C ON	V76X4027E1	OFF			INHB MPS4		HYD-09	
149-05			VFY	HYD	PCA HYDRAULIC PUMP 3 RPC A ON	V76X4028E1	OFF			INHB MPS4		HYD-09	
					$ ORB HYD SUPPLY PRESS CHECK $								
149-06			VFY	HYD	HYDR SYS 1 SUPPLY PRESS B	V58P0115A1	2850	3400	PSIA	1 OF 2		HYD-02	
149-07			VFY	HYD	HYDR SYS 1 SUPPLY PRESS C	V58P0116C1	2800	3400	PSIA	INHB MPS4		HYD-02	
149-08			VFY	HYD	HYDR SYS 2 SUPPLY PRESS B	V58P0215A1	2850	3400	PSIA	1 OF 2		HYD-02	
149-09			VFY	HYD	HYDR SYS 2 SUPPLY PRESS C	V58P0216C1	2800	3400	PSIA	INHB MPS4		HYD-02	
149-10			VFY	HYD	HYDR SYS 3 SUPPLY PRESS B	V58P0315A1	2850	3400	PSIA	1 OF 2		HYD-02	
149-11			VFY	HYD	HYDR SYS 3 SUPPLY PRESS C	V58P0316C1	2800	3400	PSIA	INHB MPS4		HYD-02	
					$ HYD CIRC PUMP LEAKAGE CHECK $								
151-00			CVFY	HYD	HYD SYS 1 CIRC PUMP PRESS	V58P0137A1	NOLO	140	PSIA	INHB MSEQ		HYD-03	
151-01			CVFY	HYD	HYD SYS 2 CIRC PUMP PRESS	V58P0237A1	NOLO	140	PSIA	INHB MSEQ		HYD-03	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
151-02	-04:05 CONT'D		CVFY	HYD	HYD SYS 3 CIRC PUMP PRESS	V58P0337A1	NOLO	140	PSIA	INHB MSEQ		HYD-03	
					$ APU LUBE SYS CK-POST START $								
152-00			CVFY	APU	APU-1 GEARBOX GN2 PRESS	V46P0151A1	6.0	30.0	PSIA	INHB MSEQ		APU-11	
152-01			CVFY	APU	APU-1 GEARBOX LUBE OIL OUT PRESS	V46P0153A1	NOLO	110	PSIA	INHB MSEQ		APU-11	
152-02			CVFY	APU	APU-2 GEARBOX GN2 PRESS	V46P0251A1	6.0	30.0	PSIA	INHB MSEQ		APU-11	
152-03			CVFY	APU	APU-2 GEARBOX LUBE OIL OUT PRESS	V46P0253A1	NOLO	110	PSIA	INHB MSEQ		APU-11	
152-04			CVFY	APU	APU-3 GEARBOX GN2 PRESS	V46P0351A1	6.0	30.0	PSIA	INHB MSEQ		APU-11	
152-05			CVFY	APU	APU-3 GEARBOX LUBE OIL OUT PRESS	V46P0353A1	NOLO	110	PSIA	INHB MSEQ		APU-11	
					$ APU TURBINE SPEED POST-START $								
152-06			CVFY	APU	APU 1 TURBINE SPEED	V46R0135A1	95	111	PCT	INHB MENG		APU-06	
152-07			CVFY	APU	APU 2 TURBINE SPEED	V46R0235A1	95	111	PCT	INHB MENG		APU-06	
152-08			CVFY	APU	APU 3 TURBINE SPEED	V46R0335A1	95	111	PCT	INHB MENG		APU-06	
					$ GLS EVENT COMPLETE = 240 $								
153-00	-04:00												
					**								
154-00			LABL	INTG	PURGE SEQ 4 MILESTONE	MPS4							S00E00.960
					**								
154-01			VFY	INTG	GLS-GO FOR ET LO2 PRE-PRESS	MLOX	ON			INHB MPS4			
154-02			VFY	INTG	GLS-GO FOR ET LH2 REPLN TERM	MLH2	ON			INHB MPS4			
154-03			VFY	INTG	GLS-GO FOR AUTO SEQ START	MSEQ	ON			INHB MPS4			
154-04			VFY	INTG	GLS-GO FOR SSME IGNITION	MENG	ON			INHB MPS4			
154-05			VFY	INTG	GLS-GO FOR SRB IGNITION	MSRB	ON			INHB MPS4			
154-06			VFY	INTG	LPS COUNTDOWN HOLD	V90X8768X1	OFF			INHB MPS4			
154-07			VFY	INTG	RSS MANUAL HOLD		ON			INHB MPS4			
154-08			VFY	INTG	NTD MANUAL HOLD		ON			INHB MPS4			
154-09			VFY	INTG	GLS MANUAL HOLD		ON			INHB MPS4			
154-10			VFY	INTG	GLS-GO FOR PURGE SEQ 4	MPS4	ON			HOLD			
154-11			MMSG	INTG	-02:55 GO FOR ET LO2 PRE-PRESS								
154-12			MSG	INTG	GO FOR PURGE SEQ. 4								
					$ GLS EVENT COMPLETE = 239 $								
					$ PURGE SEQ 4 $								
155-00			ISSU	SSME	ME-1 PURGE SEQUENCE 4 CMD	E41K1216BL	ON						S00FM0.250
155-01			ISSU	SSME	ME-2 PURGE SEQUENCE 4 CMD	E41K2216BL	ON						S00FM0.250

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
155-02			ISSU	SSME	ME-3 PURGE SEQUENCE 4 CMD	E41K3216BL	ON						S00FM0.250
					$ GLS EVENT COMPLETE = 238 $								
156-00	-03:55												
					$ CHECK SSME FOR PURGE SEQUENCE NO.4 $								
157-00			CVFY	SSME	ME-1 OPERATING MODE P3B12-14	E41J1513B1	B100			INHB MSEQ	MLH2	SSME-07	S00FM0.250
157-01			CVFY	SSME	ME-2 OPERATING MODE P3B12-14	E41J2513B1	B100			INHB MSEQ	MLH2	SSME-07	S00FM0.250
157-02			CVFY	SSME	ME-3 OPERATING MODE P3B12-14	E41J3513B1	B100			INHB MSEQ	MLH2	SSME-07	S00FM0.250
157-03			CVFY	SSME	ME-1 PHASE IN EFFECT P3B9-11	E41J1512B1	B010			INHB MSEQ		SSME-07	S00FM0.250
157-04			CVFY	SSME	ME-2 PHASE IN EFFECT P3B9-11	E41J2512B1	B010			INHB MSEQ		SSME-07	S00FM0.250
157-05			CVFY	SSME	ME-3 PHASE IN EFFECT P3B9-11	E41J3512B1	B010			INHB MSEQ		SSME-07	S00FM0.250
					$ HYD SYS CHECKS $								
158-00			CVFY	HYD	HYD SYS 1 RSVR FLUID PRESS	V58P0131A1	60	120	PSIA	INHB MSEQ		HYD-07	
158-01			CVFY	HYD	HYD SYS 1 BOOTSTRAP ACCUM GN2 P	V58P0167A1	2706	NOHI	PSIA	INHB MSEQ		HYD-07	
158-02			CVFY	HYD	HYD SYS 2 RSVR FLUID PRESS	V58P0231A1	60	120	PSIA	INHB MSEQ		HYD-07	
158-03			CVFY	HYD	HYD SYS 2 BOOTSTRAP ACCUM GN2 P	V58P0267A1	2706	NOHI	PSIA	INHB MSEQ		HYD-07	
158-04			CVFY	HYD	HYD SYS 3 RSVR FLUID PRESS	V58P0331A1	60	120	PSIA	INHB MSEQ		HYD-07	
158-05			CVFY	HYD	HYD SYS 3 BOOTSTRAP ACCUM GN2 P	V58P0367A1	2706	NOHI	PSIA	INHB MSEQ		HYD-07	
					$ GLS EVENT COMPLETE = 234 $								
					$ START AERO-SURFACE PROFILE $								
159-00			CMD	FCL	INITIATE AERO-SURFACE DRIVE CHEC	P001	ON						S00FM0.270
159-01			CMD	FCL	AERO-SURFACE PROFILE EVAL	P001	ON						S00FM0.270
					$ GLS EVENT COMPLETE = 225 $								
160-00	-03:30												
					$ GROUND POWER REMOVAL $								
161-00			CMD	EPDC	GSE PWR MN BUS A OFF CMD	V76K0192W	ON						S00FM0.220
161-01			CMD	EPDC	GSE PWR MN BUS B OFF CMD	V76K0292W	ON						S00FM0.220
161-02			CMD	EPDC	GSE PWR MN BUS C OFF CMD	V76K0392W	ON						S00FM0.220
					$ START MPS GIMBAL PROFILE $								
161-03			CMD	FCL	INITIATE MPS GIMBAL CHECK	P002	ON						S00FM0.300
161-04			CMD	FCL	MPS GIMBAL PROFILE EVAL	P002	ON						S00FM0.300

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ GLS EVENT COMPLETE = 209 $								
162-00	-03:25												
163-00		CMD	EPDC		GSE PWR MN BUS A OFF CMD	V76K0192W	OFF						S00FM0.220
163-01		CMD	EPDC		GSE PWR MN BUS B OFF CMD	V76K0292W	OFF						S00FM0.220
163-02		CMD	EPDC		GSE PWR MN BUS C OFF CMD	V76K0392W	OFF						S00FM0.220
163-03		CMD	EPDC		ORB GND PWR MN BUS A ON PRI	G76K0180E	OFF						
163-04		CMD	EPDC		ORB GND PWR MN BUS A ON SEC	G76K0181E	OFF						
163-05		CMD	EPDC		ORB GND PWR MN BUS B ON PRI	G76K0280E	OFF						
163-06		CMD	EPDC		ORB GND PWR MN BUS B ON SEC	G76K0281E	OFF						
163-07		CMD	EPDC		ORB GND PWR MN BUS C ON PRI	G76K0380E	OFF						
163-08		CMD	EPDC		ORB GND PWR MN BUS C ON SEC	G76K0381E	OFF						
					$ GLS EVENT COMPLETE = 204 $								
164-00	-03:20												
					$ VFY ON ORBITER POWER $								
165-00		VFY	EPDC		GSE MN BUS A PWR ON IND	V76X0190W	OFF			INHB MSEQ		EPDC-10	S00FM0.220
165-01		VFY	EPDC		MAIN BUS A RED ON IND	V76X0195W	OFF			INHB MSEQ		EPDC-10	
165-02		VFY	EPDC		GSE MN BUS B PWR ON IND	V76X0290W	OFF			INHB MSEQ		EPDC-10	S00FM0.220
165-03		VFY	EPDC		MAIN BUS B RED ON IND	V76X0295W	OFF			INHB MSEQ		EPDC-10	
165-04		VFY	EPDC		GSE MN BUS C PWR ON IND	V76X0390W	OFF			INHB MSEQ		EPDC-10	S00FM0.220
165-05		VFY	EPDC		MAIN BUS C RED ON IND	V76X0395W	OFF			INHB MSEQ		EPDC-10	
					$ GLS EVENT COMPLETE = 199 $								
					$ ORB AEROSURFACE ACTUATOR HEALTH MONITOR $								
166-00		CVFY	FCL		RUDDER DELTA PRESS 1	V57P0160A1	-850	850	PSID	INHB MSEQ		GNC-27	
166-01		CVFY	FCL		RUDDER DELTA PRESS 2	V57P0161A1	-850	850	PSID	INHB MSEQ		GNC-27	
166-02		CVFY	FCL		RUDDER DELTA PRESS 3	V57P0162A1	-850	850	PSID	INHB MSEQ		GNC-27	
166-03		CVFY	FCL		RUDDER DELTA PRESS 4	V57P0163A1	-850	850	PSID	INHB MSEQ		GNC-27	
166-04		CVFY	FCL		SPEED BRAKE DELTA PRESS 1	V57P0260A1	-850	850	PSID	INHB MSEQ		GNC-27	
166-05		CVFY	FCL		SPEED BRAKE DELTA PRESS 2	V57P0261A1	-850	850	PSID	INHB MSEQ		GNC-27	
166-06		CVFY	FCL		SPEED BRAKE DELTA PRESS 3	V57P0262A1	-850	850	PSID	INHB MSEQ		GNC-27	
166-07		CVFY	FCL		SPEED BRAKE DELTA PRESS 4	V57P0263A1	-850	850	PSID	INHB MSEQ		GNC-27	
166-08		CVFY	FCL		R INBD ELEVON SEC DELTA PRESS 1	V58P0912A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-09		CVFY	FCL		R INBD ELEVON SEC DELTA PRESS 2	V58P0913A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-10		CVFY	FCL		R INBD ELEVON SEC DELTA PRESS 3	V58P0914A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-11		CVFY	FCL		R INBD ELEVON SEC DELTA PRESS 4	V58P0915A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-12		CVFY	FCL		R OUTBD ELEVON SEC DELTA PRESS 1	V58P0962A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-13		CVFY	FCL		R OUTBD ELEVON SEC DELTA PRESS 2	V58P0963A1	-850	850	PSID	INHB MSEQ		GNC-24	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
166-14	-03:20		CVFY	FCL	R OUTBD ELEVON SEC DELTA PRESS 3	V58P0964A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-15	CONT'D		CVFY	FCL	R OUTBD ELEVON SEC DELTA PRESS 4	V58P0965A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-16			CVFY	FCL	L INBD ELEVON SEC DELTA PRESS 1	V58P0812A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-17			CVFY	FCL	L INBD ELEVON SEC DELTA PRESS 2	V58P0813A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-18			CVFY	FCL	L INBD ELEVON SEC DELTA PRESS 3	V58P0814A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-19			CVFY	FCL	L INBD ELEVON SEC DELTA PRESS 4	V58P0815A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-20			CVFY	FCL	L OUTBD ELEVON SEC DELTA PRESS 1	V58P0862A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-21			CVFY	FCL	L OUTBD ELEVON SEC DELTA PRESS 2	V58P0863A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-22			CVFY	FCL	L OUTBD ELEVON SEC DELTA PRESS 3	V58P0864A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-23			CVFY	FCL	L OUTBD ELEVON SEC DELTA PRESS 4	V58P0865A1	-850	850	PSID	INHB MSEQ		GNC-24	
166-24			CVFY	FCL	R INBD ELEVON PRI DELTA PRESS 1	V58P0916C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-25			CVFY	FCL	R INBD ELEVON PRI DELTA PRESS 2	V58P0917C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-26			CVFY	FCL	R INBD ELEVON PRI DELTA PRESS 3	V58P0918C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-27			CVFY	FCL	R INBD ELEVON PRI DELTA PRESS 4	V58P0919C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-28			CVFY	FCL	R OUTBD ELEVON PRI DELTA PRESS 1	V58P0966C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-29			CVFY	FCL	R OUTBD ELEVON PRI DELTA PRESS 2	V58P0967C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-30			CVFY	FCL	R OUTBD ELEVON PRI DELTA PRESS 3	V58P0968C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-31			CVFY	FCL	R OUTBD ELEVON PRI DELTA PRESS 4	V58P0969C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-32			CVFY	FCL	L INBD ELEVON PRI DELTA PRESS 1	V58P0816C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-33			CVFY	FCL	L INBD ELEVON PRI DELTA PRESS 2	V58P0817C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-34			CVFY	FCL	L INBD ELEVON PRI DELTA PRESS 3	V58P0818C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-35			CVFY	FCL	L INBD ELEVON PRI DELTA PRESS 4	V58P0819C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-36			CVFY	FCL	L OUTBD ELEVON PRI DELTA PRESS 1	V58P0866C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-37			CVFY	FCL	L OUTBD ELEVON PRI DELTA PRESS 2	V58P0867C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-38			CVFY	FCL	L OUTBD ELEVON PRI DELTA PRESS 3	V58P0868C1	-230	230	PSID	INHB MSEQ		GNC-23	
166-39			CVFY	FCL	L OUTBD ELEVON PRI DELTA PRESS 4	V58P0869C1	-230	230	PSID	INHB MSEQ		GNC-23	
167-00			CVFY	FCL	BODY FLAP ENABLE 1 OUTPUT	V79X3201E1	OFF			INHB MSEQ		GNC-29	S00FM0.290
167-01			CVFY	FCL	BODY FLAP UP 1 OUTPUT	V79X3202E1	OFF			INHB MSEQ		GNC-29	S00FM0.290
167-02			CVFY	FCL	BODY FLAP DOWN 1 OUTPUT	V79X3203E1	OFF			INHB MSEQ		GNC-29	S00FM0.290
167-03			CVFY	FCL	BODY FLAP ENABLE 2 OUTPUT	V79X3204E1	OFF			INHB MSEQ		GNC-29	S00FM0.290
167-04			CVFY	FCL	BODY FLAP UP 2 OUTPUT	V79X3205E1	OFF			INHB MSEQ		GNC-29	S00FM0.290
167-05			CVFY	FCL	BODY FLAP DOWN 2 OUTPUT	V79X3206E1	OFF			INHB MSEQ		GNC-29	S00FM0.290
167-06			CVFY	FCL	BODY FLAP ENABLE 3 OUTPUT	V79X3207E1	OFF			INHB MSEQ		GNC-29	S00FM0.290
167-07			CVFY	FCL	BODY FLAP UP 3 OUTPUT	V79X3208E1	OFF			INHB MSEQ		GNC-29	S00FM0.290
167-08			CVFY	FCL	BODY FLAP DOWN 3 OUTPUT	V79X3209E1	OFF			INHB MSEQ		GNC-29	S00FM0.290
168-00			VFY SUM	FCL	RUDDER DELTA PRESS RUDDER DELTA PRESS 1 SUM7	SUM7 V57P0160A1	-440	370	PSID	INHB MSEQ		GNC-27	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-03:20 CONT'D		SUM		RUDDER DELTA PRESS 2 SUM7	V57P0161A1							
			SUM		RUDDER DELTA PRESS 3 SUM7	V57P0162A1							
			SUM		RUDDER DELTA PRESS 4 SUM7	V57P0163A1							
169-00			VFY	FCL	SPEED BRAKE DELTA PRESS	SUM8	-440	370	PSID	INHB MSEQ		GNC-27	
			SUM		SPEED BRAKE DELTA PRESS 1 SUM8	V57P0260A1							
			SUM		SPEED BRAKE DELTA PRESS 2 SUM8	V57P0261A1							
			SUM		SPEED BRAKE DELTA PRESS 3 SUM8	V57P0262A1							
			SUM		SPEED BRAKE DELTA PRESS 4 SUM8	V57P0263A1							
170-00			VFY	FCL	R INBD ELEV SEC DELTA P	SUM9	-440	370	PSID	INHB MSEQ		GNC-24	
			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							
171-00			VFY	FCL	R OUTBD ELEV SEC DELTA P	SUM10	-440	370	PSID	INHB MSEQ		GNC-24	
			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							
172-00			VFY	FCL	L INBD ELEV SEC DELTA P	SUM11	-440	370	PSID	INHB MSEQ		GNC-24	
			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							
173-00			VFY	FCL	L OUTBD ELEV SEC DELTA P	SUM12	-440	370	PSID	INHB MSEQ		GNC-24	
			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 $								
174-00			VFY	LO2	A140411 SEC HE BUB DIFF PRESS	GLOP4644A	NOLO	.1	PSID	2 OF 3		ET-03	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
174-01	-03:20		VFY	LO2	A86927 PRI HE BUB DIFF PRESS	GLOP4144A	NOLO	.1	PSID	2 OF 3		ET-03	
174-02	CONT'D		VFY	LO2	A78419 HE BUB OUTPUT PRESS	GLOP4134A	NOLO	125	PSIG	INHB MSEQ		ET-03	
					$ GLS EVENT COMPLETE = 190 $								
175-00	-03:03												
					$ ORB HYD SUPPLY PRESS CHECK $								
176-00			CVFY	HYD	HYDR SYS 1 SUPPLY PRESS B	V58P0115A1	2850	3400	PSIA	1 OF 2		HYD-02	
176-01			CVFY	HYD	HYDR SYS 1 SUPPLY PRESS C	V58P0116C1	2800	3400	PSIA	INHB MENG		HYD-02	
176-02			CVFY	HYD	HYDR SYS 2 SUPPLY PRESS B	V58P0215A1	2850	3400	PSIA	1 OF 2		HYD-02	
176-03			CVFY	HYD	HYDR SYS 2 SUPPLY PRESS C	V58P0216C1	2800	3400	PSIA	INHB MENG		HYD-02	
176-04			CVFY	HYD	HYDR SYS 3 SUPPLY PRESS B	V58P0315A1	2850	3400	PSIA	1 OF 2		HYD-02	
176-05			CVFY	HYD	HYDR SYS 3 SUPPLY PRESS C	V58P0316C1	2800	3400	PSIA	INHB MENG		HYD-02	
					$ MPS ENGINE GIMBAL POSITION MONITOR $								
177-00			CVFY	FCL	MPS ENG 1 P ACTR POSN	V58H1100A1	-1.12	.48	DEG	INHB MSEQ		GNC-40	S00FM0.310
177-01			CVFY	FCL	MPS ENG 1 Y ACTR POSN	V58H1150A1	.77	-0.43	DEG	INHB MSEQ		GNC-40	S00FM0.310
177-02			CVFY	FCL	MPS ENG 2 P ACTR POSN	V58H1200A1	1.12	-.48	DEG	INHB MSEQ		GNC-40	S00FM0.310
177-03			CVFY	FCL	MPS ENG 2 Y ACTR POSN	V58H1250A1	.81	-0.39	DEG	INHB MSEQ		GNC-40	S00FM0.310
177-04			CVFY	FCL	MPS ENG 3 P ACTR POSN	V58H1300A1	-1.12	.48	DEG	INHB MSEQ		GNC-40	S00FM0.310
177-05			CVFY	FCL	MPS ENG 3 Y ACTR POSN	V58H1350A1	.81	-0.39	DEG	INHB MSEQ		GNC-40	S00FM0.310
					$ AEROSURFACE POSITION MONITOR $								
178-00			CVFY	FCL	L INBD ELEVON ACTR CHAN 1 POSN	V58H0802A1	-0.52	1.18	DEG	INHB MSEQ		GNC-22	
178-01			CVFY	FCL	L INBD ELEVON ACTR CHAN 2 POSN	V58H0803A1	-0.52	1.18	DEG	INHB MSEQ		GNC-22	
178-02			CVFY	FCL	L INBD ELEVON ACTR CHAN 3 POSN	V58H0804A1	-0.52	1.18	DEG	INHB MSEQ		GNC-22	
178-03			CVFY	FCL	L INBD ELEVON ACTR CHAN 4 POSN	V58H0805A1	-0.52	1.18	DEG	INHB MSEQ		GNC-22	
178-04			CVFY	FCL	L OUTBD ELEVON ACTR CHAN 1 POSN	V58H0852A1	-0.36	1.34	DEG	INHB MSEQ		GNC-22	
178-05			CVFY	FCL	L OUTBD ELEVON ACTR CHAN 2 POSN	V58H0853A1	-0.36	1.34	DEG	INHB MSEQ		GNC-22	
178-06			CVFY	FCL	L OUTBD ELEVON ACTR CHAN 3 POSN	V58H0854A1	-0.36	1.34	DEG	INHB MSEQ		GNC-22	
178-07			CVFY	FCL	L OUTBD ELEVON ACTR CHAN 4 POSN	V58H0855A1	-0.36	1.34	DEG	INHB MSEQ		GNC-22	
178-08			CVFY	FCL	R INBD ELEVON ACTR CHAN 1 POSN	V58H0902A1	-0.52	1.18	DEG	INHB MSEQ		GNC-22	
178-09			CVFY	FCL	R INBD ELEVON ACTR CHAN 2 POSN	V58H0903A1	-0.52	1.18	DEG	INHB MSEQ		GNC-22	
178-10			CVFY	FCL	R INBD ELEVON ACTR CHAN 3 POSN	V58H0904A1	-0.52	1.18	DEG	INHB MSEQ		GNC-22	
178-11			CVFY	FCL	R INBD ELEVON ACTR CHAN 4 POSN	V58H0905A1	-0.52	1.18	DEG	INHB MSEQ		GNC-22	
178-12			CVFY	FCL	R OUTBD ELEVON ACTR CHAN 1 POSN	V58H0952A1	-0.36	1.34	DEG	INHB MSEQ		GNC-22	
178-13			CVFY	FCL	R OUTBD ELEVON ACTR CHAN 2 POSN	V58H0953A1	-0.36	1.34	DEG	INHB MSEQ		GNC-22	
178-14			CVFY	FCL	R OUTBD ELEVON ACTR CHAN 3 POSN	V58H0954A1	-0.36	1.34	DEG	INHB MSEQ		GNC-22	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
178-15	-03:03 CONT'D		CVFY	FCL	R OUTBD ELEVON ACTR CHAN 4 POSN	V58H0955A1	-0.36	1.34	DEG	INHB MSEQ		GNC-22	
178-16			CVFY	FCL	RUDDER ACTR CHAN 1 POSN	V57H0150A1	-0.95	0.95	DEG	INHB MSEQ		GNC-26	
178-17			CVFY	FCL	RUDDER ACTR CHAN 2 POSN	V57H0151A1	-0.95	0.95	DEG	INHB MSEQ		GNC-26	
178-18			CVFY	FCL	RUDDER ACTR CHAN 3 POSN	V57H0152A1	-0.95	0.95	DEG	INHB MSEQ		GNC-26	
178-19			CVFY	FCL	RUDDER ACTR CHAN 4 POSN	V57H0153A1	-0.95	0.95	DEG	INHB MSEQ		GNC-26	
178-20			VFY	FCL	SPEED BRAKE ACTR CHAN 1 POSN	V57H0250A1	2.45	7.55	DEG	INHB MSEQ		GNC-26	
178-21			VFY	FCL	SPEED BRAKE ACTR CHAN 2 POSN	V57H0251A1	2.45	7.55	DEG	INHB MSEQ		GNC-26	
178-22			VFY	FCL	SPEED BRAKE ACTR CHAN 3 POSN	V57H0252A1	2.45	7.55	DEG	INHB MSEQ		GNC-26	
178-23			VFY	FCL	SPEED BRAKE ACTR CHAN 4 POSN	V57H0253A1	2.45	7.55	DEG	INHB MSEQ		GNC-26	
178-24			VFY	FCL	SELECTED BODY FLAP FDBK	V90H6410C1	-1.41	1.41	DEG	INHB MSEQ			S00FM0.280
178-25			CVFY	FCL	BODY FLAP POSN FDBK-1	V57H0065C1	-1.85	1.85	DEG	INHB MSEQ		GNC-30	S00FM0.280
178-26			CVFY	FCL	BODY FLAP POSN FDBK-2	V57H0066C1	-1.85	1.85	DEG	INHB MSEQ		GNC-30	S00FM0.280
178-27			CVFY	FCL	BODY FLAP POSN FDBK-3	V57H0067C1	-1.85	1.85	DEG	INHB MSEQ		GNC-30	S00FM0.280
178-28			CVFY	FCL	BODY FLAP POSN FDBK-4	V57H0068C1	-1.85	1.85	DEG	INHB MSEQ		GNC-30	S00FM0.280
					$ MPS GIMBAL ACTUATOR DELTA PRESSURE CHECK $								
179-00			CVFY	FCL	MPS ENG 1 PITCH SEC DELTA PRESS A	V58P1181A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-01			CVFY	FCL	MPS ENG 1 PITCH SEC DELTA PRESS B	V58P1182A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-02			CVFY	FCL	MPS ENG 1 PITCH SEC DELTA PRESS C	V58P1183A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-03			CVFY	FCL	MPS ENG 1 PITCH SEC DELTA PRESS D	V58P1184A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-04			CVFY	FCL	MPS ENG 1 YAW SEC DELTA PRESS A	V58P1186A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-05			CVFY	FCL	MPS ENG 1 YAW SEC DELTA PRESS B	V58P1187A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-06			CVFY	FCL	MPS ENG 1 YAW SEC DELTA PRESS C	V58P1188A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-07			CVFY	FCL	MPS ENG 1 YAW SEC DELTA PRESS D	V58P1189A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-08			CVFY	FCL	MPS ENG 2 PITCH SEC DELTA PRESS A	V58P1281A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-09			CVFY	FCL	MPS ENG 2 PITCH SEC DELTA PRESS B	V58P1282A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-10			CVFY	FCL	MPS ENG 2 PITCH SEC DELTA PRESS C	V58P1283A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-11			CVFY	FCL	MPS ENG 2 PITCH SEC DELTA PRESS D	V58P1284A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-12			CVFY	FCL	MPS ENG 2 YAW SEC DELTA PRESS A	V58P1286A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-13			CVFY	FCL	MPS ENG 2 YAW SEC DELTA PRESS B	V58P1287A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-14			CVFY	FCL	MPS ENG 2 YAW SEC DELTA PRESS C	V58P1288A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-15			CVFY	FCL	MPS ENG 2 YAW SEC DELTA PRESS D	V58P1289A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-16			CVFY	FCL	MPS ENG 3 PITCH SEC DELTA PRESS A	V58P1381A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-17			CVFY	FCL	MPS ENG 3 PITCH SEC DELTA PRESS B	V58P1382A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-18			CVFY	FCL	MPS ENG 3 PITCH SEC DELTA PRESS C	V58P1383A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-19			CVFY	FCL	MPS ENG 3 PITCH SEC DELTA PRESS D	V58P1384A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-20			CVFY	FCL	MPS ENG 3 YAW SEC DELTA PRESS A	V58P1386A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-21			CVFY	FCL	MPS ENG 3 YAW SEC DELTA PRESS B	V58P1387A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
179-22			CVFY	FCL	MPS ENG 3 YAW SEC DELTA PRESS C	V58P1388A1	-1050	1050	PSID	INHB MSEQ		GNC-41	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
179-23	-03:03 CONT'D		CVFY	FCL	MPS ENG 3 YAW SEC DELTA PRESS D	V58P1389A1	-1050	1050	PSID	INHB MSEQ		GNC-41	
180-00			VFY	FCL	ENG 1 PITCH SEC DELTA PRESS	SUM1	-440	370	PSID	INHB MSEQ		GNC-41	
			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							
181-00			VFY	FCL	ENG 1 YAW SEC DELTA PRESS	SUM2	-440	370	PSID	INHB MSEQ		GNC-41	
			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							
182-00			VFY	FCL	ENG 2 PITCH SEC DELTA PRESS	SUM3	-440	370	PSID	INHB MSEQ		GNC-41	
			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							
183-00			VFY	FCL	ENG 2 YAW SEC DELTA PRESS	SUM4	-440	370	PSID	INHB MSEQ		GNC-41	
			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							
184-00			VFY	FCL	ENG 3 PITCH SEC DELTA PRESS	SUM5	-440	370	PSID	INHB MSEQ		GNC-41	
			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							
185-00			VFY	FCL	ENG 3 YAW SEC DELTA PRESS	SUM6	-440	370	PSID	INHB MSEQ		GNC-41	
			SUM		ENG 3 YAW SEC DELTA PRESS A SUM6	V58P1386A1							
			SUM		ENG 3 YAW SEC DELTA PRESS B SUM6	V58P1387A1							

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-03:03		SUM		ENG 3 YAW SEC DELTA PRESS C SUM6	V58P1388A1							
	CONT'D		SUM		ENG 3 YAW SEC DELTA PRESS D SUM6	V58P1389A1							
					$ GLS EVENT COMPLETE = 175 $								
186-00	-02:55												
					**********								
187-00			LABL	INTG	ET LOX PREPRESS MILESTONE	MLOX							S00E00.960
					**********								
					$ NOTICE: THIS MILESTONE DOES NOT HOLD FOR DOWNSTREAM HOLD INDICATIONS $								
187-01			VFY	INTG	RSS MANUAL HOLD		ON			INHB MLOX			
187-02			VFY	INTG	NTD MANUAL HOLD		ON			INHB MLOX			
187-03			VFY	INTG	GLS MANUAL HOLD		ON			INHB MLOX			
187-04			VFY	INTG	LPS COUNTDOWN HOLD	V90X8768X1	OFF			INHB MLOX			
187-05			VFY	INTG	GLS-GO FOR ET LOX PRE-PRESSURIZI	MLOX	ON			HOLD			
					$ GLS EVENT COMPLETE = 174 $								
187-06			COM	LO2	GO FOR ET LOX PRE-PRESSURIZATION	N005INTGR	LO2						
187-07			MMSG	INTG	-01:57 GO FOR ET LH2 REPLN TERM								
187-08			MSG		ET LOX PRESS'G START								
					$ GLS EVENT COMPLETE = 173 $								
					$ TERM ENG GN2 PURGE SUPPLY $								
188-00			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD	GGNK1030E	ON						S00FM0.350
188-01			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD(R)	GGNK1130E	ON						S00FM0.350
188-02			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD OVR	GGNK1037E	OFF						S00FM0.350
188-03			CMD	SSME	MPENG GN2 PRG CNT CLD CMD OVR(R)	GGNK1137E	OFF						S00FM0.350
188-04			CMD	SSME	MPENG GN2 PRG VNT OPN CMD	GGNK1050E	ON						S00FM0.350
188-05			CMD	SSME	MPENG GN2 PRG VNT OPN CMD (R)	GGNK1140E	ON						S00FM0.350
188-06			CMD	SSME	MPENG GN2 PRG VNT OPN CMD OVR	GGNK1057E	OFF						S00FM0.350
188-07			CMD	SSME	MPENG GN2 PRG VNT OPN CMD OVR (R)	GGNK1147E	OFF						S00FM0.350
					$ GLS EVENT COMPLETE = 172 $								
189-00	-02:50												

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-02:50 CONT'D				$ GLS EVENT COMPLETE = 170 $								
190-00			CMD	GOX	START GOX VENT ARM RETRACT	P004							
					$ GLS EVENT COMPLETE = 155 $								
191-00	-02:35												
					$ LOX PRESSURIZING STATUS $								
192-00			VFY	LO2	ET LOX PRESSURIZATION IN PROGRESS	N03IS009E	ON			INHB MSEQ			
					$F/C GROUND REACTANT SUPPLY OFF$								
195-00			CMD	FCP	PRSD O2 GAS SUPPLY VLV-CLOSE	V45K1196NL	ON						S00FM0.260
195-01			CMD	FCP	PRSD H2 GAS SUPPLY VLV-CLOSE	V45K2196NL	ON						S00FM0.260
					$ GLS EVENT COMPLETE = 154 $								
196-00	-02:30												
199-00			CVFY	FCP	PRSD O2 GAS SPLY VLV-CLOSED	V45X1195E1	ON			INHB MSEQ		PRSD-05	S00FM0.260
199-01			CVFY	FCP	PRSD H2 GAS SPLY VLV-CLOSED	V45X2195E1	ON			INHB MSEQ		PRSD-05	S00FM0.260
					$ GLS EVENT COMPLETE = 148 $								
200-00	-02:28												
203-00			CMD	FCP	PRSD O2 GAS SUPPLY VLV-CLOSE	V45K1196NL	OFF						S00FM0.260
203-01			CMD	FCP	PRSD H2 GAS SUPPLY VLV-CLOSE	V45K2196NL	OFF						S00FM0.260
203-02			CMD	FCP	T-0 POD ACT VLV CLOSE ENABLE CMD	GFHK3546E	ON						
203-03			CMD	FCP	T-0 POD ACT VLV CLOSE CMD	GFHK3541E	ON						
203-04			CMD	FCP	T-0 POD ACT VLV CLOSE ENABLE	GFOK1546E	ON						
203-05			CMD	FCP	T-0 POD ACT VLV CLOSE CMD	GFOK1541E	ON						
					$ GLS EVENT COMPLETE = 140 $								
204-00	-02:20												

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-02:20 CONT'D												
205-00			CMD	FCP	T-0 SHUTOFF VLV CLOSE CMD	GFHK3550E	ON						
205-01			CMD	FCP	PRIMARY GH2 T-0 VENT VLV OPEN	GFHK3110E	ON						
205-02			CMD	FCP	GH2 VENT ISOL VLV CLOSE	GFHK3520E	OFF						
205-03			CMD	FCP	6000 PSI GH2 SUPPLY VLV CLOSE CMD	GFHK3040E	ON						
205-04			CMD	FCP	6000 PSI GO2 SUPPLY VLV CLOSE	GFOK1070E	ON						
205-05			CMD	FCP	T-0 SHUTOFF VLV CLOSE CMD	GFOK1550E	ON						
205-06			CMD	FCP	PRIMARY GO2 T-0 VENT VALVE OPEN	GFOK1110E	ON						
205-07			CMD	FCP	GO2 VENT ISOL VLV CLOSE	GFOK1520E	OFF						
205-08			CMD	FCP	T-0 POD ACT VLV CLOSE ENABLE CMD	GFHK3546E	OFF						
205-09			CMD	FCP	T-0 POD ACT VLV CLOSE CMD	GFHK3541E	OFF						
205-10			CMD	FCP	T-0 POD ACT VLV CLOSE ENABLE	GFOK1546E	OFF						
205-11			CMD	FCP	T-0 POD ACT VLV CLOSE CMD	GFOK1541E	OFF						
					$ GLS EVENT COMPLETE = 139 $								
206-00	-02:13												
					$ LOX PROPELLANT ULLAGE PRESS MONITOR $								
207-00			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.1	T41P1750C1	19.3	22.5	PSIG	CPER G009 MENG ET-06			
207-01			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.2	T41P1751C1	19.3	22.5	PSIG	CPER G010 MENG ET-06			
207-02			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.3	T41P1752C1	19.3	22.5	PSIG	CPER G011 MENG ET-06			
					$ CLOSE GH2 VENT ISO VALVE $								
208-00			CMD	FCP	PRIMARY GH2 T-0 VENT VLV OPEN	GFHK3110E	OFF						
					$ GLS EVENT COMPLETE = 117 $								
209-00	-01:57												
210-00			VFY	LH2	LH2 FLIGHT MASS	N03IS007E	ON			INHB MLH2	ET-09		
			**********										
211-00			LABL	INTG	ET LH2 PREPRESS MILESTONE	MLH2							S00E00.960
			**********										
					$ NOTICE: THIS MILESTONE DOES NOT HOLD FOR								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-01:57				DOWNSTREAM HOLD INDICATIONS $								
211-01	CONT'D		VFY	INTG	RSS MANUAL HOLD		ON			INHB MLH2			
211-02			VFY	INTG	NTD MANUAL HOLD		ON			INHB MLH2			
211-03			VFY	INTG	GLS MANUAL HOLD		ON			INHB MLH2			
211-04			VFY	INTG	LPS COUNTDOWN HOLD	V90X8768X1	OFF			INHB MLH2			
211-05			VFY	INTG	GLS-GO FOR LH2 REPLENISH TERMINA	MLH2	ON			HOLD			
211-06			MMSG	INTG	GO FOR RS AUTO SEQ START								
211-07			MSG	INTG	ET LH2 PRESS'G START								
					$ GLS EVENT COMPLETE = 116 $								
212-00			COM	LH2	GO FOR LH2 REPLENISH TERM	N004INTGR	LH2						S00FM0.380
					$ GLS EVENT COMPLETE = 115 $								
					$ PROPELLANT S/W ISSUE LH2 TOPPING VLV OP CMD OFF <V41K1411XL> $								
					$ CLOSE GO2 VENT ISO VALVE $								
212-01			CMD	FCP	PRIMARY GO2 T-0 VENT VALVE OPEN	GFOK1110E	OFF						
					$ GLS EVENT COMPLETE = 112 $								
213-00	-01:52												
214-00			VFY	LH2	LH2 REPLENISH TERM IN PROGRESS	N03IS006E	ON			INHB MSEQ			
					$ TERM ET HEATERS $								
215-00			CMD	EPDC	BIPOD HEATER AC #1 ON CMD	G56K0015E	OFF						S00FP0.030
215-01			CMD	EPDC	BIPOD HEATER AC #2 ON CMD	G56K0025E	OFF						S00FP0.030
215-02			CMD	EPDC	RIGHT BIPOD HTR PWR ON CMD	G56K0135E	OFF						S00FP0.030
215-03			CMD	EPDC	LEFT BIPOD HTR PWR ON CMD	G56K0145E	OFF						S00FP0.030
215-04			CMD	EPDC	AFT STRUT HTRS MAIN AC PWR OFF CMD	G56K0030E	ON						S00FP0.040
215-05			CMD	EPDC	LO2 EB INBD BKT HTR AC PWR ON CMD	G56K0250E	OFF						S00FP0.040
215-06			CMD	EPDC	LO2 FDLN BRKT HTR AC PWR ON CMD	G56K0270E	OFF						S00FP0.040
215-07			CMD	EPDC	LO2 EB OTBD BKT HTR AC PWR ON CMD	G56K0290E	OFF						S00FP0.040
					$ GLS EVENT COMPLETE = 75 $								
216-00	-01:15				$ GLS EVENT COMPLETE = 74 $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-01:15 CONT'D												
					$ LH2 PROPELLANT ULLAGE PRESS MONITOR $								
217-00			CVFY	LH2	ET-LH2 ULLAGE PRESS NO 1	T41P1700C1	40.9	44.1	PSIA	CPER G006	MENG	ET-05	
217-01			CVFY	LH2	ET-LH2 ULLAGE PRESS NO 2	T41P1701C1	40.9	44.1	PSIA	CPER G007	MENG	ET-05	
217-02			CVFY	LH2	ET-LH2 ULLAGE PRESS NO 3	T41P1702C1	40.9	44.1	PSIA	CPER G008	MENG	ET-05	
217-03			CVFY	MPS	MPS GH2 PRESS FCV 1 (LV56) CL PWR	V41X1661E1	ON			INHB MSEQ		MPS-45	
217-04			CVFY	MPS	MPS GH2 PRESS FCV 2 (LV57) CL PWR	V41X1662E1	ON			INHB MSEQ		MPS-45	
217-05			CVFY	MPS	MPS GH2 PRESS FCV 3 (LV58) CL PWR	V41X1663E1	ON			INHB MSEQ		MPS-45	
					$ MPS ENG LOX INLET TEMPS $								
217-06			CVFY	MPS	MPS E1 LO2 INLET TEMP	V41T1131C1	-289.2	NOHI	DEGF	2 OF 3		MPS-25	
217-07			CVFY	MPS	MPS E2 LO2 INLET TEMP	V41T1231C1	-289.2	NOHI	DEGF	2 OF 3		MPS-25	
217-08			CVFY	MPS	MPS E3 LO2 INLET TEMP	V41T1331C1	-289.2	NOHI	DEGF	INHB MSEQ		MPS-25	
					$ MPS STATUS CHECK $								
218-00			VFY	MPS	MPS LH2 INBD F/D VLV CL PWR (LV35)	V41X1405E1	ON			INHB MSEQ		MPS-04	
218-01			VFY	MPS	MPS LH2 INBD F/D VLV OP PWR (LV34)	V41X1406E1	OFF			INHB MSEQ		MPS-04	
218-02			VFY	MPS	MPS LH2 TOPPING VLV (PV13) CL IND	V41X1456X1	ON			INHB MSEQ		MPS-10	
218-03			VFY	MPS	MPS LH2 17IN DISC VLV(PD2)OP IND A	V41X1429X1	ON			1 OF 2		MPS-14	
218-04			VFY	MPS	MPS LH2 17IN DISC VLV(PD2)OP IND B	V41X1445X1	ON			INHB MSEQ		MPS-14	
218-05			VFY	MPS	MPS LH2 17IN(PD2)LATCH LCKED IND A	V41X1991X1	ON			1 OF 2		MPS-14	
218-06			VFY	MPS	MPS LH2 17IN(PD2)LATCH LCKED IND B	V41X1992X1	ON			INHB MSEQ		MPS-14	
218-07			VFY	MPS	MPS LH2 17IN DISC VLV(PD2)CL IND A	V41X1430X1	OFF			INHB MSEQ		MPS-16	
218-08			VFY	MPS	MPS LH2 17IN DISC VLV(PD2)CL IND B	V41X1434X1	OFF			INHB MSEQ		MPS-16	
218-09			VFY	MPS	MPS LH2 17IN(PD2)LTCH UNLCKD IND A	V41X1993X1	OFF			INHB MSEQ		MPS-16	
218-10			VFY	MPS	MPS LH2 17IN(PD2)LTCH UNLCKD IND B	V41X1994X1	OFF			INHB MSEQ		MPS-16	
218-11			VFY	MPS	MPS LH2 17IN DISC VLV OP PWR(LV48)	V41X1382E1	ON			2 OF 3		MPS-17	
218-12			VFY	MPS	PCA-MPS LH2 FEED D/V OP RPC B ON	V76X4186E1	ON			2 OF 3		MPS-17	
218-13			VFY	MPS	PCA-MPS LH2 FEED D/V OP RPC C ON	V76X4187E1	ON			INHB MSEQ		MPS-17	
218-14			VFY	MPS	MPS LH2 17IN DISC VLV CL PWR(LV49)	V41X1381E1	OFF			2 OF 3		MPS-17	
218-15			VFY	MPS	PCA-MPS LH2 FEED D/V CL RPC B ON	V76X4189E1	OFF			2 OF 3		MPS-17	
218-16			VFY	MPS	PCA-MPS LH2 FEED D/V CL RPC C ON	V76X4190E1	OFF			INHB MSEQ		MPS-17	
218-17			VFY	MPS	MPS LH2 17IN DISC LOCK PWR(LV67)	V41X1383E1	ON			2 OF 3		MPS-17	
218-18			VFY	MPS	MPS-LH2 FD DISC LOCK VLV RPC B ON	V76X4430E1	ON			2 OF 3		MPS-17	
218-19			VFY	MPS	MPS-LH2 FD DISC LOCK VLV RPC C ON	V76X4431E1	ON			INHB MSEQ		MPS-17	
218-20			VFY	MPS	MPS LH2 17IN DISC UNLOCK PWR(LV68)	V41X1384E1	OFF			2 OF 3		MPS-17	
218-21			VFY	MPS	MPS-LH2 FD DISC UNLOCK V RPC B ON	V76X4432E1	OFF			2 OF 3		MPS-17	
218-22			VFY	MPS	MPS-LH2 FD DISC UNLOCK V RPC C ON	V76X4433E1	OFF			INHB MSEQ		MPS-17	
218-23			VFY	MPS	MPS LH2 4IN DISC VLV CL PWR (LV51)	V41X1439E1	OFF			1 OF 2		MPS-32	
218-24			VFY	MPS	MPS LH2 4IN DISC VLV OP PWR (LV50)	V41X1440E1	ON			INHB MSEQ		MPS-32	
218-25			VFY	MPS	MPS LO2 INBD F/D VLV CL PWR (LV31)	V41X1505E1	ON			INHB MSEQ		MPS-07	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
218-26	-01:15		VFY	MPS	MPS LO2 INBD F/D VLV OP PWR (LV30)	V41X1506E1	OFF			INHB MSEQ		MPS-07	
218-27	CONT'D		VFY	MPS	MPS LO2 17IN DISC VLV(PD1)OP IND A	V41X1529X1	ON			1 OF 2		MPS-13	
218-28			VFY	MPS	MPS LO2 17IN DISC VLV(PD1)OP IND B	V41X1545X1	ON			INHB MSEQ		MPS-13	
218-29			VFY	MPS	MPS LO2 17IN(PD1)LATCH LCKED IND A	V41X1891X1	ON			1 OF 2		MPS-13	
218-30			VFY	MPS	MPS LO2 17IN(PD1)LATCH LCKED IND B	V41X1892X1	ON			INHB MSEQ		MPS-13	
218-31			VFY	MPS	MPS LO2 17IN DISC VLV(PD1)CL IND A	V41X1530X1	OFF			INHB MSEQ		MPS-15	
218-32			VFY	MPS	MPS LO2 17IN DISC VLV(PD1)CL IND B	V41X1534X1	OFF			INHB MSEQ		MPS-15	
218-33			VFY	MPS	MPS LO2 17IN(PD1)LTCH UNLCKD IND A	V41X1893X1	OFF			INHB MSEQ		MPS-15	
218-34			VFY	MPS	MPS LO2 17IN(PD1)LTCH UNLCKD IND B	V41X1894X1	OFF			INHB MSEQ		MPS-15	
218-35			VFY	MPS	MPS LO2 17IN DISC VLV OP PWR(LV46)	V41X1807E1	ON			2 OF 3		MPS-18	
218-36			VFY	MPS	PCA-MPS LOX FEED D/V OP RPC B ON	V76X4196E1	ON			2 OF 3		MPS-18	
218-37			VFY	MPS	PCA-MPS LOX FEED D/V OP RPC C ON	V76X4197E1	ON			INHB MSEQ		MPS-18	
218-38			VFY	MPS	MPS LO2 17IN DISC VLV CL PWR(LV47)	V41X1806E1	OFF			2 OF 3		MPS-18	
218-39			VFY	MPS	PCA-MPS LOX FEED D/V CL RPC B ON	V76X4199E1	OFF			2 OF 3		MPS-18	
218-40			VFY	MPS	PCA-MPS LOX FEED D/V CL RPC C ON	V76X4200E1	OFF			INHB MSEQ		MPS-18	
218-41			VFY	MPS	MPS LO2 17IN DISC LOCK PWR(LV65)	V41X1808E1	ON			2 OF 3		MPS-18	
218-42			VFY	MPS	MPS-LO2 FD DISC LOCK VLV RPC B ON	V76X4420E1	ON			2 OF 3		MPS-18	
218-43			VFY	MPS	MPS-LO2 FD DISC LOCK VLV RPC C ON	V76X4421E1	ON			INHB MSEQ		MPS-18	
218-44			VFY	MPS	MPS LO2 17IN DISC UNLOCK PWR(LV66)	V41X1809E1	OFF			2 OF 3		MPS-18	
218-45			VFY	MPS	MPS-LO2 FD DISC UNLOCK V RPC B ON	V76X4422E1	OFF			2 OF 3		MPS-18	
218-46			VFY	MPS	MPS-LO2 FD DISC UNLOCK V RPC C ON	V76X4423E1	OFF			INHB MSEQ		MPS-18	
218-47			VFY	MPS	MPS LO2 FDLN RLF SOV (PV7) CL IND	V41X1542E1	ON			INHB MSEQ		MPS-19	
218-48			VFY	MPS	MPS LH2 FDLN RLF SOV (PV8)CL IND	V41X1442E1	ON			INHB MSEQ		MPS-19	
218-49			VFY	MPS	MPS LH2 RTLS OTBD DV (PV18) CL IND	V41X1919X1	ON			INHB MSEQ		MPS-20	
218-50			VFY	MPS	MPS LH2 RTLS INBD DV (PV17) CL IND	V41X1929X1	ON			INHB MSEQ		MPS-20	
					$MPS LO2 PREVALVE POWER STATUS $								
219-00			VFY	MPS	MPS E1 LO2 PREVLV (PV1) OP IND	V41X1134X1	ON			INHB MSEQ		MPS-35	
219-01			VFY	MPS	MPS E1 LO2 PREVLV OP PWR 1 (LV12)	V41X1133E1	ON			INHB MSEQ		MPS-35	
219-02			VFY	MPS	MPS E1 LO2 PREVLV OP PWR 2 (LV83)	V41X1145E1	ON			INHB MSEQ		MPS-35	
219-03			VFY	MPS	MPS E1 LO2 PREVLV CL PWR 1 (LV13)	V41X1132E1	OFF			INHB MSEQ		MPS-35	
219-04			VFY	MPS	MPS E1 LO2 PREVLV CL PWR 2 (LV80)	V41X1144E1	OFF			INHB MSEQ		MPS-35	
219-05			VFY	MPS	MPS E2 LO2 PREVLV (PV2) OP IND	V41X1234X1	ON			INHB MSEQ		MPS-36	
219-06			VFY	MPS	MPS E2 LO2 PREVLV OP PWR 1 (LV14)	V41X1233E1	ON			INHB MSEQ		MPS-36	
219-07			VFY	MPS	MPS E2 LO2 PREVLV OP PWR 2 (LV84)	V41X1245E1	ON			INHB MSEQ		MPS-36	
219-08			VFY	MPS	MPS E2 LO2 PREVLV CL PWR 1 (LV15)	V41X1232E1	OFF			INHB MSEQ		MPS-36	
219-09			VFY	MPS	MPS E2 LO2 PREVLV CL PWR 2 (LV81)	V41X1244E1	OFF			INHB MSEQ		MPS-36	
219-10			VFY	MPS	MPS E3 LO2 PREVLV (PV3) OP IND	V41X1334X1	ON			INHB MSEQ		MPS-37	
219-11			VFY	MPS	MPS E3 LO2 PREVLV OP PWR 1 (LV16)	V41X1333E1	ON			INHB MSEQ		MPS-37	
219-12			VFY	MPS	MPS E3 LO2 PREVLV OP PWR 2 (LV85)	V41X1345E1	ON			INHB MSEQ		MPS-37	
219-13			VFY	MPS	MPS E3 LO2 PREVLV CL PWR 1 (LV17)	V41X1332E1	OFF			INHB MSEQ		MPS-37	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
219-14	-01:15 CONT'D		VFY	MPS	MPS E3 LO2 PREVLV CL PWR 2 (LV82)	V41X1344E1	OFF			INHB MSEQ		MPS-37	
					$ PROPELLANT SENSOR CHECK $								
220-00			VFY	LH2	ET-LH2 LOW LEVEL LIQ SENSOR NO 1	T41X1730X1	WET			INHB MSEQ		MPS-22	
220-01			VFY	LH2	ET-LH2 LOW LEVEL LIQ SENSOR NO 2	T41X1731X1	WET			INHB MSEQ		MPS-22	
220-02			VFY	LH2	ET-LH2 LOW LEVEL LIQ SENSOR NO 3	T41X1732X1	WET			INHB MSEQ		MPS-22	
220-03			VFY	LH2	ET-LH2 LOW LEVEL LIQ SENSOR NO 4	T41X1733X1	WET			INHB MSEQ		MPS-22	
220-04			VFY	MPS	MPS LO2 LEFT ECO SENSOR 1	V41X1555X1	WET			INHB MSEQ		MPS-21	
220-05			VFY	MPS	MPS LO2 LEFT ECO SENSOR 2	V41X1556X1	WET			INHB MSEQ		MPS-21	
220-06			VFY	MPS	MPS LO2 RIGHT ECO SENSOR 2	V41X1557X1	WET			INHB MSEQ		MPS-21	
220-07			VFY	MPS	MPS LO2 RIGHT ECO SENSOR 1	V41X1558X1	WET			INHB MSEQ		MPS-21	
220-08			VFY	MPS	MPS PT SENSOR ELEC RPC B ON	V76X3050E1	ON			1 OF 2		MPS-23	
220-09			VFY	MPS	MPS PT SENSOR ELEC RPC C ON	V76X3055E1	ON			INHB MSEQ		MPS-23	
					$ MPS HELIUM SYS STATUS $								
221-00			VFY	MPS	MPS PNEU ACCUMULATOR PRESSURE	V41P1650A1	715	785	PSIA	2 OF 3		MPS-38	
221-01			VFY	MPS	MPS PNEU HE ISO VLV 1 (LV7) OP PWR	V41X1645E1	ON			2 OF 3		MPS-38	
221-02			VFY	MPS	MPS PNEU HE ISO VLV 2 (LV8) OP PWR	V41X1646E1	ON			INHB MSEQ		MPS-38	
221-03			VFY	MPS	MPS E1 HE ISO VLV A (LV1) OP PWR	V41X1158E1	ON			INHB MSEQ		MPS-38	
221-04			VFY	MPS	MPS E1 HE ISO VLV B (LV2) OP PWR	V41X1159E1	ON			INHB MSEQ		MPS-38	
221-05			VFY	MPS	MPS E2 HE ISO VLV A (LV3) OP PWR	V41X1258E1	ON			INHB MSEQ		MPS-38	
221-06			VFY	MPS	MPS E2 HE ISO VLV B (LV4) OP PWR	V41X1259E1	ON			INHB MSEQ		MPS-38	
221-07			VFY	MPS	MPS E3 HE ISO VLV A (LV5) OP PWR	V41X1358E1	ON			INHB MSEQ		MPS-38	
221-08			VFY	MPS	MPS E3 HE ISO VLV B (LV6) OP PWR	V41X1359E1	ON			INHB MSEQ		MPS-38	
221-09			VFY	MPS	MPS REG HE XOVER VLV (LV10) OP PWR	V41X1614E1	OFF			INHB MSEQ		MPS-39	
221-10			VFY	MPS	MPS E1 HE INTCN OUT (LV60) OP PWR	V41X1170E1	OFF			INHB MSEQ		MPS-40	
221-11			VFY	MPS	MPS E2 HE INTCN OUT (LV62) OP PWR	V41X1270E1	OFF			INHB MSEQ		MPS-40	
221-12			VFY	MPS	MPS E3 HE INTCN OUT (LV64) OP PWR	V41X1370E1	OFF			INHB MSEQ		MPS-40	
221-13			VFY	MPS	MPS E1 HE INTCN IN (LV59) OP PWR	V41X1164E1	OFF			INHB MSEQ		MPS-40	
221-14			VFY	MPS	MPS E2 HE INTCN IN (LV61) OP PWR	V41X1264E1	OFF			INHB MSEQ		MPS-40	
221-15			VFY	MPS	MPS E3 HE INTCN IN (LV63) OP PWR	V41X1364E1	OFF			INHB MSEQ		MPS-40	
221-16			VFY	MPS	MPS HE SPLY BLWDWN 1 (LV26) OP PWR	V41X1632E1	OFF			INHB MSEQ		MPS-41	
221-17			VFY	MPS	MPS HE SPLY BLWDWN 2 (LV27) OP PWR	V41X1634E1	OFF			INHB MSEQ		MPS-41	
					$ MPS REPRESS SYSTEM STATUS $								
221-18			VFY	MPS	MPS LO2 MANF REPRSS 1(LV40) OP PWR	V41X1538E1	OFF			1 OF 2		MPS-42	
221-19			VFY	MPS	MPS LO2 MANF REPRSS 2(LV41) OP PWR	V41X1539E1	OFF			INHB MSEQ		MPS-42	
221-20			VFY	MPS	MPS LH2 RTLS REPRSS 1(LV74) OP PWR	V41X1901E1	OFF			INHB MSEQ		MPS-42	
221-21			VFY	MPS	MPS LH2 RTLS REPRSS 2(LV75) OP PWR	V41X1902E1	OFF			INHB MSEQ		MPS-42	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
221-22	-01:15		VFY	MPS	MPS LH2 MANF REPRSS 1(LV42) OP PWR	V41X1436E1	OFF			INHB MSEQ		MPS-42	
221-23	CONT'D		VFY	MPS	MPS LH2 MANF REPRSS 2(LV43) OP PWR	V41X1438E1	OFF			INHB MSEQ		MPS-42	
					$ FUEL SYS PURGE FUNCTIONAL CHECK $								
222-00			VFY	SSME	ME-1 MFV DOWNSTREAM TEMP #1	E41T1153A1	-110	NOHI	DEGF	INHB MSEQ		SSME-02	
222-01			VFY	SSME	ME-1 MFV DOWNSTREAM TEMP #2	E41T1154A1	-110	NOHI	DEGF	INHB MSEQ		SSME-02	
222-02			VFY	SSME	ME-2 MFV DOWNSTREAM TEMP #1	E41T2153A1	-110	NOHI	DEGF	INHB MSEQ		SSME-02	
222-03			VFY	SSME	ME-2 MFV DOWNSTREAM TEMP #2	E41T2154A1	-110	NOHI	DEGF	INHB MSEQ		SSME-02	
222-04			VFY	SSME	ME-3 MFV DOWNSTREAM TEMP #1	E41T3153A1	-110	NOHI	DEGF	INHB MSEQ		SSME-02	
222-05			VFY	SSME	ME-3 MFV DOWNSTREAM TEMP #2	E41T3154A1	-110	NOHI	DEGF	INHB MSEQ		SSME-02	
					$ ARM SOUND SUP POWER BUS $								
223-00			CMD	WATR	PTCR FR CMD BUS PWR ON CMD	GWDKPT08E	ON						
223-01			CMD	WATR	PTCR FR CMD BUS PWR ON CMD	GWDKPT10E	ON						
					$ GLS EVENT COMPLETE = 60 $								
224-00	-55.00												
					$ GLS EVENT COMPLETE = 55 $								
					$ ARM H2 BURN PICS $								
225-00			CMD	EPDC	H2 SYS A ARM	GMSK5012E	ON						
225-01			CMD	EPDC	H2-SYS B ARM	GMSK6012E	ON						
					$ BFS ACQUISTION OF TB0 $								
226-00			CVFY	DPS	AS5X ASC DAP 1ST CYCLE	V98X3514X1	ON			INHB MSEQ		BFS-07	
					$ GLS EVENT COMPLETE = 54 $								
					$ SRB FWD MDM PRELOCK STATUS $								
227-00			CMD	INTG	EX DO BITE TEST 4 VIA PROM SEQ	LL1							S00FN0.010
					$ BIT 11 IGN A F2 TEST PWR ON CMD OFF - B55K3047XL - $								
227-01			VFY	INTG	DO 0 CHAN 0	LL1	OFF			INHB MSEQ			S00FN0.010
					$ BIT 05 LH RECOVERY SYSTEM RESET CMD - B52K3015XL - $								
					$ BIT 11 IGN B F2 TEST PWR ON CMD OFF - B55K3048XL - $								
227-02			VFY	INTG	DO 4 CHAN 0	LL1	OFF			INHB MSEQ			S00FN0.010
227-03			CMD	INTG	READ LL1 BITE STATUS REGISTER	LL1							S00FN0.010
227-04			VFY	INTG	BITE STATUS REGISTER	BSR	X0000			INHB MSEQ		BEI-02	S00FN0.010
227-05			CMD	INTG	EX DO BITE TEST 4 VIA PROM SEQ	LR1							S00FN0.010
					$ BIT 11 IGN A F2 TEST PWR ON CMD OFF - B55K4047XL - $								
227-06			VFY	INTG	DO 0 CHAN 0	LR1	OFF			INHB MSEQ			S00FN0.010

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-55.00 CONT'D				$ BIT 05 RH RECOVERY SYSTEM RESET CMD - B52K4015XL - $								
					$ BIT 11 IGN B F2 TEST PWR ON CMD OFF - B55K4048XL - $								
227-07		VFY	INTG		DO 4 CHAN 0	LR1	OFF			INHB MSEQ			S00FN0.010
227-08		CMD	INTG		READ LR1 BITE STATUS REGISTER	LR1							S00FN0.010
227-09		VFY	INTG		BITE STATUS REGISTER	BSR	X0000			INHB MSEQ		BEI-02	S00FN0.010
					$ GLS EVENT COMPLETE = 50 $								
228-00	-50.00												
					$ VERIFY H2 BURN PIC VOLTS $								
229-00		CVFY	EPDC		H2-BURN SYS A ENG #1 CAP VOLTS	GMSV5311A	35.7	NOHI	V	1 OF 2		GSE-09	
229-01		CVFY	EPDC		H2-BURN SYS B ENG #1 CAP VOLTS	GMSV6311A	35.7	NOHI	V	INHB MENG		GSE-09	
229-02		CVFY	EPDC		H2-BURN SYS A ENG 2 CAP VOLTS	GMSV5309A	35.7	NOHI	V	1 OF 2		GSE-09	
229-03		CVFY	EPDC		H2-BURN SYS B ENG 2 CAP VOLTS	GMSV6309A	35.7	NOHI	V	INHB MENG		GSE-09	
229-04		CVFY	EPDC		H2-BURN SYS A ENG 3 CAP VOLTS	GMSV5310A	35.7	NOHI	V	1 OF 2		GSE-09	
229-05		CVFY	EPDC		H2-BURN SYS B ENG 3 CAP VOLTS	GMSV6310A	35.7	NOHI	V	INHB MENG		GSE-09	
					$ VERIFY ETVAS LANYARD PIC VOLTS $								
229-06		CVFY	EPDC		SYS A ETVAS LANYARD PIC CAP VOLTS	GMSV5603A	35.7	NOHI	V	1 OF 2		GSE-20	
229-07		CVFY	EPDC		SYS A ETVAS LANYARD PIC CAP VOLTS	GMSV7603A	35.7	NOHI	V	INHB MSRB		GSE-20	
229-08		CVFY	EPDC		SYS B ETVAS LANYARD PIC CAP VOLTS	GMSV6603A	35.7	NOHI	V	1 OF 2		GSE-20	
229-09		CVFY	EPDC		SYS B ETVAS LANYARD PIC CAP VOLTS	GMSV8603A	35.7	NOHI	V	INHB MSRB		GSE-20	
231-00		VFY	WATR		PTCR FR CMD BUS ON IND	GWDXPT12E	ON			1 OF 2		GSE-16	
231-01		VFY	WATR		PTCR FR CMD BUS ON CMD IND	GWDXPT09E	ON			INHB MSEQ		GSE-16	
					$ SRB AFT MDM PRELOCK STATUS $								
232-00		CMD	INTG		EX DO BITE TEST 4 VIA PROM SEQ	LL2							S00FN0.010
					$ BIT 11 SEP A F2 TEST PWR ON CMD OFF - B55K3045XL - $								
232-01		VFY	INTG		DO 0 CHAN 0	LL2	OFF			INHB MSEQ			S00FN0.010
					$ BIT 11 SEP B F2 TEST PWR ON CMD OFF - B55K3046XL - $								
232-02		VFY	INTG		DO 4 CHAN 0	LL2	OFF			INHB MSEQ			S00FN0.010
232-03		CMD	INTG		READ LL2 BITE STATUS REGISTER	LL2							S00FN0.010
232-04		VFY	INTG		BITE STATUS REGISTER	BSR	X0000			INHB MSEQ		BEI-02	S00FN0.010
232-05		CMD	INTG		EX DO BITE TEST 4 VIA PROM SEQ	LR2							S00FN0.010
					$ BIT 11 SEP A F2 TEST PWR ON CMD OFF - B55K4045XL - $								
232-06		VFY	INTG		DO 0 CHAN 0	LR2	OFF			INHB MSEQ			S00FN0.010
					$ BIT 11 SEP B F2 TEST PWR ON CMD OFF - B55K4046XL - $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
232-07	-50.00		VFY	INTG	DO 4 CHAN 0	LR2	OFF			INHB MSEQ			S00FN0.01(
232-08	CONT'D		CMD	INTG	READ LR2 BITE STATUS REGISTER	LR2							S00FN0.01(
232-09			VFY	INTG	BITE STATUS REGISTER	BSR	X0000			INHB MSEQ		BEI-02	S00FN0.01(
					$ GLS EVENT COMPLETE = 48 $								
					$ CLOSE LOX MPS OUTBOARD FILL VALVE $								
234-00			CMD	MPS	MPS LO2 OTBD F/D VLV (PV9) CL CMD	V41K1515XL	ON						S00FP0.05(
234-01			CMD	MPS	MPS LO2 OTBD F/D VLV (PV9) OP CMD	V41K1518XL	OFF						S00FP0.05(
234-02			CMD	MPS	MPS LO2 OTBD F/D VLV (PV9) OP CMD	V41K1518NL	OFF						S00FP0.05(
					$ CLOSE MPS LH2 OUTBOARD FILL VALVE $								
234-03			VFY	LH2	LH2 TSM DRAIN BACK COMPLETE	NLHK0109X	ON			INHB MSEQ SKP		MPS-05	
234-04			CMD	MPS	MPS LH2 OTBD F/D VLV (PV11) CL CMD	V41K1393XL	ON						S00FP0.05(
234-05			CMD	MPS	MPS LH2 OTBD F/D VLV (PV11) OP CMD	V41K1391XL	OFF						S00FP0.05(
234-06			CMD	MPS	MPS LH2 OTBD F/D VLV (PV11) OP CMD	V41K1391NL	OFF						S00FP0.05(
					$ TURN OFF SRB JOINT HEATERS $								
234-07			APL	BELE	LH PRI 851.5 TEMP SET POINT	B06K7015A	0		DEGF				S00FN0.825
234-08			APL	BELE	LH PRI 1171.5 TEMP SET POINT	B06K7025A	0		DEGF				S00FN0.825
234-09			APL	BELE	LH PRI 1491.5 TEMP SET POINT	B06K7035A	0		DEGF				S00FN0.825
234-10			APL	BELE	RH PRI 851.5 TEMP SET POINT	B06K8015A	0		DEGF				S00FN0.825
234-11			APL	BELE	RH PRI 1171.5 TEMP SET POINT	B06K8025A	0		DEGF				S00FN0.825
234-12			APL	BELE	RH PRI 1491.5 TEMP SET POINT	B06K8035A	0		DEGF				S00FN0.825
234-13			APL	BELE	LH SEC 851.5 TEMP SET POINT	B06K7115A	0		DEGF				S00FN0.825
234-14			APL	BELE	LH SEC 1171.5 TEMP SET POINT	B06K7125A	0		DEGF				S00FN0.825
234-15			APL	BELE	LH SEC 1491.5 TEMP SET POINT	B06K7135A	0		DEGF				S00FN0.825
234-16			APL	BELE	RH SEC 851.5 TEMP SET POINT	B06K8115A	0		DEGF				S00FN0.825
234-17			APL	BELE	RH SEC 1171.5 TEMP SET POINT	B06K8125A	0		DEGF				S00FN0.825
234-18			APL	BELE	RH SEC 1491.5 TEMP SET POINT	B06K8135A	0		DEGF				S00FN0.825
234-19			CMD	BELE	PRI AC POWER ON CMD	G06K0040E	OFF						S00FN0.825
234-20			CMD	BELE	SEC AC POWER ON CMD	G06K0140E	OFF						S00FN0.825
					$ GLS EVENT COMPLETE = 40 $								
236-00	-40.00												
					$ VFY ET/NOSE CONE PURGE TERM $								
236-01			VFY	LO2	A106437 PRI NC HT GN2 OUT PG PRESS	GLOP4195A	NOLO	1800	PSIG	INHB MSEQ		ET-02	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
236-02	-40.00 CONT'D		VFY	LO2	A106438 SEC NC HT GN2 OUT PG PRESS	GLOP4695A	NOLO	1800	PSIG	INHB MSEQ		ET-02	
					$ VFY ET/INTERTANK PURGE TERM $								
236-03			VFY	LH2	A78160 ET/IT GN2 PRI PRG O/PUT PRS	GLHP5734A	NOLO	1800	PSIG	INHB MSEQ		ET-08	
236-04			VFY	LH2	A78161 ET/IT GN2 SC PG OUT PRSS	GLHP5735A	NOLO	1800	PSIG	INHB MSEQ		ET-08	
					$ ENGINE READY CHECK $								
237-00			CVFY	SSME	ME-1 OPERATING MODE P3B12-14	E41J1513B1	B110			INHB MSEQ		SSME-07	
237-01			CVFY	SSME	ME-2 OPERATING MODE P3B12-14	E41J2513B1	B110			INHB MSEQ		SSME-07	
237-02			CVFY	SSME	ME-3 OPERATING MODE P3B12-14	E41J3513B1	B110			INHB MSEQ		SSME-07	
					$ GLS EVENT COMPLETE = 39 $								
					$ VERIFY ET HEATERS OFF $								
238-00			VFY	EPDC	RIGHT BI-POD HEATER CURRENT #1	G56C0175A	NOLO	0.05	AMP	INHB MSEQ			S00FP0.030
238-01			VFY	EPDC	RIGHT BIPOD HEATER CURRENT #2	G56C0185A	NOLO	0.05	AMP	INHB MSEQ			S00FP0.030
238-02			VFY	EPDC	LEFT BI-POD HEATER CURRENT #1	G56C0155A	NOLO	0.05	AMP	INHB MSEQ			S00FP0.030
238-03			VFY	EPDC	LEFT BIPOD HEATER CURRENT #2	G56C0165A	NOLO	0.05	AMP	INHB MSEQ			S00FP0.030
238-04			VFY	EPDC	LO2 ELBOW INBOARD BRKT HTR CURR	G56C0260A	NOLO	0.05	AMP	INHB MSEQ			S00FP0.040
238-05			VFY	EPDC	LO2 ELBOW OUTBOARD BRKT HTR CUR	G56C0300A	NOLO	0.05	AMP	INHB MSEQ			S00FP0.040
238-06			VFY	EPDC	LO2 FEEDLINE BRACKET HTR CURR	G56C0280A	NOLO	0.05	AMP	INHB MSEQ			S00FP0.040
					$ GLS EVENT COMPLETE = 38 $								
					$ PROPELLANTS PREPRESS CHECK $								
239-00			VFY	LH2	LH2 PRE PRESS CYCLE FAIL	N03IS082E	OFF			INHB MSEQ		ET-04	
					$ INHIBIT HPU TURBINE SPEED CONTROL LOGIC $								
240-00			ICL	BHYD	LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1							
240-01			ICL	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1							
240-02			ICL	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1							
240-03			ICL	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1							
					$ GLS EVENT COMPLETE = 37 $								
					$ FWD MDM LOCKOUT COMMANDS-GPC VERIFIES MDM LOCKED, $								
					$ GLS WILL ISSUE A HOLD IF ERRORS RECEIVED ON LOCK COMMAND $								
241-00			CMD	INTG	LOCK SRB MDM LL1/LR1 CRITICAL	LL1/LR1	ON						S00FQ0.060
241-01			VFY	INTG	SRB MDM LOCK ACKNOWLEDGED	ERROR3	X0000			INHB MSEQ		BEI-03	S00FQ0.060

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-40.00												
241-02	CONT'D		VFY	BPYR	LH EVENT RECOVERY SYSTEM RESET CMD	B52X1907XL	OFF			INHB MSEQ		BREC-05	
241-03			VFY	BPYR	RH EVENT RECOVERY SYSTEM RESET CMD	B52X2907XL	OFF			INHB MSEQ		BREC-05	
					$ GLS EVENT COMPLETE = 36 $								
					$ * * * VERIFICATION OF GOX ARM RETRACT * * * $								
242-00			VFY	GOX	6308A103 RETRACT SWITCH NO.1	GSAX8221E	ON			2 OF 3		GSE-13	
242-01			VFY	GOX	6308A102 RETRACT SWITCH NO.2	GSAX8222E	ON			2 OF 3		GSE-13	
242-02			VFY	GOX	A133566 ARM POSITION INDICATION	GSAH8191A	NOLO	2	DEG	OR		GSE-13	
242-03			VFY	GOX	6308A103 RETRACT SWITCH NO. 1	GSAX8226E	ON			2 OF 3		GSE-13	
242-04			VFY	GOX	6308A102 RETRACT SWITCH NO. 2	GSAX8227E	ON			2 OF 3		GSE-13	
242-05			VFY	GOX	A133566 ARM POSITION INDICATION	GSAH8196A	NOLO	2	DEG	INHB MSEQ		GSE-13	
					$ SRB HYD/FUEL SYSTEM STATUS CHECK $								
243-00			CVFY	BHYD	LH LEVEL HYDR FLUID RSVR SYS A	B58Q1350C1	50	NOHI	PCT	INHB MENG		BTVC-04	
243-01			CVFY	BHYD	LH LEVEL HYDR FLUID RSVR SYS B	B58Q1351C1	50	NOHI	PCT	INHB MENG		BTVC-04	
243-02			CVFY	BHYD	RH LEVEL HYDR FLUID RSVR SYS A	B58Q2350C1	50	NOHI	PCT	INHB MENG		BTVC-04	
243-03			CVFY	BHYD	RH LEVEL HYDR FLUID RSVR SYS B	B58Q2351C1	50	NOHI	PCT	INHB MENG		BTVC-04	
243-04			CVFY	BHYD	LH PRESS N2H4/GN2 BOTTLE OUT SYS A	B46P1305C1	300	NOHI	PSIA	INHB MENG		BTVC-02	
243-05			CVFY	BHYD	LH PRESS N2H4/GN2 BOTTLE OUT SYS B	B46P1306C1	300	NOHI	PSIA	INHB MENG		BTVC-02	
243-06			CVFY	BHYD	RH PRESS N2H4/GN2 BOTTLE OUT SYS A	B46P2305C1	300	NOHI	PSIA	INHB MENG		BTVC-02	
243-07			CVFY	BHYD	RH PRESS N2H4/GN2 BOTTLE OUT SYS B	B46P2306C1	300	NOHI	PSIA	INHB MENG		BTVC-02	
243-25	-34.00												
					$ VERIFY OTBD F/D VLVS CLOSED $								
244-00			VFY	MPS	MPS LOX OTBD F/D VLV CL PWR (LV29)	V41X1507E1	ON			INHB MSEQ		MPS-08	
244-01			VFY	MPS	MPS LOX OTBD F/D VLV OP PWR (LV28)	V41X1508E1	OFF			INHB MSEQ		MPS-08	
244-02			VFY	MPS	MPS LO2 OTBD F/D VLV (PV9) CL IND	V41X1514X1	ON			INHB MSEQ		MPS-08	
245-00			VFY	MPS	MPS LH2 OTBD F/D VLV CL PWR(LV33)	V41X1385E1	ON			INHB MSEQ		MPS-05	
245-01			VFY	MPS	MPS LH2 OTBD F/D VLV OP PWR (LV32)	V41X1386E1	OFF			INHB MSEQ		MPS-05	
245-02			VFY	MPS	MPS LH2 OTBD F/D VLV (PV11) CL IND	V41X1389X1	ON			INHB MSEQ		MPS-05	
					$ GLS EVENT COMPLETE = 31 $								
246-00	-31.00												

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-31.00 CONT'D												
			**********										
247-00			LABL	INTG	GO FOR AUTO SEQ START	MSEQ							S00E00.960
			**********										
247-01			VFY	INTG	GLS-GO FOR SSME IGNITION	MENG	ON			INHB MSEQ			
247-02			VFY	INTG	GLS-GO FOR SRB IGNITION	MSRB	ON			INHB MSEQ			
247-03			VFY	INTG	RSS MANUAL HOLD		ON			INHB MSEQ			
247-04			VFY	INTG	NTD MANUAL HOLD		ON			INHB MSEQ			
247-05			VFY	INTG	GLS MANUAL HOLD		ON			INHB MSEQ			
247-06			VFY	INTG	LPS COUNTDOWN HOLD	V90X8768X1	OFF			INHB MSEQ			
247-07			VFY	INTG	GLS-GO FOR AUTO SEQ START	MSEQ	ON			HOLD			
247-08			CMD	INTG	RS AUTO SEQUENCE START	CMD-LS	ON						S00FR0.010
247-09			MMSG	INTG	GO FOR SSME START								
247-10			MSG	INTG	HPU START								
					$ GLS EVENT COMPLETE = 30 $								
247-11			CMD	INTG	SPARE CDT TIMER ACTIVATION	GCDKTIM4E	ON						
					$ * * * * * * * HOLD NO LONGER AVAILABLE * * * * * * *$								
					$ ANY INHIBIT WHICH OCCURS AFTER T-31SEC WILL RESULT $								
					$ IN GLS ISSUING AN RSLS CMD HOLD/CUTOFF. $								
					$ INHIBIT VCH01 VCH02 VCH03 CONTROL LOGIC $								
248-00			ICL	FCP	PRSD FCP 1 O2 REAC VLV-OPEN	V45X1150E1						PRSD-03	
248-01			ICL	FCP	PRSD FCP 1 H2 REAC VLV-OPEN	V45X2150E1						PRSD-03	
248-02			ICL	FCP	PRSD FCP 2 O2 REAC VLV-OPEN	V45X1155E1						PRSD-03	
248-03			ICL	FCP	PRSD FCP 2 H2 REAC VLV-OPEN	V45X2155E1						PRSD-03	
248-04			ICL	FCP	PRSD FCP 3 O2 REAC VLV-OPEN	V45X1160E1						PRSD-03	
248-05			ICL	FCP	PRSD FCP 3 H2 REAC VLV-OPEN	V45X2160E1						PRSD-03	
					$ THE HPU PRESTART SEQUENCE MUST BE COMPLETED $								
					$ AT LEAST 1 SECOND PRIOR TO THE START SEQUENCE $								
					$ LH APU A PRESTART GROUP $								
249-00			CMD	BHYD	LH HYD PUMP A BYPASS VLV OPEN CMD	B58K3020XL	ON						S00FR0.070
249-01			CMLT	BHYD	LH APU-A GG HTR 1 ON CMD	B46K3022XL	OFF						S00FF0.170

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-31.00 CONT'D		CMLT	BHYD	LH APU-A GG HTR 2 ON CMD	B46K3023XL	OFF						
					$ LH APU B PRESTART GROUP $								
250-00			CMD	BHYD	LH HYD PUMP B BYPASS VLV OPEN CMD	B58K3021XL	ON						S00FR0.070
250-01			CMLT	BHYD	LH APU-B GG HTR 1 ON CMD	B46K3024XL	OFF						S00FF0.170
			CMLT	BHYD	LH APU-B GG HTR 2 ON CMD	B46K3025XL	OFF						
					$ RH APU A PRESTART GROUP $								
251-00			CMD	BHYD	RH HYD PUMP A BYPASS VLV OPEN CMD	B58K4020XL	ON						S00FR0.070
251-01			CMLT	BHYD	RH APU-A GG HTR 1 ON CMD	B46K4022XL	OFF						S00FF0.170
			CMLT	BHYD	RH APU-A GG HTR 2 ON CMD	B46K4023XL	OFF						
					$ RH APU B PRESTART GROUP $								
252-00			CMD	BHYD	RH HYD PUMP B BYPASS VLV OPEN CMD	B58K4021XL	ON						S00FR0.070
252-01			CMLT	BHYD	RH APU-B GG HTR 1 ON CMD	B46K4024XL	OFF						S00FF0.170
			CMLT	BHYD	RH APU-B GG HTR 2 ON CMD	B46K4025XL	OFF						
					$ GLS EVENT COMPLETE = 29 $								
253-00	-28.00												
					$///// T-28 SEC, VENT DOORS 4/7 CMD OPEN (R/S) /////$								
					$///// DRIVE SPEEDBRAKE TO LAUNCH POSITION (R/S) /////$								
					$///// GIMBAL ENGINES TO START POSITION (R/S) /////$								
					$ GLS EVENT COMPLETE = 28 $								
					$ START SRB HPU $								
254-00			CMLT	BHYD	LH HPU SYSTEM A-2 START CMD	B58K3017XL	ON						S00FR0.070
			CMLT	BHYD	LH HPU SYSTEM A-1 START CMD	B58K3016XL	ON						S00FR0.070
254-01			CMLT	BHYD	LH HPU SYSTEM B-2 START CMD	B58K3019XL	ON						S00FR0.070
			CMLT	BHYD	LH HPU SYSTEM B-1 START CMD	B58K3018XL	ON						S00FR0.070
254-02			CMLT	BHYD	RH HPU SYSTEM A-2 START CMD	B58K4017XL	ON						S00FR0.070
			CMLT	BHYD	RH HPU SYSTEM A-1 START CMD	B58K4016XL	ON						S00FR0.070
254-03			CMLT	BHYD	RH HPU SYSTEM B-2 START CMD	B58K4019XL	ON						S00FR0.070
			CMLT	BHYD	RH HPU SYSTEM B-1 START CMD	B58K4018XL	ON						S00FR0.070

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-28.00 CONT'D				$ GLS EVENT COMPLETE = 27 $								
255-00		CMD	WATR		SS PRELIFTOFF VLVS VENT CMD	GWDKPT36E	ON						
255-01		CMD	WATR		SS PRELIFTOFF VLVS VENT CMD	GWDKPT22E	ON						
					$ GLS EVENT COMPLETE = 26 $								
256-00	-26.00												
					$ ACTIVATE HPU TURBINE SPEED CONTROL LOGIC $								
					$ CONTROL LOGIC EXECUTION CAUSES HPU SHUTDOWN $								
257-00		ACL	BHYD		LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1	10.0	85.0	KRPM			BTVC-07	S00FR0.070
257-01		ACL	BHYD		LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1	10.0	85.0	KRPM			BTVC-07	S00FR0.070
257-02		ACL	BHYD		RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1	10.0	85.0	KRPM			BTVC-07	S00FR0.070
257-03		ACL	BHYD		RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1	10.0	85.0	KRPM			BTVC-07	S00FR0.070
					$ GLS EVENT COMPLETE = 23 $								
					$///// T-25.4 SEC, VENT DOOR 3 CMD OPEN (R/S) /////$								
258-00	-23.00												
					$////////// T-23 SEC VENT DOOR 6 CMD OPEN (R/S) //////////$								
					$ SRB HYD PRESS TO SYSTEM $								
259-00		CMD	BHYD		LH HYD PUMP A BYPASS VLV OPEN CMD	B58K3020XL	OFF						S00FR0.070
259-01		CMD	BHYD		LH HYD PUMP B BYPASS VLV OPEN CMD	B58K3021XL	OFF						S00FR0.070
259-02		CMD	BHYD		RH HYD PUMP A BYPASS VLV OPEN CMD	B58K4020XL	OFF						S00FR0.070
259-03		CMD	BHYD		RH HYD PUMP B BYPASS VLV OPEN CMD	B58K4021XL	OFF						S00FR0.070
					$ GLS EVENT COMPLETE = 22 $								
260-00		CVFY	INTG		LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	OFF			EXIT	CPER G001		
					$ GLS EVENT COMPLETE = 21 $								
261-00	-21.00												
					$ START GIMBAL PROFILE $								
262-00		CMD	BHYD		SRB FCS/HYD VERIF FLAG	P003	ON						S00FS0.030
262-01		CMD	BHYD		SRB GIMBAL PROFILE EVAL	P003	ON					BTVC-10	S00FS0.030

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-21.00 CONT'D				$ ACTIVATE NOZZLE LIMIT CONTROL LOGIC $								
					$ CONTROL LOGIC EXECUTION CAUSES HPU SHUTDOWN $								
263-00			ACL	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	+1.88	-1.88	IN				
263-01			ACL	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	+1.88	-1.88	IN				
263-02			ACL	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	+1.88	-1.88	IN				
263-03			ACL	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	+1.88	-1.88	IN				
264-00			CVFY	BHYD	LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1	66.2	NOHI	KRPM	EXIT		BTVC-08	
264-01			CVFY	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1	66.2	NOHI	KRPM	EXIT		BTVC-08	
264-02			CVFY	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1	66.2	NOHI	KRPM	EXIT		BTVC-08	
264-03			CVFY	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1	66.2	NOHI	KRPM	EXIT		BTVC-08	
					$ MPS LH2 HI POINT BLEED VALVE CLOSURE $								
265-00			CMD	MPS	MPS LH2 HI PT BL VLV(PV22)OP CMD A	V41K1465NL	OFF						S00FT0.06(
265-01			CMD	MPS	MPS LH2 HI PT BL VLV(PV22)OP CMD B	V41K1466NL	OFF						S00FT0.06(
					$///// T-20.3 SEC, VENT DOORS 5 CMD OPEN (R/S)				/////$				
					$///// T-18 SEC, ARM SRB IGN, HOLD-DOWN AND T-0 UMBILICAL				/////$				
					$///// RELEASE PIC'S				/////$				
					$///// T-17.7 SEC, VENT DOOR 1/2 CMD OPEN (R/S)				/////$				
					$ GLS EVENT COMPLETE = 16 $								
266-00	-16.00												
267-00			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT29E	ON						
267-01			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT31E	ON						
267-02			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT30E	ON						S00FT0.12(
267-03			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT32E	ON						S00FT0.12(
					$ SOUND SUPPRESSION WATER ON $								
269-00			CMD	WATR	SS POSTLIFTOFF PN VENT CMD	GWDKPT38E	ON						
269-01			CMD	WATR	SS POSTLIFTOFF VLVS VENT CMD	GWDKPT24E	ON						
					$ GLS EVENT COMPLETE = 15 $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
270-00	-16.00		CVFY	BHYD	LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1	66.2	77.8	KRPM	EXIT		BTVC-08	
270-01	CONT'D		CVFY	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1	66.2	77.8	KRPM	EXIT		BTVC-08	
270-02			CVFY	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1	66.2	77.8	KRPM	EXIT		BTVC-08	
270-03			CVFY	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1	66.2	77.8	KRPM	EXIT		BTVC-08	
					$ VERIF SRB MOTORS IN NULL POSITION $								
271-00			CVFY	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	+.5	-.5	IN	EXIT	MENG	BTVC-14	
271-01			CVFY	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	+.5	-.5	IN	EXIT	MENG	BTVC-14	
271-02			CVFY	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	+.5	-.5	IN	EXIT	MENG	BTVC-14	
271-03			CVFY	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	+.5	-.5	IN	EXIT	MENG	BTVC-14	
					$ SRB HYD PRESS VERIF $								
272-00			CVFY	BHYD	LH PRESS HYDR FLUID SUPPLY 1	B58P1303C1	2800	3486	PSIA	EXIT	MENG	BTVC-09	S00FR0.070
272-01			CVFY	BHYD	LH PRESS HYDR FLUID SUPPLY 2	B58P1304C1	2800	3486	PSIA	EXIT	MENG	BTVC-09	S00FR0.070
272-02			CVFY	BHYD	RH PRESS HYDR FLUID SUPPLY 1	B58P2303C1	2800	3486	PSIA	EXIT	MENG	BTVC-09	S00FR0.070
272-03			CVFY	BHYD	RH PRESS HYDR FLUID SUPPLY 2	B58P2304C1	2800	3486	PSIA	EXIT	MENG	BTVC-09	S00FR0.070
					$ INHIBIT NOZZLE LIMIT CONTROL LOGIC $								
273-00			ICL	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1							
273-01			ICL	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1							
273-02			ICL	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1							
273-03			ICL	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1							
					$///// T-15 SEC, SRB IGNITION PIC VOLTAGES MONITORED (R/S) /////$								
					$///// COMMAND IMU'S TO FREE INERTIAL. (R/S) /////$								
					$///// VENT DOORS 8/9 CMD OPEN. (R/S) /////$								
					$ GLS EVENT COMPLETE = 14 $								
					$ ORDNANCE ARMED VERIFICATION $								
274-00			CVFY	EPDC	SYS A RH SRB HDP M1 PIC CAP VOLTS	GMSV1301A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-01			CVFY	EPDC	SYS A RH HDP M1 PIC CAP VOLTS RED	GMSV3301A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-02			CVFY	EPDC	SYS A RH SRB HDP M2 PIC CAP VOLTS	GMSV1302A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-03			CVFY	EPDC	SYS A RH HDP M2 PIC CAP VOLTS RED	GMSV3302A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-04			CVFY	EPDC	SYS A RH SRB HDP M3 PIC CAP VOLTS	GMSV1303A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-05			CVFY	EPDC	SYS A RH HDP M3 PIC CAP VOLTS RED	GMSV3303A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-06			CVFY	EPDC	SYS A RH SRB HDP M4 PIC CAP VOLTS	GMSV1304A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-07			CVFY	EPDC	SYS A RH HDP M4 PIC CAP VOLTS RED	GMSV3304A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-08			CVFY	EPDC	SYS A LH SRB HDP M5 PIC CAP VOLTS	GMSV1305A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-09			CVFY	EPDC	SYS A LH HDP M5 PIC CAP VOLTS RED	GMSV3305A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-10			CVFY	EPDC	SYS A LH SRB HDP M6 PIC CAP VOLTS	GMSV1306A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
274-11	-16.00		CVFY	EPDC	SYS A LH HDP M6 PIC CAP VOLTS RED	GMSV3306A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-12	CONT'D		CVFY	EPDC	SYS A LH SRB HDP M7 PIC CAP VOLTS	GMSV1307A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-13			CVFY	EPDC	SYS A LH HDP M7 PIC CAP VOLTS RED	GMSV3307A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-14			CVFY	EPDC	SYS A LH SRB HDP M8 PIC CAP VOLTS	GMSV1308A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-15			CVFY	EPDC	SYS A LH HDP M8 PIC CAP VOLTS RED	GMSV3308A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-16			CVFY	EPDC	SYS B RH SRB HDP M1 PIC CAP VOLTS	GMSV2301A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-17			CVFY	EPDC	SYS B RH HDP M1 PIC CAP VOLTS RED	GMSV4301A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-18			CVFY	EPDC	SYS B RH SRB HDP M2 PIC CAP VOLTS	GMSV2302A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-19			CVFY	EPDC	SYS B RH HDP M2 PIC CAP VOLTS RED	GMSV4302A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-20			CVFY	EPDC	SYS B RH SRB HDP M3 PIC CAP VOLTS	GMSV2303A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-21			CVFY	EPDC	SYS B RH HDP M3 PIC CAP VOLTS RED	GMSV4303A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-22			CVFY	EPDC	SYS B RH SRB HDP M4 PIC CAP VOLTS	GMSV2304A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-23			CVFY	EPDC	SYS B RH HDP M4 PIC CAP VOLTS RED	GMSV4304A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-24			CVFY	EPDC	SYS B LH SRB HDP M5 PIC CAP VOLTS	GMSV2305A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-25			CVFY	EPDC	SYS B LH HDP M5 PIC CAP VOLTS RED	GMSV4305A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-26			CVFY	EPDC	SYS B LH SRB HDP M6 PIC CAP VOLTS	GMSV2306A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-27			CVFY	EPDC	SYS B LH HDP M6 PIC CAP VOLTS RED	GMSV4306A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-28			CVFY	EPDC	SYS B LH SRB HDP M7 PIC CAP VOLTS	GMSV2307A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-29			CVFY	EPDC	SYS B LH HDP M7 PIC CAP VOLTS RED	GMSV4307A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-30			CVFY	EPDC	SYS B LH SRB HDP M8 PIC CAP VOLTS	GMSV2308A	35.7	NOHI	V	1 OF 2		GSE-07	S00FS0.080
274-31			CVFY	EPDC	SYS B LH HDP M8 PIC CAP VOLTS RED	GMSV4308A	35.7	NOHI	V	EXIT	MSRB	GSE-07	S00FS0.080
274-32			CVFY	EPDC	SYS A ETVAS PIC CAP VOLTS	GMSV1311A	35.7	NOHI	V	1 OF 2		GSE-06	S00FS0.080
274-33			CVFY	EPDC	SYS A ETVAS PIC CAP RED VOLTS	GMSV3311A	35.7	NOHI	V	EXIT	MSRB	GSE-06	S00FS0.080
274-34			CVFY	EPDC	SYS B ETVAS PIC CAP VOLTS	GMSV2311A	35.7	NOHI	V	1 OF 2		GSE-06	S00FS0.080
274-35			CVFY	EPDC	SYS B ETVAS PIC CAP RED VOLTS	GMSV4311A	35.7	NOHI	V	EXIT	MSRB	GSE-06	S00FS0.080
274-36			CVFY	EPDC	SYS A LH2 TSM PIC CAP VOLTS	GMSV1309A	35.7	NOHI	V	1 OF 2		GSE-05	S00FS0.080
274-37			CVFY	EPDC	SYS A LH2 TSM PIC CAP RED VOLTS	GMSV3309A	35.7	NOHI	V	EXIT	MSRB	GSE-05	S00FS0.080
274-38			CVFY	EPDC	SYS A LO2 TSM PIC CAP VOLTS	GMSV1310A	35.7	NOHI	V	1 OF 2		GSE-05	S00FS0.080
274-39			CVFY	EPDC	SYS A LO2 TSM PIC CAP RED VOLTS	GMSV3310A	35.7	NOHI	V	EXIT	MSRB	GSE-05	S00FS0.080
274-40			CVFY	EPDC	SYS B LH2 TSM PIC CAP VOLTS	GMSV2309A	35.7	NOHI	V	1 OF 2		GSE-05	S00FS0.080
274-41			CVFY	EPDC	SYS B LH2 TSM PIC CAP RED VOLTS	GMSV4309A	35.7	NOHI	V	EXIT	MSRB	GSE-05	S00FS0.080
274-42			CVFY	EPDC	SYS B LO2 TSM PIC CAP VOLTS	GMSV2310A	35.7	NOHI	V	1 OF 2		GSE-05	S00FS0.080
274-43			CVFY	EPDC	SYS B LO2 TSM PIC CAP RED VOLTS	GMSV4310A	35.7	NOHI	V	EXIT	MSRB	GSE-05	S00FS0.080
274-44			CVFY	BPYR	LH VOLTAGE IGN PIC CAP A	B55V1603C1	35.7	40.5	V	EXIT	MSRB	SRM-05	
274-45			CVFY	BPYR	LH VOLTAGE IGN PIC CAP B	B55V1604C1	35.7	40.5	V	EXIT	MSRB	SRM-05	
274-46			CVFY	BPYR	RH VOLTAGE IGN PIC CAP A	B55V2603C1	35.7	40.5	V	EXIT	MSRB	SRM-05	
274-47			CVFY	BPYR	RH VOLTAGE IGN PIC CAP B	B55V2604C1	35.7	40.5	V	EXIT	MSRB	SRM-05	
					$ INHIBIT HPU TURBINE SPEED CONTROL LOGIC $								
275-00			ICL	BHYD	LH RATE APU A TURBINE SPEED SNSR 2 B46R1408C1								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
275-01	-16.00		ICL	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1							
275-02	CONT'D		ICL	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1							
275-03			ICL	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1							
					$ SECONDARY ROCK/TILT DELTA PRESS $								
276-00			VFY	BHYD	LH DELTA PRESS SECONDARY A ROCK	B58P1311A1	-990	+990	PSID	EXIT		BTVC-13	
276-01			VFY	BHYD	LH DELTA PRESS SECONDARY B ROCK	B58P1312A1	-990	+990	PSID	EXIT		BTVC-13	
276-02			VFY	BHYD	LH DELTA PRESS SECONDARY C ROCK	B58P1313A1	-990	+990	PSID	EXIT		BTVC-13	
276-03			VFY	BHYD	LH DELTA PRESS SECONDARY D ROCK	B58P1314A1	-990	+990	PSID	EXIT		BTVC-13	
276-04			VFY	BHYD	LH DELTA PRESS SECONDARY A TILT	B58P1315A1	-990	+990	PSID	EXIT		BTVC-13	
276-05			VFY	BHYD	LH DELTA PRESS SECONDARY B TILT	B58P1316A1	-990	+990	PSID	EXIT		BTVC-13	
276-06			VFY	BHYD	LH DELTA PRESS SECONDARY C TILT	B58P1317A1	-990	+990	PSID	EXIT		BTVC-13	
276-07			VFY	BHYD	LH DELTA PRESS SECONDARY D TILT	B58P1318A1	-990	+990	PSID	EXIT		BTVC-13	
276-08			VFY	BHYD	RH DELTA PRESS SECONDARY A ROCK	B58P2311A1	-990	+990	PSID	EXIT		BTVC-13	
276-09			VFY	BHYD	RH DELTA PRESS SECONDARY B ROCK	B58P2312A1	-990	+990	PSID	EXIT		BTVC-13	
276-10			VFY	BHYD	RH DELTA PRESS SECONDARY C ROCK	B58P2313A1	-990	+990	PSID	EXIT		BTVC-13	
276-11			VFY	BHYD	RH DELTA PRESS SECONDARY D ROCK	B58P2314A1	-990	+990	PSID	EXIT		BTVC-13	
276-12			VFY	BHYD	RH DELTA PRESS SECONDARY A TILT	B58P2315A1	-990	+990	PSID	EXIT		BTVC-13	
276-13			VFY	BHYD	RH DELTA PRESS SECONDARY B TILT	B58P2316A1	-990	+990	PSID	EXIT		BTVC-13	
276-14			VFY	BHYD	RH DELTA PRESS SECONDARY C TILT	B58P2317A1	-990	+990	PSID	EXIT		BTVC-13	
276-15			VFY	BHYD	RH DELTA PRESS SECONDARY D TILT	B58P2318A1	-990	+990	PSID	EXIT		BTVC-13	
					$ GLS EVENT COMPLETE = 13 $								
					$///// T-12.5 SEC, OPEN POGO RECIRCULATION VALVES. (R/S) /////$								
					$ AFT MDM LOCKOUT COMMANDS-GPC VERIFIES MDM LOCKED, $								
					$ GLS WILL ISSUE CUTOFF IF ERRORS RECEIVED ON LOCK COMMANDS $								
277-00			CMD	INTG	LOCK SRB MDM LL2/LR2 CRITICAL	LL2/LR2	ON						S00FS0.090
277-01			VFY	INTG	SRB MDM LOCK ACKNOWLEDGED	ERROR3	X0000			EXIT		BEI-05	S00FS0.090
					$ VERIFY LH2 HI-POINT BLEED VALVE $								
278-00			VFY	MPS	MPS LH2 HI PT BL VLV (PV22) CL IND	V41X1469E1	ON			EXIT		MPS-12	
					$ SPEEDBRAKE IN LAUNCH POSITION $								
278-01			VFY	FCL	SPEED BRAKE ACTR CHAN 1 POSN	V57H0250A1	NOLO	3	DEG	EXIT		GNC-26	S00FM0.280
278-02			VFY	FCL	SPEED BRAKE ACTR CHAN 2 POSN	V57H0251A1	NOLO	3	DEG	EXIT		GNC-26	S00FM0.280
278-03			VFY	FCL	SPEED BRAKE ACTR CHAN 3 POSN	V57H0252A1	NOLO	3	DEG	EXIT		GNC-26	S00FM0.280
278-04			VFY	FCL	SPEED BRAKE ACTR CHAN 4 POSN	V57H0253A1	NOLO	3	DEG	EXIT		GNC-26	S00FM0.280

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-16.00 CONT'D				$ TERMINATE HE FILL $								
278-05			CMD	MPS	MPHE FSYS S/O CLS CMD OVR	GHEK1008E	OFF						S00FT0.040
278-06			CMD	MPS	MPHE FSYS S/O VLV CLD CMD OVR (R)	GHEK1108E	OFF						S00FT0.040
278-07			CMD	MPS	MP HE FILL SYS S/O VLV CLS CMD	GHEK1000E	ON						S00FT0.040
278-08			CMD	MPS	MPHE FILL SYS S/O CLD CMD(R)	GHEK1100E	ON						S00FT0.040
278-09			CMD	MPS	MPHE FSYS CNT VLV OPN CMD OVR	GHEK1047E	ON						S00FT0.040
278-10			CMD	MPS	MPHE FSYS CNT VLV OPN CMD OVR (R)	GHEK1167E	ON						S00FT0.040
278-11			CMD	MPS	MPHE FILL SYS CNT VLV OPN CMD	GHEK1040E	OFF						S00FT0.040
278-12			CMD	MPS	MPHE FILL SYS CNT VLV OPN CMD(R)	GHEK1160E	OFF						S00FT0.040
278-13			CMD	MPS	MPHE F/OUT VNT OPN CMD	GHEK1010E	ON						S00FT0.040
278-14			CMD	MPS	MPHE F/OUT VNT OPN CMD (R)	GHEK1120E	ON						S00FT0.040
278-15			CMD	MPS	MPHE F/OUT VNT OPN CMD OVR	GHEK1017E	OFF						S00FT0.040
278-16			CMD	MPS	MPHE F/OUT VNT OPN CMD OVR (R)	GHEK1127E	OFF						S00FT0.040
					$ GLS EVENT COMPLETE = 12 $								
					$ MPS FIRE DETECTORS OFF $								
279-01			CMD	MPS	EXPOSED PRI FIRE DETS OFF CMD	GLHK7490E	ON						
279-02			CMD	MPS	EXPOSED SEC FIRE DET OFF CMD	GLHK7500E	ON						
					$ GLS EVENT COMPLETE = 10 $								
					$///// T-11 SEC, REQUEST NAV INIT AND 100% THROTTLE CMD (R/S) /////$								
280-00	-10.00												
					$ VERIF OF SS PRE L/O FLOW $								
282-00			VFY	WATR	SS PRELIFTOFF VLV-LS V27 OP IND	GWDXPT70E	ON			2 OF 3		GSE-19	
282-01			VFY	WATR	SS PRELIFTOFF VLV-LS V26 OP IND	GWDXPT72E	ON			2 OF 3		GSE-19	
282-02			VFY	WATR	SS PRELIFTOFF VLV-LS V25 OP IND	GWDXPT74E	ON			EXIT		GSE-19	
					$ VERIF OF SS POST LO VENT $								
283-00			VFY	WATR	SS POSTLFTF VENT VLV SV8 OP IND	GWDXPT55E	ON			2 OF 3		GSE-18	
283-01			VFY	WATR	SS POSTLIFTOFF VENT VLV SV9 OP IND	GWDXPT56E	ON			2 OF 3		GSE-18	
283-02			VFY	WATR	SS PSTLFTF VENT VLV SV10 OP IND	GWDXPT57E	ON			EXIT		GSE-18	
			**********		**********								
284-00			LABL	INTG	GO FOR SSME START	MENG							

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
	-10.00 CONT'D	**********											
285-00		VFY	INTG		RSS MANUAL HOLD		ON			INHB MENG			
285-01		VFY	INTG		NTD MANUAL HOLD		ON			INHB MENG			
285-02		VFY	INTG		GLS MANUAL HOLD		ON			INHB MENG			
285-03		VFY	INTG		GLS-GO FOR SRB IGNITION	MSRB	ON			EXIT			
285-04		VFY	INTG		GLS-GO FOR SSME IGNITION	MENG	ON			EXIT			
					$ GLS EVENT COMPLETE = 9 $								
					$ CMD HYDROGEN BURNOFF IGNITION START $								
286-00		CMD	EPDC		H2 SYS A FIRE 1	GMSK5013E	ON						S00FT0.110
286-01		CMD	EPDC		H2-SYS B FIRE 1	GMSK6013E	ON						S00FT0.110
286-02		CMD	EPDC		H2 SYS A FIRE 2	GMSK5014E	ON						S00FT0.110
286-03		CMD	EPDC		H2-SYS B FIRE 2	GMSK6014E	ON						S00FT0.110
					$ GLS EVENT COMPLETE = 8 $								
					$ GROUND TO VEHICLE GO FOR ENGINE START $								
287-00		CMD	INTG		LPS GO FOR ENG START	CMD-LS	ON						S00FT0.100
287-01		MSG	INTG		GLS GO FOR MAIN ENG START								
287-02		MMSG	INTG		T-0 GO FOR SRB IGNITION								
287-03		OMSG	INTG		GO FOR MAIN ENGINE START								
					$ RSS INHB OFF $								
287-20		CMD	BRS		LHSRB RSS A INHIBIT/RESET CMD	B55K3519E	ON						S00FT0.020
287-21		CMD	BRS		RHSRB RSS A INHIBIT/RESET CMD	B55K4519E	ON						S00FT0.020
287-22		CMD	BRS		LHSRB RSS B INHIBIT/RESET CMD	B55K3520E	ON						S00FT0.020
287-23		CMD	BRS		RHSRB RSS B INHIBIT/RESET CMD	B55K4520E	ON						S00FT0.020
287-24		CMD	TRS		ET RSS INHIBIT/RESET CMD	T55K3001E	ON						S00FT0.020
					$ TERM FWD CMD DECODERS $								
288-00		CMD	DPS		MDM LF1 PF BUS 1 ON	V72K7968W	OFF						S00FT0.070
288-01		CMD	DPS		MDM LF1 PF BUS 2 ON	V72K7969W	OFF						S00FT0.070
					$///// T-9.5 SEC, REQUEST START ENABLE/OPEN LH2 PREVALVES. /////$								
					$///// T-9.4 SEC, CLOSE LO2 OVERBOARD BLEED VALVES. (R/S) /////$								
					$ TURN OFF LH2 RECIRC PUMPS $								
289-00		CMD	MPS		IT111 LH2 PUMP 1 PRI BUS CMD	GLHK0173E	OFF						S00FT0.050

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
289-01	-10.00		CMD	MPS	IT112 LH2 PUMP 2 PRI BUS CMD	GLHK0174E	OFF						S00FT0.050
289-02	CONT'D		CMD	MPS	IT113 LH2 PUMP 3 PRI BUS CMD	GLHK0175E	OFF						S00FT0.050
289-03			CMD	MPS	IT211 LH2 PUMP 1 BU BUS CMD	GLHK0276E	OFF						S00FT0.050
289-04			CMD	MPS	IT212 LH2 PUMP 2 BU BUS CMD	GLHK0277E	OFF						S00FT0.050
289-05			CMD	MPS	IT213 LH2 PUMP 3 BU BUS CMD	GLHK0278E	OFF						S00FT0.050
289-06			CMD	MPS	MPS LH2 REC VLVS(PV14,15,16)OP CMD	V41K1111NL	OFF						S00FT0.050
290-00			CMD	EPDC	IT110 BUS ON CMD	GASK0154E	OFF						S00FT0.050
290-01			CMD	EPDC	IT210 BUS ON CMD	GASK0255E	OFF						S00FT0.050
					$ TERM AFT CMD DECODERS $								
291-00			CMD	DPS	MDM LA1 PF BUS 1 ON	V72K7965W	OFF						S00FT0.070
291-01			CMD	DPS	MDM LA1 PF BUS 2 ON	V72K7966W	OFF						S00FT0.070
292-00			VFY	ECLS	GCU 1 SUPL VLV OPEN IND	GFRX1217E	ON			GTO ST280			
292-01			CMD	ECLS	GCU 1 SELECT	N03IS044E	ON						
					$ GLS EVENT COMPLETE = 6 $								
					$ GCU PUMP TURN OFF AND VLV SAFING $								
293-00	ST280		CMD	ECLS	GCU 1 PUMP 1 STOP CMD	GFRK1030E	ON						S00FS0.020
293-01			CMD	ECLS	GCU 1 PUMP 2 STOP CMD	GFRK1040E	ON						S00FS0.020
293-02			CMD	ECLS	GCU 1 PUMP 3 STOP CMD	GFRK1050E	ON						S00FS0.020
294-00			CMD	ECLS	GCU 2 PUMP 1 STOP CMD	GFRK2030E	ON						S00FS0.020
294-01			CMD	ECLS	GCU 2 PUMP 2 STOP CMD	GFRK2040E	ON						S00FS0.020
294-02			CMD	ECLS	GCU 2 PUMP 3 STOP CMD	GFRK2050E	ON						S00FS0.020
295-00			CMD	ECLS	GCU 1 SUPPLY COOLANT CMD	GFRK1140E	OFF						
295-01			CMD	ECLS	GCU 2 SUPPLY COOLANT CMD	GFRK2140E	OFF						
295-02			CMD	ECLS	GCU 1 BYP COOLANT CMD	GFRK1150E	ON						
295-03			CMD	ECLS	GCU 2 BYP COOLANT CMD	GFRK2150E	ON						

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$/////              THE FOLLOWING PERFORMED BY THE RSLS -    /////$
$/////  T-7.0 SEC, MONITOR LH2 PREVALVES, ENGINE READY,      /////$
$/////              AND LPS GO FOR SSME START.  (R/S)        /////$
$/////  T-6.6 SEC, ORBITER MAIN ENGINE START.  MONITOR       /////$
$/////              SSME CHAMBER PRESS WHICH MUST BE > 90%   /////$
$/////              WITHIN 4.6 SEC.                          /////$
$/////  AFTER ME'S > 90% THRUST, COMMAND ENGINES TO LAUNCH   /////$
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SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$///// POSITION AND PERFORM ACTUATOR CHECKS. /////$								
					$ GLS EVENT COMPLETE = 2 $								
296-00	-02.00												
297-00			CMD	ECLS	GCU 1 BYP COOLANT CMD	GFRK1150E	OFF						
297-01			CMD	ECLS	GCU 2 BYP COOLANT CMD	GFRK2150E	OFF						
					$///// *** SRB IGNITION *** /////$								
					$///// T-0.0 SEC, REQUEST SRB IGNITION/TERM LDB POLLING /////$								
					$///// 6.6 SEC AFTER FIRST ENGINE START. /////$								
					$///// REQUEST T-0 UMBILICAL RELEASE, FOLLOWED /////$								
					$///// BY MEC 1 AND 2 MASTER RESET. (R/S) /////$								
298-00	ST290		VFY	INTG	SYS A HDP T-0 BUS ON IND	GMSX1107E	ON			1 OF 2			
298-01			VFY	INTG	SYS B HDP T-0 BUS ON IND	GMSX2107E	ON			GTO ST290			
298-02			MSG		$ SHUTTLE LIFTOFF $								
					$ STS-LIFTOFF SIGNAL TO FIRING ROOM CONSOLES $								
299-00			COM	LO2	STS-LIFTOFF COMM INTERRUPT	N014INTGR	LO2						
299-01			COM	LH2	STS-LIFTOFF COMM INTERRUPT	N014INTGR	LH2						
299-02			CMD	INTG	STS-LIFTOFF FLAG	N03IS125E	ON						

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$**********$								
					$ $								
					$ POST LIFTOFF SAFING $								
					$ $								
					$**********$								
					$ LATCH ORBITER ACCESS ARM $								
300-00			CMD	ARMS	OAA LCHBACK SPLY V-LATCH ENABLE	GSAK7501E	ON						
300-01			CMD	ARMS	OAA LCHBACK SPLY V-LATCH ENABLE	GSAK7506E	ON						
300-02			CMD	ARMS	OAA LCHBACK SPLY V-LATCH	GSAK7500E	ON						
300-03			CMD	ARMS	OAA LCHBACK SPLY V-LATCH	GSAK7505E	ON						
					$ DELAY 1 SECOND $								
301-00			CMD	ARMS	OAA LCHBACK SPLY V-LATCH	GSAK7500E	OFF						
301-01			CMD	ARMS	OAA LCHBACK SPLY V-LATCH	GSAK7505E	OFF						
301-02			CMD	ARMS	OAA LCHBACK SPLY V-LATCH ENABLE	GSAK7501E	OFF						
301-03			CMD	ARMS	OAA LCHBACK SPLY V-LATCH ENABLE	GSAK7506E	OFF						
					$ RESET H2 BURN $								
302-00			CMD	EPDC	H2 SYS A ARM	GMSK5012E	OFF						
302-01			CMD	EPDC	H2-SYS B ARM	GMSK6012E	OFF						
302-02			CMD	EPDC	H2 SYS A FIRE 1	GMSK5013E	OFF						
302-03			CMD	EPDC	H2-SYS B FIRE 1	GMSK6013E	OFF						
302-04			CMD	EPDC	H2 SYS A FIRE 2	GMSK5014E	OFF						
302-05			CMD	EPDC	H2-SYS B FIRE 2	GMSK6014E	OFF						
					$ GCU REFRIG UNIT SHUTDOWN $								
303-00			CMD	ECLS	GCU 1 REFRIG UNIT STOP CMD	GFRK1070E	ON						
304-00			CMD	ECLS	GCU 2 REFRIG UNIT STOP CMD	GFRK2070E	ON						
					$ SS SECURING $								
305-00			CMD	WATR	SS PRELIFTOFF VLVS VENT CMD	GWDKPT36E	OFF						
305-01			CMD	WATR	SS PRELIFTOFF VLVS VENT CMD	GWDKPT22E	OFF						
305-02			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT29E	OFF						
305-03			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT31E	OFF						
305-04			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT30E	OFF						
305-05			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT32E	OFF						

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
305-06			CMD	WATR	SS POSTLIFTOFF PN VENT CMD	GWDKPT38E	OFF						
305-07			CMD	WATR	SS POSTLIFTOFF VLVS VENT CMD	GWDKPT24E	OFF						
					$**$								
					$ $								
					$ A TOTAL 43 SEC DELAY IS REQUIRED PRIOR TO $								
					$ SS CONTROL TRANSFER (SEQ.308-00). $								
					$ 25 SECONDS OF THE TOTAL 43 IS USED IN A $								
					$ DELAY REQUIREMENT NEEDED PRIOR TO THE ECL $								
					$ PUMP STOP CMD REMOVALS (SEQ.306-00). THE $								
					$ REMAINING 18 SECONDS EXISTS-PRIOR TO $								
					$ SEQ. 308-00. $								
					$ $								
					$**$								
					$ DELAY 25 SECONDS $								
306-00			CMD	ECLS	GCU 1 PUMP 1 STOP CMD	GFRK1030E	OFF						
306-01			CMD	ECLS	GCU 1 PUMP 2 STOP CMD	GFRK1040E	OFF						
306-02			CMD	ECLS	GCU 1 PUMP 3 STOP CMD	GFRK1050E	OFF						
306-03			CMD	ECLS	GCU 1 REFRIG UNIT STOP CMD	GFRK1070E	OFF						
307-00			CMD	ECLS	GCU 2 PUMP 1 STOP CMD	GFRK2030E	OFF						
307-01			CMD	ECLS	GCU 2 PUMP 2 STOP CMD	GFRK2040E	OFF						
307-02			CMD	ECLS	GCU 2 PUMP 3 STOP CMD	GFRK2050E	OFF						
307-03			CMD	ECLS	GCU 2 REFRIG UNIT STOP CMD	GFRK2070E	OFF						
					$ DELAY 18 SECONDS $								
					$ SS TRANSFER TO TS $								
308-00			CMD	WATR	PTCR FR CMD BUS PWR ON CMD	GWDKPT08E	ON						
308-01			CMD	WATR	PTCR FR CMD BUS PWR ON CMD	GWDKPT10E	ON						
					$ DELAY 1 SECOND $								
308-02			CMD	WATR	CCC/FR CONTROL CCC-ON FR-OFF CMD	GWDKPT34E	ON						
308-03			CMD	WATR	CCC/FR CONTROL CCC-ON FR-OFF CMD	GWDKPT35E	ON						
					$ DELAY 1 SECOND $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
308-04			CMD	WATR	PTCR FR CMD BUS PWR ON CMD	GWDKPT08E	OFF						
308-05			CMD	WATR	PTCR FR CMD BUS PWR ON CMD	GWDKPT10E	OFF						
					$ DELAY 1 SECOND $								
308-06			CMD	WATR	CCC/FR CONTROL CCC-ON FR-OFF CMD	GWDKPT34E	OFF						
308-07			CMD	WATR	CCC/FR CONTROL CCC-ON FR-OFF CMD	GWDKPT35E	OFF						
					$ COMMIT CRITERIA MONITOR FLAGS RETURNED TO SYSTEMS $								
309-00			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	BHYD						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	HYD						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	APU						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	HYFUEL						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	HYOXID						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	ARMS						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	MECH						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	LO2						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	LH2						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	MPS						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	SSME						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	GOXARM						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	BRS						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	TRS						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	ECLSS						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	FCP						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	PLBD						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	CARGO						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	ECS						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	WATER						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	NAVAID						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	COMM						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	PLINTG						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	INSTR						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	EPDC						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	PVD						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	BPYR						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	BELEC						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	TINST						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	BINST						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	GNC						
			COM	INTG	SYSTEMS IN FD CONTROL	N012INTGR	DPS						

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ END ML BYPASS CAPABILITY $								
					$ * RANGE SAFETY HOLD FD RSYS TRANSFER TO SYSTEM * $								
310-00		CRSY	BRS		RSS OK TO LAUNCH IND NO.1	GRSX2100E							
310-01		CRSY	BRS		RSS OK TO LAUNCH IND NO.2	GRSX2102E							
311-00		CMD	INTG		IMU HOLD AVAILABLE TIMER ACTIV.	GCDKTIM1E	OFF						
		CMD	INTG		APU HOLD AVAILABLE TIMER ACTIV.	GCDKTIM2E	OFF						
		CMD	INTG		LOX HOLD AVAILABLE TIMER ACTIV.	GCDKTIM3E	OFF						
		CMD	INTG		SPARE CDT TIMER ACTIVATION	GCDKTIM4E	OFF						
311-01		END											

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				

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                    * * * * * * * * * * * * * * * * *
                    *                               *
                    *                               *
                    *          BREAKOUT             *
                    *        PRIMARY SAFING         *
                    *            AND                *
                    *         NORMAL SAFING         *
                    *                               *
                    * * * * * * * * * * * * * * * * *
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500-00		CMD	INTG	LAUNCH SEQUENCE HOLD		CMD-LS	ON						S00E00.940
500-01		CMD	INTG	RECYCLE		CMD-LS	ON						S00E00.940

$ 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 MEASUREMENTS NOT APPEARING IN SAFING.

NOTICE: NO SYSTEM SAFING IS TO BE DONE UNTIL THE GLS SAFING COMPLETE FLAG IS ISSUED.

$

$ VERIFY VEHICLE HOLDING $

501-00		VFY	INTG	GO FOR MAIN ENG START			ON			GTO NEXT	SEQ		
501-01	ST300	VFY	INTG	COUNTDOWN TIME (TBO TIME)		V90W8380C1	-530	NOHI	SEC	GTO NEXT	SEQ		S00E00.940
501-02		VFY	INTG	LAUNCH SEQUENCE ABORT FLAG		V90X8382X1	OFF			GTO NEXT	SEQ		
501-03		CMD	INTG	LAUNCH SEQUENCE HOLD		CMD-LS	ON						
501-04		CMD	INTG	RECYCLE		CMD-LS	ON						
				GTO ST300									
502-00		CMD	INTG	GLS BREAKOUT		N011INTGR	ON						
502-01		CMD	INTG	SYSTEMS IN FD CONTROL		N012INTGR	ON						

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ 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 9 $								
					$ POWER UP CMD DECODERS $								
503-00		CMD	DPS		MDM LA1 PF BUS 1 ON	V72K7965W	ON						S00E00.980
503-01		CMD	DPS		MDM LA1 PF BUS 2 ON	V72K7966W	ON						S00E00.980
					$ DELAY .5 SECONDS $								
503-02		CMD	DPS		MDM LF1 PF BUS 1 ON	V72K7968W	ON						S00E00.980
503-03		CMD	DPS		MDM LF1 PF BUS 2 ON	V72K7969W	ON						S00E00.980
					$ PERFORM NEXT 4 STEPS IF SRB FWD MDMS ARE LOCKED $								
					$ GLS EVENT COMPLETE LESS THAN 38 $								
					$ UNLOCK SRB FWD MDMS $								
504-00		CMD	INTG		MDM LOCK VERIF TEST DISC,LL01=0DOL	B75K3065XL	ON						S00E00.930
504-01		CMD	INTG		MDM LOCK VERIF TEST DISC,LL01=4DOL	B75K3066XL	ON						S00E00.930
504-02		CMD	INTG		MDM LOCK VERIF TEST DISC,LR01=0DOL	B75K4065XL	ON						S00E00.930
504-03		CMD	INTG		MDM LOCK VERIF TEST DISC,LR01=4DOL	B75K4066XL	ON						S00E00.930
					$ SAFE SRB IGNITION S/A'S $								
					$ GLS EVENT COMPLETE LESS THAN 300 $								
505-00		CMD	BPYR		LH IGNITION S&A DEVICE, ARM CMD	B55K3000XL	OFF						S00E00.750
505-01		CMD	BPYR		RH IGNITION S&A DEVICE, ARM CMD	B55K4000XL	OFF						S00E00.750
505-02		CMD	BPYR		LH IGNITION S&A DEVICE,SAFE CMD 1	B55K3001XL	ON						S00E00.750
505-03		CMD	BPYR		LH IGNITION S&A DEVICE,SAFE CMD 2	B55K3002XL	ON						S00E00.750
505-04		CMD	BPYR		RH IGNITION S&A DEVICE,SAFE CMD 1	B55K4001XL	ON						S00E00.750
505-05		CMD	BPYR		RH IGNITION S&A DEVICE,SAFE CMD 2	B55K4002XL	ON						S00E00.750
					$ POWER DOWN GSE PIC RACKS $								
					$ GLS EVENT COMPLETE LESS THAN 21 $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
506-00			CMD	EPDC	SYS A PIC RACK DC PWR OFF	GMSK1108E	ON						
506-01			CMD	EPDC	SYS B PIC RACK DC PWR OFF	GMSK2108E	ON						
506-02			CMD	EPDC	H2-BURN SYS A PIC RACK DC PWR OFF	GMSK5108E	ON						S00E00.B7(
506-03			CMD	EPDC	H2-BURN SYS B PIC RACK DC PWR OFF	GMSK6108E	ON						S00E00.B7(
506-04			CMD	EPDC	SYS A CPA DC PWR OFF	GMSK1103E	ON						
506-05			CMD	EPDC	SYS B CPA DC PWR OFF	GMSK2103E	ON						
506-06			CMD	EPDC	H2-BURN SYS A CPA DC PWR OFF	GMSK5103E	ON						S00E00.B7(
506-07			CMD	EPDC	H2-BURN SYS B CPA DC PWR OFF	GMSK6103E	ON						S00E00.B7(
					$ DELAY 2 SECONDS $								
506-08			CMD	EPDC	SYS A PIC RACK DC PWR OFF	GMSK1108E	OFF						
506-09			CMD	EPDC	SYS B PIC RACK DC PWR OFF	GMSK2108E	OFF						
506-10			CMD	EPDC	H2-BURN SYS A PIC RACK DC PWR OFF	GMSK5108E	OFF						S00E00.B7(
506-11			CMD	EPDC	H2-BURN SYS B PIC RACK DC PWR OFF	GMSK6108E	OFF						S00E00.B7(
506-12			CMD	EPDC	SYS A CPA DC PWR OFF	GMSK1103E	OFF						
506-13			CMD	EPDC	SYS B CPA DC PWR OFF	GMSK2103E	OFF						
506-14			CMD	EPDC	H2-BURN SYS A CPA DC PWR OFF	GMSK5103E	OFF						S00E00.B70
506-15			CMD	EPDC	H2-BURN SYS B CPA DC PWR OFF	GMSK6103E	OFF						S00E00.B70
					$ PERFORM NEXT 4 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 OPEN	GLOK2001E	OFF						S00E00.460
507-01			CMD	LO2	A75080 ET HE PREPRESS SOV PRI	GLOK2031E	ON						S00E00.460
507-02			CMD	LO2	A75086 ET HE SEC PREPRESS VLV OPEN	GLOK3001E	OFF						S00E00.460
507-03			CMD	LO2	A75080 ET HE PREPRESS SOV CL SEC	GLOK3071E	ON						S00E00.460
					$ PERFORM NEXT 4 STEPS IF LH2 PREPRESS HAS BEEN INITIATED $								
					$ GLS EVENT COMPLETE LESS THAN 117 $								
					$ TERMINATE LH2 PREPRESS $								
508-00			CMD	LH2	A75616 ET PRESS PRI CTL VLV OP CMD	GLHK4521E	OFF						S00E00.465
508-01			CMD	LH2	A75617 ET PRESS SEC CTL VLV OP CMD	GLHK4531E	OFF						S00E00.465
508-02			CMD	LH2	A75610 ET PRESS SOV CLSD CMD PRI	GLHK4541E	ON						S00E00.465
508-03			CMD	LH2	A75610 ET PRESS SOV CLOSE CMD SEC	GLHK4591E	ON						S00E00.465
					$ ********** $								
					$ ********** NORMAL SAFING ********** $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
				$	********** $								
				$	GO TO EVENT AT TIME OF BREAKOUT $								
				$	GLS EVENT COMPLETE LESS THAN 7 $								
				$	GCU COOLING RECONFIGURE $								
510-00		CMD	ECLS		GCU 1 PUMP 1 STOP CMD	GFRK1030E	OFF						S00E00.870
510-01		CMD	ECLS		GCU 1 PUMP 2 STOP CMD	GFRK1040E	OFF						S00E00.870
510-02		CMD	ECLS		GCU 1 PUMP 3 STOP CMD	GFRK1050E	OFF						S00E00.870
510-03		CMD	ECLS		GCU 2 PUMP 1 STOP CMD	GFRK2030E	OFF						S00E00.870
510-04		CMD	ECLS		GCU 2 PUMP 2 STOP CMD	GFRK2040E	OFF						S00E00.870
510-05		CMD	ECLS		GCU 2 PUMP 3 STOP CMD	GFRK2050E	OFF						S00E00.870
510-06		CMD	ECLS		GCU 1 BYP COOLANT CMD	GFRK1150E	OFF						S00E00.870
510-07		CMD	ECLS		GCU 2 BYP COOLANT CMD	GFRK2150E	OFF						S00E00.870
510-08		VFY	ECLS		GCU 1 SELECT	N03IS044E	ON			GTO ST310			S00E00.870
				$	GCU 1 START UP $								
510-09		CMD	ECLS		GCU 1 SUPPLY COOLANT CMD	GFRK1140E	ON						S00E00.870
510-10		CMD	INTG		GCU 1 SELECT								S00E00.870
510-11		CMD	INTG							SKIP SEQ			S00E00.870
				$	GCU 2 START UP $								
510-12	ST310	CMD	ECLS		GCU 2 SUPPLY COOLANT CMD	GFRK2140E	ON						S00E00.870
510-13		CMD	INTG		GCU 2 SELECT								S00E00.870
				$	GLS EVENT COMPLETE LESS THAN 9 $								
				$	INHIBIT RSS $								
511-00		CMD	BRS		LHSRB RSS A INHIBIT/RESET CMD	B55K3519E	OFF						S00E00.760
511-01		CMD	BRS		RHSRB RSS A INHIBIT/RESET CMD	B55K4519E	OFF						S00E00.760
511-02		CMD	BRS		LHSRB RSS B INHIBIT/RESET CMD	B55K3520E	OFF						S00E00.760
511-03		CMD	BRS		RHSRB RSS B INHIBIT/RESET CMD	B55K4520E	OFF						S00E00.760
511-04		CMD	TRS		ET RSS INHIBIT/RESET CMD	T55K3001E	OFF						S00E00.770
				$	TERM LH2 RECIRC AND CLOSE VLVS $								
512-00		CMD	MPS		IT111 LH2 PUMP 1 PRI BUS CMD	GLHK0173E	OFF						
512-01		CMD	MPS		IT112 LH2 PUMP 2 PRI BUS CMD	GLHK0174E	OFF						
512-02		CMD	MPS		IT113 LH2 PUMP 3 PRI BUS CMD	GLHK0175E	OFF						

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
512-03			CMD	MPS	IT211 LH2 PUMP 1 BU BUS CMD	GLHK0276E	OFF						
512-04			CMD	MPS	IT212 LH2 PUMP 2 BU BUS CMD	GLHK0277E	OFF						
512-05			CMD	MPS	IT213 LH2 PUMP 3 BU BUS CMD	GLHK0278E	OFF						
512-06			CMD	MPS	MPS LH2 HI PT BL VLV(PV22)OP CMD A	V41K1465NL	OFF						
512-07			CMD	MPS	MPS LH2 HI PT BL VLV(PV22)OP CMD B	V41K1466NL	OFF						
512-08			CMD	MPS	MPS LH2 REC VLVS(PV14,15,16)OP CMD	V41K1111NL	OFF						
512-09			CMD	EPDC	IT110 BUS ON CMD	GASK0154E	OFF						
512-10			CMD	EPDC	IT210 BUS ON CMD	GASK0255E	OFF						
					$ GLS EVENT COMPLETE LESS THAN 10 $								
					$ SAFE H2 BURN SYSTEM $								
513-00			CMD	EPDC	H2 SYS A FIRE 1	GMSK5013E	OFF						S00E00.B7C
513-01			CMD	EPDC	H2-SYS B FIRE 1	GMSK6013E	OFF						S00E00.B7C
513-02			CMD	EPDC	H2 SYS A FIRE 2	GMSK5014E	OFF						S00E00.B7C
513-03			CMD	EPDC	H2-SYS B FIRE 2	GMSK6014E	OFF						S00E00.B7C
$ -10.00 $													
					$ GLS EVENT COMPLETE LESS THAN 12 $								
					$ OPEN LO2 OVERBOARD BLEED VALVES $								
513-04			CMD	MPS	MPS LO2 OVBD B/V (PV19) CL CMD A	V41K1584XL	OFF						S00E00.47C
513-05			CMD	MPS	MPS LO2 OVBD B/V (PV19) CL CMD B	V41K1585XL	OFF						S00E00.47C
513-06			CMD	MPS	MPS LO2 OVBD B/V (PV19) CL CMD C	V41K1586XL	OFF						S00E00.47C
					$ GLS EVENT COMPLETE LESS THAN 14 $								
					$ UNLOCK SRB AFT MDM'S $								
514-00			CMD	INTG	MDM LOCK VERIF TEST DISC,LL02=0DOL	B75K3067XL	ON						S00E00.95C
514-01			CMD	INTG	MDM LOCK VERIF TEST DISC,LL02=4DOL	B75K3068XL	ON						S00E00.95C
514-02			CMD	INTG	MDM LOCK VERIF TEST DISC,LR02=0DOL	B75K4067XL	ON						S00E00.95C
514-03			CMD	INTG	MDM LOCK VERIF TEST DISC,LR02=4DOL	B75K4068XL	ON						S00E00.95C
$ -28.00 $													
					$ GLS EVENT COMPLETE LESS THAN 29 $								
					$ SRB APU TURBINE SPEED LIMIT CHANGE $								
515-00			ACL	BHYD	LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1	NOLO	85.0	KRPM				S00E00.72C
515-01			ACL	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1	NOLO	85.0	KRPM				S00E00.72C
515-02			ACL	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1	NOLO	85.0	KRPM				S00E00.72C

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
515-03			ACL	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1	NOLO	85.0	KRPM				S00E00.720
					$ SHUTDOWN SRB HPU $								
515-04			CMD	BHYD	LH HPU SYSTEM A-1 START CMD	B58K3016XL	OFF						S00E00.721
515-05			CMD	BHYD	RH HPU SYSTEM A-1 START CMD	B58K4016XL	OFF						S00E00.721
515-06			CMD	BHYD	LH HPU SYSTEM B-1 START CMD	B58K3018XL	OFF						S00E00.721
515-07			CMD	BHYD	RH HPU SYSTEM B-1 START CMD	B58K4018XL	OFF						S00E00.721
515-08			CMD	BHYD	LH HYD PUMP A BYPASS VLV OPEN CMD	B58K3020XL	OFF						S00E00.721
515-09			CMD	BHYD	RH HYD PUMP A BYPASS VLV OPEN CMD	B58K4020XL	OFF						S00E00.721
515-10			CMD	BHYD	LH HYD PUMP B BYPASS VLV OPEN CMD	B58K3021XL	OFF						S00E00.721
515-11			CMD	BHYD	RH HYD PUMP B BYPASS VLV OPEN CMD	B58K4021XL	OFF						S00E00.721
515-12			CVFY	BHYD	LH RATE APU A TURBINE SPEED SNSR 2	B46R1408C1	40.0	NOHI	KRPM	CPER G019			S00E00.721
515-13			CVFY	BHYD	LH RATE APU B TURBINE SPEED SNSR 2	B46R1409C1	40.0	NOHI	KRPM	CPER G019			S00E00.721
515-14			CVFY	BHYD	RH RATE APU A TURBINE SPEED SNSR 2	B46R2408C1	40.0	NOHI	KRPM	CPER G019			S00E00.721
515-15			CVFY	BHYD	RH RATE APU B TURBINE SPEED SNSR 2	B46R2409C1	40.0	NOHI	KRPM	CPER G019			S00E00.721
516-00			VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	OFF			GTO ST312			
					$ CLOSE LO2 POGO RECIRC VALVES $								
516-01			CMD	MPS	MPS LO2 POGO RECRC 1(PV20)CL CMD A	V41K1815XL	ON						S00E00.480
516-02			CMD	MPS	MPS LO2 POGO RECRC 1(PV20)CL CMD B	V41K1816XL	ON						S00E00.480
516-03			CMD	MPS	MPS LO2 POGO RECRC 2(PV21)CL CMD A	V41K1825XL	ON						S00E00.480
516-04			CMD	MPS	MPS LO2 POGO RECRC 2(PV21)CL CMD B	V41K1826XL	ON						S00E00.480
$ -31.00 $													
517-00	ST312		CMD	INTG	VENT DOOR SAFING ENABLED	S013	ON						
$ -49.00 $													
					$ GLS EVENT COMPLETE LESS THAN 56 $								
					$ DISARM H2 BURN SYS $								
519-00			CMD	EPDC	H2 SYS A ARM	GMSK5012E	OFF						S00E00.B70
519-01			CMD	EPDC	H2-SYS B ARM	GMSK6012E	OFF						S00E00.B70
520-00			VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	OFF			GTO ST340			

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ GLS EVENT COMPLETE LESS THAN 174 $								
					$ ACTIVATE ENGINE GN2 PURGE GSE $								
521-00			CMD	SSME	MPENG GN2 PRG VNT OPN CMD	GGNK1050E	OFF						S00E00.160
521-01			CMD	SSME	MPENG GN2 PRG VNT OPN CMD (R)	GGNK1140E	OFF						S00E00.160
521-02			CMD	SSME	MPENG GN2 PRG VNT OPN CMD OVR	GGNK1057E	ON						S00E00.160
521-03			CMD	SSME	MPENG GN2 PRG VNT OPN CMD OVR (R)	GGNK1147E	ON						S00E00.160
521-04			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD	GGNK1030E	OFF						S00E00.160
521-05			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD(R)	GGNK1130E	OFF						S00E00.160
521-06			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD OVR	GGNK1037E	ON						S00E00.160
521-07			CMD	SSME	MPENG GN2 PRG CNT CLD CMD OVR(R)	GGNK1137E	ON						S00E00.160
	$ -02:55 $												
					$ GLS EVENT COMPLETE LESS THAN 240 $								
					$ INITIATE PURGE SEQUENCE 3 $								
522-00			VFY	SSME	ME-1 PHASE IN EFFECT P3B9-11	E41J1512B1	B010			GTO ST320			S00E00.150
522-01			VFY	SSME	ME-1 OPERATING MODE P3B12-14	E41J1513B1	B011			GTO ST315			S00E00.150
					GTO ST320								
522-02	ST315		ISSU	SSME	ME-1 RESUME CMD	E41K1202BL	ON						S00E00.150
522-03			ISSU	SSME	ME-1 NO-OP CMD	E41K1201BL	ON						S00E00.150
522-04			ISSU	SSME	ME-1 RESUME CMD	E41K1202BL	ON						S00E00.150
522-05			ISSU	SSME	ME-1 PURGE SEQUENCE 3 CMD	E41K1215BL	ON						S00E00.150
522-06	ST320		VFY	SSME	ME-2 PHASE IN EFFECT P3B9-11	E41J2512B1	B010			GTO ST325			S00E00.150
522-07			VFY	SSME	ME-2 OPERATING MODE P3B12-14	E41J2513B1	B011			GTO ST321			S00E00.150
					GTO ST325								
522-08	ST321		ISSU	SSME	ME-2 RESUME CMD	E41K2202BL	ON						S00E00.150
522-09			ISSU	SSME	ME-2 NO-OP CMD	E41K2201BL	ON						S00E00.150
522-10			ISSU	SSME	ME-2 RESUME CMD	E41K2202BL	ON						S00E00.150
522-11			ISSU	SSME	ME-2 PURGE SEQUENCE 3 CMD	E41K2215BL	ON						S00E00.150
522-12	ST325		VFY	SSME	ME-3 PHASE IN EFFECT P3B9-11	E41J3512B1	B010			GTO ST330			S00E00.150
522-13			VFY	SSME	ME-3 OPERATING MODE P3B12-14	E41J3513B1	B011			GTO ST326			S00E00.150
					GTO ST330								
522-14	ST326		ISSU	SSME	ME-3 RESUME CMD	E41K3202BL	ON						S00E00.150
522-15			ISSU	SSME	ME-3 NO-OP CMD	E41K3201BL	ON						S00E00.150
522-16			ISSU	SSME	ME-3 RESUME CMD	E41K3202BL	ON						S00E00.150
522-17			ISSU	SSME	ME-3 PURGE SEQUENCE 3 CMD	E41K3215BL	ON						S00E00.150
522-18	ST330				$ CONTINUE $								
	$ -04:00 $												
					$ GLS EVENT COMPLETE LESS THAN 271 $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ MAIN FUEL VALVE HTRS ON $								
523-00			CMD	SSME	MPENG MFV1 HEATER PWR ON CMD	GGNK1020E	ON						S00E00.305
523-01			CMD	SSME	MPENG MFV1 HEATER PWR OFF CMD	GGNK1021E	OFF						S00E00.305
523-02			CMD	SSME	MPENG MFV1 HEATER PWR OFF CMD(R)	GGNK1141E	OFF						S00E00.305
523-03			CMD	SSME	MPENG MFV2 HEATER PWR ON CMD	GGNK1040E	ON						S00E00.305
523-04			CMD	SSME	MPENG MFV2 HEATER PWR OFF CMD	GGNK1041E	OFF						S00E00.305
523-05			CMD	SSME	MPENG MFV2 HEATER PWR OFF CMD(R)	GGNK1151E	OFF						S00E00.305
523-06			CMD	SSME	MPENG MFV3 HEATER PWR ON CMD	GGNK1060E	ON						S00E00.305
523-07			CMD	SSME	MPENG MFV3 HEATER PWR OFF CMD	GGNK1061E	OFF						S00E00.305
523-08			CMD	SSME	MPENG MFV3 HEATER PWR OFF CMD(R)	GGNK1161E	OFF						S00E00.305
$ -04:30 $													
					$ GLS EVENT COMPLETE LESS THAN 300 $								
					$ RSS SAFING $								
524-00	ST340		CMD	BRS	LH RSS S&A DEVICE ARM CMD	B55K3044XL	OFF						S00E00.751
524-01			CMD	BRS	RH RSS S&A DEVICE ARM CMD	B55K4044XL	OFF						S00E00.751
524-02			CMD	TRS	ET RSS S&A DVC ARM	T55K3110XL	OFF						S00E00.780
524-03			CMD	TRS	ET RSS S&A DVC SAFE 1	T55K3111XL	ON						S00E00.780
524-04			CMD	TRS	ET RSS S&A DVC SAFE 2	T55K3112XL	ON						S00E00.780
					$ GCU 1 AND 2 START $								
525-00			CMD	ECLS	GCU 1 PUMP 1 START CMD	GFRK1000E	ON						S00E00.870
525-01			CMD	ECLS	GCU 1 PUMP 2 START CMD	GFRK1010E	ON						S00E00.870
525-02			CMD	ECLS	GCU 2 PUMP 1 START CMD	GFRK2000E	ON						S00E00.870
525-03			CMD	ECLS	GCU 2 PUMP 2 START CMD	GFRK2010E	ON						S00E00.870
					$ DELAY 2 SECONDS $								
526-00			CMD	TRS	ET RSS S&A DVC SAFE 1	T55K3111XL	OFF						
526-01			CMD	TRS	ET RSS S&A DVC SAFE 2	T55K3112XL	OFF						
526-02			CMD	BPYR	LH IGNITION S&A DEVICE,SAFE CMD 1	B55K3001XL	OFF						S00E00.750
526-03			CMD	BPYR	LH IGNITION S&A DEVICE,SAFE CMD 2	B55K3002XL	OFF						S00E00.750
526-04			CMD	BPYR	RH IGNITION S&A DEVICE,SAFE CMD 1	B55K4001XL	OFF						S00E00.750
526-05			CMD	BPYR	RH IGNITION S&A DEVICE,SAFE CMD 2	B55K4002XL	OFF						S00E00.750
					$ GCU PUMP START CMDS OFF $								
527-00			CMD	ECLS	GCU 1 PUMP 1 START CMD	GFRK1000E	OFF						
527-01			CMD	ECLS	GCU 1 PUMP 2 START CMD	GFRK1010E	OFF						
527-02			CMD	ECLS	GCU 2 PUMP 1 START CMD	GFRK2000E	OFF						
527-03			CMD	ECLS	GCU 2 PUMP 2 START CMD	GFRK2010E	OFF						

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
528-00			VFY	BPYR	LH VOLTAGE IGN PIC CAP A	B55V1603C1	NOLO	1.5	VDC	DISPLAY			S00E00.800
528-01			VFY	BPYR	LH VOLTAGE IGN PIC CAP B	B55V1604C1	NOLO	1.5	VDC	DISPLAY			S00E00.800
528-02			VFY	BPYR	RH VOLTAGE IGN PIC CAP A	B55V2603C1	NOLO	1.5	VDC	DISPLAY			S00E00.800
528-03			VFY	BPYR	RH VOLTAGE IGN PIC CAP B	B55V2604C1	NOLO	1.5	VDC	DISPLAY			S00E00.800
528-04			VFY	BPYR	LH VOLTAGE FWD THR PIN PIC CAP A	B55V1605C1	NOLO	1.5	VDC	DISPLAY			
528-05			VFY	BPYR	LH VOLTAGE FWD THR PIN PIC CAP B	B55V1606C1	NOLO	1.5	VDC	DISPLAY			
528-06			VFY	BPYR	RH VOLTAGE FWD THR PIN PIC CAP A	B55V2605C1	NOLO	1.5	VDC	DISPLAY			
528-07			VFY	BPYR	RH VOLTAGE FWD THR PIN PIC CAP B	B55V2606C1	NOLO	1.5	VDC	DISPLAY			
528-08			VFY	BPYR	RH VOLTAGE AFT UPR BRC PIC CAP A	B55V2607C1	NOLO	1.5	VDC	DISPLAY			
528-09			VFY	BPYR	RH VOLTAGE AFT UPR BRC PIC CAP B	B55V2608C1	NOLO	1.5	VDC	DISPLAY			
528-10			VFY	BPYR	RH VOLTAGE AFT MID BRC PIC CAP A	B55V2609C1	NOLO	1.5	VDC	DISPLAY			
528-11			VFY	BPYR	RH VOLTAGE AFT MID BRC PIC CAP B	B55V2610C1	NOLO	1.5	VDC	DISPLAY			
528-12			VFY	BPYR	RH VOLTAGE AFT LWR BRC PIC CAP A	B55V2611C1	NOLO	1.5	VDC	DISPLAY			
528-13			VFY	BPYR	RH VOLTAGE AFT LWR BRC PIC CAP B	B55V2612C1	NOLO	1.5	VDC	DISPLAY			
528-14			VFY	BPYR	LH VOLTAGE AFT UPR BRC PIC CAP A	B55V1607C1	NOLO	1.5	VDC	DISPLAY			
528-15			VFY	BPYR	LH VOLTAGE AFT UPR BRC PIC CAP B	B55V1608C1	NOLO	1.5	VDC	DISPLAY			
528-16			VFY	BPYR	LH VOLTAGE AFT MID BRC PIC CAP A	B55V1609C1	NOLO	1.5	VDC	DISPLAY			
528-17			VFY	BPYR	LH VOLTAGE AFT MID BRC PIC CAP B	B55V1610C1	NOLO	1.5	VDC	DISPLAY			
528-18			VFY	BPYR	LH VOLTAGE AFT LWR BRC PIC CAP A	B55V1611C1	NOLO	1.5	VDC	DISPLAY			
528-19			VFY	BPYR	LH VOLTAGE AFT LWR BRC PIC CAP B	B55V1612C1	NOLO	1.5	VDC	DISPLAY			
528-20			VFY	BPYR	LH VOLTAGE FWD SEPN MOT PIC CAP A	B55V1613C1	NOLO	1.5	VDC	DISPLAY			
528-21			VFY	BPYR	LH VOLTAGE FWD SEPN MOT PIC CAP B	B55V1614C1	NOLO	1.5	VDC	DISPLAY			
528-22			VFY	BPYR	RH VOLTAGE FWD SEPN MOT PIC CAP A	B55V2613C1	NOLO	1.5	VDC	DISPLAY			
528-23			VFY	BPYR	RH VOLTAGE FWD SEPN MOT PIC CAP B	B55V2614C1	NOLO	1.5	VDC	DISPLAY			
528-24			VFY	BPYR	LH VOLTAGE AFT SEPN MOT PIC CAP A	B55V1615C1	NOLO	1.5	VDC	DISPLAY			
528-25			VFY	BPYR	LH VOLTAGE AFT SEPN MOT PIC CAP B	B55V1616C1	NOLO	1.5	VDC	DISPLAY			
528-26			VFY	BPYR	RH VOLTAGE AFT SEPN MOT PIC CAP A	B55V2615C1	NOLO	1.5	VDC	DISPLAY			
528-27			VFY	BPYR	RH VOLTAGE AFT SEPN MOT PIC CAP B	B55V2616C1	NOLO	1.5	VDC	DISPLAY			
	$ -05:00 $												
					$ GLS EVENT COMPLETE LESS THAN 446 $								
					$ IS OAA FULLY EXTENDED $								
529-00			VFY	ARMS	OAA PRI FULLY EXTEND SW-NOT EXTEND	GSAX7591E	ON			1 OF 5			
529-01			VFY	ARMS	OAA SEC FULLY EXTEND SW-NOT EXTEND	GSAX7611E	ON			1 OF 5			
529-02			VFY	ARMS	OAA PRI FULLY EXTEND SW-EXTENDED	GSAX7581E	OFF			1 OF 5			
529-03			VFY	ARMS	OAA SEC FULLY EXTEND SW-EXTENDED	GSAX7601E	OFF			1 OF 5			
529-04			VFY	ARMS	OAA POSITION INDICATION	GSAH7831A	NOLO	69	DEG	OR			
529-05			VFY	ARMS	OAA PRI FULLY EXTEND SW-NOT EXTEND	GSAX7596E	ON			1 OF 5			

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
529-06			VFY	ARMS	OAA SEC FULLY EXTEND SW-NOT EXTEND	GSAX7616E	ON			1 OF 5			
529-07			VFY	ARMS	OAA PRI FULLY EXTEND SW-EXTENDED	GSAX7586E	OFF			1 OF 5			
529-08			VFY	ARMS	OAA SEC FULLY EXTEND SW-EXTENDED	GSAX7606E	OFF			1 OF 5			
529-09			VFY	ARMS	OAA POSITION INDICATOR	GSAH7836A	NOLO	69	DEG	GTO S350			
					$ EMERGENCY EXTEND ORBITER ACCESS ARM $								
530-00			CMD	ARMS	OAA OPEN PRI RETRACT SUPPLY V	GSAK7210E	OFF						S00E00.B80
530-01			CMD	ARMS	OAA OPEN PRI RETRACT SUPPLY V	GSAK7215E	OFF						S00E00.B80
530-02			CMD	ARMS	OAA OPEN PRI RETRACT RETURN V	GSAK7230E	OFF						S00E00.B80
530-03			CMD	ARMS	OAA OPEN PRI RETRACT RETURN V	GSAK7235E	OFF						S00E00.B80
530-04			CMD	ARMS	OAA OPEN SEC RETRACT SUPPLY V	GSAK7250E	OFF						S00E00.B80
530-05			CMD	ARMS	OAA OPEN SEC RETRACT SUPPLY V	GSAK7255E	OFF						S00E00.B80
530-06			CMD	ARMS	OAA OPEN SEC RETRACT RETURN V	GSAK7270E	OFF						S00E00.B80
530-07			CMD	ARMS	OAA OPEN SEC RETRACT RETURN V	GSAK7275E	OFF						S00E00.B80
530-08			CMD	ARMS	A101409 EMERGENCY EXT INHIBIT	GSAK7320E	OFF						S00E00.B80
530-09			CMD	ARMS	A101409 EMERGENCY EXT INHIBIT	GSAK7325E	OFF						S00E00.B80
530-10			CMD	ARMS	A101410 EMERGENCY EXT INHIBIT	GSAK7330E	OFF						S00E00.B80
530-11			CMD	ARMS	A101410 EMERGENCY EXT INHIBIT	GSAK7335E	OFF						S00E00.B80
530-12			CMD	ARMS	OAA RESET PRI EXTEND PILOT V	GSAK7160E	OFF						S00E00.B80
530-13			CMD	ARMS	OAA RESET PRI EXTEND PILOT V	GSAK7165E	OFF						S00E00.B80
530-14			CMD	ARMS	OAA RESET SEC EXTEND PILOT V	GSAK7180E	OFF						S00E00.B80
530-15			CMD	ARMS	OAA RESET SEC EXTEND PILOT V	GSAK7185E	OFF						S00E00.B80
530-16			CMD	ARMS	OAA CLOSE PRI RETRACT SUPPLY V	GSAK7200E	ON						S00E00.B80
530-17			CMD	ARMS	OAA CLOSE PRI RETRACT SUPPLY V	GSAK7205E	ON						S00E00.B80
530-18			CMD	ARMS	OAA CLOSE PRI RETRACT RETURN V	GSAK7220E	ON						S00E00.B80
530-19			CMD	ARMS	OAA CLOSE PRI RETRACT RETURN V	GSAK7225E	ON						S00E00.B80
530-20			CMD	ARMS	OAA CLOSE SEC RETRACT SUPPLY V	GSAK7240E	ON						S00E00.B80
530-21			CMD	ARMS	OAA CLOSE SEC RETRACT SUPPLY V	GSAK7245E	ON						S00E00.B80
530-22			CMD	ARMS	OAA CLOSE SEC RETRACT RETURN V	GSAK7260E	ON						S00E00.B80
530-23			CMD	ARMS	OAA CLOSE SEC RETRACT RETURN V	GSAK7265E	ON						S00E00.B80
530-24			CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7510E	ON						S00E00.B80
530-25			CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7515E	ON						S00E00.B80
530-26			CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7100E	ON						S00E00.B80
530-27			CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7105E	ON						S00E00.B80

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
530-28			CMD	ARMS	OAA LOCK PRI EXTEND LOCK V	GSAK7130E	OFF						S00E00.B80
530-29			CMD	ARMS	OAA LOCK PRI EXTEND LOCK V	GSAK7135E	OFF						S00E00.B80
530-30			CMD	ARMS	OAA LOCK SEC EXTEND LOCK V	GSAK7150E	OFF						S00E00.B80
530-31			CMD	ARMS	OAA LOCK SEC EXTEND LOCK V	GSAK7155E	OFF						S00E00.B80
530-32			CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7120E	ON						S00E00.B80
530-33			CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7125E	ON						S00E00.B80
530-34			CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7140E	ON						S00E00.B80
530-35			CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7145E	ON						S00E00.B80
530-36			CMD	ARMS	OAA OPEN PRI EXTEND PILOT V	GSAK7170E	ON						S00E00.B80
530-37			CMD	ARMS	OAA OPEN PRI EXTEND PILOT V	GSAK7175E	ON						S00E00.B80
530-38			CMD	ARMS	OAA OPEN SEC EXTEND PILOT V	GSAK7190E	ON						S00E00.B80
530-39			CMD	ARMS	OAA OPEN SEC EXTEND PILOT V	GSAK7195E	ON						S00E00.B80
530-40			CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7080E	ON						S00E00.B80
530-41			CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7085E	ON						S00E00.B80
530-42			CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7510E	OFF						S00E00.B80
530-43			CMD	ARMS	OAA LCHBACK SPLY V-UNLATCH	GSAK7515E	OFF						S00E00.B80
					$ TURN ON 02 MONITOR PUMP $								
531-00	ST350		CMD	ARMS	WHITERM/CREW CABIN 02 CMD	GGOR1101E	OFF						
532-00			VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	ON			GTO ST387			
					$ VFY OR CLOSE LH2 ET/ORB 4 INCH DISCONNECT $								
533-00			VFY	MPS	MPS LH2 4IN DISC VLV (PD3) CL IND	V41X1420E1	OFF			GTO ST351			
533-01			CMD	MPS	PD3 CTL OVERRIDE	NLHK0040X	ON						
533-02			CMD	MPS	GCH60 SHUTOFF	NLHK0062X	ON						
533-03			CMD	MPS	MPS LH2 4IN DISC VLV (PD3) CL CMD	V41K1422XL	ON						
533-04			CMD	MPS	MPS LH2 4IN DISC VLV (PD3) OP CMD	V41K1421XL	OFF						
533-05	ST351		CMD	MPS	PV13 CTL OVERRIDE	NLHK0038X	ON						
533-06			CMD	MPS	GCH58 SHUTOFF	NLHK0060X	ON						
					$ NOTE: ME PHASE IN EFFECT VALUES AND CORRESPONDING STATUS FOR DISPLAY AS FOLLOWS: B010 = START PREP B011 = START B100 = MAINSTAGE								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					B101 = SHUTDOWN								
					B110 = POST-SHUTDOWN								
					ME STATUS WILL BE DISPLAYED AND SAFING WILL NOT PROCEED								
					UNTIL ALL ME'S CAN BE VERIFIED TO BE IN POST-SHUTDOWN/								
					STANDBY. MANUAL CAPABILITY WILL BE AVAILABLE TO FORCE								
					MPS/SSME SAFING OPERATIONS OR TO BYPASS THESE OPERATIONS								
					AND LEAVE SAFING TO THE RESPONSIBLE SYSTEM ENGINEERS								
					IF MPS IS SYS BYP AND SSME IS ACTIVE, PERFORM ENGINE STATUS ONLY.								
					IF MPS IS ACTIVE AND SSME IS SYS BYP, GO TO ST387. $								
					$ VERIFY SSME POST SHUTDOWN STANDBY STATUS $								
					$ MAIN ENGINE ONE SAFING $								
535-00	ST360	VFY	SSME		ME-1 PHASE IN EFFECT P3B9-11	E41J1512B1	B110			GTO ST370			S00E00.070
535-01		VFY	SSME		ME-1 OPERATING MODE P3B12-14	E41J1513B1	B001			GTO ST370			S00E00.070
535-02		VFY	SSME		ME-1 MCC PRESSURE (AVG)	E41P1023B1	NOLO	50	PSIA	GTO ST370			S00E00.070
535-03		VFY	MPS		MPS E1 LO2 PREVLV (PV1) CL IND	V41X1135E1	OFF			GTO ST361			S00E00.B90
535-04		CMD	MPS		MPS E1 LO2 PREVLV (PV1) OP CMD A	V41K1136XL	ON						S00E00.B90
535-05		CMD	MPS		MPS E1 LO2 PREVLV (PV1) OP CMD B	V41K1137XL	ON						S00E00.B90
535-06		CMD	MPS		MPS E1 LO2 PREVLV (PV1) OP CMD C	V41K1138XL	ON						S00E00.B90
535-07		CMD	MPS		MPS E1 LO2 PREVLV (PV1) OP CMD D	V41K1143XL	ON						S00E00.B90
					$ DELAY 3 SECONDS $								
535-08		CMD	MPS		MPS E1 LO2 PREVLV (PV1) CL CMD A	V41K1139XL	ON						S00E00.B90
535-09		CMD	MPS		MPS E1 LO2 PREVLV (PV1) CL CMD B	V41K1140XL	ON						S00E00.B90
535-10		CMD	MPS		MPS E1 LO2 PREVLV (PV1) CL CMD C	V41K1141XL	ON						S00E00.B90
535-11		CMD	MPS		MPS E1 LO2 PREVLV (PV1) CL CMD D	V41K1142XL	ON						S00E00.B90
535-12		CMD	MPS		MPS E1 LO2 PREVLV (PV1) OP CMD A	V41K1136XL	OFF						S00E00.B90
535-13		CMD	MPS		MPS E1 LO2 PREVLV (PV1) OP CMD B	V41K1137XL	OFF						S00E00.B90
535-14		CMD	MPS		MPS E1 LO2 PREVLV (PV1) OP CMD C	V41K1138XL	OFF						S00E00.B90
535-15		CMD	MPS		MPS E1 LO2 PREVLV (PV1) OP CMD D	V41K1143XL	OFF						S00E00.B90
535-16	ST361	VFY	MPS		MPS E1 LH2 PREVLV (PV4) CL IND	V41X1105E1	OFF			GTO ST362			S00E00.205
535-17		CMD	MPS		MPS E1 LH2 PREVLV (PV4) OP CMD A	V41K1119XL	ON						S00E00.205
535-18		CMD	MPS		MPS E1 LH2 PREVLV (PV4) OP CMD B	V41K1120XL	ON						S00E00.205
535-19		CMD	MPS		MPS E1 LH2 PREVLV (PV4) OP CMD C	V41K1121XL	ON						S00E00.205
					$ DELAY 3 SECONDS $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
535-20			CMD	MPS	MPS E1 LH2 PREVLV (PV4) CL CMD A	V41K1122XL	ON						S00E00.205
535-21			CMD	MPS	MPS E1 LH2 PREVLV (PV4) CL CMD B	V41K1123XL	ON						S00E00.205
535-22			CMD	MPS	MPS E1 LH2 PREVLV (PV4) CL CMD C	V41K1124XL	ON						S00E00.205
535-23			CMD	MPS	MPS E1 LH2 PREVLV (PV4) OP CMD A	V41K1119XL	OFF						S00E00.205
535-24			CMD	MPS	MPS E1 LH2 PREVLV (PV4) OP CMD B	V41K1120XL	OFF						S00E00.205
535-25			CMD	MPS	MPS E1 LH2 PREVLV (PV4) OP CMD C	V41K1121XL	OFF						S00E00.205
535-26	ST362		CVFY	MPS	MPS E1 LH2 INLET PRESS	V41P1100C1	NOLO	90	PSIA	CPER G002			S00E00.205
535-27			CMD	SSME	ME-1 POST-SHUTDOWN VERIFIED		ON						
					$ MAIN ENGINE TWO SAFING $								
536-00	ST370		VFY	SSME	ME-2 POST-SHUTDOWN VERIFIED		OFF			GTO ST380			
536-01			VFY	SSME	ME-2 PHASE IN EFFECT P3BP-11	E41J2512B1	B110			GTO ST380			S00E00.07C
536-02			VFY	SSME	ME-2 OPERATING MODE P3B12-14	E41J2513B1	B001			GTO ST380			S00E00.07C
536-03			VFY	SSME	ME-2 MCC PRESSURE (AVG)	E41P2023B1	NOLO	50	PSIA	GTO ST380			S00E00.07C
536-04			VFY	MPS	MPS E2 LO2 PREVLV (PV2) CL IND	V41X1235E1	OFF			GTO ST371			S00E00.B9C
536-05			CMD	MPS	MPS E2 LO2 PREVLV (PV2) OP CMD A	V41K1236XL	ON						S00E00.B9C
536-06			CMD	MPS	MPS E2 LO2 PREVLV (PV2) OP CMD B	V41K1237XL	ON						S00E00.B9C
536-07			CMD	MPS	MPS E2 LO2 PREVLV (PV2) OP CMD C	V41K1238XL	ON						S00E00.B9C
536-08			CMD	MPS	MPS E2 LO2 PREVLV (PV2) OP CMD D	V41K1243XL	ON						S00E00.B9C
					$ DELAY 3 SECONDS $								
536-09			CMD	MPS	MPS E2 LO2 PREVLV (PV2) CL CMD A	V41K1239XL	ON						S00E00.B9C
536-10			CMD	MPS	MPS E2 LO2 PREVLV (PV2) CL CMD B	V41K1240XL	ON						S00E00.B9C
536-11			CMD	MPS	MPS E2 LO2 PREVLV (PV2) CL CMD C	V41K1241XL	ON						S00E00.B9C
536-12			CMD	MPS	MPS E2 LO2 PREVLV (PV2) CL CMD D	V41K1242XL	ON						S00E00.B9C
536-13			CMD	MPS	MPS E2 LO2 PREVLV (PV2) OP CMD A	V41K1236XL	OFF						S00E00.B9C
536-14			CMD	MPS	MPS E2 LO2 PREVLV (PV2) OP CMD B	V41K1237XL	OFF						S00E00.B9C
536-15			CMD	MPS	MPS E2 LO2 PREVLV (PV2) OP CMD C	V41K1238XL	OFF						S00E00.B9C
536-16			CMD	MPS	MPS E2 LO2 PREVLV (PV2) OP CMD D	V41K1243XL	OFF						S00E00.B9C
536-17	ST371		VFY	MPS	MPS E2 LH2 PREVLV (PV5) CL IND	V41X1205E1	OFF			GTO ST372			S00E00.20!
536-18			CMD	MPS	MPS E2 LH2 PREVLV (PV5) OP CMD A	V41K1219XL	ON						S00E00.20!
536-19			CMD	MPS	MPS E2 LH2 PREVLV (PV5) OP CMD B	V41K1220XL	ON						S00E00.20!
536-20			CMD	MPS	MPS E2 LH2 PREVLV (PV5) OP CMD C	V41K1221XL	ON						S00E00.20!
					$ DELAY 3 SECONDS $								
536-21			CMD	MPS	MPS E2 LH2 PREVLV (PV5) CL CMD A	V41K1222XL	ON						S00E00.20!

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
536-22			CMD	MPS	MPS E2 LH2 PREVLV (PV5) CL CMD B	V41K1223XL	ON						S00E00.205
536-23			CMD	MPS	MPS E2 LH2 PREVLV (PV5) CL CMD C	V41K1224XL	ON						S00E00.205
536-24			CMD	MPS	MPS E2 LH2 PREVLV (PV5) OP CMD A	V41K1219XL	OFF						S00E00.205
536-25			CMD	MPS	MPS E2 LH2 PREVLV (PV5) OP CMD B	V41K1220XL	OFF						S00E00.205
536-26			CMD	MPS	MPS E2 LH2 PREVLV (PV5) OP CMD C	V41K1221XL	OFF						S00E00.205
536-27	ST372		CVFY	MPS	MPS E2 LH2 INLET PRESS	V41P1200C1	NOLO	90	PSIA	CPER G003			S00E00.205
536-28			CMD	SSME	ME-2 POST-SHUTDOWN VERIFIED		ON						
					$ MAIN ENGINE THREE SAFING $								
537-00	ST380		VFY	SSME	ME-3 POST-SHUTDOWN VERIFIED		OFF			GTO ST385			
537-01			VFY	SSME	ME-3 PHASE IN EFFECT P3B9-11	E41J3512B1	B110			GTO ST385			S00E00.070
537-02			VFY	SSME	ME-3 OPERATING MODE P3B12-14	E41J3513B1	B001			GTO ST385			S00E00.070
537-03			VFY	SSME	ME-3 MCC PRESSURE (AVG)	E41P3023B1	NOLO	50	PSIA	GTO ST385			S00E00.070
537-04			VFY	MPS	MPS E3 LO2 PREVLV (PV3) CL IND	V41X1335E1	OFF			GTO ST381			S00E00.B90
537-05			CMD	MPS	MPS E3 LO2 PREVLV (PV3) OP CMD A	V41K1336XL	ON						S00E00.B90
537-06			CMD	MPS	MPS E3 LO2 PREVLV (PV3) OP CMD B	V41K1337XL	ON						S00E00.B90
537-07			CMD	MPS	MPS E3 LO2 PREVLV (PV3) OP CMD C	V41K1338XL	ON						S00E00.B90
537-08			CMD	MPS	MPS E3 LO2 PREVLV (PV3) OP CMD D	V41K1343XL	ON						S00E00.B90
					$ DELAY 3 SECONDS $								
537-09			CMD	MPS	MPS E3 LO2 PREVLV (PV3) CL CMD A	V41K1339XL	ON						S00E00.B90
537-10			CMD	MPS	MPS E3 LO2 PREVLV (PV3) CL CMD B	V41K1340XL	ON						S00E00.B90
537-11			CMD	MPS	MPS E3 LO2 PREVLV (PV3) CL CMD C	V41K1341XL	ON						S00E00.B90
537-12			CMD	MPS	MPS E3 LO2 PREVLV (PV3) CL CMD D	V41K1342XL	ON						S00E00.B90
537-13			CMD	MPS	MPS E3 LO2 PREVLV (PV3) OP CMD A	V41K1336XL	OFF						S00E00.B90
537-14			CMD	MPS	MPS E3 LO2 PREVLV (PV3) OP CMD B	V41K1337XL	OFF						S00E00.B90
537-15			CMD	MPS	MPS E3 LO2 PREVLV (PV3) OP CMD C	V41K1338XL	OFF						S00E00.B90
537-16			CMD	MPS	MPS E3 LO2 PREVLV (PV3) OP CMD D	V41K1343XL	OFF						S00E00.B90
537-17	ST381		VFY	MPS	MPS E3 LH2 PREVLV (PV6) CL IND	V41X1305E1	OFF			GTO ST382			S00E00.205
537-18			CMD	MPS	MPS E3 LH2 PREVLV (PV6) OP CMD A	V41K1319XL	ON						S00E00.205
537-19			CMD	MPS	MPS E3 LH2 PREVLV (PV6) OP CMD B	V41K1320XL	ON						S00E00.205
537-20			CMD	MPS	MPS E3 LH2 PREVLV (PV6) OP CMD C	V41K1321XL	ON						S00E00.205
					$ DELAY 3 SECONDS $								
537-21			CMD	MPS	MPS E3 LH2 PREVLV (PV6) CL CMD A	V41K1322XL	ON						S00E00.205
537-22			CMD	MPS	MPS E3 LH2 PREVLV (PV6) CL CMD B	V41K1323XL	ON						S00E00.205

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
537-23			CMD	MPS	MPS E3 LH2 PREVLV (PV6) CL CMD C	V41K1324XL	ON						S00E00.205
537-24			CMD	MPS	MPS E3 LH2 PREVLV (PV6) OP CMD A	V41K1319XL	OFF						S00E00.205
537-25			CMD	MPS	MPS E3 LH2 PREVLV (PV6) OP CMD B	V41K1320XL	OFF						S00E00.205
537-26			CMD	MPS	MPS E3 LH2 PREVLV (PV6) OP CMD C	V41K1321XL	OFF						S00E00.205
537-27	ST382		CVFY	MPS	MPS E3 LH2 INLET PRESS	V41P1300C1	NOLO	90	PSIA	CPER G004			S00E00.205
537-28			CMD	SSME	ME-3 POST SHUTDOWN VERIFIED		ON						
538-00	ST385		VFY	INTG	ME-1 POST SHUTDOWN VERIFIED		ON			GTO ST360			
538-01			VFY	INTG	ME-2 POST SHUTDOWN VERIFIED		ON			GTO ST370			
538-02			VFY	INTG	ME-3 POST SHUTDOWN VERIFIED		ON			GTO ST380			
					$ NOTE: FAILURE OF THE ABOVE 3 VFY'S WILL CAUSE SAFING TO REPEAT THE ENGINE STATUS VERIFICATIONS UNTIL ALL ARE SATISFIED OR MPS/SSME ENGINEER CAN VERIFY ENGINE SHUTDOWN VIA ALTERNATE 60KBS DATA/OTV. NOT UNTIL THEN WILL OPERATER INPUT BE MADE TO CONTINUE INTO MPS/SSME SAFING OR TO BYPASS MPS/SSME SAFING. IF BYPASS IS SELECTED, THEN SAFING WILL BRANCH TO ST387. $								
					$ ACTIVATE ENGINE GN2 PURGE GSE $								
542-00			CMD	SSME	MPENG GN2 PRG VNT OPN CMD	GGNK1050E	OFF						S00E00.160
542-01			CMD	SSME	MPENG GN2 PRG VNT OPN CMD (R)	GGNK1140E	OFF						S00E00.160
542-02			CMD	SSME	MPENG GN2 PRG VNT OPN CMD OVR	GGNK1057E	ON						S00E00.160
542-03			CMD	SSME	MPENG GN2 PRG VNT OPN CMD OVR (R)	GGNK1147E	ON						S00E00.160
542-04			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD	GGNK1030E	OFF						S00E00.160
542-05			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD(R)	GGNK1130E	OFF						S00E00.160
542-06			CMD	SSME	MPENG GN2 PRG CNT VLV CLD CMD OVR	GGNK1037E	ON						S00E00.160
542-07			CMD	SSME	MPENG GN2 PRG CNT CLD CMD OVR(R)	GGNK1137E	ON						S00E00.160
					$ VFY OVBV OPEN ELSE CLOSE POGO VLVS $								
543-00			VFY	MPS	MPS LO2 OVBD B/V (PV19) OP IND $ OVBD BLD VLV OPEN $	V41X1587E1	ON			GTO ST386			S00E00.B90
					$ VFY LO2 PREVLVS CLOSED WITHIN 2.0 SEC. MAX ELSE CLOSE POGO VLVS $								
543-03			VFY	MPS	MPS E1 LO2 PREVLV (PV1) CL IND	V41X1135E1	ON			GTO ST386			S00E00.B90
543-04			VFY	MPS	MPS E2 LO2 PREVLV (PV2) CL IND	V41X1235E1	ON			GTO ST386			S00E00.B90
543-05			VFY	MPS	MPS E3 LO2 PREVLV (PV3) CL IND	V41X1335E1	ON			GTO ST386			S00E00.B90

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ LO2 PREVALVES CLOSED $								
					GTO ST387								
					$ LOX OVBV FAILED TO OPEN OR $								
					$ LO2 PREVALVES FAILED TO CLOSE $								
544-00	ST386		CMD	MPS	MPS LO2 POGO RECRC 1(PV20)CL CMD A	V41K1815XL	ON						S00E00.B90
544-01			CMD	MPS	MPS LO2 POGO RECRC 1(PV20)CL CMD B	V41K1816XL	ON						S00E00.B90
544-02			CMD	MPS	MPS LO2 POGO RECRC 2(PV21)CL CMD A	V41K1825XL	ON						S00E00.B90
544-03			CMD	MPS	MPS LO2 POGO RECRC 2(PV21)CL CMD B	V41K1826XL	ON						S00E00.B90
544-04			OMSG	INTG	LO2 OVBV FAILED TO OPEN								S00E00.B90
544-05			OMSG	INTG	LO2 ACCUMULATOR RECIRC VLVS CMD								S00E00.B90
					$ S013 LO2/LH2 GO FOR SAFING/VENT DOOR MANAGEMENT/APU SHUTDOWN $								
545-00	ST387		LABL	INTG		S013							
545-01			CMD	LO2	GLS SAFING COMPLETE	N013INTGR	ON						
545-02			CMD	LH2	GLS SAFING COMPLETE	N013INTGR	ON						
545-03			CMD	MPS	EXPOSED PRI FIRE DETS OFF CMD	GLHK7490E	OFF						S00E00.B60
545-04			CMD	MPS	EXPOSED SEC FIRE DET OFF CMD	GLHK7500E	OFF						S00E00.B60
546-00			VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	OFF			GTO ST388			
					$ MAIN ENGINE PRE-START STATUS CHECKS VERIFY PURGE SEQUENCE 3 $								
547-00			VFY	SSME	ME-1 OPERATING MODE P3B12-14	E41J1513B1	B011			DISPLAY	GTO ST390		
547-01			VFY	SSME	ME-2 OPERATING MODE P3B12-14	E41J2513B1	B011			DISPLAY	GTO ST390		
547-02			VFY	SSME	ME-3 OPERATING MODE P3B12-14	E41J3513B1	B011			DISPLAY	GTO ST390		
					$ GLS EVENT COMPLETE LESS THAN 300 $								
548-00	ST388		OMSG	APU	*** GLS GO FOR APU SHUTDOWN ***								
548-01	ST390		LABL	INTG									
					$ DELAY 5 SECONDS $								
					$ REMOVAL OF GCU#1 AND GCU#2 COOLANT COMMAND $								
549-00			CMD	ECLS	GCU 1 SUPPLY COOLANT CMD	GFRK1140E	OFF						
549-01			CMD	ECLS	GCU 2 SUPPLY COOLANT CMD	GFRK2140E	OFF						
550-00			VFY	MPS	FD35 PRI ALARM ON IND	GLHX7343E	OFF			DISPLAY			
550-01			VFY	MPS	FD35 SEC ALARM ON IND	GLHX9343E	OFF			DISPLAY			
550-02			VFY	MPS	ORB AFT LFT VENT FD36 PRI ALM ON	GLHX7453E	OFF			DISPLAY			
550-03			VFY	MPS	ORB AFT LFT VENT FD36 SEC ALM ON	GLHX9453E	OFF			DISPLAY			
550-04			VFY	MPS	ORB AFT RT VENT FD37 PRI ALM ON	GLHX7463E	OFF			DISPLAY			
550-05			VFY	MPS	ORB AFT RT VENT FD37 SEC ALM ON	GLHX9463E	OFF			DISPLAY			

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
550-06			VFY	MPS	SSME C/O FD38 ALARM ON	GLHX7473E	OFF			DISPLAY			
550-07			VFY	MPS	SSME C/O FD39 ALARM ON	GLHX7483E	OFF			DISPLAY			
550-08			VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	ON			GTO ST395			
550-09			CVFY	MPS	SSME C/O FD38 ALARM ON	GLHX7473E	OFF			CPER G014			
550-10			CVFY	MPS	SSME C/O FD39 ALARM ON	GLHX7483E	OFF			CPER G014			
551-00	ST395		VFY	INTG	T-31 FLG SET - START VENT DOOR OPS		ON			GTO ST420			
552-00	ST400		VFY	PVD	L AFT VENTS 8&9 OPEN 1	V59X3855X1	ON			3 OF 4			
552-01			VFY	PVD	L AFT VENTS 8&9 OPEN 2	V59X3865X1	ON			DELAY 1 SEC			
552-02			VFY	PVD	R AFT VENTS 8&9 OPEN 1	V59X4855X1	ON			GTO ST400			
552-03			VFY	PVD	R AFT VENTS 8&9 OPEN 2	V59X4865X1	ON			MAX OF 16 RETRIES CONTINUE			
					$ CLEANUP OF RSLS MINUS TIME VENT DOOR CMDS $								
553-00			CMD	PVD	L PB/W VENTS 4&7 OPEN CMD 1A	V59K3350XL	OFF						S00E00.050
553-01			CMD	PVD	L PB/W VENTS 4&7 OPEN CMD 1B	V59K3351XL	OFF						S00E00.050
553-02			CMD	PVD	L PB/W VENTS 4&7 OPEN CMD 2A	V59K3360XL	OFF						S00E00.050
553-03			CMD	PVD	L PB/W VENTS 4&7 OPEN CMD 2B	V59K3361XL	OFF						S00E00.050
553-04			CMD	PVD	R PB/W VENTS 4&7 OPEN CMD 1A	V59K4350XL	OFF						S00E00.050
553-05			CMD	PVD	R PB/W VENTS 4&7 OPEN CMD 1B	V59K4351XL	OFF						S00E00.050
553-06			CMD	PVD	R PB/W VENTS 4&7 OPEN CMD 2A	V59K4360XL	OFF						S00E00.050
553-07			CMD	PVD	R PB/W VENTS 4&7 OPEN CMD 2B	V59K4361XL	OFF						S00E00.050
554-00			CMD	PVD	L PB VENT 3 OPEN CMD 1A	V59K3250XL	OFF						S00E00.050
554-01			CMD	PVD	L PB VENT 3 OPEN CMD 1B	V59K3251XL	OFF						S00E00.050
554-02			CMD	PVD	L PB VENT 3 OPEN CMD 2A	V59K3260XL	OFF						S00E00.050
554-03			CMD	PVD	L PB VENT 3 OPEN CMD 2B	V59K3261XL	OFF						S00E00.050
554-04			CMD	PVD	R PB VENT 3 OPEN CMD 1A	V59K4250XL	OFF						S00E00.050
554-05			CMD	PVD	R PB VENT 3 OPEN CMD 1B	V59K4251XL	OFF						S00E00.050
554-06			CMD	PVD	R PB VENT 3 OPEN CMD 2A	V59K4260XL	OFF						S00E00.050
554-07			CMD	PVD	R PB VENT 3 OPEN CMD 2B	V59K4261XL	OFF						S00E00.050
555-00			CMD	PVD	L PB VENT 6 OPEN CMD 1A	V59K3550XL	OFF						S00E00.050
555-01			CMD	PVD	L PB VENT 6 OPEN CMD 1B	V59K3551XL	OFF						S00E00.050
555-02			CMD	PVD	L PB VENT 6 OPEN CMD 2A	V59K3560XL	OFF						S00E00.050
555-03			CMD	PVD	L PB VENT 6 OPEN CMD 2B	V59K3561XL	OFF						S00E00.050
555-04			CMD	PVD	R PB VENT 6 OPEN CMD 1A	V59K4550XL	OFF						S00E00.050
555-05			CMD	PVD	R PB VENT 6 OPEN CMD 1B	V59K4551XL	OFF						S00E00.050
555-06			CMD	PVD	R PB VENT 6 OPEN CMD 2A	V59K4560XL	OFF						S00E00.050

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
555-07			CMD	PVD	R PB VENT 6 OPEN CMD 2B	V59K4561XL	OFF						S00E00.050
556-00			CMD	PVD	L PB VENT 5 OPEN CMD 1A	V59K3450XL	OFF						S00E00.050
556-01			CMD	PVD	L PB VENT 5 OPEN CMD 1B	V59K3451XL	OFF						S00E00.050
556-02			CMD	PVD	L PB VENT 5 OPEN CMD 2A	V59K3460XL	OFF						S00E00.050
556-03			CMD	PVD	L PB VENT 5 OPEN CMD 2B	V59K3461XL	OFF						S00E00.050
556-04			CMD	PVD	R PB VENT 5 OPEN CMD 1A	V59K4450XL	OFF						S00E00.050
556-05			CMD	PVD	R PB VENT 5 OPEN CMD 1B	V59K4451XL	OFF						S00E00.050
556-06			CMD	PVD	R PB VENT 5 OPEN CMD 2A	V59K4460XL	OFF						S00E00.050
556-07			CMD	PVD	R PB VENT 5 OPEN CMD 2B	V59K4461XL	OFF						S00E00.050
557-00			CMD	PVD	L FWD VENTS 1&2 OPEN CMD 1A	V59K3050XL	OFF						S00E00.050
557-01			CMD	PVD	L FWD VENTS 1&2 OPEN CMD 1B	V59K3051XL	OFF						S00E00.050
557-02			CMD	PVD	L FWD VENTS 1&2 OPEN CMD 2A	V59K3060XL	OFF						S00E00.050
557-03			CMD	PVD	L FWD VENTS 1&2 OPEN CMD 2B	V59K3061XL	OFF						S00E00.050
557-04			CMD	PVD	R FWD VENTS 1&2 OPEN CMD 1A	V59K4050XL	OFF						S00E00.050
557-05			CMD	PVD	R FWD VENTS 1&2 OPEN CMD 1B	V59K4051XL	OFF						S00E00.050
557-06			CMD	PVD	R FWD VENTS 1&2 OPEN CMD 2A	V59K4060XL	OFF						S00E00.050
557-07			CMD	PVD	R FWD VENTS 1&2 OPEN CMD 2B	V59K4061XL	OFF						S00E00.050
558-00			CMD	PVD	L AFT VENTS 8&9 OPEN CMD 1A	V59K3850XL	OFF						S00E00.050
558-01			CMD	PVD	L AFT VENTS 8&9 OPEN CMD 1B	V59K3851XL	OFF						S00E00.050
558-02			CMD	PVD	L AFT VENTS 8&9 OPEN CMD 2A	V59K3860XL	OFF						S00E00.050
558-03			CMD	PVD	L AFT VENTS 8&9 OPEN CMD 2B	V59K3861XL	OFF						S00E00.050
558-04			CMD	PVD	R AFT VENTS 8&9 OPEN CMD 1A	V59K4850XL	OFF						S00E00.050
558-05			CMD	PVD	R AFT VENTS 8&9 OPEN CMD 1B	V59K4851XL	OFF						S00E00.050
558-06			CMD	PVD	R AFT VENTS 8&9 OPEN CMD 2A	V59K4860XL	OFF						S00E00.050
558-07			CMD	PVD	R AFT VENTS 8&9 OPEN CMD 2B	V59K4861XL	OFF						S00E00.050
					$ POST IGN VENTS 4/7 $								
560-00			CMD	PVD	L PB/W VENTS 4&7 CLOSE CMD 1A	V59K3300XL	ON						S00E00.050
560-01			CMD	PVD	L PB/W VENTS 4&7 CLOSE CMD 1B	V59K3301XL	ON						S00E00.050
560-02			CMD	PVD	L PB/W VENTS 4&7 CLOSE CMD 2A	V59K3310XL	ON						S00E00.050
560-03			CMD	PVD	L PB/W VENTS 4&7 CLOSE CMD 2B	V59K3311XL	ON						S00E00.050
560-04			CMD	PVD	R PB/W VENTS 4&7 CLOSE CMD 1A	V59K4300XL	ON						S00E00.050
560-05			CMD	PVD	R PB/W VENTS 4&7 CLOSE CMD 1B	V59K4301XL	ON						S00E00.050
560-06			CMD	PVD	R PB/W VENTS 4&7 CLOSE CMD 2A	V59K4310XL	ON						S00E00.050
560-07			CMD	PVD	R PB/W VENTS 4&7 CLOSE CMD 2B	V59K4311XL	ON						S00E00.050
					$ DELAY 2 SECONDS $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ POST IGN VENT 3 $								
561-04			CMD	PVD	L PB VENT 3 CLOSE CMD 1A	V59K3200XL	ON						S00E00.050
561-05			CMD	PVD	L PB VENT 3 CLOSE CMD 1B	V59K3201XL	ON						S00E00.050
561-06			CMD	PVD	L PB VENT 3 CLOSE CMD 2A	V59K3210XL	ON						S00E00.050
561-07			CMD	PVD	L PB VENT 3 CLOSE CMD 2B	V59K3211XL	ON						S00E00.050
561-08			CMD	PVD	R PB VENT 3 CLOSE CMD 1A	V59K4200XL	ON						S00E00.050
561-09			CMD	PVD	R PB VENT 3 CLOSE CMD 1B	V59K4201XL	ON						S00E00.050
561-10			CMD	PVD	R PB VENT 3 CLOSE CMD 2A	V59K4210XL	ON						S00E00.050
561-11			CMD	PVD	R PB VENT 3 CLOSE CMD 2B	V59K4211XL	ON						S00E00.050
					$ DELAY 2 SECONDS $								
					$ POST IGN VENT 6 $								
562-04			CMD	PVD	L PB VENT 6 CLOSE CMD 1A	V59K3500XL	ON						S00E00.050
562-05			CMD	PVD	L PB VENT 6 CLOSE CMD 1B	V59K3501XL	ON						S00E00.050
562-06			CMD	PVD	L PB VENT 6 CLOSE CMD 2A	V59K3510XL	ON						S00E00.050
562-07			CMD	PVD	L PB VENT 6 CLOSE CMD 2B	V59K3511XL	ON						S00E00.050
562-08			CMD	PVD	R PB VENT 6 CLOSE CMD 1A	V59K4500XL	ON						S00E00.050
562-09			CMD	PVD	R PB VENT 6 CLOSE CMD 1B	V59K4501XL	ON						S00E00.050
562-10			CMD	PVD	R PB VENT 6 CLOSE CMD 2A	V59K4510XL	ON						S00E00.050
562-11			CMD	PVD	R PB VENT 6 CLOSE CMD 2B	V59K4511XL	ON						S00E00.050
					$ DELAY 2 SECONDS $								
					$ POST IGN VENT 5 $								
563-00			CMD	PVD	L PB VENT 5 CLOSE CMD 1A	V59K3400XL	ON						S00E00.050
563-01			CMD	PVD	L PB VENT 5 CLOSE CMD 1B	V59K3401XL	ON						S00E00.050
563-02			CMD	PVD	L PB VENT 5 CLOSE CMD 2A	V59K3410XL	ON						S00E00.050
563-03			CMD	PVD	L PB VENT 5 CLOSE CMD 2B	V59K3411XL	ON						S00E00.050
563-04			CMD	PVD	R PB VENT 5 CLOSE CMD 1A	V59K4400XL	ON						S00E00.050
563-05			CMD	PVD	R PB VENT 5 CLOSE CMD 1B	V59K4401XL	ON						S00E00.050
563-06			CMD	PVD	R PB VENT 5 CLOSE CMD 2A	V59K4410XL	ON						S00E00.050
563-07			CMD	PVD	R PB VENT 5 CLOSE CMD 2B	V59K4411XL	ON						S00E00.050
					$ DELAY 2 SECONDS $								
					$ POST IGN VENTS 1/2 $								
564-00			CMD	PVD	L FWD VENTS 1&2 PURGE CMD 1A	V59K3100XL	ON						S00E00.050
564-01			CMD	PVD	L FWD VENTS 1&2 PURGE CMD 1B	V59K3101XL	ON						S00E00.050
564-02			CMD	PVD	L FWD VENTS 1&2 PURGE CMD 2A	V59K3110XL	ON						S00E00.050
564-03			CMD	PVD	L FWD VENTS 1&2 PURGE CMD 2B	V59K3111XL	ON						S00E00.050

SEQ	CDT STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
564-04			CMD	PVD	R FWD VENTS 1&2 PURGE CMD 1A	V59K4100XL	ON						S00E00.050
564-05			CMD	PVD	R FWD VENTS 1&2 PURGE CMD 1B	V59K4101XL	ON						S00E00.050
564-06			CMD	PVD	R FWD VENTS 1&2 PURGE CMD 2A	V59K4110XL	ON						S00E00.050
564-07			CMD	PVD	R FWD VENTS 1&2 PURGE CMD 2B	V59K4111XL	ON						S00E00.050
					$ DELAY 2 SECONDS $								
					$ POST IGN VENTS 8/9 $								
565-00			CMD	PVD	L AFT VENTS 8&9 PURGE CMD 1A	V59K3900XL	ON						S00E00.050
565-01			CMD	PVD	L AFT VENTS 8&9 PURGE CMD 1B	V59K3901XL	ON						S00E00.050
565-02			CMD	PVD	L AFT VENTS 8&9 PURGE CMD 2A	V59K3910XL	ON						S00E00.050
565-03			CMD	PVD	L AFT VENTS 8&9 PURGE CMD 2B	V59K3911XL	ON						S00E00.050
565-04			CMD	PVD	R AFT VENTS 8&9 PURGE CMD 1A	V59K4900XL	ON						S00E00.050
565-05			CMD	PVD	R AFT VENTS 8&9 PURGE CMD 1B	V59K4901XL	ON						S00E00.050
565-06			CMD	PVD	R AFT VENTS 8&9 PURGE CMD 2A	V59K4910XL	ON						S00E00.050
565-07			CMD	PVD	R AFT VENTS 8&9 PURGE CMD 2B	V59K4911XL	ON						S00E00.050
					$ DELAY 10 SECONDS $								
					$ S014 SAFING CLEAN-UP $								
566-00	ST420		LABL	INTG		S014							
					$ GLS EVENT COMPLETE LESS THAN 9 $								
567-00			CMD	EPDC	FWD LCA 1 FIRE 1 INHIBIT CMD	V76K6301NL	ON						S00E00.790
567-01			CMD	EPDC	FWD LCA 1 FIRE 2 INHIBIT CMD	V76K6302NL	ON						S00E00.790
567-02			CMD	EPDC	FWD LCA 2 FIRE 1 INHIBIT CMD	V76K6303NL	ON						S00E00.790
567-03			CMD	EPDC	FWD LCA 2 FIRE 2 INHIBIT CMD	V76K6304NL	ON						S00E00.790
567-04			CMD	EPDC	FWD LCA 3 FIRE 1 INHIBIT CMD	V76K6305NL	ON						S00E00.790
567-05			CMD	EPDC	FWD LCA 3 FIRE 2 INHIBIT CMD	V76K6306NL	ON						S00E00.790
					$ GLS EVENT COMPLETE LESS THAN 14 $								
					$ RE-ESTABLISH MPS HE SUPPLY (2000 G) $								
568-00			CMD	MPS	MPHE F/OUT VNT OPN CMD	GHEK1010E	OFF						
568-01			CMD	MPS	MPHE F/OUT VNT OPN CMD (R)	GHEK1120E	OFF						
568-02			CMD	MPS	MP HE FILL SYS S/O VLV CLS CMD	GHEK1000E	OFF						
568-03			CMD	MPS	MPHE FILL S/O VLV CLD CMD(R)	GHEK1100E	OFF						
568-04			CMD	MPS	MPHE FILL C/O CNT VLV OPN CMD OVR	GHEK1097E	OFF						
568-05			CMD	MPS	MPHE FILL C/O CNT VLV OPN CMD OVR	GHEK1197E	OFF						
568-06			CMD	MPS	MPHE FILL C/O CNT VLV OPN CMD	GHEK1090E	ON						
568-07			CMD	MPS	MPHE FILL C/O CNT VLV OPN CMD (R)	GHEK1190E	ON						

SEQ	CDT STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
569-00			VFY	INTG	T-31 FLG - START VENT DOOR OPS			ON		GTO ST426			
					$ VENTS 4/7 CLOSE CMD OFF $								
570-00			CMD	PVD	L PB/W VENTS 4&7 CLOSE CMD 1A	V59K3300XL	OFF						S00E00.050
570-01			CMD	PVD	L PB/W VENTS 4&7 CLOSE CMD 1B	V59K3301XL	OFF						S00E00.050
570-02			CMD	PVD	L PB/W VENTS 4&7 CLOSE CMD 2A	V59K3310XL	OFF						S00E00.050
570-03			CMD	PVD	L PB/W VENTS 4&7 CLOSE CMD 2B	V59K3311XL	OFF						S00E00.050
570-04			CMD	PVD	R PB/W VENTS 4&7 CLOSE CMD 1A	V59K4300XL	OFF						S00E00.050
570-05			CMD	PVD	R PB/W VENTS 4&7 CLOSE CMD 1B	V59K4301XL	OFF						S00E00.050
570-06			CMD	PVD	R PB/W VENTS 4&7 CLOSE CMD 2A	V59K4310XL	OFF						S00E00.050
570-07			CMD	PVD	R PB/W VENTS 4&7 CLOSE CMD 2B	V59K4311XL	OFF						S00E00.050
					$ VENT 3 CLOSE CMD OFF $								
571-00			CMD	PVD	L PB VENT 3 CLOSE CMD 1A	V59K3200XL	OFF						S00E00.050
571-01			CMD	PVD	L PB VENT 3 CLOSE CMD 1B	V59K3201XL	OFF						S00E00.050
571-02			CMD	PVD	L PB VENT 3 CLOSE CMD 2A	V59K3210XL	OFF						S00E00.050
571-03			CMD	PVD	L PB VENT 3 CLOSE CMD 2B	V59K3211XL	OFF						S00E00.050
571-04			CMD	PVD	R PB VENT 3 CLOSE CMD 1A	V59K4200XL	OFF						S00E00.050
571-05			CMD	PVD	R PB VENT 3 CLOSE CMD 1B	V59K4201XL	OFF						S00E00.050
571-06			CMD	PVD	R PB VENT 3 CLOSE CMD 2A	V59K4210XL	OFF						S00E00.050
571-07			CMD	PVD	R PB VENT 3 CLOSE CMD 2B	V59K4211XL	OFF						S00E00.050
					$ VENT 6 CLOSE CMD OFF $								
572-00			CMD	PVD	L PB VENT 6 CLOSE CMD 1A	V59K3500XL	OFF						S00E00.050
572-01			CMD	PVD	L PB VENT 6 CLOSE CMD 1B	V59K3501XL	OFF						S00E00.050
572-02			CMD	PVD	L PB VENT 6 CLOSE CMD 2A	V59K3510XL	OFF						S00E00.050
572-03			CMD	PVD	L PB VENT 6 CLOSE CMD 2B	V59K3511XL	OFF						S00E00.050
572-04			CMD	PVD	R PB VENT 6 CLOSE CMD 1A	V59K4500XL	OFF						S00E00.050
572-05			CMD	PVD	R PB VENT 6 CLOSE CMD 1B	V59K4501XL	OFF						S00E00.050
572-06			CMD	PVD	R PB VENT 6 CLOSE CMD 2A	V59K4510XL	OFF						S00E00.050
572-07			CMD	PVD	R PB VENT 6 CLOSE CMD 2B	V59K4511XL	OFF						S00E00.050
					$ VENT 5 CLOSE CMD OFF $								
573-00			CMD	PVD	L PB VENT 5 CLOSE CMD 1A	V59K3400XL	OFF						S00E00.050
573-01			CMD	PVD	L PB VENT 5 CLOSE CMD 1B	V59K3401XL	OFF						S00E00.050
573-02			CMD	PVD	L PB VENT 5 CLOSE CMD 2A	V59K3410XL	OFF						S00E00.050
573-03			CMD	PVD	L PB VENT 5 CLOSE CMD 2B	V59K3411XL	OFF						S00E00.050
573-04			CMD	PVD	R PB VENT 5 CLOSE CMD 1A	V59K4400XL	OFF						S00E00.050
573-05			CMD	PVD	R PB VENT 5 CLOSE CMD 1B	V59K4401XL	OFF						S00E00.050
573-06			CMD	PVD	R PB VENT 5 CLOSE CMD 2A	V59K4410XL	OFF						S00E00.050

SEQ	CDT STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
573-07			CMD	PVD	R PB VENT 5 CLOSE CMD 2B	V59K4411XL	OFF						S00E00.050
					$ VENTS 1/2 PURGE CMD OFF $								
574-00			CMD	PVD	L FWD VENTS 1&2 PURGE CMD 1A	V59K3100XL	OFF						S00E00.050
574-01			CMD	PVD	L FWD VENTS 1&2 PURGE CMD 1B	V59K3101XL	OFF						S00E00.050
574-02			CMD	PVD	L FWD VENTS 1&2 PURGE CMD 2A	V59K3110XL	OFF						S00E00.050
574-03			CMD	PVD	L FWD VENTS 1&2 PURGE CMD 2B	V59K3111XL	OFF						S00E00.050
574-04			CMD	PVD	R FWD VENTS 1&2 PURGE CMD 1A	V59K4100XL	OFF						S00E00.050
574-05			CMD	PVD	R FWD VENTS 1&2 PURGE CMD 1B	V59K4101XL	OFF						S00E00.050
574-06			CMD	PVD	R FWD VENTS 1&2 PURGE CMD 2A	V59K4110XL	OFF						S00E00.050
574-07			CMD	PVD	R FWD VENTS 1&2 PURGE CMD 2B	V59K4111XL	OFF						S00E00.050
					$ VENTS 8/9 PURGE CMD OFF $								
575-00			CMD	PVD	L AFT VENTS 8&9 PURGE CMD 1A	V59K3900XL	OFF						S00E00.050
575-01			CMD	PVD	L AFT VENTS 8&9 PURGE CMD 1B	V59K3901XL	OFF						S00E00.050
575-02			CMD	PVD	L AFT VENTS 8&9 PURGE CMD 2A	V59K3910XL	OFF						S00E00.050
575-03			CMD	PVD	L AFT VENTS 8&9 PURGE CMD 2B	V59K3911XL	OFF						S00E00.050
575-04			CMD	PVD	R AFT VENTS 8&9 PURGE CMD 1A	V59K4900XL	OFF						S00E00.050
575-05			CMD	PVD	R AFT VENTS 8&9 PURGE CMD 1B	V59K4901XL	OFF						S00E00.050
575-06			CMD	PVD	R AFT VENTS 8&9 PURGE CMD 2A	V59K4910XL	OFF						S00E00.050
575-07			CMD	PVD	R AFT VENTS 8&9 PURGE CMD 2B	V59K4911XL	OFF						S00E00.050
					$ SS WATER SYSTEM SECURING $								
					$ PRE L/O VLVS VENT CMD$								
576-00	ST426		CMD	WATR	SS PRELIFTOFF VLVS VENT CMD	GWDKPT36E	OFF						S00E00.B50
576-01			CMD	WATR	SS PRELIFTOFF VLVS VENT CMD	GWDKPT22E	OFF						S00E00.B50
					$ PRE L/O VLVS OPEN CMD $								
576-02			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT29E	OFF						
576-03			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT31E	OFF						
576-04			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT30E	OFF						S00E00.B50
576-05			CMD	WATR	SS PRELIFTOFF VLVS OP CMD	GWDKPT32E	OFF						S00E00.B50
					$ POST L/O VLVS VENT CMD $								
576-06			CMD	WATR	SS POSTLIFTOFF PN VENT CMD	GWDKPT38E	OFF						
576-07			CMD	WATR	SS POSTLIFTOFF VLVS VENT CMD	GWDKPT24E	OFF						

SEQ	CDT STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
576-08			VFY	WATR	SS PRELFTF VENT VLV SV5 OP IND	GWDXPT37E	ON			1 OF 3			S00E00.B50
576-09			VFY	WATR	SS PRELFTF VENT VLV SV6 OP IND	GWDXPT38E	ON			1 OF 3			S00E00.B50
576-10			VFY	WATR	SS PRELFTF VENT VLV SV7 OP IND	GWDXPT39E	ON			GTO ST430			S00E00.B50
576-11			CMD	WATR	SS TA CTR CCC-ON FR-OFF CMD	GWDKPT11E	ON						
576-12			CMD	WATR	SS TA CTR CCC-ON FR-OFF CMD	GWDKPT15E	ON						
576-13			CMD	WATR	SS TA CTR CCC-ON FR-OFF CMD	GWDKPT12E	ON						S00E00.B50
576-14			CMD	WATR	SS TA CTR CCC-ON FR-OFF CMD	GWDKPT14E	ON						S00E00.B50
					$ DELAY 1 SECOND $								
576-15			CMD	WATR	SS TA CTR CCC-ON FR-OFF CMD	GWDKPT11E	OFF						
576-16			CMD	WATR	SS TA CTR CCC-ON FR-OFF CMD	GWDKPT15E	OFF						
576-17			CMD	WATR	SS TA CTR CCC-ON FR-OFF CMD	GWDKPT12E	OFF						S00E00.B50
576-18			CMD	WATR	SS TA CTR CCC-ON FR-OFF CMD	GWDKPT14E	OFF						S00E00.B50
					$ SAFING VERIFICATION $								
577-00	ST430		VFY	DPS	HRS MDM LA1 PF BUS 1 ON	V72K7965WR	ON			DISPLAY			
577-01			VFY	DPS	HRS MDM LA1 PF BUS 2 ON	V72K7966WR	ON			DISPLAY			
577-02			VFY	DPS	HRS MDM LF1 PF BUS 1 ON	V72K7968WR	ON			DISPLAY			
577-03			VFY	DPS	HRS MDM LF1 PF BUS 2 ON	V72K7969WR	ON			DISPLAY			
578-00			VFY	TRS	ET RSS S&A DVC SAFED	T55X1869X1	ON			DISPLAY			S00E00.780
578-01			VFY	TRS	ET RSS S&A DVC ARMED	T55X1870X1	OFF			DISPLAY			S00E00.780
578-02			VFY	BPYR	LH EVENT IGN S&A DEVICE SAFED	B55X1843X1	ON			DISPLAY			S00E00.750
578-03			VFY	BPYR	RH EVENT IGN S&A DEVICE SAFED	B55X2843X1	ON			DISPLAY			S00E00.750
578-04			VFY	BPYR	LH EVENT IGN S&A DEVICE ARMED	B55X1842X1	OFF			DISPLAY			S00E00.750
578-05			VFY	BPYR	RH EVENT IGN S&A DEVICE ARMED	B55X2842X1	OFF			DISPLAY			S00E00.750
578-06			VFY	BPYR	LH VOLTAGE IGN PIC CAP A	B55V1603C1	NOLO	1.5	V	DISPLAY			S00E00.800
578-07			VFY	BPYR	RH VOLTAGE IGN PIC CAP A	B55V2603C1	NOLO	1.5	V	DISPLAY			S00E00.800
578-08			VFY	BPYR	LH VOLTAGE IGN PIC CAP B	B55V1604C1	NOLO	1.5	V	DISPLAY			S00E00.800
578-09			VFY	BPYR	RH VOLTAGE IGN PIC CAP B	B55V2604C1	NOLO	1.5	V	DISPLAY			S00E00.800
					$ ORDNANCE NOT ARMED VERIFICATION $								
579-00			VFY	EPDC	SYS A RH SRB HDP M1 PIC CAP VOLTS	GMSV1301A	NOLO	1.5	V	DISPLAY			S00E00.830

SEQ	CDT STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
579-01			VFY	EPDC	SYS A RH SRB HDP M2 PIC CAP VOLTS	GMSV1302A	NOLO	1.5	V	DISPLAY			S00E00.830
579-02			VFY	EPDC	SYS A RH SRB HDP M3 PIC CAP VOLTS	GMSV1303A	NOLO	1.5	V	DISPLAY			S00E00.830
579-03			VFY	EPDC	SYS A RH SRB HDP M4 PIC CAP VOLTS	GMSV1304A	NOLO	1.5	V	DISPLAY			S00E00.830
579-04			VFY	EPDC	SYS A LH SRB HDP M5 PIC CAP VOLTS	GMSV1305A	NOLO	1.5	V	DISPLAY			S00E00.830
579-05			VFY	EPDC	SYS A LH SRB HDP M6 PIC CAP VOLTS	GMSV1306A	NOLO	1.5	V	DISPLAY			S00E00.830
579-06			VFY	EPDC	SYS A LH SRB HDP M7 PIC CAP VOLTS	GMSV1307A	NOLO	1.5	V	DISPLAY			S00E00.830
579-07			VFY	EPDC	SYS A LH SRB HDP M8 PIC CAP VOLTS	GMSV1308A	NOLO	1.5	V	DISPLAY			S00E00.830
579-08			VFY	EPDC	SYS B RH SRB HDP M1 PIC CAP VOLTS	GMSV2301A	NOLO	1.5	V	DISPLAY			S00E00.830
579-09			VFY	EPDC	SYS B RH SRB HDP M2 PIC CAP VOLTS	GMSV2302A	NOLO	1.5	V	DISPLAY			S00E00.830
579-10			VFY	EPDC	SYS B RH SRB HDP M3 PIC CAP VOLTS	GMSV2303A	NOLO	1.5	V	DISPLAY			S00E00.830
579-11			VFY	EPDC	SYS B RH SRB HDP M4 PIC CAP VOLTS	GMSV2304A	NOLO	1.5	V	DISPLAY			S00E00.830
579-12			VFY	EPDC	SYS B LH SRB HDP M5 PIC CAP VOLTS	GMSV2305A	NOLO	1.5	V	DISPLAY			S00E00.830
579-13			VFY	EPDC	SYS B LH SRB HDP M6 PIC CAP VOLTS	GMSV2306A	NOLO	1.5	V	DISPLAY			S00E00.830
579-14			VFY	EPDC	SYS B LH SRB HDP M7 PIC CAP VOLTS	GMSV2307A	NOLO	1.5	V	DISPLAY			S00E00.830
579-15			VFY	EPDC	SYS B LH SRB HDP M8 PIC CAP VOLTS	GMSV2308A	NOLO	1.5	V	DISPLAY			S00E00.830
579-16			VFY	EPDC	SYS A ETVAS PIC CAP VOLTS	GMSV1311A	NOLO	1.5	V	DISPLAY			S00E00.810
579-17			VFY	EPDC	SYS B ETVAS PIC CAP VOLTS	GMSV2311A	NOLO	1.5	V	DISPLAY			S00E00.810
579-18			VFY	EPDC	SYS A LH2 TSM PIC CAP VOLTS	GMSV1309A	NOLO	1.5	V	DISPLAY			S00E00.820
579-19			VFY	EPDC	SYS A LO2 TSM PIC CAP VOLTS	GMSV1310A	NOLO	1.5	V	DISPLAY			S00E00.820
579-20			VFY	EPDC	SYS B LH2 TSM PIC CAP VOLTS	GMSV2309A	NOLO	1.5	V	DISPLAY			S00E00.820
579-21			VFY	EPDC	SYS B LO2 TSM PIC CAP VOLTS	GMSV2310A	NOLO	1.5	V	DISPLAY			S00E00.820
579-22			VFY	EPDC	SYS A RH HDP M1 PIC CAP VOLTS RED	GMSV3301A	NOLO	1.5	V	DISPLAY			S00E00.830
579-23			VFY	EPDC	SYS A RH HDP M2 PIC CAP VOLTS RED	GMSV3302A	NOLO	1.5	V	DISPLAY			S00E00.830
579-24			VFY	EPDC	SYS A RH HDP M3 PIC CAP VOLTS RED	GMSV3303A	NOLO	1.5	V	DISPLAY			S00E00.830
579-25			VFY	EPDC	SYS A RH HDP M4 PIC CAP VOLTS RED	GMSV3304A	NOLO	1.5	V	DISPLAY			S00E00.830
579-26			VFY	EPDC	SYS A LH HDP M5 PIC CAP VOLTS RED	GMSV3305A	NOLO	1.5	V	DISPLAY			S00E00.830
579-27			VFY	EPDC	SYS A LH HDP M6 PIC CAP VOLTS RED	GMSV3306A	NOLO	1.5	V	DISPLAY			S00E00.830
579-28			VFY	EPDC	SYS A LH HDP M7 PIC CAP VOLTS RED	GMSV3307A	NOLO	1.5	V	DISPLAY			S00E00.830
579-29			VFY	EPDC	SYS A LH HDP M8 PIC CAP VOLTS RED	GMSV3308A	NOLO	1.5	V	DISPLAY			S00E00.830
579-30			VFY	EPDC	SYS B RH HDP M1 PIC CAP VOLTS RED	GMSV4301A	NOLO	1.5	V	DISPLAY			S00E00.830
579-31			VFY	EPDC	SYS B RH HDP M2 PIC CAP VOLTS RED	GMSV4302A	NOLO	1.5	V	DISPLAY			S00E00.830
579-32			VFY	EPDC	SYS B RH HDP M3 PIC CAP VOLTS RED	GMSV4303A	NOLO	1.5	V	DISPLAY			S00E00.830
579-33			VFY	EPDC	SYS B RH HDP M4 PIC CAP VOLTS RED	GMSV4304A	NOLO	1.5	V	DISPLAY			S00E00.830
579-34			VFY	EPDC	SYS B LH HDP M5 PIC CAP VOLTS RED	GMSV4305A	NOLO	1.5	V	DISPLAY			S00E00.830
579-35			VFY	EPDC	SYS B LH HDP M6 PIC CAP VOLTS RED	GMSV4306A	NOLO	1.5	V	DISPLAY			S00E00.830
579-36			VFY	EPDC	SYS B LH HDP M7 PIC CAP VOLTS RED	GMSV4307A	NOLO	1.5	V	DISPLAY			S00E00.830
579-37			VFY	EPDC	SYS B LH HDP M8 PIC CAP VOLTS RED	GMSV4308A	NOLO	1.5	V	DISPLAY			S00E00.830
579-38			VFY	EPDC	SYS A ETVAS PIC CAP RED VOLTS	GMSV3311A	NOLO	1.5	V	DISPLAY			S00E00.810
579-39			VFY	EPDC	SYS B ETVAS PIC CAP RED VOLTS	GMSV4311A	NOLO	1.5	V	DISPLAY			S00E00.810
579-40			VFY	EPDC	SYS A LH2 TSM PIC CAP RED VOLTS	GMSV3309A	NOLO	1.5	V	DISPLAY			S00E00.820
579-41			VFY	EPDC	SYS A LO2 TSM PIC CAP RED VOLTS	GMSV3310A	NOLO	1.5	V	DISPLAY			S00E00.820

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
579-42			VFY	EPDC	SYS B LH2 TSM PIC CAP RED VOLTS	GMSV4309A	NOLO	1.5	V	DISPLAY			S00E00.820
579-43			VFY	EPDC	SYS B LO2 TSM PIC CAP RED VOLTS	GMSV4310A	NOLO	1.5	V	DISPLAY			S00E00.820
580-00			VFY	BHYD	LH EVENT APU A ISLN VALVE OPEN	B46X1851X1	OFF			DISPLAY			
580-01			VFY	BHYD	LH EVENT APU A ISLN VALVE CLOSED	B46X1853X1	ON			DISPLAY			
580-02			VFY	BHYD	LH EV APU SEC SP CON VLV CLD,SYS A	B46X1861X1	ON			DISPLAY			
580-03			VFY	BHYD	LH EV APU PRI SP CON VLV OP,SYS A	B46X1862X1	ON			DISPLAY			
580-04			VFY	BHYD	LH EVENT APU B ISLN VALVE OPEN	B46X1852X1	OFF			DISPLAY			
580-05			VFY	BHYD	LH EVENT APU B ISLN VALVE CLOSED	B46X1854X1	ON			DISPLAY			
580-06			VFY	BHYD	LH EV APU SEC SP CON VLV CLD,SYS B	B46X1863X1	ON			DISPLAY			
580-07			VFY	BHYD	LH EV APU PRI SP CON VLV OP,SYS B	B46X1864X1	ON			DISPLAY			
580-08			VFY	BHYD	RH EVENT APU A ISLN VALVE OPEN	B46X2851X1	OFF			DISPLAY			
580-09			VFY	BHYD	RH EVENT APU A ISLN VALVE CLOSED	B46X2853X1	ON			DISPLAY			
580-10			VFY	BHYD	RH EV APU SEC SP CON VLV CLD,SYS A	B46X2861X1	ON			DISPLAY			
580-11			VFY	BHYD	RH EV APU PRI SP CON VLV OP,SYS A	B46X2862X1	ON			DISPLAY			
580-12			VFY	BHYD	RH EVENT APU B ISLN VALVE OPEN	B46X2852X1	OFF			DISPLAY			
580-13			VFY	BHYD	RH EVENT APU B ISLN VALVE CLOSED	B46X2854X1	ON			DISPLAY			
580-14			VFY	BHYD	RH EV APU SEC SP CON VLV CLD,SYS B	B46X2863X1	ON			DISPLAY			
580-15			VFY	BHYD	RH EV APU PRI SP CON VLV OP,SYS B	B46X2864X1	ON			DISPLAY			
581-00			VFY	TRS	ET RSS A INHIBIT IND	T55X1885X1	ON			DISPLAY			S00E00.770
581-01			VFY	TRS	ET RSS B INHIBIT IND	T55X2888X1	ON			DISPLAY			S00E00.770
581-02			VFY	BRS	LH EVENT RSS A INHIBIT	B55X1881X1	ON			DISPLAY			S00E00.760
581-03			VFY	BRS	LH EVENT RSS B INHIBIT	B55X1882X1	ON			DISPLAY			S00E00.760
581-04			VFY	BRS	RH EVENT RSS A INHIBIT	B55X2881X1	ON			DISPLAY			S00E00.760
581-05			VFY	BRS	RH EVENT RSS B INHIBIT	B55X2882X1	ON			DISPLAY			S00E00.760
582-00			VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	ON			GTO ST465			
					$ MPS POST RSLS ABORT VERIFICATIONS $								
583-00			VFY	MPS	MPS LH2 4IN DISC VLV (PD3) CL IND	V41X1420E1	ON			DISPLAY			

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
583-01			VFY	MPS	MPS E1 LO2 PREVLV (PV1) CL IND	V41X1135E1	ON			DISPLAY			
583-02			VFY	MPS	MPS E1 LH2 PREVLV (PV4) CL IND	V41X1105E1	ON			DISPLAY			
583-03			VFY	MPS	MPS E2 LO2 PREVLV (PV2) CL IND	V41X1235E1	ON			DISPLAY			
583-04			VFY	MPS	MPS E2 LH2 PREVLV (PV5) CL IND	V41X1205E1	ON			DISPLAY			
583-05			VFY	MPS	MPS E3 LO2 PREVLV (PV3) CL IND	V41X1335E1	ON			DISPLAY			
583-06			VFY	MPS	MPS E3 LH2 PREVLV (PV6) CL IND	V41X1305E1	ON			DISPLAY			
583-07			VFY	MPS	MPS LO2 OVBD B/V (PV19) OP IND	V41X1587E1	ON			1 OF 1			
583-08			VFY	MPS	MPS LO2 POGO RECRC 1 (PV20) CL IND	V41X1818E1	ON			OR			
583-09			VFY	MPS	MPS LO2 POGO RECRC 2 (PV21) CL IND	V41X1828E1	ON			2 OF 2			
					$ VERIFY SSME OXIDIZER DOME PURGE $								
					$ VERIFY SSME HPOTP INT SEAL PURGE $								
584-00	ST465		VFY	SSME	MPENG GN2 PRG VNT CLD IND	GGNX1053E	ON			DISPLAY			S00E00.160
584-01			VFY	SSME	MPENG GN2 PRG VNT CLD IND (R)	GGNX1143E	ON			DISPLAY			S00E00.160
584-02			VFY	SSME	MPENG GN2 PRG CNT VLV OPN IND	GGNX1033E	ON			1 OF 2			S00E00.160
584-03			VFY	SSME	MPENG GN2 PRG CNT VLV OPN IND(R)	GGNX1133E	ON			DISPLAY			S00E00.160
584-04			VFY	SSME	MPENG GN2 PRG S/O VLV OPN IND	GGNX1073E	ON			DISPLAY			S00E00.160
584-05			VFY	SSME	MPENG GN2 PRG S/O VLV OPN IND(R)	GGNX1163E	ON			DISPLAY			S00E00.160
584-06			VFY	SSME	MPENG GN2 PRG OUT PRESS	GGNP1034A	590	710	PSIG	1 OF 2			S00E00.160
584-07			VFY	SSME	MPENG GN2 PRG OUT PRESS(R)	GGNP1139A	590	710		DISPLAY			S00E00.160
585-00			VFY	PVD	L PB/W VENTS 4&7 CLOSED 1	V59X3305X1	ON			DISPLAY			
585-01			VFY	PVD	L PB/W VENTS 4&7 CLOSED 2	V59X3315X1	ON			DISPLAY			
585-02			VFY	PVD	R PB/W VENTS 4&7 CLOSED 1	V59X4305X1	ON			DISPLAY			
585-03			VFY	PVD	R PB/W VENTS 4&7 CLOSED 2	V59X4315X1	ON			DISPLAY			
586-00			VFY	PVD	L PB VENT 3 CLOSED 1	V59X3205X1	ON			DISPLAY			
586-01			VFY	PVD	L PB VENT 3 CLOSED 2	V59X3215X1	ON			DISPLAY			
586-02			VFY	PVD	R PB VENT 3 CLOSED 1	V59X4205X1	ON			DISPLAY			
586-03			VFY	PVD	R PB VENT 3 CLOSED 2	V59X4215X1	ON			DISPLAY			
587-00			VFY	PVD	L PB VENT 6 CLOSED 1	V59X3505X1	ON			DISPLAY			
587-01			VFY	PVD	L PB VENT 6 CLOSED 2	V59X3515X1	ON			DISPLAY			
587-02			VFY	PVD	R PB VENT 6 CLOSED 1	V59X4505X1	ON			DISPLAY			
587-03			VFY	PVD	R PB VENT 6 CLOSED 2	V59X4515X1	ON			DISPLAY			

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
588-00			VFY	PVD	L PB VENT 5 CLOSED 1	V59X3405X1	ON			DISPLAY			
588-01			VFY	PVD	L PB VENT 5 CLOSED 2	V59X3415X1	ON			DISPLAY			
588-02			VFY	PVD	R PB VENT 5 CLOSED 1	V59X4405X1	ON			DISPLAY			
588-03			VFY	PVD	R PB VENT 5 CLOSED 2	V59X4415X1	ON			DISPLAY			
589-00			VFY	PVD	L FWD VENTS 1&2 PURGE IND 1	V59X3105X1	ON			DISPLAY			
589-01			VFY	PVD	L FWD VENTS 1&2 PURGE IND 2	V59X3115X1	ON			DISPLAY			
589-02			VFY	PVD	R FWD VENTS 1&2 PURGE IND 1	V59X4105X1	ON			DISPLAY			
589-03			VFY	PVD	R FWD VENTS 1&2 PURGE IND 2	V59X4115X1	ON			DISPLAY			
590-00			VFY	PVD	L AFT VENTS 8&9 PURGE IND 1	V59X3905X1	ON			DISPLAY			
590-01			VFY	PVD	L AFT VENTS 8&9 PURGE IND 2	V59X3915X1	ON			DISPLAY			
590-02			VFY	PVD	R AFT VENTS 8&9 PURGE IND 1	V59X4905X1	ON			DISPLAY			
590-03			VFY	PVD	R AFT VENTS 8&9 PURGE IND 2	V59X4915X1	ON			DISPLAY			
					$ OAA RECONFIGURATION $								
					$ OAA ALREADY RECONFIG. CHECK $								
591-00			VFY	ARMS	HRS OAA OPEN PRI EXTEND PILOT V	GSAK7170ER	ON			2 OF 2			
591-01			VFY	ARMS	HRS OAA OPEN SEC EXTEND PILOT V	GSAK7190ER	ON			OR			
591-02			VFY	ARMS	HRS OAA OPEN PRI EXTEND PILOT V	GSAK7175ER	ON			2 OF 2			
591-03			VFY	ARMS	HRS OAA OPEN SEC EXTEND PILOT V	GSAK7195ER	ON			GTO S490			
592-00	ST470		CMD	INTG	$ DELAY 1 SECONDS $								S00E00.B80
					$ VERIFY THE FOLLOWING WITHIN 30 SECONDS $								
					$ ELSE GOTO ST490 $								
592-01			VFY	ARMS	OAA PRI FULLY EXTEND SW-EXTENDED	GSAX7581E	ON			1 OF 2			S00E00.B80
592-02			VFY	ARMS	OAA PRI FULLY EXTEND SW-EXTENDED	GSAX7586E	ON			AND			S00E00.B80
592-03			VFY	ARMS	OAA SEC FULLY EXTEND SW-EXTENDED	GSAX7601E	ON			1 OF 2			S00E00.B80
592-04			VFY	ARMS	OAA SEC FULLY EXTEND SW-EXTENDED	GSAX7606E	ON			GTO ST470			S00E00.B80
592-05			CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7120E	OFF						
592-06			CMD	ARMS	OAA UNLOCK PRI EXTEND LOCK V	GSAK7125E	OFF						
592-07			CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7140E	OFF						
592-08			CMD	ARMS	OAA UNLOCK SEC EXTEND LOCK V	GSAK7145E	OFF						

SEQ	CDT STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
592-09			CMD	ARMS	INHB PRI LOCK VLV	GSAK7137E	OFF						
592-10			CMD	ARMS	INHB SEC LOCK VLV	GSAK7157E	OFF						
592-11			CMD	ARMS	OAA LOCK PRI EXTEND LOCK V	GSAK7130E	ON						
592-12			CMD	ARMS	OAA LOCK PRI EXTEND LOCK V	GSAK7135E	ON						
592-13			CMD	ARMS	OAA LOCK SEC EXTEND LOCK V	GSAK7150E	ON						
592-14			CMD	ARMS	OAA LOCK SEC EXTEND LOCK V	GSAK7155E	ON						
592-15			CMD	ARMS	OAA OPEN PRI EXTEND PILOT V	GSAK7170E	OFF						
592-16			CMD	ARMS	OAA OPEN PRI EXTEND PILOT V	GSAK7175E	OFF						
592-17			CMD	ARMS	OAA OPEN SEC EXTEND PILOT V	GSAK7190E	OFF						
592-18			CMD	ARMS	OAA OPEN SEC EXTEND PILOT V	GSAK7195E	OFF						
592-19			CMD	ARMS	OAA RESET PRI EXTEND PILOT V	GSAK7160E	ON						
592-20			CMD	ARMS	OAA RESET PRI EXTEND PILOT V	GSAK7165E	ON						
592-21			CMD	ARMS	OAA RESET SEC EXTEND PILOT V	GSAK7180E	ON						
592-22			CMD	ARMS	OAA RESET SEC EXTEND PILOT V	GSAK7185E	ON						
					$ DELAY 1 SECONDS $								
592-23			CMD	ARMS	OAA LOCK PRI EXTEND LOCK V	GSAK7130E	OFF						
592-24			CMD	ARMS	OAA LOCK PRI EXTEND LOCK V	GSAK7135E	OFF						
592-25			CMD	ARMS	OAA LOCK SEC EXTEND LOCK V	GSAK7150E	OFF						
592-26			CMD	ARMS	OAA LOCK SEC EXTEND LOCK V	GSAK7155E	OFF						
592-27			CMD	ARMS	OAA RESET PRI EXTEND PILOT V	GSAK7160E	OFF						
592-28			CMD	ARMS	OAA RESET PRI EXTEND PILOT V	GSAK7165E	OFF						
592-29			CMD	ARMS	OAA RESET SEC EXTEND PILOT V	GSAK7180E	OFF						
592-30			CMD	ARMS	OAA RESET SEC EXTEND PILOT V	GSAK7185E	OFF						
592-31			CMD	ARMS	OAA CLOSE PRI RETRACT SUPPLY V	GSAK7200E	OFF						
592-32			CMD	ARMS	OAA CLOSE PRI RETRACT SUPPLY V	GSAK7205E	OFF						
592-33			CMD	ARMS	OAA CLOSE PRI RETRACT RETURN V	GSAK7220E	OFF						
592-34			CMD	ARMS	OAA CLOSE PRI RETRACT RETURN V	GSAK7225E	OFF						
592-35			CMD	ARMS	OAA CLOSE SEC RETRACT SUPPLY V	GSAK7240E	OFF						
592-36			CMD	ARMS	OAA CLOSE SEC RETRACT SUPPLY V	GSAK7245E	OFF						
592-37			CMD	ARMS	OAA CLOSE SEC RETRACT RETURN V	GSAK7260E	OFF						
592-38			CMD	ARMS	OAA CLOSE SEC RETRACT RETURN V	GSAK7265E	OFF						

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ DELAY 1 MIN 00 SECONDS $								
					$ VERIFY WITHIN 1 MIN 00 SEC ELSE DISPLAY AND CONTINUE $								
592-39	ST480		VFY	ARMS	OAA ACCUM LEVEL SW NO 1-NORMAL	GSAX7651E	ON			4 OF 4			
592-40			VFY	ARMS	OAA ACCUM LEVEL SW NO 2-NORMAL	GSAX7671E	ON			4 OF 4			
592-41			VFY	ARMS	OAA ACCUM LEVEL SW NO 3-NORMAL	GSAX7691E	ON			4 OF 4			
592-42			VFY	ARMS	OAA ACCUM LEVEL SW NO 4-NORMAL	GSAX7711E	ON			OR			
592-43			VFY	ARMS	OAA ACCUM LEVEL SW NO 1-NORMAL	GSAX7656E	ON			4 OF 4			
592-44			VFY	ARMS	OAA ACCUM LEVEL SW NO 2-NORMAL	GSAX7676E	ON			4 OF 4			
592-45			VFY	ARMS	OAA ACCUM LEVEL SW NO 3-NORMAL	GSAX7696E	ON			4 OF 4			
592-46			VFY	ARMS	OAA ACCUM LEVEL SW NO 4-NORMAL	GSAX7716E	ON			GTO ST480			
592-47			CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7080E	OFF						
592-48			CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7085E	OFF						
592-49			CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7100E	OFF						
592-50			CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7105E	OFF						
					$ NOTIFY FIRING ROOM THAT GLS SAFING IS COMPLETE $								
593-00	ST490		CMD	INTG	GLS SAFING COMPLETE	N013INTGR	ON						

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE SINGLE OR LOW	VALUE HIGH	VALUE UNIT	ELSE	DUR.	LCC REF	OMRSD
					* * * * * * * * * * * * * * * * * * * POST G901 RECYCLE OPERATIONS * * * * * * * * * * * * * * * * * * *								
594-00	ST500		VFY	INTG	CURRENT LDB GPC MEMORY CONFIG	NGPCLMCNFG	9			GTO ST500			S00E00.751
					$ GLS EVENT COMPLETE LESS THAT 300 $								
					$ SAFE SRB RSS S/A'S $								
595-00			CMD	BRS	LH RSS S&A DEVICE ARM CMD	B55K3044XL	OFF						S00E00.751
595-01			CMD	BRS	RH RSS S&A DEVICE ARM CMD	B55K4044XL	OFF						S00E00.751
					$ 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 $								
596-00	ST510		CMD	BRS	SPEC 100 PRO	DEU 1							S00E00.751
					$ DELAY 2 SECONDS $								
596-01			VFY	DPS	DEU 1 DISPLAY ID	V92U5086CX	1000			GTO ST510			
					$ PRINT MSG IF FAILED AFTER RETRY AND GTO ST530 $								
596-02			CMD	BRS	ITEM 25 EXECUTE	DEU 1							S00E00.751
					$ DELAY 2 SECONDS $								
					$ VERIFY MEC CRITICAL CMD'S ARE ENABLED $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
596-03			VFY	BRS	MEC INH/ENA IND	V91X1491XX	ON			GTO ST510			S00E00.751
					$ PRINT MSG IF FAILED AFTER RETRY AND GTO ST530 $								
					$ ISSUE S/A SAFE CMD'S $								
597-00			ISSU	BRS	MEC 1 L RSS SAFE 1 CMD	V76K7508BL	ON						S00E00.751
597-01			ISSU	BRS	MEC 1 R RSS SAFE 2 CMD	V76K7509BL	ON						S00E00.751
					$ DELAY 1 SECOND $								
597-02			ISSU	BRS	MEC 2 L RSS SAFE 2 CMD	V76K7609BL	ON						S00E00.751
597-03			ISSU	BRS	MEC 2 R RSS SAFE 1 CMD	V76K7608BL	ON						S00E00.751
					$ DELAY 1 SECOND $								
					$ DISABLE MEC CRITICAL CMD'S $								
					$ RETRY NEXT SEQ NO MORE THAN ONCE $								
598-00	ST520		CMD	BRS	ITEM 26 EXECUTE	DEU 1							S00E00.751
					$ DELAY 2 SECONDS $								
					$ VERIFY MEC CRITICAL CMD'S ARE DISABLED $								
599-00			VFY	BRS	MEC INH/ENA IND	V91X1491XX	OFF			GTO ST520			S00E00.751
					$ PRINT MSG IF FAILED AFTER RETRY $								
600-00			CMD	BRS	RESUME	DEU 1							S00E00.751
600-01			CMD	BRS	READ MEC PREFLIGHT BITE	MEC 1							S00E00.751
600-02			CMD	BRS	READ MEC PREFLIGHT BITE	MEC 2							S00E00.751
600-03			CMD	BRS	MEC MASTER RESET	MEC 1							S00E00.751
600-04			CMD	BRS	MEC MASTER RESET	MEC 2							S00E00.751
601-00	ST530		VFY	BRS	LH EVENT RSS S&A DEVICE ARMED	B55X1870X1	OFF			DISPLAY			S00E00.751
601-01			VFY	BRS	RH EVENT RSS S&A DEVICE ARMED	B55X2870X1	OFF			DISPLAY			S00E00.751
601-02			VFY	BRS	LH EVENT RSS S&A DEVICE SAFED	B55X1869X1	ON			DISPLAY			S00E00.751
601-03			VFY	BRS	RH EVENT RSS S&A DEVICE SAFED	B55X2869X1	ON			DISPLAY			S00E00.751
					$ POST G901 RECYCLE OPERATIONS COMPLETE $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				

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* * * * * * * * * * * * * * * * * *
*                                 *
*     CONTINGENT PROGRAMS         *
*                                 *
* * * * * * * * * * * * * * * * * *
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SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ G001 R/S HOLD INDICATION LOOK-UP $								
700-00			LABL	INTG		G001							
					$ DELAY 10 SECONDS $								
700-01			VFY	DPS	FA1 INPUT PROM SEG3-10 BYPASS(HFE)	V91X2806XX	OFF			DISPLAY			
700-02			VFY	DPS	FA2 INPUT PROM SEG3-10 BYPASS(HFE)	V91X2807XX	OFF			DISPLAY			
700-03			VFY	DPS	FA3 INPUT PROM SEG3-10 BYPASS(HFE)	V91X2808XX	OFF			DISPLAY			
700-04			VFY	DPS	FA4 INPUT PROM SEG3-10 BYPASS(HFE)	V91X2809XX	OFF			DISPLAY			
700-05			VFY	DPS	FF1 MDM RETURN WORD BYPASS(HFE)	V91X2904XX	OFF			DISPLAY			
700-06			VFY	DPS	FF2 MDM RETURN WORD BYPASS(HFE)	V91X2905XX	OFF			DISPLAY			
700-07			VFY	DPS	FF3 MDM RETURN WORD BYPASS(HFE)	V91X2906XX	OFF			DISPLAY			
700-08			VFY	DPS	FF4 MDM RETURN WORD BYPASS(HFE)	V91X2907XX	OFF			DISPLAY			
700-09			VFY	DPS	FLIGHT CRITICAL MDM HOLD/ABORT	V90X8767X1	OFF			DISPLAY			
700-10			VFY	EPDC	LH IGN PIC CAP A HOLD	V90X8383X1	OFF			DISPLAY			
700-11			VFY	EPDC	RH IGN PIC CAP A HOLD	V90X8385X1	OFF			DISPLAY			
700-12			VFY	EPDC	LH IGN PIC CAP B HOLD	V90X8384X1	OFF			DISPLAY			
700-13			VFY	EPDC	RH IGN PIC CAP B HOLD	V90X8386X1	OFF			DISPLAY			
700-16			VFY	MPS	MPS LOX ACC RECIRC VLV HOLD	V90X8392X1	OFF			DISPLAY			
700-18			VFY	MPS	MPS E-1 LH2 PREVLV OPEN HOLD	V90X8396X1	OFF			DISPLAY			
700-19			VFY	MPS	MPS E-2 LH2 PREVLV OPEN HOLD	V90X8397X1	OFF			DISPLAY			
700-20			VFY	MPS	MPS E-3 LH2 PREVLV OPEN HOLD	V90X8398X1	OFF			DISPLAY			
700-21			VFY	MPS	MPS VALVE POS COMM FAULT HOLD	V90X8769X1	OFF			DISPLAY			
700-22			VFY	SSME	ME-1 PAD DATA PATH FAIL HOLD	V90X8670X1	OFF			DISPLAY			
700-23			VFY	SSME	ME-2 PAD DATA PATH FAIL HOLD	V90X8671X1	OFF			DISPLAY			
700-24			VFY	SSME	ME-3 PAD DATA PATH FAIL HOLD	V90X8672X1	OFF			DISPLAY			
700-25			VFY	SSME	ME-1 CONTROL FAIL HOLD	V90X8679X1	ON			GTO ST10			
					$ ME-1 ELECTRONIC LOCKUP $								
700-26			VFY	SSME	ME-1 OPERATING MODE P3B12-14	E41J1513B1	B011			2 OF 2			
700-27			VFY	SSME	ME-1 PHASE IN EFFECT P3B9-11	E41J1512B1	B011	B100		GTO ST01			
			MSG		ME-1 CONTROLLER ELECTRONIC LOCKUP								
					$ ME-1 HYDRAULIC LOCKUP $								
700-28	ST01		VFY	SSME	ME-1 OPERATING MODE P3B12-14	E41J1513B1	B100			2 OF 2			
700-29			VFY	SSME	ME-1 PHASE IN EFFECT P3B9-11	E41J1512B1	B011	B100		GTO ST02			
			MSG		ME-1 CONTROLLER HYDRAULIC LOCKUP								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ ME-1 MAJOR COMPONENT FAIL $								
700-30	ST02		VFY	SSME	ME-1 SELF TEST STATUS P3B15-16	E41J1514B1	B010			GTO ST03			
			MSG		ME-1 CONTROLLER MAJOR COMPONENT FAIL								
					$ ME-1 CONTROLLER CHANNEL FAIL $								
700-31	ST03		VFY	SSME	ME-1 CHANNEL STATUS P3B4-6	E41J1509B1	B000			DISPLAY			
700-32	ST10		VFY	SSME	ME-2 CONTROL FAIL HOLD	V90X8680X1	ON			GTO ST20			
					$ ME-2 ELECTRONIC LOCKUP $								
700-33			VFY	SSME	ME-2 OPERATING MODE P3B12-14	E41J2513B1	B011			2 OF 2			
700-34			VFY	SSME	ME-2 PHASE IN EFFECT P3B9-11	E41J2512B1	B011	B100		GTO ST11			
			MSG		ME-2 CONTROLLER ELECTRONIC LOCKUP								
					$ ME-2 HYDRAULIC LOCKUP $								
700-35	ST11		VFY	SSME	ME-2 OPERATING MODE P3B12-14	E41J2513B1	B100			2 OF 2			
700-36			VFY	SSME	ME-2 PHASE IN EFFECT P3B9-11	E41J2512B1	B011	B100		GTO ST12			
			MSG		ME-2 CONTROLLER HYDRAULIC LOCKUP								
					$ ME-2 MAJOR COMPONENT FAIL $								
700-37	ST12		VFY	SSME	ME-2 SELF TEST STATUS P3B15-16	E41J2514B1	B010			GTO ST13			
			MSG		ME-2 CONTROLLER MAJOR COMPONENT FAIL								
					$ ME-2 CONTROLLER CHANNEL FAIL $								
700-38	ST13		VFY	SSME	ME-2 CHANNEL STATUS P3B4-6	E41J2509B1	B000			DISPLAY			
700-39	ST20		VFY	SSME	ME-3 CONTROL FAIL HOLD	V90X8681X1	ON			GTO ST30			
					$ ME-3 ELECTRONIC LOCKUP $								
700-40			VFY	SSME	ME-3 OPERATING MODE P3B12-14	E41J3513B1	B011			2 OF 2			
700-41			VFY	SSME	ME-3 PHASE IN EFFECT P3B9-11	E41J3512B1	B011	B100		GTO ST21			
			MSG		ME-3 CONTROLLER ELECTRONIC LOCKUP								
					$ ME-3 HYDRAULIC LOCKUP $								
700-42	ST21		VFY	SSME	ME-3 OPERATING MODE P3B12-14	E41J3513B1	B100			2 OF 2			
700-43			VFY	SSME	ME-3 PHASE IN EFFECT P3B9-11	E41J3512B1	B011	B100		GTO ST22			
			MSG		ME-3 CONTROLLER HYDRAULIC LOCKUP								
					$ ME-3 MAJOR COMPONENT FAIL $								
700-44	ST22		VFY	SSME	ME-3 SELF TEST STATUS P3B15-16	E41J3514B1	B010			GTO ST30			

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
			MSG		ME-3 CONTROLLER MAJOR COMPONENT FAIL								
					$ ME-3 CONTROLLER CHANNEL FAIL $								
700-45			VFY	SSME	ME-3 CHANNEL STATUS P3B4-6	E41J3509B1	B000			DISPLAY			
700-46	ST30		VFY	INTG	LPS GO FOR AUTO SEQ START HOLD	V90X8393X1	OFF			DISPLAY			
700-47			VFY	INTG	R/S SEQ SSME GO FOR LAUNCH HOLD	V90X8395X1	OFF			DISPLAY			
700-48			VFY	INTG	LPS GO FOR ENGINE START HOLD	V90X8394X1	OFF			DISPLAY			
700-49			VFY	INTG	LPS COUNTDOWN HOLD	V90X8768X1	OFF			DISPLAY			
700-50			VFY	INTG	VENT DOOR POSITION HOLD	V90X8770X1	ON			GTO ST35			
			MSG		VENT DOOR POSITION HOLD								
700-51			VFY	INTG	ORBITER VENT DOORS STATUS WORD	V90J8201C1	INTAME1	STORE					
700-52			VFY	INTG	LPS ORBITER VENT DOORS OVRD WORD	V99J8836C1	INTAME2	STORE					
700-53			VFY	INTG	COMPUTE NAME1 OR NAME2	INTNAME	XFFFF	XFF00		DISPLAY			
700-54	ST35		VFY	INTG	LAUNCH SEQUENCE ABORT FLAG	V90X8382X1	ON			GTO ST40			
					$ ENGINE START - ABORT FLAG ON $								
700-55			VFY	FCL	MPS ENG 1 P ACTR A FAIL	V79X1170X1	OFF			DISPLAY			
700-56			VFY	FCL	MPS ENG 1 Y ACTR A FAIL	V79X1171X1	OFF			DISPLAY			
700-57			VFY	FCL	MPS ENG 1 P ACTR B FAIL	V79X1173X1	OFF			DISPLAY			
700-58			VFY	FCL	MPS ENG 1 Y ACTR B FAIL	V79X1174X1	OFF			DISPLAY			
700-59			VFY	FCL	MPS ENG 1 P ACTR C FAIL	V79X1176X1	OFF			DISPLAY			
700-60			VFY	FCL	MPS ENG 1 Y ACTR C FAIL	V79X1177X1	OFF			DISPLAY			
700-61			VFY	FCL	MPS ENG 1 P ACTR D FAIL	V79X1178X1	OFF			DISPLAY			
700-62			VFY	FCL	MPS ENG 1 Y ACTR D FAIL	V79X1179X1	OFF			DISPLAY			
700-63			VFY	FCL	MPS ENG 2 P ACTR A FAIL	V79X1270X1	OFF			DISPLAY			
700-64			VFY	FCL	MPS ENG 2 Y ACTR A FAIL	V79X1271X1	OFF			DISPLAY			
700-65			VFY	FCL	MPS ENG 2 P ACTR B FAIL	V79X1273X1	OFF			DISPLAY			
700-66			VFY	FCL	MPS ENG 2 Y ACTR B FAIL	V79X1274X1	OFF			DISPLAY			
700-67			VFY	FCL	MPS ENG 2 P ACTR C FAIL	V79X1276X1	OFF			DISPLAY			
700-68			VFY	FCL	MPS ENG 2 Y ACTR C FAIL	V79X1277X1	OFF			DISPLAY			
700-69			VFY	FCL	MPS ENG 2 P ACTR D FAIL	V79X1278X1	OFF			DISPLAY			
700-70			VFY	FCL	MPS ENG 2 Y ACTR D FAIL	V79X1279X1	OFF			DISPLAY			
700-71			VFY	FCL	MPS ENG 3 P ACTR A FAIL	V79X1370X1	OFF			DISPLAY			
700-72			VFY	FCL	MPS ENG 3 Y ACTR A FAIL	V79X1371X1	OFF			DISPLAY			
700-73			VFY	FCL	MPS ENG 3 P ACTR B FAIL	V79X1373X1	OFF			DISPLAY			
700-74			VFY	FCL	MPS ENG 3 Y ACTR B FAIL	V79X1374X1	OFF			DISPLAY			

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
700-75			VFY	FCL	MPS ENG 3 P ACTR C FAIL	V79X1376X1	OFF			DISPLAY			
700-76			VFY	FCL	MPS ENG 3 Y ACTR C FAIL	V79X1377X1	OFF			DISPLAY			
700-77			VFY	FCL	MPS ENG 3 P ACTR D FAIL	V79X1378X1	OFF			DISPLAY			
700-78			VFY	FCL	MPS ENG 3 Y ACTR D FAIL	V79X1379X1	OFF			DISPLAY			
					$ FOR THE ME SELF TEST: $								
					$ B01 = ENGINE OKAY $								
					$ B10 = MAJOR COMPONENT FAIL $								
					$ B11 = LIMIT EXCEEDED $								
					$ OTHER = ME NOT OKAY, SET W/OUT HOLD $								
					$ CONDITION $								
700-79			VFY	SSME	ME-1 SELF TEST STATUS P3B15-16	E41J1514B1	B001			DISPLAY			
700-80			VFY	SSME	ME-2 SELF TEST STATUS P3B15-16	E41J2514B1	B001			DISPLAY			
700-81			VFY	SSME	ME-3 SELF TEST STATUS P3B15-16	E41J3514B1	B001			DISPLAY			
700-82			VFY	SSME	ENGINE SHUTDOWN VERIFICATION HOLD	V90X8389X1	OFF			DISPLAY			
700-83			VFY	SSME	UNCOMMANDED ENGINE SHUTDOWN ABORT	V90X8771X1	OFF			DISPLAY			
700-84			VFY	SSME	MPS ACT PORT COMM FAULT ABORT	V90X8772X1	OFF			DISPLAY			
700-85			VFY	SSME	ME-1 LOW CHAMBER PRESSURE ABORT	V90X8773X1	OFF			DISPLAY			
700-86			VFY	SSME	ME-2 LOW CHAMBER PRESSURE ABORT	V90X8774X1	OFF			DISPLAY			
700-87			VFY	SSME	ME-3 LOW CHAMBER PRESSURE ABORT	V90X8775X1	OFF			DISPLAY			
700-88			VFY	SSME	ME-1 ACT PORT FAIL ABORT	V90X8776X1	OFF			DISPLAY			
700-89			VFY	SSME	ME-2 ACT PORT FAIL ABORT	V90X8777X1	OFF			DISPLAY			
700-90			VFY	SSME	ME-3 ACT PORT FAIL ABORT	V90X8778X1	OFF			DISPLAY			
700-91	ST40				END G001								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ 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 $								
701-00		LABL	INTG			G002							
701-01		CMD	MPS		MPS E1 LH2 PREVLV (PV4) CL CMD A	V41K1122XL	OFF						S00E00.205
701-02		CMD	MPS		MPS E1 LH2 PREVLV (PV4) CL CMD B	V41K1123XL	OFF						S00E00.205
701-03		CMD	MPS		MPS E1 LH2 PREVLV (PV4) CL CMD C	V41K1124XL	OFF						S00E00.205
701-04		OMSG	INTG		E-1 LH2 INLET OVERPRESS - G002 EXECUTED								
701-05		END	G002										
					$ G003 ENG 2 LH2 INLET PRESSURE RELIEF $								
702-00		LABL	INTG			G003							
702-01		CMD	MPS		MPS E2 LH2 PREVLV (PV5) CL CMD A	V41K1222XL	OFF						S00E00.205
702-02		CMD	MPS		MPS E2 LH2 PREVLV (PV5) CL CMD B	V41K1223XL	OFF						S00E00.205
702-03		CMD	MPS		MPS E2 LH2 PREVLV (PV5) CL CMD C	V41K1224XL	OFF						S00E00.205
702-04		OMSG	INTG		E-2 LH2 INLET OVERPRESS - G003 EXECUTED								
702-05		END	G003										
					$ G004 ENG 3 LH2 INLET PRESSURE RELIEF $								
703-00		LABL	INTG			G004							
703-01		CMD	MPS		MPS E3 LH2 PREVLV (PV6) CL CMD A	V41K1322XL	OFF						S00E00.205
703-02		CMD	MPS		MPS E3 LH2 PREVLV (PV6) CL CMD B	V41K1323XL	OFF						S00E00.205
703-03		CMD	MPS		MPS E3 LH2 PREVLV (PV6) CL CMD C	V41K1324XL	OFF						S00E00.205
703-04		OMSG	INTG		E-3 LH2 INLET OVERPRESS - G004 EXECUTED								
703-05		END	G004										

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ G006 REPLACE FAILED ET LH2 PRESS NO. 1 $								
					$ IF PREVIOUS XDUCER SWAPOUT HAS OCCURRED, LOG VIOLATION OF T41P1700C1 $								
704-00		LABL	INTG			G006							
704-01		VFY	LH2		REPLACE LH2 ULLAGE PRESS NO1 XDCR	N41K1700XL	OFF			GTO ST12			
704-02		VFY	LH2		REPLACE LH2 ULLAGE PRESS NO2 XDCR	N41K1701XL	OFF			GTO ST12			
704-03		VFY	LH2		REPLACE LH2 ULLAGE PRESS NO3 XDCR	N41K1702XL	OFF			GTO ST12			
704-04		CMD	LH2		REPLACE LH2 ULL PRESS XDCR 1 CMD	V41K1700XL	ON						
704-05		CMD	LH2		REPLACE LH2 ULLAGE PRESS NO1 XDCR	N41K1700XL	ON						
					$ DELAY .5 SECONDS $								
					$ 3 OF 3 ULLAGE PRESS XDCRS REQD $								
704-06		CVFY	LH2		ET-LH2 ULLAGE PRESS NO 1	T41P1700C1	40.9	44.1	PSIA	INHB MENG		ET-05	
704-07		CVFY	LH2		ET-LH2 ULLAGE PRESS NO 2	T41P1701C1	40.9	44.1	PSIA	INHB MENG		ET-05	
704-08		CVFY	LH2		ET-LH2 ULLAGE PRESS NO 3	T41P1702C1	40.9	44.1	PSIA	INHB MENG		ET-05	
704-09	ST12	END	G006										
					$ G007 REPLACE FAILED ET LH2 PRESS NO.2 $								
					$ IF PREVIOUS XDUCER SWAPOUT HAS OCCURRED, LOG VIOLATION OF T41P1701C1 $								
705-00		LABL	INTG			G007							
705-01		VFY	LH2		REPLACE LH2 ULLAGE PRESS NO1 XDCR	N41K1700XL	OFF			GTO ST12			
705-02		VFY	LH2		REPLACE LH2 ULLAGE PRESS NO2 XDCR	N41K1701XL	OFF			GTO ST12			
705-03		VFY	LH2		REPLACE LH2 ULLAGE PRESS NO3 XDCR	N41K1702XL	OFF			GTO ST12			
705-04		CMD	LH2		REPLACE LH2 ULL PRESS XDCR 2 CMD	V41K1701XL	ON						
705-05		CMD	LH2		REPLACE LH2 ULLAGE PRESS NO2 XDCR	N41K1701XL	ON						
					$ DELAY .5 SECONDS $								
					$ 3 OF 3 ULLAGE PRESS XDCRS REQD $								
705-06		CVFY	LH2		ET-LH2 ULLAGE PRESS NO 1	T41P1700C1	40.9	44.1	PSIA	INHB MENG		ET-05	
705-07		CVFY	LH2		ET-LH2 ULLAGE PRESS NO 2	T41P1701C1	40.9	44.1	PSIA	INHB MENG		ET-05	
705-08		CVFY	LH2		ET-LH2 ULLAGE PRESS NO 3	T41P1702C1	40.9	44.1	PSIA	INHB MENG		ET-05	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
705-09	ST12		END	G007									
					$ G008 REPLACE FAILED ET LH2 PRESS NO.3 $								
					$ IF PREVIOUS XDUCER SWAPOUT HAS OCCURRED, LOG VIOLATION OF T41P1702C1 $								
706-00			LABL	INTG		G008							
706-01			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO1 XDCR	N41K1700XL	OFF			GTO ST12			
706-02			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO2 XDCR	N41K1701XL	OFF			GTO ST12			
706-03			VFY	LH2	REPLACE LH2 ULLAGE PRESS NO3 XDCR	N41K1702XL	OFF			GTO ST12			
706-04			CMD	LH2	REPLACE LH2 ULL PRESS XDCR 3 CMD	V41K1702XL	ON						
706-05			CMD	LH2	REPLACE LH2 ULLAGE PRESS NO3 XDCR	N41K1702XL	ON						
					$ DELAY .5 SECONDS $								
					$ 3 OF 3 ULLAGE PRESS XDCRS REQD $								
706-06			CVFY	LH2	ET-LH2 ULLAGE PRESS NO 1	T41P1700C1	40.9	44.1	PSIA	INHB MENG		ET-05	
706-07			CVFY	LH2	ET-LH2 ULLAGE PRESS NO 2	T41P1701C1	40.9	44.1	PSIA	INHB MENG		ET-05	
706-08			CVFY	LH2	ET-LH2 ULLAGE PRESS NO 3	T41P1702C1	40.9	44.1	PSIA	INHB MENG		ET-05	
706-09	ST12		END	G008									
					$ G009 REPLACE FAILED ET LO2 PRESS NO.1 $								
					$ IF PREVIOUS XDUCER SWAPOUT HAS OCCURRED, LOG VIOLATION OF T41P1750C1 $								
707-00			LABL	INTG		G009							
707-01			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO1 XDCR	N41K1750XL	OFF			GTO ST12			
707-02			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO2 XDCR	N41K1751XL	OFF			GTO ST12			
707-03			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO3 XDCR	N41K1752XL	OFF			GTO ST12			
707-04			CMD	LO2	REPLACE LO2 ULL PRESS XDCR 1 CMD	V41K1750XL	ON						
707-05			CMD	LO2	REPLACE LO2 ULLAGE PRESS NO1 XDCR	N41K1750XL	ON						
					$ DELAY .5 SECONDS $								
					$ 2 OF 3 ULLAGE PRESS XDCRS REQD $								
707-06			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.1	T41P1750C1	19.3	22.5	PSIG	2 OF 3		ET-06	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
707-07			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.2	T41P1751C1	19.3	22.5	PSIG	2 OF 3		ET-06	
707-08			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.3	T41P1752C1	19.3	22.5	PSIG	INHB MENG		ET-06	
707-09	ST12				END	G009							
					$ G010 REPLACE FAILED ET LO2 PRESS NO.2 $								
					$ IF PREVIOUS XDUCER SWAPOUT HAS OCCURRED, LOG VIOLATION OF T41P1751C1 $								
708-00			LABL	INTG		G010							
708-01			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO1 XDCR	N41K1750XL	OFF			GTO ST12			
708-02			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO2 XDCR	N41K1751XL	OFF			GTO ST12			
708-03			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO3 XDCR	N41K1752XL	OFF			GTO ST12			
708-04			CMD	LO2	REPLACE LO2 ULL PRESS XDCR 2 CMD	V41K1751XL	ON						
708-05			CMD	LO2	REPLACE LO2 ULLAGE PRESS NO2 XDCR	N41K1751XL	ON						
					$ DELAY .5 SECONDS $								
					$ 2 OF 3 ULLAGE PRESS XDCRS REQD $								
708-06			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.1	T41P1750C1	19.3	22.5	PSIG	2 OF 3		ET-06	
708-07			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.2	T41P1751C1	19.3	22.5	PSIG	2 OF 3		ET-06	
708-08			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.3	T41P1752C1	19.3	22.5	PSIG	INHB MENG		ET-06	
708-09	ST12				END	G010							
					$ G011 REPLACE FAILED ET LO2 PRESS NO.3 $								
					$ IF PREVIOUS XDUCER SWAPOUT HAS OCCURRED, LOG VIOLATION OF T41P1752C1 $								
709-00			LABL	INTG		G011							
709-01			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO1 XDCR	N41K1750XL	OFF			GTO ST12			
709-02			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO2 XDCR	N41K1751XL	OFF			GTO ST12			
709-03			VFY	LO2	REPLACE LO2 ULLAGE PRESS NO3 XDCR	N41K1752XL	OFF			GTO ST12			
709-04			CMD	LO2	REPLACE LO2 ULL PRESS XDCR 3 CMD	V41K1752XL	ON						
709-05			CMD	LO2	REPLACE LO2 ULLAGE PRESS NO3 XDCR	N41K1752XL	ON						
					$ DELAY .5 SECONDS $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ 2 OF 3 ULLAGE PRESS XDCRS REQD $								
709-06			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.1	T41P1750C1	19.3	22.5	PSIG	2 OF 3		ET-06	
709-07			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.2	T41P1751C1	19.3	22.5	PSIG	2 OF 3		ET-06	
709-08			CVFY	LO2	ET-LO2 ULLAGE PRESSURE NO.3	T41P1752C1	19.3	22.5	PSIG	INHB MENG		ET-06	
709-09	ST12		END	G011									

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				

```
                        $ G012 PASS FSM OR BFS GPC ERR $
710-00          LABL    INTG                                    G012

                        $ DPS ERROR DECODE $
                        $ THE LOW FIELD IDENTIFIES THE DECODE VALUE
                          IN DECIMAL, THE HIGH FIELD IN HEX.          $

710-01          VFY     INTG    DPS LCC VIOLATION                   N03IS168D                       DISPLAY
                                $ MCDS BITE ERROR (PASS)            N03IS168D   2       X0002       INHB MSEQ $     DPS-01
                                $ GPC BITE (PASS) ERROR             N03IS168D   7       X0007       INHB MENG $     DPS-05
                                $ LAST GPC ERRORCOUNT               N03IS168D   12      X000C       INHB MENG $     DPS-09
                                $ MDM OUTPUT FAULT SUM              N03IS168D   23      X0017       INHB MENG $     DPS-20
                                $ SUMWORD ICC FAULT SUM             N03IS168D   24      X0018       INHB MENG $     DPS-21
                                $ PASS I/O ERROR LOG                N03IS168D   25      X0019       INHB MSEQ $     DPS-22
                                $ ME SHUTDOWN SW CONTACT DISAGREE   N03IS168D   300     X012C       INHB MSEQ $     SSME-36
                                $ GPC BITE (BFS) ERROR              N03IS168D   505     X01F9       INHB MENG $     BFS-04
                                $ MCDS BITE ERROR (BFS)             N03IS168D   511     X01FF       INHB MSEQ $     BFS-10
                                $ BFS I/O ERROR LOG                 N03IS168D   513     X0201       INHB MSEQ $     BFS-12

710-02          END     G012
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SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ G013 TERMINATE LOX REPLENISH $								
711-00			LABL	INTG		G013							
711-01			VFY	LO2	LOX FLIGHT MASS	N03IS008E	ON			INHB MPS4			S00FM0.043
711-02			VFY	INTG	MPS E1 LO2 INLET TEMP	V41T1131C1	NOLO	-287.7	DEGF	2 OF 3		MPS-24	S00FM0.041
711-03			VFY	INTG	MPS E2 LO2 INLET TEMP	V41T1231C1	NOLO	-287.7	DEGF	2 OF 3		MPS-24	S00FM0.041
711-04			VFY	INTG	MPS E3 LO2 INLET TEMP	V41T1331C1	NOLO	-287.7	DEGF	INHB MPS4		MPS-24	S00FM0.041
711-05			VFY	INTG	GLS-GO FOR T-9 GLS START	M009	ON			GTO ST10			
711-06			VFY	INTG	GLS-GO FOR OAA RETRACT	MOAA	ON			GTO ST10			
711-07			VFY	INTG	GLS-GO FOR APU START	MAPU	ON			GTO ST10			
711-08			VFY	INTG	GLS-GO FOR PURGE SEQ.4	MPS4	ON			GTO ST10			
711-09			VFY	INTG	GLS-GO ET LO2 PRE-PRESSURIZATION	MLOX	ON			GTO ST10			
711-10			VFY	INTG	GLS-GO FOR ET LH2 REPLN TERM	MLH2	ON			GTO ST10			
711-11			VFY	INTG	GLS-GO FOR AUTO SEQ START	MSEQ	ON			GTO ST10			
711-12			VFY	INTG	GLS-GO FOR SSME IGNITION	MENG	ON			GTO ST10			
711-13			VFY	INTG	GLS-GO FOR SRB IGNITION	MSRB	ON			GTO ST10			
711-14			VFY	INTG	GLS-NO LCC-1 FAILURES	LCC-1	ON			GTO ST10			
711-15			VFY	INTG	GLS-NO LCC-2 FAILURES	LCC-2	ON			GTO ST10			
711-16			VFY	INTG	GLS-NO LCC-3 FAILURES	LCC-3	ON			GTO ST10			
711-17			VFY	INTG	GLS-NO LCC-4 FAILURES	LCC-4	ON			GTO ST10			
711-18			VFY	INTG	MANUAL HOLD		ON			GTO ST10			
711-19			CMD	LO2	GO FOR TERMINATE LOX REPLENISH	N007INTGR	ON						S00FM0.043
711-20			MSG	INTG	START TERM LOX RPL								
					$$ PROPELLANT S/W ISSUES LO2 I/B FILL VLV OP CMD OFF <V41K1503NL> $$								
					$$ PROPELLANT S/W ISSUES LO2 I/B FILL VLV CL CMD ON <V41K1512XL> $$								
					$$ PROPELLANT S/W ISSUES LO2 I/B FILL VLV OP CMD A OFF <V41K1501XL> $$								
					$$ PROPELLANT S/W ISSUES LO2 I/B FILL VLV OP CMD B OFF <V41K1502XL> $$								
					$ DELAY 10 SECONDS $								
711-21			VFY	LO2	LOX REPL TERMINATION IN PROGRESS	N03IS010E	ON			INHB MPS4			
711-23			END	G013									
711-24	ST10		MSG	INTG	SKIPPED LOX REPLENISH TERM								
711-25			END	G013									

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ G014 INITIATE SSME HEATSHIELD WATER $								
712-00		LABL	INTG			G014							
					$ ARM HEATSHIELD WATER $								
712-01		CMD	WATR		PTCR FR CMD BUS PWR ON CMD	GWDKPT08E	ON						
712-02		CMD	WATR		PTCR FR CMD BUS PWR ON CMD	GWDKPT10E	ON						
712-03		CMD	WATR		MLP ORBR HS V336-337 ARM CMD	GWDKLU27E	ON						
					$ OPEN VLV 336 AND VLV 337 $								
712-04		CMD	WATR		MLP ORBR HS V336-337 OP CMD	GWDKLU28E	ON						
712-05		CMD	WATR		MLP ORBR HS V336-337 CL CMD	GWDKLU29E	OFF						
712-06		CMD	WATR		MLP ORBR HS V336-337 CL CMD	GWDKLU71E	OFF						
712-07		MSG	INTG		SSME HEATSHIELD WATER SPRAY INITIATED								
					$ DELAY 5 SECONDS $								
712-08		CVFY	MPS		SSME C/O FD38 ALARM ON	GLHX7473E	OFF			CPER G014			
712-09		CVFY	MPS		SSME C/O FD39 ALARM ON	GLHX7483E	OFF			CPER G014			
712-10		END	G014										

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				

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                                $ G015 BACKUP CONSOLE CRASH $
                                $ THIS CPER DESCRIBES HOW A BACKUP CONSOLE FAILURE WILL BE
                                  HANDLED. IF THE BACKUP CONSOLE IS CONFIGURED AS MAINLINE,
                                  A HOLD RESULTS PRIOR TO T-9M AND CUTOFF AFTER. IF THE
                                  CONSOLE IS CONFIGURED AS THE GLS BACKUP CONSOLE, A HOLD
                                  WILL BE INITIATED PRIOR TO T-5M AND CUTOFF AFTER T-5M. $

713-00          LABL    INTG                                    G015
713-01          VFY     INTG    GLS MAINLINE CONSOLE            N03IS270D  2            GTO ST11
                                $ MAINLINE RUNNING IN BACKUP CONSOLE $
713-02          VFY     INTG    $ MAINLINE HAS NOT PROGRESSED PAST M009 $               GTO ST10
713-03          VFY     INTG    BACKUP TYPE II CONSOLE GO MODE  SBKUPGO    ON           HOLD T-9
                                GTO ST13

                                $ MAINLINE IS PAST M009 $
713-04  ST10    VFY     INTG    BACKUP TYPE II CONSOLE GO MODE  SBKUPGO    ON           EXIT
                                GTO ST13


                                $ BACKUP IS NOT MAINLINE CONSOLE $
713-05  ST11    VFY     INTG    CCM CONSOLE                     N03IS175D  3            GTO ST13

                                $ INTERRUPT PROCESSORS RUNNING IN BACKUP $
713-06          VFY     INTG    $ MAINLINE HAS NOT PROGRESSED PAST MAPU $               GTO ST12
713-07          VFY     INTG    BACKUP TYPE II CONSOLE GO MODE  SBKUPGO    ON           INHB MSRB
                                GTO ST13


                                $ MAINLINE PAST MAPU $
713-08  ST12    VFY     INTG    BACKUP TYPE II CONSOLE GO MODE  SBKUPGO    ON           EXIT
713-09  ST13    END     G015
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SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
714-00			LABL	INTG	$ G016 RUDDER PEDAL TRACKING CHECK $								
					G016								
					$ IN THE FOLLOWING SEQUENCES THE VALUE OF THE FIRST MEASUREMENT $								
					$ IS VERIFIED TO BE WITHIN THE SPECIFIED BAND, WHERE (N) IS THE $								
					$ VALUE OF THE SECOND MEASUREMENT. $								
					$ DELAY 2 SECONDS $								
714-01			VFY	FCL	LEFT RUDDER PEDAL CMD-A	V72K1530C1 V72K1531C1	N+3.6	N-3.6	DEG	INHB MSEQ		GNC-03	
714-02			VFY	FCL	LEFT RUDDER PEDAL CMD-B	V72K1531C1 V72K1532C1	N+3.6	N-3.6	DEG	INHB MSEQ		GNC-03	
714-03			VFY	FCL	LEFT RUDDER PEDAL CMD-C	V72K1532C1 V72K1530C1	N+3.6	N-3.6	DEG	INHB MSEQ		GNC-03	
714-04			VFY	FCL	RIGHT RUDDER PEDAL CMD-A	V72K1540C1 V72K1541C1	N+3.6	N-3.6	DEG	INHB MSEQ		GNC-03	
714-05			VFY	FCL	RIGHT RUDDER PEDAL CMD-B	V72K1541C1 V72K1542C1	N+3.6	N-3.6	DEG	INHB MSEQ		GNC-03	
714-06			VFY	FCL	RIGHT RUDDER PEDAL CMD-C	V72K1542C1 V72K1540C1	N+3.6	N-3.6	DEG	INHB MSEQ		GNC-03	
714-07			END	G016									

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ G017 LEFT RHC TRACKING CHECK $								
715-00			LABL	INTG	G017								
					$ IN THE FOLLOWING SEQUENCES THE VALUE OF THE FIRST MEASUREMENT $								
					$ IS VERIFIED TO BE WITHIN THE SPECIFIED BAND, WHERE (N) IS THE $								
					$ VALUE OF THE SECOND MEASUREMENT. $								
					$ DELAY 2 SECONDS $								
715-01			VFY	FCL	LH RHC ROLL CMD-A	V72K1155C1 V72K1170C1	N-6.8	N+6.8	DEG	INHB MSEQ		GNC-01	
715-02			VFY	FCL	LH RHC ROLL CMD-B	V72K1170C1 V72K1185C1	N-6.8	N+6.8	DEG	INHB MSEQ		GNC-01	
715-03			VFY	FCL	LH RHC ROLL CMD-C	V72K1185C1 V72K1155C1	N-6.8	N+6.8	DEG	INHB MSEQ		GNC-01	
715-04			VFY	FCL	LH RHC PITCH CMD-A	V72K1156C1 V72K1171C1	N-5.1	N+5.1	DEG	INHB MSEQ		GNC-01	
715-05			VFY	FCL	LH RHC PITCH CMD-B	V72K1171C1 V72K1186C1	N-5.1	N+5.1	DEG	INHB MSEQ		GNC-01	
715-06			VFY	FCL	LH RHC PITCH CMD-C	V72K1186C1 V72K1156C1	N-5.1	N+5.1	DEG	INHB MSEQ		GNC-01	
715-07			VFY	FCL	LH RHC YAW CMD-A	V72K1157C1 V72K1172C1	N-2.8	N+2.8	DEG	INHB MSEQ		GNC-01	
715-08			VFY	FCL	LH RHC YAW CMD-B	V72K1172C1 V72K1187C1	N-2.8	N+2.8	DEG	INHB MSEQ		GNC-01	
715-09			VFY	FCL	LH RHC YAW CMD-C	V72K1187C1 V72K1157C1	N-2.8	N+2.8	DEG	INHB MSEQ		GNC-01	
715-10			END	G017									

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
716-00			LABL	INTG	$ G018 RIGHT RHC TRACKING CHECK $								
					G018								
					$ IN THE FOLLOWING SEQUENCES THE VALUE OF THE FIRST MEASUREMENT $								
					$ IS VERIFIED TO BE WITHIN THE SPECIFIED BAND, WHERE (N) IS THE $								
					$ VALUE OF THE SECOND MEASUREMENT. $								
					$ DELAY 2 SECONDS $								
716-01			VFY	FCL	RH RHC ROLL CMD-A	V72K1205C1 V72K1220C1	N-6.8	N+6.8	DEG	INHB MSEQ		GNC-01	
716-02			VFY	FCL	RH RHC ROLL CMD-B	V72K1220C1 V72K1235C1	N-6.8	N+6.8	DEG	INHB MSEQ		GNC-01	
716-03			VFY	FCL	RH RHC ROLL CMD-C	V72K1235C1 V72K1205C1	N-6.8	N+6.8	DEG	INHB MSEQ		GNC-01	
716-04			VFY	FCL	RH RHC PITCH CMD-A	V72K1206C1 V72K1221C1	N-5.1	N+5.1	DEG	INHB MSEQ		GNC-01	
716-05			VFY	FCL	RH RHC PITCH CMD-B	V72K1221C1 V72K1236C1	N-5.1	N+5.1	DEG	INHB MSEQ		GNC-01	
716-06			VFY	FCL	RH RHC PITCH CMD-C	V72K1236C1 V72K1206C1	N-5.1	N+5.1	DEG	INHB MSEQ		GNC-01	
716-07			VFY	FCL	RH RHC YAW CMD-A	V72K1207C1 V72K1222C1	N-2.8	N+2.8	DEG	INHB MSEQ		GNC-01	
716-08			VFY	FCL	RH RHC YAW CMD-B	V72K1222C1 V72K1237C1	N-2.8	N+2.8	DEG	INHB MSEQ		GNC-01	
716-09			VFY	FCL	RH RHC YAW CMD-C	V72K1237C1 V72K1207C1	N-2.8	N+2.8	DEG	INHB MSEQ		GNC-01	
716-10			END	G018									

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ G019 SHUTDOWN SRB HPU CONT'D $								
717-00			LABL	INTG		G019							
					$ THE FOLLOWING COMMANDS WILL BE $								
					$ REMOVED OR RESET AFTER THE $								
					$ RESPECTIVE HPU TURBINE SPEEDS $								
					$ INDICATE SHUTDOWN IS IN WORK $								
					$ IF LH RATE APU A TURBINE SPEED SENSOR 2 <40 KRPM $								
717-01			CMD	BHYD	LH HPU SYSTEM A-2 START CMD	B58K3017XL	OFF						S00E00.721
					$ IF LH RATE APU B TURBINE SPEED SENSOR 2 <40 KRPM $								
717-02			CMD	BHYD	LH HPU SYSTEM B-2 START CMD	B58K3019XL	OFF						S00E00.721
					$ IF RH RATE APU A TURBINE SPEED SENSOR 2 <40 KRPM $								
717-03			CMD	BHYD	RH HPU SYSTEM A-2 START CMD	B58K4017XL	OFF						S00E00.721
					$ IF RH RATE APU B TURBINE SPEED SENSOR 2 <40 KRPM $								
717-04			CMD	BHYD	RH HPU SYSTEM B-2 START CMD	B58K4019XL	OFF						S00E00.721
717-05			END G019										

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*                               *
*     CONCURRENT PROGRAMS       *
*                               *
* * * * * * * * * * * * * * * * *
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SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ P001 AERO-SURFACE PROFILE EVALUATION $								
800-00			LABL	FCL		P001							
					$ START AERO-SURFACE PROFILE $								
801-00			CMD	FCL	INITIATE AERO-SURFACE DRIVE CHEC	CMD-LS	ON						S00FM0.270
					$ READ SPEEDBRAKE ACTUATOR AND BODYFLAP POSITION FEEDBACK CHANNELS 1 THRU 4 $								
					$ FOR USE AS NULL (N) VALUE DURING AEROSURFACE PROFILE EVALUATION $								
					$ AERO-SURFACE MOVEMENT FROM INITIAL POSITION - 4 SECONDS INTO PROFILE $								
802-00			VFY	FCL	L INBD ELEVON ACTR CHAN 1 POSN	V58H0802A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-01			VFY	FCL	L INBD ELEVON ACTR CHAN 2 POSN	V58H0803A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-02			VFY	FCL	L INBD ELEVON ACTR CHAN 3 POSN	V58H0804A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-03			VFY	FCL	L INBD ELEVON ACTR CHAN 4 POSN	V58H0805A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-04			VFY	FCL	L OUTBD ELEVON ACTR CHAN 1 POSN	V58H0852A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-05			VFY	FCL	L OUTBD ELEVON ACTR CHAN 2 POSN	V58H0853A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-06			VFY	FCL	L OUTBD ELEVON ACTR CHAN 3 POSN	V58H0854A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-07			VFY	FCL	L OUTBD ELEVON ACTR CHAN 4 POSN	V58H0855A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-08			VFY	FCL	R INBD ELEVON ACTR CHAN 1 POSN	V58H0902A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-09			VFY	FCL	R INBD ELEVON ACTR CHAN 2 POSN	V58H0903A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-10			VFY	FCL	R INBD ELEVON ACTR CHAN 3 POSN	V58H0904A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-11			VFY	FCL	R INBD ELEVON ACTR CHAN 4 POSN	V58H0905A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-12			VFY	FCL	R OUTBD ELEVON ACTR CHAN 1 POSN	V58H0952A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-13			VFY	FCL	R OUTBD ELEVON ACTR CHAN 2 POSN	V58H0953A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-14			VFY	FCL	R OUTBD ELEVON ACTR CHAN 3 POSN	V58H0954A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-15			VFY	FCL	R OUTBD ELEVON ACTR CHAN 4 POSN	V58H0955A1	9.2	12.2	DEG	INHB MSEQ		GNC-25	
802-16			VFY	FCL	RUDDER ACTR CHAN 1 POSN	V57H0150A1	12.5	15.5	DEG	INHB MSEQ		GNC-28	
802-17			VFY	FCL	RUDDER ACTR CHAN 2 POSN	V57H0151A1	12.5	15.5	DEG	INHB MSEQ		GNC-28	
802-18			VFY	FCL	RUDDER ACTR CHAN 3 POSN	V57H0152A1	12.5	15.5	DEG	INHB MSEQ		GNC-28	
802-19			VFY	FCL	RUDDER ACTR CHAN 4 POSN	V57H0153A1	12.5	15.5	DEG	INHB MSEQ		GNC-28	
802-20			VFY	FCL	SPEED BRAKE ACTR CHAN 1 POSN	V57H0250A1	N+1	N+3	DEG	INHB MSEQ		GNC-28	
802-21			VFY	FCL	SPEED BRAKE ACTR CHAN 2 POSN	V57H0251A1	N+1	N+3	DEG	INHB MSEQ		GNC-28	
802-22			VFY	FCL	SPEED BRAKE ACTR CHAN 3 POSN	V57H0252A1	N+1	N+3	DEG	INHB MSEQ		GNC-28	
802-23			VFY	FCL	SPEED BRAKE ACTR CHAN 4 POSN	V57H0253A1	N+1	N+3	DEG	INHB MSEQ		GNC-28	
802-24			VFY	FCL	BODY FLAP POSN FDBK-1	V57H0065C1	N+1.5	N+4.5	DEG	INHB MSEQ		GNC-31	
802-25			VFY	FCL	BODY FLAP POSN FDBK-2	V57H0066C1	N+1.5	N+4.5	DEG	INHB MSEQ		GNC-31	
802-26			VFY	FCL	BODY FLAP POSN FDBK-3	V57H0067C1	N+1.5	N+4.5	DEG	INHB MSEQ		GNC-31	
802-27			VFY	FCL	BODY FLAP POSN FDBK-4	V57H0068C1	N+1.5	N+4.5	DEG	INHB MSEQ		GNC-31	
					$ AERO-SURFACE MOVEMENT - FROM INITIAL POSITION - 14 SEC INTO PROFILE $								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
803-00			VFY	FCL	L INBD ELEVON ACTR CHAN 1 POSN	V58H0802A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-01			VFY	FCL	L INBD ELEVON ACTR CHAN 2 POSN	V58H0803A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-02			VFY	FCL	L INBD ELEVON ACTR CHAN 3 POSN	V58H0804A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-03			VFY	FCL	L INBD ELEVON ACTR CHAN 4 POSN	V58H0805A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-04			VFY	FCL	L OUTBD ELEVON ACTR CHAN 1 POSN	V58H0852A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-05			VFY	FCL	L OUTBD ELEVON ACTR CHAN 2 POSN	V58H0853A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-06			VFY	FCL	L OUTBD ELEVON ACTR CHAN 3 POSN	V58H0854A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-07			VFY	FCL	L OUTBD ELEVON ACTR CHAN 4 POSN	V58H0855A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-08			VFY	FCL	R INBD ELEVON ACTR CHAN 1 POSN	V58H0902A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-09			VFY	FCL	R INBD ELEVON ACTR CHAN 2 POSN	V58H0903A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-10			VFY	FCL	R INBD ELEVON ACTR CHAN 3 POSN	V58H0904A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-11			VFY	FCL	R INBD ELEVON ACTR CHAN 4 POSN	V58H0905A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-12			VFY	FCL	R OUTBD ELEVON ACTR CHAN 1 POSN	V58H0952A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-13			VFY	FCL	R OUTBD ELEVON ACTR CHAN 2 POSN	V58H0953A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-14			VFY	FCL	R OUTBD ELEVON ACTR CHAN 3 POSN	V58H0954A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-15			VFY	FCL	R OUTBD ELEVON ACTR CHAN 4 POSN	V58H0955A1	-11.3	-8.3	DEG	INHB MSEQ		GNC-25	
803-16			VFY	FCL	RUDDER ACTR CHAN 1 POSN	V57H0150A1	-15.5	-12.5	DEG	INHB MSEQ		GNC-28	
803-17			VFY	FCL	RUDDER ACTR CHAN 2 POSN	V57H0151A1	-15.5	-12.5	DEG	INHB MSEQ		GNC-28	
803-18			VFY	FCL	RUDDER ACTR CHAN 3 POSN	V57H0152A1	-15.5	-12.5	DEG	INHB MSEQ		GNC-28	
803-19			VFY	FCL	RUDDER ACTR CHAN 4 POSN	V57H0153A1	-15.5	-12.5	DEG	INHB MSEQ		GNC-28	
803-20			VFY	FCL	SPEED BRAKE ACTR CHAN 1 POSN	V57H0250A1	N-3	N-1	DEG	INHB MSEQ		GNC-28	
803-21			VFY	FCL	SPEED BRAKE ACTR CHAN 2 POSN	V57H0251A1	N-3	N-1	DEG	INHB MSEQ		GNC-28	
803-22			VFY	FCL	SPEED BRAKE ACTR CHAN 3 POSN	V57H0252A1	N-3	N-1	DEG	INHB MSEQ		GNC-28	
803-23			VFY	FCL	SPEED BRAKE ACTR CHAN 4 POSN	V57H0253A1	N-3	N-1	DEG	INHB MSEQ		GNC-28	
803-24			VFY	FCL	BODY FLAP POSN FDBK-1	V57H0065C1	N-4.5	N-1.5	DEG	INHB MSEQ		GNC-31	
803-25			VFY	FCL	BODY FLAP POSN FDBK-2	V57H0066C1	N-4.5	N-1.5	DEG	INHB MSEQ		GNC-31	
803-26			VFY	FCL	BODY FLAP POSN FDBK-3	V57H0067C1	N-4.5	N-1.5	DEG	INHB MSEQ		GNC-31	
803-27			VFY	FCL	BODY FLAP POSN FDBK-4	V57H0068C1	N-4.5	N-1.5	DEG	INHB MSEQ		GNC-31	
					$ AERO-SURFACE NULL CHECK AT 19 SECONDS INTO PROFILE $								
804-00			VFY	FCL	L INBD ELEVON ACTR CHAN 1 POSN	V58H0802A1	-.52	1.18	DEG	INHB MSEQ		GNC-22	
804-01			VFY	FCL	L INBD ELEVON ACTR CHAN 2 POSN	V58H0803A1	-.52	1.18	DEG	INHB MSEQ		GNC-22	
804-02			VFY	FCL	L INBD ELEVON ACTR CHAN 3 POSN	V58H0804A1	-.52	1.18	DEG	INHB MSEQ		GNC-22	
804-03			VFY	FCL	L INBD ELEVON ACTR CHAN 4 POSN	V58H0805A1	-.52	1.18	DEG	INHB MSEQ		GNC-22	
804-04			VFY	FCL	L OUTBD ELEVON ACTR CHAN 1 POSN	V58H0852A1	-.36	1.34	DEG	INHB MSEQ		GNC-22	
804-05			VFY	FCL	L OUTBD ELEVON ACTR CHAN 2 POSN	V58H0853A1	-.36	1.34	DEG	INHB MSEQ		GNC-22	
804-06			VFY	FCL	L OUTBD ELEVON ACTR CHAN 3 POSN	V58H0854A1	-.36	1.34	DEG	INHB MSEQ		GNC-22	
804-07			VFY	FCL	L OUTBD ELEVON ACTR CHAN 4 POSN	V58H0855A1	-.36	1.34	DEG	INHB MSEQ		GNC-22	
804-08			VFY	FCL	R INBD ELEVON ACTR CHAN 1 POSN	V58H0902A1	-.52	1.18	DEG	INHB MSEQ		GNC-22	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
804-09			VFY	FCL	R INBD ELEVON ACTR CHAN 2 POSN	V58H0903A1	-.52	1.18	DEG	INHB MSEQ		GNC-22	
804-10			VFY	FCL	R INBD ELEVON ACTR CHAN 3 POSN	V58H0904A1	-.52	1.18	DEG	INHB MSEQ		GNC-22	
804-11			VFY	FCL	R INBD ELEVON ACTR CHAN 4 POSN	V58H0905A1	-.52	1.18	DEG	INHB MSEQ		GNC-22	
804-12			VFY	FCL	R OUTBD ELEVON ACTR CHAN 1 POSN	V58H0952A1	-.36	1.34	DEG	INHB MSEQ		GNC-22	
804-13			VFY	FCL	R OUTBD ELEVON ACTR CHAN 2 POSN	V58H0953A1	-.36	1.34	DEG	INHB MSEQ		GNC-22	
804-14			VFY	FCL	R OUTBD ELEVON ACTR CHAN 3 POSN	V58H0954A1	-.36	1.34	DEG	INHB MSEQ		GNC-22	
804-15			VFY	FCL	R OUTBD ELEVON ACTR CHAN 4 POSN	V58H0955A1	-.36	1.34	DEG	INHB MSEQ		GNC-22	
804-16			VFY	FCL	RUDDER ACTR CHAN 1 POSN	V57H0150A1	-0.95	0.95	DEG	INHB MSEQ		GNC-26	
804-17			VFY	FCL	RUDDER ACTR CHAN 2 POSN	V57H0151A1	-0.95	0.95	DEG	INHB MSEQ		GNC-26	
804-18			VFY	FCL	RUDDER ACTR CHAN 3 POSN	V57H0152A1	-0.95	0.95	DEG	INHB MSEQ		GNC-26	
804-19			VFY	FCL	RUDDER ACTR CHAN 4 POSN	V57H0153A1	-0.95	0.95	DEG	INHB MSEQ		GNC-26	
804-20			VFY	FCL	SPEED BRAKE ACTR CHAN 1 POSN	V57H0250A1	2.45	7.55	DEG	INHB MSEQ		GNC-26	
804-21			VFY	FCL	SPEED BRAKE ACTR CHAN 2 POSN	V57H0251A1	2.45	7.55	DEG	INHB MSEQ		GNC-26	
804-22			VFY	FCL	SPEED BRAKE ACTR CHAN 3 POSN	V57H0252A1	2.45	7.55	DEG	INHB MSEQ		GNC-26	
804-23			VFY	FCL	SPEED BRAKE ACTR CHAN 4 POSN	V57H0253A1	2.45	7.55	DEG	INHB MSEQ		GNC-26	
804-24			VFY	FCL	BODY FLAP POSN FDBK-1	V57H0065C1	-1.85	1.85	DEG	INHB MSEQ		GNC-30	
804-25			VFY	FCL	BODY FLAP POSN FDBK-2	V57H0066C1	-1.85	1.85	DEG	INHB MSEQ		GNC-30	
804-26			VFY	FCL	BODY FLAP POSN FDBK-3	V57H0067C1	-1.85	1.85	DEG	INHB MSEQ		GNC-30	
804-27			VFY	FCL	BODY FLAP POSN FDBK-4	V57H0068C1	-1.85	1.85	DEG	INHB MSEQ		GNC-30	
804-28			END	P001									

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ P002 MPS GIMBAL PROFILE EVALUATION $								
805-00			LABL	FCL		P002							
					$ START MPS GIMBAL PROFILE $								
806-00			CMD	FCL	INITIATE MPS GIMBAL CHECK	CMD-LS	ON						S00FM0.300
					$ 7 SECONDS AFTER THE INITIATING CMD-LS - AVG 25 SAMPLES OF NEXT 6 MEAS. $								
807-00			VFY	FCL	MPS ENG 1 P ACTR POSN	V58H1100A1	4.5	7.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
807-01			VFY	FCL	MPS ENG 1 Y ACTR POSN	V58H1150A1	7.5	4.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
807-02			VFY	FCL	MPS ENG 2 P ACTR POSN	V58H1200A1	7.5	4.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
807-03			VFY	FCL	MPS ENG 2 Y ACTR POSN	V58H1250A1	7.5	4.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
807-04			VFY	FCL	MPS ENG 3 P ACTR POSN	V58H1300A1	4.5	7.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
807-05			VFY	FCL	MPS ENG 3 Y ACTR POSN	V58H1350A1	7.5	4.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
					$ 17 SECONDS AFTER THE INITIATING CMD-LS - AVG 25 SAMPLES OF NEXT 6 MEAS. $								
808-00			VFY	FCL	MPS ENG 1 P ACTR POSN	V58H1100A1	-7.5	-4.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
808-01			VFY	FCL	MPS ENG 1 Y ACTR POSN	V58H1150A1	-4.5	-7.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
808-02			VFY	FCL	MPS ENG 2 P ACTR POSN	V58H1200A1	-4.5	-7.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
808-03			VFY	FCL	MPS ENG 2 Y ACTR POSN	V58H1250A1	-4.5	-7.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
808-04			VFY	FCL	MPS ENG 3 P ACTR POSN	V58H1300A1	-7.5	-4.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
808-05			VFY	FCL	MPS ENG 3 Y ACTR POSN	V58H1350A1	-4.5	-7.5	DEG	INHB MSEQ		GNC-42	S00FM0.300
808-06			END	P002									

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ P003 SRB GIMBAL PROFILE EVALUATION $								
809-00			LABL	BHYD	P003								
					$ START GIMBAL PROFILE $								S00FS0.030
810-00			CMD	BHYD	SRB FCS/HYD VERIF FLAG	CMD-LS	ON						
					$ READ ACTUATOR POSITION AT PROFILE COMPLETION FOR USE AS $								
					$ NULL (N) VALUE DURING PROFILE EVALUATION. $								
					$ ACTUATOR MOVEMENT FROM INITIAL POSITION - FIRST 2 SECONDS OF PROFILE $								
811-00			VFY	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	.63+N	NOHI	IN	EXIT			BTVC-10
811-01			VFY	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	.63+N	NOHI	IN	EXIT			BTVC-10
811-02			VFY	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	.63+N	NOHI	IN	EXIT			BTVC-10
811-03			VFY	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	.63+N	NOHI	IN	EXIT			BTVC-10
					$ ACTUATOR MOVEMENT - LAST 2 SECONDS OF PROFILE $								
812-00			VFY	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	NOLO	-.63+N	IN	EXIT			BTVC-10
812-01			VFY	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	NOLO	-.63+N	IN	EXIT			BTVC-10
812-02			VFY	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	NOLO	-.63+N	IN	EXIT			BTVC-10
812-03			VFY	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	NOLO	-.63+N	IN	EXIT			BTVC-10
					$ ACTUATOR NULL CHECK AT PROFILE COMPLETION $								
813-00			VFY	BHYD	LH POSITION TVC ROCK ACTUATOR	B58H1150C1	-.5	.5	IN	EXIT			BTVC-10
813-01			VFY	BHYD	RH POSITION TVC ROCK ACTUATOR	B58H2150C1	-.5	.5	IN	EXIT			BTVC-10
813-02			VFY	BHYD	LH POSITION TVC TILT ACTUATOR	B58H1151C1	-.5	.5	IN	EXIT			BTVC-10
813-03			VFY	BHYD	RH POSITION TVC TILT ACTUATOR	B58H2151C1	-.5	.5	IN	EXIT			BTVC-10
					$ DELAY 1.0 SECOND $								
814-00			VFY	BHYD	LH DELTA PRESS SECONDARY ROCK	SUM13	-530	+460	PSID	EXIT			BTVC-13
			SUM		LH DELTA PRESS SEC A ROCK SUM13	B58P1311A1							
			SUM		LH DELTA PRESS SEC B ROCK SUM13	B58P1312A1							
			SUM		LH DELTA PRESS SEC C ROCK SUM13	B58P1313A1							
			SUM		LH DELTA PRESS SEC D ROCK SUM13	B58P1314A1							
815-00			VFY	BHYD	LH DELTA PRESS SECONDARY TILT	SUM14	-530	+460	PSID	EXIT			BTVC-13
			SUM		LH DELTA PRESS SEC A TILT SUM14	B58P1315A1							
			SUM		LH DELTA PRESS SEC B TILT SUM14	B58P1316A1							
			SUM		LH DELTA PRESS SEC C TILT SUM14	B58P1317A1							
			SUM		LH DELTA PRESS SEC D TILT SUM14	B58P1318A1							
816-00			VFY	BHYD	RH DELTA PRESS SECONDARY ROCK	SUM15	-530	+460	PSID	EXIT			BTVC-13

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
			SUM		RH DELTA PRESS SEC A ROCK SUM15	B58P2311A1							
			SUM		RH DELTA PRESS SEC B ROCK SUM15	B58P2312A1							
			SUM		RH DELTA PRESS SEC C ROCK SUM15	B58P2313A1							
			SUM		RH DELTA PRESS SEC D ROCK SUM15	B58P2314A1							
817-00			VFY	BHYD	RH DELTA PRESS SECONDARY TILT	SUM16	-530	+460	PSID	EXIT		BTVC-13	
			SUM		RH DELTA PRESS SEC A TILT SUM16	B58P2315A1							
			SUM		RH DELTA PRESS SEC B TILT SUM16	B58P2316A1							
			SUM		RH DELTA PRESS SEC C TILT SUM16	B58P2317A1							
			SUM		RH DELTA PRESS SEC D TILT SUM16	B58P2318A1							
			END	P003									

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ P004 GOX VENT ARM RETRACT $								
818-00			LABL	GOX		P004							
819-00			CMD	GOX	HTR CTL NO.2-LOAD CONNECT	GSAK9210E	OFF						S00FM0.360
819-01			CMD	GOX	HTR CTL NO.2-LOAD CONNECT	GSAK9215E	OFF						S00FM0.360
819-02			CMD	GOX	HTR CTL NO.1-LOAD CONNECT	GSAK9160E	OFF						S00FM0.360
819-03			CMD	GOX	HTR CTL NO.1-LOAD CONNECT	GSAK9165E	OFF						S00FM0.360
819-04			CMD	GOX	HTR CTL NO.2-AC ON	GSAK9200E	OFF						S00FM0.360
819-05			CMD	GOX	HTR CTL NO.2-AC ON	GSAK9205E	OFF						S00FM0.360
819-06			CMD	GOX	HTR CTL NO.1-AC ON	GSAK9150E	OFF						S00FM0.360
819-07			CMD	GOX	HTR CTL NO.1-AC ON	GSAK9155E	OFF						S00FM0.360
819-08			CMD	GOX	A135918 INLET VLV PRI CTL-OPEN	GSAK9050E	ON						S00FM0.360
819-09			CMD	GOX	A135918 INLET VLV PRI CTL-OPEN	GSAK9055E	ON						S00FM0.360
					$ VERIFY WITHIN 2 SECS $								
819-10			VFY	GOX	A135918 INLET VLV PRI CTL-OPEN	GSAX9051E	ON			1 OF 2			S00FM0.360
819-11			VFY	GOX	A135918 INLET VLV PRI CTL-OPEN	GSAX9056E	ON			GTO S108			S00FM0.360
					GTO S110								
819-12	S108		CMD	GOX	A135920 IN VLV CTL SEL-SEC SEL	GSAK9060E	ON						S00FM0.360
819-13			CMD	GOX	A135920 IN VLV CTL SEL-SEC SEL	GSAK9065E	ON						S00FM0.360
819-14			CMD	GOX	A135916 IN VLV SEC CTL-OPEN	GSAK9040E	ON						S00FM0.360
819-15			CMD	GOX	A135916 IN VLV SEC CTL-OPEN	GSAK9045E	ON						S00FM0.360
					$ VERIFY WITHIN 2 SECS $								
820-00			VFY	GOX	A135920 IN VLV CTL SEL-SEC SEL	GSAX9061E	ON			1 OF 2			S00FM0.360
820-01			VFY	GOX	A135920 INLET VLV CTL SEL-SEC SEL	GSAX9066E	ON			AND			S00FM0.360
820-02			VFY	GOX	A135916 IN VLV SEC CTL-OPEN	GSAX9041E	ON			1 OF 2			S00FM0.360
820-03			VFY	GOX	A135916 INLET VLV SEC CTL-OPEN	GSAX9046E	ON			GTO S109			S00FM0.360
					GTO S110								
821-00	S109		CMD	GOX	A135900 PRI REG FLOW VLV-OPEN	GSAK9020E	ON						S00FM0.360
821-01			CMD	GOX	A135900 PRI REG FLOW VLV-OPEN	GSAK9025E	ON						S00FM0.360
821-02			CMD	GOX	A135903 SEC REG FLOW VLV-OPEN	GSAK9030E	ON						S00FM0.360
821-03			CMD	GOX	A135903 SEC REG FLOW VLV-OPEN	GSAK9035E	ON						S00FM0.360
					$ HEATED PURGE OFF $								
821-04	S110				DELAY 20 SEC								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ PRIMARY LOOP - HOOD UP $								
822-00		VFY	GOX		HOOD SECONDARY MODE SELECTED	NSAK0002X	OFF			GTO S123			S00FM0.370
822-01		CMD	GOX		A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	ON						S00FM0.370
822-02		CMD	GOX		A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	ON						S00FM0.370
					$ VERIFY WITHIN 5 SECONDS $								
823-00		VFY	GOX		6308A202 HOOD DOWN SWITCH NO.1	GSAX8331E	OFF			1 OF 4			S00FM0.370
823-01		VFY	GOX		6308A203 HOOD DOWN SWITCH NO.2	GSAX8332E	OFF			1 OF 4			S00FM0.370
823-02		VFY	GOX		6308A206 HOOD DOWN SWITCH NO.3	GSAX8333E	OFF			1 OF 4			S00FM0.370
823-03		VFY	GOX		A133716 HOOD POSITION INDICATION	GSAH8531A	5	NOHI	DEG	OR			S00FM0.370
823-04		VFY	GOX		6308A202 HOOD DOWN SWITCH NO.1	GSAX8336E	OFF			1 OF 4			S00FM0.370
823-05		VFY	GOX		6308A203 HOOD DOWN SWITCH NO.2	GSAX8337E	OFF			1 OF 4			S00FM0.370
823-06		VFY	GOX		6308A206 HOOD DOWN SWITCH NO.3	GSAX8338E	OFF			1 OF 4			S00FM0.370
823-07		VFY	GOX		A133716 HOOD POSITION INDICATION	GSAH8536A	5	NOHI	DEG	GTO S120			S00FM0.370
					$ REPEAT FOR NO MORE THAN 30 SECS ELSE GO TO S118 $								
824-00	S115	VFY	GOX		6308A200 HOOD UP SWITCH NO.1	GSAX8321E	ON			2 OF 4			S00FM0.370
824-01		VFY	GOX		6308A201 HOOD UP SWITCH NO.2	GSAX8322E	ON			2 OF 4			S00FM0.370
824-02		VFY	GOX		6308A205 HOOD UP SWITCH NO.3	GSAX8323E	ON			2 OF 4			S00FM0.370
824-03		VFY	GOX		A133716 HOOD POSITION INDICATION	GSAH8531A	45	NOHI	DEG	OR			S00FM0.370
824-04		VFY	GOX		6308A200 HOOD UP SWITCH NO.1	GSAX8326E	ON			2 OF 4			S00FM0.370
824-05		VFY	GOX		6308A201 HOOD UP SWITCH NO.2	GSAX8327E	ON			2 OF 4			S00FM0.370
824-06		VFY	GOX		6308A205 HOOD UP SWITCH NO.3	GSAX8328E	ON			2 OF 4			S00FM0.370
824-07		VFY	GOX		A133716 HOOD POSITION INDICATION	GSAH8536A	45	NOHI	DEG	GTO S115			S00FM0.370
					GTO S119								
824-08	S118	CMD	GOX		A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						S00FM0.370
824-09		CMD	GOX		A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						S00FM0.370
824-10		MSG			PRIMARY SYSTEM FAILED GO TO SECONDARY								
					GTO S123								
825-00	S119	CMD	GOX		A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						S00FM0.370
825-01		CMD	GOX		A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						S00FM0.370
					GTO S130								
					$ SECONDARY LOOP - HOOD UP $								
825-02	S120	MSG			PRIMARY SYSTEM FAILED GO TO SECONDARY								
825-03	S123	CMD	GOX		A133524 PRI HOOD UP VLV-OPEN	GSAK8310E	OFF						
825-04		CMD	GOX		A133524 PRI HOOD UP VLV-OPEN	GSAK8315E	OFF						S00FM0.370

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
825-05			CMD	GOX	HOOD SECONDARY MODE SELECTED	NSAK0002X	ON						S00FM0.370
825-06			CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	ON						S00FM0.370
825-07			CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	ON						S00FM0.370
					$ REPEAT FOR NO MORE THAN 30 SECS ELSE GO TO S126 INHB MSEQ $								
825-08	S125		VFY	GOX	6308A200 HOOD UP SWITCH NO.1	GSAX8321E	ON			2 OF 4			S00FM0.370
825-09			VFY	GOX	6308A201 HOOD UP SWITCH NO.2	GSAX8322E	ON			2 OF 4			S00FM0.370
825-10			VFY	GOX	6308A205 HOOD UP SWITCH NO.3	GSAX8323E	ON			2 OF 4			S00FM0.370
825-11			VFY	GOX	A133716 HOOD POSITION INDICATION	GSAH8531A	45	NOHI	DEG	OR			S00FM0.370
825-12			VFY	GOX	6308A200 HOOD UP SWITCH NO.1	GSAX8326E	ON			2 OF 4			S00FM0.370
825-13			VFY	GOX	6308A201 HOOD UP SWITCH NO.2	GSAX8327E	ON			2 OF 4			S00FM0.370
825-14			VFY	GOX	6308A205 HOOD UP SWITCH NO.3	GSAX8328E	ON			2 OF 4			S00FM0.370
825-15			VFY	GOX	A133716 HOOD POSITION INDICATION	GSAH8536A	45	NOHI	DEG	GTO S125			S00FM0.370
					GTO S128					INHB MSEQ			
825-16	S126		CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	OFF						S00FM0.370
825-17			CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	OFF						S00FM0.370
825-18			MSG	GOX	SECONDARY SYSTEM FAILED TO RAISE HOOD								
					GTO S200								
826-00	S128		CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8280E	OFF						S00FM0.370
826-01			CMD	GOX	A133573 SEC HOOD UP VLV-OPEN	GSAK8285E	OFF						S00FM0.370
826-02	S130		CMD	GOX	A133680 EXTEND LOCK VALVE-CLOSE	GSAK8090E	ON						S00FM0.370
826-03			CMD	GOX	A133680 EXTEND LOCK VALVE-CLOSE	GSAK8095E	ON						S00FM0.370
826-04			CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8170E	OFF						S00FM0.370
826-05			CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8175E	OFF						S00FM0.370
826-06			CMD	GOX	A133501 PRI RTR V-RETRACT ARMED	GSAK8162E	ON						
826-07			CMD	GOX	A133501 PRI RTR V-RETRACT ARMED	GSAK8167E	ON						
826-08			CMD	GOX	A133501 PRI RTR V-RTR EXECUTE	GSAK8160E	ON						S00FM0.370
826-09			CMD	GOX	A133501 PRI RTR V-RTR EXECUTE	GSAK8165E	ON						S00FM0.370
					$ VERIFY WITHIN 3 SECS $								
826-08			VFY	GOX	A133508 PRI RETRACT VLV-RETRACT	GSAX8162E	ON			1 OF 2			S00FM0.370
826-09			VFY	GOX	A133508 PRI RETRACT VLV-RETRACT	GSAX8167E	ON			AND			S00FM0.370
826-10			VFY	GOX	A133509 PRI RETRACT VLV-RETRACT	GSAX8163E	ON			1 OF 2			S00FM0.370
826-11			VFY	GOX	A133509 PRI RETRACT VLV-RETRACT	GSAX8168E	ON			GTO S150			S00FM0.370
					$ VERIFY WITHIN 9 SECS $								
826-12			VFY	GOX	6308A109 ARM FULLY EXTENDED	GSAX8231E	OFF			1 OF 2			S00FM0.370

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
826-13			VFY	GOX	6308A109 ARM FULLY EXTENDED	GSAX8236E	OFF			GTO S150			S00FM0.370
					$ VERIFY WITHIN 50 SECS $								
826-14			VFY	GOX	6308A103 RETRACT SWITCH NO.1	GSAX8221E	ON			2 OF 3			S00FM0.370
826-15			VFY	GOX	6308A102 RETRACT SWITCH NO.2	GSAX8222E	ON			2 OF 3			S00FM0.370
826-16			VFY	GOX	A133566 ARM POSITION INDICATION	GSAH8191A	NOLO	2	DEG	OR			S00FM0.370
826-17			VFY	GOX	6308A103 RETRACT SWITCH NO. 1	GSAX8226E	ON			2 OF 3			S00FM0.370
826-18			VFY	GOX	6308A102 RETRACT SWITCH NO. 2	GSAX8227E	ON			2 OF 3			S00FM0.370
826-19			VFY	GOX	A133566 ARM POSITION INDICATION GTO S200	GSAH8196A	NOLO	2	DEG	GTO S150			S00FM0.370
827-00	S150		CMD	GOX	A133501 PRI RTR V-RTR EXECUTE	GSAK8160E	OFF						
827-01			CMD	GOX	A133501 PRI RTR V-RTR EXECUTE	GSAK8165E	OFF						S00FM0.370
827-02			CMD	GOX	A133501 PRI RTR V-RETRACT ARMED	GSAK8162E	OFF						S00FM0.370
827-03			CMD	GOX	A133501 PRI RTR V-RETRACT ARMED	GSAK8167E	OFF						
827-04			CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8170E	ON						
827-05			CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8175E	ON						S00FM0.370
					$ DELAY 2 SECONDS $								S00FM0.370
827-06			CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8170E	OFF						
827-07			CMD	GOX	A133501 PRIMARY RETRACT VLV-RESET	GSAK8175E	OFF						S00FM0.370
827-08			CMD	GOX	A133507 SEC RTR V-RETRACT ARMED	GSAK8182E	ON						S00FM0.370
827-09			CMD	GOX	A133507 SEC RTR V-RETRACT ARMED	GSAK8187E	ON						
827-10			CMD	GOX	A133507 SEC RTR V-RTR EXECUTE	GSAK8180E	ON						
827-11			CMD	GOX	A133507 SEC RTR V-RTR EXECUTE	GSAK8185E	ON						S00FM0.370
					$ LATCH GOX ARM $								S00FM0.370
827-12	S200		CMD	GOX	A133415 LATCHBACK VALVE-LATCH	GSAK8140E	ON						
827-13			CMD	GOX	A133415 LATCHBACK VALVE-LATCH	GSAK8145E	ON						
827-14			END	P004									

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ P005 OAA CONFIGURE FOR EXTEND AND HYDRAULIC ACCUMULATOR RECHARGE $								
850-00		LABL	INTG			P005							
					$ OAA CONFIGURE FOR EXTEND $								
851-00		CMD	ARMS		OAA OPEN PRI RETRACT SUPPLY V	GSAK7210E	OFF						
851-01		CMD	ARMS		OAA OPEN PRI RETRACT SUPPLY V	GSAK7215E	OFF						
851-02		CMD	ARMS		OAA OPEN PRI RETRACT RETURN V	GSAK7230E	OFF						
851-03		CMD	ARMS		OAA OPEN PRI RETRACT RETURN V	GSAK7235E	OFF						
851-04		CMD	ARMS		OAA OPEN SEC RETRACT SUPPLY V	GSAK7250E	OFF						
851-05		CMD	ARMS		OAA OPEN SEC RETRACT SUPPLY V	GSAK7255E	OFF						
851-06		CMD	ARMS		OAA OPEN SEC RETRACT RETURN V	GSAK7270E	OFF						
851-07		CMD	ARMS		OAA OPEN SEC RETRACT RETURN V	GSAK7275E	OFF						
852-00		CMD	ARMS		OAA CLOSE PRI RETRACT SUPPLY V	GSAK7200E	ON						
852-01		CMD	ARMS		OAA CLOSE PRI RETRACT SUPPLY V	GSAK7205E	ON						
852-02		CMD	ARMS		OAA CLOSE SEC RETRACT SUPPLY V	GSAK7240E	ON						
852-03		CMD	ARMS		OAA CLOSE SEC RETRACT SUPPLY V	GSAK7245E	ON						
852-04		CMD	ARMS		OAA CLOSE PRI RETRACT RETURN V	GSAK7220E	ON						
852-05		CMD	ARMS		OAA CLOSE PRI RETRACT RETURN V	GSAK7225E	ON						
852-06		CMD	ARMS		OAA CLOSE SEC RETRACT RETURN V	GSAK7260E	ON						
852-07		CMD	ARMS		OAA CLOSE SEC RETRACT RETURN V	GSAK7265E	ON						
					$ DELAY 1.0S $								
855-00		CMD	ARMS		OAA CLOSE PRI RETRACT SUPPLY V	GSAK7200E	OFF						
855-01		CMD	ARMS		OAA CLOSE PRI RETRACT SUPPLY V	GSAK7205E	OFF						
855-02		CMD	ARMS		OAA CLOSE SEC RETRACT SUPPLY V	GSAK7240E	OFF						
855-03		CMD	ARMS		OAA CLOSE SEC RETRACT SUPPLY V	GSAK7245E	OFF						
855-04		CMD	ARMS		OAA CLOSE PRI RETRACT RETURN V	GSAK7220E	OFF						
855-05		CMD	ARMS		OAA CLOSE PRI RETRACT RETURN V	GSAK7225E	OFF						
855-06		CMD	ARMS		OAA CLOSE SEC RETRACT RETURN V	GSAK7260E	OFF						
855-07		CMD	ARMS		OAA CLOSE SEC RETRACT RETURN V	GSAK7265E	OFF						
					$ OAA PWR REMOVAL FROM EXTEND LOCK $								
856-00		CMD	ARMS		OAA UNLOCK PRI EXTEND LOCK V	GSAK7120E	OFF						
856-01		CMD	ARMS		OAA UNLOCK PRI EXTEND LOCK V	GSAK7125E	OFF						
856-02		CMD	ARMS		OAA UNLOCK SEC EXTEND LOCK V	GSAK7140E	OFF						
856-03		CMD	ARMS		OAA UNLOCK SEC EXTEND LOCK V	GSAK7145E	OFF						
					$ OAA POSITION MONITOR $								
857-00		CVFY	ARMS		OAA PRI FULLY RTR SW-RETRACTED	GSAX7621E	ON			2 OF 3		GSE-12	

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
857-01			CVFY	ARMS	OAA SEC FULLY RTR SW-RETRACTED	GSAX7622E	ON			2 OF 3		GSE-12	
857-02			CVFY	ARMS	OAA POSITION INDICATION	GSAH7831A	NOLO	2	DEG	OR		GSE-12	
857-03			CVFY	ARMS	OAA PRI FULLY RTR SW-RETRACTED	GSAX7626E	ON			2 OF 3		GSE-12	
857-04			CVFY	ARMS	OAA SEC FULLY RTR SW-RETRACTED	GSAX7627E	ON			2 OF 3		GSE-12	
857-05			CVFY	ARMS	OAA POSITION INDICATOR	GSAH7836A	NOLO	2	DEG	INHB MENG		GSE-12	
					$ RETRY NEXT 2 SEQ NO MORE THAN ONCE $								
858-00	ST20		CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7080E	ON						
858-01			CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7085E	ON						
					$ DELAY 1.0S $								
859-00			VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE OPEN	GSAX7081E	ON			1 OF 4			
859-01			VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE OPEN	GSAX7086E	ON			1 OF 4			
859-02			VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE CLOSED	GSAX7082E	OFF			1 OF 4			
859-03			VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE CLOSED	GSAX7087E	OFF			GTO ST20			
					$ PRINT MSG IF FAILED AFTER RETRY $								
859-04			MSG		OAA ACCUM CHARGE ON-FAILED								
					$ DELAY 1 MIN 00 SECONDS $								
					$ VERIFY WITHIN 1 MIN 00 SECONDS $								
860-00	ST30		VFY	ARMS	OAA ACCUM LEVEL SW NO 1-NORMAL	GSAX7651E	ON			4 OF 4			
860-01			VFY	ARMS	OAA ACCUM LEVEL SW NO 2-NORMAL	GSAX7671E	ON			4 OF 4			
860-02			VFY	ARMS	OAA ACCUM LEVEL SW NO 3-NORMAL	GSAX7691E	ON			4 OF 4			
860-03			VFY	ARMS	OAA ACCUM LEVEL SW NO 4-NORMAL	GSAX7711E	ON			OR			
860-04			VFY	ARMS	OAA ACCUM LEVEL SW NO 1-NORMAL	GSAX7656E	ON			4 OF 4			
860-05			VFY	ARMS	OAA ACCUM LEVEL SW NO 2-NORMAL	GSAX7676E	ON			4 OF 4			
860-06			VFY	ARMS	OAA ACCUM LEVEL SW NO 3-NORMAL	GSAX7696E	ON			4 OF 4			
860-07			VFY	ARMS	OAA ACCUM LEVEL SW NO 4-NORMAL	GSAX7716E	ON			GTO ST30			
					$ PRINT MSG IF FAILED AFTER TIME EXPIRED $								
860-08			MSG		OAA ACCUM LVL SW FAILED-VFYD 1 MIN								
860-09			VFY	ARMS	OAA 3000 PSI GN2 PRESS SW-NORMAL	GSAX7731E	ON			1 OF 4		GSE-10	
860-10			VFY	ARMS	OAA 2700 PSI GN2 PRESS TRANSDUCER	GSAP7801A	2000	NOHI	PSIA	1 OF 4		GSE-10	
860-11			VFY	ARMS	OAA 3000 PSI GN2 PRESS SW-NORMAL	GSAX7736E	ON			1 OF 4		GSE-10	
860-12			VFY	ARMS	OAA 2700 PSI GN2 PRESS TRANSDUCER	GSAP7806A	2000	NOHI	PSIA	INHB MSEQ		GSE-10	
			MSG		OAA ACCUM GN2 PRESS FAILED-VFY								

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
860-13			VFY	ARMS	OAA ACCUM LEVEL SW NO 1-NORMAL	GSAX7651E	ON			2 OF 4		GSE-11	
860-14			VFY	ARMS	OAA ACCUM LEVEL SW NO 2-NORMAL	GSAX7671E	ON			2 OF 4		GSE-11	
860-15			VFY	ARMS	OAA ACCUM LEVEL SW NO 3-NORMAL	GSAX7691E	ON			2 OF 4		GSE-11	
860-16			VFY	ARMS	OAA ACCUM LEVEL SW NO 4-NORMAL	GSAX7711E	ON			OR		GSE-11	
860-17			VFY	ARMS	OAA ACCUM LEVEL SW NO 1-NORMAL	GSAX7656E	ON			2 OF 4		GSE-11	
860-18			VFY	ARMS	OAA ACCUM LEVEL SW NO 2-NORMAL	GSAX7676E	ON			2 OF 4		GSE-11	
860-19			VFY	ARMS	OAA ACCUM LEVEL SW NO 3-NORMAL	GSAX7696E	ON			2 OF 4		GSE-11	
860-20			VFY	ARMS	OAA ACCUM LEVEL SW NO 4-NORMAL	GSAX7716E	ON			INHB MSEQ		GSE-11	
			MSG		OAA ACCUM LEVEL SW FAILED-VFY								
860-21			CMD	ARMS	A101409 EMERGENCY EXT INHIBIT	GSAK7320E	ON						
860-22			CMD	ARMS	A101409 EMERGENCY EXT INHIBIT	GSAK7325E	ON						
860-23			CMD	ARMS	A101410 EMERGENCY EXT INHIBIT	GSAK7330E	ON						
860-24			CMD	ARMS	A101410 EMERGENCY EXT INHIBIT	GSAK7335E	ON						
					$ HYD ACCUM RECHARGE SECURING $								
					$ RETRY NEXT 2 SEQUENCES NO MORE THAN ONCE $								
861-00	ST40		CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7080E	OFF						
861-01			CMD	ARMS	OAA OPEN ACCUM CHARGING V	GSAK7085E	OFF						
					$ DELAY 1.0S $								
862-00			VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE OPEN	GSAX7081E	OFF			1 OF 4			
862-01			VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE OPEN	GSAX7086E	OFF			1 OF 4			
862-02			VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE CLOSED	GSAX7082E	ON			1 OF 4			
862-03			VFY	ARMS	OAA ACCUM CHARGE V SW-VALVE CLOSED	GSAX7087E	ON			GTO ST40			
					$ PRINT MSG IF FAILED AFTER RETRY $								
862-04			MSG		OAA ACCUM CHARGE OFF-FAILED								
					$ RETRY SEQ NO MORE THAN ONCE $								
863-00	ST50		CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7100E	OFF						
863-01			CMD	ARMS	OAA CLOSE GN2 INHIBIT V	GSAK7105E	OFF						
					$ DELAY 1.0 SECONDS $								
863-02			VFY	ARMS	OAA GN2 INHIBIT V SW-VALVE OPEN	GSAX7101E	ON			1 OF 4			
863-03			VFY	ARMS	OAA GN2 INHIBIT V SW-VALVE OPEN	GSAX7106E	ON			1 OF 4			
863-04			VFY	ARMS	OAA GN2 INHIBIT V SW-VALVE CLOSED	GSAX7102E	OFF			1 OF 4			
863-05			VFY	ARMS	OAA GN2 INHIBIT V SW-VALVE CLOSED	GSAX7107E	OFF			GTO ST50			

SEQ	CDT/ STEP	SITE	FUNC	DISC	NOMENCLATURE	FUNCTION DESIGNATOR	VALUE			ELSE	DUR.	LCC REF	OMRSD
							SINGLE OR LOW	HIGH	UNIT				
					$ PRINT MSG IF FAILED AFTER RETRY $								
863-06			MSG		OAA GN2 VLVS CLOSE-FAILED								
					$ TURN OFF 02 MONITOR PUMP $								
863-07			CMD	ARMS	WHITERM/CREW CABIN 02 CMD	GGOR1101E	ON						
864-00			END	P005									

KLO-82-0071 Appendix A
GROUND LAUNCH SEQUENCER DESCRIPTION DOCUMENT (GLSDD)

DISTRIBUTION

LSO-420/B. BOWMAN (2)
LSO-195/O. FELL
LSO-295/R. DAVIGNON
LSO-354/M. HEINRICH
LSO-356/R. DOUGERT (2)
LSO-194/B. OSBORNE
LSO-242/D. WEBER
LSO-215/J. ERI (2)
LSO-198/P. BRINKO
LSO-356/P. QUANDT
LSO-196/W. HARRIS (4)
LSO-241/S. GODFREY
LSO-213/W. LEVAN
LSO-421/S. LARCHER
LSO-174/M. DEZENDORF (2)
LSO-251/W. BARSH
LSO-038/TECH DATA (5)
LSO-163/J. WEAVER
LSO-316/LO2 SYS (2)
LSO-390/LH2 SYS (2)
LSO-284/LOX/LH2 APPL S/W
LSO-195/T. GRACOM
LSO-308/J. RUDOLPH
LSO-274/J. BROWN
LSO-285/J. WALKER
LSO-212/W. HEATH
LSO-284/A. EDWARDS
LSO-197/L. IRMINGER
LSO-247/D. HENSON
LSO-233/ENG. SUPT. AREA
LSO-247/D. CRYER
LSO-284/J. PAPE (5)
LSO-214/C. BEST
LSO-414/J. HEIGEL
LSO-173/S. SCHIEBEN (2)
LSO-414/D. MURRAY
LSO-247/M. TRIBE (6)
LSO-422/S. PAGE
USBI-HV-EN/R. MORSE
RT-ENG-1/M. GLENN
MMC-16/S. WYLE (2)
ROC-LSS/M. HOFFMAN(2)
FA77/G. HADALLER
ZK-88/L. MCDONALD (2)
ZK-07/W. HEINK
ZK-21/R. BUCINA
ZK-27/J. TRIBE
ZK-36/A. GUNDE
ZK-88/J. R. PRUITT
TV-PEO-2/C.A. ABNER
TV-PEO-11/G. THURSTON
TV-PEO-2/T. CARDONE
TV-PEO-2/J. SIMON, JR. (10)
TV-FSD/R.G. WARD
TV-FSD-1/J. NEILSON
TV-FSD-11/F. IZQUIERDO (2)
TV-FSD-12/K.E. KLEIN (2)
TV-FSD-13/H. CRAWFORD(2)
TV-FSD-2/J.L. BOLTON
TV-FSD-21/T. KEENEY (2)
TV-FSD-22/R.A. SEIFFER (2)
TV-FSD-23/E.E. WRIGHT
TV-GDS/F.R. PENOVICH
TV-GDS-1/J.R. MEDLOCK
TV-GDS-11/J.F. McGEHEE
TV-GDS-12/L.J. RICHARDSON
TV-GDS-2/R.CLEMENTS
TV-GDS-21/W.K. LEWIS (2
TV-GDS-22/V.A. ELENTRI (2)
TV-GDS-23/E. CHANDLER(2)
TV-GDS-24/ E. HILDING(2)
TV-ETD/T.N. WILLIAMS
TV-ETD-1/A.G. GRIFFIN
TV-ETD-11/B.R. BAKER(2)
TV-ETD-12/J.D. COLLNER (2)
TV-ETD-13/W.B. GLASER (2)
TV-ETD-2/J. GARCIA
LSO-291/B. GILBERT
LSO-241/S.STILWELL
TV-ETD-21/M.G. KRAUS (2)
TV-ETD-22/G. THOMPSON(2)
TV-ETD-23/M.A. CZABAN (2)
TV-MSD/W.L. BEEKER
TV-MSD-1/C. STEVENSON
TV-MSD-14/I. VELEZ
TV-MSD-2/J.L. BOLTON
TV-MSD-23/J.G. TATUM (2)
TV-MSD-24/P. SCHMID
TE-LPS/F. CARTER
TE-LPS-1/ D. SCHECHTER(4)
RQ-SAO/D. FRANK
TM/R.B. SIECK
TE/J.N. BARFUS
TP/J. F. HARRINGTON
SK/W.C. HOUSTON
(JSC)WE3/R. HAUTAMAKI
(JSC)WG3/J. GREENLEE
(JSC)VF3/D. CAMP
(JSC)INTERMET/D. REID
USBI-LSS/E. J. ALLEN
USBI-LSS/C. BENSON