

# Post Insertion

## STS-117

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**Mission Operations Directorate  
Operations Division**

**Final  
November 8, 2006**

National Aeronautics and  
Space Administration

**Lyndon B. Johnson Space Center**  
Houston, Texas





STS-117 POST INSERTION

FINAL (Nov 8, 2006)

## PCN-2 (Feb 16, 2007) Sheet 1 of 1

List of Implemented Change Requests (482s):

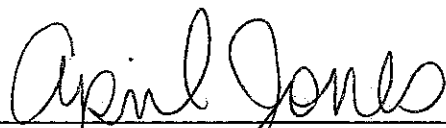
PI-788

PI-789

Incorporate the following:

1. Replace iii & iv
2. Replace 1-13 & 1-14, 1-17 & 1-18
3. Replace CC 3-3 & CC 3-4

Prepared by:

  
Publication Manager

Approved by:

  
Manager, Shuttle Procedures Management

Accepted by:

  
FDF Manager

Encl: 8 pages

**File this PCN immediately behind the front cover as a permanent record**



STS-117 POST INSERTION

FINAL (Nov 8, 2006)

## PCN-1 (Jan 11, 2007) Sheet 1 of 1

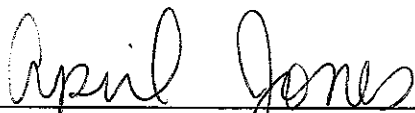
List of Implemented Change Requests (482s):

PI-776  
PI-780  
PI-785  
PI-786  
PI-787

Incorporate the following:

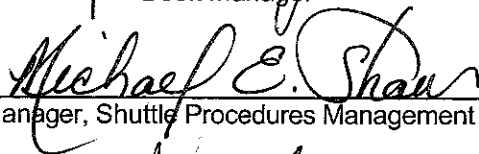
1. Replace iii & iv
2. Replace 1-5 & 1-6, 1-15 & 1-16, 1-23 thru 1-26
3. Replace CC 3-5 & CC 3-6

Prepared by:



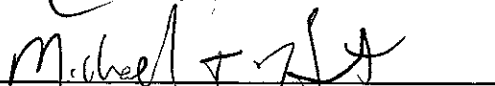
Book Manager

Approved by:



Manager, Shuttle Procedures Management

Accepted by:



FDF Manager

Encl: 12 pages

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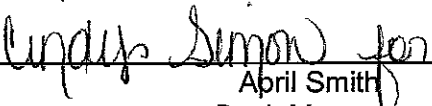


MISSION OPERATIONS DIRECTORATE


**POST INSERTION  
STS-117**

FINAL  
November 8, 2006

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This document is under the configuration control of the Crew Procedures Control Board (CPCB). All proposed changes must be submitted via FDF Workflow Crew Procedure Change Request (CR) to DO3/FDF Manager.

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Incorporates the following:		
482#:	PI-773 PI-779	MULTI-1761D

AREAS OF TECHNICAL RESPONSIBILITY

Book Manager	DO3/A. Smith	281-483-1861
Alternate Book Manager	DO3/C. Simon	281-483-0656
APU/HYD	DF5/J. Jason	281-483-7575
COMM	DF2/J. McKinnie	281-483-0792
ECLS	DF8/D. Fasbender	281-483-7857
EPS	DF7/M. Friant	281-483-0682
GNC	DF6/D. Gruber	281-483-0709
OMS/RCS	DF6/C. Kerr	281-483-0633



POST INSERTION  
STS-117

**LIST OF EFFECTIVE PAGES**

FINAL 11/08/06  
PCN-1 01/11/07  
PCN-2 02/16/07

Sign Off.....	*	117/FIN	1-17 .....	117/FIN
ii.....	*	117/FIN	1-18 .....	117/FIN 2
iii.....	*	117/FIN 2	1-19 .....	117/FIN
iv.....	*	117/FIN	1-20 .....	117/FIN
v .....		117/FIN	1-21 .....	117/FIN
vi.....		117/FIN	1-22 .....	117/FIN
1-1 .....		117/FIN	1-23 .....	117/FIN 1
1-2 .....		117/FIN	1-24 .....	117/FIN
1-3 .....		117/FIN	1-25 .....	117/FIN 1
1-4 .....		117/FIN	1-26 .....	117/FIN
1-5 .....		117/FIN 1	2-1 .....	117/FIN
1-6 .....		117/FIN 1	2-2 .....	117/FIN
1-7 .....		117/FIN	2-3 .....	117/FIN
1-8 .....		117/FIN	2-4 .....	117/FIN
1-9 .....		117/FIN	3-1 .....	* 117/FIN
1-10 .....		117/FIN	3-2 .....	* 117/FIN
1-11 .....		117/FIN	CC 3-3 .....	* 117/FIN
1-12 .....		117/FIN	CC 3-4 .....	* 117/FIN 2
1-13 .....		117/FIN	CC 3-5 .....	* 117/FIN 1
1-14 .....		117/FIN 2	CC 3-6 .....	* 117/FIN 1
1-15 .....		117/FIN 1		
1-16 .....		117/FIN 1		

POST INSERTION CUE CARDS

<u>Title</u>	<u>Ref. Page</u>	<u>Card No.</u>
AFT FLIGHT DECK RECONFIGURATION (Front).....	CC 3-3	PI-1a/117/O/B
(Back).....	CC 3-4	PI-1b/117/O/B
MIDDECK RECONFIGURATION (Front).....	CC 3-5	PI-2a/117/O/B
(Back).....	CC 3-6	PI-2b/117/O/B

\* – Omit from flight book

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CONTENTS

PAGE

POST INSERTION PROCEDURES .....	1-1
ON-ORBIT SWITCH LIST .....	1-17
ORBIT 5/6 DEORBIT .....	2-1
CUE CARD CONFIG .....	3-1

## NOTE

The STS-117 Post Insertion contains the nominal procedures from:

MET (DAY/HR:MIN)  
000/00:51 TO 000/02:30 – POST INSERTION (Section 1)

The remaining STS-117 flight phases are conducted using the Ascent Checklist, Flight Plan, Deorbit Prep Book, Entry Checklist, EVA Checklist, and Rendezvous Book.

# **POST INSERTION PROCEDURES**

**CONFIG GPCs FOR OPS 2** 1

\* For single PASS GPC failure, build PASS set as follows: \*

FAILED GPC		GPC			
		1	2	3	4
1	X	G2	FD	SM	
2	G2	X	FD	SM	
3	G2	FD	X	SM	
4	G2	SM	FD	X	

\* In step 1:  
\* Assign strings 1,3 to one GPC and  
\* strings 2,4 to other GPC  
\*

NOTE

No keyboard entries or sw throws 10 sec:  
Before and after moding PASS GPCs to RUN  
Before OPS transition or set expansion/contraction  
requests until new OPS base page is displayed

C,P 1. REASSIGN G2FD STRING TO ANOTHER GPC IN MC 1

GNC 0 GPC MEMORY

CONFIG – ITEM 1 +1 EXEC

Modify MC 1 per table

BFC CRT DISP – OFF

GNC, OPS 106 PRO

GNC 0 GPC MEMORY

CAUTION

If BFS is standalone (BFC It flash):  
BFC, CRT DISP – ON  
BFS, GNC I/O RESET  
BFC CRT DISP – OFF

CONFIG GPC	1	12340
STR	1	1
	2	2
	3	2
	4	4
PL	1/2	1
CRT	1	1
	2	2
	3	2
	4	0
L	1	1
	2	2
MM	1	1
	2	2

C3

O6

CRTX

2. MODE G2FD GPC TO OPS 0  
GPC MODE G2FD – STBY (tb-bp)  
– RUN (tb-RUN)

3. LOAD MC 2 INTO G2FD GPC  
PL, GPC/CRT G2FD GPC/X EXEC  
X: PL GPC MEMORY  
CONFIG – ITEM 45 +2 EXEC  
GPC – ITEM 46 +(G2FD) EXEC  
STORE – ITEM 47 EXEC  
Store complete when MC = 02

\* If no MC = 02 after 30 sec: \*

- \* a. On MCC GO, cycle pwr on MMU 1,2 \*
- \* \*
- \* b. Retry GPC FREEZE DRY (step 3) \*
- \* \*
- \* c. If FD successful, continue with step 4 \*
- \* If not successful and: \*
- \* NO GPCs FAILED: go to step 1, delete GPC 3 \*
- \* from TGT SET, restring 1,3 to GPC 1, and \*
- \* restring 2,4 to GPC 4, try to FD GPC 2 with \*
- \* steps 2,3; then go to step d \*
- \* \*
- \* ONE GPC FAILED: go to step 1, delete \*
- \* attempted FD GPC from TGT SET, restring all \*
- \* strings to lowest ID GPC, try to FD other GPC \*
- \* with steps 2,3; then go to step d \*
- \* \*
- \* d. If FD successful, continue with step 4 \*
- \* If not successful: consider both MMUs failed; \*
- \* on MCC GO, perform transition to OPS 3 \*
- \* \*

4. TRANSITION TO GNC OPS 2

GNC 0 GPC MEMORY  
CONFIG – ITEM 1 +2 EXEC  
Modify MC 2 per table →  
GNC, OPS 201 PRO  
GNC UNIV PTG

CONFIG GPC		DUAL G2	SINGLE G2
		2	2
STR	1	1	1
	2	2	1
	3	1	1
	4	2	1
PL	1/2	0	0
CRT	1	1	1
	2	2	1
	3	0	0
	4	2	1
L	1	0	0
	2	0	0
MM	1	1	1
	2	2	1

C3  
C2  
F2,F4  
C3

5. TURN OFF BFC LT  
BFC CRT DISP – ON  
BFS, MSG RESET  
√BFC It – off  
CRT DISP – OFF

MET  
DAY 000  
00:30  
TRANS  
DAP  
AUTO  
RT 0.5  
DB 3.5

00:35  
00:40

00:45

00:50

00:55  
A1(B1)  
AUTO  
PRI  
RT 0.2  
DB 5.0

01:00

Ref ASC for activities from 00:00-00:50 MET

MEMORY CONFIGURATION TABLE				
CONFIG	1	2	3	4(5)
OPS	G1, G6	G2	G3	SM
GPC SEL	1,2,3,4	1,2	1,2,3,4	4
STR	1 1 2 2 3 3 4 4	1 1 2 2 1 1 2 2	1 1 2 2 3 3 4 4	0 0 0 0
P/L	1/2 1	0	1	4
CRT	1 1 2 2 3 3 4 0	1 1 2 2 0 0 2 0	1 1 2 2 3 3 0 0	4 4 0 4
L	1 1 2 2	0 0	0 0	4 0
MM	1 1 2 2	1 1 2 2	1 1 2 2	4 4

- 1: GNC OMS 2 MNVR COAST
- 2: GNC OMS 2 MNVR COAST
- 3: BFS, SYS SUMM 2

- C L4:B,Q,R All cbs closed  
L4:D,E All cbs open  
L4:J cb AC3 φA SIG CONDR HUM SEP - cl  
B SIG CONDR IMU FAN - cl
- MS **SPECIALIST SEAT EGRESS**
- C,P **CONFIG GPCs FOR OPS 2** [1], 1-2  
(USE DUAL G2 CONFIG)  
If two PASS GPCs failed, √MCC  
If BFS engaged: Go to MAL, DPS, GPC FRP-4
- P R1 **PL BUS ACTIVATION**  
PL CAB - MNA  
AUX - ON
- MS **PRELIM MIDDECK CONFIG** (MID Cue Card) [2], 1-15
- MS **AFT STATION CONFIG** (AFT Cue Card) [3], 1-13

- CRTX 6. **TRANSITION TO SM OPS 201(401)**  
SM, GPC/CRT SM GPC/X EXEC  
X: SM GPC MEMORY  
CONFIG - ITEM 1 +4(5) EXEC  
Modify MC 4(5) per table →
- C3 √UPLK - ENA  
SM 1 DPS UTILITY  
UL CNTL AUTO - ITEM 35 EXEC
- C3 7. **SECURE BFS**  
BFC CRT DISP - ON  
CRT3 BFS, GNC, OPS 000 PRO  
3: BFS, BFS MEMORY
- C3 BFC CRT DISP - OFF  
√All IDPs deassigned from BFS
- O6 GPC MODE 5 - STBY (tb-RUN)
- C2 8. **RECONFIG MEDs**  
GPC/CRT 0/3 EXEC  
IDP/CRT 3 PWR - OFF  
√4 PWR - ON
- F6,F7,F8 GPC/CRT SM GPC/4 EXEC  
Power off MDUs as desired
- C3 9. **LOAD ORBIT TFLs**  
√OI PCMMU FORMAT - GPC  
SM 62 PCMMU/PL COMM
- CRT FORMAT:  
FXD - ITEM 1 EXEC (\*)  
SEL ID - ITEM 3 +1 8 8 EXEC  
LOAD - ITEM 4 EXEC  
- √RUN, CPLT  
SEL ID - ITEM 3 +1 0 3 EXEC  
LOAD - ITEM 4 EXEC  
- √RUN, CPLT  
PGM - ITEM 2 EXEC  
SM ANTENNA

	CONFIG	4(5)
	GPC	00040
STR	1	0
	2	0
	3	0
	4	0
PL	1/2	4
CRT	1	4
	2	4
	3	0
	4	4
L	1	4
	2	0
MM	1	4
	2	4

10. RECONFIG GPCs

O6 GPC MODE 5 - HALT (tb-bp)  
 OUTPUT 5 - NORM (tb-bp)  
 OUTPUT (SM GPC) - TERM (tb-bp)

If no failed GPC:

√All IDPs deassigned from FD GPC  
 GPC MODE (FD GPC) - STBY (tb-bp)  
 - HALT (tb-bp)  
 - STBY (tb-RUN)  
 - HALT (tb-bp)

If single G2 reqd:

IDP/CRTX MAJ FUNC - PL  
 GPC/CRT 2/X EXEC

**X: PL GPC MEMORY**

CONFIG - ITEM 45 +2 EXEC  
 GPC - ITEM 46 +2 EXEC  
 STORE - ITEM 47 EXEC  
 Store complete when MC = 2 (~30 sec)

√All IDPs deassigned from FD GPC  
 GPC MODE 2 - STBY (tb-bp)  
 - HALT (tb-bp)  
 - STBY (tb-RUN)  
 - HALT (tb-bp)

Perform ERR LOG RESET

**GNC 0 GPC MEMORY**

ITEM 48 EXEC

**SM 0 GPC MEMORY**

ITEM 48 EXEC

If PASS GPC failed from ASCENT and dual  
 G2 reqd, use G2FD to form G2 RS:

**GNC 0 GPC MEMORY**

CONFIG - ITEM 1 +2 EXEC

Modify MC 2 per table

GNC, OPS 201 PRO

**GNC UNIV PTG**

If PASS GPC failed from ASCENT and single  
 G2 reqd:

√All IDPs deassigned from FD GPC  
 GPC MODE (FD GPC) - STBY (tb-bp)  
 - HALT (tb-bp)  
 - STBY (tb-RUN)  
 - HALT (tb-bp)

If GPC failed from ASCENT,  
 Perform MAL, DPS, GPC FRP-1 as time permits

CONFIG	2
GPC	XY
STR 1	X
2	Y
3	X
4	Y
PL 1/2	0
CRT 1	X
2	Y
3	0
4	Y
L 1	0
2	0
MM 1	X
2	Y

C2  
 CRTX

CRT

PI LOCKER

When all GPC switch configuration complete,  
 unstow, install GPC MODE switchguard



**MET**

DAY 000

1: GNC UNIV PTG      2: SM ANTENA

01:00

A1(B1)  
AUTO  
PRI  
RT 0.2  
DB 5.0

**MS**

**PGSC UNSTOW/SETUP/ACTIVATION**  
PGSC ACTIVATION (ORB OPS, **PGSC**)

**MS**

**CONFIG FOR PLBD OPERATIONS** (AFT Cue Card) **4**, 1-14

01:05

**MS**

**WCS CONFIG/ACT** (MID Cue Card) **5**, 1-16

**MS**

**SWITCH CONFIG/GALLEY ACT** (MID Cue Card) **6**, 1-16

**C,P**

**DON/CONFIG COMM**

XX AUD A/G 2 – RCV, tw 2  
XMIT/ICOM MODE – PTT/VOX (recommended)

**P**

**LOAD DAP A5**

01:10

A5(B1)  
AUTO  
PRI  
RT 0.2  
DB 5.0

CRT1

**MNVR TO PLBD OPENING ATT** (-ZLV, +YVV)

√TGT ID +2  
BODY VECT +3  
√P +90  
√Y +0.0  
OM +270

01:15

A5(B1)  
AUTO  
ALT  
RT 0.2  
DB 5.0

**C**

DAP: A/AUTO/ALT  
Initiate TRK

**RAD ACT 7**

**RAD/PLBD OPS NO-GO FOR FOLLOWING FAILURES**

<b>OMS/RCS</b>	<b>GNC</b>	<b>ECLS/EPS</b>	<b>MECH</b>
2 OMS Engs	2 IMUs	1 H2O or Freon Lp	2 LG DPY METHODS
1 OMS Eng & 1 +X RCS jet	3 RGAs	Both RFCAs	PRES or REDNT
1 OMS Inlet line	3 ADTAs	Both Cab Fans	WINDOW PANE FAILURE
OMS Prop Tk Leak	3 Elevon or	2 FCs	<b>DPS</b>
Aft RCS He or Prop Leak	BF Pos Fdbks (same surface)	Any MN or 3Φ AC Bus	3 GPCs
<b>COMM</b>	2 FCS Ch (same surface)	Any CNTL or MPC Bus	2 PL MDMs
No Voice and No CMD		3 IMU Fans	2 FF or FA MDMs
			<b>APU/HYD</b>
			2 APU/HYD/WSB

01:25

UPLINK  
VAR  
PARAM  
TMBU  
(IF  
REQD)

If NO-GO for RAD/PLBD OPS, go to **ORB 3 DEORBIT 8**

**MS** **OPEN PLBDs**, AUTO MODE, **18** 1-11

**NOTE**: CAUTION BLOCK on 1-11

01:30

**RAD ACT 7**

**NOTE**

Expect 'S88 EVAP OUT T 1(2)' msg

L1

FLASH EVAP CNTLR PRI A – OFF  
PRI B – ON

**NOTE**

If RAD flow has been initiated manually, delay RAD ACT until MCC call or until RAD OUT T low

RAD BYP VLV MODE (two) – AUTO  
CNTLR LOOP (two) – AUTO A

Wait 90 sec  
√RAD BYP VLV tb (two) – RAD

- \* If RAD BYP VLV 1(2) tb – BYP: \*
- \* RAD CNTLR LOOP 1(2) – AUTO B \*
- \* Wait 90 sec \*
- \* √RAD BYP VLV 1(2) tb – RAD \*
- \* If RAD BYP VLV 1(2) tb still BYP or bp: \*
- \* RAD BYP VLV MODE 1(2) – MAN \*
- \* MAN SEL 1(2) – RAD FLOW \*
- \* Hold 3 sec or until tb – RAD \*
- \* If RAD BYP VLV 1(2) tb – bp: \*
- \* RAD BYP VLV MODE 1(2) – MAN \*
- \* CNTLR LOOP 1(2) – AUTO B \*
- \* After 10 sec, RAD BYP VLV MODE 1(2) – AUTO \*
- \* Wait 90 sec \*
- \* RAD BYP VLV 1(2) tb – RAD \*
- \* If RAD BYP VLV 1(2) tb – bp: \*
- \* RAD BYP VLV MODE 1(2) – MAN \*
- \* MAN SEL 1(2) – RAD FLOW \*
- \* Hold 3 sec or until tb – RAD \*
- \* If RAD BYP VLV 1(2) tb – bp: \*
- \* √MCC \*

L2

FREON ISOL MODE – AUTO

**ORB 3 DEORBIT 8**

If NO-GO for RAD/PLB OPS due to 2 FCs failed:  
Go to CONT DEORB, **LOSS OF 2 FC ORB 2 OR 3**,  
at TIG-1:30

If NO-GO due to any other failure:  
Go to CONT DEORB, **LAUNCH DAY ORBIT 3**,  
at TIG-2:00

**STAR TRKR ACTIVATION/DOOR OPEN** 12

C 06 S TRK PWR (two) – ON  
GNC I/O RESET

S TRK DR CNTL SYS (two) – OP (start timer)  
√POS tb (two) – bp  
When both tb – OP (8-24 sec), or either tb – bp for > 24 sec,  
CNTL SYS (two) – OFF

\* If tb – bp > 8 sec, notify MCC \*

1: GNC 22S TRK/COAS CNTL  
STAR TRK – ITEM 3,4 EXEC  
1: GNC 21 IMU ALIGN  
RESUME

**SUPPLY WATER CONFIG** 14

NOTE  
Do not perform until blocks 5 and 6 are  
performed

R11L SPLY H2O DUMP ISOL VLV – OP (tb-OP)  
√XOVR VLV – CL (tb-CL)  
TKB INLET – CL (tb-CL)  
TKA OUTLET – OP (tb-OP)

ML86B:A cb MNB SPLY H2O TKB INLET – op  
MNC SPLY H2O XOVR VLV – op

MET		1: GNC UNIV PTG	2: SM PL BAY DOORS
DAY 000		4: SM PL BAY DOORS	
01:30			
A5(B1)			
AUTO			
ALT			
RT 0.2			
DB 5.0			
01:35	<b>MCC &amp; CREW:</b>	GO for orbit ops	
	C	O6 UHF MODE sel – OFF	
	MS	<b>KU-BD ANT DEPLOY</b> (ORB OPS, COMM/INST)	
		<b>KU-BD ANT ACTIVATION</b> (ORB OPS, COMM/INST)	
	C,P	<b>SEAT EGRESS</b>	
01:40	C,P	<b>CLOTHING CONFIG</b> <span style="border: 1px solid black; padding: 0 2px;">9</span>	
	MS	<b>CLOTHING CONFIG</b> (MID,AFT Cue Cards) <span style="border: 1px solid black; padding: 0 2px;">10</span> , 1-14, 1-15	
01:45	ALL	<b>QUICKDON MASKS SETUP</b> <span style="border: 1px solid black; padding: 0 2px;">19</span>	
		If time permits: <b>OCAC SETUP</b> (ORB OPS, CREW SYS)	
01:50	C	<b>POST PLBD OPS RAD CONFIG</b> <span style="border: 1px solid black; padding: 0 2px;">11</span>	
	MS	<b>SPECIALIST SEAT REMOVAL/STOWAGE</b>	
01:55	C	<b>STAR TRKR ACTIVATION/DOOR OPEN</b> <span style="border: 1px solid black; padding: 0 2px;">12</span> , 1-6	
	MS	<b>ESCAPE POLE STOWAGE</b> (MID Cue Card) <span style="border: 1px solid black; padding: 0 2px;">13</span> , 1-16	
	P	<b>SUPPLY WATER CONFIG</b> <span style="border: 1px solid black; padding: 0 2px;">14</span> , 1-6	
02:00			

**CLOTHING CONFIG** 9

Doff, stow:  
 Harness, Boots, LES  
 Stow gloves in Helmet  
 Remove radiation dosimeter from LES and insert in  
 inflight garments

Doff, stow in Wet Trash:  
 UCD (clamp if used)  
 Emesis Bag, if used (unstow new bag)

**POST PLBD OPS RAD CONFIG** 11

C 1: SM 88 APU/ENVIRON THERM

NOTE  
 FREON LOOP RAD OUT temps will not drop to  
 normal operating range (< 60 deg) until ~15 min  
 after doors are opened

L1 NH3 CNTLR B (A) – OFF  
 ✓RAD BYP VLV tb (two) – RAD  
 H2O LOOP 2 BYP MODE – AUTO

CRT1 When FREON LOOP RAD OUT T < 60 deg:  
 L1 HI LOAD EVAP – OFF

1: GNC UNIV PTG

**QUICKDON MASKS SETUP** 19

Connect QDM COMM to HIU  
 Connect QDM O2 to LEH hose  
 Verify operation  
 Temp stow QDM/HIU assembly

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MET		1: GNC UNIV PTG	2: SM ANTENNA
DAY 000		4: SM ANTENNA	
02:00	MS	<b>AIRLOCK SETUP FOR INGRESS</b> <span style="border: 1px solid black; padding: 0 5px;">15</span> , 1-16	
A5 (B1)	P	<b>W/B STEAM VENT HTR ACT</b>	
AUTO		R2	√BLR CNTLR/HTR (three) – A
ALT			PWR (three) – ON
RT 0.2			
DB 5.0			
02:05	C	<b>CONFIG VERNIER CONTROL</b>	
A5 (B1)	O16:F	√MCC GO for vernier control	
AUTO		RJD MANF L5/F5/R5 DRIVER – ON, wait 5 sec	
VERN		DAP: A/AUTO/VERN	
RT 0.05			
DB 1.0			
02:10			
	ALL	<b>CONFIG CONTROLS FOR ON-ORBIT</b>	
		Perform actions on 1-17 thru 1-25	
		Unstow, install HUD covers (two)	
02:15		L2	Remove, stow (on PNL L2/FDF FD locker)
			NWS sw flex extension
	P	<b>HYD THERMAL CONDITIONING-ENABLE</b>	
		R2	HYD CIRC PUMP (three) – GPC
02:20			
	MS	<b>RESET C/W</b> (AFT Cue Card) <span style="border: 1px solid black; padding: 0 5px;">16</span> , 1-14	
02:25			
	MS	<b>FUEL CELL VI PERFORMANCE PLOT</b> (ORB OPS, <u>EPS</u> )	
02:30		Stow POST INSERTION, go to FLIGHT PLAN, <u>FLT DAY 1</u>	

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**DETAILED PLBD OPENING PROCEDURES** 18

- R13L \* If no motion determined visually or 'OP/CL' not blank within 10 sec
- \* after cmd,
- \* PL BAY DR – STOP, perform MAL, MECH, 9.1a
- \* If latch not 'OP' in single mtr time,
- \* PL BAY DR – STOP, perform MAL, MECH, 9.1d
- \* If door motion stops and not 'OP',
- \* PL BAY DR – STOP, perform MAL, MECH, 9.1f
- \* If SM GPC fails during this operation,
- \* PL BAY DR SYS (two) – DSBL
- \* – STOP
- \* Perform PASS SM GPC FAIL (ORB PKT, DPS)

**CAUTION**

Use MANUAL mode for subsequent BFS PLBD ops if BFS AUTO sequence has been interrupted by reversing latch/door drive direction or if MANUAL mode has already been used during mission

**NOTE**

Note any single mtr operations (continue ops)  
(single mtr times = 2X listed dual motor times).  
If one mtr in each of two separate latch gangs fails:  
PL BAY DR – STOP  
√MCC

**AUTO PLBD OPENING PROCEDURE**

- MS CRT4 1. SM, OPS 202 PRO or BFS, SM 63 PL BAY DOORS  
4: SM PL BAY DOORS
- R13L √PL BAY DR – STOP
- CRT4 √PBD SW – STOP
- √MAN SEL (ten) – (no \*)
- √PBD SW BYPASS – (no \*)
- 2. AC POWER ON – ITEM 1 EXEC (\*)
- 3. AUTO MODE SEL – ITEM 3 EXEC (\*)
- R13L 4. PL BAY DR SYS (two) – ENA
- CRT4 √OP/CL STATUS (ten) – CL
- R13L 5. PL BAY DR – OP
- CRT4 √CENTER LATCHES 5-8,9-12 (two) – blank,OP (~20 sec)  
√1-4,13-16 (two) – blank,OP (~20 sec)
- √STBD FWD,AFT LATCHES (two) – blank,OP (~30 sec)  
√DOOR – RDY,blank,OP (~63 sec)
- √PORT FWD,AFT LATCHES (two) – blank,OP (~30 sec)  
√DOOR – RDY,blank,OP (~63 sec)
- R13L 6. PL BAY DR – STOP
- POST-PLBD OPENING CLEANUP**
- CRT4 7. PL BAY DR SYS (two) – DSBL  
√OP/CL STATUS (ten) – OP
- 8. AC POWER OFF – ITEM 2 EXEC (\*)
- 9. SM, OPS 201 PRO (if PASS SM)  
4: SM ANTENNA
- 10. After floodlights ON > 10 min:  
A7U PL BAY FLOOD (all) – OFF

**MANUAL PLBD OPENING PROCEDURE**

- MS CRT4 1. SM, OPS 202 PRO or BFS, SM 63 PL BAY DOORS  
4: SM PL BAY DOORS
- R13L √PL BAY DR – STOP
- CRT4 √PBD SW – STOP
- √MAN SEL (ten) – (no \*)
- √PBD SW BYPASS – (no \*)
- 2. AC POWER ON – ITEM 1 EXEC (\*)
- √AUTO MODE SEL – (no \*)
- R13L 3. PL BAY DR SYS (two) – ENA
- CRT4 √OP/CL STATUS (ten) – CL
- OPEN C/L LATCHES**
- 4. Select CENTER LATCHES 5-8,9-12 – ITEM 4,5 EXEC (\*)
- R13L 5. PL BAY DR – OP
- CRT4 √CENTER LATCHES 5-8,9-12 (two) – blank,OP (~20 sec)
- R13L 6. PL BAY DR – STOP
- CRT4 7. Deselect CENTER LATCHES 5-8,9-12 – ITEM 4,5 EXEC (no \*)
- 8. Select CENTER LATCHES 1-4,13-16 – ITEM 6,7 EXEC (\*)
- R13L 9. PL BAY DR – OP
- CRT4 √CENTER LATCHES 1-4,13-16 (two) – blank,OP (~20 sec)
- R13L 10. PL BAY DR – STOP
- CRT4 11. Deselect CENTER LATCHES 1-4,13-16 – ITEM 6,7 EXEC (no \*)
- OPEN STBD FWD,AFT LATCHES & DOOR**
- 12. Select STBD FWD,AFT LATCHES – ITEM 8,9 EXEC (\*)
- R13L 13. PL BAY DR – OP
- CRT4 √STBD FWD,AFT LATCHES (two) – blank,OP (~30 sec)
- R13L 14. PL BAY DR – STOP
- CRT4 15. Deselect STBD FWD,AFT LATCHES – ITEM 8,9 EXEC (no \*)
- 16. Select STBD DOOR – ITEM 10 EXEC (\*)
- R13L 17. PL BAY DR – OP
- CRT4 √STBD DOOR – RDY,blank,OP (~63 sec)
- R13L 18. PL BAY DR – STOP
- CRT4 19. Deselect STBD DOOR – ITEM 10 EXEC (no \*)
- OPEN PORT FWD,AFT LATCHES & DOOR**
- 20. Select PORT FWD,AFT LATCHES – ITEM 11,12 EXEC (\*)
- R13L 21. PL BAY DR – OP
- CRT4 √PORT FWD,AFT LATCHES (two) – blank,OP (~30 sec)
- R13L 22. PL BAY DR – STOP
- CRT4 23. Deselect PORT FWD,AFT LATCHES – ITEM 11,12 EXEC (no \*)
- 24. Select PORT DOOR – ITEM 13 EXEC (\*)
- R13L 25. PL BAY DR – OP
- CRT4 √PORT DOOR – RDY,blank,OP (~63 sec)
- R13L 26. PL BAY DR – STOP
- CRT4 27. Deselect PORT DOOR – ITEM 13 EXEC (no \*)
- POST-PLBD OPENING CLEANUP**
- R13L 28. PL BAY DR SYS (two) – DSBL
- CRT4 √OP/CL STATUS (ten) – OP
- 29. AC POWER OFF – ITEM 2 EXEC (\*)
- 30. SM, OPS 201 PRO (if PASS SM)  
4: SM ANTENNA
- A7U 31. After floodlights ON > 10 min:  
PL BAY FLOOD (all) – OFF

FUNCTION	PLBD CONTROL								PLBD DISPLAY MDM								
	Ref: MA73C:C&D for MCA cbs																
	MTR 1				MTR 2				C	C	O	O	C	R	R	R	O
	AC/ MCA	CNTL	MDM	SYS	AC/ MCA	CNTL	MDM	SYS	A	B	A	B	A	B	C		
LATCH																	
5-8	1/MID3	AB3/AB2	PL1	2	3/MID2	CA3/CA1	PL2	1	1	2	1	2					
9-12	1/MID1	AB3/AB1	PL1	1	3/MID4	CA3/CA2	PL2	2	1	2	1	2					
1-4	1/MID3	AB3/AB2	PL1	2	3/MID2	CA3/CA1	PL2	1	1	2	1	2					
13-16	3/MID4	CA3/CA2	PL2	2	2/MID2	BC3/BC1	PL1	1	2	1	2	1					
S FWD	1/MID1	AB3/AB1	PL1	1	2/MID4	BC3/BC2	PL2	2	1	2	1	2					
S AFT	3/MID4	CA3/CA2	PL2	2	2/MID2	BC3/BC1	PL1	1	2	1	2	1					
S DOOR	1/MID1	AB3/AB1	PL1	1	2/MID4	BC3/BC2	PL2	2									
													1	1	2	2	1
													2	1	2	2	2
P FWD	1/MID1	AB3/AB1	PL1	1	2/MID4	BC3/BC2	PL2	2	1	2	1	2					
P AFT	1/MID3	AB3/AB2	PL1	2	3/MID2	CA3/CA1	PL2	1	1	2	1	2					
													2	1	1	2	2
P DOOR	3/MID4	CA3/CA2	PL2	2	2/MID2	BC3/BC1	PL1	1					1	1	1	2	1





## AFT FLIGHT DECK RECONFIGURATION

### CONFIG FOR PLBD OPERATIONS 4

A6U      **SET UP LIGHTS**  
 ANNUN BUS SEL – MNC

NOTE  
 Minimum operating time for PLB Floodlights is 10 min.  
 Light must be OFF for minimum of 10 min UNBLOCKED,  
 16 min BLOCKED prior to reuse. ~3 min to full bright

A7U      PL BAY FLOOD AFT (two) – OFF  
              MID (two)        – OFF  
              FWD                    – OFF  
                                  BKHD – ON

Record MET: \_\_\_\_/\_\_\_\_:\_\_\_\_:\_\_\_\_

- \* If PLB Floodlight not ON to full bright within 5 min: \*
- \* (Aff) PL BAY FLOOD – OFF \*

**SET UP P/TV**  
 Perform ACTIVATION, OPERATION (Cue Card, TV)  
 Perform Minicam Config for PLBD Rec: Tape, Batt

### CLOTHING CONFIG 10

Doff, stow:  
 Harness, Boots, LES  
 Stow gloves in Helmet  
 Remove radiation dosimeter from LES and insert in inflight garments

Doff, stow in Wet Trash:  
 UCD (clamp if used)  
 Emesis Bag, if used (unstow new bag)

### RESET C/W 16

R13U		
PARAMETER NAME	C/W CH	UPPER LIMIT
FREON LOOP EVAP OUT T1	107	1.90V/64.8 deg
T2	117	1.90V/64.8 deg
CABIN PRESS	4	3.85V/15.33 psia

R13U		
PARAMETER NAME	C/W CH	ENA/INH
MPS He TK P C	9	INH
L	19	INH
R	29	INH
MPS He REG P C	39	INH
L	49	INH
R	59	INH
HYD P 1	99	INH
2	109	INH
3	119	INH
O2 FLOW 1	14	INH
2	24	INH
N2 FLOW 1	54	INH
2	64	INH

## MIDDECK RECONFIGURATION

### PRELIM MIDDECK CONFIG 2

**WARNING**  
Eye and skin damage can occur in  
as little as 10 sec

#### INSTALL FILTERS

Don Sunglasses  
Unstow,install: Side Hatch UV Filter and Locking Device, and Pyro  
Box Safing Pin

#### PRESS H2O TKA

ML26C SPLY H2O GN2 TK VENT vlv – PRESS  
A SPLY vlv – OP

#### NOTE

Disregard possible 'S66 WASTE H2O PRES' fault msg

#### COMM CONFIG

Unstow: headsets, handheld mic, and/or wireless comm  
(see WCCS Cue Card), if flown  
If WCCS, perform STD WCCS CONFIG (ORB OPS, COMM/INST)  
If middeck handheld mic/speaker ops:

MO42F MIDDECK SPKR AUD A/G 1 – T/R, tw-2  
A/G 2 – RCV, tw-2  
A/A – RCV, tw-2  
ICOM A – T/R, tw-2  
B – RCV, tw-2  
XMIT/ICOM MODE – PTT/PTT  
SPKR PWR – SPKR  
MSTR SPKR VOL – 8

MO39M MIDDECK COMM CCU PWR – OFF  
Connect HHMIC to CCU  
MIDDECK COMM CCU PWR – ON

#### FDI CONFIG

Stow in Helmet Bag: ASCENT Cue Cards, ASC, ASC PKT, SYS AOA  
Unstow Jettison Stowage Bag, mark "Return to Houston"  
Place Helmet Bag in Return to Houston Bag

ML86B:C cb MNA EXT ARLK HTR LINE ZN1,2 (two) – cl  
STRUC Z1/2/3 – cl  
:E cb MNA FC PCM – op

Unstow VW Bags

MET	MS AFT ACTIONS
00:53	<u>SPECIALIST SEAT EGRESS</u>
00:57	<u>PRELIM MIDDECK CONFIG</u> <span style="border: 1px solid black; padding: 0 5px;">2</span>
01:07	<u>WCS CONFIG/ACT</u> <span style="border: 1px solid black; padding: 0 5px;">5</span>
01:08	<u>SWITCH CONFIG/GALLEY ACT</u> <span style="border: 1px solid black; padding: 0 5px;">6</span>
01:41	<u>CLOTHING CONFIG</u> <span style="border: 1px solid black; padding: 0 5px;">10</span>
01:45	<u>QUICKDON MASKS SETUP</u> <span style="border: 1px solid black; padding: 0 5px;">19</span>
01:54	<u>SPECIALIST SEAT REMOVAL/STOWAGE</u>
01:59	<u>ESCAPE POLE STOWAGE</u> <span style="border: 1px solid black; padding: 0 5px;">13</span>
02:01	<u>AIRLOCK SETUP FOR INGRESS</u> <span style="border: 1px solid black; padding: 0 5px;">15</span>

### CLOTHING CONFIG 10

Doff, stow:  
Harness, Boots, LES  
Stow gloves in Helmet  
Remove radiation dosimeter from LES and insert in  
inflight garments

Doff, stow in Wet Trash:  
UCD (clamp if used)  
Emesis Bag, if used (unstow new bag)

### QUICKDON MASKS SETUP 19

Connect QDM COMM to HIU  
Connect QDM O2 to LEH hose  
Verify operation  
Temp stow QDM/HIU assembly

## MIDDECK RECONFIGURATION

### WCS CONFIG/ACT 5

#### WCS SWITCH CONFIGURATION

ML86B:A      cb MNA H2O LINE HTR A                  - cl  
           :B                  WASTE H2O DUMP ISOL                  - cl  
                                 MNA,MNB VAC VENT ISOL VLV (two) - cl  
                                 WCS CNTLR (two)                  - cl  
                                 MNB VAC VENT NOZ HTR                  - cl  
           :F                  MNA FLOODS WMC/MO13Q              - cl

MA73C:E      All cbs closed except:  
                                 cb AC3 PL 3Φ - op

ML31C                  WASTE H2O DUMP ISOL VLV - OP (tb-OP)  
                                 √VAC VENT ISOL VLV BUS SEL - MNA  
     NOZ HTR                  - ON  
     ISOL VLV CNTL        - OP (tb-OP)

\* If VAC VENT ISOL VLV CNTL tb - CL or bp:        \*  
 \*                  VAC VENT ISOL VLV BUS SEL - MNB        \*  
 \*                                  CNTL        - OP (tb-OP)        \*  
 \*                  If VAC VENT ISOL VLV CNTL tb still CL or bp:    \*  
 \*                  √MCC for further actions                                  \*

#### WCS ACTIVATION

WCS                  Foot/Toe Restraints - down,locked  
                                 VAC VLV - OP  
                                 Unstow urinal hose from Velcro strap, install hose in cradle  
                                 √CRADLE - AUTO  
                                 √MODE - AUTO  
                                 FAN SEP SEL sw - 1  
                                 Unstow hose from cradle (√Airflow)  
                                 √WCS ON It - on  
                                 Stow hose in cradle  
                                 √WCS ON It - off  
                                 Unstow,install WCS Container, Bag & Hose, Mirror, Elbow Bag  
                                 Dispenser, First Day Clothing  
                                 √Ventline mated in aux Wet Trash

### SWITCH CONFIG/GALLEY ACT 6

MA73C:F              cb AC1 MAR 3Φ - cl  
           :G                  cb AC3 GALLEY FAN (three) - cl

ML86B:A              All cbs closed except: MNB H2O LINE HTR B - op  
           :B                  All cbs closed  
           :E                  All cbs closed except: FLOOD TUNNEL ADAPTER (three) - op  
     CO2 SYS 1,2 CNTLR, CO2 COMM INSTR - op  
     FC PCM - op  
           :F                  All cbs closed  
           :G                  All cbs closed except: ESS1BC FLOOD TUNNEL ADAPTER 1 - op

R11L:G                  SPLY H2O GALLEY SPLY VLV - OP (tb-OP)

GALLEY                  H2O HTRS (two) - ON  
                                 OVEN/RHS                  - ON

Unstow,install Personal Hygiene Hose

### ESCAPE POLE STOWAGE 13

Remove large Port Pin  
                 Slide back - Safing Latch  
                 Retract,hold Locking Pin (Ring)  
                 Remove Large Pin  
                 Release Locking Pin (Ring)  
 Remove STBD Pip Pin  
 Stow Pole  
 Reinstall Large Pin

### AIRLOCK SETUP FOR INGRESS 15

Inner Hatch    1.    Equal vlv caps (two) - remove  
                                 2.    Open hatch per decal  
                                 3.    Equal vlv (two) - OFF, install caps  
 MDDK            4.    Remove diffuser from aft middeck floor fitting and temp stow  
 EXT A/L        5.    Unstow bypass duct from Tunnel extension wall  
                                 6.    Attach free end to aft middeck floor fitting  
 MO13Q         7.    AIRLK 2 - ON/OFF  
 AW18A         8.    LTG FLOOD 1(3,4) - ON (as reqd)  
                                 9.    √Airflow at top of external airlock halo  
                                 10. √NEG CAB PRESS RELIEF vlv cover (two) - CL (pushed in)

## ON-ORBIT SWITCH LIST

### LEFT SEAT

L1..... 1-19  
 L2..... 1-19  
  
 O6..... 1-19  
 O7 ..... 1-20  
 O8..... 1-20  
  
 O14..... 1-21  
 O15..... 1-22

### RIGHT SEAT

O16..... 1-22  
 O8 ..... 1-20  
  
 R1 ..... 1-18

### AFT









C5 ..... 1-22  
 C6 ..... 1-22  
 C7 ..... 1-22  
  
 A11..... 1-23

### MIDDECK-FWD

ML86B..... 1-25

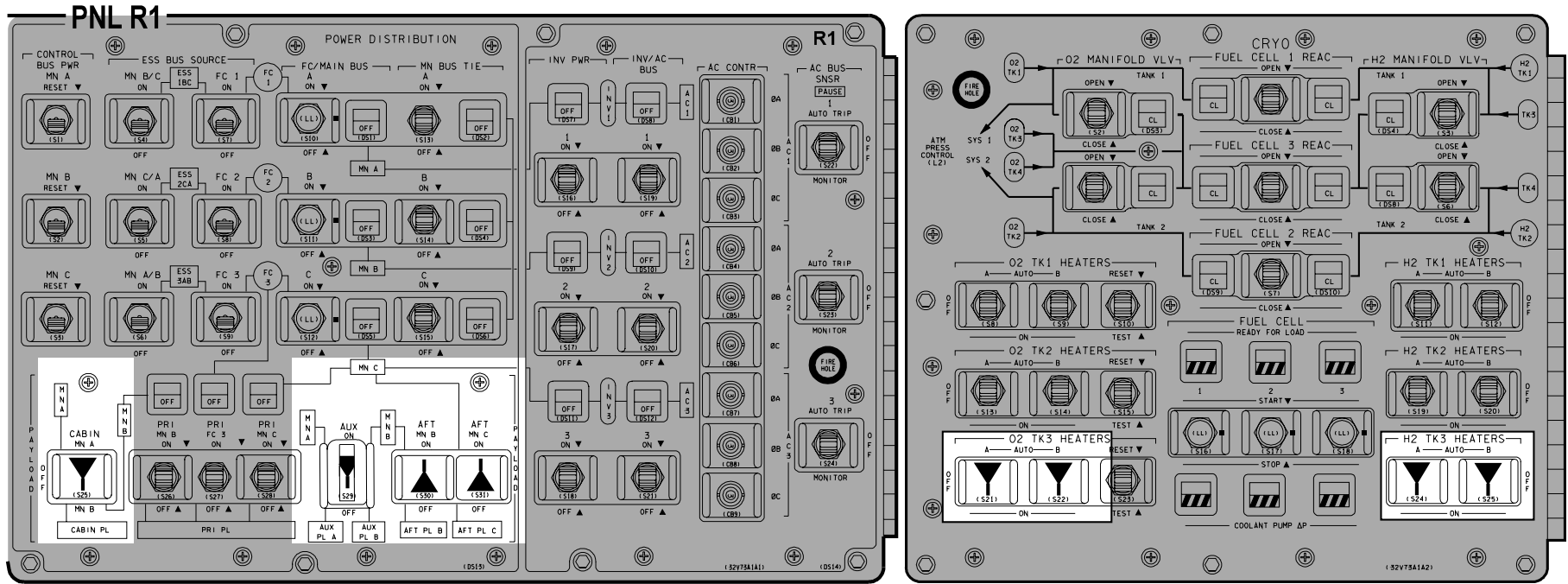
### MIDDECK-AFT

MA73C ..... 1-25  
 MO32M ..... 1-24  
 MO69M ..... 1-24

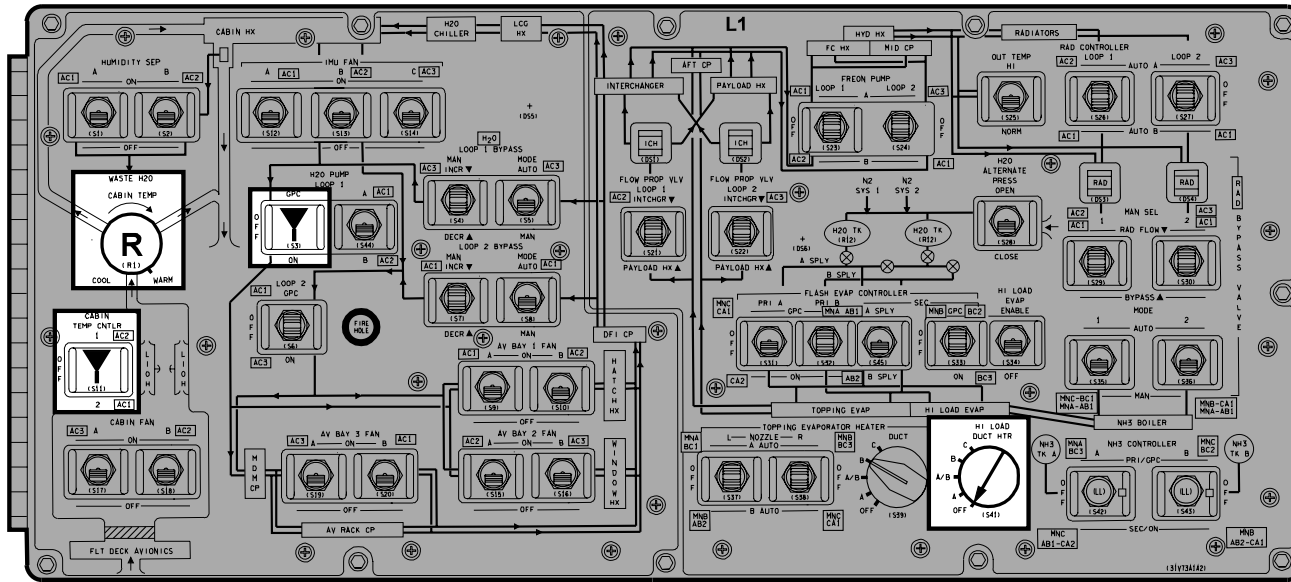
 - Up	<b>R</b> - As reqd	 - Indicates switch/display not checked during ON-ORBIT SWITCH/VERIF
 - Center	 - cb close	Switch/display pictorials are generic representations and are not intended to depict actual switch position. Check MCC if clarification reqd
 - Down	 - cb open	
 - Boxed items indicate switch configured during ON-ORBIT CONFIGURATION	 - White area indicates switch verified during ON-ORBIT SWITCH CONFIGURATION	

<u>CIRCUIT BREAKER SNAP RING COLOR CODES</u>	
<u>COLOR</u>	<u>CONFIGURATION</u>
Red	Open at all times
Green	Open on-orbit only
Yellow	Open ascent, close per procedure
Orange	Open orbit through entry
Blank (no ring)	Always closed or as required

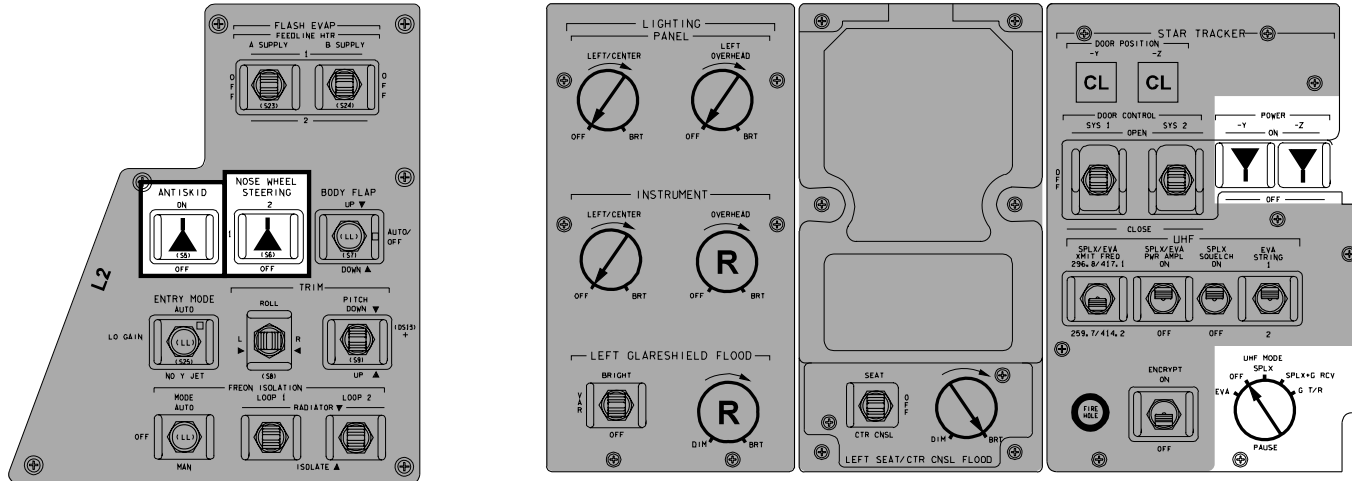
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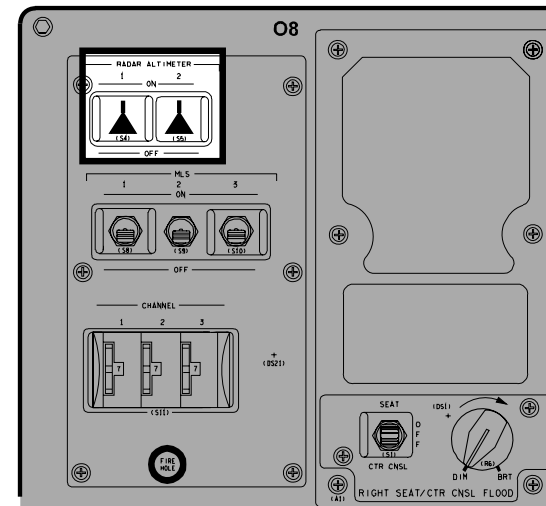
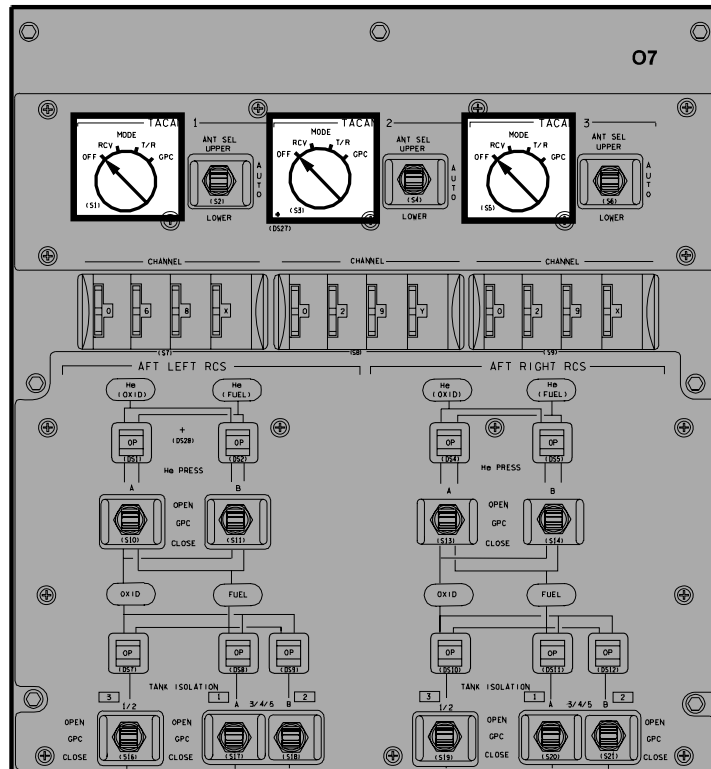
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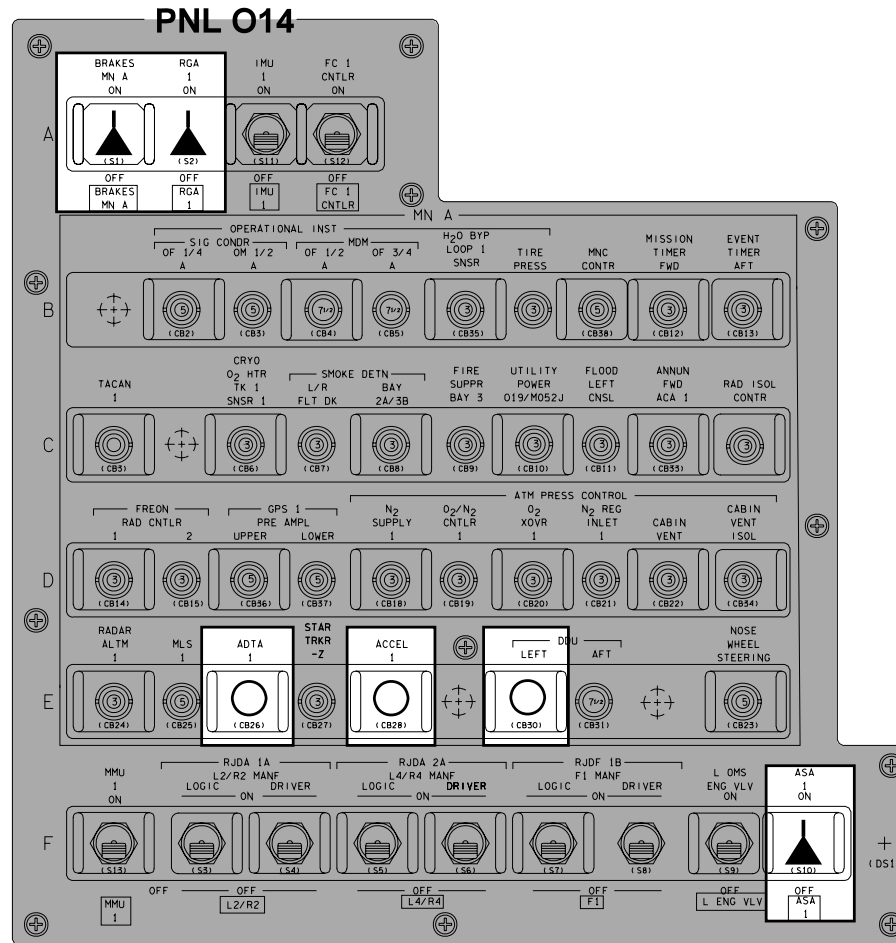


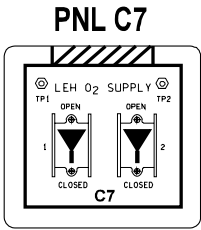
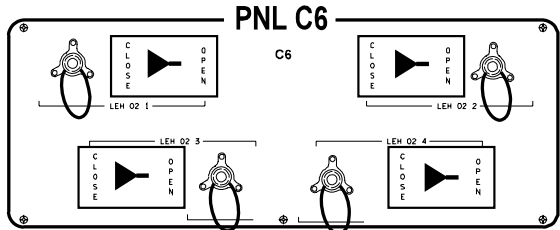
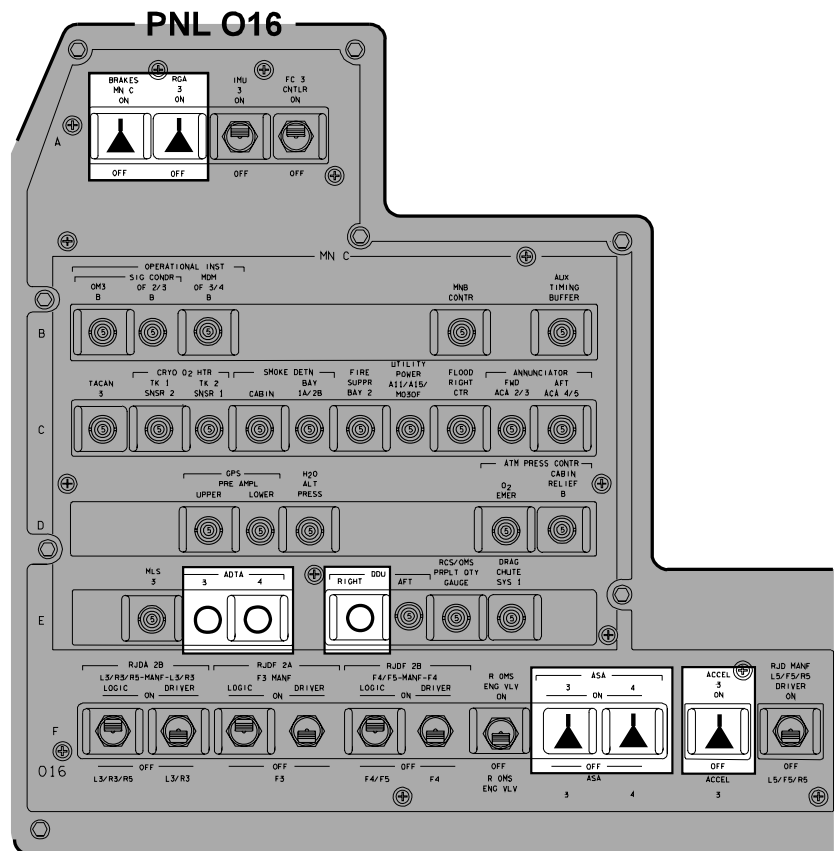
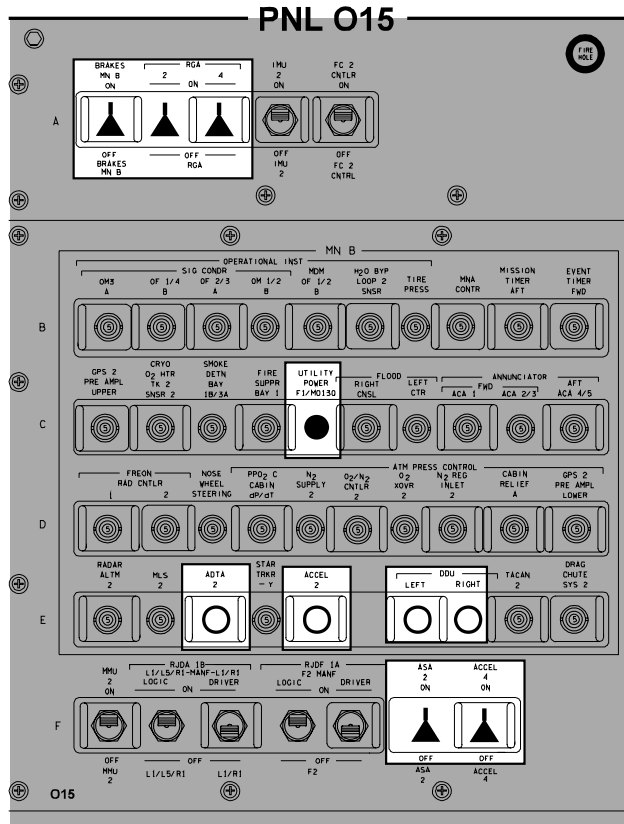
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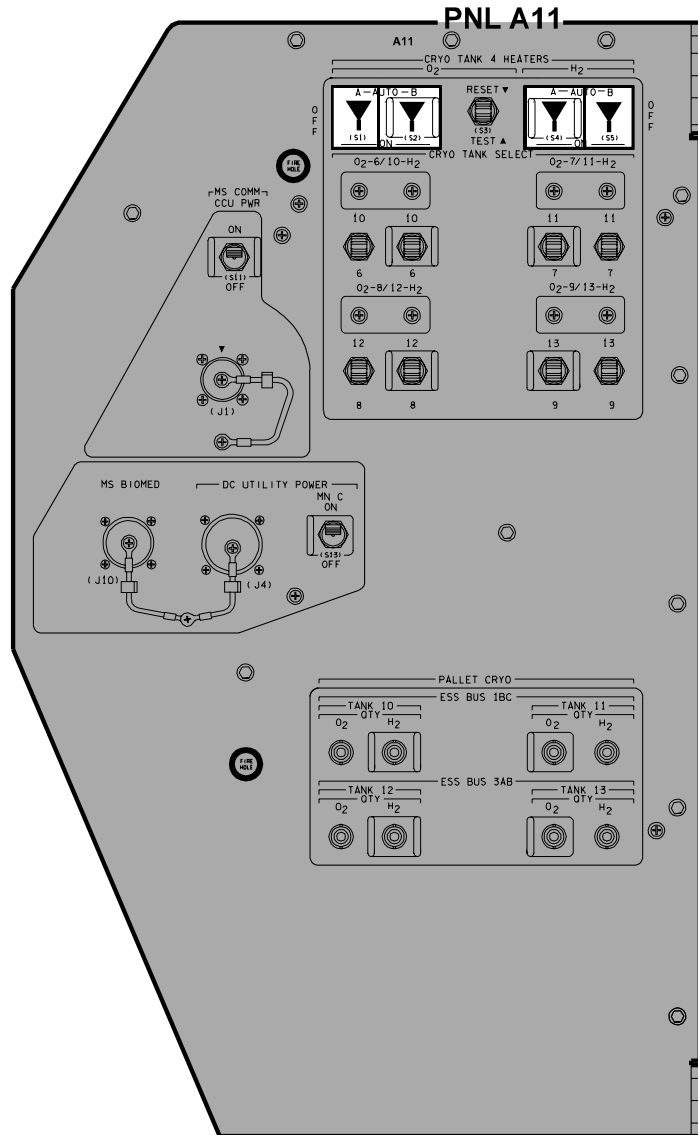




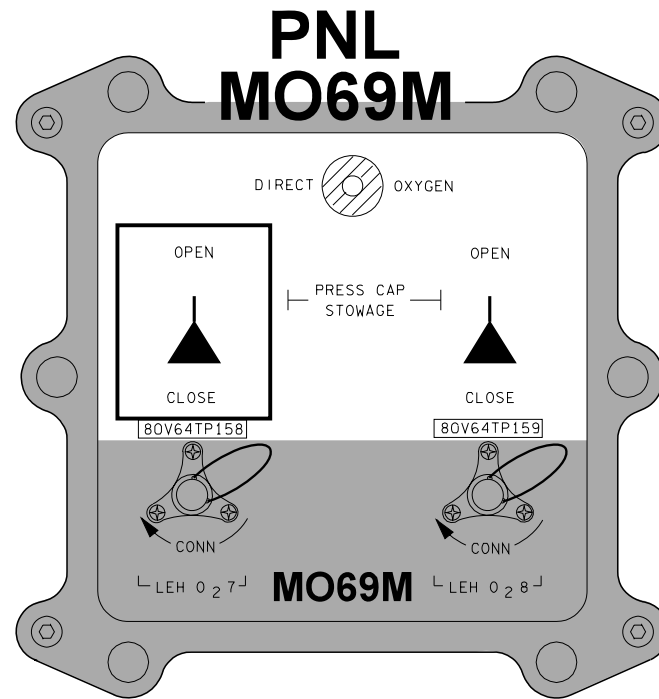
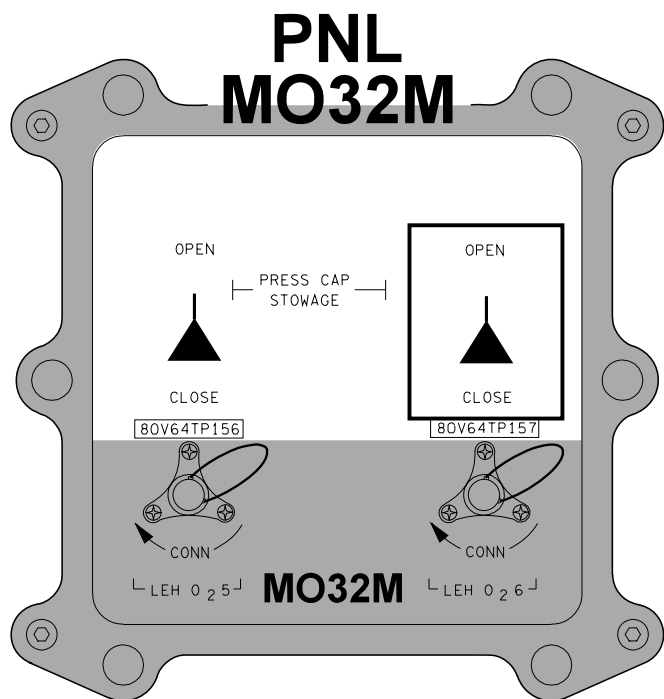
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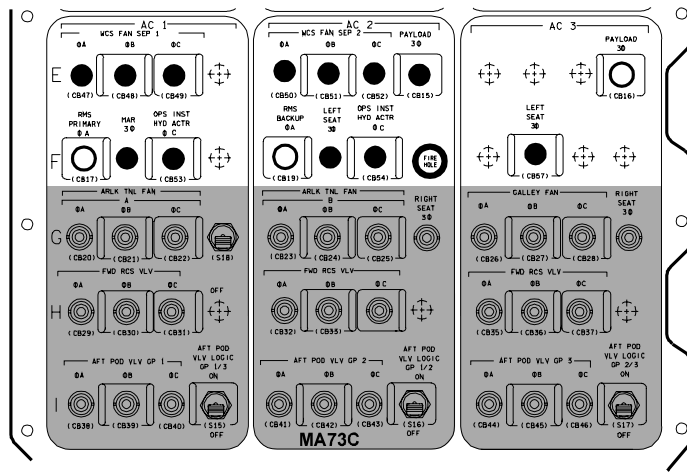
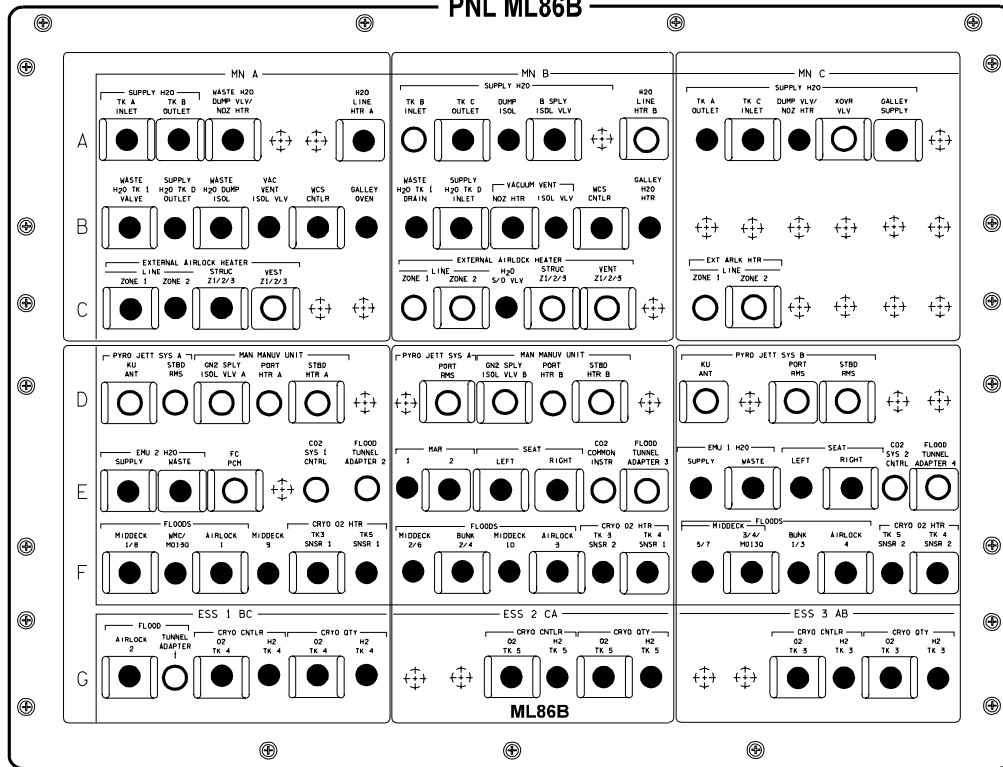




# OV104



PNL ML86B



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# ORBIT 5/6 DEORBIT

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**PEN AND INKS TO NOMINAL POST  
INSERTION FOR ORBIT 5/6 DEORBIT**

WARNING

If AV BAY FIRE (ASC PKT, PWRDN or ORBIT PKT, PWRDN) has been completed and the associated AC BUS, FF MDM, or FMCA is not recovered, √MCC for Vent Door config. Certain failure combinations will cause multiple vent doors to remain open during entry

<b>MET</b>	<b>ACTIVITY</b>
ASAP	<p>Perform PRIORITY PWRDN GROUPS A &amp; B (ORB PKT, <u>PRIOR PWRDN</u>) with following deltas:</p> <p style="padding-left: 40px;">DELETE: HI LOAD DUCT HTR OFF in Group A Pwrdn PRI RJDs DRIVER &amp; LOGIC OFF in Group B Pwrdn</p> <p>When PRIORITY PWRDN is complete, return to Nominal Post Insertion, 1-5, completing all activities except the following:</p> <p style="padding-left: 40px;">MET 1:28 OPEN PLBDs MET 1:36 KU-BD ANT DEPLOY KU-BD ANT ACTIVATION MET 1:52 POST PLBD OPS RAD CONFIG MET 1:54 SPECIALIST SEAT REMOVAL/STOWAGE MET 1:57 ESCAPE POLE STOWAGE MET 2:01 AIRLOCK SETUP FOR INGRESS MET 2:05 CONFIG VERNIER DRIVERS</p>
1:00	<p><u>If Both Voice and Command Unavailable:</u> Perform GPS INCORPORATION (ORB OPS, <u>GNC</u>)</p>
2:12	<p><u>CONFIG CONTROLS FOR ON-ORBIT</u>, 1-17 thru 1-26 (SWITCH PICTORIALS) <u>NOTE:</u> Some of these switch throws will have been done during PRIORITY POWERDOWNS</p> <p>DELETE: HI LOAD DUCT HTR – OFF, on 1-19</p>
2:30	<p>Add following MNVR: <u>MNVR (TRK) –ZLV. +YVV</u> TG = 2 BV = 3 OM = 270</p>

**PEN AND INKS TO NOMINAL D/O  
PREP FOR ORBIT 5/6 DEORBIT**

<b>TIG-</b>	<b>ACTION</b>	<b>PROCEDURES</b>
3:57	Delete	<u>COLDSOAK INITIATE</u> <b>2</b>
3:35	Delete	<u>SPECIALIST SEAT INSTALLATION</u>
3:30	Move to TIG-2:30	<u>DPS CONFIG FOR D/O PREP</u> <b>4a</b>
3:15	Move to TIG-2:20	<u>DED DISP ENT CONFIG</u> <b>6</b>
3:00	Add	<u>GNC FRP-3</u> (MAL, <u>GNC FRPs</u> ) to recover IMU 2
2:56	Delete	<u>RAD BYPASS/FES C/O</u> (ORB OPS, <u>ECLS</u> )
2:55	Delete	CONFIG FOR PLBD CLOSING <b>7</b>
2:40	Delete	<u>PLBD CLOSING</u> <b>9</b>
2:40	Add	<u>PWRDN BACKOUT</u> (Group A & B) (ORB PKT, <u>PRIOR PWRDN</u> ) (Delete IMU 2 recovery step)
2:26	Delete	<u>POST CLOSING CONFIG</u> <b>10</b>

# CUE CARD CONFIG

**CUE CARD  
CONFIG**

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TOP

**AFT FLIGHT DECK RECONFIGURATION**

**CONFIG FOR PLBD OPERATIONS 4**

A6U **SET UP LIGHTS**  
ANNUN BUS SEL – MNC

**NOTE**  
Minimum operating time for PLB Floodlights is 10 min.  
Light must be OFF for minimum of 10 min UNBLOCKED,  
16 min BLOCKED prior to reuse. ~3 min to full bright

A7U PL BAY FLOOD AFT (two) – OFF  
MID (two) – OFF  
FWD – OFF  
BKHD – ON

Record MET: \_\_\_\_/\_\_\_\_:\_\_\_\_:\_\_\_\_

- \* If PLB Floodlight not ON to full bright within 5 min: \*
- \* (Aff) PL BAY FLOOD – OFF \*

**SET UP P/TV**  
Perform ACTIVATION, OPERATION (Cue Card, TV)  
Perform Minicam Config for PLBD Rec: Tape, Batt

**CLOTHING CONFIG 10**

DoFF, stow:  
Harness, Boots, LES  
Stow gloves in Helmet  
Remove radiation dosimeter from LES and insert in inflight garments

DoFF, stow in Wet Trash:  
UCD (clamp if used)  
Emesis Bag, if used (unstow new bag)

**RESET C/W 16**

R13U		
PARAMETER NAME	C/W CH	UPPER LIMIT
FREON LOOP EVAP OUT T1	107	1.90V/64.8 deg
T2	117	1.90V/64.8 deg
CABIN PRESS	4	3.85V/15.33 psia

R13U		
PARAMETER NAME	C/W CH	ENA/INH
MPS He TK P C	9	INH
L	19	INH
R	29	INH
MPS He REG P C	39	INH
L	49	INH
R	59	INH
HYD P 1	99	INH
2	109	INH
3	119	INH
O2 FLOW 1	14	INH
2	24	INH
N2 FLOW 1	54	INH
2	64	INH

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CC 3-4

PI/117/FIN 2

HOOK  
VELCRO

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**MIDDECK RECONFIGURATION**

**PRELIM MIDDECK CONFIG 2**

**WARNING**  
 Eye and skin damage can occur in  
 as little as 10 sec

**INSTALL FILTERS**

Don Sunglasses

Unstow, install: Side Hatch UV Filter and Locking Device, and Pyro  
 Box Safing Pin

ML26C

**PRESS H2O TKA**

SPLY H2O GN2 TK VENT vlv - PRESS  
 A SPLY vlv - OP

**NOTE**

Disregard possible 'S66 WASTE H2O PRES' fault msg

**COMM CONFIG**

Unstow: headsets, handheld mic, and/or wireless comm  
 (see WCCS Cue Card), if flown

If WCCS, perform STD WCCS CONFIG (ORB OPS,  
**COMM/INST**)

MO42F

If middeck handheld mic/speaker ops:

- MIDDECK SPKR AUD A/G 1 - T/R, tw-2
- A/G 2 - RCV, tw-2
- A/A - RCV, tw-2
- ICOM A - T/R, tw-2
- B - RCV, tw-2
- XMIT/ICOM MODE - PTT/PTT
- SPKR PWR - SPKR
- MSTR SPKR VOL - 8

MO39M

MIDDECK COMM CCU PWR - OFF  
 Connect HHMIC to CCU  
 MIDDECK COMM CCU PWR - ON

**FDf CONFIG**

Stow in Helmet Bag: ASCENT Cue Cards, ASC, ASC PKT,  
 SYS AOA  
 Unstow Jettison Stowage Bag, mark "Return to Houston"  
 Place Helmet Bag in Return to Houston Bag

ML86B:C

cb MNA EXT ARLK HTR LINE ZN1,2 (two) - cl  
 STRUC Z1/2/3 - cl

:E

cb MNA FC PCM - op

Unstow VW Bags

MET	MS AFT ACTIONS
00:53	<b>SPECIALIST SEAT EGRESS</b>
00:57	<b>PRELIM MIDDECK CONFIG 2</b>
01:07	<b>WCS CONFIG/ACT 5</b>
01:08	<b>SWITCH CONFIG/GALLEY ACT 6</b>
01:41	<b>CLOTHING CONFIG 10</b>
01:45	<b>QUICKDON MASKS SETUP 19</b>
01:54	<b>SPECIALIST SEAT REMOVAL/STOWAGE</b>
01:59	<b>ESCAPE POLE STOWAGE 13</b>
02:01	<b>AIRLOCK SETUP FOR INGRESS 15</b>

**CLOTHING CONFIG 10**

Doff, stow:

Harness, Boots, LES  
 Stow gloves in Helmet  
 Remove radiation dosimeter from LES and insert in  
 inflight garments

Doff, stow in Wet Trash:

UCD (clamp if used)  
 Emesis Bag, if used (unstow new bag)

**QUICKDON MASKS SETUP 19**

Connect QDM COMM to HIU  
 Connect QDM O2 to LEH hose  
 Verify operation  
 Temp stow QDM/HIU assembly

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MIDDECK RECONFIGURATION

**WCS CONFIG/ACT 5**

WCS SWITCH CONFIGURATION

ML86B:A cb MNA H2O LINE HTR A - cl  
 :B WASTE H2O DUMP ISOL - cl  
 MNA,MNB VAC VENT ISOL VLV (two) - cl  
 WCS CNTLR (two) - cl  
 MNB VAC VENT NOZ HTR - cl  
 :F MNA FLOODS WMC/MO13Q - cl

MA73C:E All cbs closed except:  
 cb AC3 PL 3Φ - op

ML31C WASTE H2O DUMP ISOL VLV - OP (tb-OP)  
 √VAC VENT ISOL VLV BUS SEL - MNA  
 NOZ HTR - ON  
 ISOL VLV CNTL - OP (tb-OP)

\* If VAC VENT ISOL VLV CNTL tb- CL or bp: \*  
 \* VAC VENT ISOL VLV BUS SEL - MNB \*  
 \* CNTL - OP (tb-OP) \*  
 \* If VAC VENT ISOL VLV CNTL tb still CL or bp: \*  
 \* √MCC for further actions \*

WCS ACTIVATION

WCS Foot/Toe Restraints - down,locked  
 VAC VLV - OP  
 Unstow urinal hose from Velcro strap, install hose in cradle  
 √CRADLE - AUTO  
 √MODE - AUTO  
 FAN SEP SEL sw - 1  
 Unstow hose from cradle (√Airflow)  
 √WCS ON It - on  
 Stow hose in cradle  
 √WCS ON It - off  
 Unstow,install WCS Container, Bag & Hose, Mirror, Elbow Bag  
 Dispenser, First Day Clothing  
 √Ventline mated in aux Wet Trash

**SWITCH CONFIG/GALLEY ACT 6**

MA73C:F cb AC1 MAR 3Φ - cl  
 :G cb AC3 GALLEY FAN (three) - cl

ML86B:A All cbs closed except: MNB H2O LINE HTR B - op  
 :B All cbs closed  
 :E All cbs closed except: FLOOD TUNNEL ADAPTER (three) - op  
 CO2 SYS 1,2 CNTLR, CO2 COMM INSTR - op  
 FC PCM - op  
 :F All cbs closed  
 :G All cbs closed except: ESS1BC FLOOD TUNNEL ADAPTER 1 - op

R11L:G SPLY H2O GALLEY SPLY VLV - OP (tb-OP)

GALLEY H2O HTRS (two) - ON  
 OVEN/RHS - ON

Unstow,install Personal Hygiene Hose

**ESCAPE POLE STOWAGE 13**

Remove large Port Pin  
 Slide back - Safing Latch  
 Retract,hold Locking Pin (Ring)  
 Remove Large Pin  
 Release Locking Pin (Ring)  
 Remove STBD Pip Pin  
 Stow Pole  
 Reinstall Large Pin

**AIRLOCK SETUP FOR INGRESS 15**

- Inner Hatch 1. Equal vlv caps (two) - remove
- 2. Open hatch per decal
- 3. Equal vlv (two) - OFF, install caps
- MDDK 4. Remove diffuser from aft middeck floor fitting and temp stow
- EXT A/L 5. Unstow bypass duct from Tunnel extension wall
- 6. Attach free end to aft middeck floor fitting
- MO13Q 7. AIRLK 2 - ON/OFF
- AW18A 8. LTG FLOOD 1(3,4) - ON (as reqd)
- 9. √Airflow at top of external airlock halo
- 10. √NEG CAB PRESS RELIEF vlv cover (two) - CL (pushed in)

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**POST INSERTION**

**STS  
117**