

# Post Insertion

## STS-134

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**Mission Operations Directorate  
Operations Division**

**Final  
April 30, 2010**

National Aeronautics and  
Space Administration

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





STS-134 POST INSERTION

FINAL (Apr 30, 2010)

## PCN-2 (Mar 9, 2011) Sheet 1 of 1

List of Implemented Change Requests (482s):

PI-00894A

ASC-01953B

Incorporate the following:

1. Replace iii and iv
2. Replace 1-3 and 1-4, 1-17 thru 1-20, 1-27 and 1-28

Prepared by:

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Encl: 10 pages

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STS-134 POST INSERTION

FINAL (Apr 30, 2010)

## PCN-1 (Dec 3, 2010) Sheet 1 of 1

List of Implemented Change Requests (482s):

PI-00892

Incorporate the following:

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

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Encl: 10 pages

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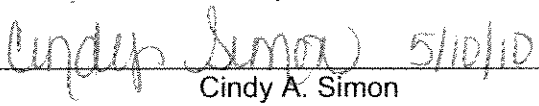


MISSION OPERATIONS DIRECTORATE

**POST INSERTION  
STS-134**

FINAL  
April 30, 2010

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Incorporates the following:	
482#:	PI-00881A PI-00885 PI-00886

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POST INSERTION  
STS-134

**LIST OF EFFECTIVE PAGES**

FINAL 04/30/10  
PCN-1 12/03/10  
PCN-2 03/09/11

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ii.....*	134/FIN	1-18 .....	134/FIN 1
iii.....*	134/FIN 2	1-19 .....	134/FIN 2
iv.....*	134/FIN	1-20 .....	134/FIN
v .....	134/FIN	1-21 .....	134/FIN
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1-16 .....	134/FIN	CC 3-6 .....	* 134/FIN

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/134/O/C
(Back) .....	CC 3-4	PI-1b/134/O/A
MIDDECK RECONFIGURATION (Front).....	CC 3-5	PI-2a/134/O/A
(Back).....	CC 3-6	PI-2b/134/O/A

\* – Omit from flight book

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

NOTE

The STS-134 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-134 flight phases are conducted using the Ascent Checklist, Flight Plan, Deorbit Prep Book, Entry Checklist, EVA Checklist, and Rendezvous Book.

# POST INSERTION PROCEDURES



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

00:35

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,D,E  
L4:Q,R  
L4:J  
00:50  
MS  
SEATS  
C,P  
00:55  
P  
A1(B1)  
AUTO  
PRI  
RT 0.2  
DB 5.0  
MS  
MS  
01:00

All cbs open  
All cbs closed  
cb AC3 φA SIG CONDR HUM SEP – cl  
B SIG CONDR IMU FAN – cl  
**SPECIALIST SEAT EGRESS**  
CDR,PLT SEAT PWR BUS SEL – OFF (ctr)  
**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  
**PL BUS ACTIVATION**  
PL CAB – MNA  
PRI MNC – ON (tb-ON)  
AUX – ON  
AFT MNB – ON  
**PRELIM MIDDECK CONFIG** (MIDDECK RECONFIGURATION  
Cue Card) [2], 1-15  
**AFT STATION CONFIG** (AFT FLIGHT DECK  
RECONFIGURATION 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 →  
SM, OPS 201(401) PRO  
SM ANTENNA  
C3 √UPLK – ENA  
SM 1 DPS UTILITY  
UL CNTL AUTO – ITEM 35 EXEC  
C3  
7. SECURE BFS  
BFC CRT DISP – ON  
C3  
C3  
C3  
O6  
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  
FORMAT:  
C3  
CRT  
FXD – ITEM 1 EXEC (\*)  
SEL ID – ITEM 3 +1 9 9 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	GPC	2	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





**STAR TRKR ACTIVATION/DOOR OPEN** 12

**C** O6 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 22 S 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

L1 FLASH EVAP CNTLR PRI A – OFF

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

SM SYS SUMM 2

CRT if FREON EVAP OUT TEMP > 41 and ≤ 47 degF:  
L1 RAD CNTLR OUT TEMP – HI  
CRT When FREON EVAP OUT TEMP > 50 degF,  
L1 RAD CNTLR OUT TEMP – NORM, then immediately:  
FLASH EVAP CNTLR PRI B – ON  
CRT if FREON EVAP OUT TEMP ≤ 41 or > 47 degF:  
L1 FLASH EVAP CNTLR PRI B – ON

<b>MET</b>	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
	<b>MS</b>	<b>KU-BD ANT DEPLOY</b> (ORB OPS, <u>COMM/INST</u> )
		<b>KU-BD ACTIVATION</b> (ORB OPS, <u>COMM/INST</u> )
	<b>C,P</b>	<b>SEAT EGRESS</b>
01:40	<b>C,P</b>	<b>CLOTHING CONFIG</b> <b>9</b>
	<b>MS</b>	<b>CLOTHING CONFIG</b> (MIDDECK, AFT FLIGHT DECK RECONFIGURATION Cue Cards) <b>10</b> , 1-14, 1-15
01:45	<b>ALL</b>	<b>QUICKDON MASKS SETUP</b> <b>19</b>
		If time permits: <b>OCAC SETUP</b> (ORB OPS, <u>CREW SYS</u> )
01:50	<b>C</b>	<b>POST PLBD OPS RAD CONFIG</b> <b>11</b>
	<b>MS</b>	<b>SPECIALIST SEAT REMOVAL/STOWAGE</b>
01:55	<b>C</b>	<b>STAR TRKR ACTIVATION/DOOR OPEN</b> <b>12</b> , 1-6
	<b>MS</b>	<b>ESCAPE POLE STOWAGE</b> (MIDDECK RECONFIGURATION Cue Card) <b>13</b> , 1-16
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> (MIDDECK RECONFIGURATION Cue Card) <span style="border: 1px solid black; padding: 0 2px;">15</span> , 1-16	
A5(B1)	P	<b>W/B STEAM VENT HTR ACT</b>	
AUTO		R2	√BLR CNTLR/HTR (three) – A PWR (three) – ON
ALT	C	<b>CONFIG VERNIER CONTROL</b>	
RT 0.2		O16:F	√MCC GO for vernier control RJD MANF L5/F5/R5 DRIVER – ON, wait 5 sec DAP: A/AUTO/VERN
DB 5.0			
02:05			
A5(B1)	ALL	<b>CONFIG CONTROLS FOR ON-ORBIT</b>	
AUTO		Perform actions on 1-17 thru 1-27 Unstow, install HUD covers (two)	
VERN			
RT 0.05			
DB 1.0			
02:10			
	L2	Remove, stow (on panel L2/FDF FD locker) NWS sw flex extension	
02:15			
	P	<b>HYD THERMAL CONDITIONING-ENABLE</b>	
	R2	HYD CIRC PUMP (three) – GPC	
02:20			
	P	<b>SUPPLY WATER CONFIG</b> <span style="border: 1px solid black; padding: 0 2px;">14</span> , 1-6	
02:25			
	MS	<b>RESET C/W</b> (AFT FLIGHT DECK RECONFIGURATION Cue Card) <span style="border: 1px solid black; padding: 0 2px;">16</span> , 1-14	
	MS	<b>FUEL CELL VI PERFORMANCE PLOT</b> (ORB OPS, EPS)	
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 DOOR 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					
P DOOR	3/MID4	CA3/CA2	PL2	2	2/MID2	BC3/BC1	PL1	1									
													2	1	1	2	2
													1	1	1	2	1











## ON-ORBIT SWITCH LIST

### LEFT SEAT

L1 ..... 1-19  
 L2 ..... 1-19  
  
 O6 ..... 1-19  
 O7 ..... 1-20  
 O8 ..... 1-21  
  
 O14 ..... 1-22  
 O15 ..... 1-23

### RIGHT SEAT

O16 ..... 1-23  
 O8 ..... 1-21  
  
 R1 ..... 1-18

### AFT









C5 ..... 1-23  
 C6 ..... 1-23  
 C7 ..... 1-23  
  
 A11 ..... 1-24

### MIDDECK-FWD

ML86B ..... 1-26

### MIDDECK-AFT

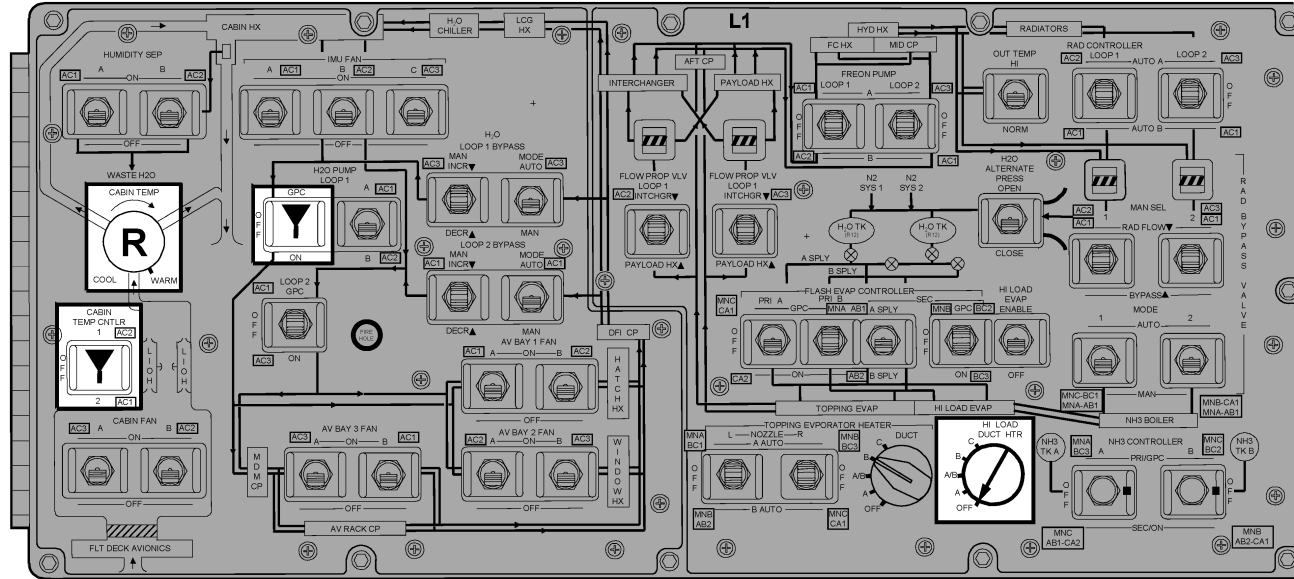
MA73C ..... 1-26  
 MO32M ..... 1-25  
 MO69M ..... 1-25  
 MO63P ..... 1-27 (no crew  
 action reqd)

 - Up  - Center  - Down  - Boxed items indicate switch configured during ON-ORBIT CONFIGURATION	<b>R</b> - As reqd  - cb close  - cb open  - White area indicates switch verified during ON-ORBIT SWITCH CONFIGURATION	 - Indicates switch/display not checked during ON-ORBIT SWITCH/VERIF Switch/display pictorials are generic representations and are not intended to depict actual switch position. Check MCC if clarification reqd
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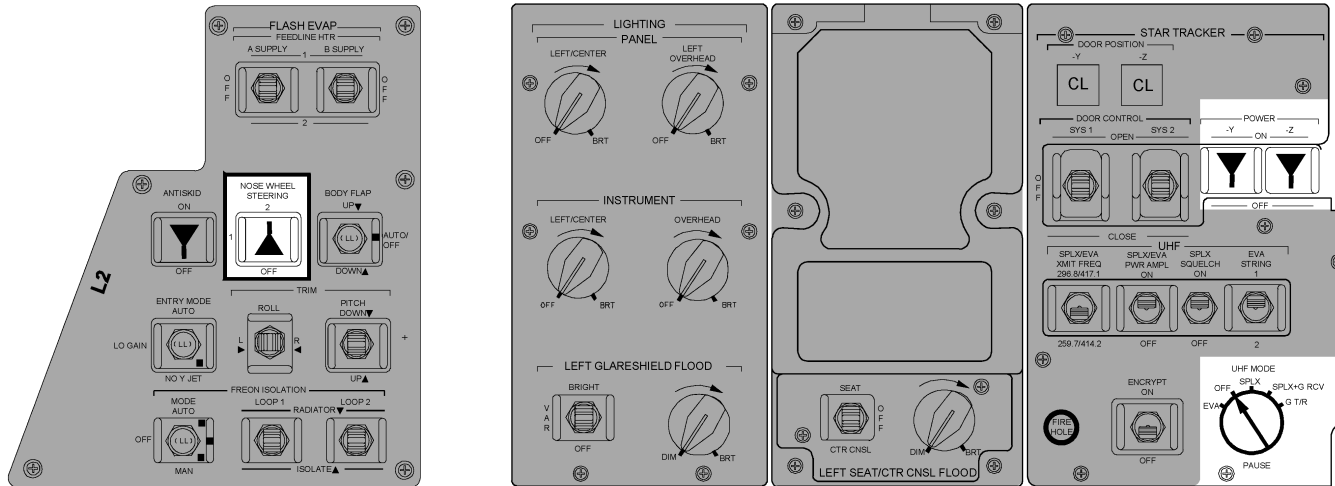
<u>CIRCUIT BREAKER SNAP RING COLOR CODES</u>	
<u>COLOR</u>	<u>CONFIGURATION</u>
Red	Open at all times
Green	Open on-orbit only
Yellow	Open ascent, close per procedure
Orange	Open orbit through entry
Blank (no ring)	Always closed or as required



# ALL VEH



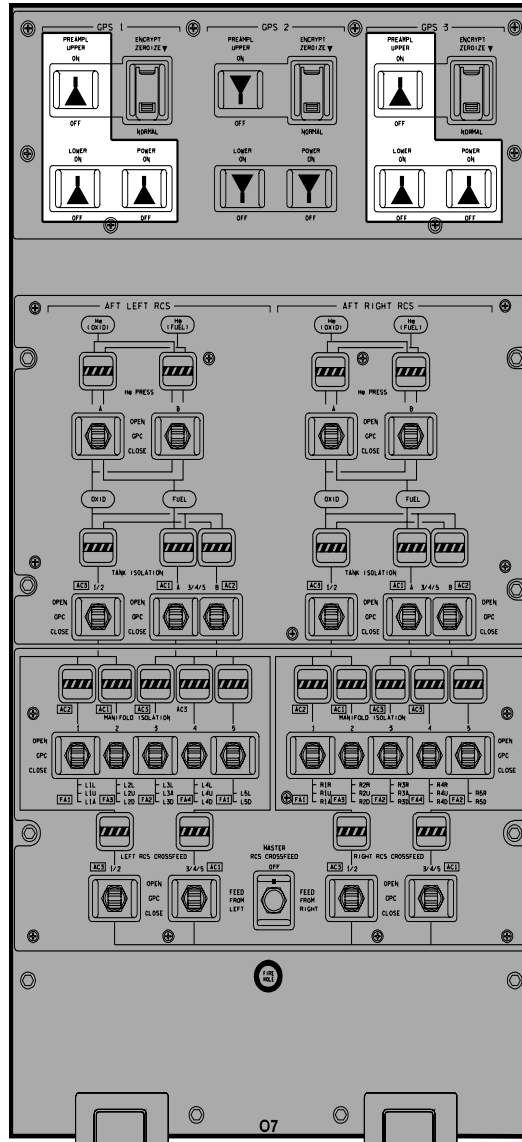
## PNL O6



4806720\_134.PNL.1

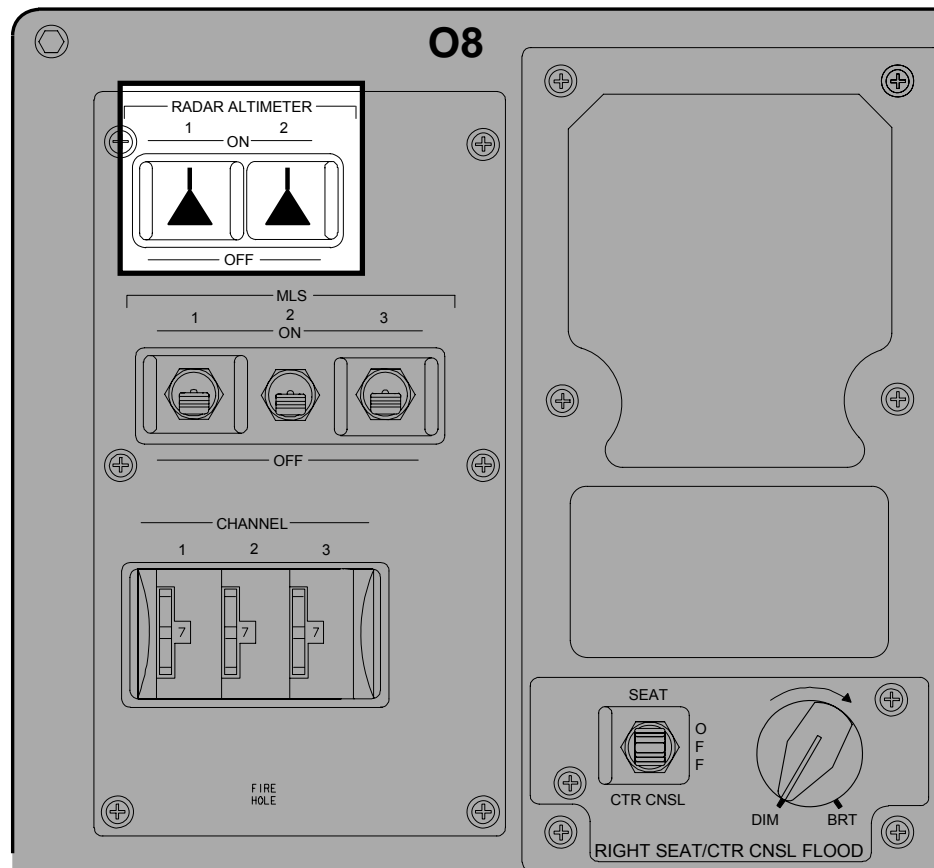
# OV105

## PNL 07



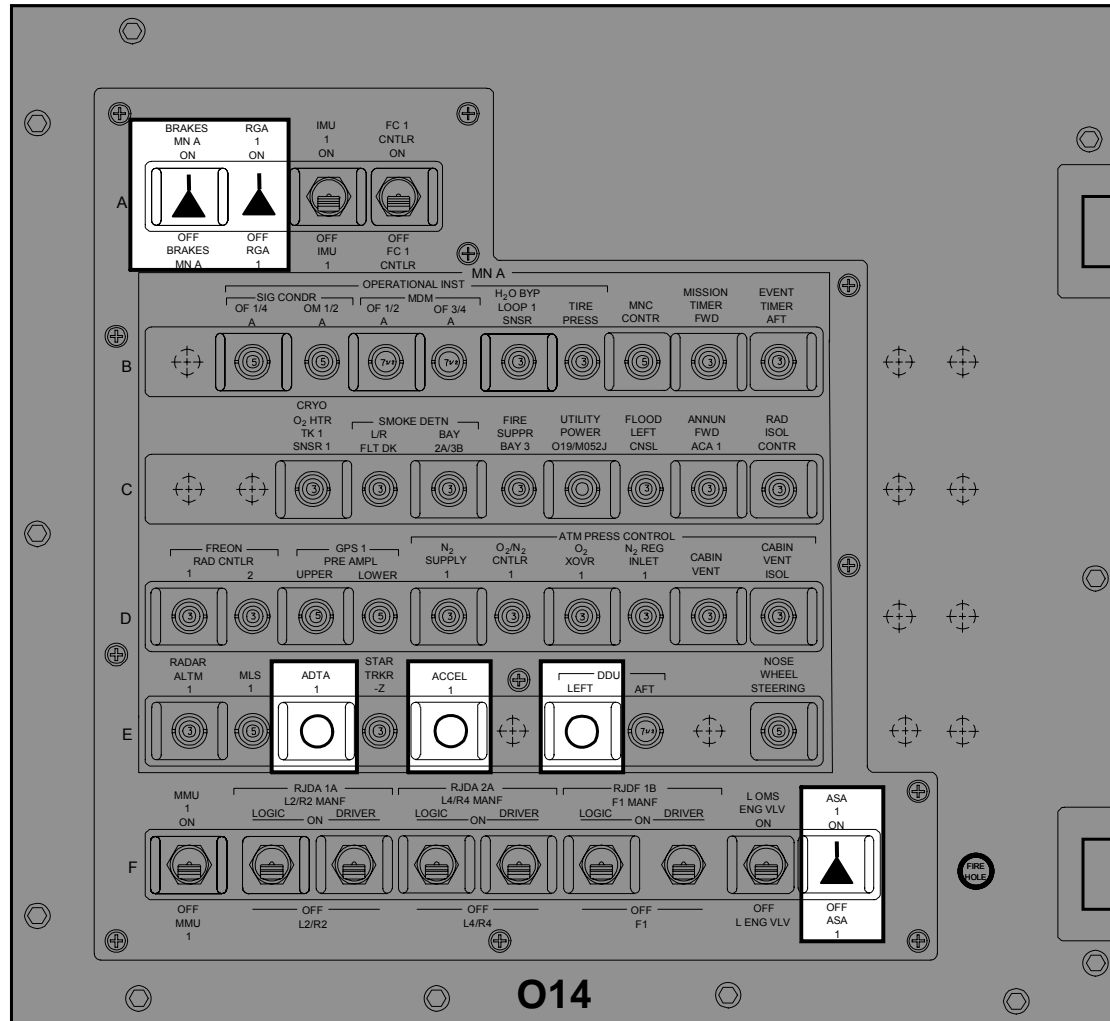


# OV105



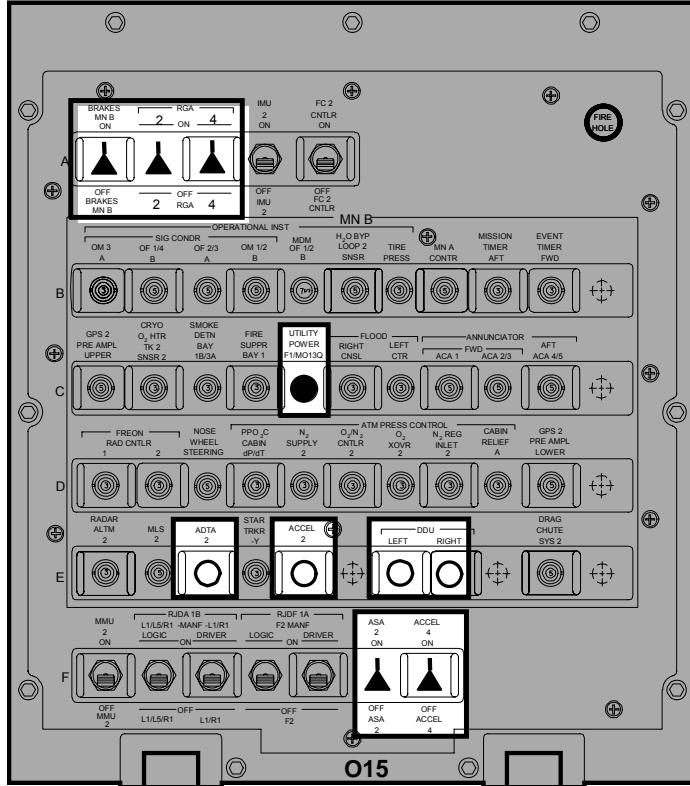
OV105

PNL O14

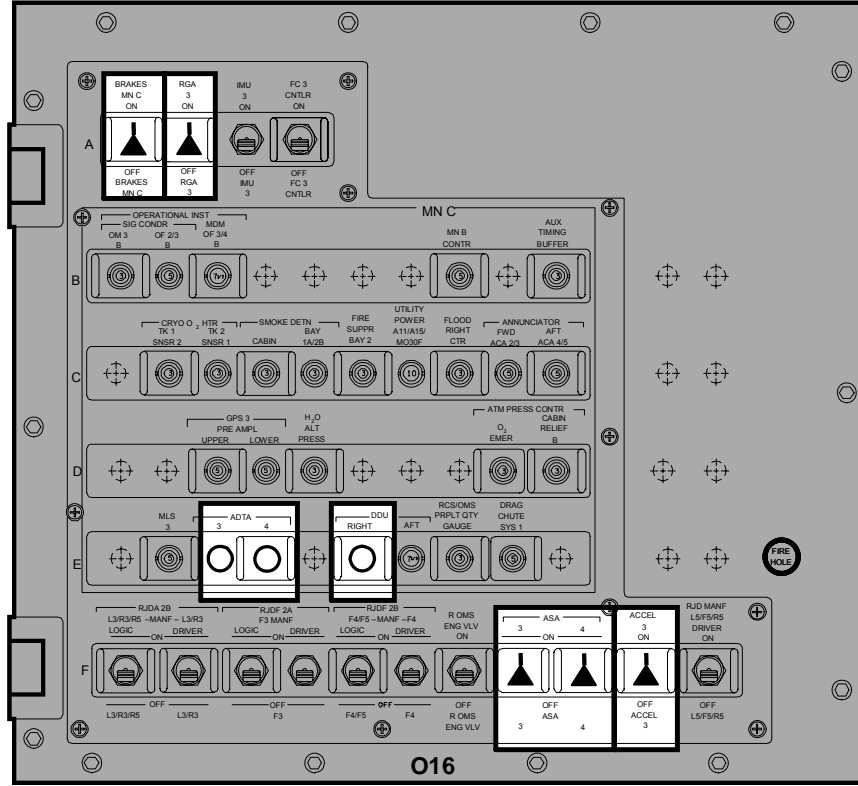


# OV105

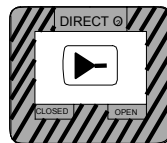
## PNL O15



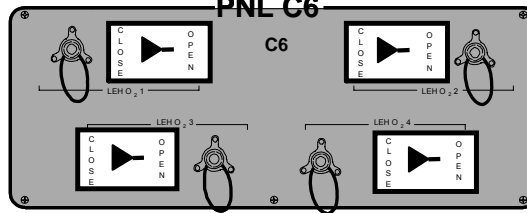
## PNL O16



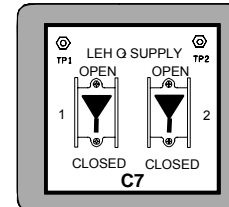
## PNL C5



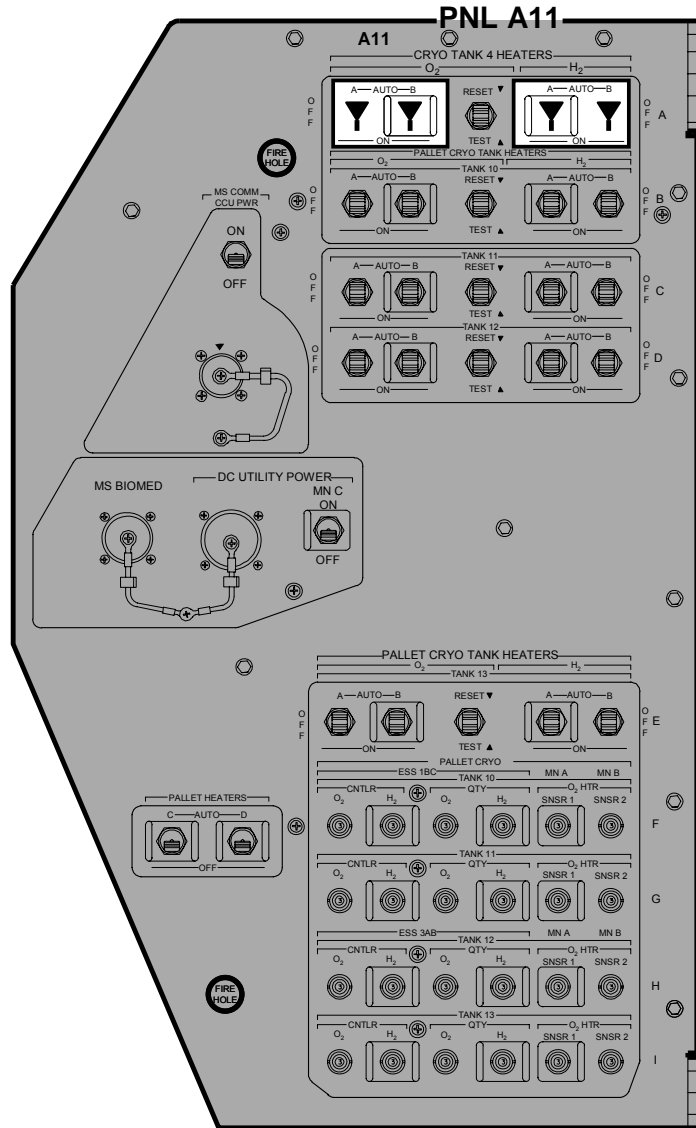
## PNL C6



## PNL C7

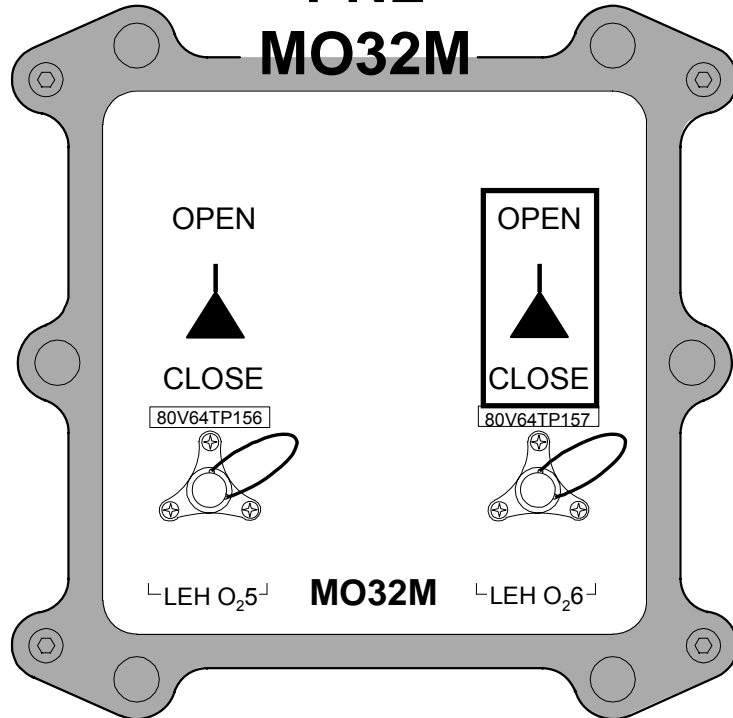


# OV105

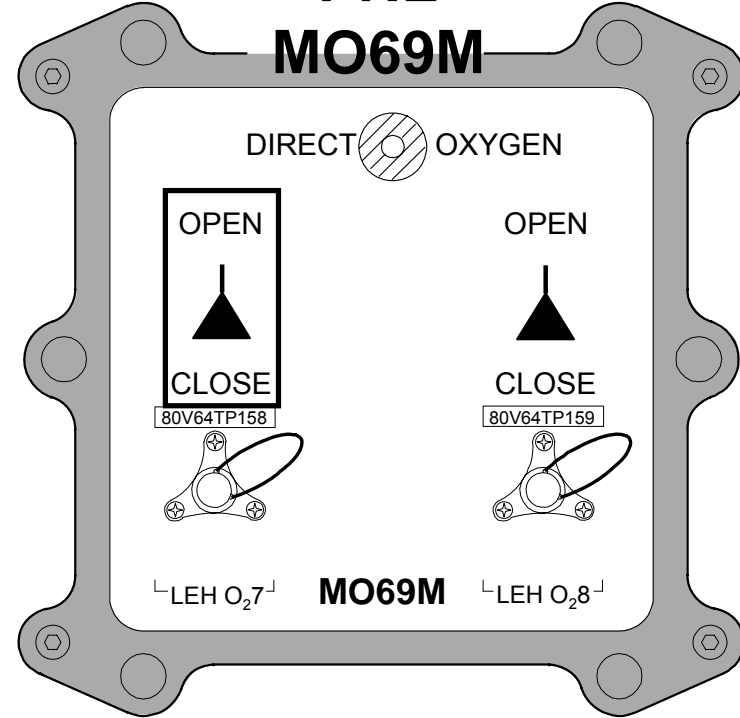


# OV103,OV105

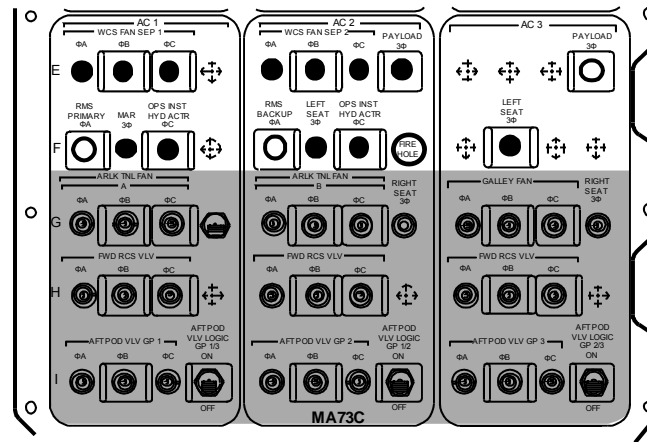
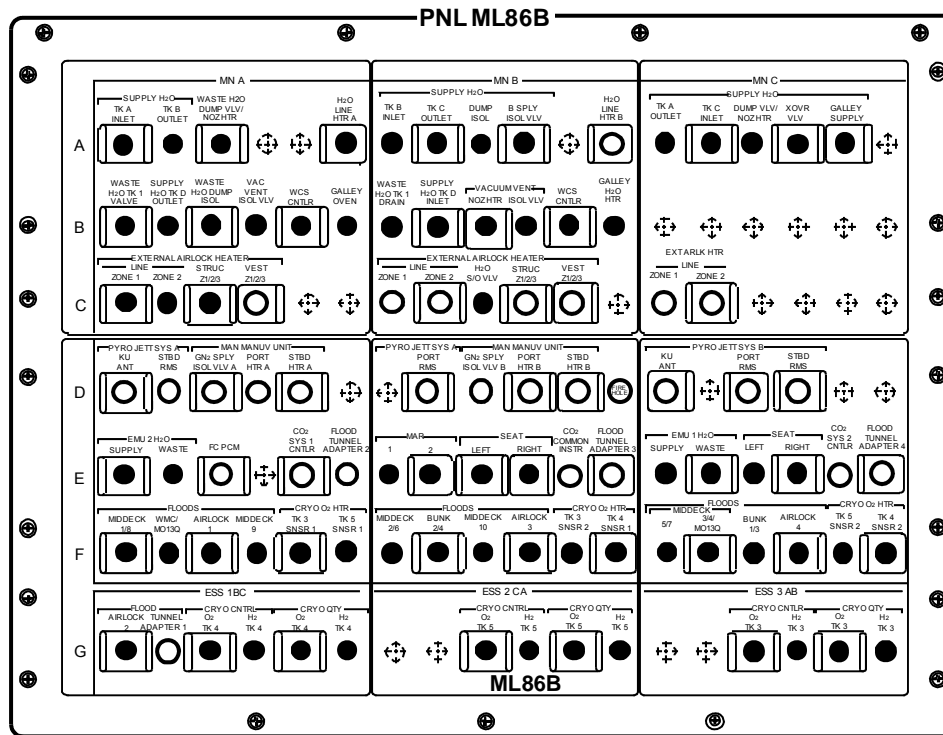
## PNL MO32M



## PNL MO69M

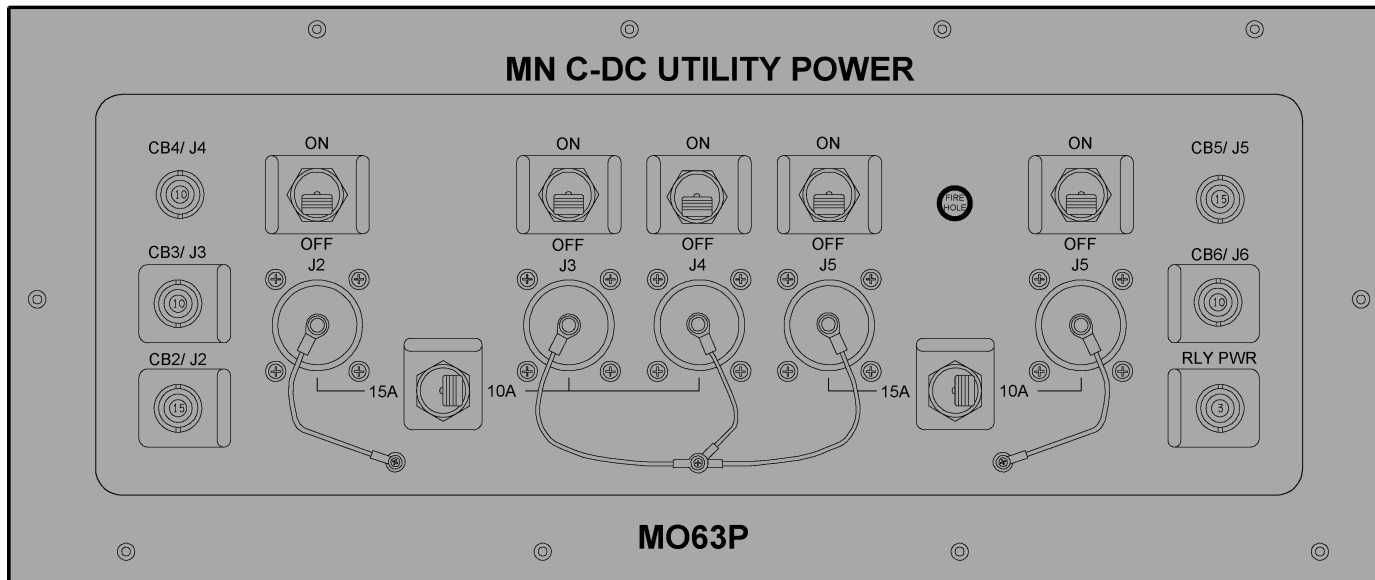


OV105



OV105

PNL MO63P



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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 ORB PKT, PWRDN) has been completed and the associated AC BUS, FF MDM, or FMCA is not recovered,  $\sqrt$ MCC for Vent Door config. Certain failure combinations will cause multiple vent doors to remain open during entry

MET	ACTIVITY
ASAP	<p>Perform PRIORITY PWRDN GROUPS A &amp; B (ORB PKT, <u>PRIOR PWRDN</u>) with following deltas:</p> <p style="margin-left: 40px;">DELETE: HI LOAD DUCT HTR OFF in Group A Pwrdrn PRI RJDs DRIVER &amp; LOGIC OFF in Group B Pwrdrn</p> <p>When PRIORITY PWRDN is complete, return to Nominal Post Insertion, 1-5, completing all activities except the following:</p> <p style="margin-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 1-27 (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	<u>CONFIG FOR PLBD CLOSING</u> <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 MID (two) – ON  
FWD (two) – 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)

If PLBD video rec desired:

Perform PLBD VTR RECORDING (Cue Card)

**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/15.34 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

**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)

PI-1b/134/O/A

(reduced copy)

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO



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 flown, 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

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

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

Unstow VW Bags

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

**CLOTHING CONFIG** 10

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

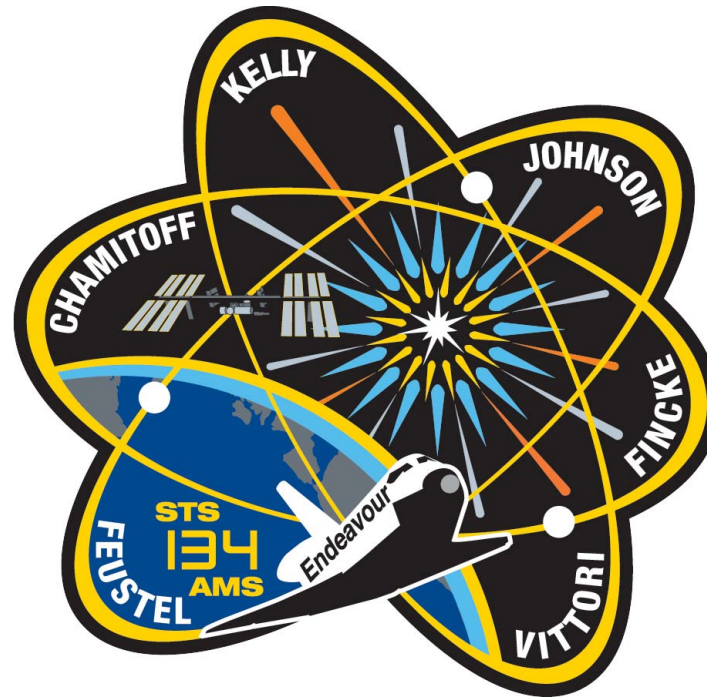
DoFF, stow in Wet Trash:  
UCD (clamp if used)  
Emesis Bag, if used (unstow new bag)

**QUICKDON MASKS SETUP** 19

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

PI-2a/134/O/A





**POST INSERTION**

**STS  
134**