

# Post Insertion

## STS-124

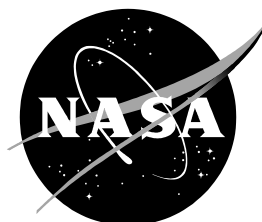
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**Mission Operations Directorate  
Operations Division**

**Final  
April 18, 2008**

National Aeronautics and  
Space Administration

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



***United Space Alliance***

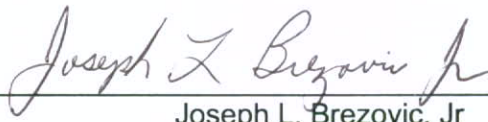


MISSION OPERATIONS DIRECTORATE

**POST INSERTION  
STS-124**

FINAL  
April 18, 2008

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|-----------------------------|--------------------------------------|
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POST INSERTION  
STS-124

**LIST OF EFFECTIVE PAGES**

FINAL 04/18/08

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| iv.....        | * | 124/FIN | 1-20 .....   | 124/FIN   |
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| 1-14 .....     |   | 124/FIN | CC 3-6 ..... | * 124/FIN |
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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/124/O/A   |
| (Back) .....                                 | CC 3-4           | PI-1b/124/O/C   |
| MIDDECK RECONFIGURATION (Front).....         | CC 3-5           | PI-2a/124/O/B   |
| (Back) .....                                 | CC 3-6           | PI-2b/124/O/A   |

\* – Omit from flight book

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|---------------------------------|------|
| 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-124 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-124 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<br>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<br>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<br>GPC |     | DUAL<br>G2 | SINGLE<br>G2 |
|---------------|-----|------------|--------------|
|               |     | 2<br>12000 | 2<br>10000   |
| 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

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<br>2 2<br>3 3<br>4 4 | 1 1<br>2 2<br>1 1<br>2 2 | 1 1<br>2 2<br>3 3<br>4 4 | 0<br>0<br>0<br>0 |
| P/L                        | 1/2 1                    | 0                        | 1                        | 4                |
| CRT                        | 1 1<br>2 2<br>3 3<br>4 0 | 1 1<br>2 2<br>0 0<br>2 0 | 1 1<br>2 2<br>3 3<br>4 0 | 4<br>4<br>0<br>4 |
| L                          | 1 1<br>2 2               | 0<br>0                   | 0<br>0                   | 4<br>0           |
| MM                         | 1 1<br>2 2               | 1 1<br>2 2               | 1 1<br>2 2               | 4<br>4           |

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

00:40

00:45

00:50

00:55

01:00

C L4:B,Q,R All cbs closed  
L4:D,E All cbs open  
L4:J cb AC3 φA SIG CONDR HUM SEP - cl  
φB 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 →

| CONFIG | 4(5)                     |
|--------|--------------------------|
| GPC    | 00040                    |
| STR    | 1 0<br>2 0<br>3 0<br>4 0 |
| PL     | 1/2 4                    |
| CRT    | 1 4<br>2 4<br>3 0<br>4 4 |
| L      | 1 4<br>2 0               |
| MM     | 1 4<br>2 4               |

NOTE  
Expect multiple msgs, Master Alarm, SM Alert

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  
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)

8. RECONFIG MEDs

GPC/CRT 0/3 EXEC  
IDP/CRT 3 PWR - OFF  
√4 PWR - ON

C2

GPC/CRT SM GPC/4 EXEC  
Power off MDUs as desired

F6,F7,F8

9. LOAD ORBIT TFLs

√OI PCMMU FORMAT - GPC  
[SM 62 PCMMU/PL COMM]

C3

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

CRT

[SM ANTENNA]

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  
**01:00**  
 A1(B1)  
 AUTO  
 PRI  
 RT 0.2  
 DB 5.0  
**01:05**  
**01:10**  
 A5(B1)  
 AUTO  
 PRI  
 RT 0.2  
 DB 5.0  
**01:15**  
 A5(B1)  
 AUTO  
 ALT  
 RT 0.2  
 DB 5.0  
**01:20**  
**01:25**  
 UPLINK  
 VAR  
 PARAM  
 TMBU  
 (IF  
 REQD)  
**01:30**

1: GNC UNIV PTG      2: SM ANTENNA

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

**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**

O5      AUD A/G 2      - RCV, tw 2  
                 XMIT/ICOM MODE - PTT/VOX (recommended)

**P**      **LOAD DAP A5**

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

CRT1      √TGT ID      +2  
                 BODY VECT      +3  
                 √P      +90  
                 √Y      +0.0  
                 OM      +270

DAP: A/AUTO/ALT  
 Initiate TRK

**C**      **RAD ACT** **7**

| <b>RAD/PLBD OPS NO-GO FOR FOLLOWING FAILURES</b> |   |                     |                     |
|--|---|---------------------|---------------------|
| <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 AAs                                   | Both Cab Fans       | WINDOW PANE FAILURE |
| OMS Prop Tk Leak                                 | 3 ADTAs                                 | 3 of 6 Av Bay Fans  | <b>DPS</b>          |
| Aft RCS He or Prop Leak                          | 3 Elevon or BF Pos Fdbks (same surface) | 2 FCs               | 3 GPCs              |
| <b>COMM</b>                                      | Any MN or 3Φ AC Bus                     | Any CNTL or MPC Bus | 2 PL MDMs           |
| No Voice and No CMD                              | 2 FCS Ch (same surface)                 | 3 IMU Fans          | 2 FF or FA MDMs     |
|  |   |                     | <b>APU/HYD</b>      |
|  |   |                     | 2 APU/HYD/WSB       |

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

**MS**      **ELBOW CAMR PICTURE** **20**, 1-6

**RAD ACT** **7**

**NOTE**

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

L1      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** 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 22S TRK/COAS CNTL  
STAR TRK – ITEM 3,4 EXEC  
1: GNC 21 IMU ALIGN  
RESUME

**ELBOW CAMR PICTURE** 20

Document Elbow Camr position via D2Xs photo from W10 per the following:  
Lens, 28-70 mm set at 70 mm (stowed in Vol 3B)  
Exp Mode – P  
√Meter – Matrix  
Sun(Earth)shine reqd

|            |                        |  |                    |
|------------|------------------------|--|--------------------|
| <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 ANT 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> <span style="border: 1px solid black; padding: 2px;">9</span>                                   |                    |
|            | <b>MS</b>              | <b>CLOTHING CONFIG</b> (MID,AFT Cue Cards) <span style="border: 1px solid black; padding: 2px;">10</span> , 1-14, 1-15 |                    |
| 01:45      | <b>ALL</b>             | <b>QUICKDON MASKS SETUP</b> <span style="border: 1px solid black; padding: 2px;">19</span>                             |                    |
|            |                        | 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> <span style="border: 1px solid black; padding: 2px;">11</span>                         |                    |
|            | <b>MS</b>              | <b>SPECIALIST SEAT REMOVAL/STOWAGE</b>   |                    |
| 01:55      | <b>C</b>               | <b>STAR TRKR ACTIVATION/DOOR OPEN</b> <span style="border: 1px solid black; padding: 2px;">12</span> , 1-6             |                    |
|            | <b>MS</b>              | <b>ESCAPE POLE STOWAGE</b> (MID Cue Card) <span style="border: 1px solid black; padding: 2px;">13</span> , 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   |       |  |               |
| A5 (B1) | MS    | <b>AIRLOCK SETUP FOR INGRESS</b> [15], 1-16              |               |
| AUTO    |       |  |               |
| ALT     | P     | <b>W/B STEAM VENT HTR ACT</b>                            |               |
| RT 0.2  | R2    | √BLR CNTLR/HTR (three) – A                               |               |
| DB 5.0  |       | PWR (three) – ON   |               |
| 02:05   |       |  |               |
| A5 (B1) | C     | <b>CONFIG VERNIER CONTROL</b>                            |               |
| AUTO    |       | √MCC GO for vernier control                              |               |
| VERN    | O16:F | RJD MANF L5/F5/R5 DRIVER – ON, wait 5 sec                |               |
| RT 0.05 |       | DAP: A/AUTO/VERN   |               |
| DB 1.0  |       |  |               |
| 02:10   |       |  |               |
|         | ALL   | <b>CONFIG CONTROLS FOR ON-ORBIT</b>                      |               |
|         |       | Perform actions on 1-17 thru 1-26                        |               |
|         |       | 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) [16], 1-14               |               |
| 02:25   |       |  |               |
|         | P     | <b>SUPPLY WATER CONFIG</b> [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> |               |

**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

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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 <span style="border: 1px solid black; padding: 2px;">BFS, SM 63 PL BAY DOORS</span> |
|    |      |     | <span style="border: 1px solid black; padding: 2px;">4: SM PL BAY DOORS</span>                         |
|    | 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   |
|    |      |     | <b>POST-PLBD OPENING CLEANUP</b>   |
|    | 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)   |
|    |      |     | <span style="border: 1px solid black; padding: 2px;">4: SM ANTENNA</span>                              |
|    | A7U  | 10. | After floodlights ON > 10 min:<br>PL BAY FLOOD (all) – OFF   |

**MANUAL PLBD OPENING PROCEDURE**

- |    |      |     |  |
|----|------|-----|--|
| MS | CRT4 | 1.  | SM, OPS 202 PRO or <span style="border: 1px solid black; padding: 2px;">BFS, SM 63 PL BAY DOORS</span> |
|    |      |     | <span style="border: 1px solid black; padding: 2px;">4: SM PL BAY DOORS</span>                         |
|    | 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   |
|    |      |     | <b>OPEN C/L LATCHES</b>  |
|    |      | 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 *)   |
|    |      |     | <b>OPEN STBD FWD,AFT LATCHES &amp; DOOR</b>  |
|    |      | 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 *)   |
|    |      |     | <b>OPEN PORT FWD,AFT LATCHES &amp; DOOR</b>  |
|    |      | 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 *)   |
|    |      |     | <b>POST-PLBD OPENING CLEANUP</b>   |
|    | 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)   |
|    |      |     | <span style="border: 1px solid black; padding: 2px;">4: SM ANTENNA</span>                              |
|    | A7U  | 31. | After floodlights ON > 10 min:<br>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/<br>MCA                 | CNTL    | MDM | SYS | AC/<br>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 |



## 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 (two) – ON  
    BHD – N/A

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), AUTO  
 OPS only for camera A(D)  
 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 O2 FLOW 2        | 24     | 4.65V/4.65 LBM/HR |

| 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)

## 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

#### 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

Unstow VW Bags

| MET   | MS AFT ACTIONS  |
|-------|---|
| 00:51 | <u>SPECIALIST SEAT EGRESS</u>   |
| 00:58 | <u>PRELIM MIDDECK CONFIG</u> <span style="border: 1px solid black; padding: 0 5px;">2</span>      |
| 01:06 | <u>WCS CONFIG/ACT</u> <span style="border: 1px solid black; padding: 0 5px;">5</span>             |
| 01:07 | <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





## 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

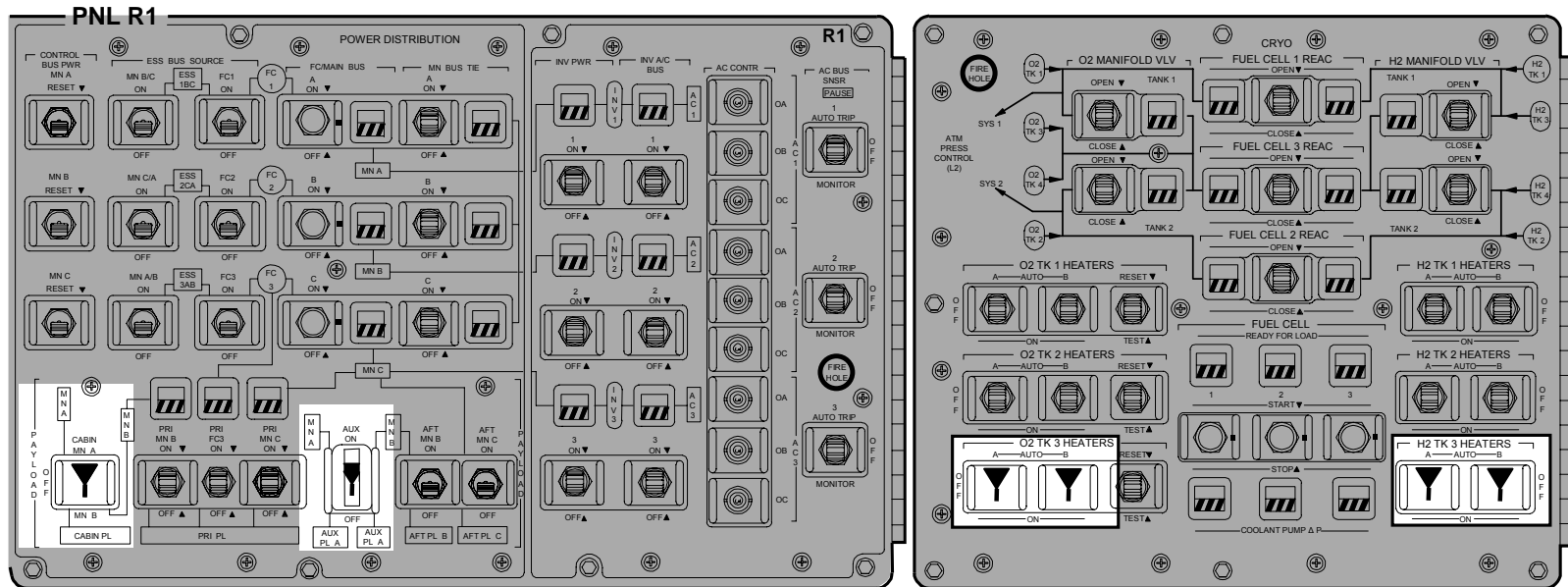
### MIDDECK-AFT

MA73C ..... 1-25  
 MO32M ..... 1-24  
 MO69M ..... 1-24  
 MO63P ..... 1-26

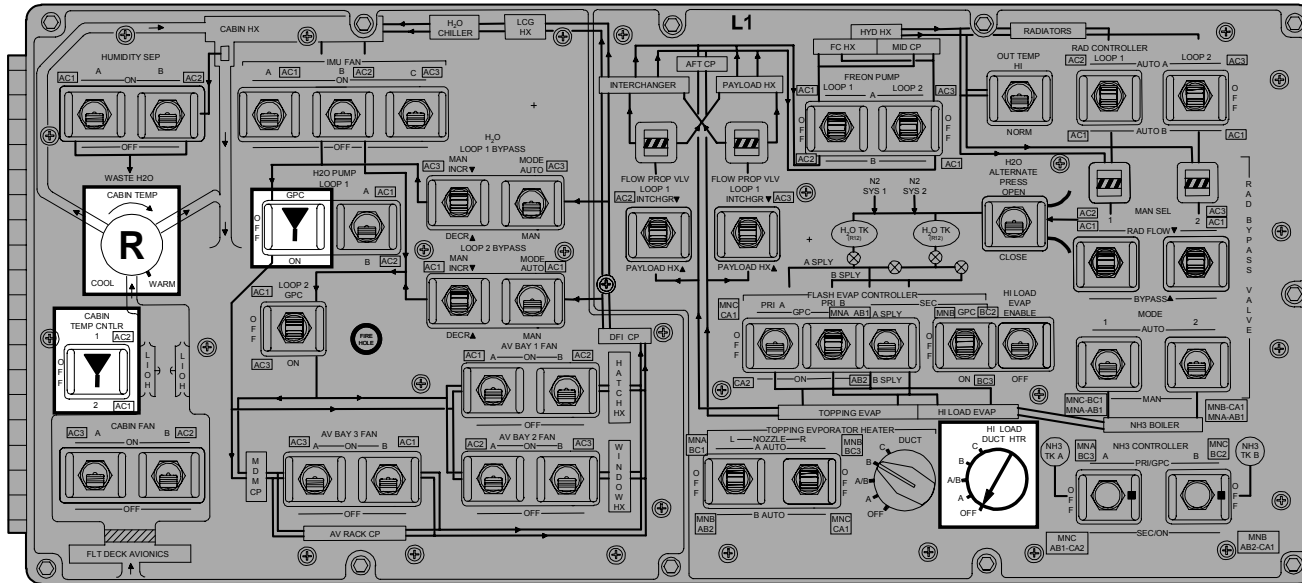
|  |   |   |
|--|---|---|
|  - Up   | <b>R</b> - As reqd  |  - Indicates switch/display not checked during ON-ORBIT SWITCH/VERIF |
|  - Center   |  - cb close  | Switch/display pictorials are generic representations and are not intended to depict actual switch position. Check MCC if clarification reqd          |
|  - 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     |

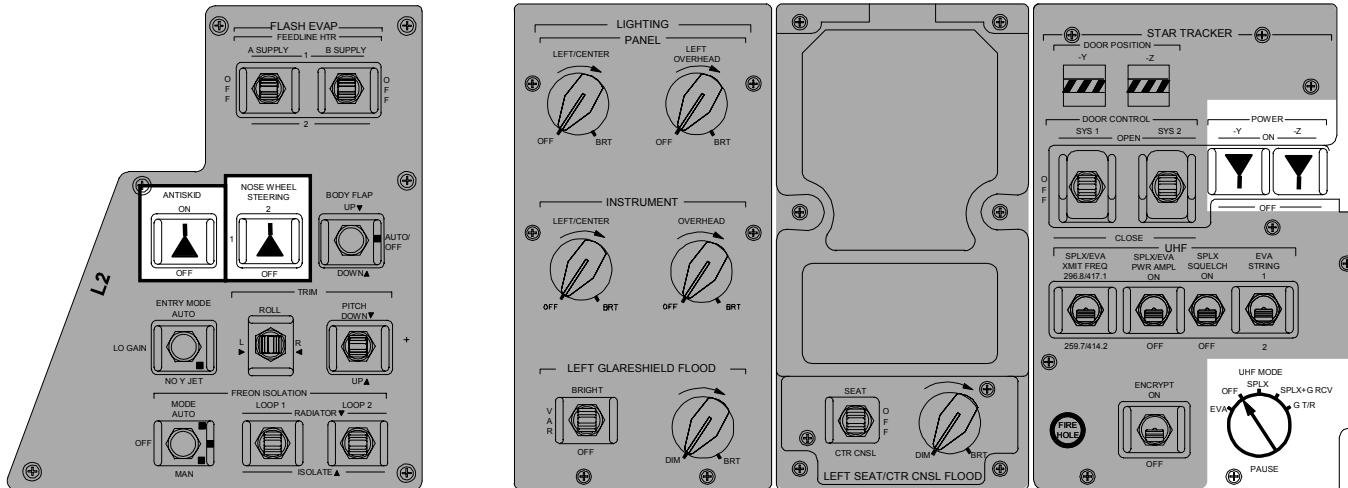
# ALL VEH



# ALL VEH

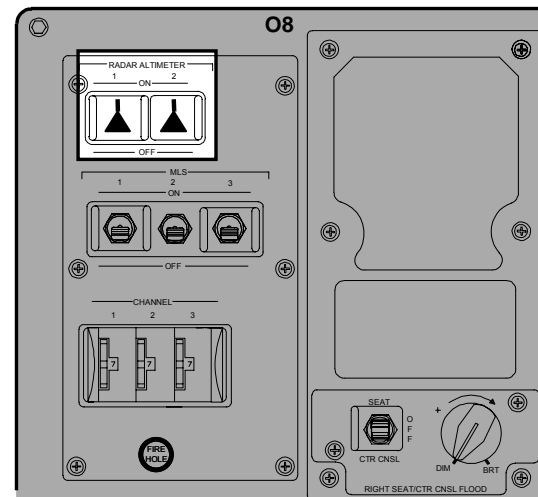
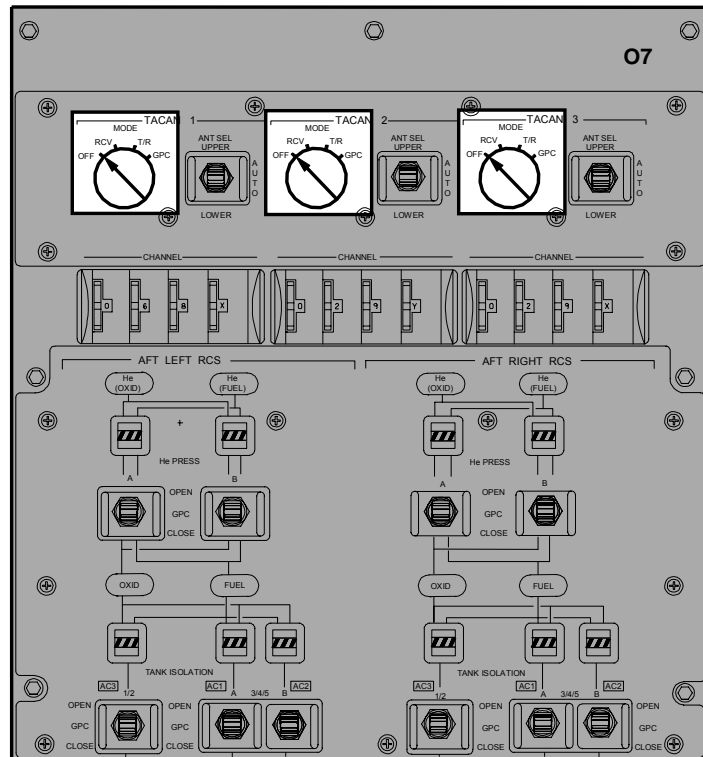


## PNL O6



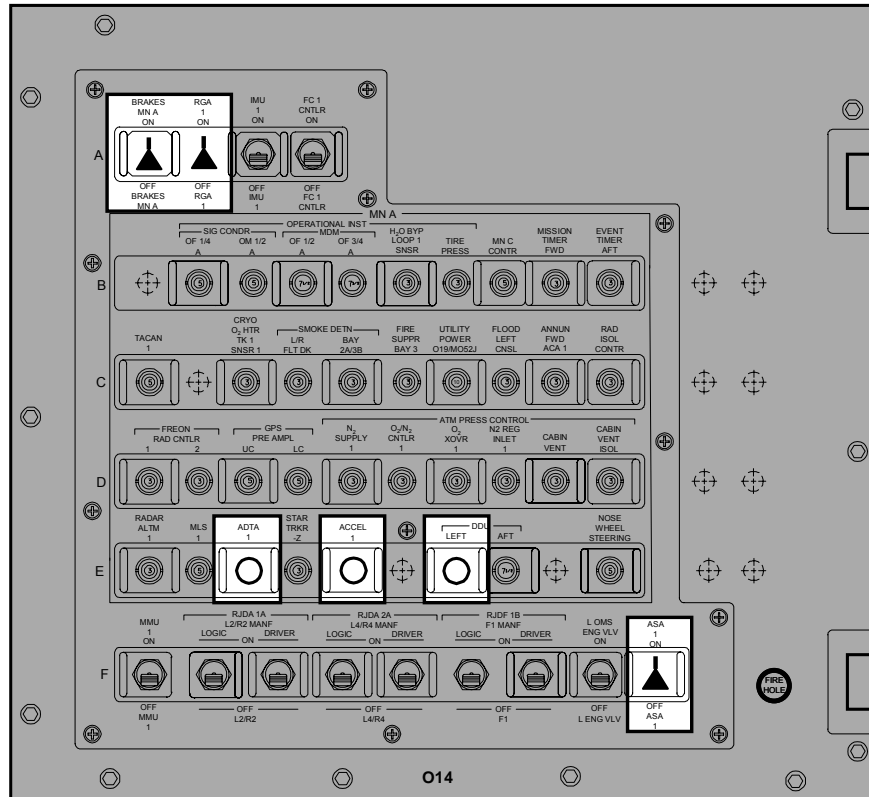
4806720\_124.PNL.2

# OV103, OV104



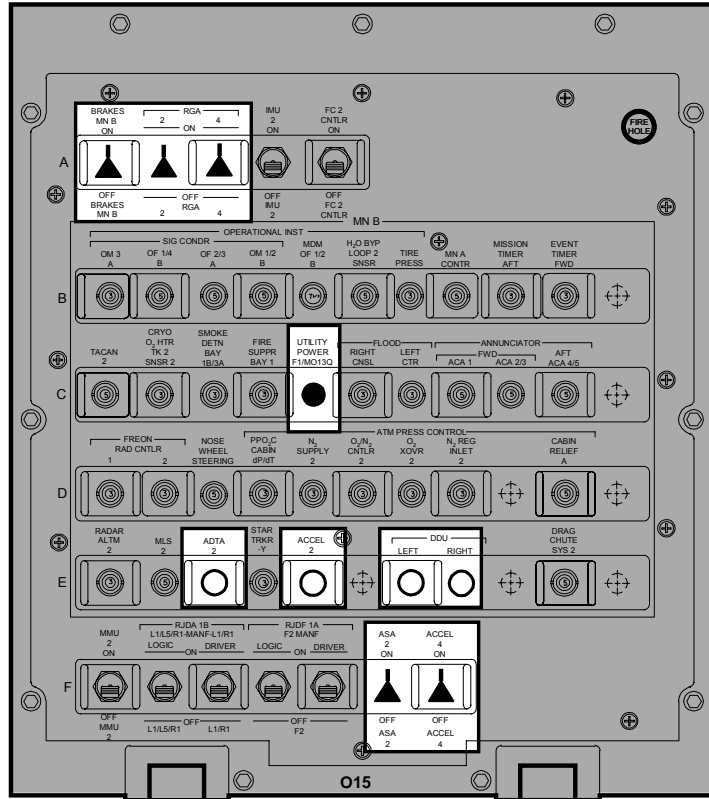
# OV103

## PNL O14

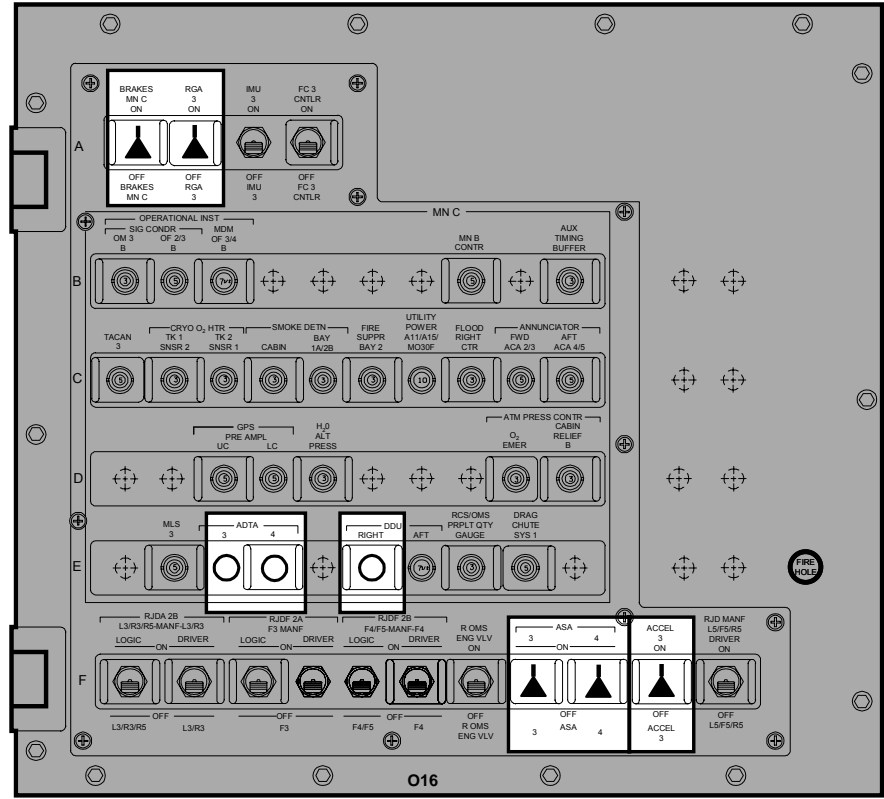


# OV103

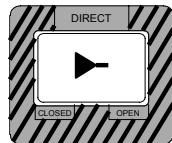
## PNL O15



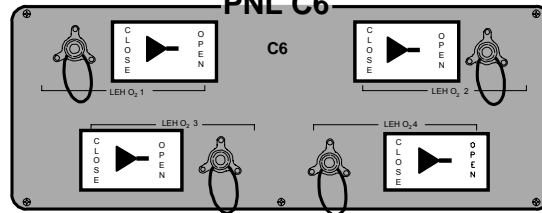
## PNL O16



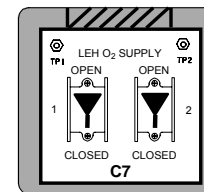
## PNL C5



## PNL C6

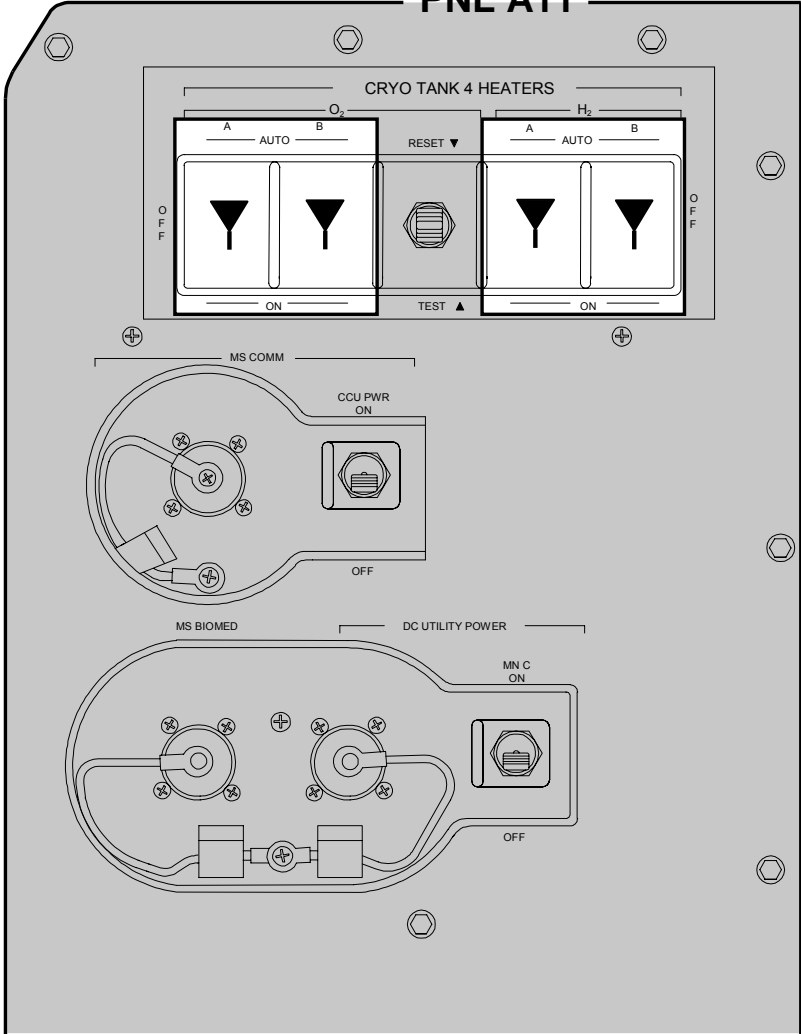


## PNL C7

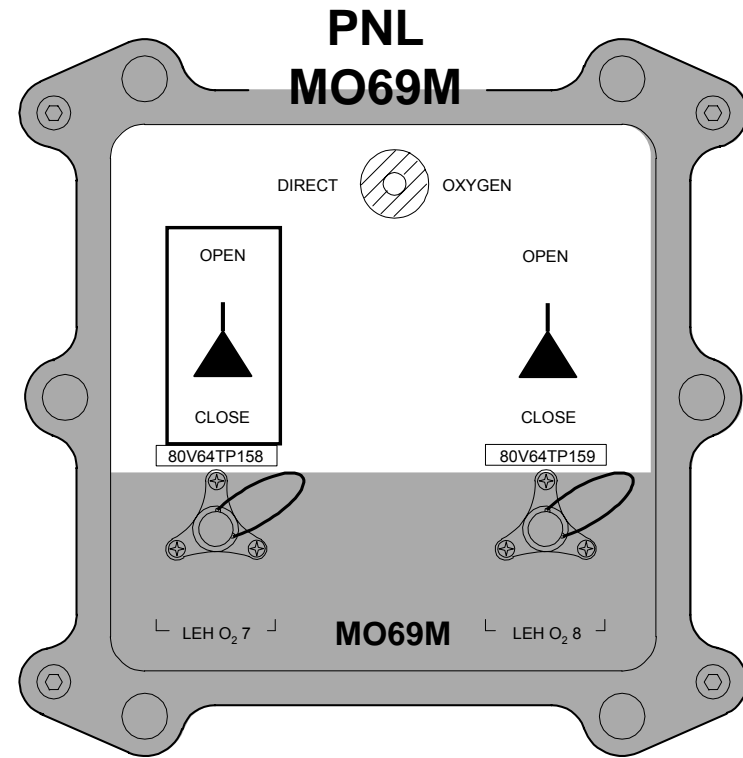
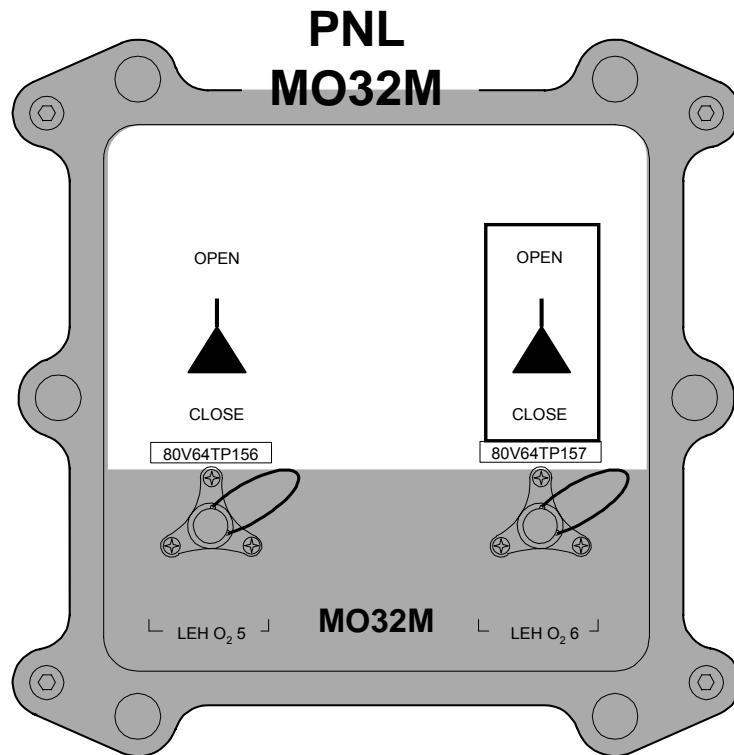


OV103

PNL A11

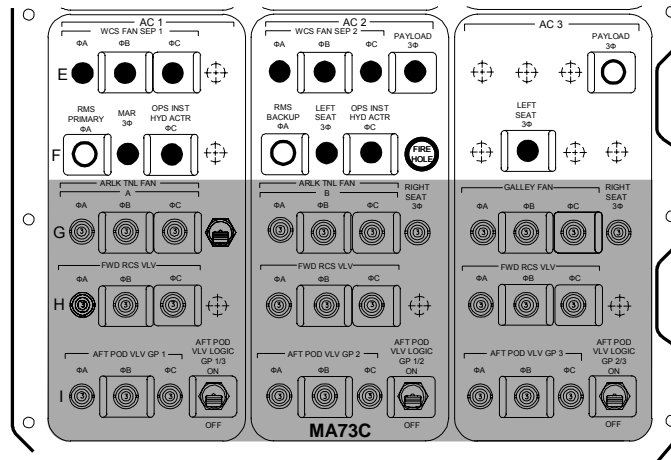
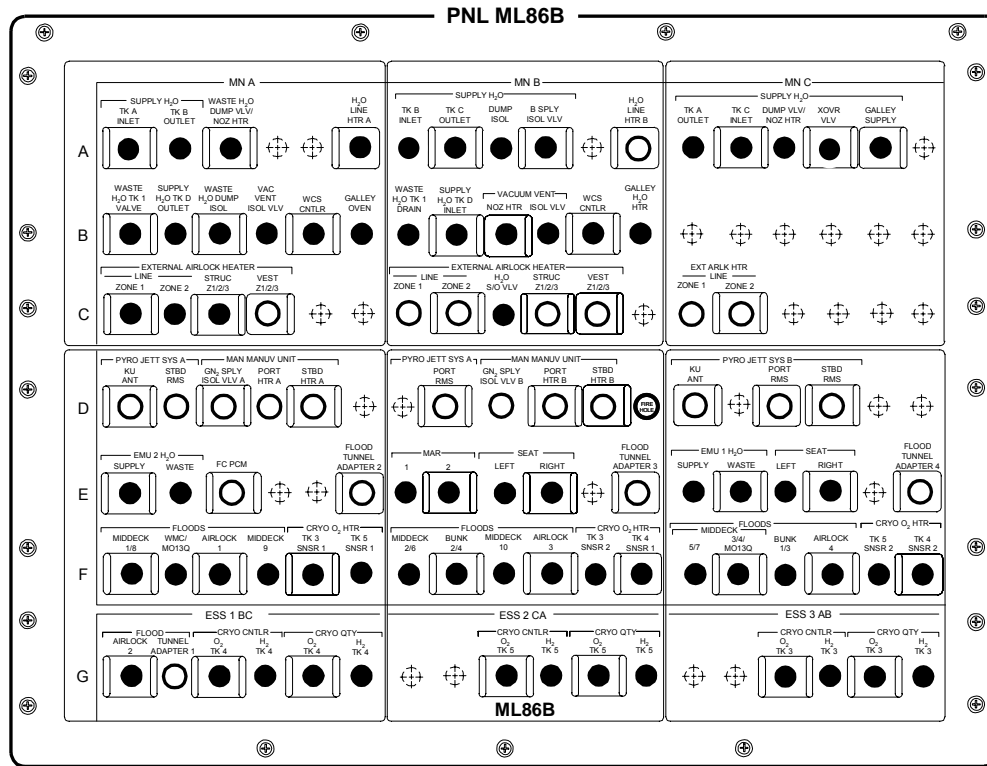


# OV103,OV105



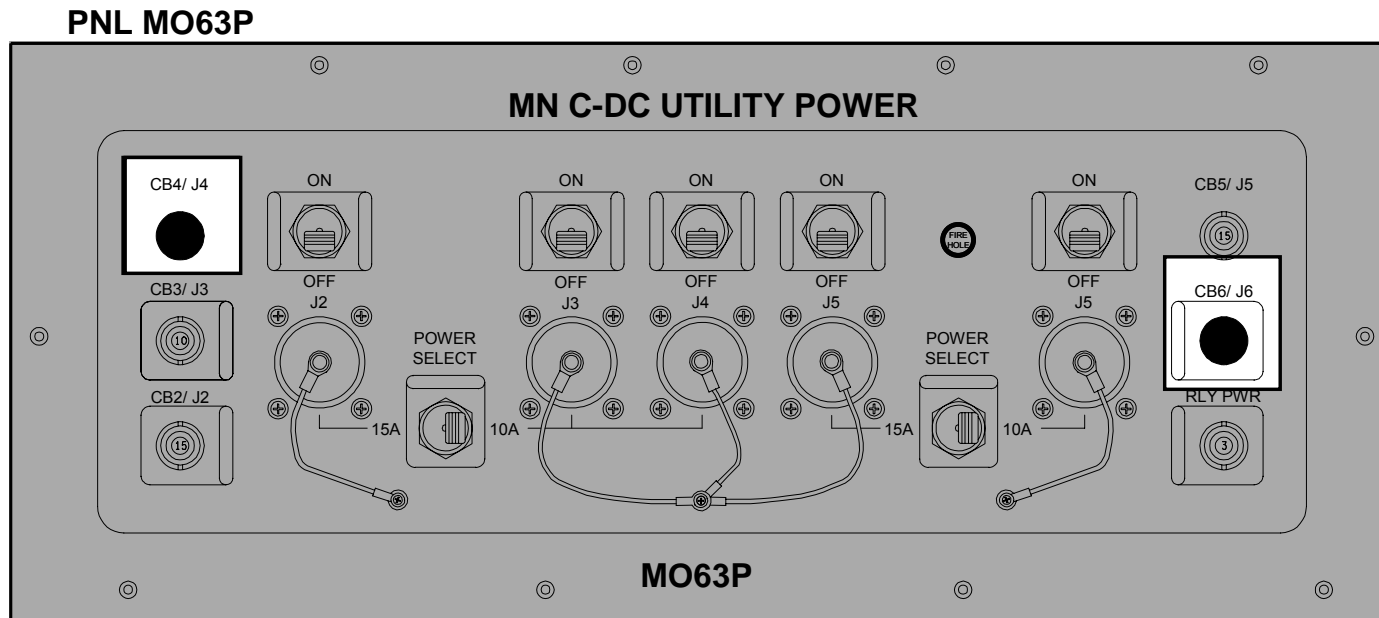


# OV103



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# OV103,OV104



# 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<br/>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<br/>MET 1:36 KU-BD ANT DEPLOY<br/>KU-BD ANT ACTIVATION<br/>MET 1:52 POST PLBD OPS RAD CONFIG<br/>MET 1:54 SPECIALIST SEAT REMOVAL/STOWAGE<br/>MET 1:57 ESCAPE POLE STOWAGE<br/>MET 2:01 AIRLOCK SETUP FOR INGRESS<br/>MET 2:05 CONFIG VERNIER DRIVERS</p> |
| 1:00       | <p><u>If Both Voice and Command Unavailable:</u><br/>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)<br/><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><br/>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> )<br>(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 (two) – ON  
BHD – N/A

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), AUTO  
OPS only for camera A(D)  
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 O2 FLOW 2        | 24     | 4.65V/4.65 LBM/HR |

| 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)

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(reduced copy)

CC 3-4

PI/124/FIN

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)

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

MO42F

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

Unstow VW Bags

| MET   | MS AFT ACTIONS  |
|-------|---|
| 00:51 | <b>SPECIALIST SEAT EGRESS</b>   |
| 00:58 | <b>PRELIM MIDDECK CONFIG</b> <span style="border: 1px solid black; padding: 2px;">2</span>      |
| 01:06 | <b>WCS CONFIG/ACT</b> <span style="border: 1px solid black; padding: 2px;">5</span>             |
| 01:07 | <b>SWITCH CONFIG/GALLEY ACT</b> <span style="border: 1px solid black; padding: 2px;">6</span>   |
| 01:41 | <b>CLOTHING CONFIG</b> <span style="border: 1px solid black; padding: 2px;">10</span>           |
| 01:45 | <b>QUICKDON MASKS SETUP</b> <span style="border: 1px solid black; padding: 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: 2px;">13</span>       |
| 02:01 | <b>AIRLOCK SETUP FOR INGRESS</b> <span style="border: 1px solid black; padding: 2px;">15</span> |

**CLOTHING CONFIG** 10

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

Diff, 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/124/O/B

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

TOP

**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  
 Perform URINE PRETREAT SETUP  
 (Cue Card, URINE PRETREAT CHANGEOUT)

**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  
                                    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**

- MA73C:G     1.   cb AC1,2 ARLK TNL FAN A,B (six) – cl
- Inner Hatch 2.   Equal vlv caps (two) – remove
- 3.   Open hatch per decal
- 4.   Equal vlv (two) – OFF, install caps
- MDDK        5.   Remove diffuser from aft middeck floor fitting and temp stow
- EXT A/L     6.   Unstow bypass duct from Tunnel extension wall
- 7.   Attach free end to aft middeck floor fitting
- MO13Q       8.   AIRLK 2 – ON/OFF
- AW18A       9.   LTG FLOOD 1(3,4) – ON (as reqd)
- 10. √Airflow at top of external airlock halo
- 11. √NEG CAB PRESS RELIEF vlv cover (two) – CL (pushed in)

PI-2b/124/O/A

(reduced copy)

CC 3-6

PI/124/FIN



|                       |                    |
|-----------------------|--------------------|
| <b>POST INSERTION</b> | <b>STS<br/>124</b> |
|-----------------------|--------------------|