

# Post Insertion

## STS-400

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**Mission Operations Directorate  
Operations Division**

**Basic  
March 20, 2008**

National Aeronautics and  
Space Administration

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





STS-400 POST INSERTION

BAS (Mar 20, 2008)

## PCN-2 (Sept 15, 2008) Sheet 1 of 1

List of Implemented Change Requests (482s):

PI-0839

Incorporate the following:

1. Replace iii & iv
2. Replace 1-15 & 1-16
3. Replace CC 3-5 & CC 3-6

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Encl: 6 pages

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STS-400 POST INSERTION

BAS (Mar 20, 2008)

## PCN-1 (May 30, 2008) Sheet 1 of 1

List of Implemented Change Requests (482s):

PI-0834

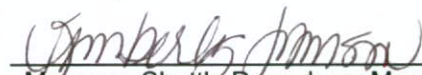
Incorporate the following:

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

Prepared by:

  
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Approved by:

  
Manager, Shuttle Procedures Management

Accepted by:

  
FDF Manager

Encl: 10 pages

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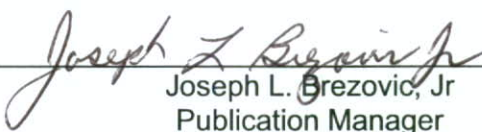


MISSION OPERATIONS DIRECTORATE

**POST INSERTION  
STS-400**

BASIC  
March 20, 2008

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Incorporates the following:
482#: NONE – Establishes baseline

AREAS OF TECHNICAL RESPONSIBILITY

Publication Manager	DO3/J. Brezovic	281-244-8325
Alternate Publication Manager	DO3/C. Simon	281-483-0656
INCO	DS23/G. Horlacher	281-483-3878
EECOM	DS44/R. Jarvis	281-483-6808
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DPS	DS22/R. Schwank	281-244-0004
P T/V	DX3/D. Williams	281-244-7882
Pointing	DO4/K. Watts	281-244-5368



POST INSERTION  
STS-400

**LIST OF EFFECTIVE PAGES**

BASIC 03/20/08  
PCN-1 05/30/08  
PCN-2 09/15/08

Sign Off .....	* 400/BAS	1-17 .....	400/BAS
ii.....	* 400/BAS	1-18 .....	400/BAS 1
iii.....	* 400/BAS 2	1-19 .....	400/BAS
iv.....	* 400/BAS	1-20 .....	400/BAS
v .....	400/BAS	1-21 .....	400/BAS
vi.....	400/BAS	1-22 .....	400/BAS
1-1 .....	400/BAS	1-23 .....	400/BAS
1-2 .....	400/BAS	1-24 .....	400/BAS
1-3 .....	400/BAS 1	1-25 .....	400/BAS
1-4 .....	400/BAS	1-26 .....	400/BAS
1-5 .....	400/BAS	1-27 .....	400/BAS
1-6 .....	400/BAS	1-28 .....	400/BAS
1-7 .....	400/BAS	2-1 .....	400/BAS
1-8 .....	400/BAS	2-2 .....	400/BAS
1-9 .....	400/BAS	2-3 .....	400/BAS
1-10 .....	400/BAS	2-4 .....	400/BAS
1-11 .....	400/BAS	3-1 .....	* 400/BAS
1-12 .....	400/BAS	3-2 .....	* 400/BAS
1-13 .....	400/BAS 1	CC 3-3 .....	* 400/BAS 1
1-14 .....	400/BAS	CC 3-4 .....	* 400/BAS
1-15 .....	400/BAS	CC 3-5 .....	* 400/BAS
1-16 .....	400/BAS 2	CC 3-6 .....	* 400/BAS 2

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/400/O/B	
(Back).....	CC 3-4	PI-1b/400/O/A	
MIDDECK RECONFIGURATION (Front).....	CC 3-5	PI-2a/400/O/A	
(Back).....	CC 3-6	PI-2b/400/O/B	I

\* – 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-400 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-400 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

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	

**CAUTION**

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

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

5. TURN OFF BFC LT

BFC CRT DISP – ON

BFS, MSG RESET

√BFC It – off

CRT DISP – OFF

C3  
C2  
F2,F4  
C3

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	
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 0 0 0 0	
P/L	1/2 1	0 0	1 1	4 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 4 4 0 0 4 4	
L	1 1 2 2	0 0 0 0	0 0 0 0	4 4 0 0	
MM	1 1 2 2	1 1 2 2	1 1 2 2	4 4 4 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  
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  
AFT MNB - 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**  
SM, GPC/CRT SM GPC/X EXEC  
[X: SM GPC MEMORY]  
CONFIG - ITEM 1 +4 EXEC  
Modify MC 4 per table →

C3 √UPLK - ENA  
SM 1 DPS UTILITY  
UL CNTL AUTO - ITEM 35 EXEC

C3 7. **SECURE BFS**  
BFC CRT DISP - ON  
C3 BFS, GNC, OPS 000 PRO  
CRT3 [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]  
FORMAT:  
CRT 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
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



**MET**  
DAY 000

01:00  
A1(B1)  
AUTO  
PRI  
RT 0.2  
DB 5.0

MS **1: GNC UNIV PTG**      **2: SM ANTENNA**

**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**  
O5,O9 AUD A/G 2 – RCV, tw – 2  
XMIT/ICOM MODE sel – 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  
OM            +0  
DAP: A/AUTO/ALT  
Initiate TRK

01:15  
A5(B1)  
AUTO  
ALT  
RT 0.2  
DB 5.0

C **RAD ACT** **7**

RAD/PLBD OPS NO-GO FOR FOLLOWING FAILURES			
OMS/RCS	GNC	ECLS/EPS	MECH
2 OMS Eng	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

01:20

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  
UPLINK  
VAR  
PARAM  
TMBU  
(IF REQD)

**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** 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

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

<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, 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> 9	
	<b>MS</b>	<b>CLOTHING CONFIG</b> (MID,AFT Cue Cards) 10, 1-14, 1-15	
01:45	ALL	<b>QUICKDON MASKS SETUP</b> 19	
		If time permits: <b>OCAC SETUP</b> (ORB OPS, CREW SYS)	
01:50	C	<b>POST PLBD OPS RAD CONFIG</b> 11	
	<b>MS</b>	<b>SPECIALIST SEAT REMOVAL/STOWAGE</b>	
01:55	C	<b>STAR TRKR ACTIVATION/DOOR OPEN</b> 12, 1-6	
	<b>MS</b>	<b>ESCAPE POLE STOWAGE</b> (MID Cue Card) 13, 1-16	
	P	<b>SUPPLY WATER CONFIG</b> 14, 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> (MID Cue Card) <span style="border: 1px solid black; padding: 2px;">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 1-27	
		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: 2px;">16</span> , 1-14	
02:25			
	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**

- |           |      |     |  |
|-----------|------|-----|--|
| <b>MS</b> | 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>   |
|           |      | 7.  | PL BAY DOOR SYS (two) – DSBL   |
|           | CRT4 |     | √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**

- |           |      |     |  |
|-----------|------|-----|--|
| <b>MS</b> | 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/ 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) – ON  
    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	LOWER LIMIT	UPPER LIMIT
FREON LOOP EVAP OUT T1	107	--	1.90V/64.8 deg
T2	117	--	1.90V/64.8 deg
CABIN PRESS	4	3.25V/13.02 psia	3.80V/15.22 psia
PPO2 A	34	2.50V/2.50 psia	--
B	44	2.50V/2.50 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)

## 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:

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

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

#### PDF 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	<u>SPECIALIST SEAT EGRESS</u>
00:57	<u>PRELIM MIDDECK CONFIG</u> <span style="border: 1px solid black; padding: 0 2px;">2</span>
01:07	<u>WCS CONFIG/ACT</u> <span style="border: 1px solid black; padding: 0 2px;">5</span>
01:08	<u>SWITCH CONFIG/GALLEY ACT</u> <span style="border: 1px solid black; padding: 0 2px;">6</span>
01:41	<u>CLOTHING CONFIG</u> <span style="border: 1px solid black; padding: 0 2px;">10</span>
01:45	<u>QUICKDON MASKS SETUP</u> <span style="border: 1px solid black; padding: 0 2px;">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 2px;">13</span>
02:01	<u>AIRLOCK SETUP FOR INGRESS</u> <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

## 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  
                                   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

MA73C:G      1.    cb AC 1,2 ARLK TNL FAN A, B (six) – cl  
 MO13Q        2.    AIRLK 2 – ON/OFF  
 Inner Hatch    3.    Equal vlv cap (two) – remove  
                                   4.    Open hatch per decal  
                                   5.    Equal vlv (two) – OFF, install caps  
 Tunnel Ext    6.    Unstow free end of Bypass duct from Tunnel extension wall  
                                   7.    Remove cap on Airlock Fan outlet and temp stow  
                                   8.    Install free end of Bypass duct to Airlock Fan outlet  
                                   9.    Unstow Airlock Fan Inlet duct from Tunnel Extension wall  
 MDDK        10.    Remove diffuser cap from Aft Middeck floor fitting and temp stow  
                                   11.    Attach one end of Airlock Fan Inlet duct to Airlock Fan muffler inlet.  
   Attach free end to Aft Middeck floor fitting  
                                   12.    Remove Mylar sleeve/tape from outer screen of Fwd Middeck floor  
   fitting and temp stow in ziplock  
 AW18A        13.    LTG FLOOD 1(3,4) – ON (as reqd)  
 MO13Q        14.    AIRLOCK FAN A – ON  
 EXT A/L        15.    √Airflow at top of external airlock halo  
                                   16.    √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..... 1-21  
  
 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

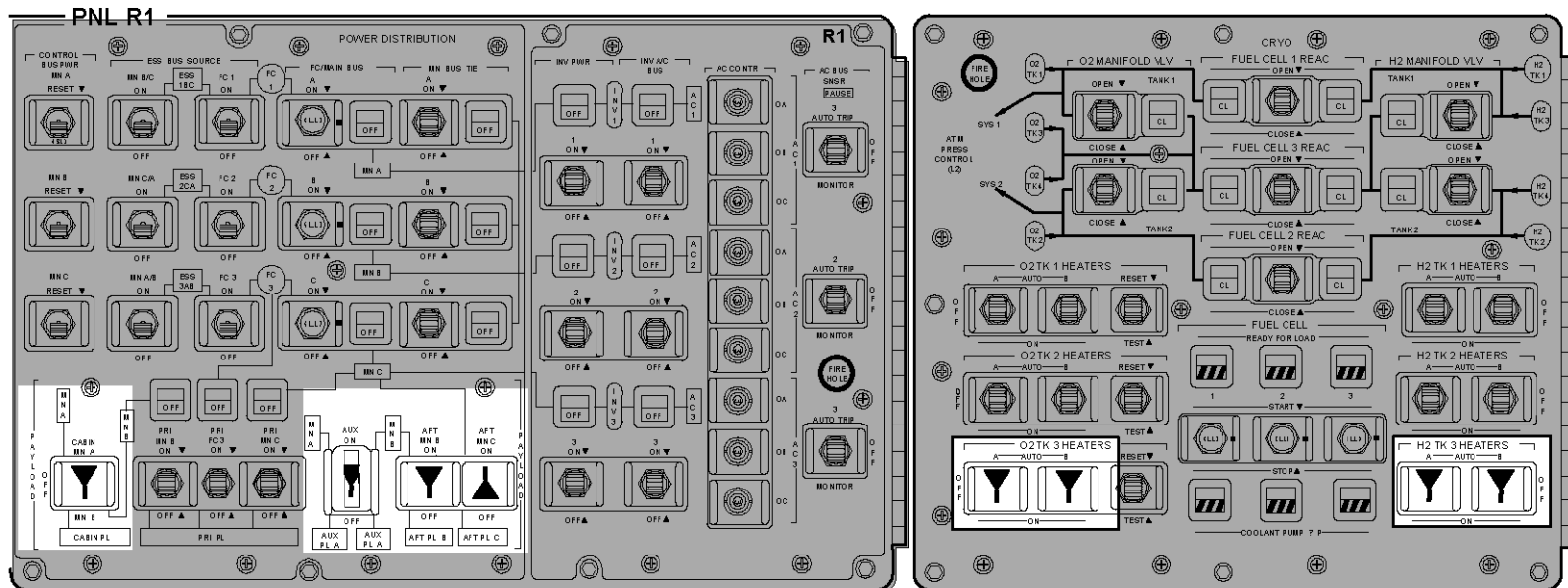
### MIDDECK-AFT

MA73C ..... 1-26  
 MO32M ..... 1-25  
 MO69M ..... 1-25  
 MO63P ..... 1-27

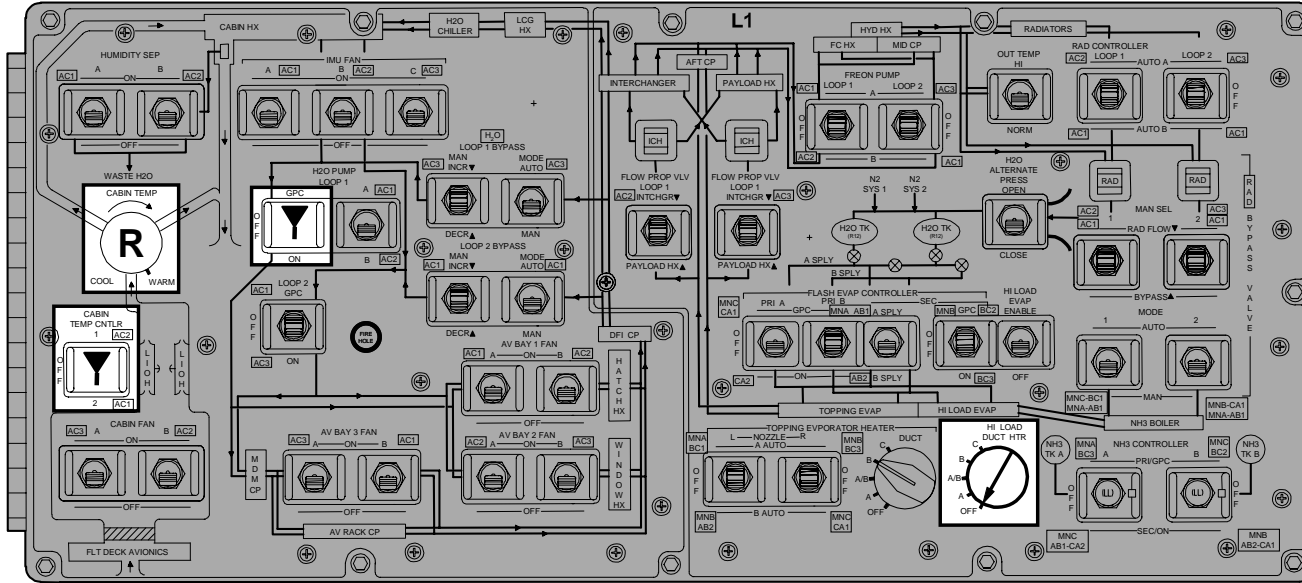
 - Up  - Center  - Down  - Boxed items indicate switch configured during ON-ORBIT CONFIGURATION	<b>R</b> - As reqd  - cb close  - cb open	 - Indicates switch/display not checked during ON-ORBIT SWITCH/VERIF Switch/display pictorials are generic representations and are not intended to depict actual switch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

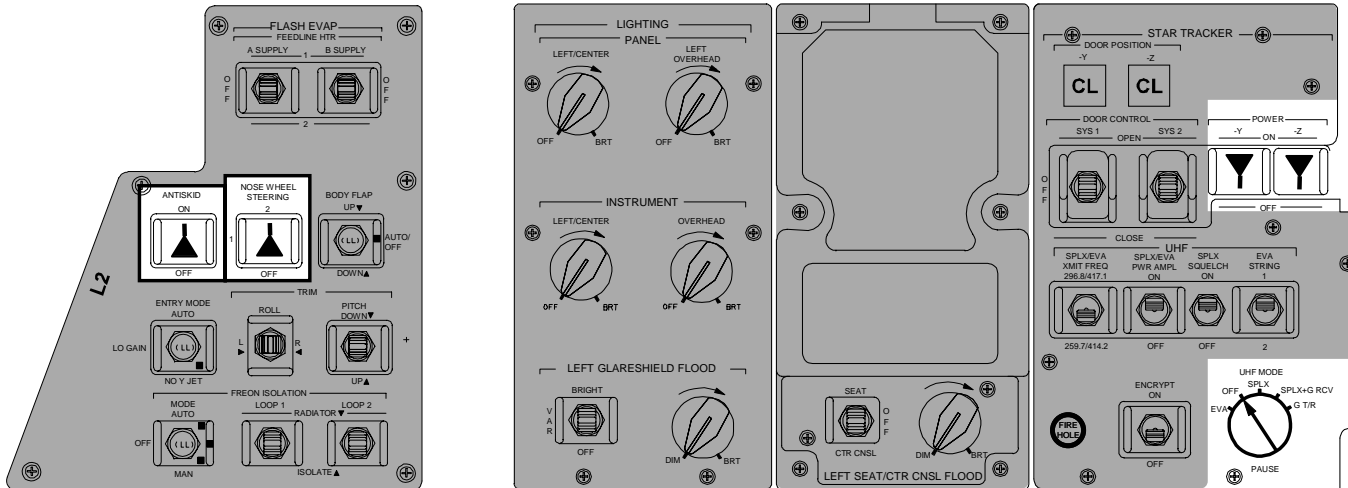
# ALL VEH



# ALL VEH



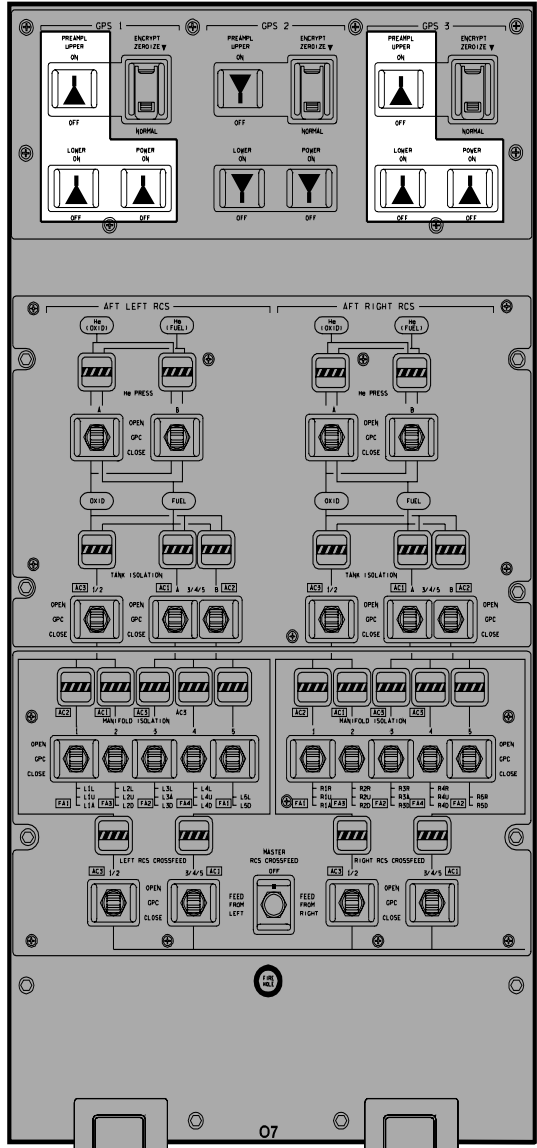
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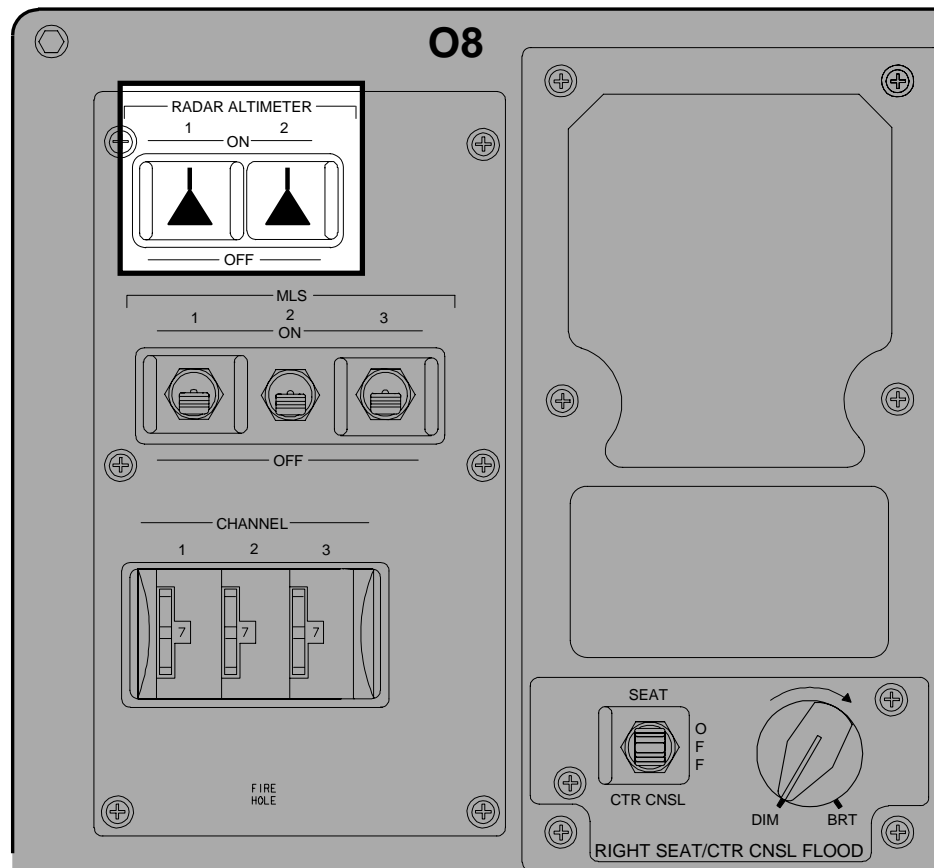
OV105

PNL 07



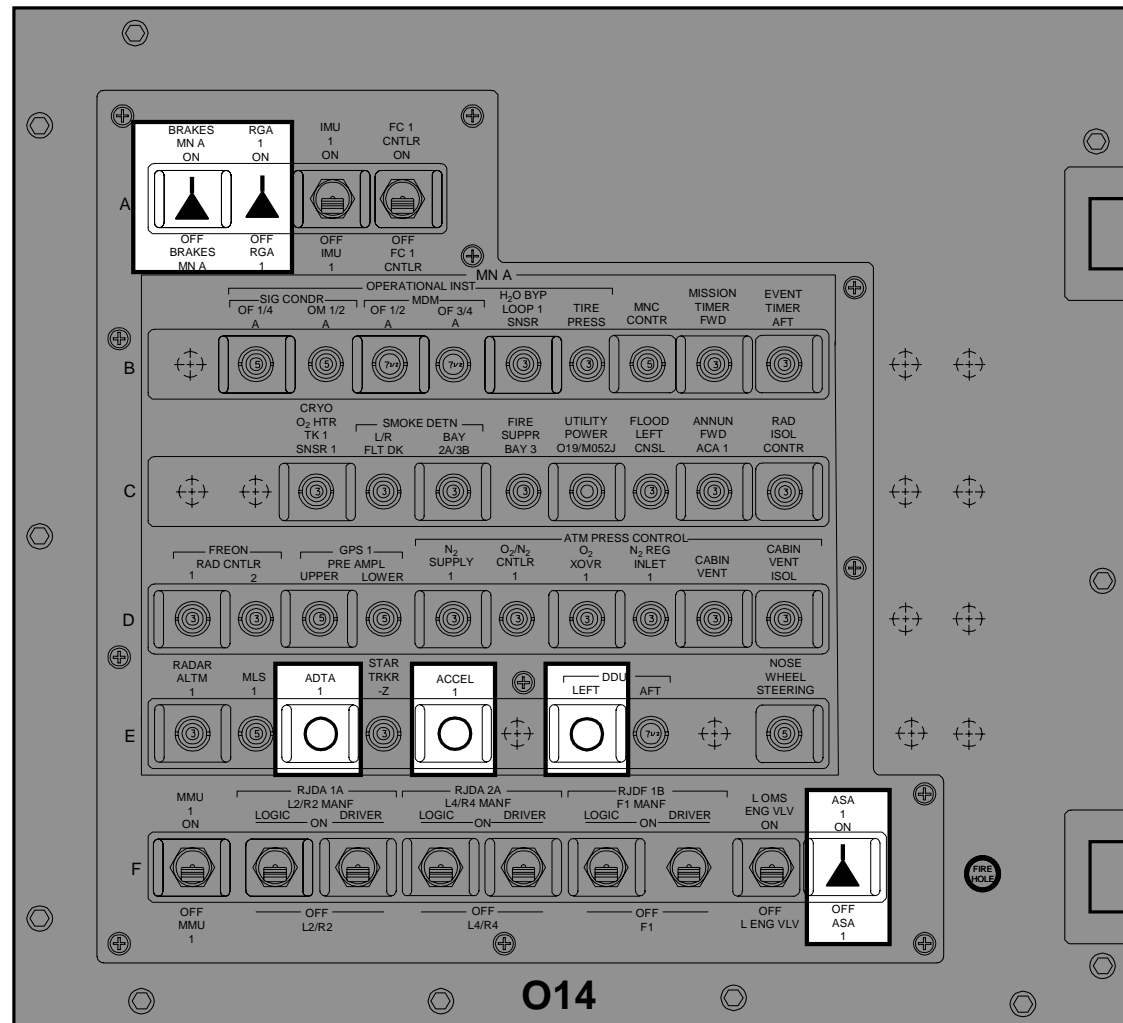


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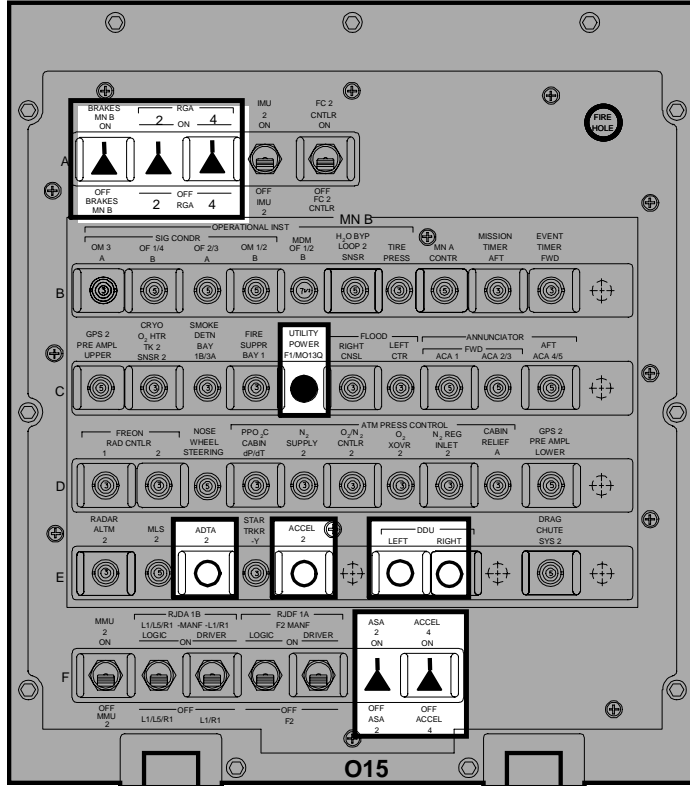
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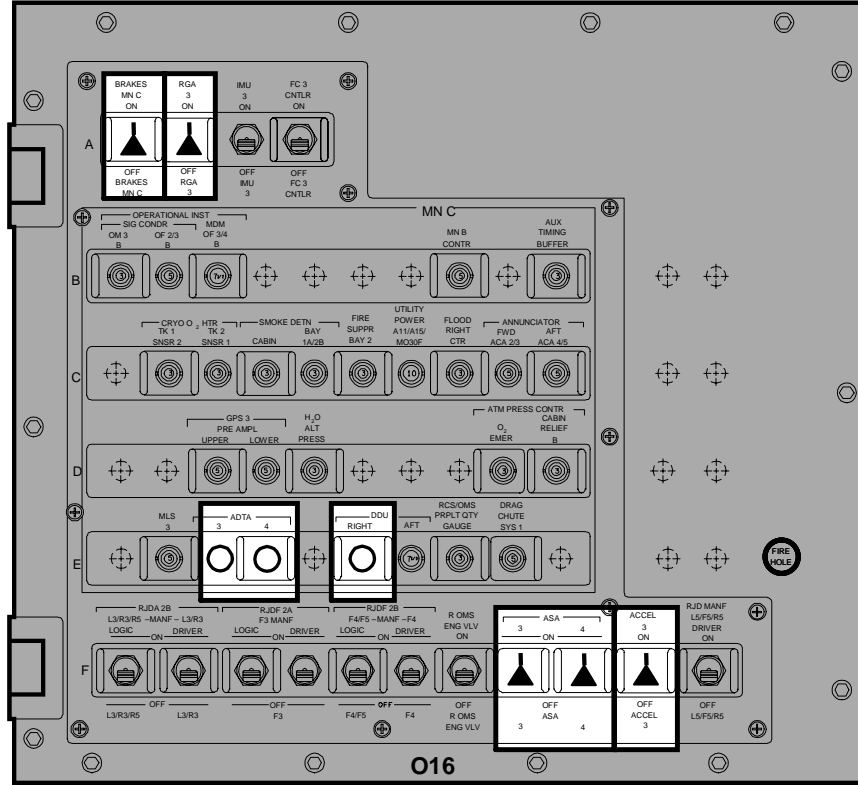


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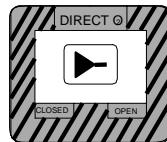
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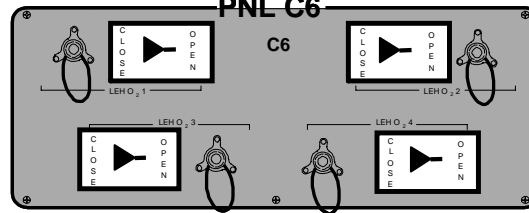
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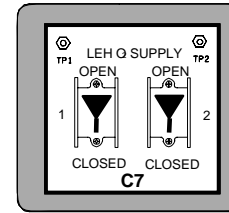
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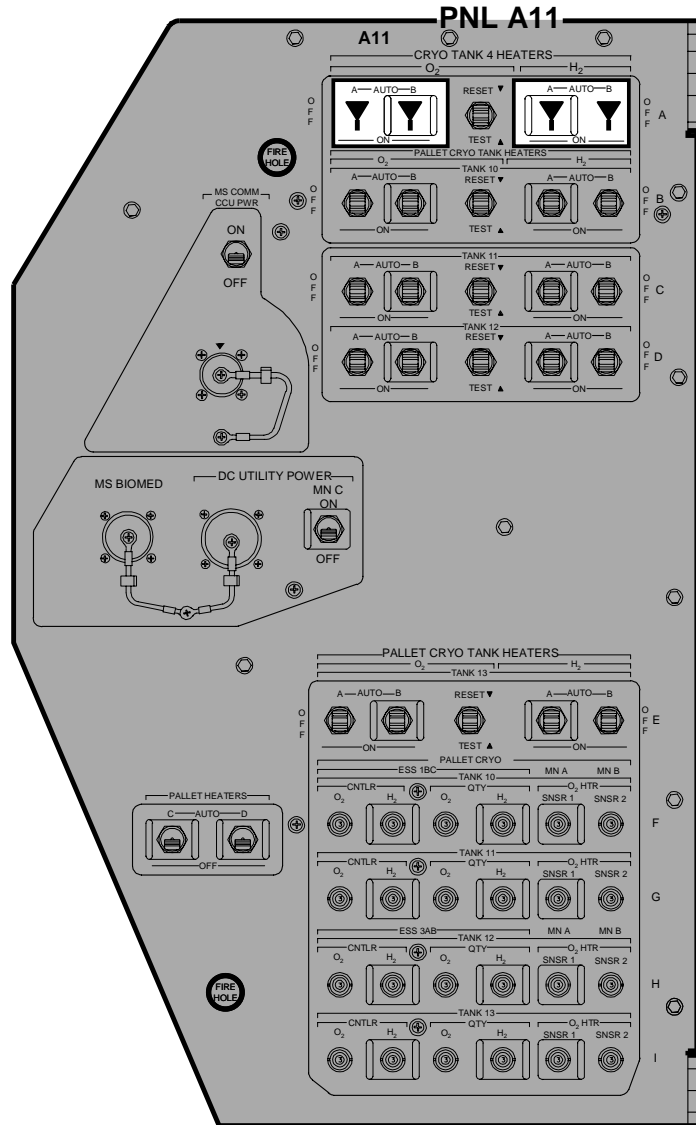
## PNL C6



## PNL C7



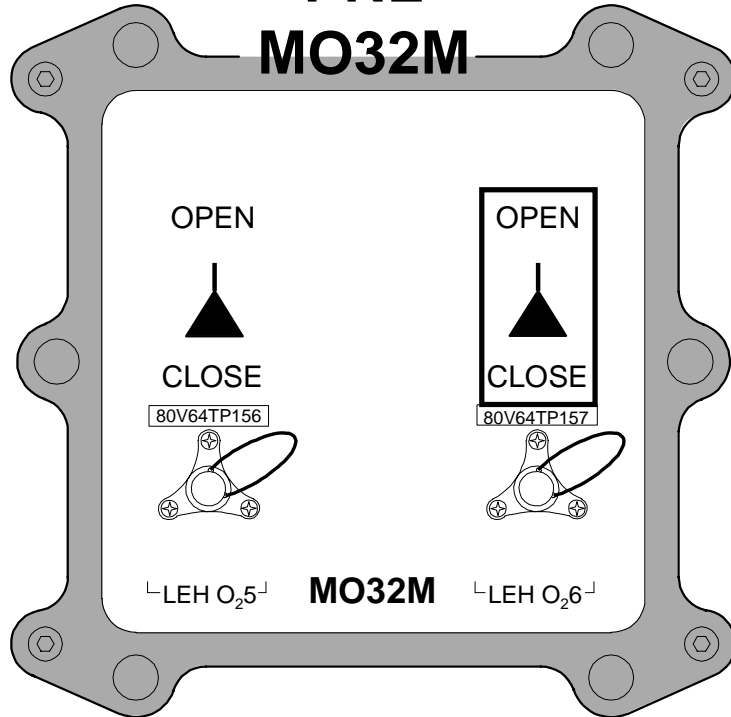
# OV105



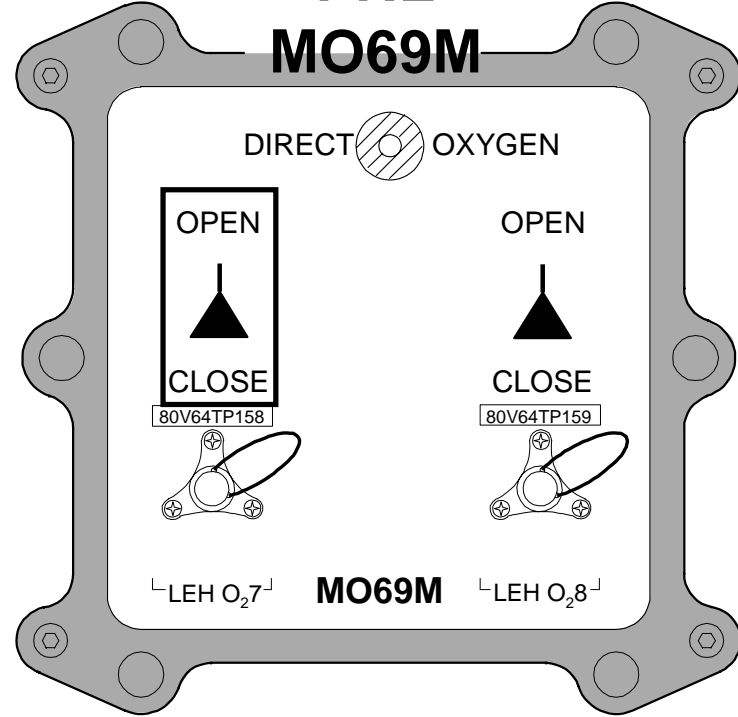
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# OV103,OV105

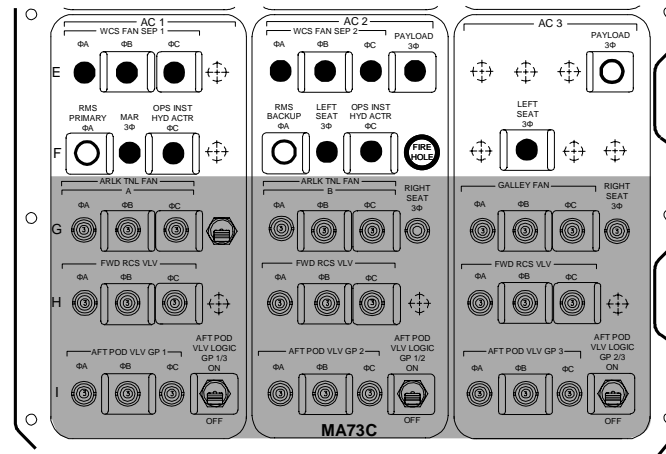
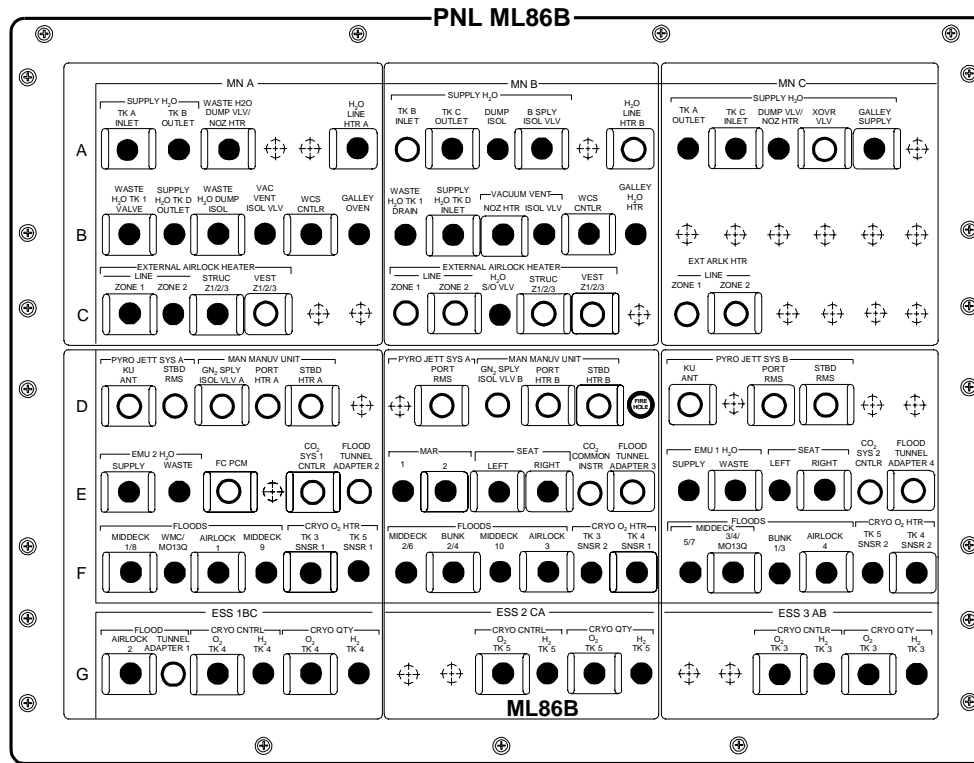
## PNL MO32M



## PNL MO69M



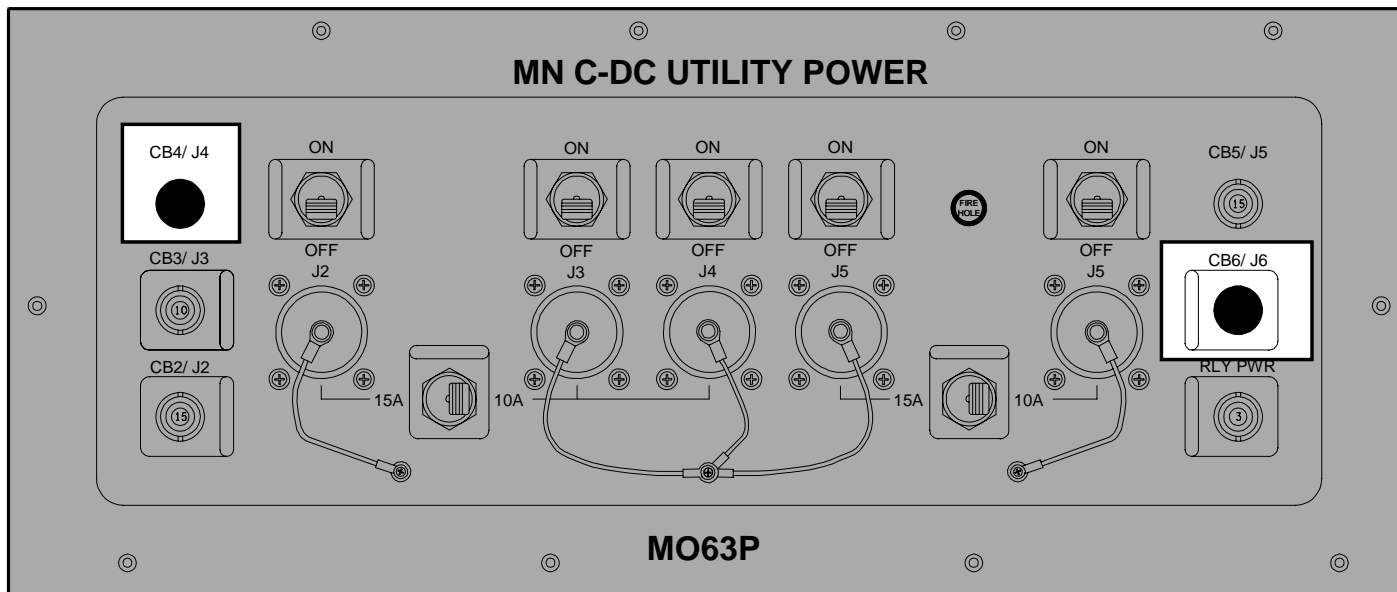
OV105



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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 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 1-27 (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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### AFT FLIGHT DECK RECONFIGURATION

#### AFT STATION CONFIG 3

##### POST SEAT EGRESS

O14:D      cb MNA CAB VENT      - op  
  ISOL - op

A14              RCS/OMS HTR FWD RCS              - A AUTO  
                                  L POD (two)                    - A AUTO, B OFF  
                                  R POD (two)                    - A AUTO, B OFF  
                                  OMS CRSFD LINES (two)      - A AUTO, B OFF  
                                  √FWD,AFT RCS JET (ten)      - AUTO

PDIP 1          KU BAND RATE                    - LOW

A12              APU HTR LUBE OIL LN (three) - A AUTO

##### ON-ORBIT CONFIG

Don headset (if reqd)  
If WCCS flown, perform STD WCCS CONFIG (ORB OPS, COMM/INST)

If flight deck handheld mic/speaker operation:

R10              MS AUD PWR                    - AUD/TONE  
                                  A/G1                              - T/R, tw-2  
                                  A/G2                              - RCV, tw-2  
                                  A/A                                - RCV, tw-2  
                                  ICOM A                        - T/R, tw-2  
                                  B                                - RCV, tw-2  
                                  XMIT/ICOM MODE sel - PTT/PTT

A11              MS COMM CCU PWR              - OFF  
                                  Connect HHMIC to MHA  
                                  MS COMM CCU PWR              - ON

R6,L5          CCU PWR                        - OFF  
A13              OS AUD SPKR PWR sel        - SPKR  
                                  MSTR SPKR VOL sel        - as reqd

R6,L5          HIU VOL (two)                    - minimum, full cww

A1L              S-BD PM MODE                  - TDRS DATA  
                                  NSP DATA RATE RCV - HI  
  XMIT - HI

A1R              CODING (two)                  - ON  
                                  S-BD FM DATA SOURCE sel - MMU 2 (rot)  
                                  AUD CTR VOICE RCD SEL CH 1 sel - OFF  
  2 sel - OFF

HOOK  
VELCRO

HOOK  
VELCRO

R14:C              cb MNB KU ANT HTR - cl  
                                  UHF EVA (two) - cl  
                                  :D                              Close left to right all cbs  
                                  :E                              Close left to right all cbs

L10              Remove, stow VIP, VTR covers

R11L              IDP/CRT 4 PWR - ON  
R12              VPU PWR - ON (LED on)  
MDU              AFD 1 - ON (if desired)

A15              cb CNTL PWR PTU 1,2 (two) - cl  
                                  PTU/MAIN BUS A,B (two) - ON (tb-ON)

O17:A              ATVC (four) - OFF  
                                  :B                              EIU (three) - OFF  
                                  :D                              MEC 1      - OFF, wait 2 sec, then  
  2                              - OFF

√PL BUS ACTIVATION complete

L12

SSP1              cb PDIP 1 PWR 2/KU BAND RLY - cl  
                                  PDIP 1 PWR 1 - cl  
                                  CB 2 - cl

SSP2              cb PDIP 2 PWR 2 - cl  
                                  PDIP 2 PWR 1 - cl  
                                  CB 2 - cl

MPLM KEEL CAM HTR/ILLUM PWR - ON

R12 (OPP)        cb OBSS SW PWR - cl  
                                  OBSS SW PWR - ON  
(OBSS)            RSC PWR - ON

Unstow, deploy reqd FDF

MET	MS AFT ACTIONS
00:53	<b>SPECIALIST SEAT EGRESS</b>
00:59	<b>AFT STATION CONFIG <span style="border: 1px solid black; padding: 2px;">3</span></b>
01:03	<b>CONFIG FOR PLBD OPERATIONS <span style="border: 1px solid black; padding: 2px;">4</span></b>
01:41	<b>CLOTHING CONFIG <span style="border: 1px solid black; padding: 2px;">10</span></b>
01:54	<b>SPECIALIST SEAT REMOVAL/STOWAGE</b>
02:01	<b>AIRLOCK SETUP FOR INGRESS <span style="border: 1px solid black; padding: 2px;">15</span></b>
02:24	<b>RESET C/W <span style="border: 1px solid black; padding: 2px;">16</span></b>

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HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

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) – ON  
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)

**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	LOWER LIMIT	UPPER LIMIT
FREON LOOP EVAP OUT T1	107	--	1.90V/64.8 deg
T2	117	--	1.90V/64.8 deg
CABIN PRESS	4	3.25V/13.02 psia	3.80V/15.22 psia
PPO2 A	34	2.50V/2.50 psia	--
B	44	2.50V/2.50 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

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CC 3-4

PI/400/BAS

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

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  
                         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  
                                 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 ]

- |             |     |  |
|-------------|-----|--|
| MA73C:G     | 1.  | cb AC 1,2 ARLK TNL FAN A, B (six) - cl   |
| MO13Q       | 2.  | AIRLK 2 - ON/OFF   |
| Inner Hatch | 3.  | Equal vlv cap (two) - remove   |
|             | 4.  | Open hatch per decal   |
|             | 5.  | Equal vlv (two) - OFF, install caps  |
| Tunnel Ext  | 6.  | Unstow free end of Bypass duct from Tunnel extension wall  |
|             | 7.  | Remove cap on Airlock Fan outlet and temp stow   |
|             | 8.  | Install free end of Bypass duct to Airlock Fan outlet  |
|             | 9.  | Unstow Airlock Fan Inlet duct from Tunnel Extension wall   |
| MDDK        | 10. | Remove diffuser cap from Aft Middeck floor fitting and temp stow   |
|             | 11. | Attach one end of Airlock Fan Inlet duct to Airlock Fan muffler inlet.<br>Attach free end to Aft Middeck floor fitting |
|             | 12. | Remove Mylar sleeve/tape from outer screen of Fwd Middeck floor<br>fitting and temp stow in ziplock                    |
| AW18A       | 13. | LTG FLOOD 1(3,4) - ON (as reqd)  |
| MO13Q       | 14. | AIRLOCK FAN A - ON   |
| EXT A/L     | 15. | √Airflow at top of external airlock halo   |
|             | 16. | √NEG CAB PRESS RELIEF vlv cover (two) - CL (pushed in)   |

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**POST INSERTION**

**STS  
400**