

Post Insertion

STS-121

**Mission Operations Directorate
Operations Division**

**Final
April 18, 2005**

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center
Houston, Texas



United Space Alliance

POST INSERTION STS-121

FINAL (Apr 18, 2005)

PCN-3 (June 19, 2006) Sheet 1 of 1

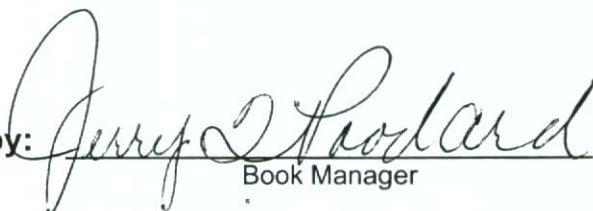
List of Implemented Change Requests (482s):

PI-750 MULTI-1753
PI-751
PI-752
PI-753

Incorporate the following:

1. Replace iii & iv
2. Replace 1-5 thru 1-8, 1-13 thru 1-16, 1-25 & 1-26
3. Replace CC 3-3 thru CC 3-6

Prepared by:


Book Manager

Approved by:


Manager, Shuttle Procedures Management

Accepted by:


FDF Manager

Encl: 16 pages

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POST INSERTION STS-121

FINAL (Apr 18, 2005)

PCN-2 (April 14, 2006) Sheet 1 of 1

List of Implemented Change Requests (482s):

PI-742 MULTI-1724
PI-743 MULTI-1739
PI-744
PI-745
PI-746
PI-747

Incorporate the following:

1. Replace iii & iv
2. Replace 1-1 & 1-2, 1-7 & 1-8, 1-13 thru 1-26
3. Replace CC 3-3 thru CC 3-6

Prepared by:


Book Manager

Approved by:


Manager, Shuttle Procedures Management

Accepted by:


FDF Manager

Encl: 24 pages

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STS-121 POST INSERTION**FINAL (Apr 18, 2005)****PCN-1 (July 18, 2005) Sheet 1 of 1**

List of Implemented Change Requests (482s):

PI-731
PI-735
PI-736
PI-739
PI-741

Incorporate the following:

1. Replace iii & iv
2. Replace 1-13 thru 1-18
3. Replace 2-3 & 2-4
4. Replace CC 3-3 thru CC 3-6

Prepared by: _____
Book Manager

Approved by: _____
Manager, Shuttle Procedures Management

Accepted by: _____
FDF Manager

Encl: 14 pages


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MISSION OPERATIONS DIRECTORATE


POST INSERTION
STS-121

FINAL
April 18, 2005

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

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| Incorporates the following: | | |
|-----------------------------|--------|-------------|
| 482#: | PI-725 | MULTI-1668A |
| | PI-728 | MULTI-1691 |
| | PI-729 | MULTI-1694 |
| | PI-734 | MULTI-1699 |
| | | MULTI-1704 |

AREAS OF TECHNICAL RESPONSIBILITY

| | | |
|------------------------|----------------|--------------|
| Book Manager | DO3/J. Woodard | 281-483-9685 |
| Alternate Book Manager | DO3/D. Peabody | 281-483-9582 |

POST INSERTION
STS-121

LIST OF EFFECTIVE PAGES

FINAL 04/18/05
PCN-1 07/18/05
PCN-2 04/14/06
PCN-3 06/19/06

| | | | | |
|----------------|---|-----------|-------------|-------------|
| Sign Off | * | 121/FIN | 1-17 | 121/FIN |
| ii..... | * | 121/FIN | 1-18 | 121/FIN 2 |
| iii..... | * | 121/FIN 3 | 1-19 | 121/FIN 2 |
| iv..... | * | 121/FIN | 1-20 | 121/FIN 2 |
| v | | 121/FIN | 1-21 | 121/FIN 2 |
| vi..... | | 121/FIN | 1-22 | 121/FIN 2 |
| 1-1 | | 121/FIN | 1-23 | 121/FIN 2 |
| 1-2..... | | 121/FIN 2 | 1-24 | 121/FIN 2 |
| 1-3..... | | 121/FIN | 1-25 | 121/FIN 3 |
| 1-4..... | | 121/FIN | 1-26 | 121/FIN |
| 1-5..... | | 121/FIN 3 | 2-1 | 121/FIN |
| 1-6..... | | 121/FIN | 2-2 | 121/FIN |
| 1-7..... | | 121/FIN 3 | 2-3 | 121/FIN 1 |
| 1-8..... | | 121/FIN | 2-4 | 121/FIN 1 |
| 1-9..... | | 121/FIN | 3-1 | * 121/FIN |
| 1-10..... | | 121/FIN | 3-2 | * 121/FIN |
| 1-11..... | | 121/FIN | CC 3-3..... | * 121/FIN 2 |
| 1-12..... | | 121/FIN | CC 3-4..... | * 121/FIN 3 |
| 1-13..... | | 121/FIN 2 | CC 3-5..... | * 121/FIN 3 |
| 1-14..... | | 121/FIN 3 | CC 3-6..... | * 121/FIN 2 |
| 1-15..... | | 121/FIN 3 | | |
| 1-16..... | | 121/FIN 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/121/O/B |
| (Back)..... | CC 3-4 | PI-1b/121/O/D |
| MIDDECK RECONFIGURATION (Front)..... | CC 3-5 | PI-2a/121/O/B |
| (Back)..... | CC 3-6 | PI-2b/121/O/C |

* – 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 CONFIGURATION | 3-1 |

NOTE

The STS-121 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-121 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: *

| GPC | GPC | | | |
|-----|-----|----|----|----|
| | 1 | 2 | 3 | 4 |
| 1 | X | G2 | FD | SM |
| 2 | G2 | X | FD | SM |
| 3 | G2 | FD | X | SM |
| 4 | G2 | SM | FD | X |

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

NOTE

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

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

GNC 0 GPC MEMORY

CONFIG – ITEM 1 +1 EXEC

Modify MC 1 per table

BFC CRT DISP – OFF

GNC, OPS 106 PRO

GNC 0 GPC MEMORY

CAUTION

If BFS is standalone (BFC It flash):

BFC, CRT DISP – ON

BFS, GNC I/O RESET

BFC CRT DISP – OFF

| CONFIG GPC | 1 |
|------------|---|
| 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; wait 34 sec *
- * *
- * 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

00:40

00:45

00:50

00:55

A1(B1)
AUTO
PRI
RT 0.2
DB 5.0

01:00

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

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

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

- C L4:B,Q,R All cbs closed
L4:D,E All cbs open
:J cb AC3 φA SIG CONDR HUM SEP – cl
φB SIG CONDR IMU FAN – cl
- MS,PS **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
- MS1 **PRELIM MIDDECK CONFIG** (MID Cue Card) **2**, 1-15
- MS2 **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 |
| 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 |

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
CRT3 BFS, GNC, OPS 000 PRO
3: BFS, BFS MEMORY

C3 BFC CRT DISP – OFF
√All CRTs deassigned from BFS

O6 GPC MODE 5 – STBY (tb-RUN)

8. **RECONFIG MEDs**

GPC/CRT 0/3 EXEC
C2 IDP/CRT 3 PWR – OFF
√4 PWR – ON

F6,F7,F8 GPC/CRT SM GPC/4 EXEC
Power off MDUs as desired

9. **LOAD ORBIT TFLs**

C3 √OI PCMMU FORMAT – GPC
SM 62 PCMMU/PL COMM

FORMAT:

CRT FXD – ITEM 1 EXEC (*)
SEL ID – ITEM 3 +1 8 4 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

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 CRTs 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

RAD ACT **7**

NOTE

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

L1 FLASH EVAP CNTLR PRI A - OFF
 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

MET

DAY 000

1: GNC UNIV PTG 2: SM ANTENNA

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

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

P R1 **PL BUS ACTIVATION**
PL CAB - MNA
AUX - ON
PRI MNC - ON (tb-ON)

01:05

MS2 **CONFIG FOR PLBD OPERATIONS** (AFT Cue Card) **4**, 1-14

MS1,3 **WCS CONFIG/ACT** (MID Cue Card) **5**, 1-16

MS1,3 **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 - PTT/VOX (recommended)

01:10

A6(B1)
AUTO
PRI
RT 0.2
DB 5.0

P **LOAD DAP A6**

CRT1 **MNVR TO PLBD OPENING ATI** (Biased -ZLV, -YVV)

√TGT ID +2
BODY VECT +5
√P +90
√Y +7
OM +85

01:15

A6(B1)
AUTO
ALT
RT 0.2
DB 5.0

C DAP: A/AUTO/ALT
(01:12) Initiate TRK

RAD ACT **7**

RAD/PLBD OPS NO-GO FOR FOLLOWING FAILURES

| <u>OMS/RCS</u> | <u>GNC</u> | <u>ECLS/EPS</u> | <u>MECH</u> |
|-----------------------------|---|---------------------|------------------|
| 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 |
| OMS Prop Tk Leak | 3 ADTAs | 3 of 6 Av Bay Fans | FAILURE |
| Aft RCS He or Prop Leak | 3 Elevon or BF Pos Fdbks (same surface) | 2 FCs | DPS |
| COMM | 2 FCS Ch (same surface) | Any MN or 3Φ AC Bus | 3 GPCs |
| No Voice and No CMD | | Any CNTL or MPC Bus | 2 PL MDMs |
| | | 3 IMU Fans | 2 FF or FA MDMs |
| | | | APU/HYD |
| | | | 2 APU/HYD/WSB |

01:20

01:25
UPLINK
VAR
PARAM
TMBU
(IF
REQD)

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

MS1,2 **OPEN PLBDs**, AUTO MODE **18**, 1-11

01:30

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

| | | | |
|------------|------------------------|---|--------------------|
| MET | | 1: GNC UNIV PTG | 2: SM PL BAY DOORS |
| DAY 000 | | 4: SM PL BAY DOORS | |
| 01:30 | | | |
| A6(B1) | | | |
| AUTO | | | |
| ALT | | | |
| RT 0.2 | | | |
| DB 5.0 | | | |
| 01:35 | MCC & CREW: | GO for orbit ops | |
| | C O6 | UHF MODE sel – OFF | |
| | MS2,1 | KU-BD ANT DEPLOY (ORB OPS, COMM/INST) | |
| | | KU-BD ANT ACTIVATION (ORB OPS, COMM/INST) | |
| | C,P | SEAT EGRESS | |
| 01:40 | | | |
| | C,P | CLOTHING CONFIG 9 | |
| | MS | CLOTHING CONFIG (MID,AFT Cue Cards) 10, 1-14, 1-15 | |
| 01:45 | | | |
| | ALL | QUICKDON MASKS SETUP 19 | |
| | | If time permits: OCAC SETUP (ORB OPS, CREW SYS) | |
| 01:50 | | | |
| | C | POST PLBD OPS RAD CONFIG 11 | |
| | MS | SPECIALIST SEAT REMOVAL/STOWAGE | |
| 01:55 | | | |
| | C | STAR TRKR ACTIVATION/DOOR OPEN 12, 1-6 | |
| | MS1,3 | ESCAPE POLE STOWAGE (MID Cue Card) 13, 1-16 | |
| | P | SUPPLY WATER CONFIG 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 | | | |
| A6(B1) | MS | <u>AIRLOCK SETUP FOR INGRESS</u> [15], 1-16 | |
| AUTO | | | |
| ALT | | | |
| RT 0.2 | P | <u>APU STEAM VENT HTR ACT</u> | |
| DB 5.0 | R2 | √BLR CNTLR/HTR (three) – A PWR (three) – ON | |
| 02:05 | | | |
| A6(B1) | C | <u>CONFIG VERNIER CONTROL</u> | |
| 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 | <u>CONFIG CONTROLS FOR ON-ORBIT</u> | |
| | | 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 | <u>HYD THERMAL CONDITIONING-ENABLE</u> | |
| | R2 | HYD CIRC PUMP (three) – GPC | |
| 02:20 | | | |
| | | | |
| | MS | <u>RESET C/W</u> (AFT Cue Card) [16], 1-14 | |
| 02:25 | | | |
| | | | |
| | MS | <u>FUEL CELL VI PERFORMANCE PLOT</u> (ORB OPS, <u>EPS</u>) | |
| 02:30 | | Stow POST INSERTION, go to FLIGHT PLAN, <u>FLT DAY 1</u> | |

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DETAILED PLBD OPENING PROCEDURES**18**

- * If no motion determined visually or 'OP/CL' not blank within 10 sec after cmd, *
- R13L * 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 <u>BFS, SM 63 PL BAY DOORS</u> <u>4: SM PL BAY DOORS</u> |
| 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 |
| | | | <u>POST-PLBD OPENING CLEANUP</u> |
| | | 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) |
| | | | <u>4: SM ANTENNA</u> |
| A7U | | 10. | After floodlights ON > 10 min: PL BAY FLOOD (all) – OFF |

MANUAL PLBD OPENING PROCEDURE

- | | | | |
|------|------|-----|--|
| MS | CRT4 | 1. | SM, OPS 202 PRO or <u>BFS, SM 63 PL BAY DOORS</u> <u>4: SM PL BAY DOORS</u> |
| 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 |
| | | | <u>OPEN C/L LATCHES</u> |
| | | 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 *) |
| | | | <u>OPEN STBD FWD,AFT LATCHES & DOOR</u> |
| | | 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 *) |
| | | | <u>OPEN PORT FWD,AFT LATCHES & DOOR</u> |
| | | 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 *) |
| | | | <u>POST-PLBD OPENING CLEANUP</u> |
| 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) |
| | | | <u>4: SM ANTENNA</u> |
| A7U | | 31. | After floodlights ON > 10 min: PL BAY FLOOD (all) – OFF |

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

AFT FLIGHT DECK RECONFIGURATION

CONFIG FOR PLBD OPERATIONS 4

A6U SET UP LIGHTS
ANNUN BUS SEL – MNC

NOTE

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

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

Record MET: ____ / ____ : ____ : ____

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

NOTE

Verify PL Bus Activation complete

L12U cb PDIP 1 PWR 2/KuBAND RLY – cl
(SSP1) X1/X2 SW PDIP 1 PWR 1 – cl
SW PWR 1 – cl

L12L cb PDIP 2 PWR 2/MPLM RLY – cl
(SSP2) SW PWR 3 – cl
PDIP 2 PWR 1 – cl
MPLM KEEL CAM PWR – ON
HTR/ILLUM PWR – ON
PWR – OFF

R12 (OPP) cb OBSS SW PWR CB1 – cl
(OBSS) OBSS SW PWR – ON
RSC PWR – ON

SET UP P/TV

Perform ACTIVATION OPERATION (Cue Card, TV)
Perform Minicam Config for PLBD Rec:
Cable, Tape, Batt

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

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

Do off, 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 UV damage can occur
in as little as 10 sec

INSTALL FILTERS

Don Sunglasses
Unstow,install: Side Hatch UV Filter and Locking
Device 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 Microphone, and/or
wireless comm. (see WCCS Cue Card), if flown
If WCCS, perform STD WCCS CONFIG
(ORB OPS, COMM/INST)

MO42F If middeck handheld mic/speaker ops:

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

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

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

ML86B:E cb MNA FC PCM – op

FDI CONFIG

Stow in Helmet Bag: ASCENT Cue Cards, ASC, ASC PKT,
SYS AOA

Unstow Jettison Stowage Bag, mark "Return to Houston"
Place Helmet Bag in Return to Houston Bag

Unstow VW Bags

| MET | MS AFT ACTIONS |
|-------|---|
| 00:53 | <u>SPECIALIST SEAT EGRESS</u> |
| 00:57 | <u>PRELIM MIDDECK CONFIG</u> 2 |
| 01:07 | <u>WCS CONFIG/ACT</u> 5 |
| 01:08 | <u>SWITCH CONFIG/GALLERY ACT</u> 6 |
| 01:40 | <u>CLOTHING CONFIG</u> 10 |
| 01:54 | <u>SPECIALIST SEAT REMOVAL/STOWAGE</u> |
| 01:59 | <u>ESCAPE POLE STOWAGE</u> 13 |
| 02:00 | <u>AIRLOCK SETUP FOR INGRESS</u> 15 |

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

WCS CONFIG/ACT 5

WCS SWITCH CONFIGURATION

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

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

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

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

WCS ACTIVATION

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

SWITCH CONFIG/GALLEY ACT 6

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

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

 :F All cbs closed
 :G All cbs closed except: FLOOD TUNNEL ADAPTER - op

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

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

Unstow,install Personal Hygiene Hose

ESCAPE POLE STOWAGE 13

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

AIRLOCK SETUP FOR INGRESS 15

Inner Hatch 1. Equal vlv caps (two) - remove
 2. Open hatch per decal
 3. Equal vlv (two) - OFF, install caps

EXT A/L 4. Remove cap from Airlock Fan outlet and stow
 MDDK 5. Remove diffuser cap from aft middeck floor fitting and install
 on Airlock Fan outlet

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)

ON-ORBIT SWITCH LIST

LEFT SEAT

L1 1-19
 L2 1-19

 O7 1-20
 O8 1-20

 O14 1-21
 O15 1-22

RIGHT SEAT

O16..... 1-22
 O8..... 1-20

 R1 1-18

AFT

C5 1-22
 C6 1-22
 C7 1-22









 A11 1-23

MIDDECK-FWD

ML86B 1-25

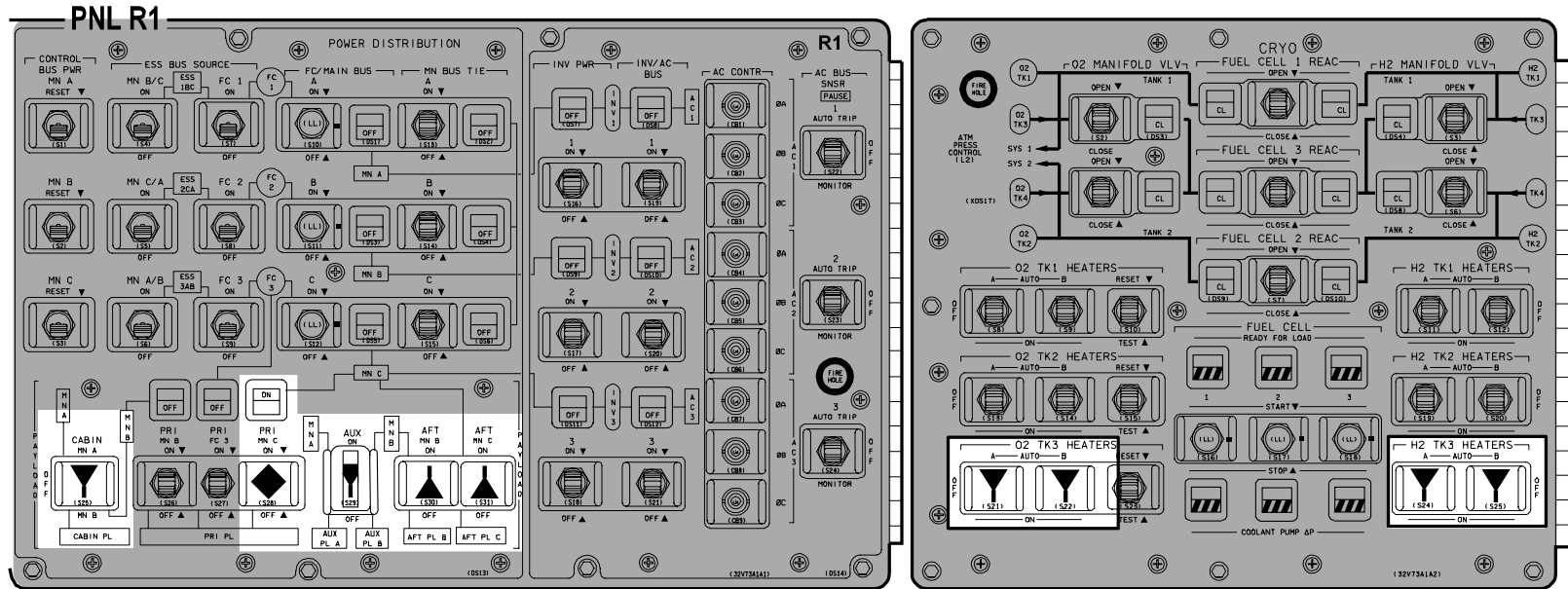
MIDDECK-AFT

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

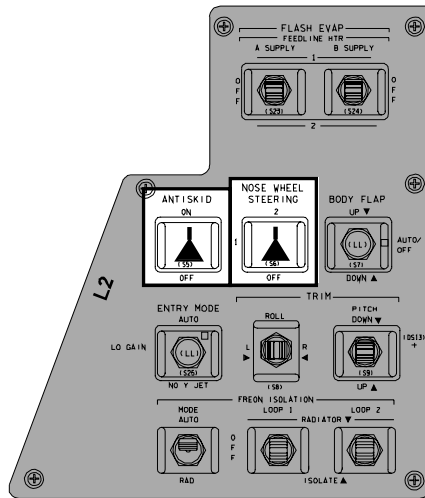
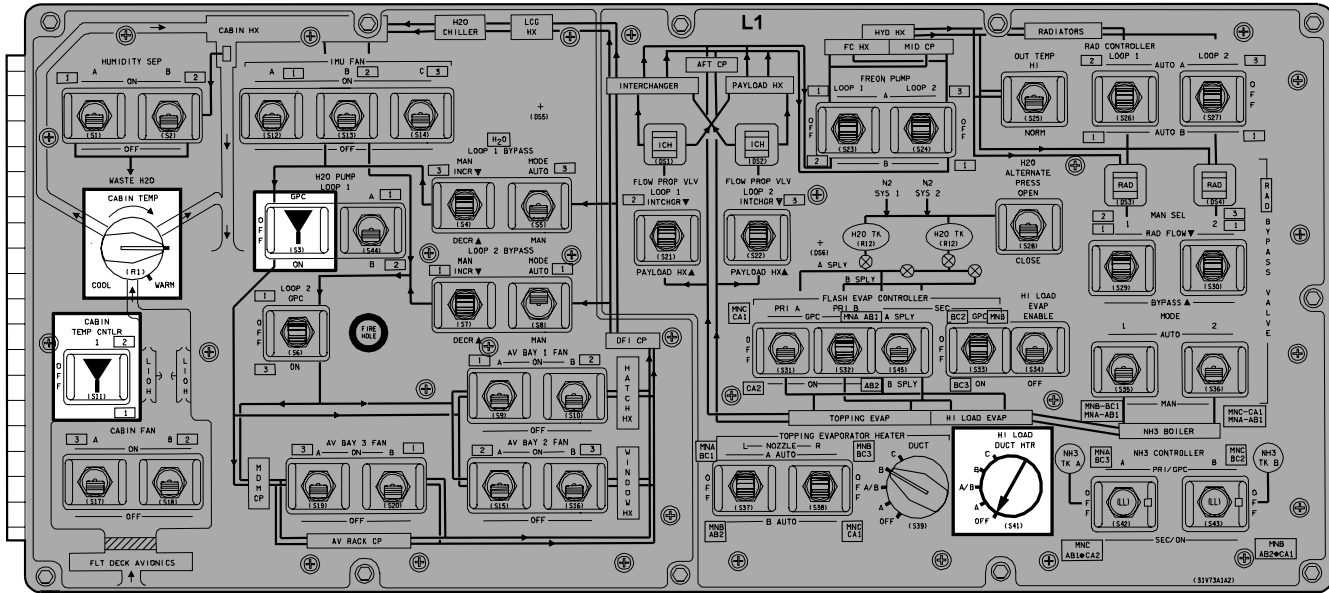
| | | |
|---|--|---|
|  - Up | R - As reqd |  - Indicates switch/display not checked during ON-ORBIT SWITCH/VERIF |
|  - Center |  - cb close | Switch/display pictorials are generic representations and are not intended to depict actual switch position. Check MCC if clarification reqd. |
|  - Down | 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

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

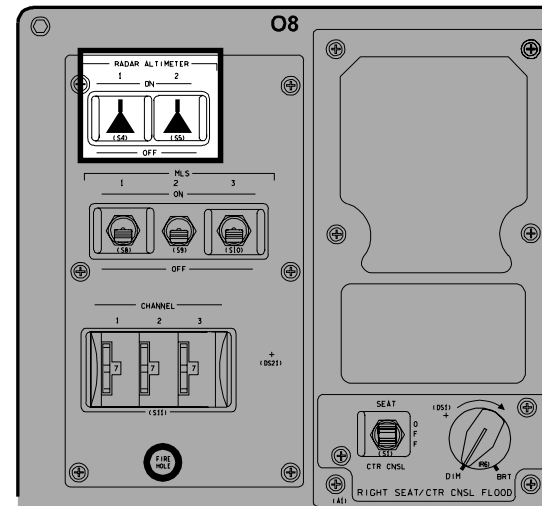
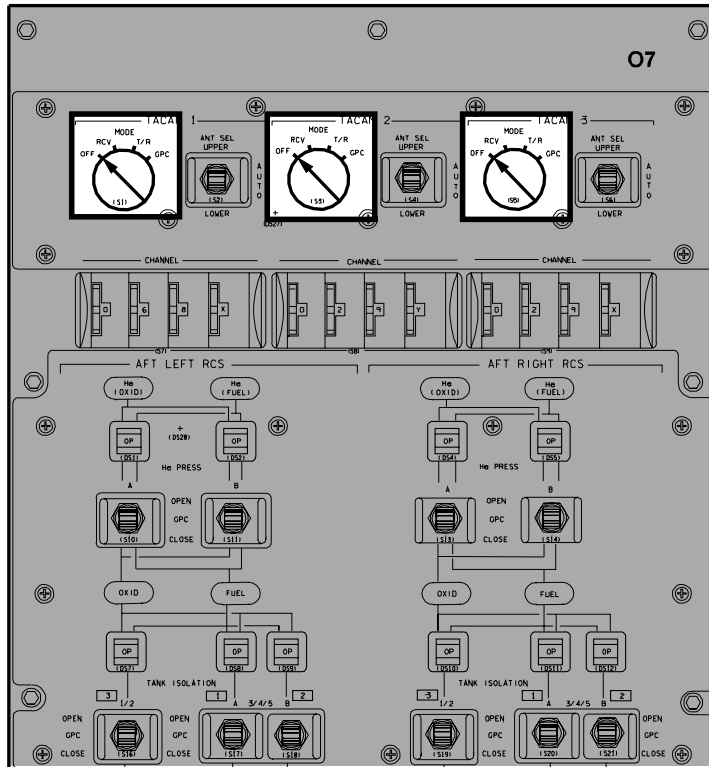
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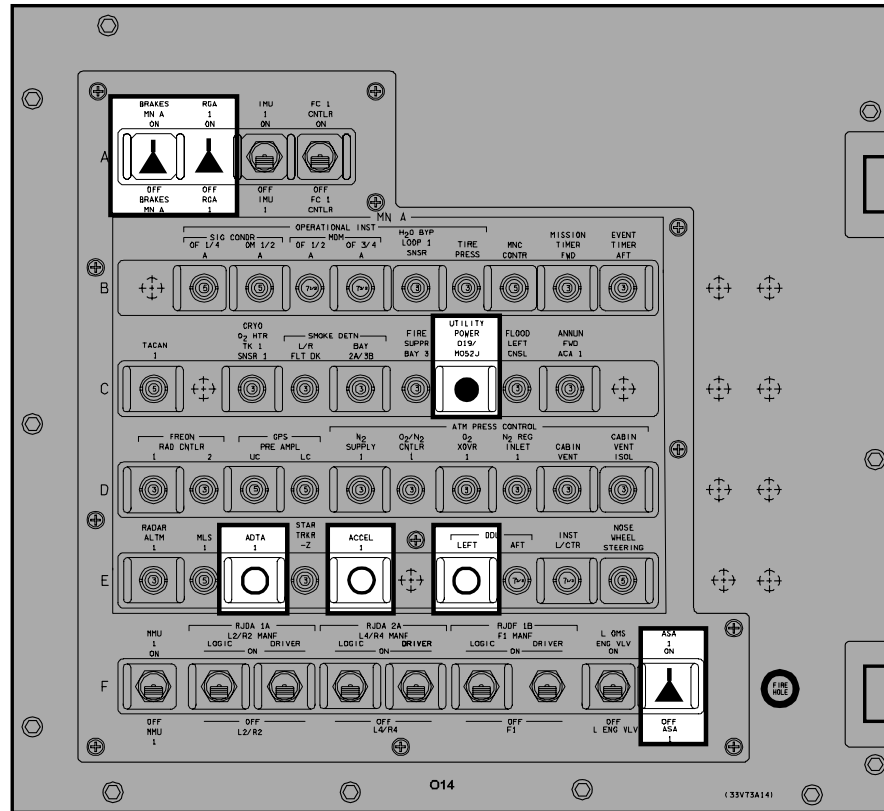
ALL VEH



OV103, OV105

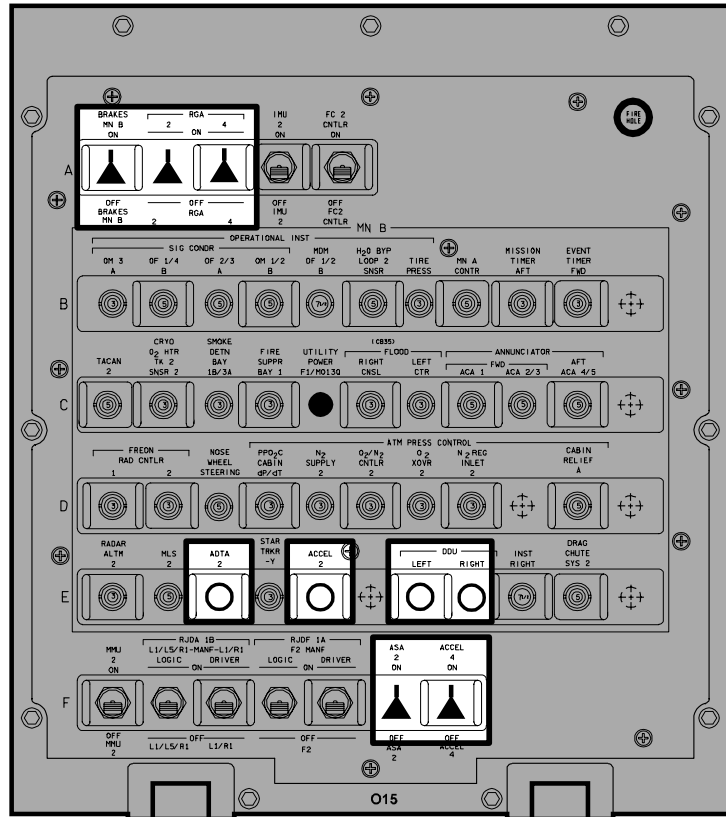


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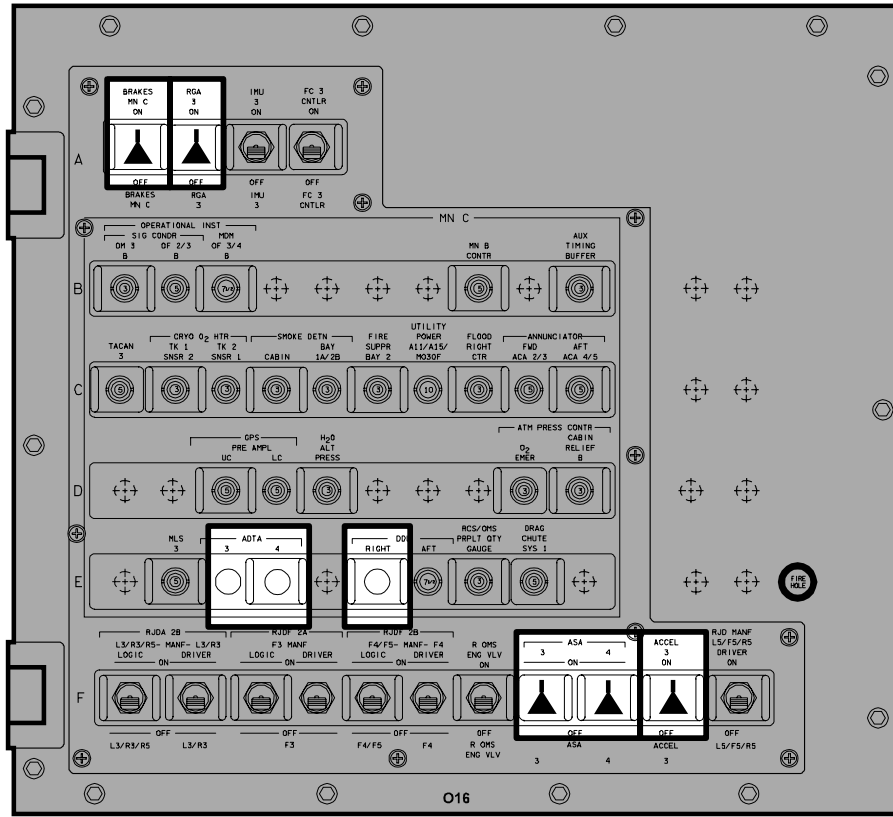


OV103, OV105

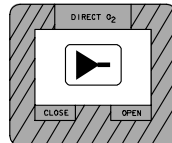
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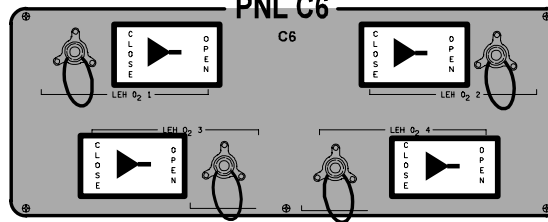
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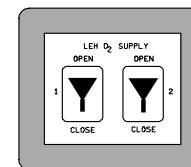
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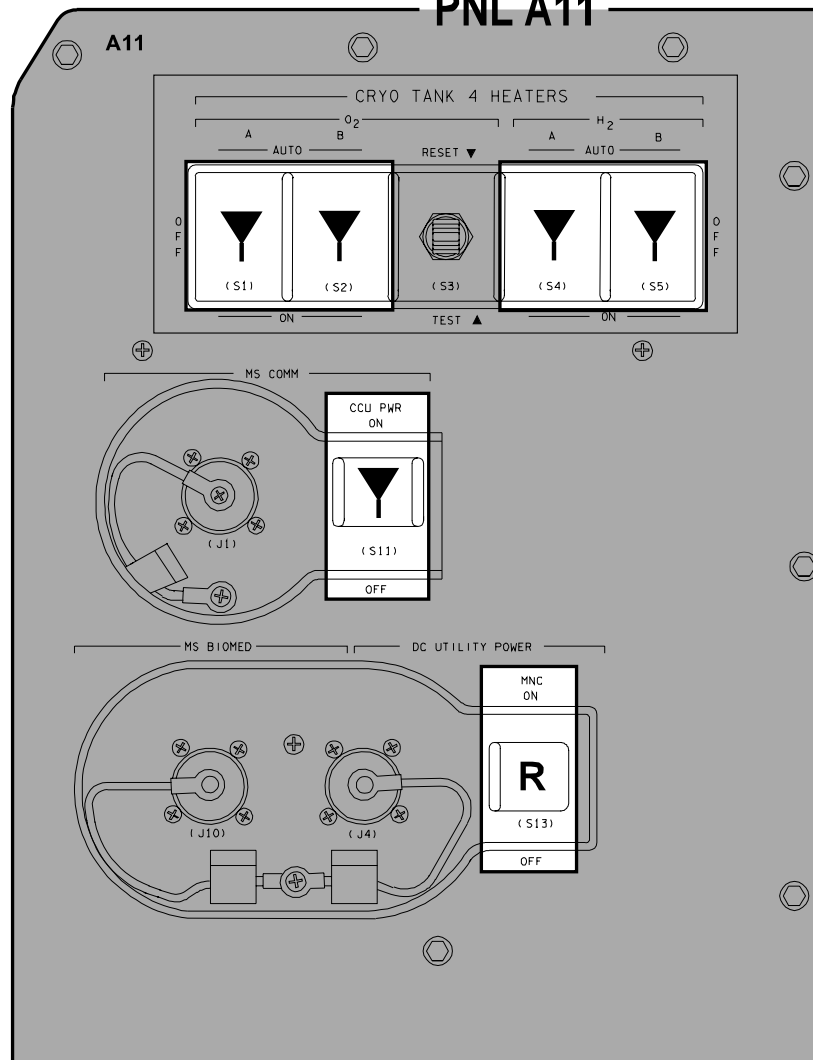
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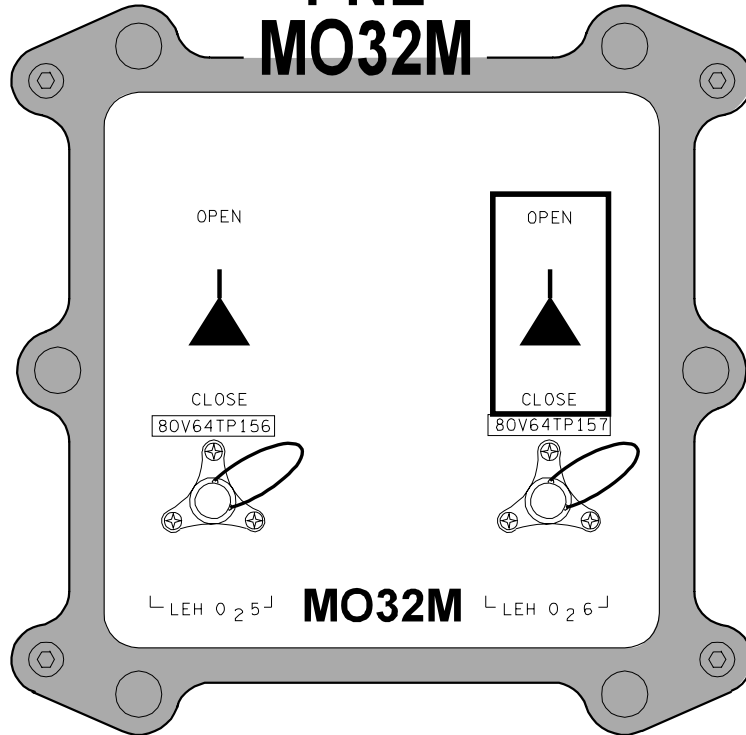


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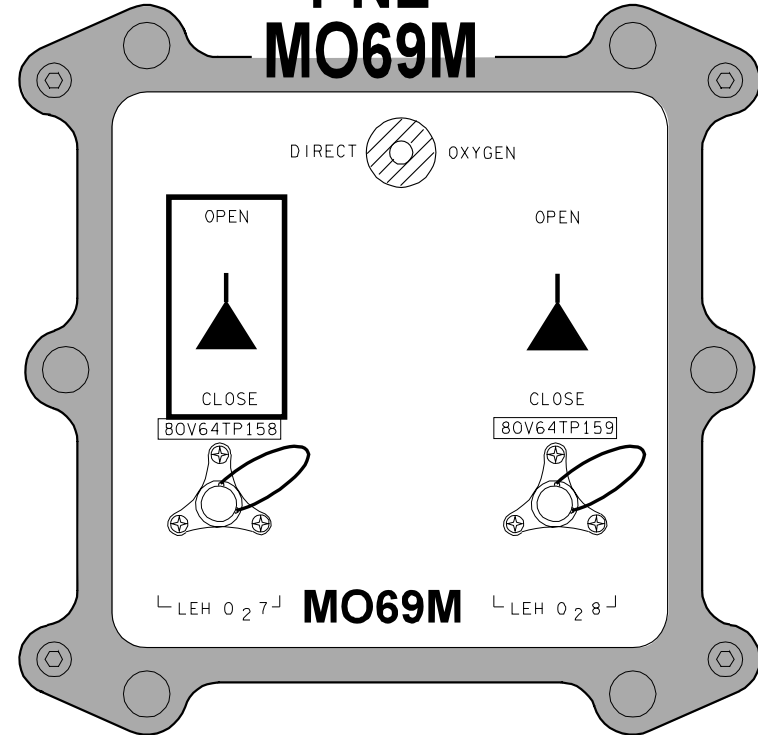


OV103,OV105

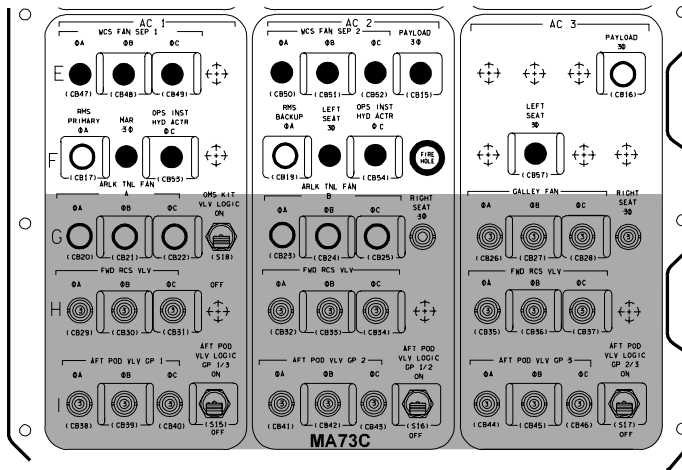
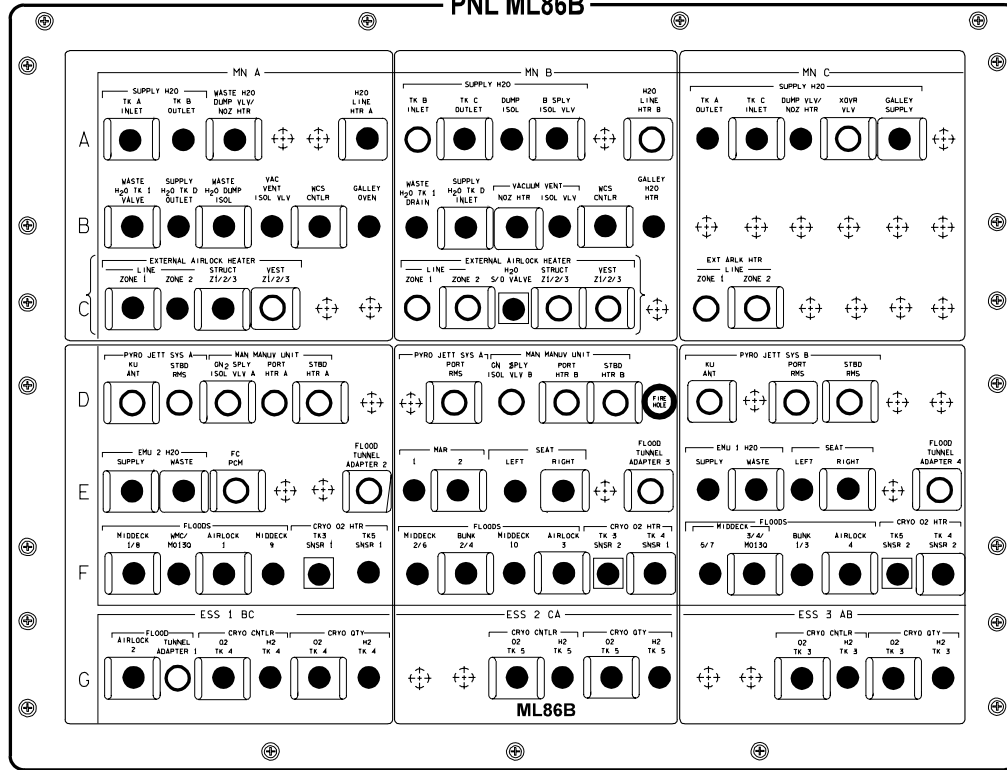
PNL MO32M



PNL MO69M



PNL ML86B



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ORBIT 5/6 DEORBIT

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

| MET | ACTIVITY |
|------------|--|
| ASAP | <p>Perform PRIORITY PWRDN GROUPS A & B (ORB PKT, <u>PRIOR PWRDN</u>) with following deltas:</p> <p>DELETE: HI LOAD DUCT HTR OFF in Group A Pwrdn PRI RJDs DRIVER & LOGIC OFF in Group B Pwrdn</p> <p>When PRIORITY PWRDN is complete, return to Nominal Post Insertion, 1-5, thru 1-9 completing all activities except the following:</p> <p>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 2:00 AIRLOCK SETUP FOR INGRESS MET 2:06 CONFIG VERNIER DRIVERS</p> |
| 1:00 | <p>If Voice or Command Unavailable: Perform GPS INCORPORATION (ORB OPS, <u>GNC</u>)</p> |
| 2:12 | <p><u>CONFIG CONTROLS FOR ON-ORBIT</u>, 1-17 thru 1-25 (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 D/O PREP FOR
ORBIT 5/6 DEORBIT**

| TIG- | ACTION | PROCEDURES |
|-------------|------------------|---|
| 3:57 | Delete | <u>COLDSOAK INITIATE</u> 2 |
| 3:35 | Delete | <u>SPECIALIST SEAT INSTALLATION</u> |
| 3:30 | Move to TIG-2:30 | <u>DPS CONFIG FOR D/O PREP</u> 4a |
| 3:15 | Move to TIG-2:20 | <u>DED DISP ENT CONFIG</u> 6 |
| 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>) |
| 2:46 | Delete | <u>CONFIG FOR PLBD CLOSING</u> 7 |
| 2:40 | Delete | <u>PLBD CLOSING</u> 9 |
| 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> 10 |

CUE CARD CONFIGURATION

**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) – ON
FWD (two) – ON

Record MET: ____/____:____:____

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

NOTE

Verify PL Bus Activation complete

L12U cb PDIP 1 PWR 2/KuBAND RLY – cl
(SSP1) X1/X2 SW PDIP 1 PWR 1 – cl
SW PWR 1 – cl

L12L cb PDIP 2 PWR 2/MPLM RLY – cl
(SSP2) SW PWR 3 – cl
PDIP 2 PWR 1 – cl

MPLM KEEL CAM PWR – ON
HTR/ILLUM PWR – ON
PWR – OFF

R12 (OPP) cb OBSS SW PWR CB1 – cl
(OBSS) OBSS SW PWR – ON
RSC PWR – ON

SET UP P/TV

Perform **ACTIVATION OPERATION** (Cue Card, TV)
Perform Micacam config for PLBD REC:
Cable, Tape, Batt

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 | 4.65/4.65 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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TOP

MIDDECK RECONFIGURATION

PRELIM MIDDECK CONFIG 2

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

INSTALL FILTERS

Don Sunglasses
Unstow,install: Side Hatch UV Filter and Locking
Device 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 Microphone, and/or
wireless comm. (see WCCS Cue Card), if flown
If WCCS, perform STD WCCS CONFIG
(ORB OPS, COMM/INST)

MO42F
If middeck handheld mic/speaker ops:
MIDDECK SPKR AUD A/G 1 - T/R, tw-2
A/G 2 - RCV, tw-2
A/A - RCV, tw-2
ICOM A - T/R, tw-2
B - RCV, tw-2
XMIT/ICOM MODE - PTT/PTT
SPKR PWR - SPKR
MSTR SPKR VOL - 8

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

ML86B:C
cb MNA EXT ARLK HTR LINE ZN1,2 (two) - cl
STRUC Z1/2/3 - cl
ML86B: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

Table with 2 columns: MET, MS AFT ACTIONS. Rows include: 00:53 SPECIALIST SEAT EGRESS, 00:57 PRELIM MIDDECK CONFIG 2, 01:07 WCS CONFIG/ACT 5, 01:08 SWITCH CONFIG/GALLERY ACT 6, 01:40 CLOTHING CONFIG 10, 01:54 SPECIALIST SEAT REMOVAL/STOWAGE, 01:59 ESCAPE POLE STOWAGE 13, 02:00 AIRLOCK SETUP FOR INGRESS 15

CLOTHING CONFIG 10

Doff,stow:
Harness, Boots, LES
Stow gloves in Helmet
Remove radiation dosimeter from LES and insert in
inflight garments
Doff,stow in Wet Trash:
UCD (clamp if used)
Emesis Bag, if used (unstow new bag)

PI-2a/121/O/B

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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

SWITCH CONFIG/GALLEY ACT 6

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

ML86B:A All cbs closed except MNB H2O LINE HTR B - op
 :B All cbs closed
 :E All cbs closed except: FC PCM - op
 CO2 SYS1,2 CNTR, CO2 COMM INSTR - op
 FLOOD TUNNEL ADAPTER (three) - op

:F All cbs closed
 :G All cbs closed except: FLOOD TUNNEL ADAPTER - op

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

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

Unstow,install Personal Hygiene Hose

ESCAPE POLE STOWAGE 13

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

AIRLOCK SETUP FOR INGRESS 15

- Inner Hatch 1. Equal viv caps (two) - remove
- 2. Open hatch per decal
- EXT A/L 3. Equal viv (two) - OFF, install caps
- MDDK 4. Remove cap from Airlock Fan outlet and stow
- 5. Remove diffuser cap from aft middeck floor fitting and install on Airlock Fan outlet
- 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 viv cover (two) - CL (pushed in)

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HOOK
VELCRO

HOOK
VELCRO

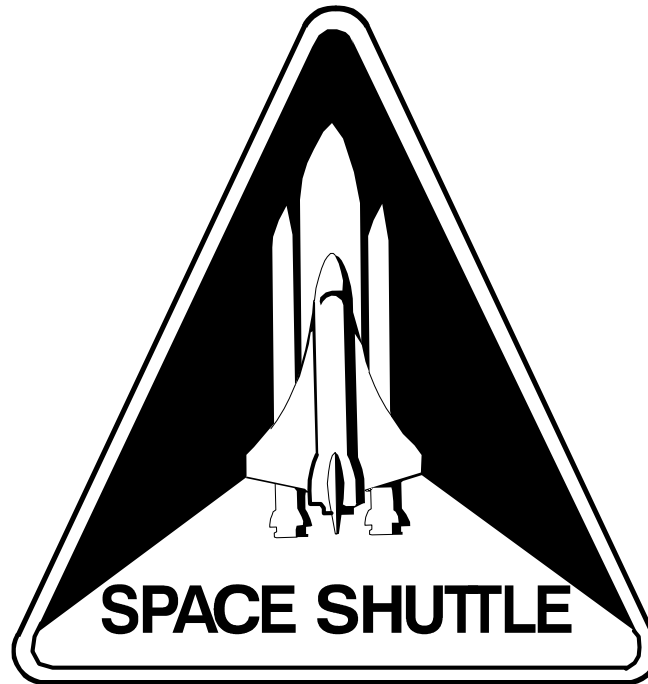
HOOK
VELCRO

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| | |
|-----------------------|--------------------|
| POST INSERTION | STS 121 |
|-----------------------|--------------------|