

Post Insertion

STS-120

**Mission Operations Directorate
Operations Division**

**Final, Rev A
September 5, 2007**

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center
Houston, Texas



STS-120 POST INSERTION

FINAL, REV A (Sept 5, 2007)

PCN-1 (Oct 1, 2007) Sheet 1 of 1

List of Implemented Change Requests (482s):

PI-813

Incorporate the following:

1. Replace iii & iv
2. Replace 1-5 & 1-6

Prepared by:



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Manager, Shuttle Procedures Management

Accepted by:



FDF Manager

Encl: 4 pages

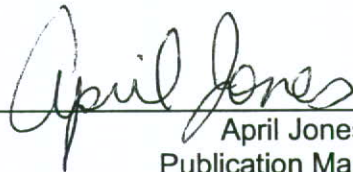
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MISSION OPERATIONS DIRECTORATE

**POST INSERTION
STS-120**

FINAL, REV A
September 5, 2007

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| Incorporates the following: | | |
|-----------------------------|--------|--------|
| 482#: | PI-798 | PI-808 |
| | PI-803 | PI-809 |
| | PI-804 | PI-810 |
| | PI-806 | PI-811 |
| | PI-807 | PI-812 |

AREAS OF TECHNICAL RESPONSIBILITY

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| Publication Manager | DO3/A. Jones | 281-483-1861 |
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| GNC | DS6/D. Weiler | 281-483-2666 |
| DPS | DS2/T. Mayces | 281-483-1889 |
| P T/V | DX3/G. Kilgo | 281-244-7926 |
| Pointing | DO4/M. Stocco | 281-244-1023 |

POST INSERTION
STS-120

LIST OF EFFECTIVE PAGES

| | |
|-------|----------|
| FINAL | 05/23/07 |
| REV A | 09/05/07 |
| PCN-1 | 10/01/07 |

| | | | | |
|----------------|---|-------------|--------------|-------------|
| Sign Off | * | 120/FIN A | 1-17 | 120/FIN A |
| ii..... | * | 120/FIN A | 1-18 | 120/FIN A |
| iii..... | * | 120/FIN A,1 | 1-19 | 120/FIN A |
| iv..... | * | 120/FIN A | 1-20 | 120/FIN A |
| v | | 120/FIN A | 1-21 | 120/FIN A |
| vi..... | | 120/FIN A | 1-22 | 120/FIN A |
| 1-1 | | 120/FIN A | 1-23 | 120/FIN A |
| 1-2 | | 120/FIN A | 1-24 | 120/FIN A |
| 1-3 | | 120/FIN A | 1-25 | 120/FIN A |
| 1-4 | | 120/FIN A | 1-26 | 120/FIN A |
| 1-5 | | 120/FIN A,1 | 2-1 | 120/FIN A |
| 1-6 | | 120/FIN A | 2-2 | 120/FIN A |
| 1-7 | | 120/FIN A | 2-3 | 120/FIN A |
| 1-8 | | 120/FIN A | 2-4 | 120/FIN A |
| 1-9 | | 120/FIN A | 3-1 | * 120/FIN A |
| 1-10 | | 120/FIN A | 3-2 | * 120/FIN A |
| 1-11 | | 120/FIN A | CC 3-3 | * 120/FIN A |
| 1-12 | | 120/FIN A | CC 3-4 | * 120/FIN A |
| 1-13 | | 120/FIN A | CC 3-5 | * 120/FIN A |
| 1-14 | | 120/FIN A | CC 3-6 | * 120/FIN A |
| 1-15 | | 120/FIN A | | |
| 1-16 | | 120/FIN A | | |

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/120/O/C |
| (Back) | CC 3-4 | PI-1b/120/O/C |
| MIDDECK RECONFIGURATION (Front)..... | CC 3-5 | PI-2a/120/O/A |
| (Back) | CC 3-6 | PI-2b/120/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 CONFIG | 3-1 |

NOTE

The STS-120 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-120 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

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

C3

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

O6 2. MODE G2FD GPC TO OPS 0
GPC MODE G2FD – STBY (tb-bp)
– RUN (tb-RUN)

CRTX 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

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

C3
C2
F2,F4
C3

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

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

00:35

00:40

00:45

00:50

00:55

A1(B1)
AUTO
PRI
RT 0.2
DB 5.0

01:00

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

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

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

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

- CRTX 6. TRANSITION TO SM OPS 201(401)
SM, GPC/CRT SM GPC/X EXEC
X: SM GPC MEMORY
CONFIG - ITEM 1 +4(5) EXEC
Modify MC 4(5) per table →
- C3 √UPLK - ENA
SM 1 DPS UTILITY
UL CNTL AUTO - ITEM 35 EXEC

| 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 |

- C3 7. SECURE BFS
BFC CRT DISP - ON
C3 CRT3 BFS, GNC, OPS 000 PRO
3: BFS, BFS MEMORY
C3 BFC CRT DISP - OFF
√All IDPs deassigned from BFS
- O6 GPC MODE 5 - STBY (tb-RUN)
- C2 8. RECONFIG MEDs
GPC/CRT 0/3 EXEC
IDP/CRT 3 PWR - OFF
√4 PWR - ON

- F6,F7,F8 GPC/CRT SM GPC/4 EXEC
Power off MDUs as desired
- C3 9. LOAD ORBIT TFLs
√OI PCMMU FORMAT - GPC
SM 62 PCMMU/PL COMM
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

10. RECONFIG GPCs

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

If no failed GPC:

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

If single G2 reqd:

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

X: PL GPC MEMORY

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

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

Perform ERR LOG RESET

GNC 0 GPC MEMORY

ITEM 48 EXEC

SM 0 GPC MEMORY

ITEM 48 EXEC

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

GNC 0 GPC MEMORY

CONFIG – ITEM 1 +2 EXEC

Modify MC 2 per table

GNC, OPS 201 PRO

GNC UNIV PTG

If PASS GPC failed from ASCENT and single
 G2 reqd:

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

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

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

C2
 CRTX

CRT

PI LOCKER

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

MET
DAY 000
01:00
A1(B1)
AUTO
PRI
RT 0.2
DB 5.0

1: GNC UNIV PTG 2: SM ANTENNA

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

01:05

MS **WCS CONFIG/ACT** (MID Cue Card) **5**, 1-16
MS **SWITCH CONFIG/GALLEY ACT** (MID Cue Card) **6**, 1-16
C,P **DON/CONFIG COMM**
O5 AUD A/G 2 – RCV, tw 2
 XMIT/ICOM MODE – PTT/VOX (recommended)
P **LOAD DAP A5**

01:10

A5(B1)
AUTO
PRI
RT 0.2
DB 5.0

CRT1 **MNVR TO PLBD OPENING ATT** (BIASED -ZLV, +YVV)
√TGT ID +2
BODY VECT +3
√P +90
√Y +0.0
OM +280

01:15

A5(B1)
AUTO
ALT
RT 0.2
DB 5.0

DAP: A/AUTO/ALT
Initiate TRK
C **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 | 3 RGAs | Both RFCAs | PRES or REDNT |
| +X RCS jet | 3 AAs | Both Cab Fans | WINDOW PANE |
| 1 OMS Inlet line | 3 ADTAs | 3 of 6 Av Bay Fans | FAILURE |
| OMS Prop Tk Leak | 3 Elevon or | 2 FCs | <u>DPS</u> |
| Aft RCS He or | BF Pos Fdbks | Any MN or 3Φ AC Bus | 3 GPCs |
| Prop Leak | (same surface) | Any CNTL or MPC Bus | 2 PL MDMs |
| <u>COMM</u> | 2 FCS Ch | 3 IMU Fans | 2 FF or FA MDMs |
| No Voice and | (same surface) | | <u>APU/HYD</u> |
| No CMD | | | 2 APU/HYD/WSB |

01:20

UPLINK
VAR
PARAM
TMBU
(IF
REQD)

If NO-GO for RAD/PLBD OPS, go to **ORB 3 DEORBIT** **8**
MS **OPEN PLBDs**, AUTO MODE, **18** 1-11
 NOTE: CAUTION BLOCK on 1-11

01:30

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

RAD ACT **7**

NOTE
Expect 'S88 EVAP OUT T 1(2)' msg
L1 FLASH EVAP CNTLR PRI A – OFF
 PRI B – ON

NOTE
If RAD flow has been initiated manually, delay RAD ACT until MCC call or until RAD OUT T low
RAD BYP VLV MODE (two) – AUTO
 CNTLR LOOP (two) – AUTO A
Wait 90 sec
√RAD BYP VLV tb (two) – RAD

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

L2 FREON ISOL MODE – AUTO

ORB 3 DEORBIT **8**

If NO-GO for RAD/PLB OPS due to 2 FCs failed:
Go to CONT DEORB, **LOSS OF 2 FC ORB 2 OR 3**,
at TIG-1:30
If NO-GO due to any other failure:
Go to CONT DEORB, **LAUNCH DAY ORBIT 3**,
at TIG-2:00

STAR TRKR ACTIVATION/DOOR OPEN 12

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

S TRK DR CNTL SYS (two) – OP (start timer)
√POS tb (two) – bp

When both tb – OP (8-24 sec), or either tb – bp for > 24 sec,
CNTL SYS (two) – OFF

* If tb – bp > 8 sec, notify MCC *

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

SUPPLY WATER CONFIG 14

NOTE

Do not perform until blocks 5 and 6 are performed

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

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

ELBOW CAMR PICTURE 20

Document Elbow Camr position via DSC760 photo from W10 per the following:
Lens, 28-70 mm set at 70 mm (stowed in Vol 3B)
Exp Mode – P
√Meter – Matrix
Sun(Earth)shine reqd
Video from Camr A acceptable as backup

| | | | |
|------------|------------------------|---|--------------------|
| MET | | 1: GNC UNIV PTG | 2: SM PL BAY DOORS |
| DAY 000 | | 4: SM PL BAY DOORS | |
| 01:30 | | | |
| A5(B1) | | | |
| AUTO | | | |
| ALT | | | |
| RT 0.2 | | | |
| DB 5.0 | | | |
| 01:35 | MCC & CREW: | GO for orbit ops | |
| | C | O6 UHF MODE sel – OFF | |
| | MS | 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 | |
| | MS | 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 | MS | AIRLOCK SETUP FOR INGRESS 15 , 1-16 | |
| A5 (B1) | P | W/B STEAM VENT HTR ACT | |
| AUTO | | R2 | √BLR CNTLR/HTR (three) – A |
| ALT | | | PWR (three) – ON |
| RT 0.2 | | | |
| DB 5.0 | C | CONFIG VERNIER CONTROL | |
| 02:05 | | O16:F | √MCC GO for vernier control |
| A5 (B1) | | | RJD MANF L5/F5/R5 DRIVER – ON, wait 5 sec |
| AUTO | | | DAP: A/AUTO/VERN |
| VERN | | | |
| RT 0.05 | | | |
| DB 1.0 | | | |
| 02:10 | ALL | CONFIG CONTROLS FOR ON-ORBIT | |
| | | Perform actions on 1-17 thru 1-25 | |
| | | Unstow, install HUD covers (two) | |
| 02:15 | L2 | Remove, stow (on PNL L2/FDF FD locker) | |
| | | NWS sw flex extension | |
| | P | HYD THERMAL CONDITIONING-ENABLE | |
| | | R2 | HYD CIRC PUMP (three) – GPC |
| 02:20 | | | |
| | MS | RESET C/W (AFT Cue Card) 16 , 1-14 | |
| 02:25 | | | |
| | MS | FUEL CELL VI PERFORMANCE PLOT (ORB OPS, <u>EPS</u>) | |
| | | | Stow POST INSERTION, go to FLIGHT PLAN, <u>FLT DAY 1</u> |
| 02:30 | | | |

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DETAILED PLBD OPENING PROCEDURES 18

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

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

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

AUTO PLBD OPENING PROCEDURE

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

MANUAL PLBD OPENING PROCEDURE

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

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

AFT FLIGHT DECK RECONFIGURATION

CONFIG FOR PLBD OPERATIONS 4

A6U SET UP LIGHTS
 ANNUN BUS SEL – MNC

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

A7U PL BAY FLOOD AFT (two) – OFF
 MID (two) – 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)
 Perform PLBD VTR RECORDING (Cue Card)
 Config Minicam for PLBD Rec: install new Tape, fresh 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

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

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

MIDDECK RECONFIGURATION

PRELIM MIDDECK CONFIG 2

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

INSTALL FILTERS

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

PRESS H2O TKA

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

NOTE

Disregard possible 'S66 WASTE H2O PRES' fault msg

COMM CONFIG

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

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

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

FDF CONFIG

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

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

Unstow VW Bags

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

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
 FC PCM – op
 :F All cbs closed
 :G All cbs closed except: ESS1BC FLOOD TUNNEL ADAPTER 1 – op

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

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

Unstow,install Personal Hygiene Hose

ESCAPE POLE STOWAGE 13

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

AIRLOCK SETUP FOR INGRESS 15

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

ON-ORBIT SWITCH LIST

LEFT SEAT

L1..... 1-19
 L2..... 1-19

 O6..... 1-19
 O7 1-20
 O8..... 1-20

 O14..... 1-21
 O15..... 1-22

RIGHT SEAT

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

 R1 1-18

AFT

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









 A11..... 1-23

MIDDECK-FWD

ML86B..... 1-25

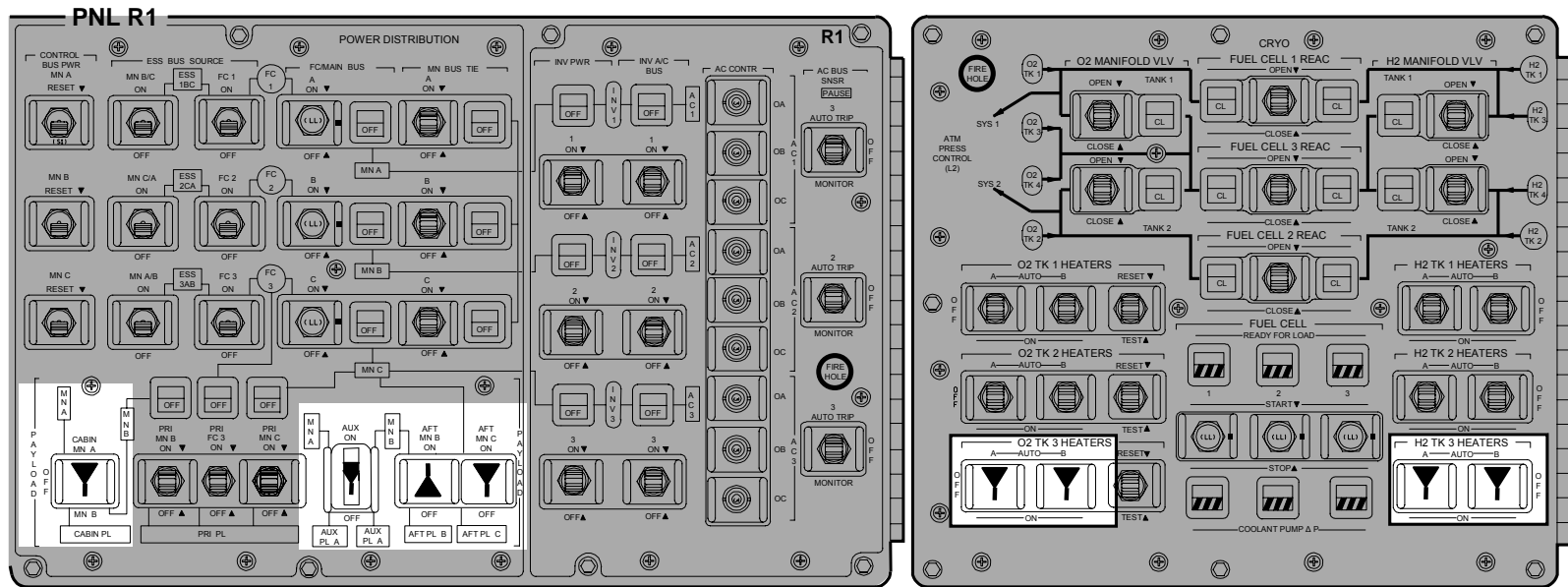
MIDDECK-AFT

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

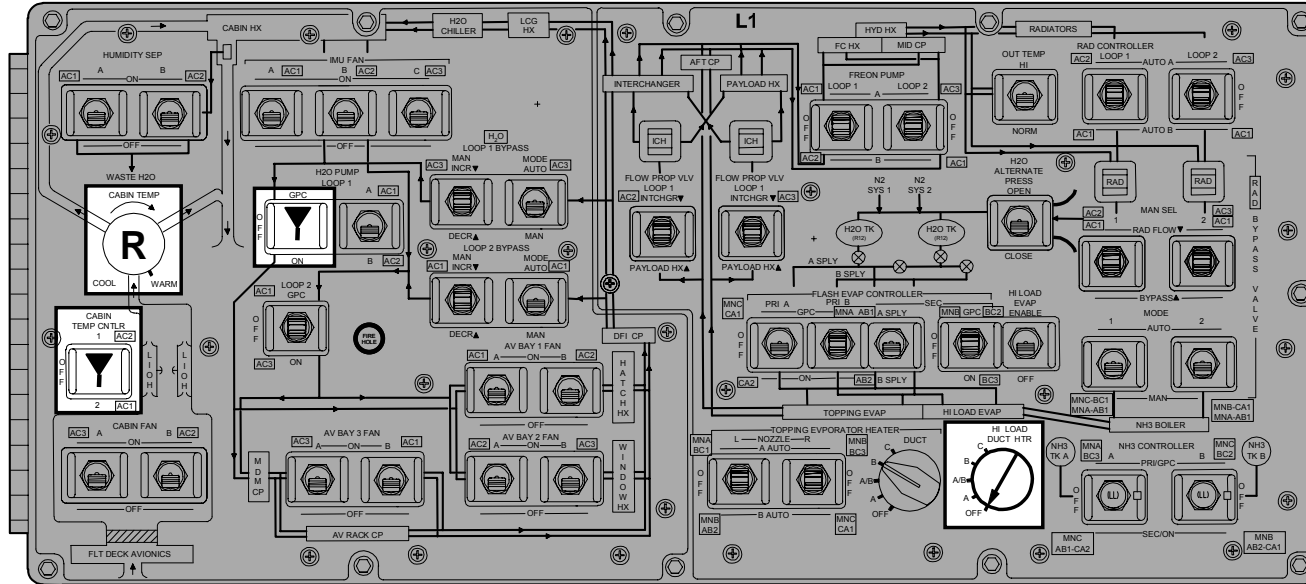
| | | |
|--|---|---|
|  - Up | R - As reqd |  - Indicates switch/display not checked during ON-ORBIT SWITCH/VERIF |
|  - Center |  - cb close | Switch/display pictorials are generic representations and are not intended to depict actual switch position. Check MCC if clarification reqd |
|  - Down |  -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

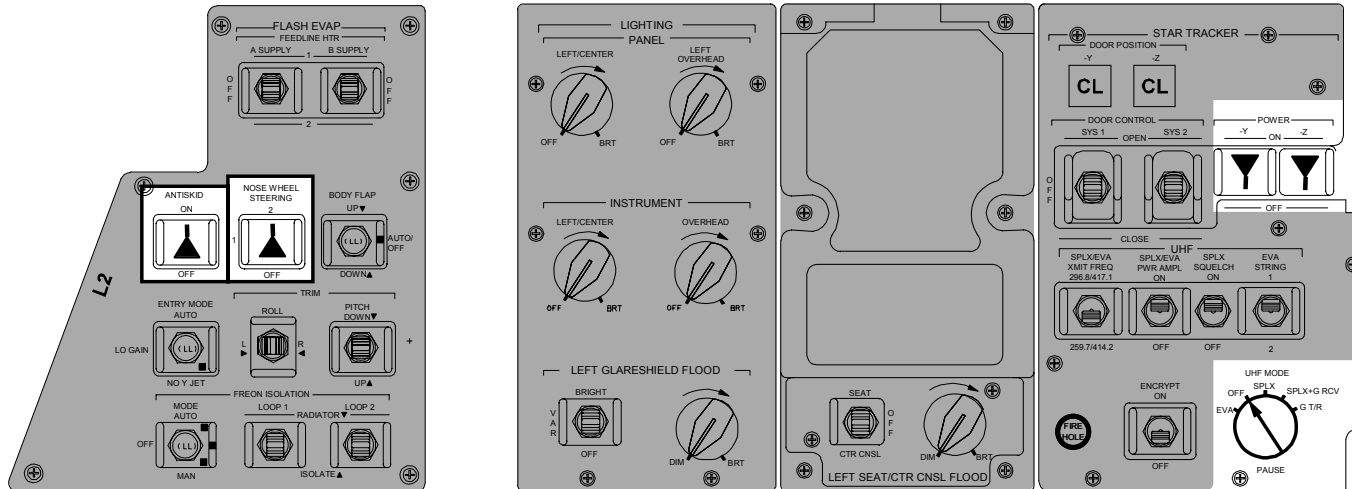
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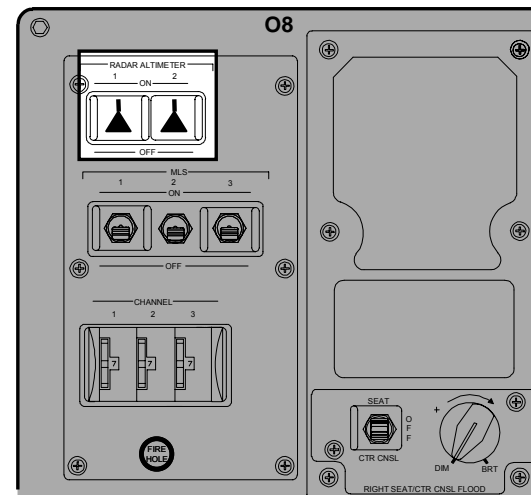
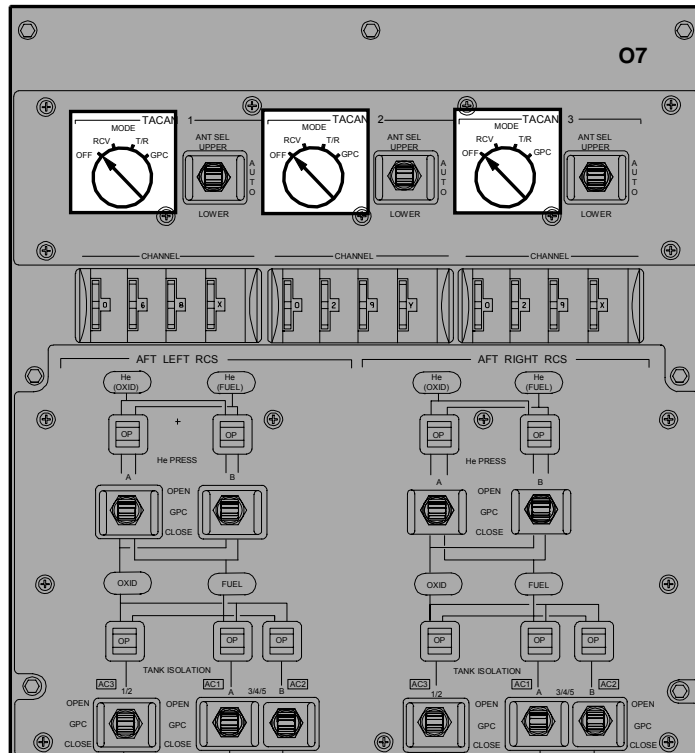
ALL VEH



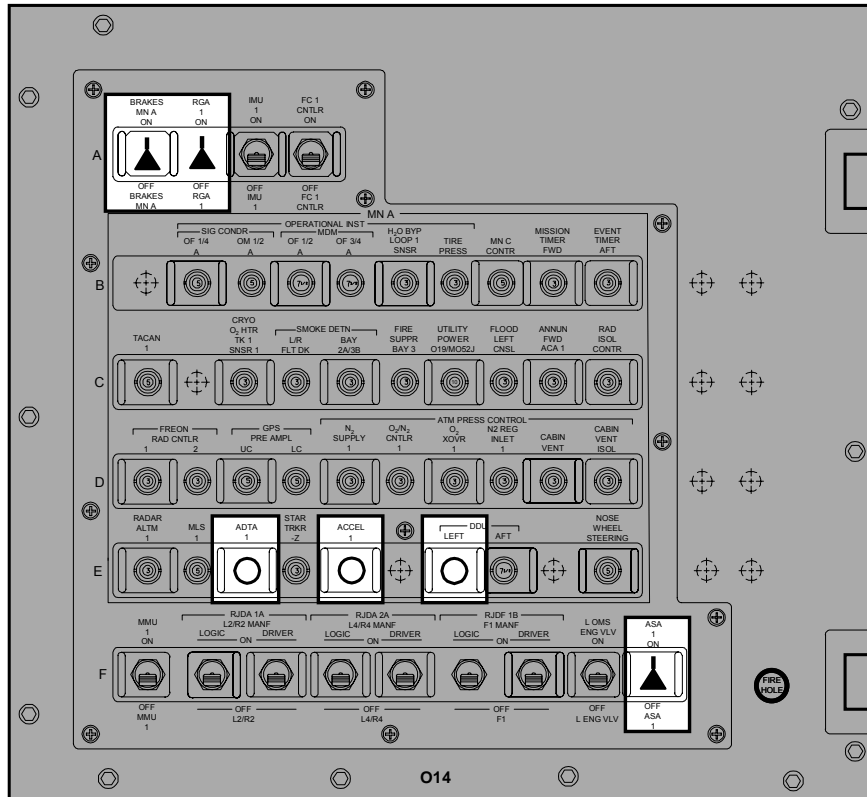
PNL O6



OV103, OV104

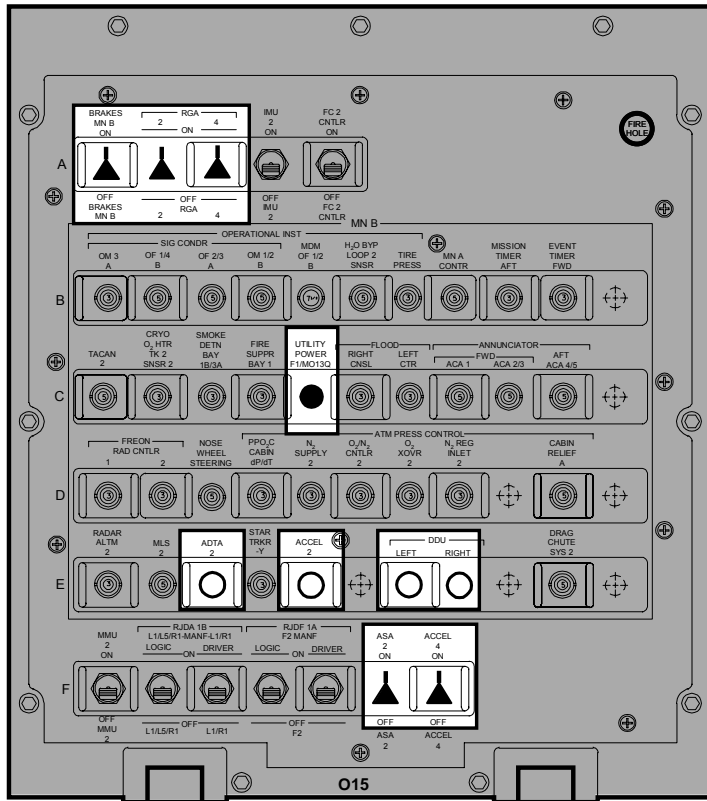


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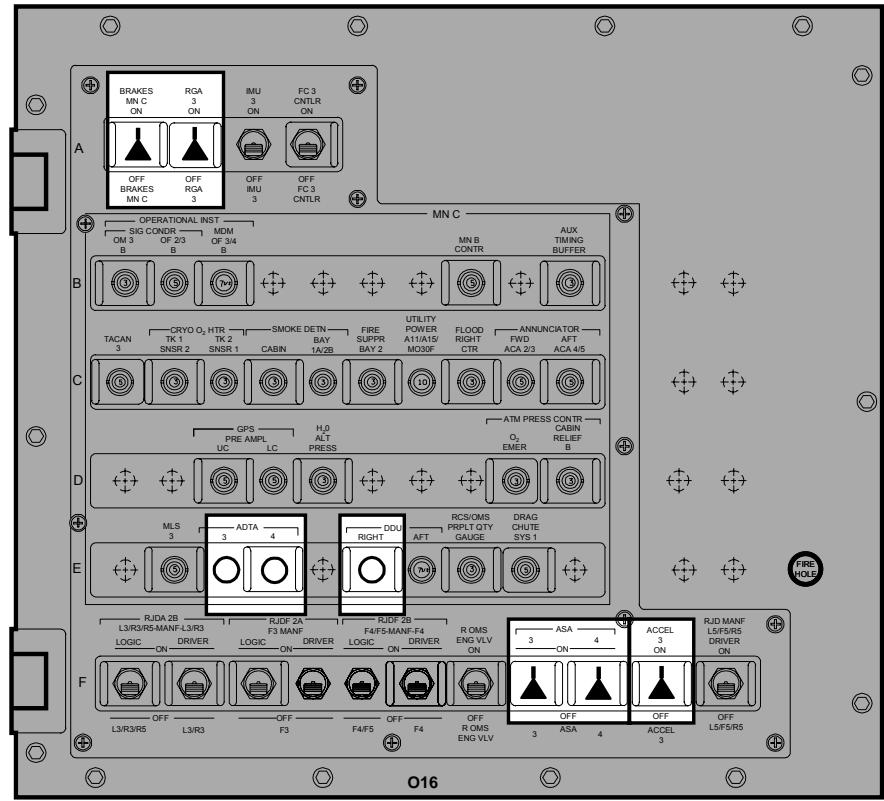


OV103

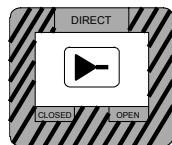
PNL O15



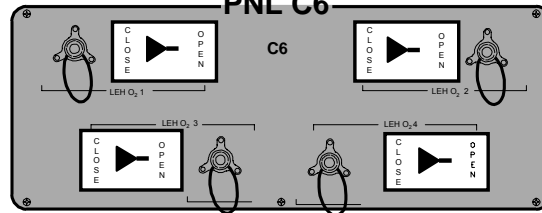
PNL O16



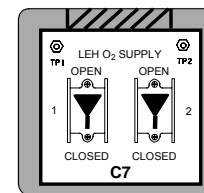
PNL C5



PNL C6

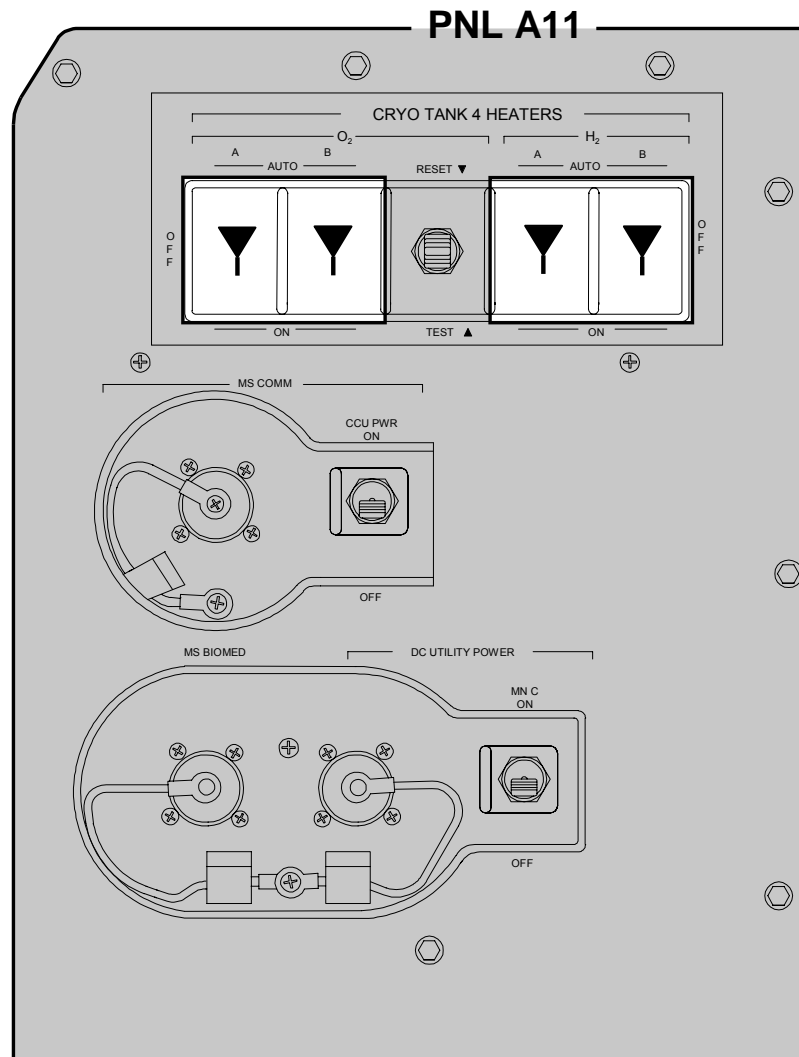


PNL C7



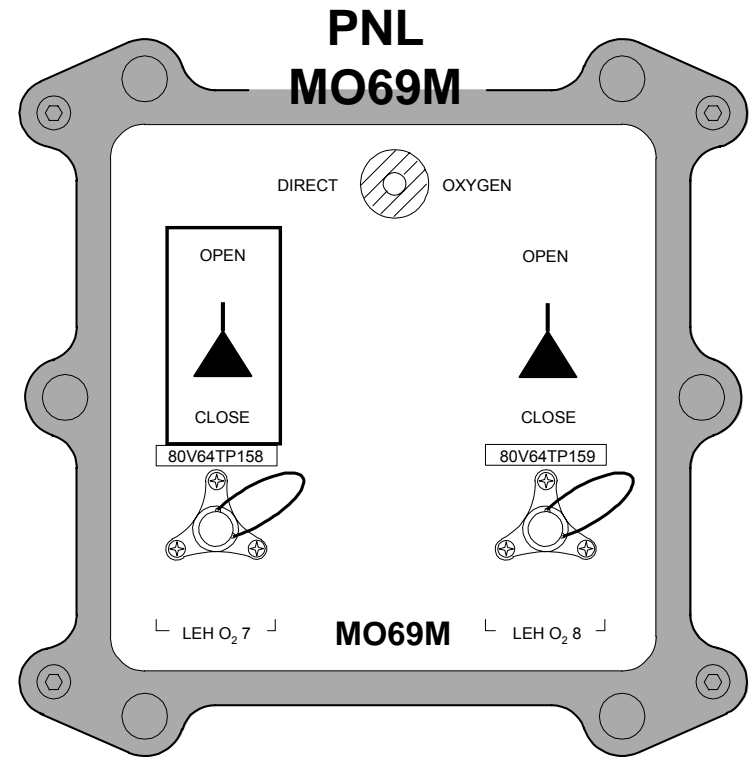
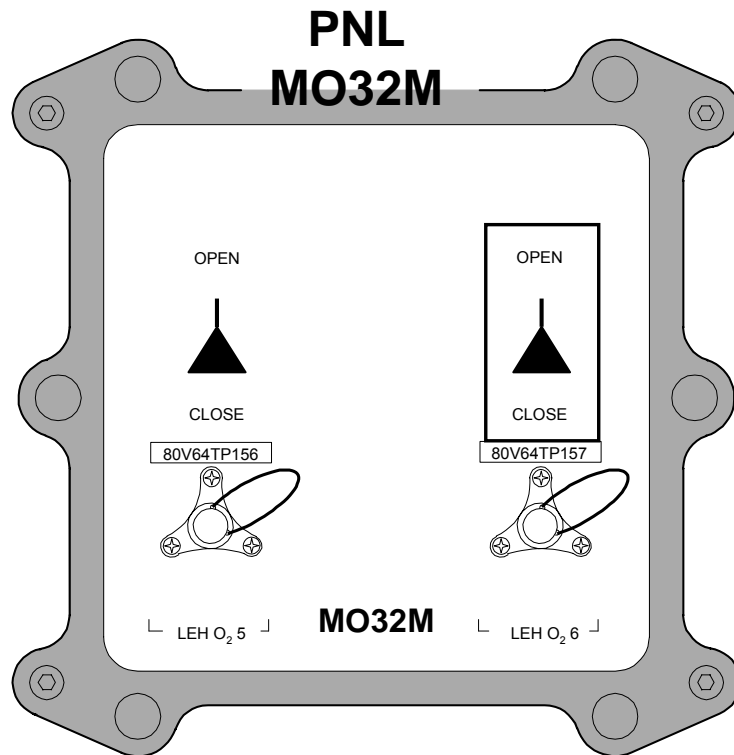
OV103

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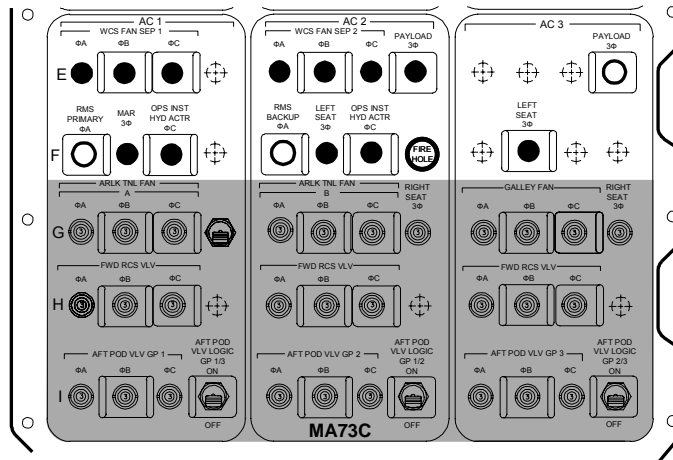
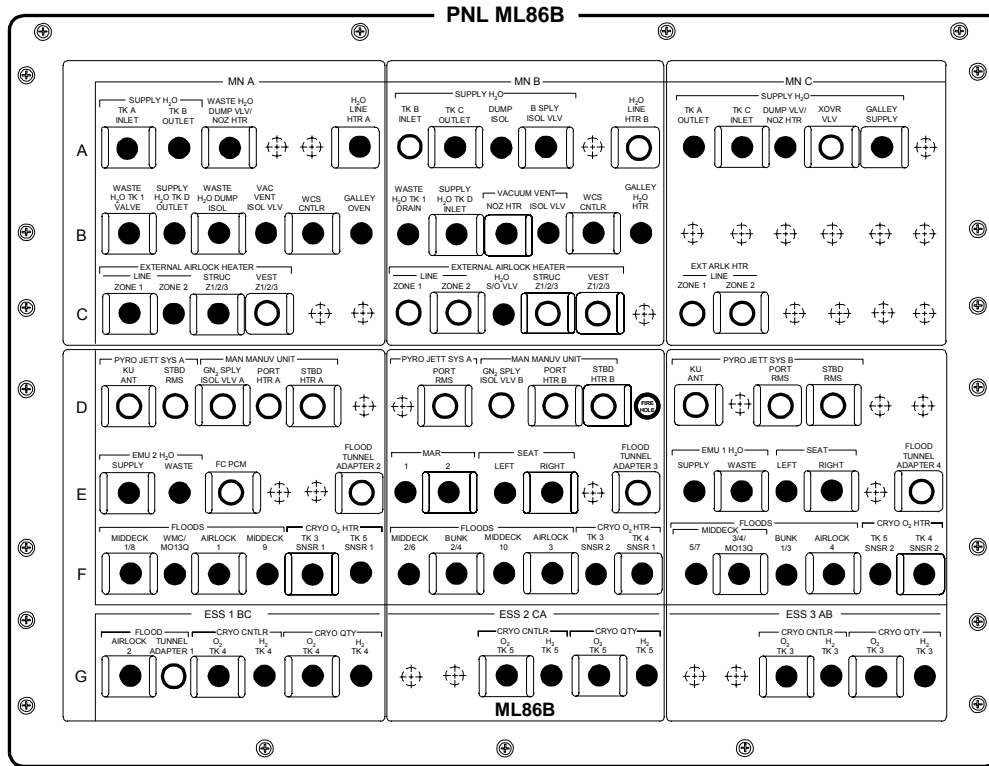


OV103,OV105

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OV103



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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

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

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

| 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>) |
| 2:55 | Delete | CONFIG FOR PLBD CLOSING 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 CONFIG

**CUE CARD
CONFIG**

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TOP

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 ccw

A1L S-BD PM MODE - TDRS DATA

NSP DATA RATE RCV - HI

XMIT - HI

CODING (two) - ON

A1R 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

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

L10 Remove, stow VIP, VTR covers

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

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
 SW PWR 1 - cl

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

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 | <u>SPECIALIST SEAT EGRESS</u> |
| 00:59 | <u>AFT STATION CONFIG 3</u> |
| 01:03 | <u>CONFIG FOR PLBD OPERATIONS 4</u> |
| 01:41 | <u>CLOTHING CONFIG 10</u> |
| 01:54 | <u>SPECIALIST SEAT REMOVAL/STOWAGE</u> |
| 02:01 | <u>AIRLOCK SETUP FOR INGRESS 15</u> |
| 02:24 | <u>RESET C/W 16</u> |

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CC 3-3

PI/120/FIN A

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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 *

SET UP P/TV
Perform ACTIVATION, OPERATION (Cue Card, TV)
Perform PLBD VTR RECORDING (Cue Card)
Config Minicam for PLBD Rec: install new Tape, fresh 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

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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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 viv - PRESS
A SPLY viv - 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

FDI CONFIG

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

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

Unstow VW Bags

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/GALLEY ACT 6, 01:41 CLOTHING CONFIG 10, 01:45 QUICKDON MASKS SETUP 19, 01:54 SPECIALIST SEAT REMOVAL/STOWAGE, 01:59 ESCAPE POLE STOWAGE 13, 02:01 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)

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
 :F MNB VAC VENT NOZ HTR - cl
 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 WCS ACTIVATION

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

SWITCH CONFIG/GALLEY ACT 6

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

ML86B:A All cbs closed except: MNB H2O LINE HTR B - op
 :B All cbs closed
 :E All cbs closed except: FLOOD TUNNEL ADAPTER (three) - op
 FC PCM - op
 :F All cbs closed
 :G All cbs closed except: ESS1BC FLOOD TUNNEL ADAPTER 1 - op

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

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

Unstow,install Personal Hygiene Hose

ESCAPE POLE STOWAGE 13

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

AIRLOCK SETUP FOR INGRESS 15

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

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POST INSERTION

**STS
120**