

Payload Powerdown

STS-120

**Mission Operations Directorate
Operations Division**

**Final, Rev A
September 11, 2007**

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center
Houston, Texas



United Space Alliance

MISSION OPERATIONS DIRECTORATE

**PAYLOAD POWERDOWN
STS-120**

FINAL, REVISION A
September 11, 2007

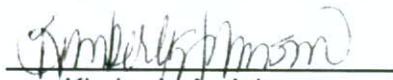
PREPARED BY:



Yvette L. Fuller
Publication Manager

APPROVED BY:

ACCEPTED BY:



Kimberly A. Johnson
Manager, Shuttle
Procedures Management



Michael T. Hurt
FDF Manager

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NOTES

1. Section 1 of this book is inserted at the back of the Ascent Pocket Checklist.
2. Sections 2 and 3 of this book are inserted at the back of the Orbit Pocket Checklist.
3. Section 4 of this book is inserted at the back of the Entry Pocket Checklist.

PAYLOAD POWERDOWN
STS-120

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REV A 09/11/07

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* – Omit from flight book

PL iii

PL PWR/120/FIN A



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PL PWRDN – ASCENT

PL PWRDN MATRIX..... PL 1-2
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PWRDN A PL 1-2

**PL PWRDN
ASC**

PL PWRDN MATRIX

**PL PWRDN
ASC**

PROCEDURE	ACTION
PWRDN FOR LOSS OF:	
2 CAB FANS	N/A
CAB PRESS	
(MINOR PWRDN; from step 4)	N/A
(MAJOR PWRDN; from step 5)	N/A
2 H2O LOOPS	
[PLT PWRDN, SYS AOA,	
<u>2 H2O LOOPS (AOA);</u>	
(CDR/PLT PWRDNS)]	N/A
(POST OMS-2)	N/A
1 FREON LOOP	N/A
HI LOAD EVAP	N/A
2 FREON LOOPS	
[PLT PWRDN, SYS AOA,	
<u>2 FREON LOOPS (AOA);</u>	
(CDR/PLT PWRDNS)]	N/A
(POST OMS-2)	N/A
FES/1 FC	N/A
2nd FC	N/A
MN BUS UNDERVOLTS/FC VOLTS	
(from step 6; permanent loss of PL PRI)	N/A
(from step 14; temporary loss of PL PRI)	N/A

ACTION

A	PWRDN	PWRUP
N/A		N/A

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PL 1-2

PL PWR/120/A/FIN A

PL PWRDN – ORBIT

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OBSS.....	PL 2-3
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PL PWRDN
ORB

PL PWRDN MATRIX

**PL PWRDN
ORB**

PROCEDURE	ACTION
PWRDN FOR LOSS OF:	
HI LOAD EVAP	N/A
1 FREON LOOP	PP3A*,PP3B** (on MCC call) as reqd
1 FC	PP3A*,PP3B** (on MCC call) as reqd until ORB kW < 17
FES (ON ORBIT)	N/A
(DEORBIT PREP)	N/A
MN BUS UNDERVOLTS/FC VOLTS	
(from step 6; permanent loss of PL PRI)	N/A
(from step 17; temporary loss of PL PRI)	N/A
PRIORITY PWRDN GROUP 3	PP3A*,PP3B** (on MCC call) as reqd

*PRIORITY PWRDN 3A (PP3A) contains recoverable PL ops pwrdn steps.

**PRIORITY PWRDN 3B (PP3B) is a total PL pwrdn that may cause PL ops to be nonrecoverable

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PL SAFING – ORBIT

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PL SAFING
ORB

ACTION

A	PL SAFING
<u>MIDDECK</u>	
<u>OIU</u>	
L12U	1. OIU PWR – OFF (ctr) (tb-bp)
<u>FLT DECK/MIDDECK</u>	
R1	2. √PL PRI MNB,FC3, MNC (three) – OFF (tb-OFF) 3. AUX – OFF 4. CAB – OFF 5. √AFT MNB – OFF 6. √MNC – OFF 7. When PL SAFING completed, return to calling procedure, if reqd

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PL 3-3

PL PWR/120/O/FIN A

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PL PWRDN – ENTRY

PL PWRDN MATRIX.....	PL 4-2
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PWRDN A	PL 4-2

PL PWRDN MATRIX

PROCEDURE	ACTION
PWRDN FOR LOSS OF:	
2 CAB FANS	N/A
2 H2O LOOPS (ENTRY)	N/A
CAB PRESS	N/A
1 FREON LOOP (ENTRY)	N/A
HI LOAD EVAP (ENTRY)	N/A
FES	N/A
2 FREON LOOPS (ENTRY)	N/A
1 FC	N/A
2nd FC (ENTRY)	N/A
MN BUS UNDERVOLTS/FC VOLTS	
(from step 6; permanent loss of PL PRI)	N/A
(from step 14; temporary loss of PL PRI)	N/A

ACTION

A	PWRDN	PWRUP
N/A		N/A

**PL PWRDN
ENT**

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PL 4-2

PL PWR/120/E/FIN A

Space Shuttle Program
FLIGHT DATA FILE

JSC-48097-120
FINAL, REV A



**PAYLOAD
POWERDOWN**

**STS
120**

Flight Cover (trim bottom to expose tabs)