### APOLLO 8

**ENTRY CHECKLIST**

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VEHICLE PREPARATION

1. INITIAL STOWAGE COMPLETED
2. 12:00h - CABIN COLD SOAK pg 5-16 (Supercirc Only)
3. UMC & ISS START UP pg G-14 (If req'd)
4. SCS POWER UP pg G-81 (If req'd)
5. PS1 - INU ORIENTATION pg G-55 (If req'd)
6. LOAD DAP (If req'd)
   V48E T1102, 01111, PRO, PRO, PRO
7. 05:00h - LAST MCC DECISION
8. 04:35h - NO COMM - PS2 & NAV SIGHTINGS
   NOMINAL - P23/37 ONBOARD COMP
9. 14L:00 - VHF SUGGESTION
   DON SCIS & MAE WESTS
10. 03:30h - P27 (SV, REFILLAT), CHVR
    & ENTRY PAD UPDATES
### P27 UPDATE

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### REMARKS

**L-3(P)**

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**OTHER**

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| ΔVy |   |
| ΔVz |   |
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| P |   |
| Y |   |
| HA | N44 |
| Hp |   |
| AVT |   |
| BT |   |
| ΔVC |   |
| SXTS |   |
| SFT |   |
| TRN |   |
| BSS |   |
| SPA |   |
| SXP |   |
| LAT | NS1 |
| LONG |   |
| RTGO | EMS |
| VIO |   |
| GET | OSG |

**E-2(P)**

- Basic Date: Nov. 6, 1968
- Changed: Nov. 6, 1968
- Dec. 15, 1968
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| X X X | MAX G |
| + | V400K N60 |
| - | T400K |
| + | RTG6 EMS |
| + | VIO |
| + | VRT |
| X X X | RET OSG* |
| + | D L MAX* |
| + | D L MIN |
| + | V L MAX* |
| + | V L MIN |
| X X X | D0 |
| X X X | RET V CIRC |
| X X X | RETTBO |
| X X X | RETEBO |
| X X X | RETRDO |
| X X X | SXTS |
| + | SFT |
| + | TRN |
| X X X | BSS |
| X X X | SPA |
| X X X | SPX |
| X X X | LIFT VECTOR |

**Basic Date Changed:** Nov. 06, 1968 - Dec. 04, 1968

**11 - 03:15h**

- P52 - IMU REALIGN pg G-56 (IMU REALIGNMENT)
  - P37 (NO COMM ONLY)

**13**

- ECS CKS
  - 02 SUPPLY REFILL pg S-12
  - ECS Monitor Ck pg S-5

**14**

- EPS CKS #1 thru 4 (If req'd) pg S-3

**15**

- SPS CK pg S-1 (If req'd)

**16**

- RCS CKS
  - SM RCS Monit Ck pg S-1
  - CM RCS Monit Ck pg S-1

**17**

- C&W SYS CK pg S-17

**18**

- MNC SELF CK pg G-70

**19**

- DSKY COND LT TEST pg G-76

**20 - 02:45h**

- MIDCOURSE MANEUVER
  - P30 - EXT AV
  - P40/41 - SPS/RCS THRUSTING
  - MIDCOURSE (#7) BURN

**21**

- NO COMM NAV SIGHTINGS

**22**

- MNVR TO ENTRY ATT (Supercirc only)
  - V62E

**23**

- V49E

**24 F 06 22**

- DESIRED FINAL GMBL ANGLES (.01°)
  - LOAD ENTRY ATT PAD ANGLES
  - PRO
25 F 50 18 REQ MNVR TO FDAI RPY ANGLES (.01°)
   AUTO SC CONT - CMC
   BMAG MODE (3) - RATE 2
   CMC MODE - AUTO
   PRO SC CONT - SCS
   MNVR to 27

26 06 18 AUTO MNVR TO FDAI RPY ANGLES (.01°)

27 F 50 18 REQUEST TRIM (.01°)
   (BYPASS) ENTR
   BN 2.5

28 BORESIGHT & SXT STAR CHECK
   OPT MODE - CMC
   OPT ZERO - OFF

29 V41 N91E

30 F 21 92 SHAFT, TRUN (.01°, .001°)
   Load SXTS angles

31 41 OPTICS DRIVE

32 -01:35h PS2 - IMU REALIGN pg G-56
   Record gyro torquing angles
   R
   P
   Y
   If >1°, recycle PS2
   If confirmed, use SCS for EMS entry

33 (_:_:_ ) GDC ALIGN
   If drift >10°/hr, change rate source

FINAL STOWAGE
OPTICS (except for Uplink)
ORDEAL
SEC GLY TO RAD - BYPASS (verify)
Cool pm installed
Y-Y struts (2) extended
Stow Data Box R-12
CM RCS LOGIC - OFF
CM RCS LOGIC cb (both) - CLOSE
CM RCS LOGIC - ON
Note: If sys test mtr 5c,d, 6a,b,c,d all read 3.9 vdc
   (28°F) or more, omit preheat
UP LTM - BLOCK (verify)
CM RCS HTS - ON (LMP Confirm)
   (20 min or till lowest rdg is
   3.9 vdc) (Monitor Fuel & Ox
   press for press drop)

WASTE M20 DUMP - OFF
UR DUMP HT - OFF
LEB LIGHTING - OFF
E-8 (P)

ETS CHECK

- ENS FUNC = OFF
- ENS cb (both) = Close
- ENS MODE = STBY

ENS FUNC = ENS TEST 1 (wait 5 sec)
- Check ind its = off
- RANGE ind = 0.0
- Slew hairline over notch
- in self = test pattern

ENS FUNC = ENS TEST 2 (wait 10 sec)
- .05G: It = on (all others out)
- ENS FUNC = ENS TEST 3
- .05G: It = on
- RS1 lower It = on (10 sec later)
- Set RANGE counter to 58 mV=0.0

ENS FUNC = ENS TEST 4
- .05G: It = on (all others out)
- G-V trace within pattern to hr rt corner (9G)
- RANGE ind counts down to 0=0.2

ENS FUNC = ENS TEST 5
- .05G: It = on
- RS1 upper It = on (10 sec later)
- RANGE ind = 0.0
- Strike traces vertical line 9G to 0.225=0.1

ALIGN SCROLL TO ENTRY PATTERN (on
- 37K ft/sec line)

ENS FUNC = RNG SET
- G-V scroll away traces vert. line
- 0.225 to 0.0=0.1

ENS MODE = STBY

AV TEST (Deorbit only)

- ENS FUNC = AV SET
- SET AV ind to 1586.8 fps
- ENS MODE = AUTO

ENS FUNC = AV TEST
- SPS THRUST LT = on/off
- AV ind stops at -20.0=20.7 (10 sec)

ENS MODE = STBY

---

28 (1-1-1) FINAL GDC DRIFT CK (if req'd)

- If drift >10°/hr, suspect GDC. Do not
  use RSS & FDAL 92

- TRIM, CH RCS PREDICT
  - UP TLM BLOCK (verify)
  - CH RCS NTH - OFF (LMP Confirm)
  - CH RCS LOGIC - OFF

ETS TEST METER = 4A

PYRO CIRCUIT CK

- RCS LOGIC cb (both) = close (verify)
- NHA BUS TIE (both) = AUTO

- RCS TRANS - CH
- PYRO AAB SEQ AAB (both) = open (verify)
- SERR ARM cb (both) = close
- SERR PYRO ARM (both) = SAFE
- PYRO AAB SEQ AAB (both) = close

DC IND = PYRO A(B)
- * If PYRO BAT A(B)<35 vdc
- * PYRO A(B) SEQ A(B) cb = open
- * PYRO A(B) BAT BUS A(B) TO PYRO
- * BUS TIE cb = close

NHA BAT C cb = close

NHB BAT C cb = close

DC IND - NHB

FNL 8 = All cb's closed except:
- PL VENT - open
- FLOAT BAG (3) = open
- SPS SHUING cb (both) - open
- DOCKING PBHB cb (both) - open
- DIRECT UPLINK cb (both) - open
- Eqn ASC (3) - open

SEQ TEST (INSP Monit)

- SERR LOGIC cb (both) = close (verify)
- SERR LOGIC (both) = on (up)

- ELS - AUTO
- ELS LOGIC - on (up)

INSP confirm GO for PYRO ARM

- ELS - MAN
- ELS LOGIC - OFF (Full power)
### CM RCS ACTIVATION (Supercirc only)
- SECS PYRO ARM (both) - ARM
- CM RCS PRESS - ON
- SECS PYRO ARM (both) - SAFE
- RCS Ind sw - CM1, then 2
- He PRESS 3300-3750 psia
- FUEL & OX PRESS 285-302 psia
- SECS LOGIC (both) - OFF
- SECS ARM cb (both) - open

### Normal & Hybrid Deorbit only
- SECS LOGIC both - OFF
- SECS ARM cb both - open
- RCS TRANS - SN

### 42-00:45m
**P27 & ENTRY PAD UPDATE**
Go to Entry Checklist
- Supercirc - Pg. E-10
- Hybrid - Pg. E-16
- Normal Deorbit - Pg. E-23

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### NAV CHECK
- **SEC**
- **MIN**
- **HR**

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### N43
- **LAT**
- **LONG**
- **ALT**
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E-10 (S.C.)

SUPERCIRCULAR ENTRY

SET DET (up, to EI)

EMS INITIALIZATION

SET RNG TO PAD DATA RNG
EMS FUNC - Vo SET
Slew Scroll to Pad Data VIO
EMS FUNC - ENTRY

RSI ALIGNMENT

FDX SOURCE - ATT SET
ATT SET - GDC
EMS ROLL - on (up)
GDC ALIGN PB - PUSH & HOLD
YAW THUMBWHEEL - POSITION RSI THRU
GDC ALIGN PB - Position RSI 45° & BACK TO LIFT UP
GDC ALIGN PB - Release
EMS ROLL - OFF
R.P.Y THUMBWHEELS (3)-RESET (GDC)
RSI ALIGNMENT - PUSH TO PRESENT GMBL ANGLES
GDC ALIGN PB - PUSH

SUPERCIRCULAR ENTRY

DON HELMETS & GLOVES

SUIT RTN AIR vlv - CLOSE (push) (Suit)
EMER CAB PRESS vlv - OFF (Suited)
SUIT TO COUCH - OFF

MN BUS TIE (both) - ON
TAPE RCDR - REWIND - ON BOARD

SEPARATION CK LIST

GMBL MTRS(4) - START
PRIM GLY TO RAD - BYPASS (FULL)
02 PLSS VLV - ON (FILL if unsuited)
02 SM SUPPLY VLV - OFF
CAB PRESS RVL VLV (both) - BOOST/ENTRY
NORMAL if unsuited
ELS cb (both) - CLOSE (verify)
ABORT SYS PRPLNT - RCS CMD (verify)
SM RCS PRIM & SEC PRPLNT A (BCD) - ON
VHF AM (both) - OFF
VHF ANT - RECY
HI GAIN ANT PWR - OFF
FC Pumps (3) - OFF
Verify single suit compr oper,
loads balanced
FC 2 MN A&B - OFF tb-bp
S-BD PWR AMP - LOW
ECS RAD CONT/HTR cb (both) - open
STM/UR DUCT HTR cb (both) - open
HTRS OVLD cb (both) - open
POT H2O HTR - OFF
SEC COOL LOOP EVAP - RESET (25 min)
PUMP - OFF
CAB FAN (both) - OFF
GLY EVAP TEMP IN - MAN

MNVR TO CH/SM SEP P, R ATT
SC CONT - SGS
CHC MODE - FREE
MNVR TO PAD ATT
E-12 (S.C.)

MNVR TO PAD ATT
R (0°) P (265°) Y (0°)

7A 40:00m
SECS ARM cb (both) - close
SECS LOGIC (both) - on(up)
MSFN Confirm GO for PYRO ARM
SECS PYRO (both) - ARM

41:00m
P61 - ENTRY PREP

V37E 61E

* 05 09 01427 - INU REVERSED *
* 05 09 01426 - INU UNSAT *

9 F 06 61
IMPACT LAT, LONG, HDS UP/DN (+/-) PRO
 (.01°, .01°, +00001)

10 F 06 60
GMAX, V400K, GAMMA E1
(01°, fps, .01°)

Record
GMAX
V400K
GAMMA E1
PRO

11 F 06 63
RTGOGO (.1mm) PADD
VIO (fps) PADD
TFE(min-sec)

Compare with MSFN for PGNS GO/NO GO
If NO COMM, set RTGOGO & VIO in EMS
& initialize

(ACCEPT) PRO
(RECALC) V32E to 11

P62 - CM/SM SEP & PRE-ENTRY MNVR

12 F 50 25
00041 REQUEST CM/SH SEP
SC CONT - SCS
CHC MODE - FREE

43:00m
(-17:00)

E-13 (S.C.)

COMPARE PITCH ATT WITH PAD DATA

YAW - 45° OUT-OF-PLANE (LEFT)
RATE - HIGH
ATT DB - MIN
MAN ATT (3) - RATE CMD
BMAG MODE (3) - ATT/RATE2
MN BUS TIES (both) - ON (verify)
PRIM GLY TO RAD - BYPASS (verify)
CM RCS LOGIC - ON (Verify)
CM/SM SEP (both) - ON
CM & MODE - CM
RCS TRNFR - CM
CM RCS FUEL & OX PRESS - 285-302 psia
CM RCS LOGIC - OFF

Monitor Vm A/B:
If <25vdc go to EMERG
POWERDOWN PGM ENG-3

When Vm A/B < 25VDC:
SEC COOL LOOP PUMP - AC 1(2)

EVAP = EVAP

AUTO RCS SEL A/C ROLL (4) - OFF
AUTO RCS SEL CM 2(6)-OFF
AUTO RCS SEL CM 1(6)-MNA or -MNN
YAW back to 0°
PITCH TO HORIZ TRACK ATT
ROLL - 0° (LIFT UP)
PITCH - 400K HORIZ Mark (31.7°)
YAW - 0°

DEADBAND - MAX
EMS DATA - Verify
EMS FUNC - ENTRY (verify)
EMS MODE - AUTO
MAINTAIN HORIZ TRK
SPS F6Y cb (4) - open

(Act ENTRY DAP)

13 F 06 61
IMPACT LAT, LONG, HDS DN (.01°, .01°, +00001)

14 POSS 06 22
FINAL ATT DISP, RPY (.01°)
(Only if X-axis beyond 45° of Vel vector)
P63 - ENTRY INIT

15 06 64  G, VI, RTGOO (.01G, fps, .1nm)

FDAI SCALE - 50/15

ROT CONR PWR DIR (both) - MNA/MNB
TAPE RCDR - RCD/PWD

58:00m

HORIZ CK

Pitch error needle goes toward zero approaching .05G time

MAN ATT (3) - RATE CND

If CMC is GO:

BMAG MODE (3) - RATE 2
SC CONT - CMC
CMC MODE - AUTO

* If DAP NO GO:
* SC CONT - SCS
* FLY BETA

If CMC NO GO:

* SC CONT - SCS
* FLY EMS

P64 - ENTRY POST .05G

16 .05G time

RTGOO AT .05G AGREES WITH EMS-verify

.05G Lt - ON (EMS START)

* No EMS START within 3 sec: *
* EMS MODE - MAN

.05G su - on (up)
EMS ROLL - on (up)

06 68 BETA, VI, HDOT (.01°, fps, fps)

Compare RSI & FDAI
If CMC or PAD cms Lift DN,
MNVR Lift DN
EMS CO/NO GO
G-V Plot within limits
Rng ctr dun 60+7 during 10 sec period
Monitor G-meter for convergence with pad data (Do)
(V<27K fps) Go 20

17 06 69 BETA (.01°)

DL (.01G)

VI (fps)

* IF NO AGREEMENT: *
* SC CONT - SCS
* FLY EMS

PRO

P65 - ENTRY - UP CONT (V>27K fps)

18 06 68 BETA, VI, HDOT (.01°, fps, fps)

(V<VL+500 fps & RDOT Neg) Go to 20

P66 - ENTRY - BALLISTIC (D°DL)

19 06 22 DESIRED GMB ANGLES RPY (.01°)

Monitor horiz ±12° of 31.7° mark

P67 - ENTRY - FINAL PHASE (0.2G)

20 06 66 BETA, CRS RNG ERR, DNRNG ERR (.01°, .1nm, .1nm)

KEY VERB
Record DNRNG ERR
KEY RLSE

Monitor lift vector on RSI & FDAI

F 16 67 RTGOO, LAT, LONG (Vrel=1000 fps)

RTOGO NEG - LIFT UP
RTOGO POS - LIFT DOWN
Monitor altimeter

Go to EARTH LANDING pg E-35
E-16(H)

G&N HYBRID DEORBIT

VEHICLE PREP COMPLETE

P30 - EXTERNAL ΔV

V37E 30E

1 F 06 33 GETI
   (ACCEPT) PRO
   (REJECT) LOAD DESIRED GETI

2 F 06 81 ΔVX,Y,Z (LV)
   (ACCEPT) PRO
   (REJECT) LOAD DESIRED GETI

3 F 06 42 HA,HP,ΔV
   (ACCEPT) PRO
   (REJECT) Record ΔV
   LOAD DESIRED GETI

4 F 16 45 M,TFI,MGA
   (ACCEPT) PRO
   (REJECT) Load new param.

5 F 37 00E

E-17(H)

SEPARATION CK LIST

PRIM GLY TO RAD - BYPASS (pull)
02 PLSS vilv - ON(FILL if unsuited)
02 SM SUPPLY vilv - OFF
CAB PRESS REL vilv (both) - BOOST/ENTRY
ELS cb (both) - close

AUTO RCS SEL CM (12) - MNA or MNB
ROT CONTR PWR NORM 1 & 2 - AC/DC
ABORT SYS PRPLNT - RCS CMD
SM RCS PRIM PRPLNT (4) - ON, tb-gray
VHF AM (both) - OFF
VHF ANT - RECY

DON HELMETS & GLOVES

SUIT RTN AIR vilv - CLOSE(push)(suited)
EMER CAB PRESS vilv - OFF(suited)
CMP to Couch

MNVR TO PAD BURN ATT

LOAD DAP
BMAG MODE (3) - RATE 2
SC CONT - CMC
CMC MODE - AUTO
DEADBAND - MIN
MAN ATT (3) - RATE CMD

V62E
V49E

12 F 06 22 DESIRED FINAL GMBAL ANGLES
   LOAD MNVR PAD GMBL ANGLES
   PRO

13 F 50 18 REQ MNVR TO FDAI RPY ANGLES
   (AUTO) PRO
   (MAN) SC CONT - SCS
   BMAG MODE (3) - RATE 2
   MNVR to 15
E-18(H)

14 06 18 AUTO MNVR TO FDAI RPY ANGLES (.01°)

15 F 50 18 REQ TRIM TO FDAI RPY ANGLES (TRII) Go to 13
(TRPASS) ENTR

16 BORESIGHT & SXT STAR CHECK
OPT MODE - CMC
OPT ZERO - OFF

17 V41 N91E

18 F 21 92 SHAFT, TRU
Load SXTS angles (.01°, .001°)

19 41 OPTICS DRIVE
Check SXT STAR
OPT ZERO - ZERO
Check BORESIGHT STAR (If avail)

20 V25 N17E (.01°)
Load Pad Data GMBL Angles For CM BURN ATT
ATT SET TW - SET
To PAD DATA GMBL ANGLES
For CM BURN ATT

20A AC PWR REDUCTION
HGA PWR - OFF
FC PUMPS (3) - OFF
Verify single suit compr oper,
loads balanced
FC 2 Mn A&B - OFF
S-BD PWR AMP - LOW
ECS RAD CONT/HTR cb(both) - open
STM/UR DUCT HTR cb (both) - open
HTRS QVLD cb (both) - open
POT H2O HTR - OFF
SEC COOL LOOP EVAP - RESET
PUMP - OFF
CAB FAN (both) - OFF
GLY EVAP TEMP IN - MAN
MN BUS TIE (both) - ON
GMBL HTR (4) - START

21 P41 - RCS THRUSTING
V37E 41E

22 F 50 18 REQ MNVR TO LCL HORIZ (HDS DN) (.01°)
(AUTO) BMAGS (3) - RATE 2
SC CONT - CMC
CMC MODE - AUTO
PRO to 23
(MAN/DAP) BMAGS (3) - RATE 2
SC CONT - CMC
CMC MODE - HOLD
V62E MNVR to 24

23 06 18 AUTO MNVR TO FDAI RPY (.01°)

24 F 50 18 REQ TRIM TO LCL HORIZ ALIGN SC ROLL
(AUTO TRIM) PRO to 23
(BYPASS) DEADBAND - MIN
RATE - LOW
MAN ATT (3) - RATE CMD
BMAG MODE (3) - ATT/RATE 2
ENTR

25 06 85 VGX, Y, Z

E-19(H)

26 59:25 RHC's and THC - ARMED
DSKY CLEARS

E-19(H)

22 F 50 18 REQ MNVR TO LCL HORIZ (HDS DN) (.01°)
(AUTO) BMAGS (3) - RATE 2
SC CONT - CMC
CMC MODE - AUTO
PRO to 23
(MAN/DAP) BMAGS (3) - RATE 2
SC CONT - CMC
CMC MODE - HOLD
V62E MNVR to 24

23 06 18 AUTO MNVR TO FDAI RPY (.01°)

24 F 50 18 REQ TRIM TO LCL HORIZ ALIGN SC ROLL
(AUTO TRIM) PRO to 23
(BYPASS) DEADBAND - MIN
RATE - LOW
MAN ATT (3) - RATE CMD
BMAG MODE (3) - ATT/RATE 2
ENTR

25 06 85 VGX, Y, Z

RHC's and THC - ARMED
DSKY CLEARS

RHC's and THC - ARMED
DSKY CLEARS
E-20(H)

27 16 85 VG,X,Y,Z (AVE G ON) (.1fps)
LIMT CYCLE - OFF
TAPE RCDR-CMD RSET/HBR/RCd/FWD
FLT RCDR-RECORD
EMS MODE-AUTO

06:00
28 F 16 85 SEQ NULL VGX, Y, Z (.1fps)
BURN EMS AV CTR To ZERO
If SM Only Burn - Go To Step 31
THC - LOCKED
SC CONT - SCS
CNC MODE - FREE
RATE - HIGH
Gly To RAD - BYPASS (verify)
SECS ARM cb(both) - close
SECS LOGIC(both) - on (up)
MSFN CONFIRM GO FOR PYRO ARM
SECS PYRO ARM(both) - ARM
CM RCS PREPLT 162 - ON, tb-gray
CM RCS PRESS - ON
RCS Ind Sw - CM 1, then 2
He PRESS 3300-3750 psia
FUEL & OX PRESS 285-302 psia
CM RCS LOGIC - on(up)
MN BUS TIES(both) - ON (verify)
CM/SM SEP(both) - on (up)
CM NODE - CM
RCS TRANS - CM
CM RCS LOGIC - OFF
Monitor VM A/B:
If <25 vdc, go to EMERG
POWERDOWN Pg EMG-3
When VM A/B > 25 vdc:
SEC COOL LOOP PUMP - ACl(2)
EVAP - EVAP
V63E
* If CNC NO GO:
* FDAI SOURCE - ATT SET*
* FDAI SELECT - 1 or 2 *
* ATT SET - CDC *
MAN ATT PITCH - ACCEL CMD
FDAl SCALE - 5/5
MNVR To CM BURN ATT(Null Err Needles)
R 0°
P 0°
Y 0°

E-21(H)

29
CM RCS BURN
RHC #1-Continuous Pitch Down
RHC #2-Module Pitch to null needles
BURN VGZ TO ZERO
*If only 1 RHC *
* Pulse + P5° from retro *
* att. Maintain rates <3°/sec *

30
BURN COMPLETION AT:
AV CTR= _______ or DET= _______

31 F 16 44 HA, HP, TFF (.1min, min-sec)
Check HP:
If > Pad data, continue burn
till < Pad

PRO

32 F 16 85 VGX,Y,Z (.1fps)
Read VG residuals to MSFN
(HYBRID) PRO to 33
(SM ONLY BURN)

PRO

F 37 00E

E-15:00 V37E 47E (.1fps)
SC CONT - SCS
CNC MODE - FREE
MAN ATT (PITCH) - RATE CMD
RATE - HIGH
Gly to RAD - BYPASS (verify)
IN BUS TIE (both) - ON (verify)
CM/SM SEP (both) - ON
CM NODE - CM
RCS TRNFR - CM
CM RCS LOGIC - OFF

PRO
Monitor VM A/B:
If <25 vdc, go to EMERG
POWERDOWN Pg EMG-3
When VM A/B > 25 vdc:
SEC COOL LOOP PUMP = AC 1(2)
EVAP - EVAP
NORMAL DEORBIT

VEHICLE PREP COMPLETE

P30 - EXTERNAL ΔV

Go to EARTH ORBIT ENTRY, PR E-30(E.O.)

1  V37E 30E

2  F 06 33  GETI
    (ACCEPT) PRO
    (REJECT) LOAD DESIRED GETI

3  F 06 81  Δx,y,z (LV)
    (ACCEPT) PRO
    (REJECT) LOAD DESIRED GETI

4  F 06 42  HA,HP,ΔV
    Record ΔV
    (ACCEPT) PRO
    (REJECT) Reselect P30 or P27. Load new param.

5  F 16 45  M,TFI,MGA
    (marks,min-sec,.01°)
    *MGA -00002: If *
    SET DET
    PRO

6  F 37  OOE

7  SEPARATION CK LIST

PRIM GLY TO RAD - BYPASS (pull)
02 PLSS vlv - ON
02 SM SUPPLY vlv - OFF
CAB PRESS REL vlv (both)-BOOST/ENTRY
    NORM if unsuited
ELS cb(both) - close

AUTO RCS SEL CM(12) - MNA or MNB
ROT CONTR PWR NORM 1&2 - AC/DC
ABORT SYS PRPLNT - RCS CMD
SM RCS PRIN PRPLNT (4) - ON, tb-gray
VHF AH (both) - OFF
VHF ANT - RECY
8 DON HELMETS & GLOVES
SUIT RTN AIR vlv - CLOSE (push) (suited)
EMER CAB PRESS vlv - OFF (suited)
CMP to Couch

9 SPS THRUSTING PREP
NONESS BUS - MNB
CYCLE CYRO FANS

BMAG MODE (3) - RATE 2
AV CG - CSM
CMC MODE - FREE
AUTO RCS SEL (16) - As req'd for ullage
SC CONT - CMC
CMC MODE - AUTO

10 MNVR TO PAD BURN ATT
V62E

11 V49E

12 F 06 22 DESIRED FINAL GMBL ANGLES
LOAD MNVR PAD GMBL ANGLES
PRO

13 F 50 18 REQ MNVR TO FDAI RPY ANGLES
(AUTO) PRO
(MAN) SC CONT - SCS
MNVR to 15

14 06 18 AUTO MNVR TO FDAI RPY ANGLES
(.01°)

15 F 50 18 REQ TRIM TO FDAI RPY ANGLES
(TIRM) ENTR

16 V37E 40E

17 F 50 18 REQUEST MNVR TO FDAI RPY ANGLES (.01°)
(AUTO) BMAG MODE (3) - RATE 2
SC CONT - CMC
CMC MODE - AUTO
PRO to 18
(MAN/DAP) BMAG MODE (3) - RATE 2
SC CONT - CMC
CMC MODE - HOLD
MNVR to 19
(MAN/SCS) SC CONT - SCS
MNVR to 19

18 06 18 AUTO MNVR TO FDAI RPY ANGLES
(.01°)

19 F 50 18 REQUEST TRIM MNVR TO FDAI RPY ANGLES
ALIGN S/C ROLL
(.01°)
GDC ALIGN

TVC CHECK & PREP
STAB CONT SYS cb (Pnl 8) - close
SPS cb (12) - close
DEADBAND - MIN
RATE - LOW
LIMIT CYCLE - ON
MAN ATT (3) - RATE CMD
BMAG MODE (3) - ATT1/RATE 2
ROT CONTR PWR DIRECT (both) - OFF
SBS TVC (2) - RATE CMD
* If SCS, SCS TVC (2) - AUTO*
* SC CONT - SCS
TVC GMBL DRIVE P&Y - AUTO
MN BUS TIES (both) - ON
TVC SERVO PWR 1 - AC1/MNA
2 - AC2/MNB
TRANS CONTR PWR - ON
ROT CONTR PWR NORMAL 2 - AC
RNC #2 - ARMED

TVC - 5 min
MNVR cb - Drive on (windup mk
Limit 0° Rates 0/m/s Go)
If do Go:
SET TVC 160, 0, 0
Track horiz with 160 window mk
At TVC 0 - Align GDC
55:00m

**PRIMARY TVC CHECK**

- GMBL MOT PI-Y1-START/ON (LMP confirm)
- If SCS, verify Thumbwheel Trim
- THC = CW
- Verify NO MTVC

**SECOND TVC CHECK**

- GMBL MOT P2-Y2-START/ON (LMP confirm)
- SET GPI TRIM
- Verify MTVC
- THC NEUTRAL
  - GPI returns to 0,0(CMC) or trim (SCS)
- ROT CONT PWR NORM 2 - AC/DC

(TRIM) Go to step 17

(BYPASS) BHAG MODE (3) = ATTL/RATE 2 (verify)

ENTR

59:25

- DSKY BLANKS

59:30

- (AVE C ON)
- FLT RCDR = RECORD

EMS MODE = AUTO

**06 40 TFI, VG, AVM (min-sec, 1fps)**

- CHECK PIPA BIAS < 2fps for 5 sec

**ULLAGE AS REQ**

- IF NO ULLAGE
- DIR ULLAGE PB - PUSH*
- CONTROL ATT W/RHC *

- MONITOR AVM (R3) COUNTING UP

---

**E-27(N)**

- AV THRUST AAB = NORMAL
- THC = ARMED
- RHC (both) = ARMED
- TAPE RCDR = RECORD/STOP/HBR/FWD

59:25

- DSKY BLANKS

59:30

- (AVE C ON)
- FLT RCDR - RECORD

EMS MODE - AUTO

**06 40 TFI, VG, AVM (min-sec, 1fps)***

- CHECK PIPA BIAS < 2fps for 5 sec

**ULLAGE AS REQ**

- IF NO ULLAGE
- DIR ULLAGE PB - PUSH*
- CONTROL ATT W/RHC *

- MONITOR AVM (R3) COUNTING UP

---

**F04 103**
E-28(N)

59:55
(-00:05)
F 99 40 ENG ON ENABLE REQUEST
(AUTO IGN) PRO AT TFI > 10 sec
(BYPASS IGN) ENTR to 24

* 06 40 TFC, VG, ΔVM
(min-sec, .1fps, .1fps)
* F 97 40 SPS Thrust fail *
*(RESTART) PRO To IGN *
*(RECYCLE) ENTR To TIG-05 sec*
SPS THRUST LITE - ON
MONITOR THRUSTING
Pc 95-105 psia
EMS COUNTING DOWN
SPS INJ VLVS (4) - OPEN
SPS He VLVS cb - gray
SPS FUEL/OXID PRESS - 175-195 psia
PUGS - BALANCED
*PROG ALARM *
*V5N9E 01407 VG INC*
*THC = CW, FLY MTVC*

ECO
*EMER SPS CUTOFF: *
* ΔV THRUST A&B - OFF*

22 00:00 IGN
*If SCS - THRUST PB - PUSH*

23 F 16 40 TFC(STATIC), VG, ΔVM
(min-sec, .1fps)
ΔV THRUST A/B - OFF
VERIFY THRUST OFF
SPS INJ VLVS (4) - CLOSED
SPS He TB (2) - BP

24 F 16 85 VG XYZ(CM)

NULL RESIDUALS
RECORD ΔV CTR & RESIDUALS
EMS FUNC - OFF
EMS MODE - STBY
BMAG MODE (3) - RATE 2
DEADBAND - MAX
TAPE RCDR - STOP
NONESS BUS - OFF
TRANS CONT PWR - OFF

PRO
V82E

25 F 37

R3-59B59 HP > 49.4 nm

PRO
OOE

BURN STATUS REPORT

ATIC
VT
W
VGX
H
R
ΔVC
P
FUEL
Y
OXID
UNBAL

REMARKS
EARTH ORBIT ENTRY

CM RCS ACTIVATION (Norm Deorb Only)
SECS LOGIC (both) - on(up)
SECS ARM cb (both) - close
MSFN Confirm Go for PYRO ARM
SECS PYRO ARM (both) = ARM
CM RCS PRPLNT 162 - ON, tb-gray
CM RCS PRESS = ON
RCS Ind sw = CM1, Then 2
He PRESS 3300-3750 psia
FUEL & OX PRESS 285-302 psia

Verify CM/SM SEP ATT
R (180°)
P
Y (0°) (Yaw later)

EMS INITIALIZATION
EMS FUNC - RNG SET
SET RNG TO PAD DATA RNG
EMS FUNC - Vo SET
Slew scroll to pad data VIO
EMS FUNC - ENTRY

RSI ALIGNMENT
FDAT SOURCE - ATT SET
ATT SET - GDC
EMS ROLL - on(up)
GDC ALIGN PB - PUSH & HOLD
YAW TW - POSITION RSI THRU 45° & BACK TO LIFT UP
GDC ALIGN PB - RELEASE
EMS ROLL - OFF
R,P,Y TW (3) = RESET (GDC) TO PRESENT GMBL ANGLES
GDC ALIGN PB - PUSH

PWR REDUCT (Norm Deorb Only)
HI GAIN ANT PWR - OFF
FC Pumps (3) - OFF
Verify single suit compr oper, loads balanced
FC 2 MN A&B - OFF, tb-bp
S-BD PWR AMP - LOW
ECS RAD CONT/HTR cb (both) - open
STM/UR DUCT HTR cb (both) - open
HTRS OVL'D cb (both) - open
POT H2O HTR - OFF
SEC COOL LOOP EVAP - RESET
PUMP - OFF
CAB FAN (both) - OFF
GLY EVAP TEMP IN - MAN
P61 - ENTRY PREP

3 V37E 61E
*05 09 01427 - IMU REVERSED*
*05 09 01426 - IMU UNSAT *

4 F 06 61 IMPACT LAT, LONG, HDS UP/DN (+/-)
PAD VALUES
LAT
LONG
HDS UP/DN

5 F 06 60 GMAX, V400K, GAMMA EI
Record
GMAX
V400K
GAMMA EI

6 F 06 63 RTOGO (.1mm) PAD
VIO (fps) PAD
TFE (min-sec)
Compare with MSFN for PUNS GO/NO GO
NO COMM, set RTOGO & VIO in EMS & initialize

(Accept) PRO
(RECALC V32E to 6

P62 - CM/SM SEP & PRE-ENTRY MNVR

7 F 50 25 00041 REQUEST CM/SM SEP
SC CONT - SCS
CMC NODE - FREE
YAW 45° out-of-plane (left for RCS, Rt for SPS)
RATE - HIGH
DEADBAND - MIN
MAN ATT(3) - RATE CMD
BMAG NODE (3) - ATT 1/RATE 2
PRIM GLY to RAD - BYPASS (verify)
CM RCS LOGIC - on(up) (verify)
MN BUS TIES (both) - ON (verify)
CM/SM SEP (both) - on(up)
CMW MODE - CM
RCS TRANS - CM
CM RCS FUEL PRESS - 285-302 psia
OX PRESS - 285-302 psia
CM RCS LOGIC - OFF
Monitor Vm A/B:
If < 25vdc go to ENERG
POWERDOWN Pg ENG-3
When Vm A/B > 25vdc:
SEC COOL LOOP PUMP - AC 1(2)
EVAP - EVAP
AUTO RCS SEL A/C ROLL (4) - OFF
AUTO RCS SEL CM 2(6) - OFF
AUTO RCS SEL CM 1(6) - MNA or MNB
YAW back to 0°
PITCH TO ENTRY ATT
ROLL 0° (LIFT UP)
PITCH - HORIZ on 31.7° MARK (400K)
YAW 0°
DEADBAND - MAX
MAN ATT (PITCH) - ACCEL CMD
EMS DATA - Verify
EMS FUNC - ENTRY (verify)
EMS MODE - AUTO
MAINTAIN HORIZ TRK

PRO (Act ENTRY DAP)

8 F 06 61 
IMPACT LAT, LONG, HDS/DN (.01°, .01°, -.00001)
PRO

9 POSS 06 22 
FINAL ATT DISP, RPY
(Only if X-axis beyond 45° of Vel vector)

E-32(E.O.)

G, VI, RT GO

06 64

FDAL SCALE - 50/15
ROT CONTR PWR DIR (both) - MNA/MNB
TAPE RCDR - HBR/RCD/FWD
FLT RCDR - ON
HORIZ CK
PITCH error needle goes toward
error approaching .05G time
MAN ATT (COMN) - RATE CMD
If CMC is GO:
BNAG MODE (3) - RATE 2
SC CONT - CMC
CMC MODE - AUTO
*IF DAP NO GO:
*SC CONT - SCS*
*FLY BETA *
*IF CMC NO GO:
*SC CONT - SCS*
*FLY EMS *

RCS Deorb: Roll HVS UP
Hori sinks with 20° window mark

P64 - ENTRY POST .05G

06 68 BETA, VI, HDO

Compare RSI & FDAL
If CMC or PAD cmd Lift DN,
MNVR Lift DN
EMS GO/NO GO
G-V Plot within limits
Rng ctr dwm 40+10 during 10sec period
Monitor G-meter 10 sec
Convergence with pad data (Do)
(V<27K fps) Go To 15
**EARTH ORBIT ENTRY**

**P65 - ENTRY - UP CONT (V>27k fps)**

12 F 16 69

BETA (.01°) ———— PAD
DL (.01G) ———— PAD
VL (fps) ———— PAD

*IF NO AGREEMENT:*

*SC CONT - SCS*

*FLY EMS*

**P66 - ENTRY - BALLISTIC (D<DL)**

13 06 68

BETA, VI, HDOT (.01°, fps, fps)
(V<VL +500 fps & RDOT Neg) Go To 15

**P67 - ENTRY - FINAL PHASE (0.2G)**

15 06 66

BETA, CRSRNG ERR, DNRNG ERR (.01°, .1nm, .1nm)

KEY VERB
Record DNRNG ERR

KEY RLSE
Limit: + 100nm from Pad DRE
Monitor lift vector on RSI & FDI

F 16 67

RTOGO, LAT, LONG (Vre=1000 fps) (.01°, .1nm, .01°)

RTOGO NEG = LIFT UP
RTOGO POS = LIFT DOWN
Monitor altimeter

Go to EARTHLANDING pg E-35

**EARTHLANDING**

**E-35**

90K'

STEAM PRESS-PEGGED

40K'

CABIN PRESS REL vlv (both) - BOOST/ENTRY (Unsuit) (90K+63S)

30K'

ELS LOGIC - ON (up)
ELS - AUTO

24K'

(RCS disable (auto))

Apex cover jett (auto)

(WAIT 2 SECS)

Drogue parachutes deployed (auto)

If Drogues Fail:

X ELS - MAN
X RCS CMD - ON
X Stabilize CN
X 5K' MAIN DPLY PB - PUSH
X ELS - AUTO

23.5K'

Cabin Pressure increasing (DROG +50s)

If not increasing by 17K':

X CABIN PRESS REL vlv (RH) - DUMP

10K'

Main parachutes deployed

MAIN DEPLOY PB - PUSH (within 1 sec)
FLOAT BAG 3 cb - close
VHF ANT - RECY
VHF AM(A) - SIMPLEX
VHF BCN - ON
PL BCN LT - ON HIGH - STRUT LOCKS (both) - UNLOCK
Remove SIDE HATCH JACK SCREWS
CABIN PRESS REL vlv (both) - CLOSE
DIRECT O2 - OPEN (CCM)
CN RCS LOGIC - ON (up)
CM PRPLNT - DUMP (burn audible)
MONITOR CM RCS 1&2 tor He press decrease
* NO BURN or PRESS DECREASE *
* USE BOTH RHC's *
* DO NOT FIRE PITCH JETS *
CM PRPLNT-PURGE (to zero He press)
* CM RCS He DUMP PB - PUSH *
* RHC (both) - 30 secs *
* NO PITCH *
CABIN PRESS REL vlv (both) - BOOST/ENTRY
STRUT LOCKS (both) - UNLOCK

FLT & PL BAT BUS A, B, & BAT C cb (3) - CLOSE
FLT & PL MNA & B cb (2) - OPEN

3K'
CABIN PRESS REL vlv (RH) - DUMP
FLOOD POST LDG
CM RCS PRPLNT (both) - OFF
ROT CONTR PWR DIRECT - OFF

800'
CAB PRESS REL vlv - CLOSE (latch off)
MN BUS TIES (both) - OFF

+00:18m
LANDING
MAIN REL PYRO cb (both) - close
MAIN RELEASE - on (up)

Go to POSTLANDING

- POSTLANDING

STABILIZATION, VENTILATION, COMMUNICATIONS

1 Remove helmets
DIRECT O2 - CLOSE (CW)

2 Stabilization after landing
ELS - AUTO (verify)
MAIN REL PYRO cb (both) - close (verify)
MAIN RELEASE - on (up) (verify)
SECS PYRO (both) - SAFE
SECS LOGIC (both) - OFF
BAT RLY BUS cb (2) - OPEN
*NO contact:*
*VHF AM A&B - OFF *
*VHF AM RCV only - A*
PL VENT cb - close
FLOAT BAG cb (3) - Close
UPRIGHT SYS COMPRESS cb (both) - close
If Stable II:
FLOAT BAG (3) - FILL TILL 2 min after upright, then OFF
VHF AM A/B & BCN - OFF while inverted
IF stabe I:
After 10 min Cooling Period
FLOAT BAG (3) - FILL 7 min, then OFF

3 Post Stabilization and Ventilation

PL VENT vlv - UNLOCK (Pull)
Remove PL VENT Exh Cover
PL VENT - HIGH or LOW
PL DYE MARKER - ON (swimmer comm)
Release footstraps and restraints
MNA BAT BUS A & BAT C cb (2) - open
MNB BAT BUS B & BAT C cb (2) - open
FLT & PL BAT C cb - open
EARTH ORBIT ENTRY

PYRO A SEQ A cb - OPEN
PYRO B SEQ B cb - OPEN
* EACH HR - CHECK D-C VOLTS 27.5 V *
* If Not:
* FLT & PL-BAT BUS A&B cb (2) - OPEN
* FLT & PL BAT C cb (2) - OPEN
* GO TO LOW POWER CHECKLIST pg E-38*
Unstow and install PLV DISTRIB DUCT
Deploy grappling hook and line if req.

4 Post Landing Communications
VHF ANT-RECY (verify)
VHF BCN - ON (verify)
If no contact with recovery forces
perform VHF BEACON Check
MONITOR VHF BEACON transmission
with Survival Transceiver
* VHF Beacon not operating *
* connect Survival Transceiver to ANT*
* Cable and place radio in BCN mode *

LOW POWER CHECKLIST
VHF BCN - OFF
VHF (3) - RCV
FLOOD FIXED - OFF
VHF AM A&B - OFF (center)
VHF AM only - A (verify)
COUCH LIGHTS - OFF
POSTLANDING VENT SYS: minimize use
SURV RADIO - plug into VHF BCN ANT cable
CONN & turn radio on in BCN mode

EGRESS PROCEDURES

STABLE I
Disconnect umbilicals
Neck dam on
Center couch - 270° position
Armrests folded

CDR, LMP
Connect raft to S/C, if desired, with
green lanyard
Connect raft white lanyards to suits &
iinflate water wings when exiting
Hatch piston press vlv - Press (Imdb)

CDR
LP VENT-OFF

LMP
Put hardware kit out

LMP, CDR Egress

or C. STABLE II
LMP
CB CREW STA AUDIO (3) - open

ALL
PWR (3) - OFF
SUIT PWR (3) - OFF
Remove helmets
Disconnect umbilicals
Release footstraps
Release restraint harness
Couch seat pans (3) - 170° position
Arm rests folded
Survival kits removed from stowage
Connect liferaft mainline to CDR or S/C

CDR
Connect first white lanyard from
liferaft to suit
Connect third white lanyard from
liferaft to suit

CMP
Pressure equalization vlv - OPEN

LMP
Remove and stow fwd hatch
Exit feet first with rucksacks; when clear
of S/C inflate water wings and raft

CDR
Exit feet first; when clear of S/C
inflate water wings
FIRE/SMOKE IN CM DURING ENTRY

1. CABIN FANS - OFF

2. Monitor EPS indicators for excessive current. Immediately remove power from affected bus.

3. ROT CONTR PWR DIRECT (both) - MNA/MNB & maintain attitude if required.

4. If affected bus is:

   **MNA**
   - AC INV 1 AC BUS 1 - OFF
   - AC INV 2 AC BUS 1 - ON
   - Set up for CM/RCS sys 2
   - AUTO RCS SEL A/C ROLL (4) - OFF
   - CM 1(6) - OFF
   - CM 2(6) - MNB

   Follow normal RCS dump procedure for fuel rich dump.

   **MNB**:
   - AC INV 2 AC BUS 2 - OFF
   - AC INV 1 AC BUS 2 - ON

   Follow normal RCS dump procedure for oxidizer rich dump.

5. CAB PRESS RELF vlv (RH) - DUMP

6. Continue ENTRY
Contamination in CM
1. Don O2 masks and/or PGA's immediately
2. Evaluate contamination level (isolate & correct source of contamination if possible) and proceed with one of the following steps:
   a. Retain O2 masks or remain in suit and accept contamination level in cabin.
   b. Retain O2 masks and scrub cabin atmosphere through suit loop. If initially suited, establish partially suited or shirtsleeve configuration and don O2 masks.

CAUTION
If in PGA's, adjust DIRECT O2 to maintain suit to cabin AP 0.38 psi.

b. Retain O2 masks and scrub cabin atmosphere through suit loop. If initially suited, establish partially suited or shirtsleeve configuration and don O2 masks.

CAUTION
Change LIOH cartridges after scrub completed.

c. Retain PGA's or don PGA's Verify suit integrity (visually) Perform Cabin Dump Perform Cabin Repress

Contamination In Suit
1. SUIT COMPR 2 - AC1
2. SUIT COMPR 1 - OFF
3. DIRECT O2 vlv - OPEN (CCW) for 1 minute then close (cw)

If condition persists:
4. SUIT COMPR 2 - OFF
5. DIRECT O2 vlv - OFF
6. Doff helmet
7. Don emergency O2 masks
SMS RCS THRUSTER FAILED-ON

1 SC CONT To Alternate Source +
2 ROT CONTR PWR DIRECT(both)-MN A/B
   (control rates in direct)
3 AUTO RCS SEL-OFF (in affected axis)
4 DIRECT PwrVage cb(both)-Open
5 If vehicle rates are still uncontrolled:
   a. AUTO RCS SEL (16)-On
   b. MAN ATT (3)-ACCEL CMD
   c. ROT CONTR PWR DIRECT(both)-OFF
6 If rates are still uncontrolled:
   SMS RCS Prpint-OFF

CM RCS THRUSTER FAILED-ON

1 RCS CMD-OFF
2 If Thruster is still on:
   a. CM AUTO RCS SEL 1-OFF
   b. CM AUTO RCS SEL 2-ON
   c. RCS CMD-ON
3 If Thruster is still on: ROT CONTR PWR DIRECT(2)-OFF
4 If Thruster is still on: CM RCS Prpint 1-OFF
5 If Thruster is still on: CM RCS Prpint 1-ON
   CM RCS Prpint 2-OFF

CM RCS Fails To Pressurize Or Feed PRPLNT

1 Verify Electrical power for pressurization
   a. EPS BAT BUS A/B(both)cb-Close (Pnl 229)
   b. PYRO A/B SEQ A/B cb(both)-Close (Pnl 250)
   c. SECS ARM cb(both)-Close (Pnl 8)
   d. SEC PYRO ARM(both)-ARM
   e. SECS LOGIC(both) - ON
2 Cycle CM RCS - PRES
3 Verify ELEC PWR To CM RCS Prpint vlv
   a. EPS GRP 1 & 3 cb-Close
   b. RCS SM HTR - A & B cb-Close(Pnl 6)
   c. CM RCS Prpint 1-ON
   CM RCS Prpint 2-OFF
4 Cycle CM RCS Prpint (2)-On
5 OPEN He and Prpint X-Feed
   a. EPS GRP 5 cb-Close (Pnl 229)
   b. RCS LOGIC cb-Close (Pnl 8)
   c. CM RCS LOGIC - ON
6 CM Prpint - Dump momentarily then Off.

SPS ENGINE DOES NOT SHUT DOWN AUTOMATICALLY

1 AV THRUST A&B - OFF
2 THC - CW
3 CHECK SPS DIRECT ON - OFF
4 SPS PILOT vlv (2) CB's - OPEN (Pnl 8)
5 EPS Group 5 CB's - OPEN (Pnl 229)

MN BUS A(B) UNDERVOLTAGE LITE ON

1 CK MN Bus Voltage
2 If only one bus low with High FC Current, isolate and reconfig
3 If both busses low:
   a. Use powerdown CKlist Pg.5 EMG-5 if DC PRW reduct prior to sep has not been accomplished.
   b. After DC PWR reduct use powerdown CKlist Pg. 5 EMG-3.
AC BUS 1(2) LIGHT ON WITH MN BUS A(B) UNDERVOLT
AND/OR AC BUS 1(2) OVERLOAD

1 Turn OFF associated inverter within 5 sec.

CABIN PRES DECREASING

1 Cabin Relief Valve = Close
2 Cabin Relief Valve = Boost/Entry After Drogue Deployment

O2 FLOW HI LIGHT ON*

1 Verify HI Flow
2 If Cabin Press is not decreasing:
   Surge Tank = OFF
   PLSS Fill vlv = OFF

SUITE COMPRESSOR FAILS WHILE SUITED

1 Select Redund Suit COMPR On Alternate Bus
2 Direct O2 vlv = ON
3 When Feasible Remove Helmets

EMERGENCY SAFE OF APEX COVER JETT

If No MSFN GO For Pyro Arm Indicates Apex Cover Jettision,
SECS LOGIC (2) - OFF
cb ELS (2) - open
SECS LOGIC (2) - On
If MSFN GO, Go To Step A
If Still Apex Cover Jettision,
  cb SECS LOGIC A - close
  cb SECS LOGIC B - open
If MSFN GO, Go To Step B
If Still Apex Cover Jettision,
  cb SECS LOGIC A - close
  cb SECS LOGIC B - open
If MSFN GO, Go To Step C
If Still Apex Cover Jettision,
ELS - MAN
ELS LOGIC - OFF
SECS LOGIC (2) - OFF
cb SECS LOGIC (2) - open
cb SECS ARM (2) - open
CMP To LEB
cb SEQ A&B PYRO A&B(2) - open (pnl 250)
Verify Pyro bus A&B voltage 0
Use Tool E, (5/32 allen head) to remove
closeout panel located beneath panels
276 & 277 (approx 10 fasteners on panel).
Remove, or cut all wires to, connector marked "cut" with white tag (P545). Tape
ends of any wires cut. Replace closeout panel.
cb SEQ A&B PYRO A&B - Close
Verify PYRO Bus A&B voltage >35 vdc
cb ELS (2) - Close
cb SECS LOGIC (2) - Close
cb SECS ARM (2) - open(verify)
DO NOT ARM PYRO BUSES
Continue Normal Entry Except,

Perform CH RCS pressurization & CM/SM Separation together at which time ARM PYRO's in the following manner:
SECS PYRO ARM (B) - SAFE (verify)
SECS PYRO ARM (A) - ARM

To Jettison Apex Cover At 24K:
SECS PYRO ARM (B) - ARM

STEP A
cb ELS(2) - open (verify), close at or after apex cover jettison at 24K
Continue Normal Entry

STEP B
cb SECS LOGIC A - open (verify), close at or after apex cover jettison at 24K
Continue Normal Entry

STEP C
cb SECS LOGIC B - open (verify), close at or after apex cover jettison at 24K
Continue Normal Entry