

1100
240
3121

ASTP

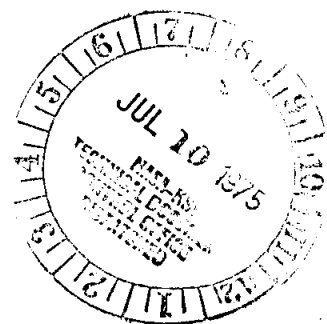
FINAL

PCN-1

NOTE: This is a PAGE CHANGE NOTICE to be
incorporated into the previous edition.
DISCARD ONLY the changed out pages.

ENTRY CHECKLIST

**PREPARED BY
PROCEDURES BRANCH
CREW TRAINING & PROCEDURES DIVISION**



National Aeronautics and Space Administration
LYNDON B. JOHNSON SPACE CENTER
Houston, Texas

JULY 1, 1975

ASTP

ASTP ENTRY CHECKLIST

JULY 1, 1975

JSC-09148
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DS

It is requested that any organization having comments, questions, or suggestions concerning this document contact Charles O. Lewis, Procedures Branch, CG22, Bldg. 4, Room 211, Telephone 483-3048.

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CHANGE CONTROL RECORD

APOLLO/SOYUZ TEST PROJECT ENTRY CHECKLIST

CONTROL NO.	FDF EDITION INCORPORATED		DISAPPROVED OR OTHER DISPOSITION
	TITLE	DATE	
001	REFERENCE	2/7/75	
002	REFERENCE	2/7/75	
003	REFERENCE	2/7/75	
004	REFERENCE	2/7/75	
005	REFERENCE	2/7/75	
006	REFERENCE	2/7/75	
007	REFERENCE	2/7/75	
008	REFERENCE	2/7/75	
009	REFERENCE	2/7/75	
010	REFERENCE	2/7/75	
011	REFERENCE	2/7/75	
012	REFERENCE	2/7/75	
013	REFERENCE	2/7/75	
014	REFERENCE	2/7/75	
015	REFERENCE	2/7/75	
016	REFERENCE	2/7/75	
017	REFERENCE	2/7/75	
018			WITHDRAWN
019	REFERENCE	2/7/75	
020	REFERENCE	2/7/75	

CHANGE CONTROL RECORD

APOLLO/SOYUZ TEST PROJECT ENTRY CHECKLIST

CONTROL NO.	FDF EDITION INCORPORATED		DISAPPROVED OR OTHER DISPOSITION
	TITLE	DATE	
021	REFERENCE	2/7/75	
022	REFERENCE	2/7/75	
023	REFERENCE	2/7/75	
024	FINAL	5/9/75	
025	REFERENCE	2/7/75	
026	REFERENCE	2/7/75	
027	REFERENCE	2/7/75	
028	REFERENCE	2/7/75	
029	REFERENCE	2/7/75	
030	REFERENCE	2/7/75	
031	REFERENCE	2/7/75	
032	REFERENCE	2/7/75	
033	REFERENCE	2/7/75	
034	REFERENCE	2/7/75	
035	FINAL	5/9/75	
036	FINAL	5/9/75	
037	FINAL	5/9/75	
038	FINAL	5/9/75	
039	FINAL	5/9/75	
040	FINAL	5/9/75	

CHANGE CONTROL RECORD

APOLLO/SOYUZ TEST PROJECT ENTRY CHECKLIST

CONTROL NO.	FDF EDITION INCORPORATED		DISAPPROVED OR OTHER DISPOSITION
	TITLE	DATE	
041	FINAL	5/9/75	
042	FINAL	5/9/75	
043	FINAL	5/9/75	
044	FINAL	5/9/75	
045	FINAL	5/9/75	
046	FINAL	5/9/75	
047	FINAL	5/9/75	
048	FINAL	5/9/75	
049	FINAL	5/9/75	
050	FINAL	5/9/75	
051	FINAL	5/9/75	
052	FINAL	5/9/75	
053	FINAL	5/9/75	
054	FINAL	5/9/75	
055	FINAL	5/9/75	
056	FINAL	5/9/75	
057	FINAL	5/9/75	
058	FINAL	5/9/75	
059			DISAPPROVED
060			DISAPPROVED

CHANGE CONTROL RECORD

APOLLO/SOYUZ TEST PROJECT ENTRY CHECKLIST

CONTROL NO.	FDF EDITION INCORPORATED		DISAPPROVED OR OTHER DISPOSITION
	TITLE	DATE	
061	FINAL	5/9/75	DISAPPROVED
062	FINAL	5/9/75	
063	FINAL PCN-1	7/1/75	
064	FINAL PCN-1	7/1/75	
065	FINAL PCN-1	7/1/75	
066	FINAL PCN-1	7/1/75	
067	FINAL PCN-1	7/1/75	
068	FINAL PCN-1	7/1/75	
069	FINAL PCN-1	7/1/75	
070	FINAL PCN-1	7/1/75	
071			
072	FINAL PCN-1	7/1/75	
073	FINAL PCN-1	7/1/75	
074	FINAL PCN-1	7/1/75	
075	FINAL PCN-1	7/1/75	

ASTP ENTRY CHECKLIST

LIST OF EFFECTIVE PAGES

BASIC 10/15/74
 REFERENCE 2/7/75
 FINAL 5/9/75
 PCN-1 7/1/75

PAGE	DATE	PAGE	DATE
*i	7/1/75	6-2	5/9/75
ii	5/9/75	6-3	5/9/75
*iii	7/1/75	6-4	5/9/75
1-1	5/9/75	*6-5	7/1/75
1-2	5/9/75	7-1	5/9/75
1-3	5/9/75	7-2	5/9/75
*1-4	7/1/75	7-3	5/9/75
1-5	5/9/75	7-4	5/9/75
1-6	5/9/75	7-5	5/9/75
*1-7	7/1/75	*7-6	7/1/75
2-1	5/9/75	7-7	5/9/75
*2-2	7/1/75	7-8	5/9/75
3-1	5/9/75	*8-1	7/1/75
3-2	5/9/75	8-2	5/9/75
*3-3	7/1/75	*9-1	7/1/75
3-4	5/9/75	*9-2	7/1/75
3-5	5/9/75	*9-3	7/1/75
4-1	5/9/75	*9-4	7/1/75
4-2	5/9/75	*9-5	7/1/75
*5-1	7/1/75	*9-6	7/1/75
*5-2	7/1/75	*9-8	7/1/75
*5-3	7/1/75	*9-9	7/1/75
6-1	5/9/75		

*Current Change

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CONTENTS

NORMAL PROCEDURES		PAGE
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9	QUICK DEORBIT.	9-1

98+00

11112
01111H
A
D

P52 (OPT 3) (33, 37, 42) (RECORD) *IF N93 >1.5 DEG/HR/AXIS*
 P00
 * RECYCLE P52 *
 * IF CONFIRMED: *
 * USE SCS FOR EMS ENTRY *
 * * * * *

98+10

30:00

IF BMAG 2 >10 DEG/HR/AXIS * * * *
 *END SCS DRIFT CK (BMAG 1) PERFORM
 * GDC/IMU COMPARISON CK LIST PG E/1-2*
 * * * * *

T
A
N

TRANSMIT GYRO TORQUE ANGLES AND TIME OF GYRO TORQUE

98+20

EMS ENTRY CK

EMS ΔV TEST AND NULL BIAS CK
 TRANSMIT EMS NULL BIAS CK RESULTS

RSI ALIGNMENT
 GDC ALIGN

98+30

SECONDARY WATER EVAP ACTIVATION

P52 (OPT 3)

N71 1ST STAR	XX	0	0	0		
N71 2ND STAR	XX	0	0	0		
N05(R1) ANG ERR	XX					
N93 GYRO TORQUING ANGLES	X					
	Y					
	Z					
TIME OF GYRO TORQUE	HR	+	0	0	0	
	MIN	+	0	0	0	
	SEC	+	0			0 0

EMS ENTRY CK

EMS FUNC - OFF
 CB EMS (2) - CLOSE (PNL 8)
 EMS MODE - STBY
 EMS FUNC - EMS TEST 1 (WAIT 5 SEC)
 EMS MODE - NORMAL (WAIT 10 SEC)
 CHECK IND LTS - OUT
 RANGE IND - 0.0
 SLEW HAIRLINE OVER NOTCH
 IN SELF-TEST PATTERN
 EMS FUNC - EMS TEST 2
 .05G LT - ON (ALL OTHERS OUT)
 WAIT 10 SEC
 EMS FUNC - EMS TEST 3
 .05G LT - ON
 RSI LOWER LT - ON (10 SEC LATER)
 SET RANGE COUNTER TO 58 NM ±0.0
 EMS FUNC - TEST 4
 .05G LT - ON (ALL OTHERS OUT)
 G-V TRACE WITHIN PATTERN TO LWR RT
 CORNER AT 9G
 RNG IND COUNTS DOWN TO 0.0 ±0.2NM
 EMS FUNC - TEST 5
 .05G LT - ON
 RSI UPPER LT - ON (10 SEC LATER)
 RANGE IND - 0.0
 SCRIBE TRACES VERTICAL LINE 9G TO
 0.28 ±0.1G
 SET SCROLL TO 37K FPS
 EMS - OFF/STBY

EMS ΔV TEST AND NULL BIAS CK

EMS MODE - STBY (VERIFY)
 EMS FUNC - ΔV SET/VHF RNG
 SET ΔV IND TO 1536.8 FPS
 EMS MODE - NORMAL
 EMS FUNC - ΔV TEST
 SPS THRUST LT - ON/OFF (10 SEC)
 ΔV IND STOPS AT -0.1 TO -41.5
 EMS MODE - STBY
 EMS FUNC - ΔV SET/VHF RNG
 SET ΔV IND TO -100.0 FPS
 CMC MODE-FREE(UNTIL MEAS COMPLETE)
 OR BMAG MODE (3) - RATE 2
 EMS FUNC - ΔV (WAIT 5 SEC)
 START DET
 00:00 EMS MODE - NORMAL
 01:40 EMS MODE - STBY(RECORD)OFF
 IF ΔV <1 FPS, DO NOT BIAS
 IF ΔV >1 FPS BUT <10 FPS,
 STDN PROVIDE BIAS IN PAD ΔVC
 IF ΔV >10 FPS, EMS IS NO-GO

RSI ALIGNMENT

NOTE: RSI ALIGNMENT IS PERFORMED
 EVEN IF RSI ALIGNMENT IS CORRECT
 IN ORDER TO CK OPERATION OF RSI
 FDAI SOURCE - ATT SET
 ATT SET - GDC
 EMS ROLL - ON (UP)
 GDC ALIGN PB - PUSH AND HOLD
 YAW TW - POSITION RSI THROUGH 45 DEG
 SET TO LIFT UP (HDS ON)
 OR TO LIFT DN (HDS UP) ATT PER
 ENTRY UPDATE PAD
 GDC ALIGN PB - RELEASE
 EMS ROLL - OFF

SEC WATER EVAP ACTIVATION

ELECTROPHORESIS COOLING VLV - BYPASS
 (VERIFY) (PNL 165)
 EVAP H2O CONT SEC VLV - AUTO(PNL 382)
 ECS IND SEL - SEC
 SEC COOL LOOP PUMP - AC2
 GLY DISCH SEC PRESS - 40-52 PSIG
 SEC COOL LOOP EVAP - EVAP
 SEC GLY EVAP OUT TEMP- 38-50.5 DEG F
 ECS IND SEL - PRIM

E/1-3

DATE 5/9/75

98+30-

11112
01111
00:00-

CM RCS PREHEAT CK LIST

FINAL STOWAGE CK LIST

SET UP CAMERA FOR FIREBALL PHOTOGRAPHY
CM4/DAC/25/CX05(F2) - BRKT, MIR
(T11, 1/500, 7) 2 FPS

98+40

98+50-

20:00-

CM RCS PREHEAT TERMINATION CK LIST
CONFIGURE PANEL CB'S (NOT SWITCHES)

99+00-

CM RCS PREHEAT CK LIST

NOTES:

1. IF SYS TEST MTR 5C, 5D, 6A, 6B, 6C, & 6D ALL READ ≥ 4.0 VDC, OMIT PREHEAT
SYS TEST METER-5B (BAT RLY BUS)
2. IF PREHEAT REQ'D, PREHEAT UNTIL ALL JETS READ ≥ 4.0 VDC, OR 20 MINUTES, WHICHEVER OCCURS FIRST
3. CHECKS CM RCS 24, 25, 12, 14, 16, AND 21 JET INJECTOR VALVE TEMPERATURES, RESPECTIVELY
4. DIRECT COILS USED FOR PREHEATING JETS

CB RCS LOGIC(2) - CLOSE (PNL 8)
CM RCS LOGIC - ON (UP) (PNL 1)
(ENERGIZES RCS LOGIC BUS)
CB CM RCS HTRS (2) - CLOSE (PNL 8)
CM RCS HTRS - ON (UP) (PNL 101)
SET DET COUNTING UP

CM RCS PREHEAT TERMINATION CK LIST

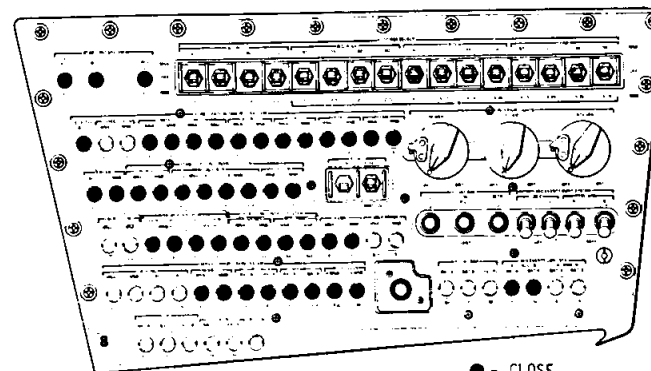
CM RCS HTRS - OFF (PNL 101)
CM RCS LOGIC - OFF (PNL 1)
CB CM RCS HTRS (2) - OPEN (PNL 8)
SYS TEST MTR - 5B (BAT RLY BUS)

FINAL STOWAGE CK LIST

ORDEAL

FDAI (2) - INRTL
PWR - OFF, STOW
GLY TO RAD SEC VLV - BYPASS (CCW)
(VERIFY) (PNL 377)
ATTACH BOTH STRUT UNLOCK LANYARDS
VERIFY SUIT BAGS TIED DOWN TO A4,
A5, AND A6
VERIFY UCTA'S STOWED IN PORTABLE
WASTE STOWAGE CONTAINER (U1),
HDC AND MAG IN (B3)

CHANGE DAC TO CM4 WINDOW
UNSTOW CX05 MAG FROM (F2)
AND INSTALL ON DAC



● - CLOSE
○ - OPEN

E/1-4

DATE 7/1/75

100+00

11102
01111

RECORD BURN STATUS

WARNING: WAIT UNTIL COMP ACTY LT - OUT

V66E

CM RCS CK

BMAG MODE (3) - ATT 1/RATE 2

YAW TO CM/SM SEP ATT

PER ENTRY PAD

IF BOTH RINGS FAILED
 PERFORM ROLLING ENTRY
 CK LIST

V37E 62E

CM/SM SEP CK LIST

P62

F50 25

POSSIBLE ALARMS
 01427-ROLL REVERSED
 01426-IMU UNSAT

CM/SM SEP

MONITOR V MNA/B
 YAW BACK TO 0 DEG
 PRO

VERIFY LAT, LONG FROM PAD
 LOAD R3=-1(LIFT UP);
 +1(LIFT DN)

PRO
 (POSSIBLE 06 22 IF ANGLE
 OF ATTACK >045 DEG)
 STDN UPDATE FINAL ENTRY
 PAD
 EMS INITIALIZATION

PITCH TO PAD P.05G
 (050 DEG)

GO TO ENTRY (PG E/2-1)

F06 61

IF <25 VDC, PERFORM CM LD
 * PWR RECONFIG, PG E/7-8*

P63
06 64

*IF LIFT DN *****
 ROLL TO 180 DEG AND TRACK
 HORIZ ON 9 DEG WINDOW MK

100+10

O
R
R

100+20

100+30

CM RCS CK

AUTO RCS SEL A/C ROLL (4) - OFF
 (VERIFY)

CB RCS LOGIC (2) - CLOSE (VERIFY)

SC CONT - SCS/MIN IMP

RCS TRNFR - CM

AUTO RCS SEL (RING 1) - OFF

AUTO RCS SEL (RING 2) - MNB

TEST RING 2 THRUSTERS (MIN IMP MAY
 NOT PRODUCE AUDIBLE JET FIRING.
 USE 3 CYCLES)

AUTO RCS SEL (RING 1) - MNA

AUTO RCS SEL (RING 2) - OFF

TEST RING 1 THRUSTERS

AUTO RCS SEL (RING 2) - MNB

RCS TRNFR - SM

MAN ATT (3) - RATE CMD

ROLLING ENTRY CK LIST
 *PERFORM CM/SM SEP CK LIST THROUGH-
 * SECS PYRO ARM (2) - ON (UP)
 *BMAG MODE (3) - ATT 1/RATE 2
 *MAN ATT (3) - RATE CMD (VERIFY)
 *SC CONT - SCS
 *MNVN TO 0, 0 DEG
 * (PITCH FROM ENTRY PAD REMARKS)
 *DBD/RATE - MIN/LOW
 *CAUTION: ATT HOLD IN PITCH AND YAW
 * MUST BE MAINTAINED UNTIL SEP
 *AT RET .05G - 120 SEC:
 * FDAI SCALE - 50/15
 * MAN ATT ROLL - ACCEL CMD
 * ROLL RIGHT ~20 DEG/SEC
 *AT RET .05G - 90 SEC:
 * CM/SM SEP (2) - ON (UP)

ENTRY PAD PRELIMINARY FINAL

CM/SM SEP CK LIST

PRIM GLY TO RAD-BYPASS
 (PULL)
 GLY EVAP TEMP IN-MAN
 CB SPS P & Y (4) - OPEN
 CB ELS/CM-SM SEP (2) -
 CLOSE

VHF AM (A&B) - OFF(CTR)
 STDN CONFIRM GO FOR ATS
 PWR DN

ATS F PWR AMPL-OFF(CTR)

ATS F XPNDR-OFF(CTR)

ATS F HGA POWER-OFF

RHC PWR DIRECT #2-MNA/B

CM RCS LOGIC - ON (UP)

CUE STDN IF IN CONTACT

STDN CONFIRM GO FOR

PYRO ARM (IF POSS)

SECS PYRO ARM(2)-ON(UP)

VERIFY CORRECT SEP ATT

PER ENTRY PAD REMARKS

CM/SM SEP (2) - ON (UP)

MAN ATT (3) - MIN IMP

RHC PWR DIRECT #2 - OFF

BMAG MODE (3) - RATE 2

C/W MODE - CM

RCS TRNFR - CM

CM RCS MANF PRESS -

287 - 302 PSIA

SECS PYRO ARM(2) - SAFE

AUTO RCS SEL(12)-MNA/B

(VERIFY)

CM RCS LOGIC - OFF

EMS INITIALIZATION

EMS FUNC - TEST 5
 VERIFY SCROLL ON 37K
 EMS FUNC - RNG SET
 SET RNG TO PAD RTOGO
 EMS FUNC - VO SET
 SLEW SCROLL TO PAD VIO
 EMS MODE - STBY(VERIFY)
 EMS FUNC - ENTRY
 VERIFY .05G LT FILTER
 IS DOWN

AREA	XX							XX							
SEP ATT	Y		TO					Y		TO					
P.05G	+					0	0	+					0	0	
N61 LAT			0							0					
LONG															
RTOGO .05G	+							+							
VIO .05G	+							+							
RET .05G	XX	XX						XX	XX						
RET 0.2G	XX	XX						XX	XX						
N66 DRE															
BANK AN															
RET RB	XX	XX						XX	XX						
RET BBD	XX	XX						XX	XX						
RET EBO	XX	XX						XX	XX						
RET DROG	XX	XX						XX	XX						
RET MAIN	XX	XX						XX	XX						

REMARKS:

E/1-7

DATE 7/1/75

ENTRY

P63 - ENTRY - INIT

1 06 64 G,VI,RTOGO (.01G,fps,.1nm) 2

RET .05G FDAI SCALE - 5/5
-5 min

RET .05G GNCS/SCS ATTITUDE CK
-2 min

Check IMU vs. GDC pitch attitudes agree
within 5 deg
*DO NOT AGREE * * * * *

* Lift up *

* RET .05G - 1 min, check horiz on 33 deg
window mk (Limit: +/- 5 deg) GO/NO-GO *

* If GNCS GO, fly lift up to .2G,
then CMC/AUTO *

* If GNCS NO-GO, track horiz on
29 deg window mk, hold lift
up to .2G, then EMS entry *

* Lift dn *

* Check pitch error needle centered
(Limit: +/- 5 deg) GO/NO-GO *

* If GO or NO-GO, track horiz on 9 deg
window mk, hold lift dn to 1.0G
(V16 N74, R3) then, *

* If GNCS GO, CMC/AUTO *

* If GNCS NO-GO, EMS entry *

* * * * *

GNCS GO, Lift up

Hold PAD entry att, fly lift up to .2G
GNCS GO, Lift dn

Track horiz on 9 deg window mk, fly
lift dn to 1.0G (V16 N74, R3)

RET .05G EMS MODE - BACKUP/VHF RNG
(.05G lt - on)
(---:---) .05G sw - on (up)
EMS ROLL - on (up)

P64 - ENTRY - POST .05G

06 74 BETA,VI,G (.01 deg,fps,.01G)
Start DAC
MAN ATT (3) - RATE CMD

RET .2G P67 - ENTRY - FINAL PHASE (POST .2G)

(---:---)
3 06 66 BETA,CRSRNG ERR,DNRNG ERR (.01 deg,.1nm)
(* is north & long)

DOWN RANGE GNCS GO/NO-GO NAV CK:

KEY VERB
Record DNRNG ERR ---- PAD ----
KEY RLSE
(Limit: +/-180 NM IF ΔV TRIM <30 FPS,
GNCS GO/NO-GO)
(DRE CHECK INVALID FOR ΔV TRIM >30 FPS)
* If GNCS NO-GO: *
* Fly EMS (Pg E/2-2) *

1ST CROSS RANGE GNCS GO/NO-GO NAV CK

If initial BETA direction not same
as PAD, GNCS is NO-GO
* If GNCS NO-GO: *
* Fly EMS (Pg E/2-2) *

E/2-1

DATE 5/9/75

ENTRY

ENTRY

At .2G (lift up) or 1G (lift dn)

If GNCS is GO:

SC CONT - CMC/AUTO

*If DAP NO-GO: *

* SC CONT - SCS:

* Fly BETA *

*If GNCS NO-GO:

* Fly EMS *

* Go to PAD BACKUP BANK AN at .2G(lift up) or 1G(lift dn) *

* Reverse bank at RET RB *

* At 800 nm scroll line *

* If RTOGO <500 nm, roll toward 90 deg *

* If RTOGO >600 nm, roll toward 0 deg *

* Fly to get RTOGO convergence between *

* 300 nm and 200 nm scroll lines *

* At 4000 fps for nom tgt, 16 nm at 2.7G *

* If RTOGO >16 nm, fly toward lift up *

* If RTOGO <16 nm, fly toward lift dn *

*If GNCS & EMS NO-GO: *

* Fly PAD bank/reverse bank *

CM RCS CK

RCS IND - CM 1, 2

*If both RCS rings *

* He pressure <2000 psia: *

* Roll right ~20deg/sec *

S BAND NORMAL PWR AMPL HIGH - HIGH

Select best omni as req'd to maintain

Comm after exit blackout

RET RB
-1 min

(__:__)

2ND CROSS RANGE GNCS GO/NO-GO NAV CK:

If BETA reverses earlier than 1 min
before PAD RET RB, GNCS is NO-GO.

*If GNCS NO-GO: *

* Fly EMS (see above) *

RET

90K' (__:__) STEAM PRESS - pegged at ~90K'

Start Watch
(00:00)

4 F 16 67 RTOGO, LAT, LONG (Vrel=1000 fps) (.1nm, .01 deg)

SC CONT - SCS

RTOGO NEG (R1) - LIFT UP

RTOGO POS (R1) - LIFT DN

Monitor altimeter

Stop DAC

DAC - T8, 12 FPS

Go to EARTH/POST LANDING, pg E/3-1

E/2-2

DATE 7/1/75

POST LANDING COMMUNICATIONS

- (3) VHF ANT - RECY (verify)
- VHF BCN - ON (verify)
- (6,9) VHF AM - T/R (verify)
- (3) VHF AM A & B - SIMPLEX (verify)
- *If no contact with recovery forces:
- (6,9) * VHF AM - REC
- * Center couch attempt to contact recovery forces
- * If contact reestablished and left or right couch wish to Transmit:
- (6,9) * VHF AM - T/R (only long enough to transmit, then VHF AM - REC)
- *If still no contact with recovery forces:
- * Monitor VHF Beacon transmission with VHF AM B Rcvr and/or Survival Trncvr (VOICE)
- * If VHF Beacon not operating:
- * Connect Survival Trncvr cable conn J1 to bcu ant cable conn P112 behind ant access pnl and place radio in BCN mode
- * (Use tool E to open VHF antenna access panel and tool F to loosen connector P112)
- *After 1 hour on the water:
- (3) * VHF AM A(B) - OFF
- * VHF AM RCV ONLY - A
- *On the quarter hour and every quarter hour thereafter:
- (3) * VHF AM A - SIMPLEX
- * VHF RCV ONLY - OFF
- (6,9) * VHF AM - REC
- * Center couch transmit in blind, 5 minutes
- (3) * VHF AM A - OFF
- * VHF AM RCV ONLY - A

If shipboard recovery, continue Pg E/3-3

If helicopter recovery, go to Pg E/3-4

If unaided egress, go to Pg E/3-4

SHIPBOARD EGRESS & POWERDOWN

- GEAR BOX SEL - N
- ACTR HNDL SEL - N
- Check hatch GN2 pressure gauge
- If > mid-white
- GN2 vlv HNDL - VENT (pull)
- GN2 vlv HNDL - Neutral (detent)
- Check pressure gauge (mid-white)
- *Repeat press/vent to obtain mid-white*
- If < mid-white
- Charge hatch counterbalance
- GN2 vlv HNDL - PRESS (push)
- GN2 vlv HNDL - Neutral (detent)
- Check pressure gauge (mid-white)
- *Repeat press/vent to obtain mid-white*
- Inform recovery you are ready for egress

COMMENTS:

- Recovery will keep you informed of retrieval status.
- CM will remain powered up for comm until immediately prior to egress.
- Stay strapped in couch for retrieval.
- When CM is safely on ship (recovery will so inform you) inform recovery you are ready for egress
- Recovery Team Leader will knock three times on side hatch window to indicate crew is clear to open side hatch
- Crew will open hatch
- GEAR BOX SEL - UNLATCH
- ACTR HNDL SEL - UNLATCH
- LOCK PIN REL KNOB - UNLOCK
- Operate ratchet handle until hatch open
- Verify hatch overcenter lock engaged
- ACTR HNDL SEL - N
- Stow ratchet handle
- When hatch open
- (15) PL VENT - OFF
- cb PANEL 250 (all) - open
- (R1) Remove MA151 (Germanium & Sodium Iodide Crystal Experiment)
- Hand MA151 experiment and bag to Recovery Team Leader
- (U2) Remove PAO film bag (tv monitor cable bag)
- Hand bag to Recovery Team Leader
- Egress

HELICOPTER EGRESS & POWERDOWN

GEAR BOX SEL - N
ACTR HNDL SEL - N
Check hatch GN2 pressure gauge
If > mid-white
GN2 vlv HNDL - VENT (pull)
GN2 vlv HNDL - Neutral (detent)
Check pressure gauge (mid-white)
Repeat press/vent to obtain mid-white
If < mid-white
Charge hatch counterbalance
GN2 vlv HNDL - PRESS (push)
GN2 vlv HNDL - Neutral (detent)
Check pressure gauge (mid-white)
Repeat press/vent to obtain mid-white

Inform swimmer you are ready for equipment bag by knocking on side hatch window

COMMENTS:

CM VHF - BCN and BCN LT will remain on to aid in maintaining visual/radio acquisition after crew egress.
Swimmer will open hatch.
Swimmer will hand in equipment bag containing Life Preserver Units (LPU), Tempscribe temperature recorder, tape, and MA151 handling container
Crew will close hatch; swimmers will assist

Receive equipment bag from swimmer
Close hatch
GEAR BOX SEL - LATCH
ACTR HNDL SEL - LATCH
Overcenter Lock - Disengage
(Use D ring to disengage lock)
Operate ratchet handle until hatch locked
GEAR BOX SEL - N
ACTR HNDL SEL - N

Tape Tempscribe to X-X foot strut
Don LPU's
(R1) Remove MA151 (Germanium & Sodium Iodide Crystal Experiment)/bag and place in handling container
(15) PL VENT - OFF
PL BCN LT - LO (verify) (night landing only)
(3) VHF AM A/B - OFF
(6,9,10) VHF AM - OFF
Inform swimmer you are ready for egress by knocking on side hatch window
Egress, inflate LPU when out of hatch (last man out hand MA151 handling container to swimmer)

3. CREWMEN UNAIDED EGRESS PROCEDURES

*If no ventilation or CM O2 supply *
* *
* If Stable I, open side hatch as req'd *
* If Stable II, initiate egress within *
* 2-1/2 hrs *

STABLE I

(PSA) Disconnect umbilicals (if suited)
Neck dams on (if suited)
Configure center couch to 0 deg
Armrests stowed
Check hatch GN2 pressure gauge
If > mid-white
GN2 vlv HNDL - VENT (pull)
GN2 vlv HNDL - Neutral (detent)
Check pressure gauge (mid-white)
Repeat press/vent to obtain mid-white
If < mid-white
Charge hatch counterbalance
GN2 vlv HNDL - PRESS (push)
GN2 vlv HNDL - Neutral (detent)
Check pressure gauge (mid-white)
Repeat press/vent to obtain mid-white
(R4) Unstow rucksacks 1B & 2
Connect lanyards
(yellow to rucksack, green to head strut, white to crew, in order of egress printed on lanyards)

99+30-

11112
01111
11102
01111

IF PLANNED HYBRID PERFORM
* CM RCS CK

CYCLE CMC MODE SWITCH - FREE - AUTO
V48E, LOAD .5 DEG DBD, N47 FROM DEORBIT BURN PAD
P30, VERIFY N33 AND N81 FROM DEORBIT BURN PAD
SET DET COUNTING UP TO DEORBIT BURN TIG
P00, V62E
V49E, MNVR TO DEORBIT BURN PAD ATT

SXT BORESIGHT STAR CK, V41 N91E (PG G/2-4)
(LIMIT: SXT FOV, GNCS GO/NO-GO)*IF GNCS NO-GO, SET TH TO:

REQUEST STON MONITOR NEXT STEP (IF POSS)
MN BUS TIES (2) - ON (UP)
VHF AM A & B - OFF (CTR)
CB SPS P & Y - OPEN
STOW OPTICS EYEPICES
CREW STRAPPED IN AND SEATS LOCKED
STOW COAS AND DIM LIGHTS
AUTO RCS SEL (16) - AS REQ'D
FDAI SCALE - 5/1
MAN ATT (3) - RATE CMD
DBD/RATE - MIN/LOW
BMAG MODE (3) - RATE 2
SC CONT - CMC/AUTO
FDAI (2) - INRTL
GDC ALIGN
RHC (2) - ARMED
RHC PWR NORMAL (2) - AC/DC
RHC PWR DIRECT (2) - MNA/B
SET EMS ΔV TO PAD ΔVC (SM ΔV)
LOAD CM BURN ATT FROM PAD
REMARKS INTO N17
P41, PRO, ENTR
BMAG MODE (3) - ATT 1/RATE 2
NO ATS: HBR/RCD/FWD/CMD RESET
THC - ARMED
PRIM GLY TO RAD - BYPASS (PULL)
GLY EVAP TEMP IN - MAN
AT 59:30; EMS MODE - NORMAL
THC PWR - ON

99+40

99+50

SM RCS DEORBIT BURN INITIATION

NOMINAL

NULL N85 VG'S TO +/- .2
POST BURN CK LIST

PLANNED HYBRID

BURN EMS TO ZERO
CONTINUE NEXT PAGE

IF LOSS OF SM RCS TRANS
* CAPABILITY OCCURS

*V82E
*IF HP>75, GO AROUND 6 REVS
*IF 75 NM>HP>46 NM, GO TO
* NEXT PAGE, DO HYBRID ASAP
*IF HP<46 NM, DO POST BURN
* CK LIST

RCS DEORBIT BURN PAD

PRELIMINARY

FINAL

FINAL UPDATE

N33	HR	+	0	0				+	0	0				+	0	0			
	MIN	+	0	0	0			+	0	0	0			+	0	0	0		
	SEC	+	0					+	0					+	0				
N81	ΔVX		0						0						0				
	ΔVY		0						0						0				
	ΔVZ		0						0						0				
N22	R	+				0	0	+				0	0	+				0	0
	P	+				0	0	+				0	0	+				0	0
	Y	+				0	0	+				0	0	+				0	0
	ΔVC	XX	XX					XX	XX					XX	XX				
	BT	XX	XX					XX	XX					XX	XX				
	ΔV75	XX	XX					XX	XX					XX	XX				
	TARGET HP	+	XX	XX				+	XX	XX				+	XX	XX			
N47	WT	+						+						+					
	STAR	XX	0	0	0			XX	0	0	0			XX	0	0	0		
	SFT	+				0		+				0		+				0	
	TRN	+				0	0	+				0	0	+				0	0

POST BURN CK LIST

CM RCS CK

CAPTURE HP = _____ NM

V82E, PRO
RCS BURN STATUS
PRO, P00
EMS - OFF/STBY
MAN ATT (3) - MIN IMP
RHC #1 - LOCKED
RHC PWR NORMAL #1-OFF
RHC PWR DIRECT(2)-OFF
THC - LOCKED
THC PWR - OFF
BMAG MODE(3) - RATE 2
GO TO Pg E/1-7
FLY LIFT DOWN ENTRY

AUTO RCS SEL A/C ROLL (4)
- OFF (VERIFY)
CB RCS LOGIC (2) - CLOSE
(VERIFY)
SC CONT - SCS/MIN IMP
RCS TRNFR - CM
AUTO RCS SEL (RING 1)-OFF
AUTO RCS SEL (RING 2)-MNB
TEST RING 2 THRUSTERS(MIN
IMP MAY NOT PRODUCE
AUDIBLE JET FIRING.
USE 3 CYCLES)
AUTO RCS SEL (RING 1)-MNA
AUTO RCS SEL (RING 2)-OFF
TEST RING 1 THRUSTERS
AUTO RCS SEL (RING 2)-MNB
RCS TRNFR - SM
MAN ATT (3) - RATE CMD

CM RCS PITCH
ATTITUDE = _____ DEG
TIG-1 MIN SM
RCS HORIZ CK
WINDOW MK = _____ DEG

RCS BURN STATUS

ΔVC		XX			
FDAI	R	+			XX XX
	P	+			XX XX
	Y	+			XX XX
ΔVX		0	0		
N85	ΔVY		0	0	
	ΔVZ		0	0	

SM RCS/
HYBRID

E/5-1

DATE 7/1/75

HYBRID

2 MIN
or
ASAP

RATE-HIGH
FDAI SCALE - 5/5
SC CONT - SCS
AUTO RCS A/C ROLL (4) - OFF
cb ELS/CM - SM SEP (2) - CLOSE
CM RCS LOGIC - ON
SECS PYRO ARM (2) - ON
CM/SM SEP (2) - ON
C/W MODE - CM
RCS TRNFR - CM
CM RCS LOGIC - OFF
CM RCS MANF PRESS - 287-302
V MNA/B >25V
* IF <25V - CM LO PWR, PG E/7-8 *

MAN ATT PITCH - ACCEL CMD
V63E (CM BURN ATT)
* IF GNCS NO-GO *
* SET TW TO CM BURN ATT *
* FROM BURN PAD REMARKS *
* FDAI - ATT SET, 1 or 2, GDC *

PITCH UP TO CM BURN ATT (NULL NEEDLES)
(110 DEG > SM BURN ATT)

CM RCS BURN

RHC #1 - CONTINUOUS PITCH DOWN
RHC #2 - MODULATE PITCH TO NULL NEEDLES
* IF ONLY 1 RHC *
* PULSE +/- P = 5 DEG FROM BURN ATT *
* MAINTAIN RATES <3 DEG/SEC *

BURN RULES

UNPLANNED HYBRID

BURN FOR 100 SEC
V82E, IF Hp >46 NM - BURN Hp = 46 NM

PLANNED HYBRID

BURN VGZ TO +/- .2
V82E, IF Hp > PAD - BURN Hp = PAD
* IF HE TK PRESS <2000, BURN Hp = CAPTURE HP *

PRO

RECORD BURN STATUS

RCS BURN STATUS (AFTER BURN)

ΔVC			XX	XX			
FDAI (IF ATT NOT NOM)	R	+				XX	XX
	P	+				XX	XX
	Y	+				XX	XX
N85	ΔVX		0	0			
	ΔVY		0	0			
	ΔVZ		0	0			

PRO
 OOE
 SECS PYRO ARM (2) - SAFE
 EMS - OFF/STBY
 MAN ATT (3) - MIN IMP
 RHC #1 - LOCKED
 RHC PWR NORMAL #1 - OFF
 RHC PWR DIRECT (2) - OFF
 THC - LOCKED
 THC PWR - OFF
 BMAG MODE (3) - RATE 2

V66E
 CONFIGURE CM RCS
 FOR SINGLE RING ENTRY (AUTO RCS SEL (RING 1
 OR 2)(6)-OFF FOR RING WITH LOWEST He PRESS)
 V37E 62E (AVE G ON)
 05 09 01427 - ROLL REVERSED
 *05 09 01426 - IMU UNSAT *

F 50 25 00041 REQUEST CM/SM SEP
 PRO

F 06 61 IMPACT LAT, LONG, LIFT UP/DN (-/+)
 (.01deg, +/-00001)
 Verify LAT, LONG from PAD (Pg E/1-7)
 Load R3 = +1 (lift dn)

PRO
 POSS 06 22 FINAL ATT DISP, RPY (.01 DEG)
 (Only if angle of attack >45 deg)

P63 - ENTRY - INIT

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

EMS INITIALIZATION

EMS FUNC - TEST 5
 Verify scroll on 37K fps
 EMS FUNC - RNG SET
 Set RNG to PAD DATA RTOGO
 EMS FUNC - Vo SET
 Slew scroll to PAD DATA VIO
 EMS MODE - STBY (verify)
 EMS FUNC - ENTRY
 Verify .05G lt filter is down

RSI ALIGNMENT

Verify correct RSI alignment
 lift dn = 180 DEG

DIM LIGHTS

ROLL TO 180 DEG AND TRACK HORIZ ON
 9 DEG WINDOW MK (LIFT DN)

GO TO ENTRY, Pg E/2-1 *IF UNPLANNED HYBRID* * *
 * LIFT DN TO 1G, THEN *
 * ROLL RIGHT TO 270 DEG*
 * (LV SOUTH), NO RB *
 * * * * *

01+20
04+05
11103
01111

WARNING: WAIT UNTIL COMP ACTY LT - OUT

V6GE
CM RCS CK
BMAG MODE (3) - ATT 1/RATE 2
YAW TO CM/SM SEP ATT
PER BLOCK DATA PAD

*IF BOTH RINGS FAILED *
PERFORM ROLLING ENTRY
* CK LIST

V37E 62E
CM/SM SEP CK LIST

P62
F50 25

POSSIBLE ALARMS *
01427-ROLL REVERSED
01426-IMU UNSAT

CM/SM SEP

MONITOR V MNA/B
YAW BACK TO 0 DEG
PRO
VERIFY LAT, LONG FROM PAD
LOAD R3=-1(LIFT UP);
+1(LIFT DN)
PRO
(POSSIBLE 06 22 IF ANGLE
OF ATTACK >045 DEG)
EMS INITIALIZATION

F06 61

IF <25 VDC, PERFORM CM LO
* PWR RECONFIG, PG E/7-8*

P63
06 64

PITCH TO PAD P.05G

*IF LIFT DN * * * * *
ROLL TO 180 DEG AND TRACK
* HORZ ON 9 DEG WINDOW MK*

GO TO ENTRY (PG E/2-1)

PGA DOFFING AND STOWAGE CK LIST

INSTALL HOSE SCREENS (B2)
ON RETURN HOSES
PWR - OFF
SUIT PWR - OFF FOR DISCONNECT
AUDIO CONT - NORM
SUIT FLOW VLV - CABIN FLOW
(FOR UNSUITED CREWMAN)
(FULL FLOW FOR 3 UNSUITED)
DOFF PGA'S

(PGA BAG C, AFT BKH) DON BOOTS, JACKETS, COUNTER
PRESSURE GARMENTS, AND CWG
HARNES (W/O CONN COVER)
(U2) SNAP BIO-BELTS TO GARMENTS
UNSTOW PGA BAG L AND R
STOW PGA'S, HELMETS, HELMET
BAGS, AND ACCESSORY BAGS IN PGA
BAGS, AND REMOVE THE PGA POCKET
ASSEMBLIES, WRIST DAMS, AND
NECK DAMS FROM F2 AND STOW ON
TOP OF A4, A5, AND A6
SECURE BAGS WITH TIE DOWN STRAPS
ATTACHED TO LOCKERS
(R11) UNSTOW UTCA CLAMPS, ATTACH TO
UTCA'S, AND STOW IN PORTABLE
WASTE STOWAGE CONTAINER (U1)

01+40
04+25

01+50
04+35

SPS BURN STATUS (AFTER TRIM)

ATIG		XX	XX				
AVC			XX				
FDAI	R	+				XX	XX
(IF ATT	P	+				XX	XX
NOT NOM)	Y	+				XX	XX
N85	AVX		0	0			
(IF VG							
>.2)	AVY		0	0			
	AVZ		0	0			

COMPLETION RULES

SITUATION	COMPLETION RULE
VG <60 FPS	TRIM VG TO +/- .2 START WITHIN 30 SEC
VG >60 FPS	RESTART SPS SCS
NO RESTART, HP <75	USE RCS COMPLETION CHARTS(4 OR 3 QUADS) AS APPLICABLE
NO RESTART, HP >75 4 QUAD CAPABILITY	USE RCS 4 QUAD COMPLETION CHART

CM RCS CK

AUTO RCS SEL A/C ROLL (4) - OFF
(VERIFY)
CB RCS LOGIC (2) - CLOSE (VERIFY)
SC CONT - SCS/MIN IMP
RCS TRNFR - CM
AUTO RCS SEL (RING 1) - OFF
AUTO RCS SEL (RING 2) - MNB
TEST RING 2 THRUSTERS (MIN IMP MAY
NOT PRODUCE AUDIBLE JET FIRING.
USE 3 CYCLES)
AUTO RCS SEL (RING 1) - MNA
AUTO RCS SEL (RING 2) - OFF
TEST RING 1 THRUSTERS
AUTO RCS SEL (RING 2) - MNB
RCS TRNFR - SM
MAN ATT (3) - RATE CMD

EMS INITIALIZATION

EMS FUNC - TEST 5
VERIFY SCROLL ON 37K
EMS FUNC - RNG SET
SET RNG TO PAD RTDGO
EMS FUNC - VO SET
SLEW SCROLL TO PAD V10
EMS MODE - STBY(VERIFY)
EMS FUNC - ENTRY
VERIFY .05G LT FILTER
IS DOWN

CM/SM SEP CK LIST

CB SPS P & Y (4) - OPEN
CB ELS/CM-SM SEP (2) - CLOSE
CB CSM/DM FINAL SEP (2) - CLOSE
VHF AM (A & B) - OFF (CTR)
RHC PWR DIRECT #2 - MNA/B
CM RCS LOGIC - ON (UP)
CUE STON IF IN CONTACT
STON CONFIRM GO FOR PYRO ARM
(IF POSS)
SECS PYRO ARM (2) - ON (UP)
VERIFY CORRECT SEP ATT PER BLOCK
DATA PAD REMARKS (PG E/6-2)
CSM/DM FINAL SEP (2) - ON (UP)
CM/SM SEP (2) - ON (UP)
MAN ATT (3) - MIN IMP
RHC PWR DIRECT #2 - OFF
BMAG MODE (3) - RATE 2
C/W MODE - CM
RCS TRNFR - CM
CM RCS MANF PRESS - 287-302 PSIA
SECS PYRO ARM (2) - SAFE
AUTO RCS SEL (12) - MNA/B (VERIFY)
CM RCS LOGIC - OFF

ROLLING ENTRY CK LIST * * * *
PERFORM CM/SM SEP CK LIST THROUGH
* SECS PYRO ARM (2) - ON (UP) *
*BMAG MODE (3) - ATT 1/RATE 2 *
*MAN ATT (3) - RATE CMD (VERIFY) *
*SC CONT - SCS *
*MNR TO 0, ---, 0 DEG *
* (PITCH FROM ENTRY PAD REMARKS) *
*OBD/RATE - MIN/LOW *
* CAUTION:ATT HOLD IN PITCH AND YAW *
* MUST BE MAINTAINED UNTIL SEP *
*AT RET .05G - 120 SEC: *
* FDAI SCALE - 50/15 *
* MAN ATT ROLL - ACCEL CMD *
* ROLL RIGHT ~20 DEG/SEC *
*AT RET .05G - 90 SEC: *
* CM/SM SEP (2) - ON (UP) *
* * * * *

E/6-5

DATE 7/1/75

CANNOT SEE THROUGH OPTICS

FOR IMU ALIGNMENTS

IF COAS NOT CALIBRATED-

1. IF GDC & IMU COMPARE WITHIN 5 DEG-
PERFORM COAS LOS DETERMINATION
PROCEDURES (Pg G/2-19) ASAP.

IF NOT- VERIFY IMU ALIGNMENT:
USE P21 (G/4-5) TO OBTAIN ALTITUDE.
MNVR TO & MAINTAIN +X AXIS TRACK OF
HORIZON.

KEY V83E & VERIFY DEPRESSION ANGLE.

80 NM ALT = 348 DEG DEP ANG

120 NM ALT = 345 DEG DEP ANG

160 NM ALT = 343 DEG DEP ANG

IF IMU COMPARE WITHIN 5 DEG-
PERFORM COAS LOS DETERMINATION
PROCEDURES (Pg G/2-19) ASAP.

IF NOT- USE NOMINAL COAS
ANGLES (+0, +57470) FOR P54's .

2. IN PLACE OF P52 OPT 3-

USE P20 OPT 1 TO OBTAIN STAR SIGHTING
ATTITUDES:

LOAD N78 WITH +ZERO'S.

LOAD 1ST STAR, RECORD N18 AND

PERFORM AUTO MNVR TO STAR ATT.

RECALL P20, LOAD 2ND STAR & RECORD.

RECALL P20, LOAD 3RD STAR & RECORD.

PERFORM P54 OPT 3 (G/3-9):

CENTER STAR IN COAS.

VERIFY N91 LOADED WITH COAS LOS

ANGLES RECORDED (Pg G/2-20).

MANUALLY MNVR TO 2ND STAR.

FOR SUBSEQUENT P54's (WITH SAME REFSMMAT),

CAN USE V49 MNVR TO 1ST STAR.

3. IN PLACE OF P52 OPT 1 COARSE ALIGN- PERFORM
P52 OPT 1 PULSE TORQUE (ENTER ON
TORQUE REQUEST)
(DO NOT PERFORM STAR SIGHTINGS).

IF COAS LOS DETERMINATION HAS BEEN PERFORMED-
REPEAT ABOVE STEPS 2 & 3, AS REQUIRED.

FOR DEORBIT BURN IMU CK (PG E/1-6),

PERFORM P20 (OPT 1) MNVR TO CHECK STAR
IMU IS GO IF STAR <5 DEG FROM CENTER OF COAS.

STAR ROLL PITCH YAW

_____	_____.	_____.	_____
_____	_____.	_____.	_____
_____	_____.	_____.	_____
_____	_____.	_____.	_____

E/7-5

DATE 5/9/75

OPTICS FROZEN

BEFORE DOING IMU ALIGN (PERFORM ONE TIME)

1. OPTICS POWER - ON
2. OPT ZERO - ZERO
3. VERIFY SXT/SCT LOS SLAVED
IF NOT, CONTINUE USING SCT
4. RECORD TPACS
IF TA NEGATIVE (XXX.XX) SUBTRACT 270 DEG
5. KEY V64E, LOAD N94 WITH SA & TA.
PRO, RECORD N78 REG 1 & REG 2.
PRO
6. GO TO IMU ALIGN

FOR IMU ALIGNMENTS

IN PLACE OF P52 OPT 3-

USE P20 OPT 1 TO OBTAIN STAR SIGHTING
ATTITUDES:

LOAD N78 WITH VALUES RECORDED ABOVE.

LOAD 1ST STAR, RECORD N18 AND

PERFORM AUTO MNVR TO STAR ATT.

RECALL P20, LOAD 2ND STAR & RECORD.

RECALL P20, LOAD 3RD STAR & RECORD.

PERFORM P54 OPT 3 (G/3-9):

CENTER STAR IN SXT WITH MIC.

VERIFY N94 LOADED WITH RECORDED SA & TA.

MANUALLY MNVR TO 2ND STAR.

FOR SUBSEQUENT P54'S (WITH SAME REFSMMAT),

CAN USE V49 NMVR TO 1ST STAR.

IN PLACE OF P52 OPT 1 COARSE ALIGN - PERFORM
P52 OPT 1 PULSE TORQUE (ENTER ON TORQUE
REQUEST)

(DO NOT PERFORM STAR SIGHTINGS).

FOR DEORBIT BURN IMU CK (PG E/1-6),

PERFORM P20 (OPT 1) (LOAD N78 = 0)

MNVR TO CHECK STAR

IMU IS GO IF STAR <5 DEG FROM CENTER OF COAS.

N91 OR TPAC'S

SA _____ .

TA _____ .

N78

R1 _____ .

R2 _____ .

STAR ROLL PITCH YAW

_____	_____.	_____.	_____
_____	_____.	_____.	_____
_____	_____.	_____.	_____

BLOCK  DEORBIT	PROCEDURE LOCATION		
-5+30 DM CLOSEOUT	D/13-1	■ +35 P52 (OPT 3) (RECORD)	E/
-4+20 P00 V62E V49 MNVR TO BLOCK DATA DEORBIT PAD ATT		-1+30 EMS ENTRY CK EMS ΔV & NULL BIAS CK RSI ALIGN ALIGN GDC	E/1-3 E/1-3 E/1-3
-4+10 CLOSE HATCH 1 HATCH 1 INTEGRITY CK	DECAL (TUNNEL 1) DECAL (TUNNEL 1)	-1+20 SEC H2O EVAP ACTIVATION CM RCS PREHEAT CK LIST	E/1-3 E/1-4
-4+00 APOLLO ACTIVE UNDOCKING	J/2-5	-1+10 FINAL STOWAGE CK LIST	E/1-4
-3+45 UNDOCK AT UNDOCK + 30 SEC: THC (-X) 3 SEC (4 JET)		-1+00 CM RCS PREHEAT TERMINATION CK LIST CONFIGURE PANEL 8 CB'S	E/1-4 E/1-4
SC CONT - CMC BMAG MODE (3) - RATE 2		-0+40 CM RCS ACTIVATION PRE SEP CK LIST	E/1-5 E/1-5
-3+40 DON SUITS SUIT INTEGRITY CK	S/1-12 S/1-15 (STEP 8)	-0+30 CYCLE CMC MODE SW - FREE - AUTO V48E, LOAD .5 DEG DBD (11102) P30, LOAD FROM BLOCK DATA (01111) SET DET P52 (OPT 3) AUTO OPTICS TO STAR (LIMIT: SXT FOV, GNCS GO/NO-GO) EXIT 06 92 STOW OPTICS CREW STRAPPED IN, SEATS LOCKED STOW COAS, DIM LIGHTS	
-2+30 PRE DM JETT CHECKLIST	S/3-5	-0+15 GO TO SPS BURN CUE CARD	
-2+16 DM JETTISON V48E, (11112) (01111)		0+00 DEORBIT BURN	
-2+10 P52 (OPT 3) (RECORD) P00 ALIGN GDC START SCS DRIFT CK (BMAG 2) DOFF SUITS	S/1-20	CM/SM SEP	E/1-7
-1+45 DON LIFE VESTS, HEEL RESTRAINTS INSTAL HEAD RESTS, CUE CARDS		ENTRY	E/2-1
-1+40 PYRO BATT CK END SCS DRIFT CK	E/1-2 E/1-2		

BLOCK DATA
DEORBIT

E/8-1

DATE 7/1/75

BLOCK DATA
DEORBIT

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DATE 7/1/75

E/9-1

WHEN ONE FAILURE AWAY FROM QUICK DEORBIT

1. IF ELECTRICAL POWER CRITICAL (ONE FUEL CELL), POWER DOWN PER POWER DOWN CK LIST.
REAPPLY POWER AT C/W LIMITS AS REQ'D.
POWER UP BOTH BMAGS

POWER DOWN CK LIST

4 IF UNSUITED, SUIT COMP (2) - OFF
(CYCLE ON 10 MIN EVERY HOUR)
5 FC PUMPS (FAILED FUEL CELLS) - OFF
CB G&N OPTICS MNA & MNB (2) - OPEN
G&N PWR (AC) - OFF
2 O2 HTRS (2) - OFF (CTR)
H2 HTRS (2) - OFF (CTR)
H2 FANS (2) - OFF (CTR)
C/W NORMAL - ACK
POT H2O HTR - OFF
SM RCS ENG PKG HTRS (4) - OFF
1 EMS FUNC - OFF
RHC PWR DIRECT (2) - OFF
THC PWR - OFF
181 CM/DM CAMR PWR - OFF
TV AMPL - OFF
274 SM RCS QUAD HTRS (4) - OFF
EXT LTS - OFF
225 CB ATSF SYSTEM (2) - OPEN
400 VTR PWR - OFF
3 VHF RANGING - OFF
S BD AUX TV - OFF (CTR)
CONFIGURE FOR SINGLE INVERTER
OPERATION (TURN OTHER INVERTER OFF)
LIGHTS - MIN REQ'D

2. SET WRIST WATCH TO CURRENT CDT.
3. STOW ALL UNNECESSARY ITEMS.
4. PERFORM SYSTEMS CHECKS:
CM RCS PREHEAT CK LIST (E/1-4)
(IF ONE FUEL CELL; MN BUS TIE (2) - ON FOR PREHEAT)
EMS ΔV AND NULL BIAS CK (E/1-3)
5. ACCEPT STDN UPLINK OF INPLANE REFSMMAT AND REALIGN IMU (P52 OPT 1).
(PNL 5; G/N PWR - AC1; CB G/N OPTICS (2) - CLOSE FOR P52, THEN OFF, OPEN)
6. VERIFY BOTH BMAGS POWERED UP.
KEEP GDC AND ASCP TW'S ALIGNED TO IMU.
7. COORDINATE WITH SOYUZ ON SITUATION. REVIEW QUICK TRANSFER AND UNDOCKING PROCEDURES.

NOTES: GROUND WILL PROVIDE QUICK DEORBIT PADS TO
INSURE A CURRENT SOLUTION (>1 HR 15 MINUTES BUT <2 HR 45 MIN)

GROUND WILL ALSO PROVIDE DEORBIT AND ENTRY PAD FOR NEXT
GO/NO-GO TARGET.

PLAN ON CONTINUING TO NEXT GO/NO-GO TARGET AND USING NOMINAL
DEORBIT AND ENTRY PROCEDURES, UNLESS FINAL TIME CRITICAL
FAILURE OCCURS.

QUICK
DEORBIT

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK
DEORBIT

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

DATE 7/1/75

1/9-3

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

1/9-4

DATE 7/1/75

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

DATE 7/1/75

E/9-5

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

QUICK DEORBIT PAD

CDT	HR	+	0	0	0		
	MIN	+	0	0	0		
	SEC	+	0			0	0
FDAI	R	+				0	0
	P	+				0	0
	Y	+				0	0
ΔVC		XX	XX				
P .05G		+				0	0
RET 0.2G		XX	XX				
REMARKS:							

01:30

01:20

01:10

01:00

SCS CONTROL CK LIST

VERIFY BOTH BMAGS OPERATING
 AUTO RCS SEL A3,C4,B3,D4 - OFF
 A/C ROLL (4) - OFF
 BMAG MODE (3) - RATE 2
 MAN ATT (3) - RATE CMD
 DBD/RATE - MIN/HIGH
 SC CONT - SCS
 BMAG MODE - ATT 1/RATE 2
 FDAI SELECT - 1
 FDAI SOURCE - ATT SET
 ATT SET - GDC
 VERIFY GDC ALIGNED TO TW'S
 IF GDC NOT ALIGNED TO TW'S,
 ALIGN GDC TO TW'S

HORIZ TRACK CK LIST

INFORM SOYUZ: READY TO MMVR. ГОТОВ
 VERIFY PAD ROLL, PAD YAW ВЫПОЛНИТЬ
 MAN ATT (P) - MIN IMP МАHEBP.
 RHC - PITCH TO TRACK HORIZ ON
 15 DEG WINDOW MK (HEADS DOWN)

LOSS OF LAST FUEL CELL

(DON'T TROUBLESHOOT IF
 <1 HR 15 MIN TO TIG)

MN BUS TIE (2) - ON
 CB MN A BAT C - CLOSE
 CB MN B BAT C - CLOSE
 SELECT DEORBIT PAD WITH TIG >1 HR 15 MIN BUT <2 HR 45 MIN

SCS CONTROL CK LIST

EMERGENCY POWER DOWN CK LIST

CREW TRANSFER/DM CLOSEOUT CK LIST

UNSTOW AND DON LIFE VESTS (F1)
 AND HEEL RESTRAINTS (B1)
 UNSTOW READRESTS (B1)
 INSTALL ENTRY CUE CARDS

HORIZ TRACK CK LIST

CONFIGURE PANEL 8 CB'S

CM RCS ACTIVATION

PRE-SEP CK LIST

SET DET COUNTING UP TO PAD TIG

CREW TRANSFER/DM CLOSEOUT CHECKLIST

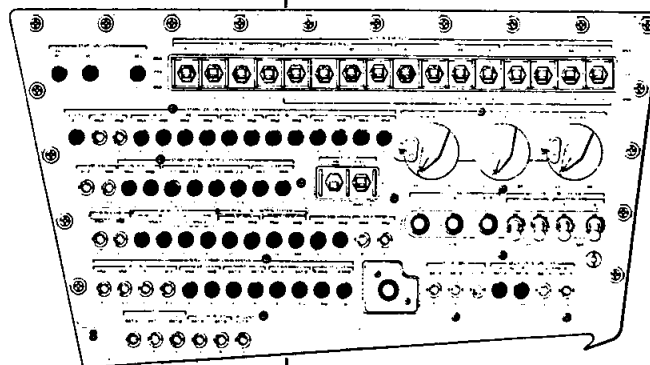
CLOSE HATCH 3 AND PEV
 REQUEST SOYUZ CLOSE HATCH 4 AND VENT TUNNEL
 OPEN WASTE STOWAGE VENT VALVE (PNL 252)
 DIRECT O2 ON (.7 LB/HR)
 OPEN HATCH 2 PEV
 WHEN PRESSURE EQUALIZED OPEN HATCH 2
 UNSTOW PROBE AND DROGUE AND PLACE IN DM
 PERFORM HATCH 2 CLOSURE (DECAL, STEPS 1-4)
 HATCH 2 PEV - CLOSE (CCW)/LOCK (VERIFY)
 CB DM PWR (2) - OPEN (PNL 274)
 INSTALL HATCH 1 (DECAL)
 PERFORM HATCH 1 PRESSURE TEST

CM RCS ACTIVATION

CB SECS ARM (2) - CLOSE
 CUE STDN (IF POSS)
 SECS LOGIC (2) - ON (UP)
 STDN CONFIRM GO
 FOR PYRO ARM (IF POSS)
 SECS PYRO ARM (2) - ON (UP)
 CM RCS PRPLNT 1 & 2 TB (2) - GRAY
 (VERIFY) (INDICATES FUEL AND
 OXIDIZER ISOLATION VALVES OPEN)
 CM RCS PRESS - ON (UP)
 RCS IND SEL - CM1, THEN 2
 HE PRESS STABILIZES AT 3600-3800
 PSIA AFTER 15 MINUTES
 MANF PRESS 287-302 PSIA
 SECS PYRO ARM (2) - SAFE

PRE-SEP CK LIST

REPRESS PKG VLV - ON
 O2 SM SUPPLY VLV - OFF
 SURGE TK - ON (VERIFY)
 CAB PRESS REL VLV (2) - NORM
 ABORT SYS PRPLNT - RCS CMD (VERIFY)



● - CLOSE
 ○ - OPEN

EMERGENCY POWER DOWN CK LIST

4 IF UNSUITED, SUIT COMP (2) - OFF
 (CYCLE ON 10 MIN EVERY HOUR)
 CB ECS GLYCOL PUMPS (6) - OPEN
 5 FC PUMPS (3) - OFF
 G/N PWR (AC) - OFF
 CB ECS RADIATORS (6) - OPEN
 CB ECS POT H2O HTR (2) - OPEN
 CB ECS H2O ACCUM (2) - OPEN
 CB ECS WASTE H2O/URINE DUMP
 HTR (2) - OPEN
 CB ECS AC UTIL AC2 (3) - OPEN
 CB GUIDANCE/NAVIGATION(10)-OPEN
 MINIMUM LIGHTS
 3 FC HEATERS (3) - OFF
 SPS LINE HTRS - OFF
 BATTERY CHARGE - OFF
 S-BD NORMAL PWR AMPL - OFF (CTR)
 S-BD AUX TAPE - OFF (CTR)
 S-BD AUX TV - OFF (CTR)
 UP TLM CMD RESET - RESET THEN OFF
 VHF RANGING - OFF
 TAPE RECORDER FWD/REWIND - OFF
 PCM BIT RATE - HIGH
 CONFIGURE FOR SINGLE INVERTER,
 OTHER INVERTER - OFF
 2 H2 HEATERS - OFF (CTR)
 O2 HEATERS - OFF (CTR)
 SM RCS ENG PKG HTRS (4) - OFF
 (AT C/W LIMIT - 1)
 CAUTION/WARNING NORMAL - ACK
 225 CB ATSF SYSTEM (2) - OPEN
 226 CB CRYOGENIC FAN MOTORS (6) - OPEN
 274 CB ALL ON TOP ROW - OPEN
 IF DM UNMANNED, CB DM POWER(2)-OPEN
 EXTERIOR LIGHTS (2) - OFF
 SM RCS QUAD HEATERS (4) - OFF(CTR)
 100 MINIMUM LIGHTS
 8 CB ORDEAL (2) - OPEN
 MINIMUM LIGHTS
 7 FDAI/GPI POWER - 1
 IF OFF, BMAG POWER 1 - ON
 1 EMS FUNC - OFF
 RHC PWR DIRECT (2) - OFF
 THC PWR - OFF

TLM POWER DOWN

(RESET C/W AS REQ'D)
 5 CB ECS TRANSDUCER (8) - OPEN
 CB ECS SECONDARY COOLANT LOOP
 XDUCERS (2) - OPEN
 276 CB INSTRUMENTATION POWER
 CONTROL(4)-OPEN(CYCLE FOR S/C
 DATA AS REQ'D)
 3 POWER SCE - OFF (CTR)

S-BD POWER DOWN FOR LOS PERIOD

3 S BAND NORMAL XPONDER-OFF(CTR)
 POWER PMP - OFF (CTR)
 4 TELCOM (2) - OFF (CTR)

FOR S-BD ACQUISITION:

4 TELCOM (2) - ACT/2
 3 POWER PMP - NORM
 S BAND NORMAL XPONDER - PRIM

E/9-6

DATE 7/1/75

DATE 7/1/75

E/9-7

-01:00-

FINAL STOWAGE CK LIST (IF TIME PERMITS)

FINAL STOWAGE CK LIST

ORDEAL
 FDI (2) - INRTL
 PWR - OFF, STOW
 STOW OPTICS EYEPieces
 STOW COAS
 GLY TO RAD SEC VLV - BYPASS (CCW)
 (VERIFY) (PNL 377)
 VERIFY SUIT BAGS TIED DOWN
 VERIFY UCTA'S STOWED IN PORTABLE
 WASTE STOWAGE CONTAINER (U1),
 HDC AND MAG IN (B3)
 SET MET TO DET

DET
05:00--

-00:50-

15:00--

-00:40-

25:00--

-00:30-

METER POWER UP (AS REQ'D)

METER	PANEL	CB
CABIN PRESS, PART PRESS CO2	5	ECS TRANSDUCER PRESS GROUPS 2 (2)
CM RCS PRESS	276	INSTRUMENTATION POWER CONTROL 1 & 2
SM RCS PRESS, QTY	276	INSTRUMENTATION POWER CONTROL 3 & 4
SPS PRESS	276	INSTRUMENTATION POWER CONTROL 3 & 4
ECS	5	ECS RADIATORS CONT/HTRS (2) ECS TRANSDUCER PRESS GROUPS 1 & 2 (4)

UNDocking/SEPARATION CHECKLIST

RHC PWR NORMAL #2 - AC/DC (VERIFY)
 RHC PWR DIRECT #2 - MNA/B
 THC PWR - ON
 MAN ATT (3) - MIN IMP
 DBD/RATE - MIN/HIGH (VERIFY)
 BMAG MODE (3) - ATT 1/RATE 2 (VERIFY)
 AUTO RCS SEL A3,C4,B3,D4 - OFF (VERIFY)
 A/C ROLL (4) - OFF (VERIFY)
 SC CONT - SCS (VERIFY)
 RHC #2 - ARMED (VERIFY)

GUIDE RING A&B - OFF (VERIFY)
 STRUCT LATCH A&B - OFF (VERIFY)
 BACKUP PASSIVE A&B - OFF (VERIFY)

◀ INFORM SOYUZ: PREPARING FOR BACKUP PASSIVE
 UNDOCKING. ГОТОВ К РЕЗЕРВНОЙ ПАССИВНОЙ
 ПАССТЫКОВКЕ.
 I INFORM APOLLO: PREPARING FOR UNDOCKING.

274 DOCKING SYSTEM CB'S (12) - CLOSE

38:00 MAN ATT (3) - RATE CHO (HORIZ ON 15 DEG WINDOW MK)
 VERIFY GDC ALIGNMENT (PAD R, PAD P+80 DEG, PAD Y)
 IF REQ'D, GDC ALIGN TO (PAD R, PAD P+80 DEG, PAD Y)

◀ INFORM SOYUZ: READY FOR BACKUP PASSIVE UNDOCKING.
 ГОТОВ К РЕЗЕРВНОЙ ПАССИВНОЙ
 I INFORM APOLLO: READY TO UNDOCK. ПАССТЫКОВКЕ.

◀ INFORM SOYUZ: INITIATING UNDOCKING. НАЧИНАЮ ПАССТЫКОВКУ,
 5,4,3,2,1 MARK. 5,4,3,2,1 MARK.

40:00 BACKUP PASSIVE A&B AND CAPTURE LATCH A&B (4) -
 RELEASE (SIMULTANEOUSLY) ~8 SEC
 GUIDE RING CAPTURE LT - OUT
 PASSIVE LT - ON
 STRUCT RING CONTACT LT - OUT

◀ INFORM SOYUZ: UNDOCKING COMPLETED.
 ПАССТЫКОВКА ЗАВЕРШЕНА.

40:30 AUTO RCS SEL (16) - MNA/B
 THC - THRUST (+Y) FOR 10 SEC
 MAN ATT (P) - MIN IMP
 RHC - TRACK HORIZ ON 15 DEG WINDOW MK)
 274 DOCKING SYSTEM CB'S (12) - OPEN
 THC PWR - OFF

-00:30-

UNDOCKING/SEPARATION CK LIST (PG 9-7)

NOTE: SOYUZ UNDOCK/SEPARATION MUST BE PERFORMED
20 MINUTES BEFORE TIG

35:00--

-00:20-

SOYUZ UNDOCK/SEPARATION

DM JETT/SEPARATION CK LIST

NOTE: DM JETT/SEPARATION MUST BE PERFORMED
10 MINUTES BEFORE TIG

45:00--

DM JETT/SEPARATION CHECKLIST

46:00 CB CSM/DM FINAL SEP (2) - CLOSE
CB SECS ARM (2) - CLOSE
SECS LOGIC (2) - ON (VERIFY)
SECS PYRO ARM (2) - ARM

48:00 MAN ATT(3) - RATE CMD(HORIZ ON 15 DEG WINDOW MK)
VERIFY GDC ALIGNMENT (PAD R,PAD P+40 DEG,PAD Y)
IF REQ'D GDC ALIGN TO(PAD R,PAD P+40 DEG,PAD Y)
THC PWR - ON

50:00 CSM/DM FINAL SEP (2) - ON (UP)

50:30 THC - THRUST (+Y) FOR 10 SEC
THC PWR - OFF
MAN ATT (P) - MIN IMP
RHC - TRACK HORIZ ON 15 DEG WINDOW MK

SECS PYRO ARM (2) - SAFE
CB CSM/DM FINAL SEP (2) - OPEN

-00:10-

DM JETT/SEPARATION

SPS DEORBIT BURN CK LIST

55:00--

CREW STRAPPED IN AND SEATS LOCKED

00:00-

SPS DEORBIT BURN

SPS DEORBIT BURN CK LIST

CB INSTRUMENTATION POWER (4) - CLOSE (PNL 276)
AUTO RCS SEL (12) - MNA/B (VERIFY)
FDAI SCALE - 5/1 (VERIFY)
DBD/RATE - MIN/LOW
BMAG MODE (3) - ATT 1/RATE 2 (VERIFY)
SC CONT - SCS (VERIFY)
RHC - TRACK HORIZ ON 15 DEG WINDOW MK
SCS TVC (2) - RATE CMD
TVC GMBL DR P&Y - AUTO
ATVC - HI
SET EMS ΔV
VERIFY DET COUNTING UP TO PAD DEORBIT BURN TIG

TVC SERVO PWR 1 - 1/A, 2 - 2/B
RHC PWR NORMAL (2) - AC, DIRECT (2) - OFF
GMBL MOTORS P1 & Y1 - START, SET TRIM (1ST PAD REMARKS)
VERIFY MTVC
SCS TVC (2) - AUTO
THC - CW, VERIFY NO MTVC
GMBL MOTORS P2 & Y2 - START, SET TRIM
VERIFY MTVC
THC - NEUTRAL, VERIFY NO MTVC
VERIFY GPI RETURNS TO TRIM
RHC PWR NORMAL (2) - AC/DC
RHC PWR DIRECT (2) - MNA/B
CONTINUE TO TRACK HORIZ ON 15 DEG WINDOW MK

58:00 MAN ATT (3) - RATE CMD (HORIZ ON 15 DEG WINDOW MK)
VERIFY GDC ATTITUDE EQUAL PAD BURN ATTITUDE
IF REQ'D, GDC ALIGN TO PAD BURN ATTITUDE
RHC 2 & THC - ARMED
VERIFY EMS, DET, SPS N2 & He

59:00 CHECK HORIZ ON 11 DEG WINDOW MK (7 DEG WINDOW MK AT TIG)
EMS - NORMAL
THC PWR - ON

59:30 ΔV THRUST A (B) - NORMAL

59:46 ULLAGE

00:00 THRUST PB - PUSH
00:03 ΔV THRUST (2) - NORMAL
RATE - HIGH

XX:XX ECO
ΔV THRUST (2) - OFF
TRIM EMS ΔV TO 18.0
GMBL MOTORS (4) - OFF
TVC SERVO PWR 1 & 2 - OFF
MAN ATT (3) - MIN IMP
RHC - TRACK HORIZ ON 29 DEG WINDOW MK
EMS - OFF/STBY
THC - LOCKED
THC PWR - OFF
RHC PWR DIRECT (2) - OFF

E/9-8

DATE 7/1/75

DATE 7/1/75

E/9-9

00:00

RECORD BURN STATUS

CM RCS CK

IF BOTH RINGS FAILED
PERFORM ROLLING ENTRY
CK LIST

YAW RIGHT TO 45 DEG

CM/SM SEP CK LIST

05:00

CM/SM SEP

YAW BACK TO 0 DEG

TRACK HORIZ ON 29 DEG WINDOW MK

00:10

FOR ENTRY, HOLD LIFT UP UNTIL RET 0.2G,
THEN FLY CONSTANT BANK (ROLL LEFT TO 305 DEG) ENTRY.

15:00

00:20

ATTACH BOTH STRUT UNLOCK LANYARDS

CB ECS TRANSDUCER PRESS GROUPS 2 (2) - CLOSE

25:00

FDAI SCALE - 5/5
.05G SW - ON (UP)
EMS ROLL - ON (UP)

RCS IND - CM 1,2

IF BOTH RCS RINGS
He PRESS <2000
PSIA:ROLL RIGHT
~20 DEG/SEC

28:00

AT PAD RET 0.2G,
MAN ATT (3) - RATE CMD
ROLL LEFT TO 305 DEG

00:30

FLY CONSTANT BANK ENTRY
START WATCH WHEN STM PRESS PEGGED (90K'), MONITOR ALTIMETER
GO TO EARTH/POST LANDING, PG E/3-1

SPS BURN STATUS (AFTER TRIM)

ΔTIG		XX	XX				
ΔVC			XX				
FDAI	R	+				XX	XX
(IF ATT	P	+				XX	XX
NOT NOM)	Y	+				XX	XX

ROLLING ENTRY CK LIST
*PERFORM CM/SM SEP CK LIST THROUGH-
*SECS PYRO ARM (2) - ON (UP)
*BMAG MODE (3) - ATT 1/RATE 2
*MAN ATT (3) - RATE CMD (VERIFY)
*SC CONT - SCS
*MNVN TO 0,P.05G+19 DEG.....0 DEG
*OBD/RATE - MIN/LOW
*CAUTION:ATT HOLD IN PITCH AND YAW
*MUST BE MAINTAINED UNTIL SEP
*AT RET .05G - 120 SEC:
*FDAI SCALE - 50/15
*MAN ATT ROLL - ACCEL CMD
*ROLL RIGHT ~20 DEG/SEC
*AT RET .05G - 90 SEC:
*CM/SM SEP (2) - ON (UP)

CM RCS CK

AUTO RCS SEL A/C ROLL (4) - OFF
(VERIFY)
CB RCS LOGIC (2) - CLOSE (VERIFY)
SC CONT - SCS/MIN IMP
RCS TRNFR - CM
AUTO RCS SEL (RING 1) - OFF
AUTO RCS SEL (RING 2) - MNB
TEST RING 2 THRUSTERS (MIN IMP MAY
NOT PRODUCE AUDIBLE JET FIRING.
USE 3 CYCLES)
AUTO RCS SEL (RING 1) - MNA
AUTO RCS SEL (RING 2) - OFF
TEST RING 1 THRUSTERS
AUTO RCS SEL (RING 2) - MNB
RCS TRNFR - SM
MAN ATT (3) - RATE CMD

CM/SM SEP CK LIST

CB SPS P & Y (4) - OPEN
CB ELS/CM-SM SEP (2) - CLOSE
VHF AM (A&B) - OFF(CTR)
RMC PWR DIRECT #2-MNA/B
CM RCS LOGIC - ON (UP)
CUE STDN IF IN CONTACT
SECS PYRO ARM(2)-ON(UP)
VERIFY CORRECT SEP ATT
CM/SM SEP (2) - ON (UP)
MAN ATT (3) - MIN IMP
BMAG MODE (3) - RATE 2
C/W MODE - CM
RCS TRNFR - CM
CM RCS MANF PRESS - 2&7-302 PSIA
SECS PYRO ARM (2) -SAFE
AUTO RCS SEL(12) - MNA/B (VERIFY)
CM RCS LOGIC - OFF

CHECKLIST DISTRIBUTION LIST

5/14/75

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 WC6/M. Collins

DD4/J. Hordinsky (2)

CSDL/MS23/R. Larson
 J. Dunbar

EC2/R. Grafe
 EC3/D. Hughes
 ED/J. Harris
 ED8/H. Kuehnel
 EE4/R. Dietz
 EG2/G. Johnson
 EG8/R. Wilson
 EP12/H. White
 ES12/D. Smith

HA62/Boeing/E. Bouford
 HS01/Boeing

Headquarters/MAO/J. Holcomb

CB/A. Forostenko

BLDG 1720/BOB MOORE (2)

FE221/R. Powell (8)

+ Extra distribution on this item.

FM13/Data Management Office (5)

JM5/R. Magin

ENTRY CHECKLIST

T. KELLER, TRW
 H2/2085

STD 91

SPEC

EXTRA 1

TOTAL 95