APOLLO 13
FLIGHT PLAN
AS-508/CSM-109/LM-7
(REVISED FLIGHT PLAN - 54:00 GET TO SPLASHDOWN)

FLIGHT PLANNING BRANCH
FLIGHT CREW SUPPORT DIVISION

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS
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FLIGHT PLAN

CSM
CMP

54:00

CDR
CLEAR TUNNEL OF
CM HATCH
INSPECT TUNNEL &
DOCKING LATCHES
REMOVE PROBE & DROGUE

LM

54:20

LMP

MCC-H

PTC
P 90, Y 0

PTC
P 90, Y 0

PTC
P 90, Y 0

ACTIVATION CHECKLIST

OPEN LM HATCH
RECORD AND REPORT DOCKING
TUNNEL INDEX ANGLE (-2.0°)
IVT TO LM

IVT TO LM

ASSIST CDR

LM POWER-ON

LM FAMILIARIZATION

CM POWER TO LM-OFF

TEMPORARILY STOW
PROBE & DROGUE
### Flight Plan

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**CSM**

- **CM Power to LM-On**
- **Quads C&D Disabled**

**LM**

- **LMP Power-Off**
- **LM Familiarization**

**LM**

- **IVT to CSM**
- **IVT to CSM**

**CSM**

- **Quads C&D Enable**
- **Close LM Hatch**
- **Terminate Batt B Charge**
- **CMC Restart LT.**
- **Main B Bus Under Volt (55:55:20)**
- **Main A Bus Under Volt (55:58:25)**

**MCC-H**

- **First Indication of System Malfunction**

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**FLIGHT PLAN**

- **MNVR to R 60, P 90, Y 0**
FLIGHT PLAN

56:00
CMP: INSTALL CM HATCH
LM TUNNEL VENT VALVE - LM/CM AP
BUS TIE AC-ON
OMNI C

:10
FUEL CELL 1 OFF LINE
OMNI B

:20
EMERGENCY POWER DOWN TO DELTA OF 10 AMPS
INVERTER 1 ON BOTH AC BUSES
OMNI C

56:30
BMAG 2 OFF
FUEL CELL 3 OFF LINE
BATTERY A OFF
OXYGEN SURGE TANK ISOLATED

:40
O₂ TANK 1 HEATER & FANS-ON

:50
BMAG 1 OFF

OMNI B

MCC-H
FLIGHT PLAN

57:00
FUEL CELL 3 REACTANTS OFF
OMNI C
RCS THRUSTER CONFIGURATION VERIFIED

:10

:20
REPRESS PACKAGE ISOLATED
FUEL CELL 1 REACTANTS OFF
INITIALIZE ERASEABLE DUMP - V74
CHARGE BATTERY A (57:26)
WASTE WATER DUMP HEATER-OFF
QUADS A&C SM RCS PROP ISOL VALVES CLOSED

57:30
LM POWER UP (57:36)
CM POWER TO LM OFF (57:38)

:40

:50
BATTERY A-OFF

58:00

MCC-H
FLIGHT PLAN

58:00

DOCKED COARSE ALIGN (58:03)
VO6N20E (CSM)
VO6N20E
FINE ALIGN (58:12)
POWER DOWN CMC & IMU (CSM)
MISSION TIMER ACT

58:30

PRIMARY GLYCOL LOOP ACT
FDAI POWER-ON
RCS HTRS-ON
RCS PRESS
DAP LOAD 30120
LM IN ATT HOLD

59:00

CSM POWERED DOWN
IMU FINE ALIGN

UPDATE TO LM
GYRO TORQUING ›'s
FLIGHT PLAN

PQGS, HEATER & EPS DISPLAYS - ALL CIRCUIT BREAKERS OPEN

LGC CLOCK ΔT - V55E
VERIFY ASCENT FEEDS - CLOSE

UPDATE PC+2 DPS
ABORT PAD (59:02)

UPLINK TO LM
PTC REFSSMAT
T EPHEM
FLIGHT PLAN

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**CMP**

- DESCENT O₂ (60:02)
- P30 PAD UPDATE (60:53)
- DPS PRESS & C/O (61:12)
- DPS MNVR GET: 61:30
- POWERDOWN PGNCS

**CDR**

- FLIGHT PLAN UPDATE (62:34)
- ATT HOLD
- LM POWER DOWN
- PC+2 P30 MNVR PAD UPDATE (63:05)

---

**LMP**

- YAW 90° TO NEXT PTC ATT

---

**CMP**

- REST PERIOD (6.0 HOURS)

---

**CDR**

- YAW 90° TO NEXT PTC ATT

---

**LMP**

- REST PERIOD EAT PERIOD

---

**CMP**

- CREW STATUS REPORT

---

**CDR**

- EAT PERIOD

---

**LMP**

- RENDZ RADAR PROCEDURE UPDATE

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FLIGHT PLAN

84:00
- CMP
- REST PERIOD (8 HOURS)

85:00
- CMP
- PROCEDURE TO FAB LI0H HOOKUP

86:00
- CDR
- REST PERIOD (3 1/2 HRS)

87:00
- CDR
- LM LI0H CANISTER CHANGE (85:30)
- LM BIOMED OFF COMM CK EAT PERIOD

88:00
- LMP
- EAT PERIOD

89:00
- LMP
- EAT PERIOD

90:00
- CMP
- EAT PERIOD

91:00
- CDR
- CREW STATUS REPORT

92:00
- LMP
- PROCEDURE UPDATE CM CONFIG
- EAT PERIOD

93:00
- CMP
- CO2 MASTER ALARM

94:00
- CDR
- L10H CANISTER CHANGE
- REST PERIOD (6.0 HRS)

95:00
- LMP
- PROCEDURE UPDATE LM POWER TO CM
- EAT PERIOD

96:00
- CMP
- EAT PERIOD

MISSION | EDITION | DATE | TIME | DAY/REV | PAGE
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FLIGHT PLAN

108:00
- CMP
- CDR
- LMP

109:00
- SHE DISK BURST

110:00
- REST PERIOD

111:00
- IN SFN
- VOICE UP PROCEDURE FOR POWERING CM FROM LM
- PROCEDURE VOICED UP FOR CHARGING BAT A
- PROCEDURE VOICED UP FOR REMOVING BAT A
- PROCEDURE VOICED UP FOR CM POWER REMOVAL
- SELECT HBR
- TRANSFER LM PWR TO CSM
- CHARGE BAT A
- LIOH CANNISTER CHANGE

112:00

113:00
- IN SFN
- PROCEDURE VOICED UP FOR LIOH CANNISTER UTILIZATION
- REST PERIOD (2 1/2 HRS)
- LIOH CANNISTER ADDED

114:00
- REST PERIOD (IN LM)
- LIOH CANNISTER ADDED

115:00
- REST PERIOD

116:00

117:00

118:00

119:00

120:00

MISSION | EDITION | DATE | TIME | DAY/REV | PAGE
--------|---------|------|------|---------|------
FLIGHT PLAN

120:00
PA-ON
VOICED UP PROCEDURES FOR MCC-7, SM SEP, & LM JETTISON
PA-OFF

121:00

122:00
VOICED UP TRANSFER AND STOWAGE LIST
PCM-HBR; PA-ON

123:00
PCM-LBR
REVISED CM POWER UP PROCEDURES
TERMINATE BATTERY CHARGE-BATT A
CSM POWER UP (TM) - CSM POWER DOWN
BATTERY CHARGE BATTERY A
REST PERIOD

124:00
VOICED UP PHOTO DATA FOR POST SM SEP PHOTOGRAPHY

125:00
REST PERIOD

126:00
VOICED UP PROCEDURE FOR BAT B CHARGE

126:00
TERMINATE BATT A CHG
START BATT B CHG
READOUT BATT B VOLTS & CHARGE AMPS
ENTRY PROCEDURES UPDATE TO CREW

127:00

128:00
TERMINATE BATT B CHG SW TO ASCENT H2O
DOCKING TUNNEL INDEX -2.1°
ENTRY PROCEDURES UPDATE

129:00

130:00
POWER AMPS-OFF
REST PERIOD
REST PERIOD

131:00

132:00

132:00
REST PERIOD

MISSION | EDITION | DATE | TIME | DAY/REV | PAGE
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FLIGHT PLAN

132:00
POWER UP LM SYSTEMS
START MISSION TIMER
AGS ACTIVATION & BODY ALIGN
MCC-H UPLINK LM S.V. & REFSSMATS, V66 (SUN-MOON)
P62 - LM IMU REALIGN, OPT 1
LM E-MEMORY DUMP
MCC UPLINK: MCC-7 TARGET LOAD
MCC UPDATE: MCC-7 MNVR PAD
CM/SM SEP PAD
LM JETT PAD
P30 - TARGET MCC-7
P41-RCS THRUSTING
COMPLETE CM RCS PREHEAT
MNVR TO BURN ATT
AGS BODY AXIS ALIGN
MCC-7

133:00

134:00

135:00

136:00

137:00

138:00

138:00

139:00

140:00

141:00

142:00

143:00

144:00

CSM HOT FIRE
SM JETTISON 138:02
SM PHOTOGRAPHY & DESCRIPTION
MCC UPDATE: ENTRY PAD RECOVERY WEATHER REPORT
MCC UPDATE: CM COARSE ALIGN 3's
POWER UP CM SYSTEMS
MCC UPLINK S.V., REFSSMATS, ENTRY TGT
CM COARSE ALIGN
CM P52 IMU ALIGN, OPT 1
LM MNVR TO JETT ATT (FDAO): R 228
LM CLOSEOUT P 125
PRESSURIZE TUNNEL Y 12.4
HATCH INTEGRITY CHECK
LM JETTISON 141:29:56
MNVR TO ENTRY ATT: R 0, P 91.3, Y 0
SXT STAR CHECK
MCC UPDATE ENTRY PAD & S.V.
MOON CHECK
EI - 142:40:39
SPLASHDOWN - 142:54:56