PRINT DATE: 08/20/98

FAILURE MODES EFFECTS ANALYSIS (FMEA) – NON-CIL HARDWARE
NUMBER:05-2B-23400M -X

SUBSYSTEM NAME: COMM & TRACK: UHF SPACE COMMUNICATION
REVISION: 0 11/14/95

PART DATA

	PART NAME VENDOR NAME	PART NUMBER VENDOR NUMBER
LRU	: ANTENNA, UHF ATC BOEING SSD	MC481-0056-0001

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:
ANTENNA, UHF, ATC (VOICE)

REFERENCE DESIGNATORS: 20V74A90

QUANTITY OF LIKE ITEMS: 1
ONE

FUNCTION:
PROVIDES FOR THE TRANSMISSION AND RECEPTION OF UHF-ATC (VOICE) COMMUNICATIONS WITH THE GROUND.

REFERENCE DOCUMENTS: VS70-740119

FAILURE MODES EFFECTS ANALYSIS FMEA – NON-CIL FAILURE MODE
NUMBER: 05-2B-23400M-01

REVISION#: 0 11/14/95

SUBSYSTEM NAME: COMM & TRACK: UHF SPACE COMMUNICATION
LRU: ANTENNA, UHF ATC
ITEM NAME: ANTENNA, UHF ATC

CRITICALITY OF THIS FAILURE MODE: 1R3

FAILURE MODE:
LOSS OF SIGNAL

MISSION PHASE:
PL PRE-LAUNCH
LO LIFT-OFF
DO DE-ORBIT
LS LANDING/SAFING

VEHICLE/PAYLOAD/KIT EFFECTIVITY:
102 COLUMBIA
103 DISCOVERY
104 ATLANTIS
105 ENDEAVOUR
AFTER SPACE COMM MODIFICATION

CAUSE:
PIECE PART FAILURE, CONTAMINATION, VIBRATION, MECHANICAL SHOCK,PROCESSING ANOMALY, THERMAL STRESS

CRITICALITY 1/1 DURING INTACT ABORT ONLY? NO

REDUNDANCY SCREEN
A) PASS
B) PASS
C) PASS

PASS/FAIL RATIONALE:
A)

B)

C)

CORRECTING ACTION:

CORRECTING ACTION DESCRIPTION:
NO CREW CORRECTIVE ACTION AVAILABLE TO RECOVER USE OF FAILED ANTENNA

FAILURE MODES EFFECTS ANALYSIS (FMEA) – NON-CIL FAILURE MODE
NUMBER: 05-2B-23400M-01

- FAILURE EFFECTS -

(A) SUBSYSTEM:
LOSS OF UHF ATC VOICE COMMUNICATIONS WITH THE GROUND.

(B) INTERFACING SUBSYSTEM(S):
LOSS OF UHF ATC VOICE COMMUNICATIONS WITH THE GROUND.

(C) MISSION:
NO EFFECT - FIRST FAILURE

(D) CREW, VEHICLE, AND ELEMENT(S):
NO EFFECT - FIRST FAILURE

(E) FUNCTIONAL CRITICALITY EFFECTS:
AFTER THREE FAILURES (THIS ANTENNA AND 2 S-BAND), POSSIBLE LOSS OF CREW/VEHICLE DUE TO LOSS OF STATE VECTOR UPDATE.

- APPROVALS -

PRODUCT ASSURANCE ENGR : VAN D. NGUYEN : Van Nguyen 8-20-98
DESIGN ENGINEERING : HUNG TRAN : E Duyen for H. Tran 8/21/98