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PRINT DATE: 08/09/89

SHUTTLE CRITICAL ITEMS LIST - ORBITER NUMBER: GO-AA-103000-00-000-X

SUBSYSTEM NAME:

REVISION : 1 89/08/09

	PART NAME VENDOR NAME	PART NUMBER VENDOR NUMBER
■ LRU :	CABLE, GALILEO RPM MONITOR	V763-713738

■ EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:
ORBITER-TO-GSE INTERCONNECT CABLE, STOWED ABOARD ORBITER.

■ QUANTITY OF LIKE ITEMS: 1
ONE

■ FUNCTION:
CABLE STOWED ABOARD ORBITER UNTIL NEEDED AFTER ORBITER LANDING.
CONNECTS R11A1 PANEL OUTPUT JACK TO GALILEO RPM MONITOR SIGNAL
CONDITIONER ASSEMBLY BOX ON GROUND.

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SHUTTLE CRITICAL ITEMS LIST - ORBITER

NUMBER: GO-AA-103000-Q0-000-02

SUBSYSTEM: GALILEO RPM TANK MONITOR
LRU :CABLE, GALILEO RPM MONITOR
ITEM NAME: CABLE, GALILEO RPM MONITOR

REVISION# 1 89/08/25

CRITICALITY OF THIS
FAILURE MODE:1S

■ FAILURE MODE:

ONE OR MORE CONDUCTORS IN CABLE OR CONNECTORS SHORTS TO ONE OR MORE OTHER CONDUCTORS IN THE CABLE OR CONNECTORS.

MISSION PHASE:

LS LANDING SAFING

■ VEHICLE/PAYLOAD/KIT EFFECTIVITY: 104 ATLANTIS 76

■ CAUSE:

CONTAMINATION, VIBRATION, MECHANICAL SHOCK, THERMAL STRESS, PROCESSING ANOMALY

■ CRITICALITY 1/1 DURING INTACT ABORT ONLY? N

- REDUNDANCY SCREEN A) N/A
■ B) N/A
■ C) N/A

PASS/FAIL RATIONALE:

- A)
■ B)
■ C)

- FAILURE EFFECTS -

■ (A) SUBSYSTEM:

LOSS OF ONE OR MORE SYSTEM FUNCTIONS. FAILURE TO DETECT AND DISPLAY POSSIBLE RUNAWAY TANK OVERPRESSURES.

■ (B) INTERFACING SUBSYSTEM(S):

POSSIBLE TANK RUPTURE, FIRE/EXPLOSION,

■ (C) MISSION:

POSSIBLE LOSS OF THE GALILEO/IUS PAYLOAD

SHUTTLE CRITICAL ITEMS LIST - ORBITER NUMBER: GO-AA-103000-00-000-02

- (D) CREW, VEHICLE, AND ELEMENT(S):
POSSIBLE LOSS OF THE ORBITER, POSSIBLE LOSS OF LIFE.
- (E) FUNCTIONAL CRITICALITY EFFECTS:
LOSS OF ONE OR MORE SYSTEM FUNCTIONS. FAILURE TO DETECT POSSIBLE RUNAWAY TANK OVERPRESSURES. POSSIBLE FIRE/EXPLOSION IN ORBITER PAYLOAD BAY. POSSIBLE LOSS OF ORBITER, POSSIBLE LOSS OF LIFE.

DISPOSITION RATIONALE

(A) DESIGN

THE WIRE HARNESSES AND CABLES ARE FABRICATED ACCORDING TO APPROPRIATE WIRE LISTS FOR THEIR INTENDED USAGE. THE WIRE HARNESSES AND CABLES ARE COMPOSED OF PFA TEFLON INSULATED WIRE PER SPECIFICATIONS MB0150-001 AND -002, TETRAFLON INSULATED WIRE PER SPECIFICATION MB0150-001, KAPTON INSULATED WIRE PER SPECIFICATION MB0150-002, AND COAX CABLE PER SPECIFICATION MB0150-003, TERMINATED IN CONNECTOR PER NASA SPECIFICATION 48M38177 AND 40M39689. ALL WIRE HARNESS ARE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF MLC001-0013 WITH CIRCUIT SEPARATION AS DEFINED IN MF0004-002.

(B) TEST

QUALIFICATION, CERTIFICATION AND ACCEPTANCE TESTS ARE PERFORMED TO SATISFY THE ENVIRONMENTAL DESIGN AND PERFORMANCE REQUIREMENTS OF THE DESIGN REQUIREMENTS DOCUMENT (DTR00-0077) VERIFICATION MATRIX.

(C) INSPECTION

WIRE HARNESS ARE INSPECTED FOR WEIGHT, WORKMANSHIP, FINISH, DIMENSIONS, CONSTRUCTION, CLEANNESS, IDENTIFICATION MARKING AND CERTIFIED MATERIALS AND PROCESSES. ACCEPTANCE TEST PROCEDURE ARE APPROVED BY QUALITY ASSURANCE.

(D) FAILURE HISTORY

FAILURE HISTORY INDICATES NO GENERIC FAILURE MODES EXIST (APOLLO, MILITARY)

(E) OPERATIONAL USE
NONE

RELIABILITY ENGINEERING:	W. R. MARLOWE	:	<u>W. R. Marlowe</u>
DESIGN ENGINEERING	: L. COLEMAN	:	<u>L. Coleman</u>
QUALITY ENGINEERING	: C. ROLLINS	:	<u>C. Rollins</u>
NASA RELIABILITY	:	:	<u>[Signature]</u>
NASA SUBSYSTEM MANAGER	:	:	<u>[Signature]</u>
NASA QUALITY ASSURANCE	:	:	<u>[Signature]</u>