SYSTEM:	ASI	FUNCTIONAL CRIT:	1
SUBSYSTEM:	ET Interface Hardware	PHASE(S):	b
REV & DATE:	J, 12-19-97	HAZARD REF:	S.11
DCN & DATE:			
ANALYSTS:	C. Rush/E. Howell		

FAILURE MODE: Structural Failure

FAILURE EFFECT: b) Loss of mission and vehicle/crew due to LH2 tank structural failure or debris source to Orbiter from GH2 fittings and fairings.

TIME TO EFFECT: Immediate

FAILURE CAUSE(S): Improper Manufacture

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: Provide aerodynamic protection for GH2 pressline.

FMEA ITEM CODE(S)	PART NO.	PART NAME	QTY	EFFECTIVITY
4.5.14.1	80911071880-269	Fairing Assy	1	LWT-54 & Up
4.5.15.1	80911071880-260	Fairing Assy	1	LWT-54 & Up

REMARKS: The fairings are grouped as the failure mode, causes and effects are the same.

SYSTEM:	ASI	REV & DATE:	J, 12-19-97
SUBSYSTEM:	ET Interface Hardware	DCN & DATE:	
FMEA ITEM CODE(S):	4.5.14.1, 4.5.15.1		

RATIONALE FOR RETENTION

DESIGN:

The fairing skin is formed from 2024-T81 sheet and ribs are machined from 7075-T7351 aluminum alloy plate stock. Materials selected for this part number are in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties. The fairing is designed to the required yield (1.1) and ultimate (1.4) safety factors (ET Stress Report 826-2188).

TEST:

The Fairing Assy is certified. Reference HCS MMC-ET-TM08-L-S112 (LWT-54 thru 88) and HCS MMC-ET-TM08-L-S515 (LWT-89 & Up).

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

Verify materials selection and verification controls (MMC-ET-SE16, drawing 80911071882).

Inspect dimensional conformance (drawing 80911071882).

FAILURE HISTORY:

Current data on test failures, unexplained anomalies and other failures experienced during ground processing activity can be found in the PRACA data base.