

CRITICAL ITEMS LIST (CIL)

SYSTEM:	ASI	FUNCTIONAL CRIT:	1
SUBSYSTEM:	Intertank	PHASE(S):	b
REV & DATE:	J, 12-19-97	HAZARD REF:	S.11
DCN & DATE:			
ANALYSTS:	H. Keefe/E. Howell		

FAILURE MODE: Structural Failure

FAILURE EFFECT: b) Loss of mission and vehicle/crew due to debris source to orbiter.

TIME TO EFFECT: Immediate

FAILURE CAUSE(S):
 A: Improper Manufacture
 B: Failure of Attaching Hardware

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: Provides controlled seal area around GH2 pressurization line.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
4.2.12.1	80911001316-005	GH2 Pressline Seal	1	LWT-54 & Up

REMARKS:

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM: ASI
SUBSYSTEM: Intertank
FMEA ITEM CODE(S): 4.2.12.1

REV & DATE: J, 12-19-97
DCN & DATE:

RATIONALE FOR RETENTION

DESIGN:

- A, B: The GH2 pressurization line fairing seal and closure controls leakage/venting from Intertank Compartment. It is made from 6061 aluminum alloy. Materials selected for this part number are in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties. The Pressurization Line Seal and attach bolts are designed to the required ultimate safety factor of 1.4 (ET Stress Report 826-2188).
- B: Attaching hardware is selected from the Approved Standard Parts List (ASPL 826-3500), installed per STP2014 and STP2021. Attaching hardware is torqued using values specified on Engineering drawings. Tensile installation loads are sufficient to provide screening for major flaws in individual fasteners.

TEST:

The GH2 Pressline Seal is certified. Reference HCS MMC-ET-TM08-L-S014 (LWT-54 thru 88) and HCS MMC-ET-TM08-S512 (LWT-89 & Up).

Vendor

- B: Attaching hardware is procured and tested to standard drawings 26L3 and 26L14.

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

- A, B: Verify materials selection and verification controls (MMC-ET-SE16, drawing 80911001316 and standard drawings 26L3 and 26L14).

MAF Quality Inspection:

- B: Inspect that attaching hardware is free from damage (drawing 80911001319, STP2014 and STP2021).
- A, B: Verify installation and witness torque (drawing 80911001319).

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.