

CRITICAL ITEMS LIST (CIL)

SYSTEM: Electrical  
 SUBSYSTEM: LH2 Depletion System  
 REV & DATE: J, 12-19-97  
 DCN & DATE:  
 ANALYSTS: H. Claybrook

FUNCTIONAL CRIT: 1  
 PHASE(S): b  
 HAZARD REF: E.01, P.06

FAILURE MODE: Loss of Damping Capability  
 FAILURE EFFECT: b) Premature MECO or engine failure due to false dry or false wet signals. Incorrect signal is caused by vibration levels exceeding limits of LH2 depletion Sensors  
 TIME TO EFFECT: Minutes  
 FAILURE CAUSE(S): A: Assembly Error  
 B: Failure of Attaching Hardware  
 REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: Provides vibration isolation for the LH2 depletion sensors

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
3.6.4.1	54L10-1	Vibration Isolator	2	LWT-89 & Up

REMARKS:

CRITICAL ITEMS LIST (CIL)  
CONTINUATION SHEET

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RATIONALE FOR RETENTION

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DESIGN:

A, B: These isolators are designed to protect components from severe vibration and may be used in temperatures from -423° to 700° Fahrenheit.

The vibration isolator consists of wire rope formed into loops and held into place by four steel bar clamps. The clamps are held together with screws between the wire rope coils. Screws are staked to prevent loosening. Inserts on the ends are used for mounting the part to structure. All isolator parts are made from corrosion resistant steel (CRES).

TEST:

The isolator has been certified for use with the LH2 depletion sensors (reference HCS MMC-ET-TM08-L-E050).

Vendor:

A: The isolator is procured and acceptance tested to standard drawing 54L10. Acceptance testing includes natural frequency determination and transmissibility.

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

- A: Verify material selection and verification controls (MMC-ET-SE16 and standard drawing 54L10).
- A: Verify screws are properly installed and staked (standard drawing 54L10).
- A: Verify proper installation of inserts (standard drawing 54L10).
- A: Verify acceptance test (standard drawing 54L10)

MAF Quality Inspection:

- A: Verify vendor certificate of compliance for 54L10-1 vibration isolator.
- B: Verify installation and witness torque of 54L10-1 vibration isolator (drawing 80934003719).

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.