

FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST

FMEA NUMBER: EC-STBD2-20

ORIGINATOR: JSC

PROJECT:EDFT-03

PART NAME: TERA PROBE REST.
 PART NUMBER: SED39126343-301
 LSC CONTROL NO: N/A
 ZONE/LOCATION: STBD-2

LRU/ORU PART NUMBER: SED39126343-301
 LRU/ORU PART NAME: BAY 2 STBD ASSY
 DRAWING/REF DESIGNATOR: SEE P/N
 EFFECTIVITY/AFFECT STAGE: STS-72

QUANTITY: 1
 SYSTEM: OFE
 SUBSYSTEM: EVA

CRITICALITY:

CRITICAL ITEM: No
 CRITICALITY CATEGORY: 1R/3

SUCCESS PATHS: 3
 SUCCESS PATH REMAINING: 2

END ITEM NAME: N/A
 END ITEM FUNCTIONAL: N/A
 END ITEM CAPABILITY: N/A
 END ITEM FAILURE TOLERANCE: N/A

REDUNDANCY SCREENS:

A/1. C/O PRELAUNCH: Pass
 2. C/O ON ORBIT: N/A for NSTS
 B/3. DETECTION FLIGHT CREW: N/A
 4. DETECTION GROUND CREW: N/A
 C/5. LOSS OF REDUNDANCY FROM SINGLE CAUSE: Pass

FUNCTION: Launch/landing restraint used to hold the TERA Passive Worksite Interface. Three compression springs hold 1/4 turn locking pin in position to prevent release of TERA.

FAILURE MODE CODE: N/A for NSTS

FAILURE MODE: Inadvertent release of pin at launch/landing.

CAUSE: Piece part failure, contamination.

REMAINING PATHS: Redundant springs.

EFFECT/ MISSION PHASE:
 Launch/Landing.

CORRECTIVE ACTION: None.

-FAILURE EFFECTS-

END ITEM/LRU/ORU/ASSEMBLY: Two spring failures have no effect.

SUBSYSTEM/NEXT ASSEMBLY/INTERFACE: N/A

SYSTEM/END ITEM/MISSION: Partial loss of DTO objectives.

CREW/VEHICLE : None for double failure, the lock pin is prevented from disengaging by 3 compression springs on the lock pin device. If all springs failed, the lock pin could rotate and release resulting in one of the TERA launch restraints being opened. This may overload the remaining restraints. Possible loose equipment in PLB may collide with vehicle.

FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST

FMEA NUMBER: EC-STBD2-10 ORIGINATOR: ISC PROJECT:EDFT-03

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|------------------------------|--------------------------------------|----------------|
| PART NAME: TERA PROBE REST. | LRU/ORU PART NUMBER: SED39126343-301 | QUANTITY: 1 |
| PART NUMBER: SED39126343-301 | LRU/ORU PART NAME: BAY 2 STBD ASSY | SYSTEM: GFE |
| LSC CONTROL NO: N/A | DRAWING/REF DESIGNATOR: SEE P/N... | SUBSYSTEM: EVA |
| ZONE/LOCATION: STBD-2 | EFFECTIVITY/AFFECT STAGE: STS-72 | |

HAZARD INFORMATION:

HAZARD: N/A

HAZARD ORGANIZATION CODE: N/A

HAZARD NUMBER: N/A

TIME TO EFFECT: Seconds
 TIME TO DETECT: N/A
 TIME TO CORRECT: immediate
 FAILURE DETECTION/FLIGHT: None

REMARKS:

-RATIONALE FOR ACCEPTABILITY-

- (A) DESIGN: N/A
- (B) TEST: N/A
- (C) INSPECTION: N/A
- (D) FAILURE HISTORY: N/A
- (E) OPERATIONAL USE: N/A
- (F) MAINTAINABILITY: N/A

PREPARED BY: G. Wright

REVISION:

DATE: 8/10/95

WAIVER NUMBER: