

FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIS

FMEA NUMBER: CSD-TB-28 ORIGINATOR: JSC PROJECT: EDFT-02

PART NAME: MSHT LRU/ORU PART NUMBER: SED39126212-301 QUANTITY: 3
 PART NUMBER: SED39127091-301 LRU/ORU PART NAME: MSHT SYSTEM: DTO 671
 LSC CONTROL NO: N/A DRAWING/REF DESIGNATOR: SEE P/N SUBSYSTEM: EVA
 ZONE/LOCATION: CABIN/PLB EFFECTIVITY/AFFECT STAGE: STS-69

CRITICALITY:

CRITICAL ITEM: No SUCCESS PATHS: 3
 CRITICALITY CATEGORY: 1R/3 SUCCESS PATH REMAINING: 2

REDUNDANCY SCREENS:

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

FUNCTION: The micro conical handling shield handling tool is used to manipulate the MM/OD shield, provides the tether point for the shield, and provides the tool to actuate the 1/4 turn fasteners.

FAILURE MODE CODE: N/A for NSTS
 FAILURE MODE: Unable to actuate the tool (stuck on shield).

CAUSE: Contamination, galling, piece part defect

REMAINING PATHS: 2 methods to jettison shield. EFFECT/ MISSION PHASE: EVA

CORRECTIVE ACTION: If shield is installed and tool can not be removed, remove the shield with 2nd tool and jettison shield or remove the shield utilizing the EVA contingency bolts.

-FAILURE EFFECTS-

END ITEM/LRU/ORU/ASSEMBLY:
 Unable to remove tool from shield

SUBSYSTEM/NEXT ASSEMBLY/INTERFACE: N/A

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

CREW/VEHICLE: None for single failure, tool must be properly stowed in order to ensure that it will not become free during deorbit/landing. Loose equipment in the PLB could cause significant damage to vehicle.

FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST

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HAZARD INFORMATION:

HAZARD: YES: NO: x

HAZARD ORGANIZATION CODE: N/A

HAZARD NUMBER: N/A

TIME TO EFFECT: Hours
 TIME TO DETECT: Seconds
 TIME TO CORRECT: Minutes
 FAILURE DETECTION/FLIGHT: Visual

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: 4/15/95

WAIVER NUMBER