

FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST

FMEA NUMBER: EC-STBD2-1 ORIGINATOR: ISC PROJECT: EDFT-03

PART NAME: PWP REST. LATCH	LRU/ORU PART NUMBER: SED39126343-301	QUANTITY: 5
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	

CRITICALITY:

CRITICAL ITEM: No SUCCESS PATHS: 3
 CRITICALITY CATEGORY: 1R/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: Pass
- C/5. LOSS OF REDUNDANCY FROM SINGLE CAUSE: Pass

FUNCTION: Launch/landing stowage restraints for the APFR, TERA, and PFRWS. There are 3 types of restraints. The 90° lift and turn bolt lock is common to all 3 PWP components. The lift and turn restraint prevents the EVA bolt from backing out.

FAILURE MODE CODE: N/A for NSTS

FAILURE MODE: Lift and turn mechanism unlocks inadvertently or bolt backs out.

CAUSE: Spring failure, contamination, piece part failure.

REMAINING PATHS: Ball detents, EVA bolt, and 2 Springs	EFFECT/ MISSION PHASE: Launch/Landing.
---	---

CORRECTIVE ACTION: None required.

-FAILURE EFFECTS-

END ITEM/LRU/ORU/ASSEMBLY: EVA restraint bolt not prevented from backing out by any means if 2 springs and ball detents holding lift and turn mechanism fail.

SUBSYSTEM/NEXT ASSEMBLY/INTERFACE: N/A

SYSTEM/END ITEM/MISSION: Partial loss of DTO if PWP damaged.

CREW/VEHICLE : None for double failure, if all components fail allowing lift and turn restraint to rotate, and the EVA bolt backs out, one PWP restraint latches will be open. This may allow overloading the remaining restraints. Possible loose equipment in PLB may collide with vehicle.

FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST

FMEA NUMBER: EC-STBD2-1 ORIGINATOR: ISC: PROJECT:EDFT-03

PART NAME: PWP REST. LATCH	LRU/ORU PART NUMBER: SED39126343-301	QUANTITY: 5
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: Immediately

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:
