

**FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST**

FMEA NUMBER: EC-STBD2-15      ORIGINATOR:      JSC      PROJECT:EDFT-03

PART NAME: PWP RESTRAINTS      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

**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:**

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 restraints for the AFR, TERA, and PFRWS. There are 3 types of restraints. All restraints are mounted to the transition plate by EVA removable bolts.

FAILURE MODE CODE: N/A for NSTS

FAILURE MODE: Jammed restraint.

CAUSE: Contamination, wear, galling, piece part defect.

**REMAINING PATHS:**

Two other restraint or EVA releasable bolts.

EFFECT/MISSION PHASE: EVA

**CORRECTIVE ACTION:** For jammed open restraint - release remaining restraints and jettison PWP component. For jammed closed restraint - close remaining restraints. For one jammed open and one jammed closed restraint - remove closed latch by EVA bolts and jettison PWP component.

For PFRWS - PFRWS latch can be contingency released with 7/16 in. box ratchet. However this latch will always be activated first. If binding in latch occurs, latch will be moved back to it's earlier position and corrective action taken as stated above.

**-FAILURE EFFECTS-**

END ITEM/LRU/ORU/ASSEMBLY: Unable to open or close a PWP restraint.

SUBSYSTEM/NEXT ASSEMBLY/INTERFACE: N/A

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

CREW/VEHICLE : Unable to land with a open PWP restraint. Equipment must be jettisoned. Loose equipment in PLB during deorbit/landing could impact and damage vehicle.

---

**FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST**


---

FMEA NUMBER: EC-STBD2-15      ORIGINATOR:      ISC      PROJECT: EDFT-03

---

PART NAME: PWP RESTRAINTS	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: 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: 8/10/95

WAIVER NUMBER:

---