

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

FMEA NUMBER: PRD-FM08

ORIGINATOR: JSC

PROJECT: GFE - SHUTTLE

PART NAME: Ratchet Release Assy  
 LRU PART NUMBER: 10163-10063-03  
 DRAWING:

PART NUMBER: 10163-20002-0103  
 LRU PART NAME: PRD  
 SUBSYSTEM: PRD

QUANTITY: 1  
 SYSTEM: EVA Tools  
 EFFECTIVITY: STS-70

CRITICALITY:

CRITICAL ITEM? NO

CRITICALITY CATEGORY\_1R/3\_

REDUNDANCY SCREEN:

A - PASS  
 B - PASS  
 C - PASS

FUNCTION: Used to crank in webbing and secure gears.

FAILURE MODE: Jams or binds under tension.

CAUSE: Contamination.

FAILURE DETECTION: N/A

REMAINING PATHS: Spare PRD

EFFECT/ MISSION PHASE: EVA

CORRECTIVE ACTION:

Use spare PRD to relieve tension, and then remove failed PRD.

-FAILURE EFFECTS-

END ITEM: Unable to ratchet in strap.

INTERFACE: Unable to securely restrain RMS, payload or PLB doors.

MISSION: None.

CREW/VEHICLE : Possible vehicle damage from unsecured payload. Loss of vehicle if PLB doors can't be closed.

HAZARD INFORMATION:

HAZARD: YES\_\_\_ NO\_X

HAZARD ORGANIZATION CODE:

HAZARD NUMBER:

TIME TO EFFECT: Immediate  
 TIME TO DETECT: Immediate  
 TIME TO CORRECT: Minutes

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LRU PART NUMBER: 10163-10063-03  
DRAWING:****PART NUMBER: 10163-20002-0103  
LRU PART NAME: PRD  
SUBSYSTEM: PRD****QUANTITY: 1  
SYSTEM: EVA Tools  
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**FAILURE DETECTION/FLIGHT: Visual, tactile**

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**REMARKS**

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**-RATIONALE FOR ACCEPTABILITY-**

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- (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

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**PREPARED BY: C. L. Hartman****REVISION:****DATE: 05/24/95****WAIVER NUMBER:**

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