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

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AREA NUMBER: EDFT-05-STBD7-3	ORIGINATOR: JSC	PROJECT: DTO 671
PART NAME: LATCH BOLT ASSEMBLY	LRU PART NUMBER: SED39128554-401	QUANTITY: 2
PART NUMBER: 683-55271-1	LRU PART NAME: BAY 7 STBD INSTALLATION	SYSTEM: EDFT-05
DRAWING: SEE P/N	SUBSYSTEM: N/A	EFFECTIVITY: STS-80

**CRITICALITY:**CRITICAL ITEM? YES \_\_\_\_\_ NO XCRITICALITY CATEGORY: 1R/3**REDUNDANCY SCREENS:**A - Pass  
B - N/A  
C - Pass

FUNCTION: Two latch bolt assemblies are used to secure the CHIA subcarrier assembly to the DCC FSE for launch and landing. Each assembly has an anti-backdrive device to prevent the bolt from losing preload and backing out after the torquing device has been removed.

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**FAILURE MODE:** Unable to secure CHIA subcarrier assembly to DSIA

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**CAUSE:** Contamination, galling, piece part failure**FAILURE DETECTION:** Visual

REMAINING PATHS: Two - C-channel contingency release bolts and other C-channel bolts. Deorbit and landing loads were analyzed and results obtained (in all possible combinations and using a factor of safety of 1.0) indicate that, although not recommended, safe landing could be accomplished with one latch bolt engaged.

**EFFECT/MISSION PHASE:** EVA, Landing**CORRECTIVE ACTION:** Prior to de-orbit, jettison subcarrier if it is free. Otherwise, free by releasing contingency bolts and jettison.

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**-FAILURE EFFECTS-**

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**END ITEM:** Unable to secure subcarrier assembly for landing.**INTERFACE:** N/A**MISSION:** Possible partial loss of DTO objectives**CREW/VEHICLE:** Possible vehicle damage if unrestrained subcarrier (600 lbs) not jettisoned prior to landing.

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**HAZARD INFORMATION:**HAZARD: YES \_\_\_\_\_ NO X

HAZARD ORGANIZATION CODE: N/A

HAZARD NUMBER: N/A

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TIME TO EFFECT: Hours

TIME TO DETECT: Seconds

TIME TO CORRECT: Minutes

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REMARKS:

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**RETENTION RATIONALE.**

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

PREPARED BY: Murray Epstein

REVISION:

DATE: 4/15/96

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