FMEA/CIL DATA SHEET

FMEA NUMBER: DTO-OTD03-003 ORIGINATOR: JSC PROJECT: EVA

PART NAME: Bayonet Latch	LRU/ORU P/N: SEG33106254-301	QUANTITY: 1
PART NUMBER: SEG33106977-301	LRU/ORU PART NAME: OTD	
LSC CONTROL NO: N/A	DRAWING/REF DESIG: SEG33106375-301	SYSTEM: EVA
ZONE/LOCATION: Bay 7, Port Side	EFFECTIVITY/AFFECT STAGE: STS-80	SUBSYSTEM: TA&A

CRITICALITY

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

END ITEM NAME: ORU Transfer Device (OTD) ORU Attachment Assembly - Bayonet Latch Receptacle
END ITEM FUNCTIONAL: Secures EVA tools to the OTD ORU Attachment Assy for STS-80 operations.
END ITEM CAPABILITY: Has ball detent to "soft-dock" tool bayonet probe prior to "hard-dock" latch engagement.
END ITEM FAILURE TOLERANCE: The OTD ORU Attachment Assy Bayonet Latch is two fault tolerant.

REDUNDANCY SCREENS:

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

FUNCTION: The OTD ORU Attachment Assembly Bayonet Latch Receptacle consists of a ball detent in the tool probe receptacle interface which "soft-docks" the EVA tool. A sliding latch lever with ball detent then secures the EVA tool in "hard-dock" position. In the event the latch lever is inadvertently engaged, the "soft-dock" ball detent will retain the EVA tool to the Bayonet Receptacle.

FAILURE MODE CODE: N/A for DTO
FAILURE MODE: INADVERTENT RELEASE
CAUSE: Inadvertent disengagement of Bayonet Latch lever, dual ball detent failures (one in Latch lever & other at groove interface of tool bayonet probe), or inadvertent kick or bump on the Latch lever.

REMAINING PATHS: 2 - After Latch lever has been inadvertently engaged, the "soft-dock" ball detent, which interfaces with the groove of the tool bayonet probe, will retain the EVA tool to the Bayonet Receptacle.

EFFECT/MISSION PHASE: On-orbit EVA operations

CORRECTIVE ACTION: None - "soft-dock" ball detent will retain tool on initial failure of Latch lever or inadvertent disengagement of lever and tether will retain tool in the event the "soft-dock" detent fails.

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-FAILURE EFFECTS-

END ITEM/LRU/ORU/ASSEMBLY: First failure (inadvertent disengagement of Latch lever) will have no effect as the EVA tool will still be retained by the Bayonet Receptacle "soft-dock" ball detent.

SUBSYSTEM/NEXT ASSEMBLY/INTERFACE: Crew can use other Bayonet Latch Receptacle if ball detent failures occur or resort to using the Mini-workstation for EVA tool stowage.

SYSTEM/END ITEM/MISSION: None

CREW/VEHICLE: Dual ball detent failures and/or inadvertent engagement of the Bayonet Latch lever and associated "soft-dock" ball detent failure, will result in the inadvertent release of an EVA tool from the Bayonet Receptacle.

HAZARD INFORMATION:

HAZARD: ___ YES __X__ NO
HAZARD ORGANIZATION CODE: N/A
HAZARD NUMBER: N/A

TIME TO EFFECT: Seconds
TIME TO DETECT: Seconds
TIME TO CORRECT: Seconds
FAILURE DETECTION: Visual

REMARKS:

None.

-RATIONALE FOR ACCEPTABILITY-

N/A

PREPARED BY: M. B. Moskowitz
DATE: May 1996

REVISION: N/A
WAIVER NUMBER: N/A