

## EXECUTIVE RISK ASSESSMENT SUMMARY

HAZARD REPORT NUMBER: LW-PS-RAES-2D	DATE: 7/96
REV. LETTER:	REV. DATE:
PART NUMBER: 940077-3	LRU NUMBER: SED39129185
TITLE: Unable to properly configure seat	1. SEVERITY: Catastrophic 2. LIKELIHOOD OF OCCURRENCE: Improbable 3. CLASSIFICATION: Controlled
CAUSE: D. Seat-back cannot be locked into landing position - tilt cable jams in the disengaged position.	REDUNDANCY SCREENS: A - Pass B - Pass C - Pass
FMEA: LWS-PS-RAES-2D      Criticality: 1R/2 Name/Quantity: Seat-back tilt control cable/1 Function: Controls the seat back tilt latching mechanism. Failure Mode: Tilt control cable jams in the disengaged position	Cause: Contamination, excessive wear, piece-part defect Failure detection: Crew notices seat-back fails to latch.
Corrective Action: For Launch/RTLS, De-Orbit, Landing latching pins can be manually pushed into place with control cable handle or "T"-bar on rear of seat.	
EFFECT: Time to Effect: Seconds Time to Correct: Seconds Failure Effect: Seating inadequate to provide support/restraint for nominal flight loads or crash loads. Possible crew injury/loss of crew due to crewmember being tossed during turbulence, landing or following a failure which results in a crash landing.	REMAINING PATHS: None
CONTROL/RETENTION RATIONALE: DESIGN: 1. Designed for minimum access for contamination. 2. Linkages are decoupled to allow engagement of one latching pin if the other is jammed (LWS-PS has positive margins of safety for one latch out on nominal landing).	
FAILURE HISTORY: OPERATIONAL USE: 4. Latching pins can be manually pushed into place with control cable handle or "T"-bar on rear of seat. MAINTAINABILITY:	

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**VERIFICATION:**

**TEST:** 3. Functional test performed before and after each certification test and acceptance testing with QA participation.

3a. A latch/unlatch test performed (150 iterations). No failures encountered.

**INSPECTION:**

1. During assembly all parts are checked to be generally clean.

3b. PDA 4.2.6, PIA 4.2.3 - With the seat-back in the aft position unlock the seat-back adjustment lever located on the right side of the seat pan, slowly move seat back forward and release the control cable lever. The seat back shall lock in place in the forward launch position. Repeat for aft position. Repeat previous steps using "T"-bar. With seat back in forward position, pull "T"-bar move seat back forward into folded position. Release stowage pins and return to forward position. During all phases "T"-bar should be easily released and the seat back shall be free of jams, bindings, or inadvertent stops and move smoothly.

3c. OMRS V66AAO.022-C, D - Verify pilot/cmdr two position seat back and head rest adjustment, full range and locking capability.

3d. Life Certification Test (800 full range of motion iterations) completed on seat-back (TPS DW95201430) and passed.

4. Crew training (Habitability, Equipment and Procedures - HAB EQ PROC) on the use of the control cable and "T"-bar.