

EXECUTIVE RISK ASSESSMENT SUMMARY

HAZARD REPORT NUMBER: LW-PS-RAES-4B	DATE: 7/96
REV. LETTER:	REV. DATE:
PART NUMBER: 950001-205	LRU NUMBER: SED39129185
TITLE: Unable to release crew from restraint system.	1. SEVERITY: Catastrophic 2. LIKELIHOOD OF OCCURRENCE: Improbable 3. CLASSIFICATION: Controlled
CAUSE: B. Restraint system release mechanism fails to release.	REDUNDANCY SCREENS: A - Pass B - Pass C - Pass
FMEA: LWS-PS-RAES-4B Criticality: IR/2 Name/Quantity: Restraint release mechanism Function: Restrain crew member in the seat. Failure Mode: Internal components of release button mechanism fail in engaged position.	Cause: Contamination, excessive wear, piece-part defect Failure detection: Crew member cannot release restraint harness.
Corrective Action: Crew loosens all manual belt adjustments to maximum for egress out of seat.	
EFFECT: Time to Effect: Seconds Time to Correct: Seconds Failure Effect: Crew member hampered from egressing from seat. Possible crew member injury/loss of crew.	REMAINING PATHS: 1. Manual adjustment buckles
CONTROL/RETENTION RATIONALE: DESIGN: 1. Designed for minimum access for contamination. 3. Restraint system harness will be designed to withstand vibrations associated with Launch, RTLS and Landing. TEST: 2. Functional test performed before and after each certification test and acceptance testing with QA participation. INSPECTION: FAILURE HISTORY: OPERATIONAL USE: MAINTAINABILITY:	

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VERIFICATION:

1. During assembly all parts are checked to be clean.
- 2a. PDA 4.2.8.6, PIA 4.2.8.6 Verify that the fittings for the shoulder and lap belts will release from the buckle. With a small preload on the harness system, 20 +/- 2 pounds, release the fittings from the buckle by using one hand and turn the buckle release clockwise. Repeat for counter-clockwise.
- 2b. OMRSD V66AAO.022-K, L - Verify locking capability of pilot/cmdr lap belt/shoulder harness buckle, engage and disengage.
3. A vibration test has been performed (QVT TPS FY9620123) to the acceptance levels listed below and approved by EM2:

<u>Frequency Range (Hz)</u>	<u>Level</u>	
20	0.00053	g ² /Hz
150	0.030	g ² /Hz
350	0.030	g ² /Hz
1000	0.030	g ² /Hz
2000	0.0075	g ² /Hz
Overall = 6.1 grms		