CRITICAL ITEMS LIST

ASSY NOMENCLATURE: *LIFERAFT*
ASSY P/N: *SDD40100198-701*
SYSTEM: *CREW ESCAPE SYSTEM*
SUBSYSTEM: *LRU-1BU LIFERAFT*
REVISION

FMEA REF	FMEA REV	NAME,QTY & DRAWING REF DESIGNATION	CRIT'Y	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
1 6 1		LIFERAFT(1) SDD40100198-701	2/1R	1.6.1 Mode: Upper/lower chamber will not maintain pressure Cause: • Seam debonding • Defective material	Unable to maintain buoyancy of crewmember if second chamber fails	1. DESIGN FEATURES TO MINIMIZE FAILURE MODE a. The liferaft is fabricated from heat sealable polyurethane coated nylon b. Two separate inflatable cells c. Designed in accordance with MIL-L-85824 d. CO_2 inlet pressure valves are cement reinforced to the nylon fabric 2. TEST OR ANALYSIS TO DETECT FAILURE MODE a. Acceptance Test (1) Operational test Raft is inflated in less than 30 seconds to its design shape, pressure shall not be less than 25 psig or greater than 2 0 psig (2) Structural test The chambers are inflated to 5 0 psig, and after 10 minutes, shall not be less than 4 75 psig (3) Leakage test The chambers are inflated to 2 0 ± .25 psig for 4 hours, minimum decay of 4 psig (4) Each roll of fabric has a sample burst test done to 7 psig (5) A heat seal pull test is performed on each roll of fabric to 40 pounds

EXPEDITE PROCESSING

PREPARED BY *R E. AllisonIB W Sauser*
SUPERSEDING DATE
APPROVED BY *J O Schlosser*
DATE *10/24/88*

CRITICAL ITEMS LIST

ASSY NOMENCLATURE *LIFERAFT*

ASSY P/N: *SDD40100198-701*

SYSTEM: *CREW ESCAPE SYSTEM*

SUBSYSTEM *LRU-18U LIFERAFT*

REVISION

FMEA REF	FMEA REV	NAME, QTY & DRAWING REF DESIGNATION	CRIT'Y	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
1 6 1		LIFERAFT (1) --- SDD40100198-701	2/1R	1.6.1 Mode: Upper/lower chamber will not maintain pressure Cause: • Seam debonding • Defective material	Unable to maintain buoyancy of crewmember if second chamber fails	2. TEST OR ANALYSIS TO DETECT FAILURE MODE b. Certification (1) Previously qualified by the Royal Australian Air Force Aircraft Research and Development Unit, report number TI624. (2) Qualified by the Department of Navy, Operational Test and Evaluation Force, Test and Evaluation Master Plan 807, March 28, 1984 (3) Structural test at 5.0 ± .25 psig for 10 minutes maximum (4) Leak test at 2.0 ± 0.25 psig for 4 hours; minimum amount of decay 4 psig c Turnaround Testing (In accordance with PIA 23031) (1) Structural test at 5.0 ± .25 psig for 10 minutes maximum (2) Leak test at 2.0 ± 0.25 psig for 4 hours, minimum amount of decay 4 psig 3. INSPECTION a The rafts are monitored by DCAS inspection b Tube is inspected for proper installation of valves and for seam workmanship c Subassembly parts are checked before installation at final assembly d Each completed raft is visually inspected after final assembly e In process and finished items are inspected 100 percent f All coated fabrics are visually checked for defects

PREPARED BY *R. L. Allison/B. W. Sauser*

SUPERSEDING DATE

APPROVED BY

CEE/LR-2

DATE *10/31/89*

CRITICAL ITEMS LIST

ASSY NOMENCLATURE: *LIFERAFT* SYSTEM: *CREW ESCAPE SYSTEM* REVISION

ASSY P/N: *SDD40100198-701* SUBSYSTEM: *LRU-1BU LIFERAFT* PAGE 3 OF 39

FMEA REF	FMEA REV	NAME, QTY & DRAWING REF DESIGNATION	CRIT'Y	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
1 6 1		LIFERAFT (1) --- SDD40100198-701	2/1R	1.6.1 Mode: Upper/lower chamber will not maintain pressure Cause: • Seam debonding • Defective material	Unable to maintain buoyancy of crewmember if second chamber fails	3. **INSPECTION** g. One-Hundred percent welded seam inspection h. During operational and pressure testing, seams, and material are inspected for evidence of any failure <u>Turnaround Inspection</u> (In accordance with PIA 23031) a. Tube is inspected for proper installation of valves and for seam workmanship. 100 percent welded seam inspection b. Each raft is visually inspected for damage 4. **FAILURE HISTORY** None. This raft is used by the Navy and Royal Australian Air Force 5. **OPERATIONAL USE** a. Operational effect of failure. The liferaft has both upper and lower inflatable chambers. The first failure would have no effect, as only one chamber is required for crewmember floatation. The crewmember could be lost through exposure or lack of buoyancy if both chambers failed b. Crew action. If the leak was small, the crewmember could keep the chamber inflated by using the oral inflation assembly c. Crew training. The crew is trained to use the oral inflation assembly d. Mission constraints. None. Mission is terminated prior to use of the equipment e. In-flight checkout. None. Liferaft cannot be inspected during flight

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PREPARED BY *R. L. Allison/B. W. Sauter* SUPERSEDING DATE APPROVED BY *J. O. Schlosser* DATE *10/24/88*