

CRITICAL ITEMS LIST

ASSY NOMENCLATURE: PERSONAL LIFEVEST (LPU)

SYSTEM: CREWESCAPE SYSTEM

REVISION

ASSY P/N: 40P59G-01

SUBSYSTEM: PERSONAL PARACHUTE ASSY.

PAGE 64 OF 79

SMEA		NAME, QTY & DRAWING REF DESIGNATION	CRIT'Y	FAILURE MODE AND CAUSE	FAILURE EFFECTION END ITEM	RATIONALE FOR ACCEPTANCE
REF	REV					
6.2.1		LIFE PRESERVER UNIT (LPU), (1) 40P59G-01	2/1R	6.2.1 Mode: Damaged LPU chamber Cause: a defective material	Unable to float crewmember's head above water if second LPU chamber fails	<p>1. DESIGN FEATURES TO MINIMIZE FAILURE MODES</p> <ul style="list-style-type: none"> a. The bladder is polyurethane coated nylon. b. There are two separate chambers, an inner and outer cell. c. Both the inner and outer cells can be orally inflated. d. The seams are ultrasonic heat sealed. <p>2. TEST OR ANALYSIS TO DETECT FAILURE MODE</p> <ul style="list-style-type: none"> a. <u>Acceptance Test</u> <ul style="list-style-type: none"> (1) Inner cell leak test, 10 0 scc/minute maximum at 1.5 ± 0.2 psig for 10 minutes. (2) Structural test inner cell, 4.0 ± 0.5 psig for 5 minutes (3) Inner cell leak test after structural test, 10 0 scc/minute at 1.5 ± 0.2 psig for 10 minutes (4) Outer cell leak test, 10 0 scc/minute maximum at 1.5 ± 0.2 psig for 10 minutes (5) Outer cell structural test, 4.0 ± 0.2 psig for 5 minutes (6) Final assembly leak test, inner and outer cell, 10 0 scc/minute maximum at 1.5 ± 0.2 psig for 10 minutes b. <u>Certification Test</u> <ul style="list-style-type: none"> (1) Structural test inner cell, 4.0 ± 0.5 psig for 5 minutes (2) Outer cell structural test, 4.0 ± 0.2 psig for 5 minutes

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SUPERSEDING DATE: 10/24/01

BY: J. D. SCHLOSSER

DATE: 07/89

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ASSY NOMENCLATURE: PERSONAL LIFEVEST (LPU)
ASSY P/N: #0059G-01

SYSTEM: CREW ESCAPE SYSTEM

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PAGE 65 OF 79

FMEA		NAME, QTY & DRAWING REF DESIGNATION	CRITY	FAILURE MODE AND CAUSE	FAILURE EFFECT OR IMPACT	RATIONALE FOR ACCEPTANCE
REF	REV					
6.2.1		LIFE PRESERVER UNIT (LPU), (1) #0059G-01	2/1R	6.2.1 Mode: Damaged LPU chamber Cause: • defective material	Unable to float crewmember's head above water if second LPU chamber fails	<p>(3) Final assembly leak test, inner and outer cell, 10.0 scc/minute maximum at 1.5 ± 0.2 psig for 10 minutes</p> <p>(4) Four water jumps</p> <p>c. Turnaround Test. (In accordance with PIA 21030)</p> <p>(1) Inner cell leak test, 10.0 scc/minute maximum at 1.5 ± 0.2 psig for 10 minutes</p> <p>(2) Structural test inner cell, 4.0 ± 0.5 psig for 5 minutes.</p> <p>(3) Inner cell leak test after structural test, 10.0 scc/minute at 1.5 ± 0.2 psig for 10 minutes</p> <p>(4) Outer cell leak test, 10.0 scc/minute maximum at 1.5 ± 0.2 psig for 10 minutes.</p> <p>(5) Outer cell structural test, 4.0 ± 0.2 psig for 5 minutes</p> <p>(6) Final assembly leak test, inner and outer cell, 10.0 scc/minute maximum at 1.5 ± 0.2 psig for 10 minutes</p> <p>3. INSPECTION</p> <p>a. One hundred percent visual inspection of all ultrasonic heated sealed seams</p> <p>b. Visual inspection of bladder material for defects</p> <p>c. Visual inspection of cemented valves</p> <p>d. Verify structural test</p> <p>e. Verify leak tests.</p>

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SUPERSEDING DATE 10/2000

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DATE 8/7/89

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SYSTEM: CREW ESCAPE SYSTEM

REVISION:

ASSY P/N: #0059G-01

SUBSYSTEM: PERSONAL PARACHUTE ASSY.

PAGE 66 OF 79

FMEA		NAME, QTY & DRAWING REF DESIGNATION	CRITY	FAILURE MODE AND CAUSE	FAILURE EFFECT ON INDICEN	RATIONALE FOR ACCEPTANCE
REF	REV					
6.2.1		LIFE PRESERVER UNIT (LPU), (1) 40059G-01	2/1R	6.2.1 Mode: Damaged LPU chamber Cause: • defective material	Unable to float crewmember's head above water if second LPU chamber fails	<p><u>Turnaround Inspection</u> (in accordance with PIA 23030)</p> <ul style="list-style-type: none"> a. One hundred percent visual inspection of all ultrasonic heated sealed seams b. Visual inspection of bladder material for defects c. Visual inspection of cemented valves d. Verify structural test. e. Verify leak tests <p>4. FAILURE HISTORY None The LPU is in current use by the Air Force.</p> <p>5. OPERATIONAL USE</p> <ul style="list-style-type: none"> a. Operational Effect of failure - Possible loss of crewmember if second LPU fails. b. Crew Action - None c. Crew Training - Not applicable. d. Mission Constraints - None Mission would be terminated prior to use of this equipment e. In-flight Checkout - None

PREPARED BY: R. L. ALLISON, M HERR

SUPERSEDING DATE: 10/24/88

APPROVED BY: J. D. SCHLOSSER

DATE: 8/1/89