

# CRITICAL ITEMS LIST

ASSY NOMENCLATURE: CONTAINER LEG STRAP ATTACHMENT POINT SYSTEM, CREW ESCAPE SYSTEM REVISION:  
 ASSY P/N: SK1102448387 SUBSYSTEM: PERSONAL PARACHUTE ASSY. PAGE 1 OF 79

FMEA		NAME, QTY & DRAWING REF DESIGNATION	CRIT'Y	FAILURE MODE AND CAUSE	FAILURE EFFECT OR END ITEM	RATIONALE FOR ACCEPTANCE
REF	REV					
1	1	CONTAINER LEG STRAP ATTACHMENT POINT, (2) SK1102448387	I/I	1.1.1 Mode: Triangular ring or webbing breaks  Cause: • excessive loads • defective material	Possible inability to clear Orbiter due to improper orientation of crewmembers	1. DESIGN FEATURES TO MINIMIZE FAILURE MODES a. The triangular ring is rated at 2,500 pounds and is designed in accordance with MIL-H-7915 b. The webbing assembly is rated at 4,000 pounds c. The material is nylon certified in accordance with MIL-W-4088, type 8. d. The stitching is F-thread (nylon), certified to Federal Thread Standard V-T-295, breaking strength of 11 pounds e. The webbing assembly is stitched 8-12 stitches per inch over 4.5 inches. f. The maximum expected load is less than 300 pounds  2. TEST OR ANALYSIS TO DETECT FAILURE MODE a. <u>Acceptance Test</u> (1) One hundred percent proof loading of triangular ring to 2,500 pounds. (2) Tensile test on webbing to a minimum breaking strength of 4,000 pounds on each roll of webbing (3) Tensile test on thread to a minimum breaking strength of 11 pounds  b. <u>Certification Test</u> (1) Four dummy drops at 110 knots, 2 at 10,000 feet, 2 at 25,000 feet (2) Four live water drop jumps. (3) One 300 knot wind blast test

PREPARED BY R. L. ALLISON, M. HERR

SUPERSEDING DATE 10/24/

Y J. O. SCHLOSSER

DATE 8/7/89

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ASSY NOMENCLATURE: CONTAINER LEG STRAP ATTACHMENT POINT    SYSTEM: CREW ESCAPE SYSTEM    REVISION:  
ASSY P/N SK1102448387    SUBSYSTEM: PERSONAL PARACHUTE ASSY.    PAGE 2 OF 79

FMEA		NAME, QTY & DRAWING REF DESIGNATION	CRITY	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
REF	REV					
1.1.1		CONTAINER LEG STRAP ATTACHMENT POINT, (2) SK1102448387	1/1	<p>1.1.1 Mode: Triangular ring or webbing breaks</p> <p>Cause:</p> <ul style="list-style-type: none"> <li>• excessive loads</li> <li>• defective material</li> </ul>	Possible inability to clear Orbiter due to improper orientation of crewmembers	<p>(4) Four dummy drops at 225 knots, 2 at 10,000 feet, 2 at 25,000 feet.</p> <p>(5) Eight live jumps at 110 knots, 4 at 10,000 feet, 4 at 6,000 feet.</p> <p>(6) Four live jumps at 170 knots, 15,000 feet</p> <p>(7) Four live jumps at 185 knots, 20,000 feet</p> <p>(8) Four live jumps at 200 knots, 25,000 feet.</p> <p>(9) The harness is subjected to a total in-flight egress load of 21 times the maximum expected load of 1,200 pounds, to a total of 2,400 pounds, 2 drop tower tests.</p> <p>c. <u>Turnaround Test</u>. (In accordance with PIA 23028)</p> <p>The PPA will be unpacked, inspected, and repacked prior to each flight.</p> <p>3. INSPECTION</p> <ol style="list-style-type: none"> <li>a. Verify dimensions of triangular ring</li> <li>b. Visually inspect for sharp edges and burrs.</li> <li>c. Visually inspect webbing for defects</li> <li>d. Visually inspect thread for defects</li> <li>e. Verify stitching is in conformance with drawings and inspect for any defects</li> </ol>

PREPARED BY: R. L. ALLISON, M. HERR

SUPERSEDING DATE: 10124188

APPROVED BY: J. O. SCHLOSSER

DATE 8/7/89

# CRITICAL ITEMS LIST

ASSY NOMENCLATURE: CONTAINER LEG STRAP ATTACHMENT POINT

SYSTEM: CREW ESCAPE SYSTEM

REVISION:

ASSY P/N: SK1102448387

SUBSYSTEM: PERSONAL PARACHUTE ASSY. PAGE 3 OF 79

FMEA		NAME, QTY & DRAWING REF DESIGNATION	CRITY	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
REF	REV					
111		CONTAINER LEG STRAP ATTACHMENT POINT, (2) SK1102448387	1/1	<p>1.1.1 Mode: Triangular ring or webbing breaks</p> <p>Cause: • excessive loads • defective material</p>	Possible inability to clear Orbiter due to improper orientation of crewmembers	<p><u>Turnaround Inspection.</u> (In accordance with PIA 23028)</p> <ol style="list-style-type: none"> <li>The PPA will be unpacked, inspected, and repacked prior to each flight.</li> <li>Visually inspect for sharp edges and burrs</li> <li>Visually inspect webbing for defects.</li> <li>Visually inspect thread for defects.</li> <li>Verify stitching is in conformance with drawings and inspect for any defects</li> </ol> <p>4. FAILURE HISTORY</p> <p>None. The triangular ring and webbing are in fleet use by the Navy.</p> <p>5. OPERATIONAL USE</p> <ol style="list-style-type: none"> <li>Operational Effect of Failure - Possible loss of life.</li> <li>Crew Action - None</li> <li>Crew Training - Not applicable</li> <li>Mission Constraints - None. Mission would be terminated prior to use of this equipment</li> <li>In-Flight Checkout - None</li> </ol>

PREPARED BY: R. L. ALLISON, M. HERR

SUPERSEDING DATE: 10/24/88

APPROVED BY: J. O. SCHLOSSER

DATE: 01/18/89