

CRITICAL ITEMS LIST

ASSY NOMENCLATURE: PARACHUTE HARNESS

SYSTEM: CREW ESCAPE SYSTEM

REVISION

ASSY P/N: SK1102450007

SUBSYSTEM: PERSONAL PARACHUTE ASSY.

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P/MEA		NAME, QTY & DRAWING REF DESIGNATION	CRTY	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
REF	REV					
7.1.2		SEAWARS, (2) SK1102450007	21R	7.1.2 Mode: SEAWARS releases prematurely Cause: • contamination • defective material • thermal stress	Loss of SEAWARS attaching points	<ol style="list-style-type: none"> 1. DESIGN FEATURES TO MINIMIZE FAILURE MODES <ol style="list-style-type: none"> a. The SEAWARS are widely used in the Navy fleet b. The upper cross connector is backup to each SEAWARS connection c. The maximum load is 500 pounds. d. The pin is rated to 7,000 pounds. e. The circuit boards are plated through hole circuit boards f. The potting compound is Dow Corning silicone dielectric gel 527, designed for the SEAWARS application g. The electronic parts are established in accordance with MIL-STD-975. 2. TEST OR ANALYSIS TO DETECT FAILURE MODE <ol style="list-style-type: none"> a. <u>Acceptance Test</u> <ol style="list-style-type: none"> (1) Lot acceptance testing of cartridge, no-fire test. (2) 25KV electrostatic discharge test on each cartridge assembly (3) Functional test, firing test (4) Sensor contact continuity test, less than 2.0 ohms (5) Capacitance test minimum capacitance 1.5 nanofarads (6) Insulation resistance test, greater than 500 megohms

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FMEA		NAME, QTY & DRAWING REF DESIGNATION	CRITY	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
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7.1.2		SEAWARS, (2) SK1102450087	2/IR	7.1.2 Mode: SEAWARS releases prematurely Cause: • contamination • defective material • thermal stress	Loss of SEAWARS attaching points	<p>(7) Electronic package assembly (EPA) all-fire test at 19 VDC maximum</p> <p>(8) EPA no-fire test at 3.5 VDC maximum</p> <p>(9) EPA insulation resistance, not less than 5 megohms</p> <p>b. <u>Certification Test.</u></p> <p>(1) Four dummy drops at 110 knots, 2 at 10,000 feet, 2 at 25,000 feet</p> <p>(2) Four live water drop jumps</p> <p>(3) One 300 knot wind blast test</p> <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 SEAWARS has been qualified by the Navy and Air Force</p> <p>c. <u>Turnaround Test</u> (In accordance with PIA 21028)</p> <p>(1) The PPA will be unpacked, inspected, and repacked prior to each flight</p> <p>(2) Battery voltage check</p> <p>(3) Circuit continuity check</p>

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

SUPERSEDING DATE: 10/2/00

APPROVED BY: J. O. SCHLOSSER

DATE: 8/7/89

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ASSY NOMENCLATURE PARACHUTE HARNESS
ASSY P/N. SR1102450087

SYSTEM CREW ESCAPE SYSTEM
SUBSYSTEM: PERSONAL PARACHUTE ASSY.

REVISION:
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FMEA		NAME, QTY & DRAWING REF DESIGNATION	CRIT'Y	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
REF	REV					
7.1.7		SEAWARS, (2) SR1102450087	3/1R	7.1.2 Mode: SEAWARS releases prematurely Cause: • contamination • defective material • thermal stress	Loss of SEAWARS attaching points	<p>3. INSPECTION</p> <ul style="list-style-type: none"> a. Visual inspection of the potted initiator/cartridge body subassembly. b. Visual inspection of each cartridge to assure compliance with Air Force drawings. c. Visual inspection of sensor housing to assure compliance with drawings d. Visual inspection of SEAWARS during assembly e. Verification of acceptance data package <p><u>Turnaround Inspection</u> (In accordance with PIA 23028)</p> <ul style="list-style-type: none"> a. The PPA will be unpacked, inspected, and repacked prior to each flight. b. Battery voltage check to verify voltage c. Circuit continuity check <p>4. FAILURE HISTORY</p> <p>None - The SEAWARS is in use by the Navy fleet and 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 SEAWARS 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 A. L. ALLISON, M. HERR

SUPERSEDED DATE 10-20-99

APPROVED BY J. O. SCHLOSSER

DATE 01/21/99