

CRITICAL ITEMS LIST

ASSY NOMENCLATURE: PILOT CHUTE DEPLOYMENT CUTTERS

SYSTEM: CREW ESCAPE SYSTEM

REVISION:

ASSY P/N: SK1182430087

SUBSYSTEM: PERSONAL PARACHUTE ASSY.

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FMEA		NAME, QTY & DRAWING REF DESIGNATION	CRITY	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
REF	REV					
312		PILOTCHUTE DEPLOYMENT CUTTERS, (1) SK1182430087	III	3.1.2 Mode: Cutter functions early Cause: defective material	Pilot chute deploys early	<p>1. DESIGN FEATURES TO MINIMIZE FAILURE MODES</p> <ul style="list-style-type: none"> a. The cutters are mechanically activated by the bail out lanyard force by pulling out a firing pin b. The force to activate the cutters is 17 ± 9 pounds per cutter. c. A powder train burns 2 seconds then activates a charge to fire cutter. d. The cutters are widely used in Department of Defense programs e. Firing lanyard is a Kevlar line rated at 500 pounds. <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) Random sampling for lot acceptance functional test at temperatures of -65°F, +160°F, and 70°F. Acceptance testing is not required by the specification (2) Pull force test at 17 ± 9 pounds (3) Delay time test at 2.0 ± 0.4 seconds b. <u>Certification Test</u> <ul style="list-style-type: none"> (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

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3.1.2		PILOT CHUTE DEPLOYMENT CUTTERS, (1) SK1182430087	1/1	3.1.2 Mode: Cutter functions early Cause: • defective material	Pilot chute deploys early	<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>c. <u>Turnaround Test</u> (In accordance with PIA 23028) The PPA will be unpacked, inspected, and repacked prior to each flight</p> <p>3. INSPECTION</p> <ul style="list-style-type: none"> a. Visual inspection of all parts for defects b. Verify pull test is within 17 ± 9 pounds. c. Verify time delay test is within 2.0 ± 0.4 seconds d. Visual inspection of final assembly <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. Verify dimensions between cutters during packing of PPA. <p>4. FAILURE HISTORY</p> <p>None. These cutters are in fleet use by the Navy</p>

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

SUPERSEDING DATE: 10/24/00

APPROVED BY: J. D. SCHLOSSER

DATE: 01/09

CRITICAL ITEMS LIST

ASSY NOMENCLATURE: PILOT CHUTE DEPLOYMENT CUTTERS

SYSTEM: CREW ESCAPE SYSTEM

REVISION:

ASSY P/N: SK1102430087

SUBSYSTEM: PERSONAL PARACHUTE ASSY.

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FMEA		NAME, QTY & DRAWING REF DESIGNATION	CRITY	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
REF	REV					
3.1.2		PILOT CHUTE DEPLOYMENT CUTTERS, (1) SK1102430087	1/1	3.1.2 Mode: Cutter functions early Cause: a defective material	Pilot chute deploys early	<p>5. OPERATIONAL USE</p> <ul style="list-style-type: none"> a. Operational Effect of Failure - Possible loss of life. b. Crew Action - None. c. Crew Training - Not applicable. d. Mission Constraints - None. Mission would be terminated prior to use of this hardware. e. In-Flight Checkout - None.

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

SUPERSEDING DATE: 10/20/00

APPROVED BY: J. O. SCHLOSSER

DATE: 8/18/99