

CRITICAL ITEMS LIST

ASSY NOMENCLATURE: OXYGEN ACTUATOR ASSEMBLY
 ASSY P/N: 8725059

SYSTEM: CREW ESCAPE SYSTEM

SUBSYSTEM: EMERGENCY OXYGEN SYSTEM

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| FMEA | | NAME, QTY & DRAWING REF DESIGNATION | CRITY | FAILURE MODE AND CAUSE | FAILURE EFFECT OR IBD ITEM | RATIONALE FOR ACCEPTANCE |
|------|-----|-------------------------------------|-------|---|---|---|
| REF | REV | | | | | |
| 551 | | ACTUATION SYSTEM(S) 8725059 | VI | Mode: Fails to activate one or both reducers. Cause: • Cable breaks • Contamination • Pince part failure | EOS will no supply oxygen to crewmember | <p>1. Design Features.</p> <ul style="list-style-type: none"> a. Wire rope diameter: 0.62, 7x7 CRES in accordance with MIL-W-83420, Type I b. Wire rope is contained inside a flexible conduit, CRES, 1.88 inside diameter with teflon tubing 1.90 outside diameter ± 0.24 inches c. Ball terminals are swaged onto the wire rope d. A 30 lb. force is needed to activate the system e. Hoisting is 303 CRES per ASTM A582 Pulley is 303 CRES per ASTM A582 <p>2. Test or Analysis to Detect Failure Mode.</p> <p><u>ACCEPTANCE:</u></p> <ul style="list-style-type: none"> a. Activation cable is proof between ball terminals to 120 lb. for 5 seconds b. Intermediate lanyard proof loaded to 100 lb. ± 10 lb. tension between the reducers and pulley assembly c. Lanyard activating, green apple to the coupler assembly ball terminal is proof loaded to 280 lb. for 5 second per MIL-C-5688. d. All wire rope is proof loaded to 100 lb. ± 10 lb tension e. System level actuation test (functional test) f. Conduit is proof loaded to 100 lb. ± 10 lb |

PREPARED BY: R L Allison/B. W. Sauer

SUPERSEDING DATE

APPROVE

CEE/RDS-34

DATE 10/24/88

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REVISION

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| FMEA | | NAME, QTY & DRAWING REF DESIGNATION | QTY | FAILURE MODE AND CAUSE | FAILURE EFFECT OR EVIDENCE | RATIONALE FOR ACCEPTANCE |
|------|-----|-------------------------------------|-----|---|--|---|
| REF | REV | | | | | |
| 551 | | ACTUATION SYSTEM (1) 8725058 | 1/1 | <p>Mode: Fails to activate one or both reducers</p> <p>Cause: <ul style="list-style-type: none"> o Cable breaks o Contamination o Piece part failure </p> | EOS will not supply oxygen to crewmember | <p>2. Test or Analysis to Detect Failure Mode (cont)</p> <p>a. <u>Certification:</u></p> <ul style="list-style-type: none"> (1) System level actuation test in parachute harness. (2) The system is live jumped at the Naval Weapons Center 12 jumps from 25,000 feet, 4 jumps from 12,000 feet, 12 jumps from 10,000 feet, and 8 water drop jumps <p>b. <u>Turnaround Testing</u> (In accordance with PIA 23029)</p> <ul style="list-style-type: none"> (1) System level actuation test in parachute harness. (2) Cam actuation and reset test. <p>3. <u>INSPECTION</u></p> <ul style="list-style-type: none"> a. 100percent DCAS inspection on all parts b. Cleaned in accordance with PS 103, American Safety Flight Systems c. Visual inspection to conformance of drawings. d. All moving parts are examined to ensure that they operate freely without sticking or binding. <p><u>Turnaround Inspection</u> (In accordance with PIA 23029)</p> <ul style="list-style-type: none"> a. All moving parts are examined to ensure that they operate freely without sticking or binding b. Verify visibly clean c. Verify actuation/reset of cam assembly <p>4. <u>Failure History</u> None. The actuation system is a new configuration</p> |

CRITICAL ITEMS LIST

ASSY NOMENCLATURE: OXYGEN ACTUATOR ASSEMBLY
 ASSY P/N: 8725850

SYSTEM: CREW ESCAPE SYSTEM

SUBSYSTEM: EMERGENCY OXYGEN SYSTEM

REVISION:

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| AREA | | NAME, QTY & DRAWING REF DESIGNATION | QTY | FAILURE MODE AND CAUSE | FAILURE EFFECT OR LIMITATION | RATIONALE FOR ACCEPTANCE |
|------|-----|-------------------------------------|-----|---|--|---|
| REF | REV | | | | | |
| 551 | | ACTUATOR SYSTEM (1) 8725850 | 1/1 | Mode: Fails to activate one or both reducers. Cause: a) Cable breaks b) Contamination c) Hole part failure | EOS will not supply oxygen to crewmember | <p>B. ACTIVATION SYSTEM</p> <ul style="list-style-type: none"> a. Operational effect of failure: Possible loss of crewmember b. Crew action: None. c. Crew training: The crew is trained in the proper use of the emergency oxygen system. d. Mission constraints: None. Mission would be terminated prior to use of this equipment. e. In-flight checkout: None. The crew could inspect cables during flight, but could not repair or replace defective equipment. |

DEVELOPED BY: J. J. Bland, W. Sasser

SUPERSEDING DATE:

APPROVED BY: J. G. Schaefer

DATE: 10/1/88

CBE/EOS-36