

CRITICAL ITEMS LIST

PROJECT: EXTERMINATOR COMMUNICATOR

SYSTEM: EXTERMINATOR COMMUNICATOR

ISSY IDENTIFIERS: EXTERMINATOR COMMUNICATOR (100)

ISSY P/N: 0129400 (REV) SHEET: 1 OF 2

ITEM REF.	REV.	NAME, QTY & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RISK / CONC. RATIONALE FOR ACCEPTANCE
EMC-16		EXTERMINATOR COMMUNICATOR DOC P/N: 0129400 QTY: 1	MODE: FAILURE OF TALKING TONE GENERATOR (1000) CAUSE: CONTAMINATION VIBRATION, SHOCK, TEMP. CYCLE, ETC PARTS FAILURE	LOSS OF TALKING TONE AFTER SECOND FAILURE, IMPST CASE IS CREWMAN IS NOT ALERTED TO CRZ RAILCAR.	DESIGN FEATURES: THE EXTERMINATOR COMMUNICATOR (EMC) DESIGN IS BASED ON DESIGNER INTENT AND DUE TO THE LIMITED TALKING TONE CODE, A HIGH-SPEC PROCEDURE FOR THE TALKING EQUIPMENT INCLUDED THE USE OF VIBRATION SHOCKS AND PRACTICES ON HIGH-PRESSURE PARTS AND MATERIALS WERE INCLUDED TO MEET OR EXCEED HIGH-SPEC PARTS. HIGH-PRESSURE PARTS WERE IN PLACE TO PREVENT STRESS AND CORROSION. EMC IS EMPLOYMENTALLY SCHEDULED TO TALKING COMMUNICATION.

CRITICAL ITEMS LIST

PROJECT: EXHAUSTION MOTOR (EMU)

SYSTEM: EMU (COMMUNICATIONS)

ISSY WORKFLOW: EXHAUSTION MOTOR (EMU)

ISSY P/N: 8127MM0 (BYD) QUANTITY: 2 OF 2

EMU REF.	REV.	NAME, QTY & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	TIME / FUNC. 2/128 CRITICALITY CONTINUE FOR ACCEPTANCE
EMC-16 (CONT'D)		EXHAUSTION MOTOR QTY: 1 P/N: 8127MM0	MODE: FAILURE IN EXHAUSTION MOTOR OUTPUT CAUSE: CONTAMINATION, VIBRATION, SHOCK, TEMP. CYCLE, ALL MODES FAILURE	LOSS OF AIRFUEL MIXING TONE AFTER SECOND FAILURE, DEGREE OF USE IS LIMITED TO 15 MIN. PER HOUR.	TEST: (1) CERTIFICATION TEST: ONE-TIME TEST ON ONE UNIT. ALL ELECTRICAL PARAMETERS MEASURED BEFORE AND AFTER ENVIRONMENTAL EXPOSURE: <ul style="list-style-type: none"> o TEMPERATURE - 5 CYCLES FROM 15 F TO 155 F OPERATING AND 1 CYCLE TO -65 F NON OPERATING. o SHOCK - TERMINAL PERS. SHOCK WITH 20g PEAK AND 11 msec DURATION APPLIED 3 TIMES FOR EACH AXIS IN BOTH + AND - DIRECTIONS. TOTAL OF 10 SHOCKS. o LANDING SHOCK & ACCELERATION ENVIRONMENTS CERTIFIED BY ANALYSIS o VIBRATION - <ul style="list-style-type: none"> TEST - INACCEL (0001) - 5 MIN PER AXIS <ul style="list-style-type: none"> 20 TO 80 Hz - INCREASING 3 (0001) 80 TO 300 Hz - CONSTANT 0.05g/Hz 350 TO 2000 Hz - DECREASING 3 (0001) FEED - INACCEL - 40 MINUTES PER AXIS <ul style="list-style-type: none"> 20 TO 150 Hz - INCREASING 1 (0001) 150 TO 1000 Hz - CONSTANT 0.05g/Hz 1000 TO 2000 Hz - DECREASING 1 (0001)

CRITICAL ITEMS LIST

PROJECT: EXTENSION OF AVAILABILITY UNIT

SYSTEM: ECM COMMUNICATIONS

ASSY IDENTIFICATION: EXTENSION OF AVAILABILITY UNIT

ASSY P/N: 0329400 (ENR) SHEET: 1 of 2

P/N REF.	REV.	NAME, DIV & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HMR / FTRC. 2/100 CRITICALITY	CRITERIA FOR ACCEPTANCE
EVC-16 (CONT'D)		EXTENSION OF AVAILABILITY UNIT P/N: 0329400 DIV: 1	<p>MAIN: FAILURE IN WORKING TIME, COMMUNICATIONS UNIT</p> <p>CAUSE: CONTAMINATION, VIBRATION, SERVICE TEMP. CYCLE, FUEL PUMP FAILURE</p>	<p>LOSS OF AVIATION WARNING TONE</p> <p>AFTER SECOND FAILURE, WORST CASE IS CREWMAN IS NOT ALERTED TO CO2 INHALER.</p>	TEST: (CONT'D)	<ul style="list-style-type: none"> • VIBRATION - UNIT OPERATED IN ORBITER ENVIRONMENT TO 10-5 HMR FOR SIX HOURS. • SERVICE, AVIATION, AND FUELING CERTIFIED BY ANALYSIS. (2) MAINTENANCE ACCEPTANCE TEST: ENVIRONMENTAL, SCREEN AND THERMAL ELECTRONIC PERFORMANCE TEST. • TEMPERATURE - THE UNIT OPERATES FROM 20 F TO 125 F. • VIBRATION - 1 MINUTE PER AXIS MINIMUM <ul style="list-style-type: none"> 20 TO 80 Hz - INCREASING 3 (RMS) 80 TO 150 Hz - CONSTANT 0.04g (RMS) 150 TO 2000 Hz - DECREASING 3 (RMS) (3) PRE-INSTALLATION ACCEPTANCE TEST (PIAT) PERFORMED PERIODICALLY IN 150 PARTS TO DELIVERY OF END-ITEM FOR THE INSTALLATION. UNIT'S COMPLETION ELECTRICAL PERFORMANCE WITH HMR.

CRITICAL ITEMS LIST

PROJECT: EXPERIMENTAL MOBILITY UNIT

SYSTEM: FM COMMUNICATIONS

ISSY IDENTIFICATION: EXPERIMENTAL COMMUNICATIONS (EMC)

ISSY P.N.: (R279400) (R279400) SHEET: 4 of 7

P/N REF.	REV.	NAME, QTY & DRAWING REF. DESCRIPTION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	IMP / FREQ. 2/100 CRITICALITY RATIONALE FOR ACCEPTANCE
EMC-16 (CONT'D)		EXPERIMENTAL COMMUNICATIONS O/A P.N: R279400 QTY: 1	SYM: FAILURE IN STARTING TIME GENERATOR INITIAL CAUSE: CONTAMINATION, VIBRATION, SHORT, LEAK, CYCLE, ICE PARTS FAILURE	LOSS OF STARTING WARNING TONE AFTER SECOND FAILURE, EARLY CAGE IS CANCELED IS NOT ALERTED TO C2C DUTYMAN.	TEST: (CONT'D) (4) GROUND THROUGHPUT TEST - o CONTROL INFORMATION TEST PERFORMED FIRST TIME FIC IS INSTALLED IN END. WARNING TONE RECEIVED DURING 1440 BATTERY ON TARE CIRCUIT. o COMBINED CARRIER FUNCTION IS PERFORMED PRIOR TO FIRST VEHICLE CARRIER TEST SCENARIO AND PRIOR TO DELIVERY FOR FLIGHT. WARNING TONE IS ACTIVATED DURING POWER RESTORE. o FTA/FBI CREW FIRST INDICATION TEST IS PERFORMED ON FLIGHT TRAINING. WARNING TONE IS ACTIVATED DURING POWER RESTORE. o ORDER/EMI FUNCTIONAL CIRCUIT IS PERFORMED AT VEHICLE INSTANT STARTING. WARNING TONE IS ACTIVATED DURING POWER RESTORE.

CRITICAL ITEMS LIST

PROJECT: ENTRENCHER IN HIGH FLY INTL

SYSTEM: EMI COMMUNICATIONS

ASSY NAME AND TYPE: ENTRENCHER IN COMMUNICATIONS (EVC)

ASSY P/N: B070400 (REV) ... SERIAL: 5 of 7

ITEM REF.	REV.	NAME, QTY & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	NBR / FREQ. / CRITICALITY RATIONALE FOR ACCEPTANCE
EVC-16 (CONT'D)		ENTRENCHER IN COMMUNICATOR QTY P/N: 0379400 QTY: 1	MODE: FAILURE OF TAPPING TONE GENERATOR OUTPUT CAUSE: CONTAMINATION, VIBRATION, SURG., TEMP. CYCL., FEE PAPER FAILURE	LOSS OF ARTICLE DURING TONE AFTER SECOND FAILURE, FIRST CASE IS CREAMIN IS NOT ALERTED TO COZ BUREAU.	<p>INSPECTION: THE EVC WAS MANUFACTURED IN ACCORDANCE WITH AN APPROVED QUALITY ASSURANCE PROGRAM LISTING ALL STANDARD WORKING POINTS. CRITICAL WORKING POINTS IN PL. ESTABLISHED AT LEVELS OF SEPARATELY IDENTIFICATION, TEST, INTEGRATION, AND FINAL ASSEMBLY. SUBASSEMBLIES ARE INSPECTED FOR CONFORMANCE WITH RELEASED DRAWINGS AND STANDARDS FOR PARTS PLACEMENT, SURFACE, AND CLEANLINESS. FINAL PHASE OF INSPECTION INCLUDES VACUUM CLEANING OF PARTS.</p> <p>FAILURE HISTORY: TWO RECENT EVCs FAILURES ARE CURRENTLY OPEN. THERE HAVE BEEN FOUR FAILURES RELATED TO THIS CI.</p> <p>1. DESCRIPTION THERE WAS A CONNECTION FAILURE OF AIR CHARACTER (CNC0416). CONNECTION FAILURE THE CONNECTION WAS RELOADED, AND THE UNIT OPERATED NORMALLY.</p> <p>2. DESCRIPTION THERE IS A PAPER FEED FAILURE FROM 10 FEEDS INTO 100S AND 100S FEEDS INTO 100S.</p>

CRITICAL ITEMS LIST

PROJECT: EXTREMELY LOW POWER (ELP)

SYSTEM: ELM COMMUNICATIONS

ISS'Y IDENTIFICATION: EXTREMELY LOW
POWER (ELP)

ISS'Y P.N: 0329400 (COP) SHEET: 1 of 2

ITEM REF.	REV.	NAME, QTY & PARTING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON EM ITEM	IDIR / FINE. 2/100 CRITICALITY
EUC-16 (CONT'D)		EXTREMELY LOW POWER (ELP) QTY: 1	MODE SHORTED DC POWER INPUT; PRIMARY CAUSE: VIBRATION, SHOCK, TEMP. CYCLE, ETC PARTS FAILURE	LOSS OF PERMANENT POWER INPUT PATH AFTER SECOND FAILURE, WORST CASE IS LOSS OF ALL EUC FUNCTION	<p>FAILURE HISTORY: (CONT'D)</p> <p>SHORT IN A TRANSMITTER (COP/140).</p> <p><u>CORRECTIVE ACTION</u></p> <p>ALL OF THIS TYPE OF MODE WAS PULLED FROM THE SYSTEM. INSPECTIONS FOR WORN WIRE INSULATION INDICATED.</p> <p>3. <u>DESCRIPTION</u></p> <p>COILED TRANSMITTER FAILED IN DIS-ILLATOR DURING TEMP TEST (COP/140).</p> <p><u>CORRECTIVE ACTION</u></p> <p>ALL STOCK OF THIS TRANSMITTER REMOVED FROM THE SYSTEM.</p> <p>4. <u>DESCRIPTION</u></p> <p>THERE WAS A SHORT TO THE INPUT ON THE PIN CONNECTOR WHICH CAUSED THE INCREASE IN THE SIGNAL LEVEL (COP/140).</p> <p><u>CORRECTIVE ACTION</u></p> <p>THE LEADS TO THE INPUT WERE REWOUND AND THE UNIT PASSED THE TEST AND OPERATED NORMALLY.</p>

CRITICAL ITEMS LIST

PROJECT: EXTENSION OF MOBILITY (EM)

ISSY IDENTIFIER: EXTENSION OF COMMUNICATIONS (EUC)

SYSTEM: EVA COMMUNICATIONS

ISSY P/N: 0329400 (REV)

SHEET: 2 of 2

ITEM REF.	REV.	NAME, QTY & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	IDMR / FUNC. 2/100 CRITICALITY	RATIONALE FOR ACCEPTANCE
EUC-16 (CONT'D)		EXTENSION OF COMMUNICATIONS RCR P/N: 0329400 QTY: 1	NAME: FAILURE OF WARNING TONE GENERATOR OUTPUT CAUSE: VIBRATION, SHOCK, TEMP. CYCLE, ETC PARTS FAILURE	LOSS OF AUDIBLE WARNING TONE AFTER SECOND FAILURE, WORST CASE IS CREWMAN IS NOT ALERTED TO CO2 BUILDUP.	CREW RESPONSE: - FAILURE UNDETECTABLE BY ITSELF AND ESS DISPLAY IS OBSERVED DURING PROGRESS OF AN UNRELATED MALFUNCTION. - IF DETECTED, CREW WOULD HAVE TO PERIODICALLY MONITOR FAULT MESSAGE AND STATUS LISTS. TRAINING: - CREWS ARE TRAINED TO PERIODICALLY CHECK THE STATUS AND FAULT MESSAGE LISTS ON THE DCM. OPERATIONAL CONSIDERATIONS: - DDCS (REAL TIME DATA SYSTEM) IN OUGS GROUND MONITORING OF EMI STATUS. - EVA TIMELINE PROCEDURES REQUIRE PERIODIC EMI SYSTEMS STATUS CHECKS. - FLIGHT PHASES OFFLINE OPERATIONAL CRITICALITY AND WARNING SYSTEM.	