

CRITICAL ITEMS LIST

PROJECT: SRMS

SYSTEM: PAYLOAD GRAPPLE FIXTURE

ASS'Y NOMENCLATURE: TPAD FLIGHT RELEASABLE

ASS'Y P/N: 51475E1D1

SHEET: 1

FMEA REF.	REV.	NAME, QTY & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HOWR / FUNC. CRITICALITY	RATIONALE FOR ACCEPTANCE
10150	1	RELEASE ROD QTY-1 SPAR 51475C106	MODE: UNABLE TO BACK OFF RELEASE ROD. CAUSE(S): SEIZED ROD.	GRAPPLE FIXTURE SHAFT CANNOT BE RELEASED WHEN REQUIRED ON EVA. WORST CASE UNABLE TO RELEASE PAYLOAD. REDUNDANT PATHS REMAINING N/A	DESIGN FEATURES ----- 1/1	DURING ASSEMBLY OF THE RELEASE ROD INTO THE EVA RELEASE MECHANISM ALL FAYING PARTS ARE LUBRICATED WITH BRAYCOTE 601 GREASE (FORMERLY 3L-38RP) WHICH HAS A PERFLUORINATED POLYETHER OIL BASE WHICH IS VERY STABLE UNDER VACUUM ENVIRONMENT. THE COATING OF BRAYCOTE 601 PROVIDES: A: LUBRICATION OF PARTS TO PREVENT BINDING DURING OPERATION OF THE MECHANISM AND: B: A RELEASE AGENT COATING TO PREVENT COLD WELDING OF FAYING PARTS.

CRITICAL ITEMS LIST

PROJECT: SRMS
 ASS'Y NOMENCLATURE: TPAD FLIGHT RELEASABLE

SYSTEM: PAYLOAD GRAPPLE FIXTURE
 ASS'Y P/N: 51475C101

SHEET: 2

FMEA REF.	REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RWR / FUNC. 1/1 CRITICALITY	RATIONALE FOR ACCEPTANCE
10150	1	RELEASE ROD QTY: 1 SPAR 51475C106	MODE: UNABLE TO BACK OFF RELEASE ROD. CAUSE(S): SEIZED ROD.	GRAPPLE FIXTURE SHAFT CANNOT BE RELEASED WHEN REQUIRED ON EVA. WORST CASE UNABLE TO RELEASE PAYLOAD. REDUNDANT PATHS REMAINING N/A	1/1	ACCEPTANCE TESTS ----- NONE BY SPAR QUALIFICATION TESTS ----- NONE BY SPAR OPERATIONAL TESTS ----- FLIGHT CHECKOUT -----

CRITICAL ITEMS LIST

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SYSTEM: PAYLOAD GRAPPLE FIXTURE
 ASS'Y P/N: 51475E101 SHEET: 3

PNEA REF.	REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HOUR / FUNC. 1/1 CRITICALITY	RATIONALE FOR ACCEPTANCE
10150	1	RELEASE ROD QTY 1 SPAR 51475C106	MODE: UNABLE TO BACK OFF RELEASE ROD. CAUSE(S): SEIZED ROD.	GRAPPLE FIXTURE SHAFT CANNOT BE RELEASED WHEN REQUIRED ON EVA. WORST CASE UNABLE TO RELEASE PAYLOAD. REDUNDANT PATHS REMAINING N/A	QA/INSPECTIONS	<p>GRAPPLE FIXTURES ARE MANUFACTURED UNDER DOCUMENTED QUALITY CONTROLS BY A SPAR APPROVED SUBCONTRACTOR. THESE CONTROLS ARE EXERCISED THROUGH DESIGN PROCUREMENT, PLANNING, PROCESSING, FABRICATION, ASSEMBLY, TESTING, SHIPPING AND RECEIVING OF UNITS. SPAR/GOVERNMENT REPRESENTATIVE MANDATORY INSPECTION POINTS ARE ENVOCKED ON THE SUBCONTRACTOR AT VARIOUS LEVELS OF ASSEMBLY AND TESTING.</p> <p>RECEIVING INSPECTION VERIFIES THAT ALL PARTS RECEIVED ARE AS IDENTIFIED IN THE PROCUREMENT DOCUMENTS, THAT NO PHYSICAL DAMAGE TO PARTS HAS OCCURRED DURING SHIPMENT AND THAT APPROPRIATE DATA HAS BEEN RECEIVED WHICH PROVIDES ADEQUATE TRACEABILITY INFORMATION AND IDENTIFIES ACCEPTABLE PARTS.</p> <p>PARTS ARE INSPECTED THROUGHOUT MANUFACTURE, ASSEMBLY AND TEST AS APPROPRIATE TO THE MANUFACTURING STAGE COMPLETED. THESE INSPECTIONS INCLUDE:</p> <p>INSPECTION VERIFIES THAT KITTED PARTS ARE CORRECT PRIOR TO ASSEMBLY AND TRACEABILITY INFORMATION RECORDED.</p> <p>INSPECTION TO DRAWING IS CONDUCTED THROUGHOUT THE ASSEMBLY PROCESS, INCLUDING INSPECTION OF LOCKING, WITNESSING OF TORQUING AND APPLICATION OF TORQUE STRIPING.</p> <p>VISUAL INSPECTION AND CRITICAL DIMENSIONAL VERIFICATION IS PERFORMED TO SPAR INSPECTION TEST PROCEDURE SPAR-RMS-ITP 306 WHICH INCLUDES GROUNDING VERIFICATION, WORKMANSHIP, DIMENSIONAL, WEIGHT, (SPAR/GOVERNMENT REP. MANDATORY INSPECTION POINT)</p>

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SHEET: 4

P/N & REF.	REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HWR / FINE. 1/1 CRITICALITY	RATIONALE FOR ACCEPTANCE
10150	1	RELEASE ROD QTY: 1 SPAR 51475C106	MODE: UNABLE TO BACK OFF RELEASE ROD. CAUSE(S): SEIZED ROD.	GRAPPLE FIXTURE SHAFT CANNOT BE RELEASED WHEN REQUIRED ON EVA. WORST CASE UNABLE TO RELEASE PAYLOAD. REDUNDANT PATHS REMAINING N/A	1/1	FAILURE HISTORY ----- NONE

PREPARED BY: MFWS

SUPERSEDING DATE: 30 OCT 86

APPROVED BY: _____

DATE: _____

MF

CRITICAL ITEMS LIST

PROJECT: SBMS

SYSTEM: PAYLOAD GRAPPLE FIXTURE

ASS'Y NOMENCLATURE: TPAD FLIGHT RELEASABLE

ASS'Y P/N: 51475E101

SHEET: 5

PHEX REF.	REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT OR END ITEM	HOUR / FUNC. CRITICALITY	RATIONALE FOR ACCEPTANCE
10150	1	RELEASE ROD QTY-1 SPAR 51475C106	MODE: UNABLE TO BACK OFF RELEASE ROD. CAUSE(S): SEIZED ROD.	GRAPPLE FIXTURE SHAFT CANNOT BE RELEASED WHEN REQUIRED ON EVA. WORST CASE UNABLE TO RELEASE PAYLOAD. REDUNDANT PATHS REMAINING N/A	1/1	<p>OPERATIONAL EFFECTS</p> <p>-----</p> <p>EVA TECHNIQUES WILL NOT RELEASE PAYLOAD FROM ARM. IF SHARES CANNOT BE OPENED IN ANY MODE, THEN THE ARM/PAYLOAD COMBINATION MUST BE JETTISONED.</p> <p>CREW ACTION</p> <p>-----</p> <p>IF SHARES CANNOT BE OPENED IN ANY MODE THE ARM/PAYLOAD COMBINATION MUST BE JETTISONED.</p> <p>CREW TRAINING</p> <p>-----</p> <p>NONE</p> <p>MISSION CONSTRAINT</p> <p>-----</p> <p>NONE</p> <p>SCREEN FAILURES</p> <p>-----</p> <p>N/A</p>