

FAILURE MODES AND EFFECTS ANALYSIS

ASSY NOMENCLATURE: RMS IFM D&C KIT
ASSY P/N: 5ED33103306-304

SYSTEM: REMOTE MANIPULATOR SYSTEM
SUBSYSTEM: RMS IN-FLIGHT MAINTENANCE D&C KIT

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NAME AND DRAWING	FUNCTION	FAILURE MODE AND CAUSE	MISSION PHASE	FAILURE EFFECT ON			FAILURE DETECTION FLIGHT GROUND	CORRECTIVE ACTION TIME AVAILABLE/ TIME REQUIRED	CRIT. H/F	HAZARDS/REMARK
				END ITEM	MISSION	CREW/VEHICLE				
EE COMMAND SIGNAL CIRCUIT (continued)		<p>7029 Mode: Zener diode D3 fails open, fails to conduct</p> <p>Cause: • structural failure • mechanical stress • vibration • electrical stress • resistor R2 fails short</p>	Orbit	<p>Loss of ability to release or derigidize. Release command will give capture command. Derigidize command will give rigidize command</p> <p><u>Worst Case</u> Subsequent failure may result in inability to release payload</p> <p><u>Redundant Paths Remaining</u> Backup mode. RMS Jettison.</p>		Subsequent failure may result in inability to release a payload	Operator detects payload has not been released. EE TB's on RMS D&C panel do not change	Release payload using backup release or jettison arm/payload combination Immediate/minutes	3/IR	<p>Crew action required to prevent motor burnout</p> <p>Redundancy Schemes: A - Pass B - Pass C - Pass</p>
		<p>7030 Mode: Capacitor C2 fails open</p> <p>Cause: • structural failure • mechanical stress • vibration • electrical stress</p>	Orbit	<p>Loss of noise filtering on EE command signal voltages</p> <p><u>Worst Case</u> No effect on crew/vehicle or mission</p>		None	Not detectable	None	3/3	<p>Redundancy Schemes: A - N/A B - N/A C - N/A</p>

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ATTACHMENT -
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