

System: SRMS

Subsystem: ELECTRICAL SUB-SYSTEM

Assembly Desc: Servo Power Amplifier

Part Number(s): S1140F1177-3

Name	Part Number(s)	Qty	Sheet No.	Schematic No.
Item: Motor Drive Amplifier Assembly	823536-551	1		824206
Function: Motor Drive Amplifier Assembly	Provides motor voltage based on demand from tachometer electronics. Commutates the motor drive voltage. Provides hardware current limiting, brake drive, direct drive functions and enables backup drive. Provides BITE circuits and BITE verification for MDA.			

Failure Mode: LOSS of Output from Buck Regulator in Direct Drive.

Criticality:	H/W	Func.	Screen Failures
3	1	R	

Mission Phase: Orbit

Cause(s): Motor Drive Amplifier Assembly Permanent loss of Direct Drive voltage selection.

Failure effect on unit/and item: MDA voltage demand to buck regulator is permanently selected to CPU generated value. No effect in computer supported modes. In direct drive, MDA demand voltage BITE will detect and apply joint brake.

Worst Case: Loss of Direct Drive for failed joint.

Redundant Paths: Computer Supported modes.
Backup Drive.

Failure Detection: In Direct Drive:
"ABE" Warning with Master Alarm and Brakes ON indicated.
SM Message "S96 PDRS ABE SY (SP,EP,WP,WY,WR)".
SPEC 86 Downarrow at "ABE - MDA DMND: SY (SP,EP,WP,WY,WR)".

Corrective Action: Cycle power and select Computer Supported modes.

Time to Effect: Immediate

Time to Correct: Immediate

Hazard/Remarks:

Approvals:

Functional Group	Name	Position	Telephone	Date Signed	Status
Engineer	Jorgensen, Glen	SPAR OEC	(713) 286 9101	13Mar97	Signed
Reliability	Hautot, Rodney	Product Assurance Manager SRMS	4879	17Mar97	Signed
Program Management Office	Rice, Craig	Technical Program Manager	4892	13Mar97	Signed
Technical Manager	Peck, John	Technical Manager (JSC)	713-483-1264	24Mar97	Signed
CITY + Mission Assurance Coord, DAVID		RMC SpmR ENGINEER	(202) 491-2499	1/22/97	Signed