

BRAMPTON ONTARIO L6S4J3

System: SRMS

Subsystem: ELECTRICAL SUB-SYSTEM

Assembly Desc: Servo Power Amplifier

Part Number(s): 51140F1177-3

Name	Part Number(s)	Qty	Sheet No.	Schematic No.
Item: Motor Drive Amplifier Assembly	823836-551	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: False Direct Drive BITE.

Criticality:	HW	Func.	Screen Failures
	3	1R	

Mission Phase: Orbit

Cause(s): Motor Drive Amplifier Assembly  
Direct Drive BITE circuit output failed active.  
Direct drive BITE decoder fail signal fails active (high).

Failure effect on unit/and item: Direct Drive BITE circuit falsely indicates a failure of the direct drive command circuitry. Direct drive may be lost for the failed joint. If BITE annunciation is due to a failure of the Decoder Fail signal, Direct Drive BITE will be latched on the failed joint when any one of the other five joints is driven in Direct.

Worst Case: Loss of Direct Drive for failed joint.

Redundant Paths: Computer Supported modes.  
Backup Drive.

Failure Detection: "CHECK CRT" Caution with Master Alarm.  
SM Message "S98 PDR8 ABE SY (SP,EP,WP,WY,WR)".  
SPEC 96 Downarrow at "ABE - DIR DRV: SY (SP,EP,WP,WY,WR)".

Corrective Action: Continue in 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 DEC	(713) 286 8101	14Mar97	Signed
Reliability	Hautot, Rodney	Product Assurance Manager SRMS	4879	17Mar97	Signed
Program Management Offc	Rice, Craig	Technical Program Manager	4892	13Mar97	Signed
Technical Manager	Peck, John	Technical Manager (JSC)	713-483-1264	25Mar97	Signed
PARTITION ASSURANCE COMM, DAVID		RMS SQA ENGINEER	(214) 451-2499	17Mar97	Signed