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SPACE SHUTTLE PROGRAM
Space Shuttle Projects Office (MSFC)
NASA Marshall Space Flight Center, Huntsville, Alabama



Reusable Solid Rocket Motor **STS-102 Flight Readiness Review/CoFR**

Motor Set RSRM-78

27 February 2001

Presented by Terry Boardman



Thiokol Propulsion

an Alcoa business

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STS-102 (RSRM-78)

Agenda

Flight Readiness Review/CoFR

- 1.0 Previous Flight Assessment—**STS-98**
- 2.0 Certification Status—**No Constraints**
- 3.0 Changes Since Previous Flight—**None**
- 4.0 Configuration Inspection
 - 4.1 As-Built Versus As-Designed, Hardware, and Closeout Photo Review Status—**No Issues**
 - 4.2 Hardware Changeouts Since ET/SRB Mate Review—**None**
- 5.0 SMRB Nonconformances—**None**
- 6.0 Technical Issues/Special Topics—**None**
- 7.0 Readiness Assessment

Backup LCC and Contingency Temperatures for STS-102



Previous Flight Assessment—STS-98

Disassembly Evaluation Summary—Status of Disassembly Activity

KSC Operations		LH RSRM	RH RSRM	Remarks
Initial LH/RH SRB viewing	*	Complete	Complete	
SRB/SRM walkaround assessment	*	Complete	Complete	
Demate/evaluate aft exit cone (AEC)	*	Complete	Complete	
Remove/evaluate S&A and OPTs	*	Complete	Complete	
Remove/evaluate nozzle	*	Complete	Complete	
Remove/evaluate stiffener rings/stubs		Complete	Complete	
Remove/evaluate igniter	*	Complete	Complete	
Demate/evaluate field joints/evaluate insulation	*	Complete	Complete	
Utah Operations				
Disassemble/evaluate nozzle (joint No. 4 and 5)	*	Complete	Complete	
Disassemble/evaluate nozzle (joint No. 2 and 3)	*	Complete	Complete	
Disassemble/evaluate S&A	*	Complete	Complete	
Washout nozzle phenolics		15 Mar 2001	15 Mar 2001	
Washout nozzle AEC phenolics		15 Apr 2001	15 Apr 2001	
Measure/evaluate aft dome and LH segment insulation		12 Jul 2001	12 Jul 2001	
Measure/evaluate igniter insulation		03 May 2001	03 May 2001	

* RSRM Project committed to complete prior to next launch

- No constraints to STS-102 flight



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STS – 102 Readiness Assessment

Pending satisfactory completion of normal operations flow (per OMRSD), the RSRM hardware is ready to support flight for mission

STS – 102

27 February 2001

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Current Flight Predictions

LCC and Contingency Temperatures for STS-102

	<u>Heater Location</u>	<u>LCC</u>	<u>Minimum Allowable Sensor Temperature*</u>	
			<u>LH</u>	<u>RH</u>
	Igniter	74°F	72°F	72°F
	Forward Field Joint	80°F	74°F	64°F
	Center Field Joint	80°F	67°F	67°F
	Aft Field Joint	80°F	68°F	66°F
	Nozzle-to-Case Joint	75°F	70°F	65°F

*Launch commit criteria (LCC) contingency temperature in the event of heater failure

Note: Calculation includes all standard repair conditions