February 8, 1982

## SHUTTLE SERIES

## ORBITER TECHNICAL STATUS REVIEWS

Orbiter Technical Status Reviews (TSR) documents are organized chronologically by the date that the review actually took place. They run from 1981 through 1986. They are contained in seven linear feet of material consisting of presentation material, minutes and correspondence. This is a preliminary inventory. Material has been kept exactly the way in which it was received.

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5.4 Loan Structural Mod Incorporation

OV102 CO

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First Flight Evaluation
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Added WSB Instrumentation on OV- 102; WSB Steam Vent Temperature LCC Violations	July 25, 1984
OMS Pod Attachment Pt 6 Load	August 1, 1984

Indicator; Evaluation of jC-9 Ceramic Coating on Nextel Components Orbiter Windows Contamination Seal August 1, 1984 **Evaluation of Wing Tip Aerothermal** August 3, 1984 Seals TPS Enhancement August 8, 1984 Evaluation of C-9 Ceramic Coating on Nextel Components; OV-102 Forward August 13-14, 1984 Fuselage Heat Sink Understrength Forward ET/Orbiter Multi-piece Bearing; Understrength August 15, 1984 Active Keel Latch OV-102 Additional OMS Effort AA Mod Period; Thermal Window Concerns; ET Umbilical Cavity Ferry Door August 17, 1984 Installation Turn Around Time Improvement; Limit Switch Contamination Problem Hydraulic GSE Quick Disconnect Leakage; Wing Load Reduction August 24, 1984 Design Alternatives "Wing Spoiler Study" Ice Impact Tests September 11, 1984 Orbiter Vehicle Corrosion September 13, 1984 Proposed OMS/RCS Follow-on Test September 19, 1984 Program Extension at WSTF External Tank Disconnects, Removal of Super Lightweight Thermal Protection; Re-Test F FA05 Beany Cap September 25, 1984 Acoustic Test Article; OMS Pod Beef up Study Box Number: 11 Tile Movement Due to Gap-Filler October 3, 1984 Installation Wing Tip Aerothermal Seals; Uninsulated Areas of Xo273 Bulkhead October 10, 1984 and NLG Door Hinge Arms; Ingress / Egress Hatch Hold Open Latch FAD 9B Flight Derived Aerodynamic October 1984 Assessment Deltas OV-104 PRSD Subsystem Tank Set 5 Initial Installation; PLBD Hinge Cover November 6, 1984 Interference OV-099 OMS Pod Flt 6 (Skin Damage) November 9, 1984 Installation of LO2 Prevalve Anti-Slam Actuators on OV-102; OV-102 Wing November 13, 1984 Load Calibration Check Loading for Flight #7 Brake / Skid Control System November 14, 1984 MPS GO2 Flow Control Valves (FCV) November 27, 1984 Early Assessment of 51E Heavyweight November 28, 1984 Abort Landing Main Landing Gear Axle; Thermal December 12, 1984 Envelope Expansion WTR Measurements December 11, 1984 Rockwell Standard Dry Lubed Bleeder Plug Torque Problems; M&P Issue Reusability of Self Locking Fasteners; December 14, 1984 Aft Fuselage Main Pump System Flex Hose Support Proposed Revisions to OV-103 / 104 Redlines Due to OCA 'C' Assessment; December 18, 1984 AFA-12 Acoustic Test MCR11075 - Modification of Flight January 17, 1985

Deck Shear Panels for In-Flight

Access to Avionics Air Filters; Orbiter Oxygen Sensing System Proposal - Redesign Oxygen January 25, 1985 Pressurant Flow Control Valve Payload Bay Hypergolic Detection and Fire Suppression Systems; fuel Cell Water Nozzle Redundancy; RCS January 31, 1985 Primary Thruster Instability Resolution; Repair of Ceramic Coated AFRSI AC Motorvalve Switch Retrofit; Increased AC Motor Valve HE Load Limit; Galileo / Ulysses Waterline February 7, 1985 Freeze-up During Fuel Cell Tank **CRYO** Loading Load Limiter Deletion P/L Retention February 11, 1985 Aft Fuselage Main Pump System Flex February 28, 1985 Hose Support; Installation of Location Evaluation of SOS Forward ET Bolt February 25, 1985 **Proof Load Testing** Centaur Payload Integration Wire Harness Support at Xo 1307 March 20, 1985 Bulkheads; Centaur / Orbiter LH2 Ascent Venting Main Gear Wheel Drive Log Channel; Remove flight Numbers from March 29, 1985 Modifications to Mission Equipment and Model MV0434A & Tech Orders for Special KSC Installations ET Acreage Ice Hazard to Orbiter TPS April 1, 1985 OMS Engine Flange Leakage April 3, 1985 Requirements Brake Instrumentation Changes; Thermal Instrumentation for CG April 10, 1985 Expansion & TPS Health & Life Ceramic Adhesive for Lower Surface April 18, 1985 Gap Fillers 6.0 Loads Cycle - External Load Calculations; Liner Interferences / May 14, 1985 Contamination Ground Positioning of Orbiter Secondary Latches; EVA Camera May 22 & 31, 1985 Bracket; Forward Stabilizer Link Interference SubHeading: Box Number: 11 \* Mid-Fuselage Modifications for Payload Mission Kit \* This 12 page October 24, 1984 document has been scanned Lower Mid-Fuselage Torsional Restraint \* This 7 page document has May 2, 1985 been scanned SubHeading: Box Number: 12 Aerothermo / PAR KSC June 4, 1985 Proposal: Oxygen Pressurant Flow Control Valve; Corrective Action for June 6, 1985 OMS Propellant Quantity Gaging (PQGS) RCS Thruster and OME Nozzle Coating Repair; Orbiter TCS REquirements Support Bracket June 12, 1985 Insulation / Tape Review for VCR 10611; 8 Inch Disconnect Reconfiguration Orbiter / ET Aft Attach Pinched Wire; June 19, 1985 Orbiter / ET Separation System Review; Orbiter / ET Separation System Review: Visual Aid on Spherical Washer Orientation;

	Resolution of the Angular Rotation Limits on Forward Joint; Multi Piece Bearing Proof Load Test	
	Payload Bay Vent Flow Tests; Filter Protection for FCL Payload Head Exchanger & RFCA; Pre Roll Main Gear Tiers	June 20, 1985
	6.0 Loads / Stress Cycle Status and Review	June 24, 1985
	OMS Pod Skin Graphite - Bismaleimide (Solid Laminate) Delivery Date Options	July 19, 1985
	MLG Axle Deflection Test; MLG Axle Stiffness/Weight Increase	July 31, 1985
	CTF Mass Properties Biasing; Purge Circuit #2 Proof Pressure Test Failure	August 1, 1985
	Aft Heat Shield Thermal Environment Recertification; Light Weight Engine Mounted Heat Shield (LW EMHS) Over Temperature Problem on OV-104	August 2, 1985
	OMS Pod Skin Graphite - Bismaleimide (Solid Laminate) Delivery Date Options	August 7, 1985
	Landing Gear Skid	August 7, 1985
	TPS Roughness; Simplified Heating Model Control Point #1	August 13, 1985
	Brake Contamination	August 14, 1985
	Application of High Emissivity Coating on Silts Pod Gap Fillers	August 21, 1985
	Rockwell Orbiter Support to the Bars MKKP Data Base	August 28, 1985
	Landing Gear Skid; Gear Load Reduction Study; Orbiter OV-103 1307 Bulkhead Pressure Loading Quick Look Review	August 29, 1985
	RTV Use on Threaded Fasteners; Bent Springs - Orbiter Umbilical Curtain	September 3, 1985
	ARCS Propellant Tank Heater Control Modification	September 6, 1985
	Evaluation of Test Failure of Lightweight Keel Latch	September 13, 1985
	Fuel Cell Instrumentation	September 19, 1985
	MLG Load Relief Study (Phase 1)	September 24, 1985
	Orbiter Wing Leading Edge Incoflex Insulators	September 28, 1985
SubHeading:	Box Number: 12 *	
	OMS Pod Y-Web Door Carrier Plate Failure; MPS Pneumatic System Surge Tanks and Tank Support Structure Clearance; OMS/RCS AC Motor Valve Indication Switch Retrofit * This 46 page document has been scanned	June 25, 1985
SubHeading:	Box Number: 13	
	Forward ET Attach Panel	October 4, 1985
	APU Controller Bite Anomaly	October 10, 1985
	Proposed Certification Test New TPS Rewaterproofing Material	October 15, 1985
	OMS Engine Nozzle Flange Waviness	October 29, 1985
	Relocate of TPS Measurements	November 27, 1985
	Fluid Dump Study	December 3, 1985
	Rewaterproofing OV-104	December 16, 1985

MLG Emergency Skids MCR 11573, Feasibility Study Report	December 20, 1985
OV-102 Purge Circuit #2 Proof Pressure Failure	January 9, 1986
Thermodynamic Design Data Book Update OV-099 / OV-102; Thermal Control System	January 23, 1986
OV-103 AFRSI Screed Anomaly	March 6, 1986
OV-099 Flight 8 Hatch A Did not Align with Airlock Aperture During Closing Cycle	March 27, 1986
Centaur GH2 Inflight Vent in Vertical Tail Assembly	April 17, 1986
Fuel Cell Flowmeter Transistor Mounting Change	April 29, 1986
Orbiter / Payload Retention Hardware, Dry Film Lube Issue	April 1986
P/L Bay Window Contamination; Dynaring Seals Repair Procedures; Wing / Elevon Lower Cove Redesign; Orbiter Chin Area	May 21, 1986
Rework MLG / Door Retract Mechanism; OV-103 GSE Heat Exchanger; High Temperature Teflon Coated Seal	June 12, 11986
Emergency Egress Slide; Ingress / Egress Hatch Tool	July 16, 1986
Review of Orbiter Primary Structural Joint Attachments	July 23, 1986
APU Fuel System O-Rings; Udimet LX Turbine Housings for Baseline APU	August 13, 1986
Potential Orbiter Structural Problems Due to Unapproved Assembly Drilling Coolant	August 19, 1986
Tile Coating Furnace Qualification and Certification	August 29, 1986
Thermal Analysis TPS MR/DR Data Base Update	August 29, 1986
Production Thermal Design Data Books	August 29, 1986
Alternate Fuel Cell Water Delivery Configuration	September 2, 1986
RM vs Power Leads	September 5, 1986
ET Umbilical Insert Problem and Flange Joint Integrity	September 9, 1986
ET / Orb-ET 2 Inch Disc Seal Problem, 2 Inch GO2 Pressurization System	September 9, 1986
Fuel Cell Operational Improvements; APU Drain Line Heater Safety Concern	September 18, 1986
APU Detection	October 6, 1986
Orbiter Contamination Control	October 17, 1986
Reduced Cabin Pressure Certification for EVA Operations	October 17, 1986
Orbiter Main Propulsion System Pressure Transducer Failure	October 21, 1986
Re-evaluate Criticality of LH2 and LO2 MPS Fill / Drain Valves for Aborts	October 21, 1986
Quality Dynaring Seals for Use on Damaged Dynatube Fittings	October 23, 1986
OMS/RCS Corrective Actions and Retrofit	October 24, 1986
Brake Pressure Reduction at Flat Tire	October 24, 1986
Day Neurobau 40 *	

SubHeading: Box Number: 13 \*

Aft Fuselage / Vertical Tail for 6.0 Loads Evaluation * This 39 page document has been scanned	September 11, 1986
Box Number: 14	
Stowage Locker Door Latch Re- Design & Hinge Modification	November 3, 1986
Increase Permissible Tile Corner Equivalent Roughness in Lower Surface Region A	November 7, 1986
TSR CCTV Camera Mounts Bonded vs Bolted Attachment, MCR 11989	November 7, 1986
Main Gear Axle Plating Study	November 17, 1986
PRSD Hydrogen Tank Pressure Relief Vent System Operation During Tank Vacuum Jacket Failure	November 18, 1986
PRSD Subsystem Beech Aircraft Capability Retention	November 18, 1986
Suspension Strap Limited Life Investigation and Ten Year Recertification	November 18, 1986
RCS Primary Thruster Combustion Instability Protection System	November 20, 1986
Non-Asbestos Structural Film Adhesive	November 26, 1986
Side Hatch Window Cover Design Study	December 2, 1987
RCS Propellant Tank Jet Constraints	December 2, 1986
CCTV Camera Mounts Bonded vs Bolted Attachment	December 3, 1986
AC Motor Valve Oxidizer Bellows Leakage Issue	December 3, 1986
AC Motor Valve Oxidizer Bellows Leakage Issue	December 5, 1986
Power Reactant Storage & Distribution (PRSD) Disconnect Spring Anomaly	December 15, 1986
Orbiter Contamination Control A. Redesign of Avionics Air Cooled LRU Filters	December 15, 1986
MLG Wheel Spin Up (Reboard)	December 15, 1986
MLG Door Booster Redesign Study	December 15, 1986
MPS GH2 Pressurization Flow Control Valve Rubber O-Ring Seal	December 15, 1986
Main Gear Stiffened Axle Plating	December 16, 1986

December 16, 1986

Roll-on-Rim Study