

CRITICAL ITEMS LIST

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REFERENCE DESIGNATOR: _____
 NAME/QUANTITY: Quick Release Pin/1
 DRAWING REFERENCE: ST28P15B3

PROJECT: UARS
 LRU NAME/QUANTITY: PPR Payload Bay Attach- ment Clamp Assembly
 LRU PART NUMBER: 10159-10037-02

SUBSYSTEM: _____
 EFFECTIVITY: ALL ORBITERS

FAILURE MODE NO. UARS-FM-001	CRITICALITY 2/LR	FAILURE EFFECT	RETENTION RATIONALE
FUNCTION Hold inserted PPR in position.		END ITEM None for this failure alone, if knob also fails the assembly will not be properly configured for loading and doors cannot be closed.	<p>A. Design</p> <p>Sufficient interface tolerances are used to ensure proper operation and are based on manufacturer's specifications and required thermal tolerances.</p> <p>Shank and Spindle are made of 17-4PH or 15-7MO stainless and the socket that it interfaces with is made of stainless steel.</p> <p>II. Test/Analysis</p> <p>Assembly will be functionally cycled to ensure proper operation. Pins have been thermally tested at -120 degrees F and function has been verified per (TPS # 11590054).</p> <p>C. Inspection</p> <p>All piece parts are inspected for conformance to the applicable drawings before and after any special process.</p> <p>PDA (Pre-delivery Acceptance) will be performed on all end items. Pins are verified functionally at PDA by inserting them into end item and checking that they lock and unlock.</p>
FAILURE MODE AND CAUSE Jams closed in deployed position. Cause: 1. Galling 2. Contamination		MISSION None	
REUNDANCY SCREENS A- Pass B- N/A C- Pass		CREW/VEHICLE Possible damage to orbiter with second failure during landing. Unable to close Payload Bay doors if failure of both knob and pin occur which would result in loss of vehicle.	
REMAINING PATHS First failure unable to remove clamp.		INTERFACE None	
MISSION PHASE	TIME TO EFFECT	TIME TO CORRECT	
EVA	Hours	Minutes	

PREPARED BY: R. Bruno

REVISION: _____

ISSUING DATE _____

DATE _____

CRITICAL ITEMS LIST

REFERENCE DESIGNATOR: _____
 NAME/QUANTITY: Quick Release Pin/1
 DRAWING REFERENCE: ST2HP15B3

PROJECT: UARS
 LRU NAME/QUANTITY: Pin Payload Bay At Latch
 LRU PART NUMBER: 10159-10037-02

SUBSYSTEM: _____
 EFFECTIVITY: ALL ORBITERS

FAILURE MODE NO. UARS-FM-001	CRITICALITY 2/1R	FAILURE EFFECT	RETENTION RATIONALE
FUNCTION Hold inserted PFR in position.		END ITEM None for this failure alone, if knob also fails the assembly will not be properly configured for loading and doors cannot be closed.	C. Inspection (cont.) All piece parts are cleaned and processed in IIC Cleaning, Packaging, Handling, Shipping, and Storage Procedures for Space Shuttle Crew Equipment; Document #10107-70009. D. Failure History A quick release pin failure has been observed during vibration testing for CITA. A swaged pin that held the T-handle in place came loose and the pin failed. E. Ground Turnaround PDA-PIA will be performed on all end items. F. Operational Use 1. Operational Effect of Failure None, for this failure alone. 2. Crew Action None 3. Crew Training None 4. Mission Constraints None 5. In-flight Check-out None
FAILURE MODE AND CAUSE Jams closed in deployed position. Cause: 1. Galling 2. Contamination		MISSION None	
REDUNDANCY SCREENS A- Pass B- N/A C- Pass	REMAINING PATHS First failure unable to remove clamp.	CREW/VEHICLE Possible damage to orbiter with second failure during landing. Unable to close Payload Bay doors if failure of both knob and pin occur which would result in loss of vehicle.	
MISSION PHASE	TIME TO EFFECT	TIME TO CORRECT	
EVA	Hours	Minutes	

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 ATTACHMENT
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PREPARED BY: K. Brown REVISION: _____
 DATE: _____