

CRITICAL ITEMS LIST

REFERENCE DESIGNATOR: N/A
 NAME/QUANTITY: SHAFT, KNOB/CLEVIS ASSEMBLY/1
 DRAWING REFERENCE: 10159-20354-01

PROJECT: PAD
 LRU NAME/QUANTITY: PAD ASSEMBLY/1
 LRU PART NUMBER: 10159-10053-01

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SUBSYSTEM: N/A
 EFFECTIVITY: ALL ORBITERS

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FAILURE MODE NUMBER PAD-003	CRITICALITY 2/2	FAILURE EFFECT	RETENTION RATIONALE
FUNCTION Moves clevis to move hook up and down to latch and unlatch with RMS striker bar		END ITEM Unable to latch PAD to RMS striker bar MISSION Unable to perform EVA task CREW / VEHICLE None INTERFACE None	A. DESIGN: Shaft, knob/clevis assembly is made of 15-5 PH H1050. Shaft diameter is $615 \pm .003$. Shaft pitch is 0.45 in. Shaft lead is .069 in. Apply Nedox smooth, hard coating to threads of clevis to prevent galling. B. TEST: • PDA - Functional checkout and test - Interface with striker bar • Certification - Vibration test to certification plan requirements for 1 minute per axis (minimum) - Functional test at -188°F - Thermal analysis performed at $+200^{\circ}\text{F}$ to verify tolerances
FAILURE MODE AND CAUSE <u>Mode:</u> Unable to latch PAD to RMS striker bar <u>Cause(s):</u> Galling or contamination between shaft and clevis			
REDUNDANCY SCREENS A - N/A B - N/A C - N/A	REMAINING PATHS N/A		
MISSION PHASE On-orbit	TIME TO EFFECT Immediate		

(Concluded on next page)

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REFERENCE DESIGNATOR: N/A

PROJECT: PAD

SUBSYSTEM: N/A

NAME / QUANTITY: SHAFT, KNOB/CLEVIS ASSEMBLY / 1

LRU NAME / QUANTITY: PAD ASSEMBLY / 1

EFFECTIVITY: ALL ORBITERS

DRAWING REFERENCE: 10159-28354-01

LRU PART NUMBER: 10159-18053-01

FAILURE MODE NUMBER PAD-003 (Concluded)	CRITICALITY 2/2	
RETENTION RATIONALE (CONCLUDED)		
<p>C. INSPECTION:</p> <ul style="list-style-type: none"> • Manufacturing <ul style="list-style-type: none"> - Inspect dimensions, workmanship, and configuration for conformance to drawing and cleanliness requirement (generally clean) • PDA <ul style="list-style-type: none"> - Inspect for damage or material degradation - Verify successful completion of interface test - Verify dimensions, workmanship, and configuration conformance to drawing and cleanliness requirement (generally clean) • Preinstallation acceptance (PIA) <ul style="list-style-type: none"> - Inspect for damage; and to ensure proper installation, verify that knob is torqued to 20 - 40 in-lb and that lock is engaged. 	<p>F. OPERATIONAL USE:</p> <ul style="list-style-type: none"> • Crew turns knob to position hook in soft dock position (visual indication) • Crew puts hook on striker bar • Crew must turn knob to lock hook (PAD) to RMS striker bar (visual indication) • Place knob in locked position • No other crew actions are necessary to latch PAD to striker bar 	
<p>D. FAILURE HISTORY: None</p>		
<p>E. GROUND TURNAROUND:</p> <ul style="list-style-type: none"> • Inspect for damage or material degradation • Verify successful completion of interface test • Verify dimensions, workmanship, and configuration conformance to drawing and cleanliness requirement (generally clean) 		

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ATTACHMENT -
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PREPARED BY: D. A. Crouch

REVISION:

SUPERSEDING DATE:

DATE: 8/91