CIL
Critical Items List

Assembly Name/Part Number: Reaction Arm Assembly/10151-0.50 0[illegible]
Reference: CIL_RARM
Prepared By: C. Hartman
Superseding Date: 1/89

Approved By: M. Withey
Date: 8/89 Rev: A

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Housing G0870-584993-001 Item 3.3 One	1/1	3.3FM12 Fails to interface with Torque Multiplier. CAUSE: Defective material. Damage, impact. Thermal Expansion.	END ITEM: Unable to mate with Torque Multiplier. GFE INTERFACE: Unable to loosen latch bolts. MISSION: Terminate EVA. Unable to Jettison Payload. CREW/VEHICLE: Loss of crew and vehicle.	A. DESIGN: The Reaction Arm Housing is fabricated from Inconel 718 bar per AMS 5664. It is manufactured by Rockwell International per Drawing G1870-584993. The Reaction Arm Assembly is stowed in a foam cushion in the Payload Bay PSA to protect it from the possibility of damage from impact. B. TEST: Component Acceptance Test - None PSA Test - The following tests are conducted at the Reaction Arm Assembly level in accordance with TLC Document 10107-70690: 1. Functional test to verify proper interface with Torque Multiplier. Certification Test - The Reaction Arm Assembly was tested to S/AD requirements of eight cycles and exhibited no evidence of damage. It was certified for the worst case PSA Stowage temperature range of -80 degrees F to +150 degrees F and interfaced with the Torque Multiplier.

CIL
Critical Items List

Assembly Name/Part Number: Reaction Arm Assembly/10159-20260-01
Reference: CIL_RAAM
Prepared By: C. Martinez
Superceding Date: 9/88
Approved By: R. Withey
Date: 1/89 Rev: A

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Housing 10170-1501991-001 (Item 5.3) (One)	1/1	5.1FM12 Fails to interface with Torque Multiplier.		C: INSPECTION Components and material manufactured to ILC requirements at an approved supplier are documented from procurement through shipping by the supplier. ILC incoming receiving inspection verifies that the materials received are as identified in the procurement documents, that no damage has occurred during shipment and that supplier certification has been received which provides traceability information. The following MIP's are performed during the Reaction Arm Assembly manufacturing process to assure the failure causes are precluded from the fabricated item: 1. Inspection for damage or material degradation. During PDA, the following inspection points are performed at the Reaction Arm Assembly level in accordance with ILC Document 0107-70690: 1. Inspection for damage or material degradation. 2. Verify successful completion of interface test. 3. Verify conformance to drawing.

CIL
Critical Items List

Assembly Name/Part Number: Reaction Arm Assembly/10137-20210-01
References: CIL_RAAM
Prepared By: C. Hartman Approved By: R. Nithey
Superceding Date: 9/88 Date: 1/89 Rev: A

NAME / P/N / ITEM	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Housing 10010- (304991-80) Item 2.3 1 Ea 1 Ea	1/1	5.3FM12 Fails to Interface with Torque Multiplier.		B. FAILURE HISTORY: None C. GROUND TURNAROUND: During ground turnaround, in accordance with RLC Document 10107-70713, the Reaction Arm Assembly is inspected for damage and proper operation. F. OPERATIONAL USE: 1. Crew Response Pre/Post EVA - N/A EVA - Transport back to crew compartment and attempt to repair. 2. Training Crew briefing. 3. Operational Considerations Catastrophic failure. Possible loss of crew/vehicle.