Assembly Name/Part Number: Torque Multiplier/10159-20234-01
Reference: CIL_TRQMLT
Prepared By: C. Hartman
Superseding Date: 1/89

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

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Torque Multiplier 10159-20234-01 Item 5.4 One	1/1	5.4FM1: Fails to interface with latch bolt. CAUSE: Defective material, impact, contamination, galling.	END ITEM: Unable to interface with latch bolt. GFE INTERFACE: Unable to ingress latch bolts. MISSION: Unable to Jettison Payload. Terminate EVA. CREW/VEHICLE: Loss of crew and vehicle.	A. DESIGN: The Torque Multiplier Socket is 1-1/16 inch, 12-Pt socket fabricated from 8740 steel and is manufactured by Snap On Tools. The Torque Multiplier is stowed in a foam cushion in the Payload Bay FSA to protect it from the possibility of damage from impact. B. TEST: Component Acceptance Test - None FSA Test - The following tests are conducted at the Torque Multiplier Assembly level in accordance with ILC Document 10187-78650: 1. Functional test to verify proper operation. 2. Interface with latch bolt test fixture.

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CIL
Critical Items List

Assembly Name/Part Number: Torque Multiplier/10159-20294-01
Reference: CIL_TRQMLT
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
Torque Multiplier 10159-20294-01 Item 5.4 One	1/1	5.4Fm1: Fails to interface with latch bolt.		Certification Test - The Torque Multiplier was tested to S/AB requirements of eight cycles and exhibited no evidence of damage. It was certified for the worst case FSA Stowage temperature range of -200 degrees F to +350 degrees F. 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 Torque Multiplier Assembly manufacturing process to assure the failure causes are precluded from the fabricated item: 1. Inspection of all components for damage or material degradation. 2. Verify cleanliness to VC level.

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ILC
Critical Items List

Assembly Name/Part Number: Torque Multiplier/10159-1-0294-01
Reference: CIL 1R2R1
Prepared By: C. Harlman
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
Torque Multiplier 10159-1-0294-01 Item 5.4 One	1/1	5.4FM11 Fails to interface with latch bolt.		(continued below)

During PDA, the following inspection points are performed at the Torque Multiplier Assembly level in accordance with ILC Document 0187-78-A.

1. Verify conformance to drawing.
2. Inspection for damage or material degradation.
3. Verification of successful completion of functional test and bolt interface.
4. Verify cleanliness to VC level.

D. FAILURE HISTORY
None

E. GROUND TURNAROUND
During ground turnaround, in accordance with ILC Document 0187-78713, the Torque Multiplier Assembly is inspected for damage, functionally tested for proper operation and cleaned to VC level.

F. OPERATIONAL USE:

1. Crew Response
Pre/Post EVA - N/A
EVA - Transport Torque Multiplier to crew compartment and attempt to repair.

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CIL
Critical Items List

Assembly Name/Part Number: Torque Multiplier/10157 20,59 01
Reference: CIL_INDEX
Prepared By: C. Hartman
Superceding Date: 1/89
Approved By: M. Hickey
Date: 4/89 Rev. A

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Torque Multiplier 740439- 120294-01 Item 9.4 One	1/1	9.4FM01 Fails to interface with latch bolt.		2. Training Crew briefing. 3. Operational Considerations Catastrophic failure. Possible loss of crew/vehicle.

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