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CRITICAL ITEMS LIST

ASSEMBLY NAME/PART NUMBER: CABLE CUTTER A667/10139-10056-02  
 Reference: CIL, CC  
 Prepared By: E. Norlan Approved By: M. Mathew  
 Superseding Dates: 11/80 Dates: 1/89 Rev: 6

QTY	NAME P/N	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
1	Cable Cutter 100150-10056 1-92, 131mm 3.7 1Dm	5.2FMS3 Ratchet mechanism inoperable.  CAUSE: Broken or damaged pusher spring, pawl, spring pin, dowel pin or link drive. Loss of blade tooth, pin shaft or retainer pin. Defective material or thread adhesive. Loss of set screw. Bending. Contamination.	END ITEM: Cutting jaws unable to close.  GPE INTERFACES: Cable seal be cut using back- up Cable Cutters.  MISSION: Additional time required to complete task.  CREW/VEHICLE: Possible loss of crew/vehicle with loss of back-up cable cutter.	A. DESIGN: The ratchet pawl is fabricated from forging tool steel and the ratcheting blade is fabricated from investment casting steel. Both are chrome plated per QQ-C-370, Class 20. The dowel pin and link drive are fabricated from 316 stainless steel and heat treated to H1050 condition. They are also passivated per QQ-F-35 specification. High strength outside and heat treated conditions preclude wear and breakage.  The set screw is 818-37 UNF x .75 lg cup point set screw fabricated from 30-4 stainless steel and is procured to MS specifications. The pin shaft and pin retainer are fabricated from 316 stainless steel and are heat treated to H1050 condition. Loss of set screw and pin retainer is precluded in design by the use of thread lock adhesive. They are installed using high strength Loctite 0276. An added assurance, pin retainer Loctite is allowed to cure 30 minutes before further handling.  The shaft size of Loctite is carefully monitored to eliminate unacceptable deterioration.  The Cable Cutter is stored in a foam cushion in the Payload Bay PBA to protect it from the possibility of damage due to impact.

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ASSEMBLY NAME/PART NUMBER: CABLE CUTTER ASSY/10159-10056-02  
 Reference: CIL\_EC  
 Prepared By: C. Hartman  
 Approved By: B. Wilkey  
 Superseding Date: 11/06  
 Date: 1/09  
 Rev: R

NAME P/N	QTY	CRIT	FAILURE MODE & EFFECTS	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Cable Cutter 10159-10056 1-02, Titan 3.2 One		2/1R	S. ZFM03 Natchet mechanism insuperable		<p>B. TEST:</p> <p>Component Acceptance Test - None</p> <p>PBB Test - The following tests are conducted at the Cable Cutter Assembly level in accordance with ILC Document 18103-70697:</p> <p>1. Functional test to verify jaws close properly.</p> <p>Certification Test - The Cable Cutter was certified for worst case P&amp;B Stowage temperature range of -200 degrees F to +250 degrees F. It was functionally tested to demonstrate ability to cut wire bundles at -200 degrees F to +250 degrees F and exhibited no evidence of damage, binding or jamming.</p> <p>C. INSPECTION: Components and material manufactured to ILC requirements at an approved supplier are documented from procurement through shipping by the supplier. ILC including receiving inspection verifying 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.</p>

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ASSEMBLY NAME/PART NUMBER: CABLE CUTTER ASSY/100159-10056-02  
 Reference: CIL CC  
 Prepared By: C. Harless  
 Approved By: M. Wilkey  
 Superseding Dates: 11/88  
 Dates: 1/89 Revs: A

QTY	NAME P/N	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
1	Cable Cutter 100159-10056 1-02, 1 Item S. Z 1 One	2/10	S. Z/MOJ Ratchet mechanism inoperable		<p>The following NIP's are performed during the Cable Cutter manufacturing process to ensure the failure causes are precluded from the fabricated item:</p> <ol style="list-style-type: none"> <li>1. Inspection of all components for damage or material degradation.</li> <li>2. The issuance of Loctite is controlled by inspection.</li> <li>3. Verification that Loctite shelf life is within specification.</li> <li>4. Witness of Loctite application to handle set screw.</li> <li>5. Verify set screw is adjusted properly.</li> <li>6. Witness of Loctite application to retaining pins and verify proper cure time.</li> </ol> <p>During P&amp;R, the following inspection points are performed at the Cable Cutter Assembly level in accordance with ILC Document 10107-70007:</p> <ol style="list-style-type: none"> <li>1. Verify conformance to drawing.</li> <li>2. Inspection for damage or material degradation.</li> <li>3. Verify successful completion of functional test.</li> <li>4. Verify cleanliness to VC level.</li> </ol>

CRITICAL ITEM LIST

ASSEMBLY NAME/PART NUMBER: CABLE CUTTER ASEP/10159-10056-02  
 Reference: CIL CC  
 Prepared By: C. Hartson  
 Approved By: M. Mithey  
 Superseding Dates: 11/88  
 Dates: 1/89 Revs A

NAME P/N	QUANTITY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Cable Cutter 10159-10056 1-02 Item 5.2 EVA		2/10	5.2FM03 Batch exchange insuperable		<p>D. FAILURE HISTORY: None</p> <p>E. GROUND TURNDOWN: Being ground turndown, in accordance with IC Document 14887-70712, the Cable Cutter are inspected for damage and proper operation and cleaned to VC level.</p> <p>F. OPERATIONAL USE:</p> <ol style="list-style-type: none"> <li>1. Crew Response PAC/PDS EVA - N/A EVA - Cut cables using back-up Cable Cutter closed in PDR or attempted to manually disconnect.</li> <li>2. Training Crew briefing.</li> <li>3. Operational Considerations Task may require additional time.</li> </ol>

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