

10107-7077

DOCUMENT NO.

RELEASE DATE:

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CIL
CRITICAL ITEMS LIST

ASSEMBLY NAME/PART NUMBER: PAYLOAD RETENTION STRAP/LO159-10075-01

Reference: CIL_PRS

Prepared By: E. Hartman

Approved By: M. Withay

Superceding Date:

Date: 3/90 Rev:

NAME P/N	QUANTITY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Strap Assembly 18159- 20413-01 One	1/1		S. I/FMOL Loss of Strap CAUSE: Broken stitches, torn or abraded webbing, or fabric, damaged Armalon, defective material. Loss of Hook and Clavie Assembly.	DND ITEM: PRS becomes unattached from itself. D/E INTERFACE: Payload becomes loose in cradle. MISSION: N/A CREW/VEHICLE: Possible loss of crewmember or vehicle damage.	A. DESIGN: The Strap Assembly is fabricated from 24 mil thick Kevlar 29 fabric with Armalon stiffener. The Kevlar fabric has a tensile strength of 2100 lbs. in both warp and fill directions. Hook loops are fabricated from 1" Kevlar webbing which has a tensile strength of 5800 lbs. Kevlar 5-ply cord is used for stitching per FED-510-751-A, Jack stitch type 301, 4 to 6 stitches per inch. All cut edges of fabric and webbing are coated with Kel-F-800 to prevent fraying. B. TEST: Component Acceptance Test - During Manufacturing, test samples are fabricated from the lots of flight materials and proof load tested to 4200 lbs. PDA Test - During PDA, each strap is acceptance load tested to 3600 lbs. Certification Test - During design verification testing, the strap sample withstood a load of 8056 lbs. with only minor webbing failure. No stitching failure was observed.

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CIC
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ASSEMBLY NAME/PART NUMBER: PAYLOAD RETENTION STRAP/10159-10075-01

Reference: CIC_PRS

Prepared By: C. MarLean

Approved By: M. Withey

Superseding Date:

Date: 3/98 Rev:

NAME P/N	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Strap Assembly 10159- 20413-1 One	1/1 S.IFN01 Loss of Strap		<p>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.</p> <p>The following MIP's are performed during the strap assembly manufacturing process to assure the failure causes are precluded from the fabricated item:</p> <ol style="list-style-type: none"> 1. Visual inspection of all materials to verify no damage or degradation. 2. Cut pattern pieces are inspected for proper dimensions. 3. Visual inspection of all stitching to verify proper tension and length.

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Prepared By: C. Hartman

Approved By: M. Vithey

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NAME P/N	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Strap Assembly 10159- 20413-1 One	1/1 S.I.FMDL Loss of Strap		<p>During PDA, the following inspection points are performed at the PRS assembly level in accordance with controlling TPS:</p> <ol style="list-style-type: none"> 1. Visual inspection for material degradation. 2. Visual inspection for structural damage after acceptance load test. <p>D. Failure History:</p> <p>No failure history exists for this item.</p> <p>E. Ground Turnaround:</p> <p>During ground turnaround, in accordance with controlling TPS, the PRS is visually inspected for broken stitches, open seams and material degradation or damage.</p>

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NAME P/N	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
Strap Assembly 10159- Z0413-1 One	1/1 S. IFRDI Loss Of Strap		<p>F. Operational Use:</p> <p>1. Operational Effect - Unable to secure payload for jettison</p> <p>2. Training No training specifically covers this failure mode.</p> <p>3. Operational Considerations Inspect strap at time of use.</p>