LIFESAVING SYSTEMS CORPORATION

LSC Test Report Number: F-730-369
Revision: A

Load Testing of #369



PROPRIETARY & CONFINDENTIAL

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PURPOSE:

The purpose of this report is to show the load strength of the snap hook with locking screw, part number 369. Successful completion shall confirm the attachment hardware satisfies the requirement of withstanding a load of 15kN without permanent distortion listed in AS/NZS 1891.1:1995, clause 3.3.2.

ACRONYMS AND ABBREVIATIONS:

LSC – Lifesaving Systems Corp.
N/A – Not Applicable
P/N – Part Number
S/N – Serial Number
Lbf – Pound-Force
N – Newton

TEST FACILITY:

Testing and inspection was performed at Lifesaving Systems Corporation's (LSC) manufacturing facility located in Apollo Beach, Florida by LSC personnel.

REFERENCE:

AS/NZS 1891.1:1995

Australian/New Zealand Standard

Industrial fall-arrest systems and Devices

Part 1: Safety belts and harnesses

SUMMARY OF TESTS PERFORMED & RESULTS:

Section	Test Description	Results
2.4	Load Test	The snap hook can withstand the minimum load of 3,372lbf (15kN) without permanent distortion.

SECTION 1- TEST CONDITIONS & EQUIPMENT:

1.1 ENVIRONMENTAL CONDITIONS

Load test shall be performed at a temperature of 75 ± 5°F, and a relative humidity of 50 ±15%. The temperature and humidity shall be recorded at time of test.

1.2 TOLERANCES

The load cell tolerances shall be maintained within all applicable specified tolerances.

- 2000lbf ± 2lbf
- 4000lbf ± 3lbf
- 6000lbf ± 4lbf

1.3 INSTRUMENTS AND EQUIPMENT

LSC Tool No.	Test Equipment	Description	Cal. Date	Cal. Due
88	Cell, Load	Force Measurement: 10,000lb	6/4/2019	6/4/2020
57	RH/Temp Monitor	Temp and Humidity Monitor	6/3/2019	6/4/2020
85	Calipers	Dimensional Measurement:	1/2/2019	1/2/2020

1.4 CALIBRATION

The instruments and equipment are calibrated according to manufacturer's specifications and calibration is traceable to the National Institute of Standards and Technology (NIST). Calibration records are maintained on file at Lifesaving Systems Corp. Photograph of the load cell calibration sticker can be found in Section 2.5 of this report.

SECTION 2- LOAD TEST:

2.1 SCOPE

The load test is performed to determine the strength of the snap hook.

2.2 APPRATUS

- Hydraulic pull tester
- Load Cell
- Type 302 stainless steel, 7 x 19 aircraft cable

2.3 PROCEDURE

Step 1. Measure the overall height of the snap hook and record results.

Step 2. Mount the snap hook inside the hydraulic pull tester by looping a steel cable through the top grip and back through the snap hook.

Step 3. Mount the other end of the snap hook to a snap hook attached to the bottom grip. The snap hook shall be in a vertical orientation before load testing.

Step 4. Increase the force at a rate of 500N (112lbf) every 3 seconds until the target load of 15kN (3,372lbf) is achieved or ultimate failure occurs.

Step 5. Release the force and measure the height of the snap hook for material distortion. Record results.

2.4 ANALYSIS OF RESULTS

Table1.

Target Load (lbf)	Snap Hook Measurement Pre-Test (in)	Load Cell Reading (lbf)	Snap Hook Measurement Post-Test (in)	Comment
0	0	0	0	-
3,372	4.5	4,017	4.5	No Material Distortion

Temperature and Relative Humidity Reading: 77.3°F, 53%

2.5 PHOTOGRAPHS



Test Setup



Load Cell: Calibration Sticker



Load at 4,017lbf



Post Measurement