LIFESAVING SYSTEMS CORPORATION

LSC Test Report Number: F-730-190-MS
Revision: A

Static Load Test Report

P/N: 190-MS



PROPRIETARY & CONFINDENTIAL

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PURPOSE:

The purpose of this report is to determine the ultimate strength of the #190-MS hoisting sling. Successful completion will confirm the hoisting sling demonstrates the suitability and safety for use during helicopter hoist operations, including the deployment and recovery of persons (Human External Cargo).

ACRONYMS AND ABBREVIATIONS:

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

TEST FACILITY:

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

EQUIPMENT UNDER TEST:

Part No.	Material	Cable Specs	Part Description
190-MS	316 Stainless Steel	7 x 19 Stranding 3/16” Diameter	Hoist Sling

SUMMARY OF TESTS PERFORMED & RESULTS:

Section	Test Description	Results
2.2	Static Load Test	One cable leg will break on the #190-MS at an ultimate load of 3,697lbf.

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%.

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	7/03/2020	7/03/2021

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 3.0 of this report.

SECTION 2- LOAD TEST:

2.1 SINGE LEG ATTACHMENT- VERTICAL

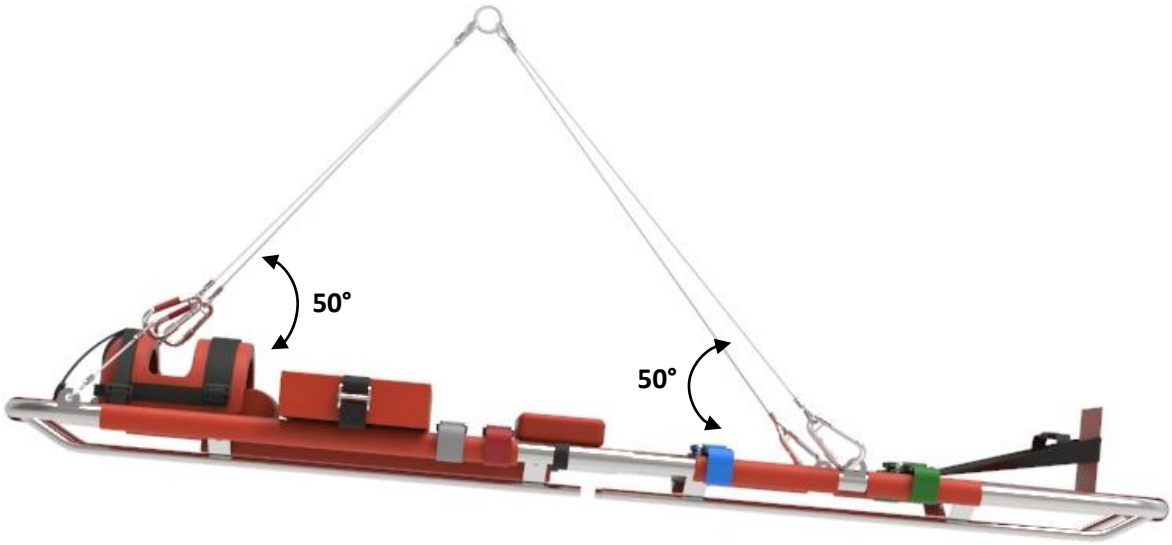
The #190-MS hoisting sling shall be mounted inside a hydraulic pull tester in the vertical orientation. The O-ring shall be mounted to the top grip and one cable leg with snap hook shall be mounted to the bottom grip. An increasing force shall be applied to the #190-MS until ultimate failure occurs. Cause of failure shall be reported.

2.2 ANALYSIS OF RESULTS

Table 1.

Pull Test	Load Cell Reading (lbf	Comment
(Single Leg)	3,697	Cable broke at 3,697lbf. Slight deformation of O-ring.

2.3 LOAD CALCULATIONS



Angle 50°

Load Factor = 0.7660

Cable Breaking Strength = 3,697lbf

Four Legs = (Cable BS x LF) x 4

(3,697lbf x 0.7660) x 4 = 11,327lbf max load

With the maximum working load limit of 600 lbs for the 402 Medevac Litter, the 190-MS sling set provides a safety factor of over 18.

SECTION 3- PHOTOGRAPHS



#190-MS Pre-Test



#190-MS Setup

Note: Single cable leg attached



Cable Failure at 3,697lbf



#190-MS Post Test

Cable Failure at 3,697lbf



Load Cell Calibration Sticker