Lifesaving Systems Corporation
220 Elsberry Road
Apollo Beach, Florida 33572
www.lifesavingsystems.com

STATIC LOAD TEST REPORT

STAMPED V-RING

384-S



PROPRIETARY & CONFINDENTIAL

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OWNED BY LIFESAVING SYSTEMS AND MAY NOT BE DUPLICATED, COMMUNICATED TO OTHER PARTIES OR USED FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF LIFESAVING SYSTEMS CORP.

Prepared by: _____ Date: 6/1/2022
Kyle Curry, **Engineering**

Approved by: _____ Date: 6/1/2022
Taran Fleming, **Quality Manager**

CONTENTS

CONTENTS 2
1.0 PURPOSE 3
2.0 DESIGN AND MATERIAL 4
3.0 TEST REQUIRMENTS 5
4.0 TEST EQUIPMENT AND CALIBRATION 6
4.1 EQUIPMENT 6
5.0 RESULTS 7
6.0 SUMMARY 8
7.0 APPENDIX 9

1.0 PURPOSE

The purpose of this report is to prove that P/N 384-S Stamped V-Ring meets the static load strength requirements stated in the ANSI Z359 4.3.1.3 Tensile Testing of Buckles and Adjusters of 4,000lbs. (17.8kN). Additionally, a “Box-Double X” stitch pattern will be tested in tandem to determine its maximum load before failure.

2.0 DESIGN AND MATERIAL

P/N 384-S	
Part Number:	384-S
Process:	Stamped
Material:	304 Stainless Steel
Size:	2.51” x 2.27” x 0.160” (8 Ga.)

WEBBING SAMPLE WITH BOX-DOUBLE X
• Material: 1.75” Mil-Spec T-13 Nylon Webbing, Black • Thread: TEX 210 • Stitching: Box-Double X, 1-3/8” x 1-3/8”



Figure 1. PARTS TESTED FOR STATIC LOAD TEST

3.0 TEST REQUIRMENTS

Submit the V-ring frame to an internally applied test load of 4000 lbs. (17.8kN) in the manner shown below in Figure 2. The time to reach the test load shall be greater than one minute to avoid dynamic effects. The test sample will then be taken to failure after achieving the target load of 4000 lbs. (17.8kN).

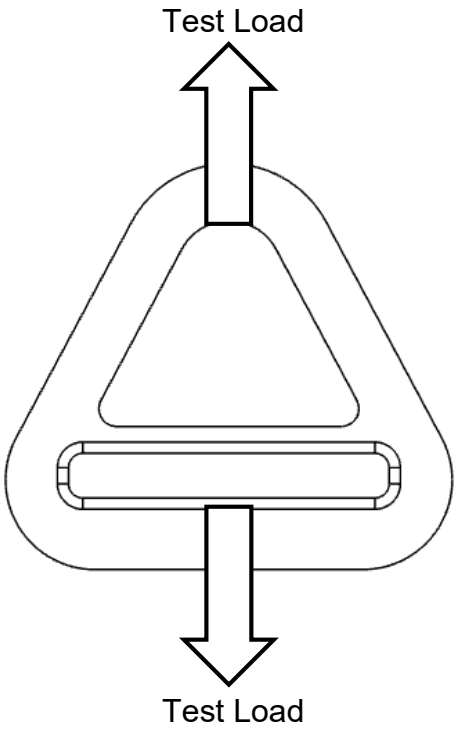


Figure 2. TENSILE TESTING LOAD SETUP

4.0 TEST EQUIPMENT AND CALIBRATION

4.1 EQUIPMENT

The primary testing equipment consists of the following items:

1. Force Measurement: 10,000lb S-Beam load cell with a digital gauge. Calibration sticker valid until 06/24/2022.





2. Load Tester: Hydraulic Cylinder

5.0 RESULTS

Part Number	Target Load (lbs)	Breaking Load (lbs)	Pass/Fail
384-S	4000	5065	Pass
Webbing Sample	4000	N/A	Pass

6.0 SUMMARY

From the results shown above, P/N 384-S Stamped V-Ring along with the Box-Double X stitching passed the static load requirements of 4000 lbs. stated in ANSI Z359 4.3.1.3 Tensile Testing of Buckles and Adjusters. Part 384-S then achieved a breaking strength of 1000+ lbs. passed the target load, while the stitching showed no signs of failure.

7.0 APPENDIX



Figure 1. TEST SETUP BEFORE LOADING



Figure 2. TEST SETUP AFTER LOADING TO 5065 LBS.



Figure 3. 384-S AFTER FAILURE AT 5065 LBS.



Figure 4. BOX-DOUBLE X STITCHING AFTER ACHIEVING 5065 LBS.