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Securing Adjuster Test Report

Part Number: #451



PROPRIETARY & CONFINDENTIAL

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PURPOSE

The purpose of this report is to show the load strength of the securing adjuster #451 used on the quick strops. Successful completion shall confirm the adjuster satisfies the requirement of withstanding a load of 5kN without permeant distortion listed in AS/NZS 1891.1:1995, clause 3.3.3. The test shall be conducted at Lifesaving Systems Corp. located in Apollo Beach, Florida.

DESCRIPTION

The securing adjuster #451 made from corrosion resistant stainless steel and has a knurled slide bar for grip. The adjuster is used to adjust the crotch strap webbing on the #214A and #214A-SAP quick strops.



#451



#214A



#214A-SAP

ACRONYMS AND ABBREVIATIONS

LSC: Lifesaving Systems Corp.
P/N: Part Number
kN: Kilonewtons
lbf: Pound-Force

SECTION 1 – SPECIFICATIONS

1.1 #451

Technical Specifications	
Process:	Frame: Stamped
Material:	Frame: Stainless Steel 304 Bar: Knurled Stainless Steel 304
Breaking limit:	2,200lbs (998kg)
Size:	11 GA x 1.7” x 2.8”

SECTION 2 – STATIC LOAD TEST

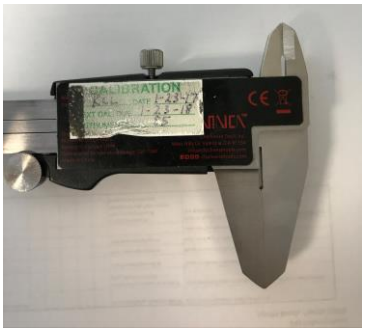
2.1 Objective

Test the structural integrity of the adjuster by applying a load force of 5kN (1,124lbf) and inspect for permanent distortion.

2.2 Equipment

No.	Test Equipment	Description
1	Hydraulic Pull Tester	Force Application
2	10k S-Beam Load Cell	Force Measurement
3	Digital Caliper	Dimensional Measurement

2.3 Calibration

Test Equipment	Description	Calibration Due Date
10k S-Beam Load Cell	Force Measurement	5-18-2018
	• Force Measurement: 10,000lb S-Beam load cell (transducer) with one (I) each 0-10,000lbs.	
Test Equipment	**Description**	**Calibration Due Date**
Digital Caliper	Dimension Measurement	1-23-2018
	• Measurement: VINCA DCLA-0605 Electronic Digital Caliper.	

2.4 Procedure

(a) Pre-Test: Measure the length and width of the adjuster using a digital caliper. Record the measurement.

(b) Attach the adjuster and webbing combination inside the pull tester to the top and bottom grips.

(c) Use chalk to mark a line across the webbing just under the hardware frame.

i. NOTE: The webbing line will be used to identify any slippage that occurs during the load test.

(d) Increase the force at a rate of 250lbf (1.1kN) every 5 seconds until a maximum limit of 5kN (1,125lbf) has been reached.

(e) Release the load.

(f) Post-Test: Measure the length and width of the adjuster using a digital caliper. Record the measurement.

(g) Measure the distance between the line marked on the webbing and the hardware frame, if slippage occurred.

(h) Examine the specimen for signs of fracture and compare the pre-test measurement with post-test measurement. Record any distortion in the material.

SECTION 3 - RESULTS

3.1 #451

<table>
<tr><th rowspan="2">Adjuster</th><th colspan="2">Measurement</th><th rowspan="2">Webbing Slippage (Yes/No)</th><th rowspan="2">Material Distortion (Yes/No)</th></tr>
<tr><th>Pre-Test</th><th>Post-Test</th></tr>
<tr><td>Length</td><td>1.71”</td><td>1.71”</td><td rowspan="2">NO</td><td>NO</td></tr>
<tr><td>Width</td><td>2.04”</td><td>2.04”</td><td>NO</td></tr>
<tr><td>
Load Force:
1,163lbf
>5kN</td><td colspan="2">
Post-Test: No Distortion

Post-Test: No Distortion</td><td colspan="2">
Post-Test: No Slippage</td></tr>
</table>

SECTION 4- SUMMARY

(a) Requirement listed in AS/NZS 1891.1-1995, clause 3.3.3.

"Securing buckles and adjusters shall be designed to withstand the loads transmitted as a result of the appropriate assembly test, and, except for those used on pole straps, shall be designed to withstand without permanent distortion, a load of 5kN."

NOTE: The design of the buckle should minimize 'creep' of the belt under normal wearing, i.e. cyclic mild tensioning.

PASS: The securing adjuster #451 used on the #214A and #214A-SAP meets this requirement.

The results shall be used to show compliance for ATSO-C1003 authorization.