DAYTON T. BROWN INC.
Founded 1950

1175 CHURCH STREET • BOHEMIA, LONG ISLAND, NEW YORK 11716
AREA CODE 631 589-6300

TEST REPORT

Test Report No.: 415287-01-04-R16-1037 8 December 2016
Job No.: 415287-01-000

CLIENT Lifesaving Systems
220 Elsberry Road
Apollo Beach, FL 33572

SUBJECT Triton Harness (Class III) Hardware and Webbing Sampled and Identified by Client for Specification Testing

SUMMARY

The test results herein show that the submitted representative samples were tested to the cited test requirements of SAE International Standard No. AS8043A* and the Lifesaving Systems test plan for the type of assembly tested.

* SAE International Aerospace (AS) Standard No. 8043A,
Restraint Systems for use in Civil Aircraft as Amended
31 March 2000

WEBBING SAMPLE DESCRIPTION

Part No.	NFW016
Material:	Nylon
Weave Pattern:	1.75”
Color:	Black
Type:	T-8

WEBBING SAMPLE DESCRIPTION

Part No.	NFW017
Material:	Nylon
Weave Pattern:	1.75”
Color:	Black
Specification:	MIL-W-4088 1/AU
Type:	T-13

HARNESS COMPONENT SAMPLE DESCRIPTION

PART NO.	DESCRIPTION
487-12	Link, Tri-Star
721	Shuttle Cock Buckle
H001	Superloc 1” BLK
513	Talon II w/Swivel, SS
487-13C	V-Ring, Tri-Bar, Cast TI
723	Buckle, Stainless Steel
451	SL Bar Adj, 1.75”

GENERAL

The submitted specimens were inspected upon receipt at Dayton T. Brown, Inc. and found to be undamaged.

The specimens were received on 8 August, 22 August, and 4 November 2016.

The webbing testing was conducted from 28 September through 18 October 2016.

The adjuster testing was conducted from 20 October through 17 November 2016.

The hardware testing was conducted from 27 September through 1 October 2016.

The test results contained herein pertain only to the specimens listed in this report.

Dayton T. Brown, Inc. is not involved in any production quality inspections. All tests are based on the samples that are selected by the manufacturer and provided to Dayton T. Brown, Inc. without any Dayton T. Brown, Inc. involvement in said selection.

Dayton T. Brown, Inc. performs testing to SAE (AS) 8043A and the Lifesaving Systems test plan under laboratory conditions. These tests do not measure and are not intended to measure all possible applications or installations of the seat belt assembly or components, except as so instructed by the manufacturer as to a particular configuration to be tested. In that event, the report will describe the particular application tested in detail. Dayton T. Brown, Inc. is not responsible for actual performance of any seat belt assembly, seat belt retractor, or individual seat belt component as installed in any vehicle.

GENERAL - Continued

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Very truly yours,

DAYTON T. BROWN, INC.



J. Benincasa
Test Technician



T. Zimoulis
Test Engineer

8.0 REQUIREMENTS FOR WEBBING – Part No. NFW016, Type T-8

Minimum Performance Standards (MPS)	Test and Units	Specimen Average/Median Determined	Required
5.2	Breaking Strength, N	22,377	Not less than 22,000 N for Pelvic
5.3	Elongation at 11,120 N, Percent	18.40	Shall be less than 20%
5.4	Resistance to Light		
	1) Breaking strength after light exposure, N	19,656	Not less than 13,300 N

8.0 REQUIREMENTS FOR WEBBING – Part No. NFW017, Type T-13

Minimum Performance Standards (MPS)	Test and Units	Specimen Average/Median Determined	Required
5.2	Breaking Strength, N	39,744	Not less than 22,000 N for Pelvic
5.3	Elongation at 11,120 N, Percent	14.42	Shall be less than 20%
5.4	Resistance to Light		
	1) Breaking strength after light exposure, N	34,496	Not less than 13,300 N

DATA – Part No. NFW016, Type T-8

WEBBING BREAKING STRENGTH

Specimen	Original (N)	Elongation at 11,120 N (Percent)
W1	21,205*	18.94
W2	22,377	18.55
W3	22,920	17.72
Median	22,377	
Average		18.40

* Does not meet requirements.

Specimen	After Light (N)
W7	19,788
W8	19,656
W9	19,359
Median	19,656

DATA – Part No. NFW017, Type T-13

WEBBING BREAKING STRENGTH

Specimen	Original (N)	Elongation at 11,120 N (Percent)
W1	37,876	14.34
W2	39,797	14.15
W3	39,744	14.77
Median	39,744	
Average		14.42

Specimen	After Light (N)
W7	34,505
W8	32,459
W9	34,496
Median	34,496

9.0 REQUIREMENTS FOR HARDWARE

Minimum Performance Standards (MPS)	Test and Units	Specimen Average Determined	Required
6.1	Corrosion Resistance		
	All other hardware	See Data Table	Metallic hardware parts of a human harness must not corrode, after being subjected to the conditions in 9.1
6.2.1	Temperature Resistance	Passed	Nonmetallic hardware parts of a human harness, when subjected to the conditions specified in 9.2.1, must not deteriorate to cause the assembly to operate improperly

DATA

HARDWARE

Specimen Part No.	Description	Corrosion Resistance	Temperature Resistance
487-12	Link, Tri-Star	Passed	Passed
721	Shuttle Cock Buckle	Passed	Passed
H001	Superloc 1” BLK	Passed	Passed
513	Talon II w/Swivel, SS	Fail*	Passed
487-13C	V-Ring, Tri-Bar, Cast TI	Passed	Passed
723	Buckle, Stainless Steel	Fail*	Passed
451	SL Bar Adj, 1.75”	Passed	Passed
Average		See Above	Passed

*A small amount of corrosion was noted on the samples, which does not impair normal adjustment or operation.

10.5 REQUIREMENTS FOR ASSEMBLY PERFORMANCE

Minimum Performance Standards (MPS)	Test and Units	Median Determined	Required
5.2	Resistance to Abrasion		
	1) Breaking strength after abrasion, N		
	a. Adjuster	12,716	Not less than 16,700 N for Pelvic
	b. Buckle	13,860	Not less than 16,700 N for Pelvic

DATA

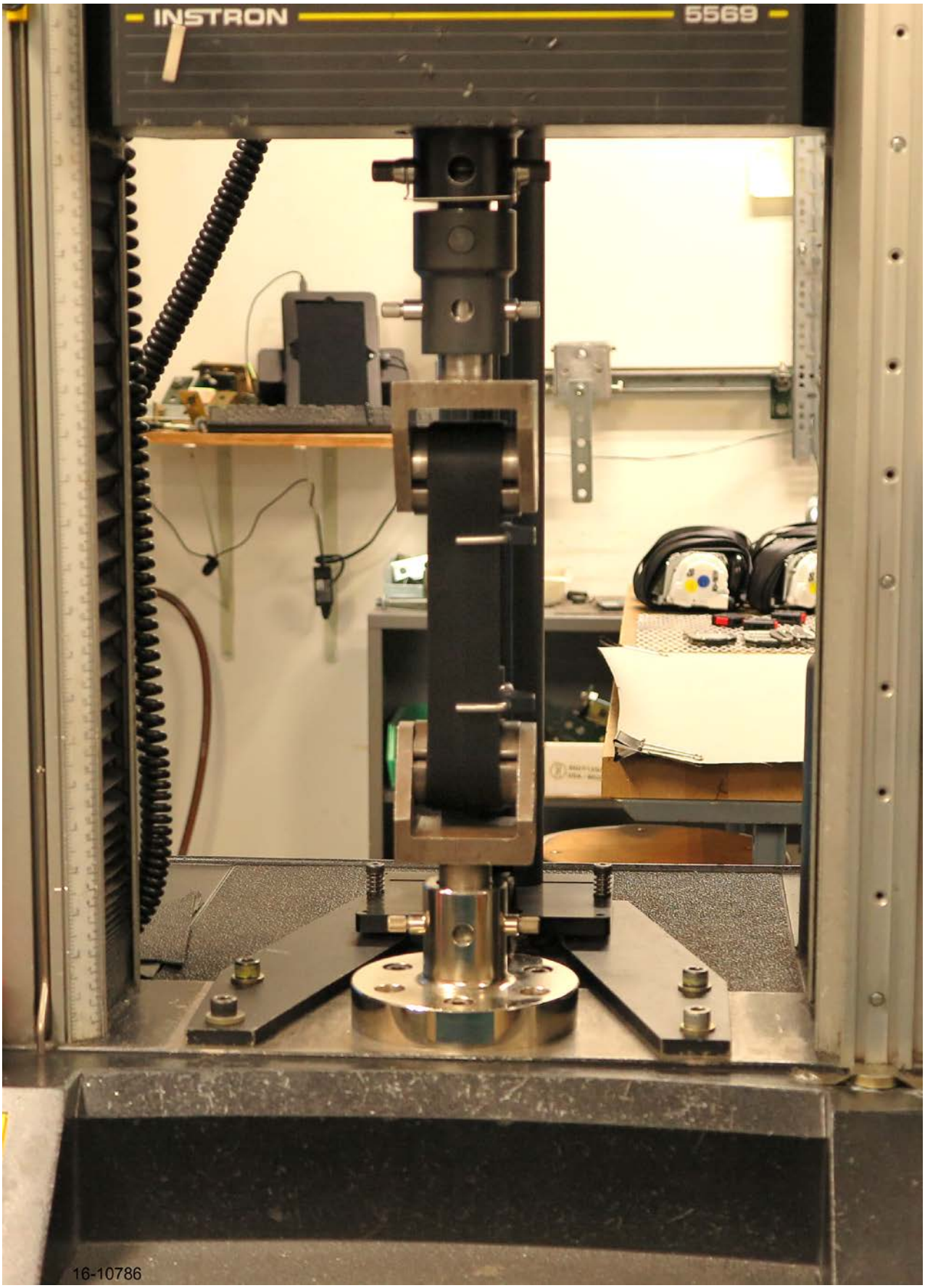
WEBBING BREAKING STRENGTH, NEWTONS

Specimen	After Abrasion Adjuster (N)	After Abrasion Buckle (N)
B1	12,721	14,463
B2	11,847	13,860
B3	12,716	13,459
Median	12,716*	13,860**

Note: The adjusters and buckle adjusters were modified in order to fit into the abrasion machine fixture.

* After 1,962 cycles, the 13.34N weight was not enough to pull webbing through the adjuster. An additional length of webbing was attached to the test webbing and then clamped to the abrasion machine drum to assist pulling the webbing through the adjuster.

** The 13.34N weight was not enough to pull webbing through the buckle adjuster. An additional length of webbing was attached to the test webbing and then clamped to the abrasion machine drum to assist pulling the webbing through the adjuster. At 190 cycles, abrasion machine couldn't pull the webbing through the adjuster due to the friction. The test was aborted. Additional webbing was sent to DTB to continue testing. As per the customers instructions the buckle adjuster was mounted at a 45° angle. The 13.34N weight was not enough to pull webbing through the buckle adjuster. An additional length of webbing was attached to the test webbing and then clamped to the abrasion machine drum to assist pulling the webbing through the adjuster. Periodically the abrasion machine couldn't pull the webbing through the adjuster. After cooling down the adjuster the test was restarted; this was done every 200 cycles.



JOB NO. 415287-01-0000 18 OCTOBER 2016

TYPICAL PHOTO OF THE WEB STRENGTH AND ELONGATION TEST SETUP

415287-01-04-R16-1037 FILE NO. 16-10786

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TYPICAL PHOTO OF THE CORROSION TEST SETUP

27 SEPTEMBER 2016

FILE NO. 16-10787

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415287-01-04-R16-1037

TYPICAL PHOTO OF THE CORROSION TEST SAMPLES

29 SEPTEMBER 2016

FILE NO. 16-10788

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TYPICAL PHOTO OF THE CORROSION TEST SAMPLES

29 SEPTEMBER 2016

FILE NO. 16-10789

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JOB NO. 415287-01-0000 28 NOVEMBER 2016

TYPICAL PHOTO OF THE TEMPERATURE RESISTANCE TEST SETUP

415287-01-04-R16-1037 FILE NO. 16-10790

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415287-01-04-R16-1037

TYPICAL PHOTO OF THE ADJUSTER ABRASION TEST SETUP

17 OCTOBER 2016

FILE NO. 16-10791

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JOB NO. 415287-01-0000 20 OCTOBER 2016

TYPICAL PHOTO OF THE BUCKLE ADJUSTER ABRASION TEST SETUP

415287-01-04-R16-1037 FILE NO. 16-10792

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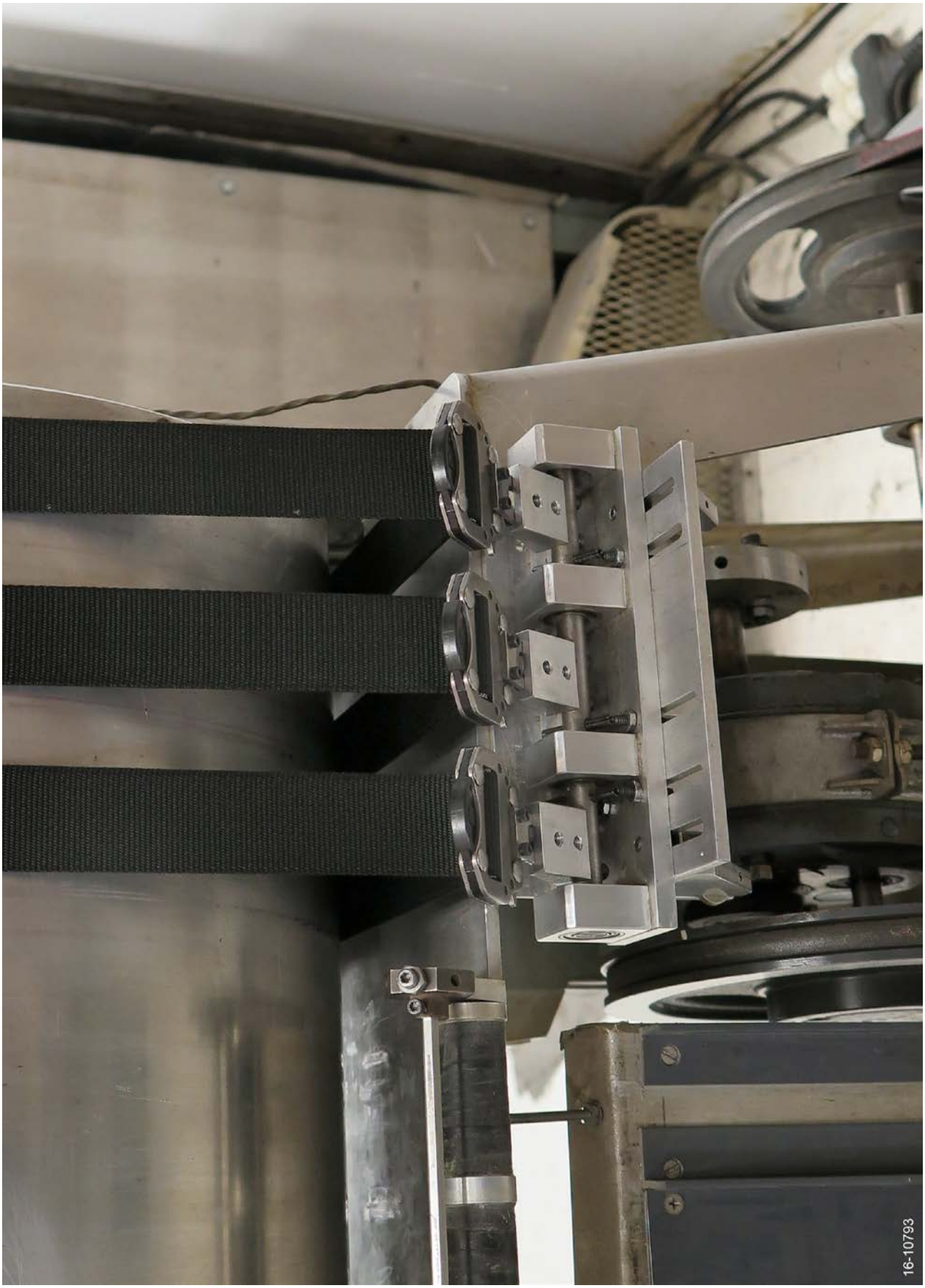

JOB NO. 415287-01-0000 14 NOVEMBER 2016

TYPICAL PHOTO OF THE BUCKLE ADJUSTER ABRASION TEST SETUP

415287-01-04-R16-1037 FILE NO. 16-10793

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JOB NO. 415287-01-0000

20 OCTOBER 2016

TYPICAL PHOTO OF THE ABRASION TEST WEB ASSIST SETUP

415287-01-04-R16-1037

FILE NO. 16-10794

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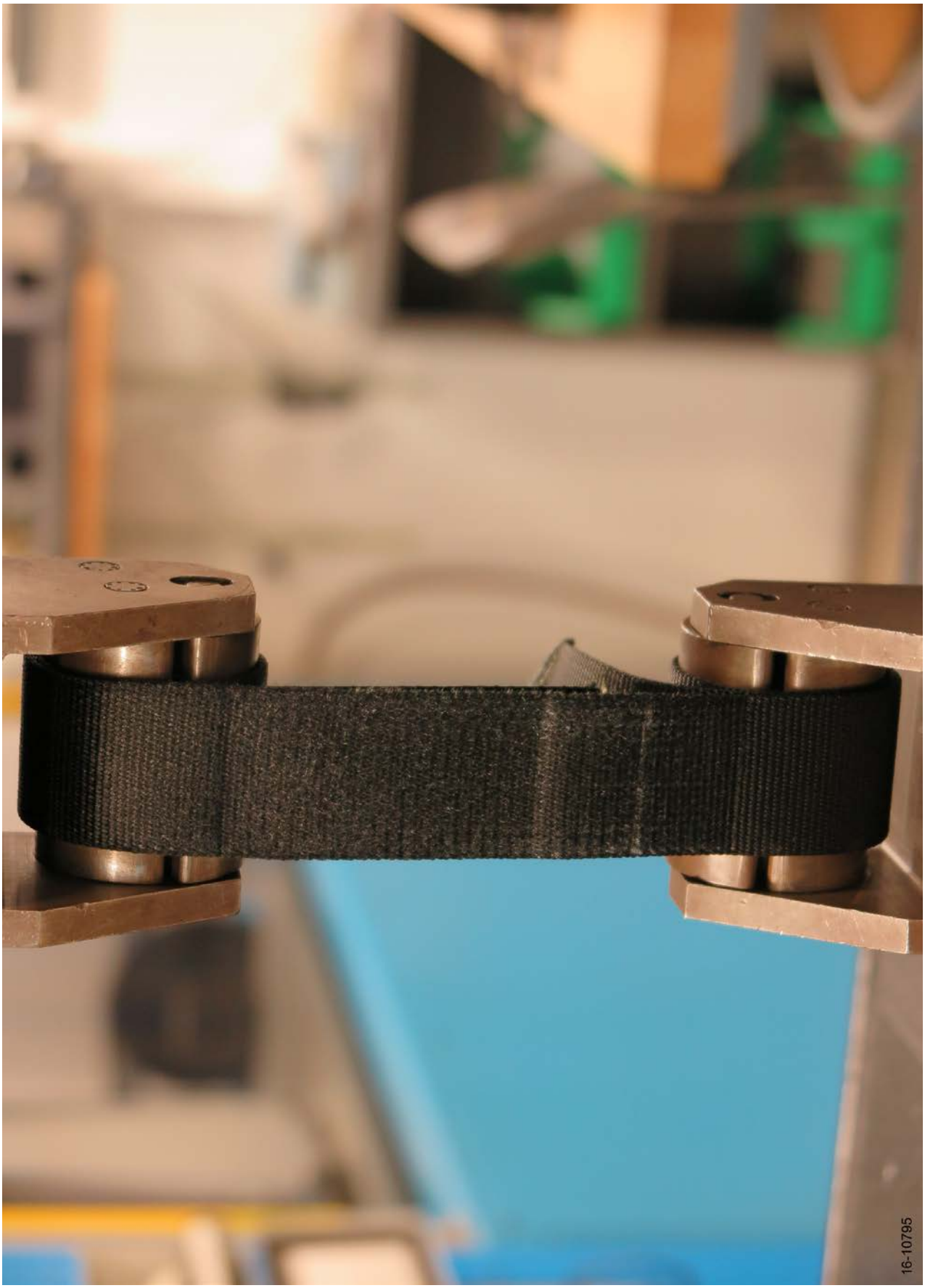

JOB NO. 415287-01-0000 17 NOVEMBER 2016

TYPICAL PHOTO OF THE POST-ABRASION STRENGTH TEST SETUP

415287-01-04-R16-1037 FILE NO. 16-10795

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