



ENGINEERING AND TEST DIVISION
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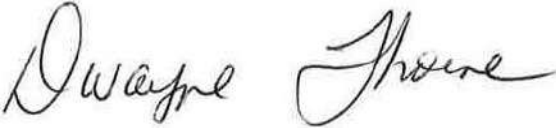
TEST REPORT NO.: 419026-99-04-R23-0827

DAYTON T. BROWN, INC. JOB NO.: 419026-99-000

CUSTOMER:	IMTRA MARINE PRODUCTS 30 SAMUEL BARNET BLVD NEW BEDFORD, MA 02745
SUBJECT:	MEDIUM WEIGHT HAMMER SHOCK TESTING OF ONE 1500 SERIES PILOT CHAIR, SERIAL NO. DTB-1
PURCHASE ORDER NO.:	218505-02

ATTENTION: KENT REMY BERESFORD

THIS REPORT CONTAINS: THREE PAGES AND ONE ENCLOSURE

PREPARED BY	 K. MAY
TEST ENGINEER	 N. CHIAVARO
QUALITY DEPARTMENT	 D. THORNE
DATE	16 NOVEMBER 2023

INFORMATION CONTAINED HEREIN MAY BE SUBJECT TO EXPORT CONTROL LAWS. REFER TO INTERNATIONAL TRAFFIC IN ARMS REGULATION (ITAR) OR THE EXPORT ADMINISTRATION REGULATION (EAR) OF 1979. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO OBTAIN ANY REQUIRED LICENSES TO EXPORT ANY CONTROLLED DATA.

THE DATA CONTAINED IN THIS REPORT WAS OBTAINED BY TESTING IN COMPLIANCE WITH THE APPLICABLE TEST SPECIFICATION AS NOTED



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1.0 ABSTRACT

This test report details the results of the medium weight hammer shock testing of one 1500 Series Pilot Chair, under reference (a) to the requirements of references (c) and (d). Any deviations are detailed in the applicable enclosure herein.

Results of the test are detailed in the following text.

The test item was operated during specified portions of testing.

The operation of the test item was conducted by Dayton T. Brown Inc. under the instruction by IMTRA Marine Products and NORSAP personnel.

The test results recorded in this report apply only to the sample(s) as received and relate only to those items tested.

This test report shall not be reproduced, except in full, without the written approval of Dayton T. Brown, Inc. (DTB).

2.0 REFERENCES

- (a) Customer Purchase Order No.: 218505-02
- (b) Dayton T. Brown, Inc. Job No.: 419026-99-000
- (c) Test Specification: DTB Quote #22-0381B, dated 18 May 2023,
- (d) Test Specification: MIL-DTL-901E



3.0 ADMINISTRATIVE INFORMATION

<u>Customer</u>	IMTRA Marine Products 30 Samuel Barnet Blvd New Bedford, MA 02745
Test Item Description	1500 Series Pilot Chair
Quantity Received	One
Part No.	N/A
Serial No.	DTB-1 (assigned by Dayton T. Brown, Inc.)
Date Received	28 August 2023
Dates Tested	18 September through 2 October 2023
Date Shipped	11 October 2023

4.0 TEST PROGRAM OUTLINE

Test	Test Item Description	Results
Medium Weight Hammer Shock	1500 Series Pilot Chair, Serial No. DTB-1	See Enclosure 1 for test results.



Enclosure 1

Medium Weight Hammer Shock Test and Results



TEST REQUIREMENT

The medium weight hammer shock test shall be conducted in accordance with references (c) and (d).

TEST RESULTS

A pretest visual inspection of the test item revealed the following:

- The chair has a rip at the top.

All testing was performed in accordance with the referenced specifications.

Refer to the following pages of this enclosure for the test data.

Note: The results provided in the following pages are for testing without the rail system.

The test item completed all phases of testing.

A post-test visual inspection of the test item revealed no additional anomalies.



DAYTON T. BROWN, INC.

**Medium Weight Hammer Shock:
Test and Test Item Classification and Mounting Hardware**

JOB NUMBER: 419026-01-001 DATE: 15 SEP 23

TEST ITEM: 1500 Series Pilot Chair, Part No. N/A, Serial No. DTB-1

The test and test item(s) were classified as follows:

Shock Grade	A
Equipment Class	I
Shock Test Type	A
Mounting Location	Deck
Mounting Plane	Base
Mounting Orientation	Vertical Axis Specified

The test item fastener information was as follows:

Test Item (Chair) Fastener (Bolt) Size (Diameter)	M10
Test Item (Chair) Fastener (Bolt) Grade / Specification	Grade 10.9
Test Item (Chair) Fastener (Bolt) Torque	80 ft/lbs

COMMENTS: _____

TECHNICIAN J. Bauer

ENGINEER N. Chiavaro



DAYTON T. BROWN, INC.
MEDIUM WEIGHT HAMMER SHOCK SETUP SHEET

JOB NUMBER: 419026-01-000 DATE: 29 Sep 23
TEST ITEM: 1500 Series Pilot Chair, Part No. N/A, Serial No. DTB-1

WEIGHT ON SHOCK TABLE FOR THE 30° front down and 30° side down CONFIGURATION

Item	Weight (lbs)
Test Item	119
Fixture	1206
Dummy	205
Standard Channel Pairs	204
Mounting Hardware for Fastening Fixture to Channels (Tees/Bolts)	32
30 Degree Rails (2), MIL-S-901, Figure 16	1581
Hardware to mount unit to fixture	1
TOTAL WEIGHT	3348 lbs

Note: The selection of the quantity of channel pairs used for the 30° front down and 30° side down test setup was made based on the following "A" and "B" dimensions.

The weight above the channels was: 1531 lbs.

Dimension	Inches
A Dimension (inches)	40
B Dimension (inches)	40

COMMENTS: _____

TECHNICIAN F. Baumbach
ENGINEER N. Chiavaro



DAYTON T. BROWN, INC.
MEDIUM WEIGHT HAMMER SHOCK TEST DATA SHEET

JOB NUMBER: 419026-01-001

TEST ITEM: 1500 Series Pilot Chair, Part No. N/A, Serial No. DTB-1

SHOCK BLOW NO.	DATE	CONFIGURATION	ACTUAL HAMMER DROP HEIGHT (FEET)	ACTUAL ANVIL TABLE TRAVEL (INCHES)	OBSERVATIONS	TECH INITIALS
1	9/29/2023	Vertical	1.25	3	Shock Blow No. 1, resulted in yielding to the set screws around chair stand. The chair directional adjustment smashed into chair base. Ops check, resulted in no anomalies.	RL
2	9/29/2023	Vertical	2.25	3	Shock Blow No. 2, resulted in yielding to the set screws around chair stand. The chair directional adjustment smashed into chair base. Ops check, resulted in no anomalies.	RL
3	9/29/2023	Vertical	2.25	1.5	Shock Blow No. 3, resulted in yielding to the set screws around chair stand. The chair directional adjustment smashed into chair base. Ops check, resulted in no anomalies.	RL
4	9/29/2023	30 Degree Front Down	2.5	3		FDB
5	9/29/2023	30 Degree Front Down	2.5	1.5	Note 1	FDB
6	9/30/2023	30 Degree Side Down	2.5	3		FDB
7	9/30/2023	30 Degree Side Down	2.5	1.5	Note 1	FDB

COMMENTS Note 1: Performed operations checks after each axis and operated as expected.

TECHNICIAN FDB

ENGINEER N. Chiavaro

Test equipment utilized for the program reported herein was within its assigned interval of calibration. Details are on file at Dayton T. Brown, Inc. and will be made available upon request.



Job Sub: 419026-01

TEST: MEDIUM WEIGHT HAMMER SHOCK

<u>ITEM</u>	<u>MANUFACTURER</u>	<u>MODEL</u>	<u>DTB NO.</u>	<u>ACCURACY</u>	<u>CAL DUE DATE</u>
SHOCK MACHINE, HAMMER	NEW ENGLAND TRAWLER	MEDIUM WEIGHT	04v-021	Maintenance Only	11/19/2023
Scale, Crane Hanging 6000 lbs.	Adam Equipment	IHS 6a	38-63	± 2 lbs.	02/04/2024
GAUGE, PRESSURE 200 PSI	ASHCROFT	200 PSI	60-183	± 0.5% of F.S.	11/26/2023
TORQUE WRENCH, 20 - 100 FT LBS.	PROTO	J6012C	69-121	± 3% CW ± 6% CCW	01/14/2024



Photo 1 - File No. T20230919-5869
Pretest, scale zeroed out



Photo 2 - File No. T20230919-5878
Pretest, Weight of 1500 Series Chair



Photo 3 - File No. T20230929-6134
Pretest, test item setup in Vertical



Photo 4 - File No. T20230929-6135
Pretest, test item setup in Vertical



Photo 5 - File No. T20230929-6137
Post Blow 3 Inspection



Photo 6 - File No. T20230929-6138
Post Blow 3 Inspection

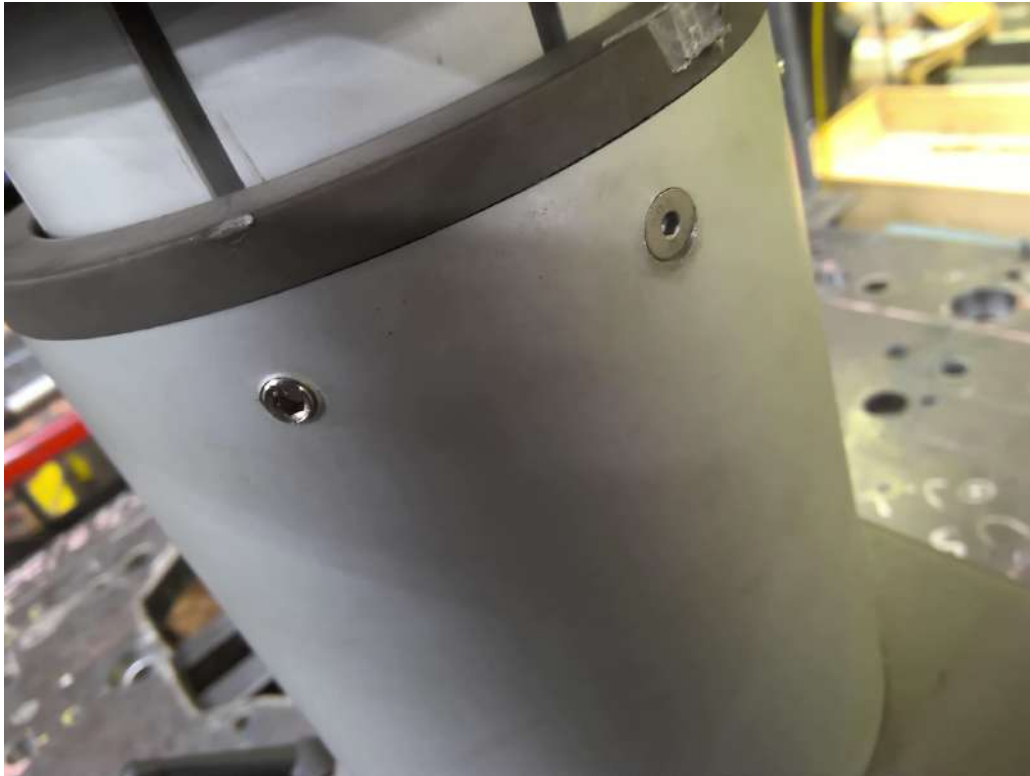


Photo 7 - File No. T20230929-6139
Post Blow 3 Inspection

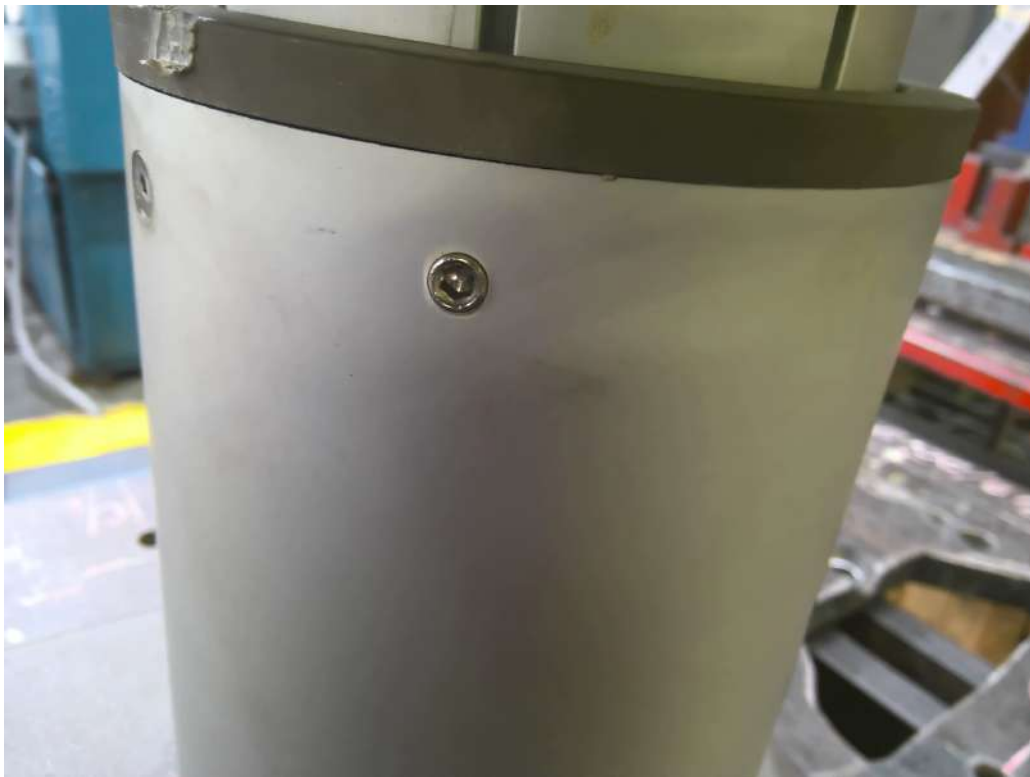


Photo 8 - File No. T20230929-6142
Post Blow 3 Inspection



Photo 9 - File No. T20230929-6159
Pretest, 30 Degree Front Down Setup



Photo 10 - File No. T20230929-6160
Pretest, 30 Degree Front Down Setup



Photo 11 - File No. T20230929-6161
Post Blow 5 Inspection



Photo 12 - File No. T20230929-6171
Pretest, 30 Degree Side Down Setup



Photo 13 - File No. T20230929-6172
Pretest, 30 Degree Side Down Setup