

PETER PEPPER PRODUCTS

Date: April 27, 2016

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**Test Report For:** 

**Peter Pepper Products** 

ANSI/BIFMA X5.1-2011 CHAIR TEST STANDARD

STACKR Stool

Anthony Drewicz
Project Manager

Jim Jantz Reviewer

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Compton, CA 90224

Phone: (310) 667-5944 ext. 144 Email: kpepper@peterpepper.com

**DATE RECEIVED:** 04/12/16

**DATES TESTED:** 04/14/16 – 04/21/16

**DESCRIPTION OF SAMPLES:** 

Part Description: Tubular Steel Stool with Seat

Condition of Test Sample: New

#### **WORK REQUESTED/APPLICABLE DOCUMENTS:**

To test the submitted sample per ANSI/BIFMA X5.1-2011 Chair Test Standard for the following test program:

Test No.	Test Description	
8	Drop-Dynamic	
11	Seating Durability	
12	Stability	
18	Leg Strength	
19	Footrest Static Load	
20	Footrest Durability	

#### **CONCLUSION:**

The submitted sample meets the acceptance criteria of the tests listed above.

Test	Results	Notation
ANSI/BIFMA 5.1-2011 #8 Drop Test	Compliant	No loss of serviceability.
ANSI/BIFMA 5.1-2011 #11 Seating Durability	Compliant	No loss of serviceability.
ANSI/BIFMA 5.1-2011 #12 Stability	Compliant	No loss of serviceability.
ANSI/BIFMA 5.1-2011 #13 Vertical Arm Strength	Compliant	No loss of serviceability.
ANSI/BIFMA 5.1-2011 #18 Leg Strength	Compliant	No loss of serviceability.
ANSI/BIFMA 5.1-2011 #19 Footrest Static Load	Compliant	No loss of serviceability.
ANSI/BIFMA 5.1-2011 #20 Footrest Durability	Compliant	No loss of serviceability.

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# **TEST EQUIPMENT:**

Asset	Description	Cal Date	Cal Due
138272	LOAD CELL 0-1,000 #	10/07/2015	10/07/2016
138039.1	BAG WEIGHT- (300 lbs.)	12/07/2007	VBU
138039.2	BAG WEIGH- (225 lbs.)	12/07/2007	VBU
138379	STOPWATCH	09/02/2014	09/02/2016
138170	FRONT STABILITY WEIGHT	04/14/2008	VBU
138012	SCALE / 0-1,000 #	11/12/2015	11/12/2016
138279	FORCE GAGE; DIGITAL 100LB	03/04/2016	03/04/2017
138112	GRADUATED RULE 36"	10/11/2013	10/11/2018
138345	3 Station Seat Impact	VBU	VBU

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8. DROP TEST – DYNAMIC:

Date Tested: 04/21/16
Condition of Test Sample: Production

Test Procedure:

Test Method: ANSI/BIFMA X5.1-2011; Test No. 8

Functional Load: 225 lbs. Proof Load: 300 lbs. Drop Height: 6"

Number of Samples Tested: One (1)

Acceptance Criteria:

Functional Load: No structural breakage or loss of serviceability,

including stacking ability if applicable.

Proof Load: No sudden and major change in the structural

integrity of the product. Loss of serviceability is

acceptable.

Results:

Sample ID	Loads	Results
1	Functional Load - 225 lbs.	Pass
l l	Proof Load - 300 lbs.	Pass

The submitted sample meets the acceptance criteria of the test described above. Refer to the following page for photograph.

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**DROP TEST - DYNAMIC** 

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#### 11. SEATING IMPACT TEST

Dates Tested: 04/14/16 – 04/19/16

Condition of Test Sample: New

Test Procedure:

Test Method: ANSI/BIFMA X5.1-2011; Test No. 11

Section 11.3 Seat Center Impact Test

Bag Diameter: 16"
Bag Weight: 125 lbs.
Number Cycles: 100,000
Height of Drop: 1.2"
Cycles per Minute: 10 to 30

Section 11.4 Load Ease Test

Bag Diameter: 8"

Bag Weight: 165 lbs.

Number of Cycles Required: 20,000 to each Front Corner

Cycles per Minute: 10 to 30 Number of Samples Tested: One (1)

# Acceptance Criteria:

There shall be no loss of serviceability to the chair after completion of both the Impact and Load Ease Tests.

# Results:

### Section 11.3

Sample No.	Number of Cycles	Description of Results
1	100,000	Pass

# Section 11.4

Location of Force	Number of Cycles	Description of Results
Left Front Corner	20,000	Pass
Right Front Corner	20,000	Pass

The submitted sample meets the acceptance criteria of the test described above. Refer to the following pages for photographs.

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**Seating Impact Test** 

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**Load Ease Test** 

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# 12. STABILITY TEST -DYNAMIC (Front and Rear):

Date Tested: 04/14/16
Condition of Test Sample: New

Test Procedure:

Test Method: ANSI/BIFMA X5.1-2011; Test No. 12

All of the chair's adjustable features shall be set for

the most unstable conditions.

Chair Type:

Weight in Seat

(Rear Stability Only): Type I: 286 lbs. (13 disks)

Type II: 286 lbs (13 disks) Type III: 132 lbs (6 disks)

Front Stability:

Alternative: N/A
Vertical Load: 135 Lbs
Horizontal Force: 4.5 Lbs
Number of Samples Tested: One (1)

Acceptance Criteria:

Front Stability: The chair shall not tip over as the result of the force

application of 4.5 lbf...

Rear Stability: The force to tip shall not be less than:

Type I: Chair must not tip over Type II: Chair must not tip over

Type III: [F = 1.1 (47 - H) pounds force.]. H is the

seat height in inches. For chairs with seat height equal to or greater than 710 mm (28.0 in.), a fixed force of 93 N

(20.9 lbf.) shall be applied.

#### Results:

Sample ID	Seat Height	Front Stability	Rear Stability	Results
1	29.5"	5.7 lbf. to tip	N/A	Pass

The submitted sample meets the acceptance criteria of the test described above. Refer to the following pages for photographs.

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**Stability Test - Front** 

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#### 18. LEG STRENGTH TEST - FRONT & SIDE APPLICATION:

Date Tested: 04/21/16
Condition of Test Sample: New

Test Procedure:

Test Method: ANSI/BIFMA X5.1-2011; Test No. 18

Front to Rear Leg Application:

Functional Load: 75 lbf. (Load Each Leg)
Proof Load: 113 lbf. (Load Each Leg)

Side Load Application:

Functional Load: 75 lbf. (Load Each Leg)
Proof Load: 113 lbf. (Load Each Leg)

Number of Samples Tested: One (1)

Acceptance Criteria:

Functional Load: No structural breakage or loss of serviceability,

including stacking if applicable.

Proof Load: No sudden and major change in the structural

integrity of the product. Loss of serviceability is

acceptable.

Results:

Sample ID	Load Application	Functional	Proof	<b>Description of Results</b>
	Side to Side (Rear Side)	75 lbf.	113 lbf	N/A
	Side to Side (Front Side)	75 lbf.	113 lbf	Pass
1				
	Front to Rear (Left Side)	75 lbf.	113 lbf.	Pass
	Front to Rear (Right Side)	75 lbf.	113 lbf.	Pass

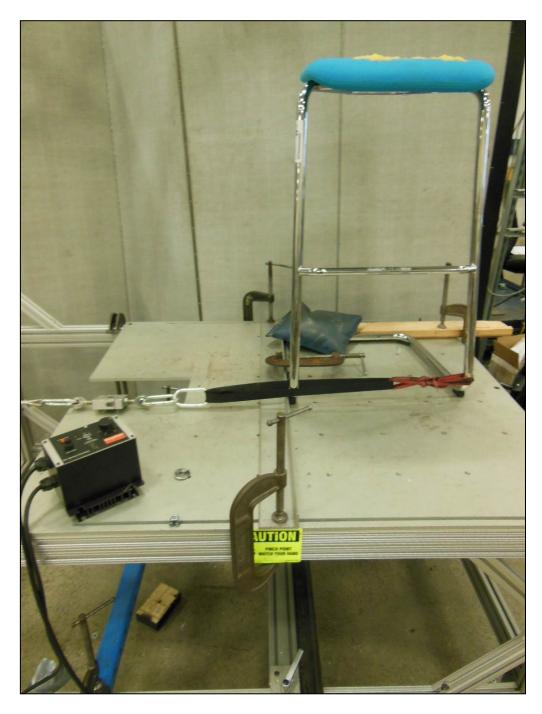
The submitted sample meets the acceptance criteria of the test described above. Refer to the following pages for photographs.

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**LEG STRENGTH TEST - FRONT APPLICATION** 

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**LEG STRENGTH TEST - SIDE APPLICATION** 

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#### 19. FOOTREST STATIC LOAD TEST - VERTICAL

Date Tested: 04/21/16 Condition of Test Sample: New

Test Procedure:

Test Method: ANSI/BIFMA X5.1-2011; Test No. 19

Functional Load: a) Apply a force F1 of 445 N (100 lbf.) uniformly along

a 102 mm (4 in.) distance along the footrest but not greater than 51 mm (2 in.) from the outside edge at the apparent weakest point of the structure for one (1) minute in the vertical downward direction. If the footrest adjusts in height relative to the seat and allows for a force application 180 degrees (on the opposite side of the chair) from the primary force application, maintain force F1 and apply an additional force F2 of 445 N (100 lbf.) to the footrest at the opposing position for an additional one (1) minute.

opposing position for an additional one (1) minute. The F2 force shall also be applied uniformly along a 102 mm (4 in.) distance along the footrest but not greater than 51 mm (2 in.) from the outside edge.

b) If applicable, remove force F2.

c) Increase the force F1 to 200 lbf. for one (1) minute.

Proof Load: Apply a force of 1334 N (300 lbf.) uniformly along a

102 mm (4 in.) distance along the footrest but not greater than 51 mm (2 in.) from the outside edge at the apparent weakest point of the structure for one (1)

minute in the vertical downward direction.

Number of Samples Tested: One (1)

# Acceptance Criteria:

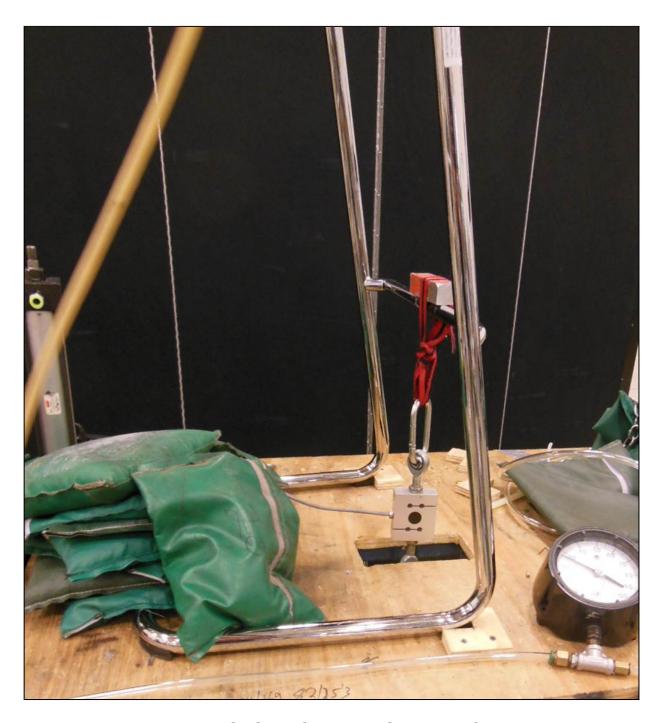
The load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.

#### Results:

Sample ID	Load (lbf.)	Results
4	Functional Load 200 lbf	Pass
'	Proof Load 300 lbf	Pass

The submitted sample meets the acceptance criteria of the test described above. Refer to the following page for photograph.

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FOOTREST STATIC LOAD TEST - VERTICAL

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# 20. FOOTREST DURABILITY TEST - VERTICAL - CYCLIC:

Date Tested: 04/19/16 – 04/21/16

Condition of Test Sample: New

Test Procedure:

Test Method: ANSI/BIFMA X5.1-2011; Test No. 20

Load To Footrest: 200 lbs.

Direction of Force: Vertically Downward

Number of Cycles Required: 50,000 Cycles per Minute: 10 to 30 Number of Samples Tested: One (1)

#### Acceptance Criteria:

There shall be no loss of serviceability. Adjustable footrests that move more than 25 mm (1 in.) in the first 500 cycles shall be considered to have lost their serviceability.

Sample ID	Number of Cycles	Description of Results
1	50,000	Pass

# Results:

The submitted sample meets the acceptance criteria of the test described above. Refer to the following page for photograph.

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FOOTREST DURABILITY TEST - VERTICAL - CYCLIC

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# **Revisions Made To Test Report**

Index	Date	Revision Description	Revised by
			Anthony Drewicz
001	04/27/16	Initial release.	Revised by Anthony Drewicz