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SUDEX ARGENTINA SRL
Date: November 26, 2014

Test Report For:

SUDEX ARGENTINA SRL

ANSI/BIFMA X5.1-2011
CHAIR TEST STANDARD

Foldi Arm Chair

Lynwood Pearson
Project Manager

Anthony Serge
Reviewer

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DATE RECEIVED: 11/10/2014
DATES TESTED: 11/12/2014 – 11/25/2014

DESCRIPTION OF SAMPLES:
Part Description: Foldi Arm Chair
Condition of Test Sample: New

WORK REQUESTED/APPLICABLE DOCUMENTS:
To test the submitted sample per ANSI/BIFMA X5.1-20 11 Chair Test Standard for the following test program:

Test No.	Test Description
6	Back Rest Strength-Non-Tilt
12	Stability
13	Arm Strength-Vertical
14	Arm Strength-Horizontal
15	Backrest Durability-Tilt
16	Backrest Durability-Non-Tilt
21	Arm Durability

CONCLUSION:

Test	Results	Notation
ANSI/BIFMA 5.1-2011 #6 Back Strength	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 #14 Horizontal Arm Strength	Compliant	No loss of serviceability.
ANSI/BIFMA 5.1-2011 #16 Backrest Durability	Compliant	No loss of serviceability.
ANSI/BIFMA 5.1-2011 #21 Armrest Durability	Compliant	No loss of serviceability.

TEST EQUIPMENT:

Asset	Description	Cal Date	Cal Due
138272	LOAD CELL 0-1,000 #	10/16/2014	10/16/2015
138042	SEATING IMPACT / 2 STATION	VBU	VBU
138043	BACK DURABILITY 0-300lbs	VBU	VBU
138336	STOPWATCH	2/19/2014	2/19/2015
138170	FRONT STABILITY WEIGHT	04/14/2008	VBU
138012	SCALE / 0-1,000 #	12/11/2013	12/12/2014
138148	DIGITAL PROTRACTOR	09/11/2014	09/11/2015
138279	FORCE GAGE; DIGITAL 100LB	03/31/2014	03/31/2015
138282	STEEL RULE 0-60" x 1/64	06/05/2014	06/05/2015
138112	GRADUATED RULE 36"	10/11/2013	10/11/2018
138343	Arm Durability Station	VBU	VBU

6. BACK STRENGTH PROCEDURE - STATIC (Type II-III – Non-Tilt Seat):

Date Tested: 11/25/2014
Condition of Test Sample: New

Test Procedure:
Test Method: ANSI/BIFMA X5.1 2011; Test No. 6
Functional Load: 150 lbf.
Proof Load: 250 lbf.

Number of Samples Tested: One (1)

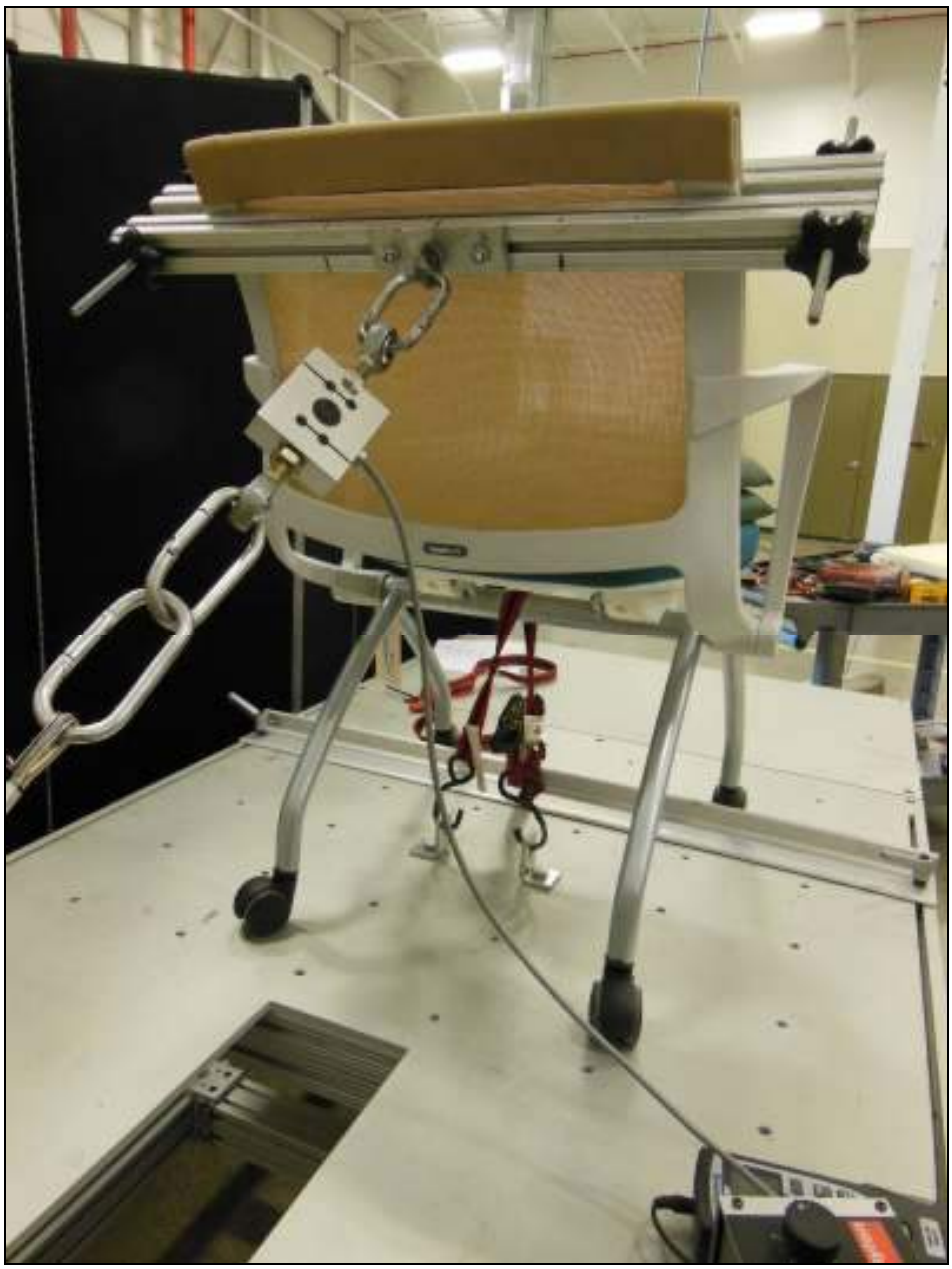
Acceptance Criteria:
Functional Load: There shall be no loss of serviceability to the chair.

Proof Load: There shall be no sudden and major change in the structural integrity of the product. Loss of serviceability is acceptable.

Results:

Sample ID	Static Load	Description of Results
1	150 lbf.	Pass
	250 lbf.	Pass

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



BACK STRENGTH PROCEDURE - STATIC

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

Date Tested: 11/25/2014
Condition of Test Sample: New

Test Procedure:
Test Method: ANSI/BIFMA X5.1-2011; Test No. 12
All t for
the most unstable conditions.
Chair Type: II

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
Type

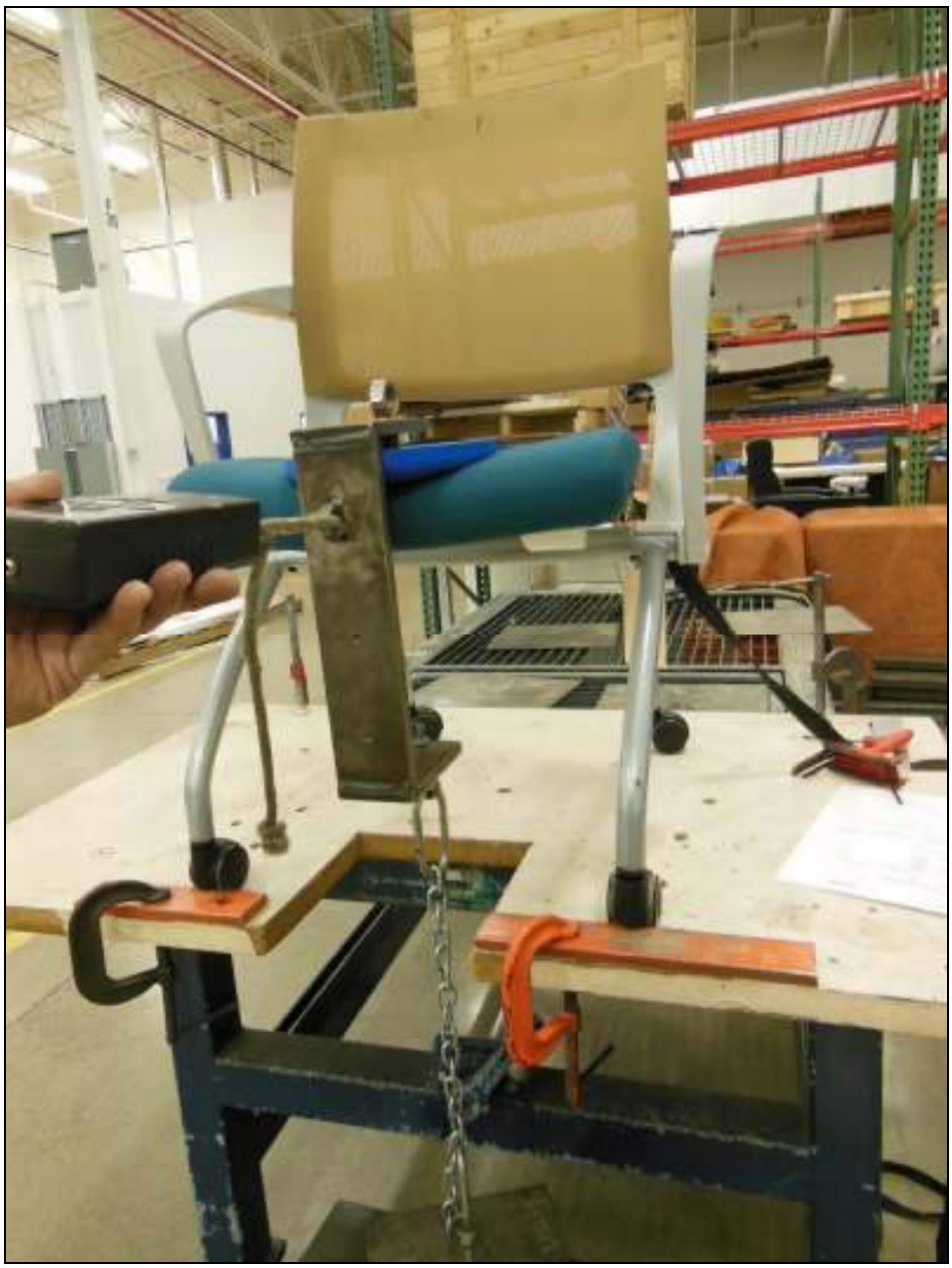
Type III: [F = 1.1 (47 – H) pounds force.]. H is the seat height in inches. For chairs with seat height equal to or greater than 710 mm (28.0 in.), a fixed force of 93 N (20.9 lbf.) shall be applied.

Results:

Sample ID	Seat Height	Front Stability	Rear Stability	Results
1	18”	lbf. to tip	lbf. to tip	Pass

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

Stability Test - Rear



Stability Test - Front

13. ARM STRENGTH TEST VERTICAL-STATIC:

Date Tested: 11/25/2014
Condition of Test Sample: New

Test Procedure:
Test Method: ANSI/BIFMA X5.1-2011; Test No. 13
Functional Static Load: 169 lbf.
Proof Static Load: 253 lbf.
Number of Samples Tested: One (1)

Acceptance Criteria:
Functional Load: There shall be no loss of serviceability.

Proof Load: There shall be no sudden and major change in the structural integrity of the chair. Loss of serviceability is acceptable.

Results:

Sample ID.	Static down Load (lbf.)	Description of Results
1	169 lbf.	Pass
	253 lbf.	Pass

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

Arm Strength Test Vertical-Static

14. ARM STRENGTH TEST- HORIZONTAL-STATIC:

Date Tested: 11/25/20104
Condition of Test Sample: New

Test Procedure:
Test Method: ANSI/BIFMA X5.1-2011; Test No. 14
Functional Force: 100 lbf.
Proof Load: 150 lbf.
Number of Samples Tested: One (1)

Acceptance Criteria:
Functional Load: A functional load applied once shall cause no loss of serviceability.

Proof Load: A proof 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
1	Functional Load	100 lbf.	Pass
	Proof Load	150 lbf.	Pass

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

Arm Strength Test- Horizontal-Static

16. BACK DURABILITY TEST-CYCLIC (Type III):

Dates Tested: 11/17/2014 – 11/25/2014
Condition of Test Sample: New

Test Procedure:
Test Method: ANSI/BIFMA X5.1-2011; Test No. 16
Backrest Width: 18”
Number of Cycles Required: 120,000
Center Pull Location: 80,000
Off Center Pull Location: 40,000
Force Applied to Chair Back: 75 lbf.
Load in Seat: 225 lbs.
Cycles per Minute: 10 to 30

Number of Samples Tested: One (1)

Acceptance Criteria:
No structural breakage or loss of serviceability.

Results:

Sample ID	Pull Location	Number of Cycles	Description of Results
1	Center Pull	80,000	Pass
	Off Center Pull	40,000	Pass

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

BACK DURABILITY TEST-CYCLIC

21. ARM DURABILITY TEST- CYCLIC:

Dates Tested: 11/12/2014 – 11/17/2014
Condition of Test Sample: New

Test Procedure:
Test Method: ANSI/BIFMA X5.1-2011; Test No. 21
Load To Each Arm: 90 lbs.
Angle of Force: 10 Degrees from Vertical
Number of Cycles Required: 60,000
Cycles per Minute: 10 to 30
Number of Samples Tested: One (1)

Acceptance Criteria:
Structural breakage or loss of serviceability shall constitute failure. No failure that in any way would cause personal injury to the occupant shall be allowed.

Results:

Sample ID	Number of Cycles	Description of Results
1	60,000	Pass

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

Arm Durability Test – Cyclic

Revisions Made To Test Report

Index	Date	Revision Description	Revised by	Revised by
001	26-Nov-2014	Initial release.	Lynwood Pearson