



LAB N° 1514



Furniture Business Division

## TEST REPORT: 4787969023.1 Rev.1

This report cancel and replace the previous N° 4787969023.1 issued on 27/05/2017.

### APPLICANT

**Name:** Metalmeccanica Alba S.r.l.  
**Address:** Via Boschier, 54/A  
Localita Ca' Rainati  
San Zenone degli Ezzelini, TV  
31020  
Italy



**Product:** Pluto telaio 4 gambe con scocca -  
Ansi Bifma X5.1

### DATE

**Sample in:** 8/5/2017  
**Tests start:** 8/5/2017  
**Tests end:** 27/5/2017  
**Report issue:** 30/5/2017

### OVERALL DIMENSIONS:

<b>Measured:</b>	<b>Depth:</b>	525 mm;	<b>Height:</b>	813 mm
	<b>Width:</b>	450 mm	<b>Weight:</b>	4,2 kg
<b>Nominal:</b>	<b>Depth:</b>	ND;	<b>Height:</b>	ND;
	<b>Width:</b>	ND;	<b>Weight:</b>	ND;

**Sample number** 941082      **Order Number:** 11755980

### REFERENCE STANDARD

**ANSI/BIFMA X5.1:2017 General-Purpose Office Chairs - Tests.**

NOTE: clauses considered as not applicable to the product are not listed in this report.

**Sample defects before the test: NO VISIBLE DEFECTS**

Tests have been performed on a temperature of  $21 \pm 2$  °C

The tests have been performed on 2 samples as requested by the customer

The sample is classified as Type: III

**Technician**  
Rodolfo Sala

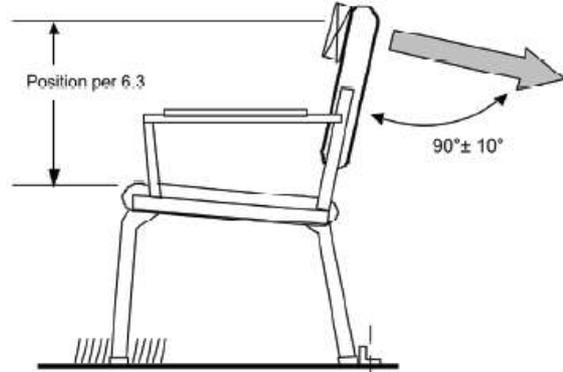
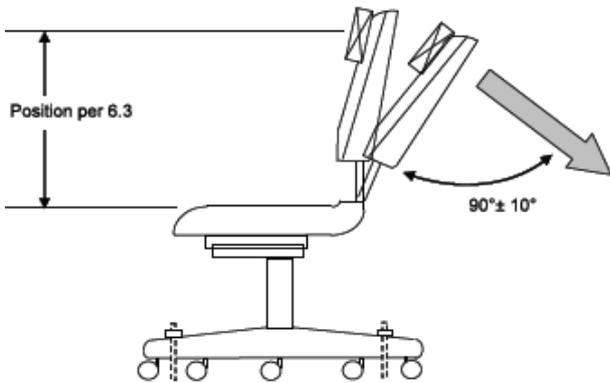
**Laboratory Manager**  
Matteo Longoni

*Note: any copy, even partial, of this report, and any change or alteration to it are strictly forbidden.  
The test results listed in this report are relevant only for the tested sample. Sampling performed by the customer.*

TEST REPORT: 4787969023.1 Rev.1

Issued on: 30/5/2017

**Backrest Strength Test - Static - Type II & III ANSI/BIFMA X5.1:2017 Par. 6**



Test has been performed pulling the backrest backwards  
**Backrest height:** 415 mm  
**Loading pad height measured from the seat:** top of backrest

Functional Load			
Backrest force (N)	Time of test (sec)	N° cycle	Rating
667	60	1	P

**Note:** Test performed on sample one as 1<sup>st</sup> test on this sample.

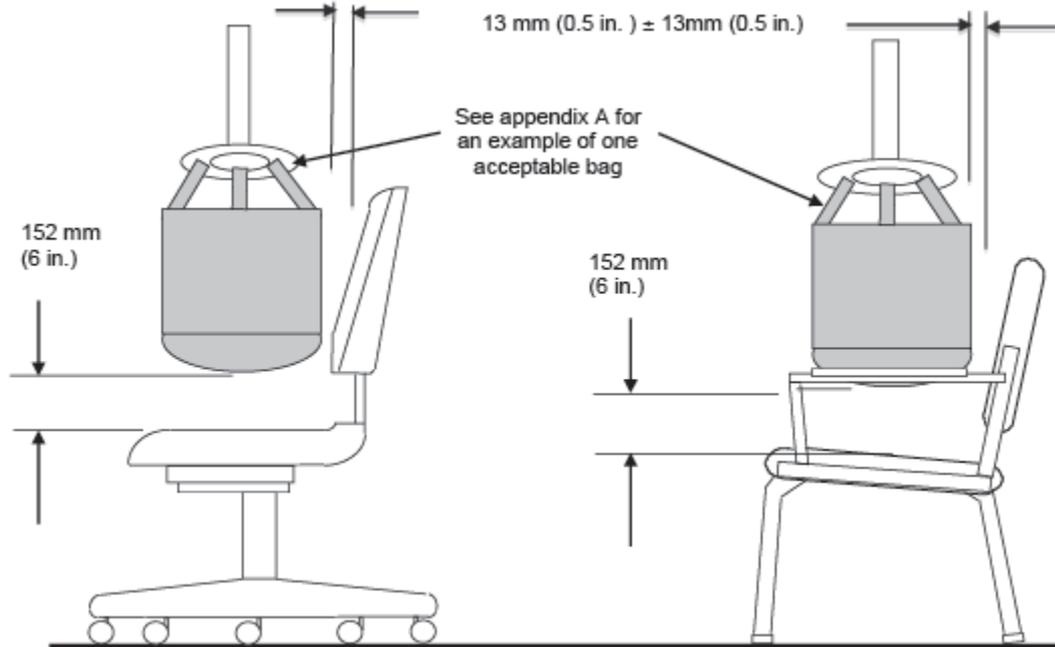
Proof Load			
Backrest force (N)	Time of test (sec)	N° cycle	Rating
1001	60	1	P

**Note:** Test performed on sample one as 1<sup>st</sup> test on this sample.

TEST REPORT: 4787969023.1 Rev.1

Issued on: 30/5/2017

**Drop Test - Dynamic ANSI/BIFMA X5.1:2017 Par. 7**



Functional Load					
Seat	The distance between the bag and the backrest	Drop height (mm)	Weight of bag (kg)	N° cycle	Rating
Fixed position	13 mm	152	102	1	P

**Note:** Test performed on sample two as 3<sup>rd</sup> test on this sample.

Proof Load					
Seat	The distance between the bag and the backrest	Drop height (mm)	Weight of bag (kg)	N° cycle	Rating
Fixed position	13 mm	152	136	1	P

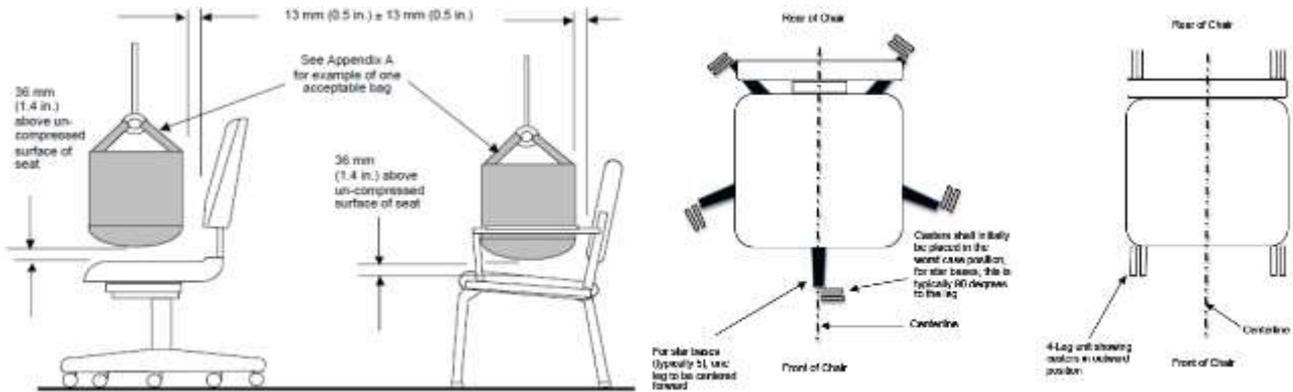
**Note:** Test performed on sample two as 3<sup>rd</sup> test on this sample.

TEST REPORT: 4787969023.1 Rev.1

Issued on: 30/5/2017

Seating Durability Tests – Cyclic ANSI/BIFMA X5.1:2017 Par. 10

Impact Test ANSI/BIFMA X5.1:2017 Par. 10.3



Minimum thickness of cushiony materials of seat: 0 mm  
 Thickness of additional foam: 50 mm (IFD al 25% di 200 N ± 22 N)  
 Distance between the bag and the backrest: 13 mm

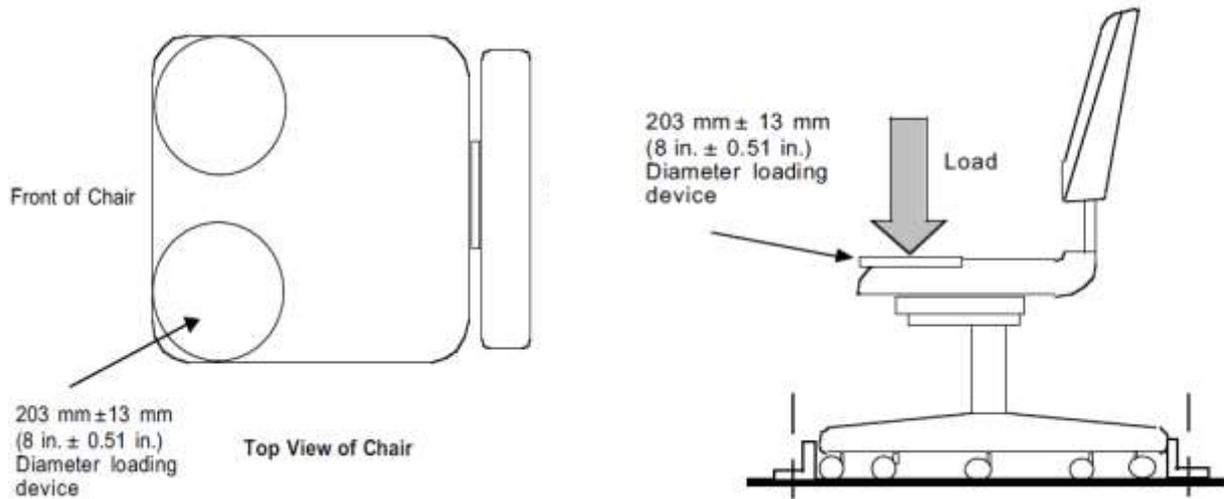
Weight of bag (kg)	Height of fall (mm)	N° cycle	Frequency (cycle / minute)	Rating
57	36 mm	100.000	15	P

Note: Test performed on sample two as 1<sup>st</sup> test on this sample.

TEST REPORT: 4787969023.1 Rev.1

Issued on: 30/5/2017

Front Corner Load-Ease Test – Cyclic – Off-center ANSI/BIFMA X5.11:2017 Par. 10.4



The test has been performed for 40,000 cycles alternated on the corners of the front edge (20,000 cycles for each corner)

Seating load (N)	N° cycle	Cycle frequency (cycle / minute)	Rating
890	40.000	12	P

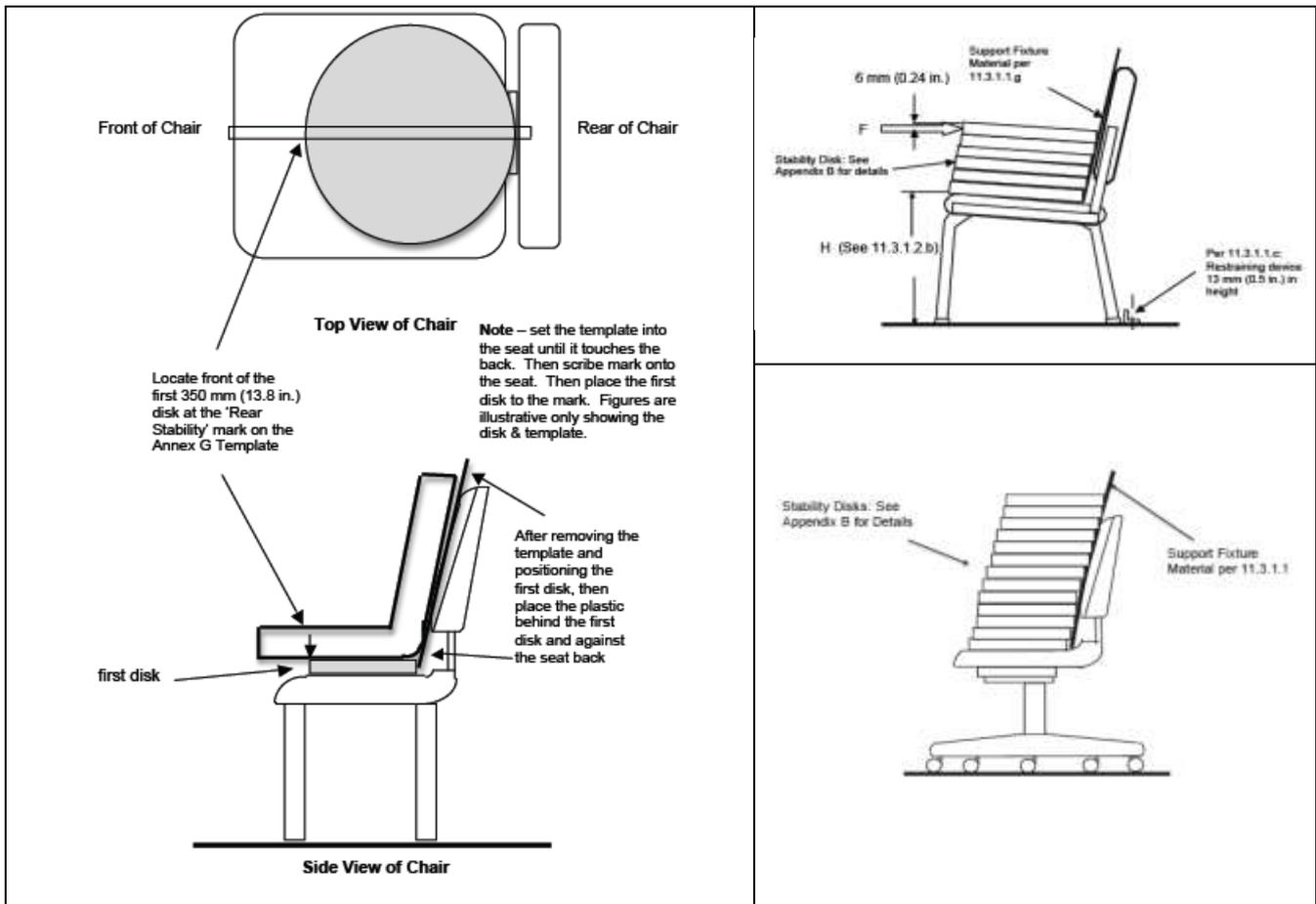
**Note:** Test performed on sample two as 2<sup>nd</sup> test on this sample.

TEST REPORT: 4787969023.1 Rev.1

Issued on: 30/5/2017

Stability Test ANSI/BIFMA X5.1:2017 Par. 11

Rear Stability ANSI/BIFMA X5.1:2017 Par. 11.3



Force has been applied : on top of the weight

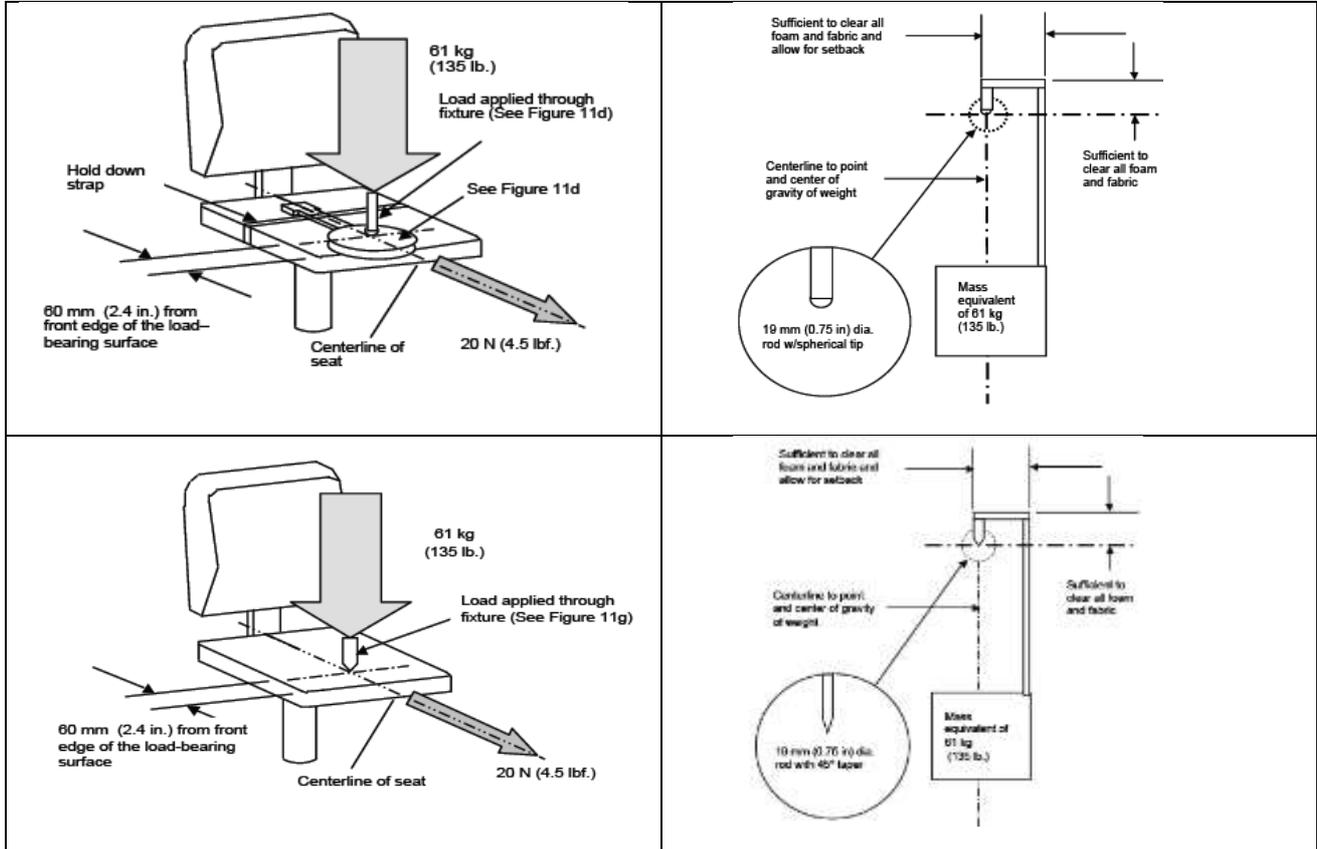
Type III:

Applied discs on seat (N)	Horizontal force (N)	Loading point	Rating
6	153	on top of the weight	P

Note: The horizontal force was determined by the following formula:  $F = 0,1964 (1195 - H)$ , when H found is: 420 mm.

Test performed on sample one as 8<sup>th</sup> test on this sample.

Front Stability ANSI/BIFMA X5.1:2017 Par. 11.4



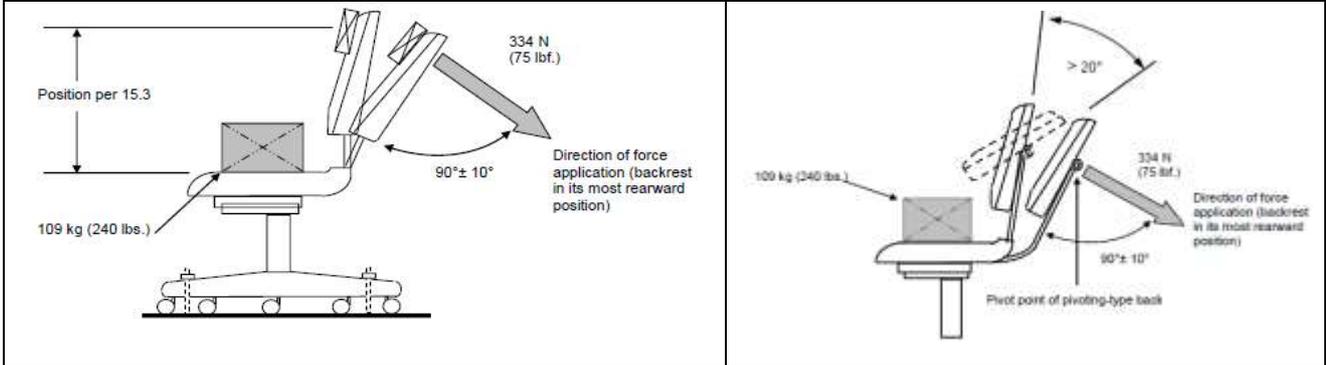
Load seat (kg)	Loading point (mm)	Horizontal force (N)	Rating
61	60	20	P

Test performed on sample one as 9<sup>th</sup> test on this sample.

TEST REPORT: 4787969023.1 Rev.1

Issued on: 30/5/2017

**Backrest Durability Test - Cyclic - Type II and III ANSI/BIFMA X5.1:2017 Par. 15**



Test has been performed pulling the backrest backwards  
**Backrest height:** 400 mm  
**Loading pad height measured from the seat:** top of backrest  
**Frequency:** 15 cycles per minute  
**Width of the backrest:** 415 mm

Width of the backrest > 406 mm				
Loading point on backrest	Load (kg)	Backrest force (N)	N° cycle	Rating
Centrally	109	334	80.000	P
102 mm to the right of the vertical centerline.	109	334	20.000	P
102 mm to the left of the vertical centerline.	109	334	20.000	P

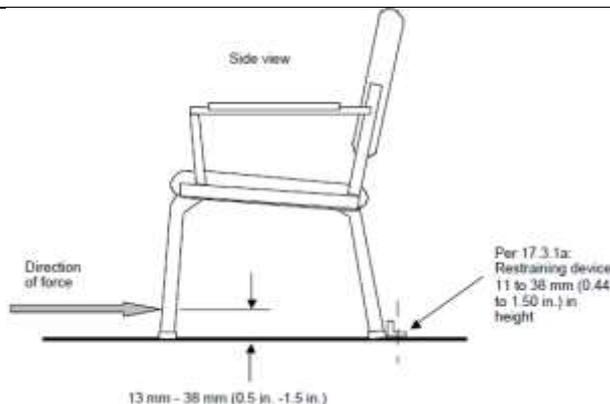
**Note:** Test performed on sample one as 2<sup>nd</sup> test on this sample.

TEST REPORT: 4787969023.1 Rev.1

Issued on: 30/5/2017

Leg Strength Test - Front and Side Application ANSI/BIFMA X5.1:2017 Par. 17

Front Load Test ANSI/BIFMA X5.1:2017 Par. 17.3



Load is applied to inwards and parallel to the axis between the front and back of the seat  
 Load is applied one time on each front leg  
 Height load pad (measured from floor): 15 mm  
 Distance between the load pad from the outer edge of the leg: 11 mm

Functional Load			
Horizontal force (N)	Time of test (sec)	N° cycle	Rating
334	60	1	P

**Note:** Test performed on sample one as 6<sup>th</sup> test on this sample.

Proof load			
Horizontal force (N)	Time of test (sec)	N° cycle	Rating
503	60	1	P

**Note:** Test performed on sample one as 6<sup>th</sup> test on this sample. Permanent deformation of legs during tests, leg supports the load during the test.

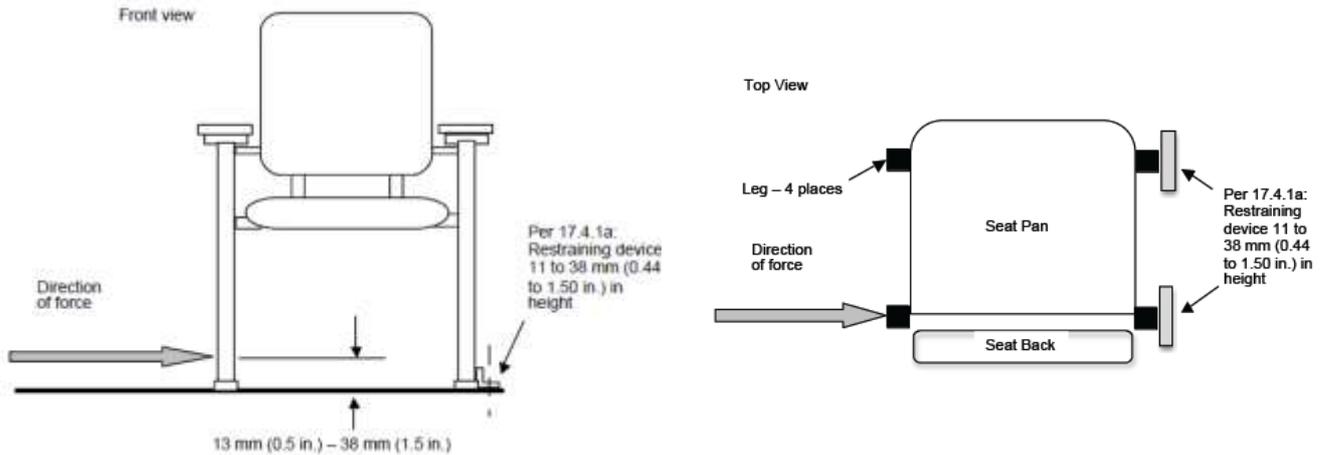


Detail of permanent deformation after test on one front leg

TEST REPORT: 4787969023.1 Rev.1

Issued on: 30/5/2017

Side Load Test ANSI/BIFMA X5.1:2017 Par. 17.4



Load is applied to inwards and parallel to the axis between the right and left of the seat

Load is applied one time on each side leg

Height load pad (measured from floor): 15 mm

Distance between the load pad from the outer edge of the leg: 11 mm

Functional Load			
Horizontal force (N)	Time of test (sec)	N° cycle	Rating
334	60	1	P

**Note:** Test performed on sample one as 7<sup>th</sup> test on this sample.

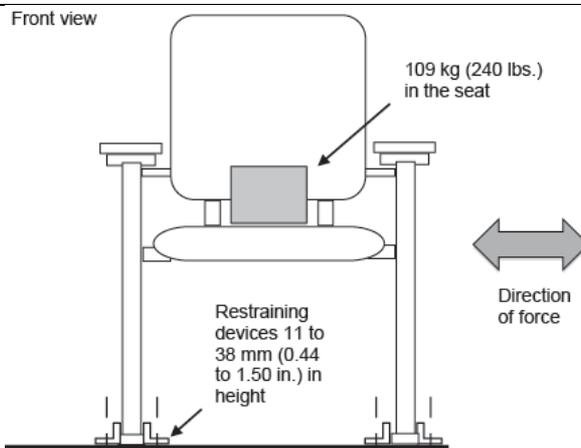
Proof load			
Horizontal force (N)	Time of test (sec)	N° cycle	Rating
503	60	1	P

**Note:** Test performed on sample one as 7<sup>th</sup> test on this sample. Permanent deformation of legs during tests, leg supports the load during the test.

TEST REPORT: 4787969023.1 Rev.1

Issued on: 30/5/2017

Structural Durability Test – Cyclic ANSI/BIFMA X5.1:2017 Par. 24



Load (kg)	Horizontal force (N)	N° cycle	Frequency (cycle per minute)	Rating
109	334	25.000	15	P

Note: Test performed on sample one as 5<sup>th</sup> test on this sample.

**Key:**

- P** = PASS, the sample MEETS the standard requirement.
- F** = FAIL, the sample DOES NOT MEET the standard requirement.
- NA** = NON APPLICABILE, the requirement/test IS NOT APPLICABLE to the sample.
- NR** = NOT REQUESTED, On Customer request the test is NOT PERFORMED.
- NP** = General note (see details).
- ND** = NOT DECLARED.
- //** = The rating of test CANNOT BE EXPRESSED, see details in test report

FINE RAPPORTO / END OF TEST REPORT