

Test Report No. 7191096602-EEC14-CSL
dated 24 Oct 2014

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SUBJECT:

Testing of Chair submitted by Merryfair Chair System Sdn Bhd on 12 Sep 2014.

TESTED FOR:

Merryfair Chair System Sdn Bhd
No 2, Jalan Koporat 1/KU9,
Taman Perindustrian Meru,
42200 Klang, Selangor Darul Ehsan,
Malaysia.

DATE OF TEST:

15 Sep 2014 to 23 Oct 2014

DESCRIPTION OF SAMPLE:

Two complete sets of Chair as shown in the photograph were received.
The following descriptions were given by the client:

Model	:	Rover
Product Type	:	Office Chair
Country of Origin	:	Malaysia
Classification	:	Type III

METHOD OF TEST:

As requested by the client, the tests were conducted in accordance with the following standard:

ANSI/BIFMA X5.1-2011 "General-Purpose Office Chairs – Tests"

The tests were conducted at TÜV SÜD PSB furniture test laboratory, a FIRA (UK) Accredited Testing Laboratory, located at No.1 Science Park Drive. Singapore 118221.



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RESULTS:

Clause	Test	Parameters	Results	Requirement
5	Back Strength Test – Static – Type I	Functional load = Proof load = Duration =	N/A	Functional load: No loss of serviceability
6	Back Strength Test – Static – Type III	Functional load = 667 N Proof load = 1,112 N Duration = 1 min	Passed	Proof Load: No sudden & major change in structural integrity. Loss of serviceability is acceptable
7	Base Test – Static	Loading force = 11.1 kN Duration = 1 min Cycles = 2	Passed	No sudden & major change in the structural integrity of the base.
8	Drop Test – Dynamic	Functional load = 102 kg Proof load = 136 kg Drop height = 152 mm	Passed	Functional load: No loss of serviceability Proof Load: No sudden & major change in structural integrity. Loss of serviceability is acceptable
9	Swivel Test – Cyclic	Seat load = 113 kg Total cycles = 120,000 Rate = 5 -15 cycles/min	Passed	No loss of serviceability
10	Tilt Mechanism Test – Cyclic	Seat load = Cycles = Rate =	N/A	No loss of serviceability to the tilt mechanism
11	Seating Durability test – Cyclic - Impact Test	Seat load = 57 kg Drop height = 30 mm Cycles = 100,000 Rate = 10 - 30 cycles/min	Passed	No loss of serviceability
	- Front Corner Load-Ease Test – Cyclic – Off Center	Seat load = 734 N Cycle = 40,000 Rate = 10 - 30 cycles/min	Passed	



RESULTS:

Clause	Test	Parameters	Results	Requirement
12	Stability Tests - a) Rear Stability - Type III	Loading = 6 disks Seat height \leq 710 mm Force = $0.1964(1195 - 420)$ = <u>152</u> N	Passed	Chair shall not tip over.
	b) Front Stability	Vertical Load = 600 N Horizontal force = 20 N	Passed	
13	Arm Strength Test – Vertical – Static	Functional load = 750 N Proof load = 1,125 N Duration = 1 min	Passed	Functional load: No loss of serviceability. For a height adjustable arm, it must hold the position within 6mm. Proof Load: No sudden & major change in structural integrity. For a height adjustable arm, it must not has a sudden drop in height of greater than 25mm. Loss of serviceability is acceptable
14	Arm Strength Test – Horizontal – Static	Functional load = 445 N Proof load = 667 N Duration = 1 min	Passed	Functional load: No loss of serviceability. Proof Load: No sudden & major change in structural integrity. Loss of serviceability is acceptable



RESULTS:

Clause	Test	Parameters	Results	Requirement
15	Back Durability Test – Cyclic – Type I	Seat weight = Loading force = Cycles = Rate =	N/A	No loss of serviceability
16	Back Durability Test – Cyclic – Type III	Seat weight = 102 kg Loading force = 334 N Cycles = 120,000 Rate = 10 - 30 cycles/min	Passed	
17	Caster / Chair Base Durability Test – Cyclic - Pedestal Base Chairs - Chairs with Legs	Seat weight = 113 kg Cycles = 2,000 (obstacles) 98,000 (no obstacles) Rate = 10 ± 2 cycles/min	Passed N/A	
	Caster Retention for Each Caster	Applied force = 22 N	Passed	No part of castor shall separate from base
18	Leg Strength Test – Front & Side Application - Front Load Test	Functional load = Proof load = Duration =	N/A	Functional load: No loss of serviceability Proof Load: No sudden & major change in structural integrity. Loss of serviceability is acceptable
	- Side Load Test	Functional load = Proof load = Duration =	N/A	
19	Footrest Static Load Test – Vertical	Functional Load (1), Force, F1 = 445 N Duration = 1 min	Passed	Functional Load: No loss of serviceability or sudden loss of footrest height. Proof Load: No sudden & major change in structural integrity. Loss of serviceability is acceptable
		Footrest adjustment, Force, F1 = Force, F2 = Duration =	N/A	
		Functional Load (2), Force F1 = 890 N Duration = 1 min	Passed	
		Proof Load, Force = 1,334 N Duration = 1 min	Passed	

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RESULTS:

Clause	Test	Parameters	Results	Requirement
20	Footrest Durability Test – Vertical – Cyclic	Loading force = 890 N Cycles = 50,000 Rate = 10 - 30 cycles/min	Passed	No loss of serviceability. Adjustable footrest that move more than 25mm in the first 500 cycles shall be considered to have lost their serviceability.
21	Arm Durability Test – Cyclic	Applied force = 400 N Cycles = 60,000 Rate = 10 - 30 cycles/min	Passed	No loss of serviceability.
22	Out Stop Tests for Chairs with Manually Adjustable Seat Depth	Seat weight = Loading weight = Cycles =	N/A	
23	Tablet Arm Static Load Test	Applied load = 68 kg Duration = 1 min	Passed	No sudden and major change in the structural integrity of the chair. After test, tablet arm must allow egress from the unit; other losses of serviceability are acceptable
24	Tablet Arm Load Ease Test – Cyclic	Force = 343 N Cycles = 100,000 Rate = 14 ± 6 cycles/min	Passed	No loss of serviceability

REMARKS:

1. N/A: Not applicable as features not available on chair.


Shareen Chan
Engineer


Wong Bee Hui
Product Manager
Consumer Products

APPENDIX:



Photograph : Rover

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July 2011

