

## Test Report

No.: GLHGR081202244FT

Date: Jan.06, 2008


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ZHONGSHANSHI SONGLIN FURNITURE CO., LTD  
B BOLCK, JINLI INDUSTRIAL ZONE, SANXING ROAD, SALANG VILLAGE, SANJIAO TOWN,  
ZHONGSHAN CITY

The following sample(s) was / were submitted and identified on behalf of the client as:

Sample Description : OFFICE LEATHER CHAIR  
Style / Item No. : 408252 (REF#SL-A0-01)  
Supplier : SAUDER  
Country of Origin : CHINA  
Country of Destination : USA  
Test Performed : Selected test(s) as requested by applicant  
Sample Receiving Date : Dec 16, 2008  
Test Performing Date : Dec 16, 2008 to Dec 18, 2008  
Test Result(s) : For further details, please refer to the following page(s)

Signed and on behalf of  
SGS-CSTC Co., Ltd.

  
\_\_\_\_\_  
William Cao  
Engineer

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## Test Report

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### Test Conducted:

ANSI/BIFMA X5.1 -2002 General -Purpose Office Chair – Tests, American National Standard for Office Furniture.

Type of chair: Type II & Type III

Test Items	Test Methods	Test Requirements	Test Results
Back Strength Test - Static - Type I (Functional Load)	ANSI/BIFMA X5.1 -2002 Clause 5.4	No loss of serviceability when 890N (200lbs.) is applied for 1 min. Applied 90° to the back at 16in. above the seat.	NA
Back Strength Test - Static - Type I (Proof Load)	ANSI/BIFMA X5.1 -2002 Clause 5.4	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 1334N (300lbs.) is applied for 1 min. Applied 90° to the back at 16in. above the seat.	NA
Back Strength Test - Static - Type II & III (Functional Load)	ANSI/BIFMA X5.1 -2002 Clause 6.4	No loss of serviceability when 667N (150lbs.) is applied for 1 min. Applied 90° to the back at 16in. above the seat.	Pass
Back Strength Test - Static - Type II & III (Proof Load)	ANSI/BIFMA X5.1 -2002 Clause 6.4	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 1112N (250lbs.) is applied for 1 min. Applied 90° to the back at 16in. above the seat.	Pass
Base Test - Static	ANSI/BIFMA X5.1 -2002 Clause 7	No sudden and major change in the structural integrity under 11,120N (2500lbs.) compressions for 1 min. The weight is then removed and reapplied for 1 min. The center column may not touch the test platform during load applications.	Pass
Drop Test - Dynamic (Functional Load)	ANSI/BIFMA X5.1 -2002 Clause 8.4	No loss of serviceability when 102kg (225lbs.) weight free falls from 6in. height to the center of the seat.	Pass
Drop Test - Dynamic (Proof Load)	ANSI/BIFMA X5.1 -2002 Clause 8.4	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 136kg (300lbs.) weight free falls from 6in. height to the center of the seat.	Pass
Swivel Test - Cyclic	ANSI/BIFMA X5.1 -2002 Clause 9	No loss of serviceability after 60,000cycles of rotation (360°) under a 102kg (225lbs.) load on the seat at its max. height. Seat shall then withstand another 60,000cycles of rotation at its lowest seating position. Total 120,000cycles.	Pass
Tilt Mechanism Test - Cyclic - Type I & II	ANSI/BIFMA X5.1 -2002 Clause 10	No loss of serviceability after 300,000cycles under a 102kg (225lbs.) load to the center of the seat	Pass
Impact Test - Cyclic	ANSI/BIFMA X5.1 -2002 Clause 11.3	No loss of serviceability in 100,000cycles impact. A weight of 57kg (125lbs.) free falls onto the seat from 1 in. height.	Pass
Front Corner Load Ease Test -Cyclic - off Center	ANSI/BIFMA X5.1 -2002 Clause 11.4	No loss of serviceability after load each seat front corner with 734N (165 lbs.) for 20,000 cycles, total 40,000 cycles. Note: this test is done after "Impact test" on the same sample.	Pass

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Test Items	Test Methods	Test Requirements	Test Results
Stability Test – Rear Stability	ANSI/BIFMA X5.1-2002 Clause 12.3	A 79kg (173lbs.) weight is placed to the seat center (strapped as Fig. 12a). Obstruct the chair casters/legs with 13mm (1/2in.) obstacle. A tipping force is applied to the chair back until the total weight is transferred to the rear support members. The tipping force shall not be less than: Type I and II –89N (20 lbs.) Type III –156N (35 lbs.)	Pass
Stability Test – Front Stability	ANSI/BIFMA X5.1-2002 Clause 12.4	The chair is obstructed with a 13mm (1/2 in.) obstruction to the chair casters/legs. A downward load of 600N (135lbs.) is centered 60mm (2.4in.) from the seat front center edge. The seat shall withstand a 20N (4.5lbf.) horizontally from the front seat edge without tipping.	Pass
Arm Strength Test Vertical - Static (Functional Load)	ANSI/BIFMA X5.1-2002 Clause 13.4	No loss of serviceability when 890N (200lbs.) is applied for 1 min. The vertical load is uniformly applied along a 127mm (5in.) length at the apparent weakest point.	Pass
Arm Strength Test Vertical-Static (Proof Load)	ANSI/BIFMA X5.1-2002 Clause 13.4	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 1334N (300lbs.) is applied for 1 min. The vertical load is uniformly applied along a 127mm (5 in.) length at the apparent weakest point.	Pass
Arm Strength Test Horizontal –Static (Functional Load)	ANSI/BIFMA X5.1-2002 Clause 14.4	No loss of serviceability when 445N (100lbs.) for 1 min. is applied horizontally outward to the armrest at the most forward point of the armrest.	Pass
Arm Strength Test Horizontal –Static (Proof Load)	ANSI/BIFMA X5.1-2002 Clause 14.4	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 667N (150lbs.) for 1 min. is applied horizontally outward to the armrest at the most forward point of the armrest.	Pass
Back Durability Test – Cyclic – Type I	ANSI/BIFMA X5.1-2002 Clause 15	No loss of serviceability in 120,000 cycles with a 102kg (225lbs.) in the center of the seat and a 445N (100lbf.) 90° to the center of the chair back. For chairs with a back width greater than 406mm (16in.), test at the center of chair back for 80,000cycles and then 102mm (4in.) off-center 40,000 cycles, half to each side.	NA
Back Durability Test – Cyclic – Type II & III	ANSI/BIFMA X5.1-2002 Clause 16	No loss of serviceability in 120,000 cycles with a 102kg (225lbs.) in the center of the seat and a 334N (75lbf.) 90° to the center of the chair back. For chairs with a back width greater than 406mm (16in.), test at the center of chair back for 80,000cycles and then 102mm (4in.) off-center 40,000 cycles, half to each side.	Pass
Caster / Chair Base Durability Test for Pedestal Base Chair	ANSI/BIFMA X5.1-2002 Clause 17.1	No loss of service after 2,000cycles over a hard surface with 3 obstacles and 98, 000cycles over a smooth hard surface without obstacles under a 102kg (225lbs.) load on the seat. Test stroke is 762mm (30in.) minimum. The caster should not separate under 22N (5lbs.) pulling force in line with the caster stem after the cycling test.	Pass

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Test Items	Test Methods	Test Requirements	Test Results
Caster / Chair Base Durability Test for Chairs with Legs	ANSI/BIFMA X5.1-2002 Clause 17.2	No loss of service after 2,000cycles over a hard surface with 2 obstacles and 98, 000cycles over a smooth hard surface without obstacles under a 102kg (225lbs.) load on the seat. Test stroke is 762mm (30in.) minimum. The caster should not separate under 22N (5lbs.) pulling force in line with the caster stem after the cycling test.	NA
Leg Strength Test -Front Load (Functional Load)	ANSI/BIFMA X5.1-2002 Clause 18.3	No loss of serviceability when a force of 334N (75lbf.) is applied to each front leg individually for 1 minute.	NA
Leg Strength Test-Front Load (Proof Load)	ANSI/BIFMA X5.1-2002 Clause 18.3	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when a force of 556N (125lbf.) is applied to each front leg individually for 1 minute.	NA
Leg Strength Test -Side Load (Functional Load)	ANSI/BIFMA X5.1-2002 Clause 18.4	No loss of serviceability when a force of 334N (75lbf.) is applied once to each front and rear leg individually for 1 minute.	NA
Leg Strength Test -Side Load (Proof Load)	ANSI/BIFMA X5.1-2002 Clause 18.4	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when a force of 512N (115lbf.) is applied once to the front and rear leg individually for 1 minute.	NA
Footrest Durability Test	ANSI/BIFMA X5.1-2002 Clause 19	No loss of serviceability after 50,000cycles of a 890N (200lbf) load vertical along 102mm (4in.) length of the footrest at the apparent weakest point of the structure.	NA
Arm Durability Test-Cyclic	ANSI/BIFMA X5.1-2002 Clause 20	No structural breakage or loss of serviceability when a force of 400N (90lbf.) is applied to each arm at a 10° angle ±1° for 60,000cycles	Pass
Out Stop Tests for Chairs with Manually Adjustable Seat Depth	ANSI/BIFMA X5.1-2002 Clause 21	Place a 70 kg (154 lb) rigid mass in the center of the seat. Hold the seat at its most position. A cable is attached to the most rigid point of the vertical centerline of the seat. Hang a weight of 25 kg (55 lb) on the opposite end of the cable. Release the weight so it can drag the seat move forward rapidly and impact	NA
Tablet Arm Static Load Test	ANSI/BIFMA X5.1-2002 Clause 22	Apply a load of 68 kg (150 lb) at the apparent weakest position for 5 minutes and remove the load. No sudden and major change in the chair when the application of the load.	NA
Tablet Arm Load Ease Test - Cyclic	ANSI/BIFMA X5.1-2002 Clause 23	No loss of serviceability to the unit after loading the tablet surface with a weight of 35 kg (77 lb) for a total 100,000 cycles.	NA

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GZHG 274095

Remark: 1) NA – Not applicable;

2) Type of chair:

Type I – tilt chair: a chair with a seat tilts with a counterbalancing force;

Type II – fixed seat angle, tilting backrest: a chair that provides a fixed angle with a tilting backrest;

Type III – fixed seat angle, fixed backrest: a chair that provides a fixed seat angle with a fixed backrest;

3) Photo appendix is included.

4) Test report GLHGR081102078FT is copied from the test report GLHGR081102077FT.

5) The client states their products entitled as following style/item no. #408246, #408252, #408252 (REF#SL-A0-01) are claimed to be identical, but only Item no. #408246 is tested in SGS.

6) The original test report Reference No. GLHGR081102078FT, issued date: JAN.05.2009, was modified on JAN.06.2009, according to original applicant's requirements. Following changes are included :

1. Change of applicant's name.
2. Change of applicant's address.
3. Change of Item No.

\*\*\*End of Report\*\*\*

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## PHOTO APPENDIX



Sample as received

SGS authenticate the photo on original report only

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