

SHAH01476379 **Test Report** Number:

22 Jul, 2022 Applicant: Date:

HANGZHOU WEICHENG SUPPLY CHAIN

MANAGEMENT CO., LTD.

ROOM 315, 3RD FLOOR, BUILDING A03, NO. 9, JIUSHENG ROAD, JIANGGAN DISTRICT,

HANGZHOU CITY, ZHEJIANG PORVINCE.

Attn: JIANG YANG

Sample Description:

One(1) group of submitted sample said to be:

Item Name Folding Adirondack Chiar

Item No. A081-018 Quantity 2

Packaging Provided By Applicant Yes Country Of Origin China

Tests Conducted:

As requested by the applicant, for details refer to attached page(s).

Conclusion:

Tested samples Standard

Result UL4041:2018 - OUTLINE OF INVESTIGATION FOR Submitted sample **Pass**

OUTDOOR FURNITURE

Remark: 1. The markings and instruction manual were not provided for review in this report.

To be continued

Authorized By:

Intertek Testing Services Ltd. Zhejiang

Peter Chen General Manager







Tests Conducted

Safety Requirements and Test Methods for Outdoor Furniture

With reference to UL4041:2018 – Outline of investigation for outdoor furniture, the submitted sample was subjected to the following tests:

Number of Sample Tested: One (1) Piece

Types: Chair type III

Overall dimensions: 740 mm W X 832 mm D X 910 mm H

Weight: 15.3 kg

Initial check: No visible damage was found.

Executive summary:

	summary:					
Clause	Test item	Verdict				
Introducti	on					
1	Scope					
2	General					
3	Glossary					
Construct	iion					
4	General					
4.1	Furniture for outdoor use shall be constructed of materials and fasteners suitable for the purpose.	Р				
4.2	Iron and steel units and components shall be protected against corrosion as specified in Protection against Corrosion, Section 5.					
4.3	Glass components shall meet the requirements of the Standard Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings, ANSI Z97.1, Class A or shall not break when tested according to EN 14072:2003, or shall break as specified in EN 14072:2003, Clause 7, (c)(2) or (c)(3) or fulfils the requirements in EN 12150-1:2015, Clause 8, "Fragmentation test". If compliance to these standards is not met then Horizontal Glass Impact Test, Section 8 and Vertical Glass Impact Test, Section 9 tests shall be conducted.					
4.4	Holes for umbrella in glass table top shall be protected to prevent metal to glass contact.	NA				
4.5	Plastics components that are deemed safety critical need to meet the outdoor requirements as defined by a F1 rating, per Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C.					
4.6	In order to avoid physical injury when the product is in its intended position of use, all edges and corners shall be rounded, chamfered or otherwise protected. This applies to: a) Seating: Edges of the seat, backrest and arm rests and any part of the bottom surface of the seat at a distance less than 120 mm (4.7 in) from any edge, where the probe, see Figure 4.1 can commonly access; b) Tables: Table tops, any part of the underside of the top surface at a distance less than 500 mm (19.7 in) from any edge below the table, where a knee and/or an arm can commonly access.					
4.7	All other parts shall be free from burrs, sharp edges and sharp points and shall comply with Standard for Tests for Sharpness of Edges on Equipment, UL 1439.					
4.8	Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided.					
4.9	It shall not be possible for any load bearing part of the furniture to come loose unintentionally.					
4.10	All parts which are lubricated to assist sliding shall be designed to protect users from lubricant stains when in normal use.					
4.11	when in normal use. There shall be no accessible holes in the ends of tubular components with a diameter between 7 mm (0.28 in.) to 12 mm (0.47 in.) with a depth more or equal to 10 mm (0.39 in.). The bottom of tubular legs in contact with the floor shall be closed or capped, however, holes in them are allowed as long as they are not between 7 and 12 mm as this poses a potential finger entrapment issue.					



Clause	Test item				
5	Protection Against Corrosion				
5.1	Patio furniture made of the following materials shall be considered to comply with corrosion requirements and corrosion testing is not required, all other materials shall be tested: a) Copper, aluminum, or stainless steel; and b) Bronze or brass containing at least 80 percent copper; and				
	Brass inserts containing at least 60 percent copper. Patio furniture made of ferrous materials and provided with one of the coatings in Table 5.1 shall be				
5.2	considered to comply with corrosion requirements and corrosion testing is not required, all other materials shall be tested.				
5.3	Patio furniture shall not be constructed of metals in any combination such as to cause galvanic action that will adversely affect any part of the equipment exposed to moisture as shown in the Table 5.2.				
5.4	If corrosion testing is needed a Salt spray test shall be performed using ASTM Testing from Standard Practice for Operating Salt Spray (Fog) Apparatus, ASTM B117, with 5% concentration neutral salt spray condition, test for 72 hours.				
5.5	In reference to Salt spray test, 5.4 there shall be no less than rating 9 after 72 hours test on any component that will affect the performance of the furnishing, the rating standard shall follow Standard Practice for Evaluating Degree of Rusting on Painted Steel Surfaces, ASTM D610-08.	Р			
Performa	nce				
6	Welding				
6.1	The welding process, materials and any special properties; joint configurations and preparation; and welding procedure specifications shall be suitable for the application.				
6.2	The weld joint specification shall have a min tolerance of $0-0.5$ mm for any bevel or root gap and a min trim tolerance of ± 0.5 mm. The parts shall be fitted as intended before welding and compliance with the tolerance requirement shall be determined via a rod gauge. Verification of the adequacy of the specified tolerance (minimum or other) shall be determined at the most adverse tolerance.				
6.3	A fillet weld specification shall account for any curvature of the mounting surface.				
6.4	The specification for a beveled opening that accepts a separate part to be welded shall indicate the point of reference to which the bevel is to be measured.				
6.5	All welding joints shall be positioned for welding in either the flat or horizontal position unless made using a production jig. The horizontal or vertical plane of the flat and horizontal joint vary up to a maximum of 10 degrees.				
6.6	A beveled opening shall be made using a production jig or other aid that enables consistency of shape and dimensions with the specification. The production jig / aid shall provide visual indication that the welded part has the specified penetration.				
6.7	The minimum overlap of parts in stress-carrying lap joints shall be five times the thickness of the thinner part.				
6.8	Weld start / stops of intermittent welds shall be placed away from high stress areas (e.g. corners).				
6.9	Qualifications and training records for staff performing welding must be maintained and available for review.				
6.10	360° welding is required on all tube-to-tube, tube-to-plate, and tube-to-assembly welds. Strap-to-tube welds may have the strap connected with short beads.				
7	General Laries and Class Invest Test	NA			
8	Horizontal Glass Impact Test This test applies to all tables that have horizontal glass surfaces that do not comply with 4.3. The sample is to be supported as normally supported by the frame. A solid steel sphere, 51 mm (2 in.) in diameter and weighing 0.54 kg (1.18 lb.), is to fall through the distance required to result in an impact of 6.8 J (5 ft-lbf). The glass surface shall not crack or break.				
9	Vertical Glass Impact Test This test applies to all tables that have vertical glass surfaces that do not comply with 4.3. The sample is to be supported as normally supported by the frame. The glass surface is to be mounted in the intended manner. A sand-filled bag having a 760 ±13 mm	NA			



Clause		
	(30 ± 0.5 in.) circumference and a weight of 9.1 kg (20 lb.) is to fall as a pendulum through the	Verdict
	distance that produces an impact of 18.4 J (13.6 ft-lbf) on any point on the panel.	
	The glass shall not become dislodged or displaced from its mounting means.	
	Shear and Pinch Point Test	Р
	This test is applicable to all furniture that may have an entrapment hazard.	
	The furnishing should be set up as intended based on its instructions. The test shall be performed	
	with and without a load.	
	The furnishing shall be used in accordance with it instructions and shall be manipulated through all	
40	of its adjustments.	
10	1. When a product is being folded or unfolded, shear and pinch points are acceptable if the user is	
	in control of their movement and is able to stop movement if pain is experienced.	
	2. Shear and pinch points created by loads applied during normal use are not acceptable as there	
	is a risk of injury created by the weight of the user. For example shear and pinch points created during an attempt to adjust the angle of the backrest of a chaise lounge chair while sitting.	
	3. Shear and pinch points created by energized components like mechanical springs and gas lifts	
	are not acceptable as the user is not in control of his/her movement.	
Table test		
11	Stability Test	
	General	NA
	This test is applicable to all tables.	
	The legs, wheels, casters, or similar means of support, arranged in the position most likely to result	
	in tip-over and blocked so that the table does not move. The thickness of the mechanism employed	
44.4	to block casters or wheels shall be a maximum of 1/8th the diameter of the caster or wheel.	
11.1	All table leaves and other movable or adjustable parts shall be positioned in the worst case position	
	for stability.	
	A 305 mm (12 in.) disk loaded with 57 Kg (125 pounds) shall be centered 178 mm (7 in.) in from the	
11.2	edge of the table at the least stable position.	
	The table shall not tip over.	
	Table stability – Tables designed to support an umbrella	NA
	This test is applicable for tables that are intended to support an umbrella. This test does not apply to	
	tables that are not intended to support an umbrella even if the table is provided with an opening for	
	an umbrella to pass through.	
	1. Unless otherwise specified, the tests shall be carried out in the configuration most likely to	
	cause overturning. Where the table top can be extended, and the smallest dimension of the unextended table top is less than 300 mm, then the extended configuration shall be considered	
	most likely to cause failure.	
	 In this case, the extended configuration is considered as the main surface. 	
	3. Levelling devices shall be set as near as possible to 5 mm (0.20 in) from the fully open position	
	whilst ensuring the table top is parallel to the floor.	
	4. Tables supplied with storage features shall be tested with no load in the storage item.	
	A metal pipe that is 2210 mm (87 in.) in length with a diameter of 38 mm \pm 4.1 mm (1.5 \pm 0.16 in.)	
	and a wall thickness of 1.0 ± 0.02 mm $(0.04 \pm 0.0079 \text{ in})$ shall be fixed firmly in the opening for a	
	table umbrella. A horizontal force of 30 N (6.7 lbf) is to be applied at the top end of the metal pipe.	
	The table shall not tip over as a result of the application of the load.	
	Top Load Ease Cycle Test	NA
	This test is applicable for all tables.	
	For units with a primary surface with a depth greater than or equal to 457 mm (18 in.) deep, a 91 kg	
	(200 lb.) weight applied by means of a 406 mm ± 13 mm (16 in. ± 0.5 in.) diameter bag or force	
12	applied through a 406 mm ± 13 mm (16 in. ± 0.5 in.) disk shall be positioned with the edge of the	
-	bag/disk within 25 mm (1 in.) from the edge of the surface at the center of the largest unsupported	
	span. For primary surfaces with a depth less than 457 mm (18 in.), center the bag on the available	
	surface depth.	
	The cycling device shall be set to cycle at a rate of 14 ± 6 cycles per minute.	
	The loading device shall be raised until the entire weight is off the surface and then eased (without	



Clause	Test item		
	impact) onto the surface, so that it takes the entire weight without any support from the cycling		
	device.		
	Repeat for a total of 5,000 cycles. There shall be no loss of serviceability to the unit.		
	Concentrated load test	NA	
	This test is applicable for all tables.		
	Functional load test:		
	a) Apply the specified 90.7 Kg (200 lb.) Concentrated load to the primary surface through a 305		
	mm (12 in.) diameter disk so that its center is 178 mm (7 in.) from the unit's edge at its		
	apparent weakest point. b) When testing units with lengths (or diameters) greater than 1829 mm (72 in.), two 90.7 Kg (200		
	Ib.) loads are required. The loads are applied through 305 mm (12 in.) diameter disks. The		
	centers of these disks shall be placed 915 mm ± 25 mm (36 in. ± 1.0 in.) apart and 178 mm (7		
	in.) in from the edge of the primary surface at the apparent weakest point.		
13	c) Test time is 60 minutes.		
	There shall be no loss of serviceability.		
	Proof load test:		
	a) For tables with an area greater than 0.46 m ² (5 ft. ²), unless stated otherwise, the setup shall be		
	performed per Section 13 but with the appropriate 136.1 Kg (300 lb.) concentrated load(s).		
	b) For tables with an area equal to or less than 0.46 m ² (5 ft. ²), the setup shall be performed per		
	Section 13, except the 136.1 Kg (300 lb.) concentrated load shall be placed in the center of the		
	table.		
	c) Test to be performed for 15 minutes. There shall be no sudden and major change in the structural integrity of the product. Loss of		
	serviceability is acceptable.		
	Distributed Load Test	NA	
	This test is applicable for all tables.		
	Functional load test:		
	A load of 1.5 lb./in. of perimeter shall be evenly distributed and centered over a line 203 mm (8 in.) in		
	from the edge along the entire perimeter.		
	Test to be performed for 60 minutes.		
14	There shall be no loss of serviceability.		
	Proof load test:		
	Perform the setup per 14.1, Normal (Functional) load test, using a 2.3 lb./in of perimeter distributed		
	abnormal (proof) loads.		
	Test to be performed for 15 minutes.		
	There shall be no sudden and major change in the structural integrity of the product. Loss of		
	serviceability is acceptable. Table Unit Drop Test	NA	
	This test is applicable only to tables with a weight of less than 136.1 Kg (300 lb.).	INA	
15	The unit shall be placed on a test platform.		
	Raise one end of the long axis of the unloaded unit so that the bottom of the base is 180 mm (7.1		
	in.) above the test platform or at the balance point, whichever is lower. The end of the unit being		
	tested shall be released and allowed a free fall to the test platform. Repeat for the other end of the table unit.		
	There shall be no loss of serviceability.		
	Leg Strength Test	NA	
6	This test is applicable for all tables.		
•			
	Functional:		



Clause	Test item	Verdict
	a) Based on the table type, calculate the Normal (Functional) force A as follows [not to exceed	
	445 N (100 lbf)]:	
	Tables with a total surface area greater than 0.46 m ² (5 ft. ²) and 610 mm (24 in) in height:	
	A = 0.5 x (unit weight, kg) x 9.8 + 222N	
	A = 0.5 x (unit weight, lb.) + 50 lbf	
	All other types:	
	A = 0.5 x (unit weight, kg) x 9.8 + 44N	
	A = 0.5 x (unit weight, lb.) + 10 lbf	
	b) Calculate the Normal (Functional) Force "B" as (0.5 x A).	
	Individually and separately apply the Normal (Functional) horizontal forces A and B).	
	No loss of serviceability shall occur as a result of the application of the Normal (Functional) loads.	
	Proof:	
	a) Calculate the Abnormal (Proof) Forces A [not to exceed 668 N (150 lbf)] and B as follows:	
	Proof Force A = 1.5 x (Functional Force A)	
	Proof Force B = 1.5 x (Functional Force B)	
	b) Repeat the testing as shown in the Normal (Functional) Test Procedure, but with the Abnormal	
	(Proof) loads.	
	Application of the Abnormal (Proof) loads shall cause no sudden and major change in the structural	
	integrity of the product. Loss of function is acceptable.	
	Test for Tables with Casters	NA
	This test applies to all tables with casters.	
	Apply a 39 kg (85 lb.) load to the primary surface. The load shall be applied through a 305 mm (12	
17	in.) diameter disk centered on the table.	
17	Set the cycling device to operate at a rate of 10 ± 2 cycles per minute. One cycle consists of a	
	forward, then a backward stroke of the machine.	
	Cycle the table unit for 2,500 cycles.	
	There shall be no loss of serviceability to a caster or the table.	
Chair test	ing	
	Stability Tests	
18	The stability tests shall be performed on all types of chairs exclude chaise lounge chair.	
10	Note: Rearward stability tests apply only to chairs with backrests greater than 200 mm (7.9 in.) in	
	height as measured with the BIFMA CMD.	
	Rear stability – Type III chairs	Р
	For chairs with adjustable features, all adjustments shall be set at the apparent least stable condition	F=39.05 lbs.
	for rearward stability.	
	Load the apparent least stable seat of one of the seating positions with 6 disks.	
	Apply a horizontal force to the highest disk. The location of the force application is 6 mm (0.25 in.)	
	from the top of the disk.	
18.4.1	a) For chairs with seat height (as measured at the front of the bottom of the lowest disk when all	
	disks are in the chair) less than 710 mm (28.0 in.), calculate the force as follows:	
	F = 0.1964 x (1195 – H) Newton. H is the seat height in mm.	
	[F = 1.1 x (47 – H) pounds force.]. H is the seat height in inches.	
	b) b) 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.	
	The chair shall not tip over.	
	Rear stability test – Type I and II chairs	NA
18.4.2	On chairs with adjustable features, all adjustments shall be set at the apparent least stable condition	
	for rearward stability.	
	Load the chair with 13 disks.	
	The chair shall not tip over.	
	Front stability	Р
18.5	On units with adjustable features, all adjustments shall be set at the apparent least stable condition	•
	for forward stability.	



Clause	Test item	Verdict			
	Alternative A:				
	Apply a vertical load of 600 N (135 lbf), through a 200 mm (7.87 in.) diameter disk, the center of				
	which is 60 mm (2.4 in.) from the front center edge of the load-bearing surface of the seat. Apply a horizontal force of 20 N (4.5 lbf) at the same level of the plane of the top of the seat. The				
	force shall be coincident with the side-to-side centerline of the seat.				
	The chair shall not tip over as the result of the force application. A chair shall not tip over under load on a level surface and on an uneven surface.				
	·				
	Alternative B: Apply a vertical load of 600 N (135 lbf), by means of the front stability loading fixture at a point 60				
	mm (2.4 in.) from the front center edge of the load-bearing surface of the chair.				
	Apply a horizontal force of 20 N (4.5 lbf) at the same level of the plane of the top of the seat. The force shall be coincident with the side-to-side centerline of the seat.				
	The chair shall not tip over as the result of the force application.				
	A chair shall not tip over under load on a level surface and on an uneven surface.				
	Alternative C:				
	This test procedure (Alternative C) shall only be used for multiple seating units. A downward force shall be applied initially at 45°± 5° to the test platform by attaching a strap, not to				
	exceed 76 mm (3 in) in width, centered over the front portion of the seat.				
	The force determined results the unit tipping over shall not be less than 40% of the total unit weight. Backrest Strength Test – Static – Type I and II	NA			
	This test does not apply to chairs with backrest height less than 200 mm (7.9 in.).				
	If adjustable features are available, all adjustments shall be set at midpoint.				
	Functional load:				
	Attach a loading device (front push or back pull) to the horizontal center of the backrest as determined above. Apply a force of 667 N (150 lbf) that is initially 70 degrees ± 10 degrees to the				
	plane of the backrest for 1 minute. (For multiple seating, the force shall be applied simultaneously to				
19	the two most adverse backrests for 1 minute.) Remove the load.				
	Application of Normal (Functional) Load shall not result in loss of serviceability to the chair.				
	Proof load:				
	A force of 1001 N (225 lbf) shall be applied to the backrest at the backstop position for 1 minute. (for				
	Multiple seating, the force shall be applied simultaneously to the two most adverse backrests for 1 Minute.)				
	Remove the load.				
	Application of the Abnormal (Proof) loads shall cause no sudden and major change in the structural integrity of the product. Loss of function is acceptable.				
	Backrest Strength Test - Static - Type III	Р			
	This backrest strength test shall be performed on Type III chairs with backrests greater than 200 mm (7.9 in.) in height.				
	If adjustable features are available, all adjustments shall be set at normal use conditions.				
	Functional load:				
20	Attach a loading device (front push or back pull) to the horizontal center of the backrest as determined above. Apply a force of 667 N (150 lbf) that is initially 90 degrees ± 10 degrees to the				
	plane of the backrest. (For multiple seating, the force shall be applied simultaneously to the two most				
	adverse backrests for 1 minute.) For units with 3 seats, the loads shall be applied to the center and one of the side seats. For units				
	with 4 seats, the loads shall be applied to the two center seats.				
	Remove the load. A Normal (Functional) load applied once shall cause no loss of serviceability to the chair.				
	A Normal (Functional) load applied once shall cause no loss of serviceability to the chalf.				



Clause	Test item		
	Proof load:		
	A force of 1001 N (225 lbf) shall be applied to the backrest at the backstop position (For multiple		
	seating, the force shall be applied simultaneously to the two most adverse backrests) for 1 minute.		
	Remove the load.		
	An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural		
	integrity of the chair. Loss of serviceability is acceptable.		
	Drop Test – Dynamic	Р	
	This test applies to all chair types.		
	For chairs with a seat height adjustment feature, set the adjustment to its highest position.		
	On multiple-seating units, all seating positions not being tested shall be loaded with 109 kg (240 lb.)		
	with the exception of the position to be impacted.		
	For chairs with seat height adjustment features, set height to its lowest position and repeat.		
	Functional load:		
	A test bag weighing 102 kg (225 lb.) shall be raised 152 mm (6 in.) above the uncompressed seat and released one time.		
21	Then remove the bag.		
	There shall be no loss of serviceability.		
	There shall be no loss of serviceability.		
	Proof load:		
	Repeat setup as in the Normal (Functional) test and increase the weight of the test bag to an		
	Abnormal (Proof) load of 136 kg (300 lb.).		
	The test bag shall be raised 152 mm (6 in.) above the uncompressed seat and released one time.		
	Then remove the bag.		
	There shall be no sudden and major change in the structural integrity of the chair. Loss of		
	serviceability is acceptable.		
	Swivel Test – Cyclic	NA	
	This test applies to all chair types with a swivel seat.		
	a) If the seat height is adjustable, set it to the maximum seat height position. Set all other		
	adjustable features to the normal use condition.		
22	A 122 kg (270 lb.) load shall be placed on the seat such that the center of gravity of the load is 51 to		
	64 mm (2 to 2.5 in.) forward or rearward of the centerline of the rotational axis.		
	The seat or platform shall rotate for 30,000 cycles at a rate between 5 and 15 rotations per minute.		
	b) If the seat height is adjustable set the height to its lowest position.		
	For all chairs, continue the test for an additional 30,000 cycles to a total of 60,000 cycles.		
	There shall be no loss of serviceability.		
	Seating Durability Tests – Cyclic	Р	
	For Safety Level – Stage 1: There shall be no loss of serviceability to the chair after completion of		
23	both the impact and load-ease tests.		
	Safety Level – Stage 2 or Performance Level (Stage 3): The product must not show sudden and		
	major change in structural integrity after completion of both the impact and load-ease tests. The		
	product can show minor damage or loss of serviceability.	Р	
	Impact test If adjustable features are available, all adjustments shall be set at normal use conditions.	Р	
23.3	A test bag weighing 57 kg (125 lb.) shall be attached to a cycling device, permitting a free fall from		
	30 mm (1.2 in.) above the uncompressed seat.		
	The cycling device shall be set at a rate between 10 and 30 cycles per minute.		
	For Multiple Seating, all seats not being cycled shall be loaded with 109 kg (240 lb.) of weight per		
	seat. And each seat on the same sample shall be subjected to the test.		
	The chair shall be tested to 10,000 cycles.		
	Front corner load-ease test - Cyclic - Off-center	Р	
23.4	This test is not applicable for multiple seating units.	•	
	Apply a load of 734 N (200 lbf) through a 203 mm ±13 mm (8 in. ± 0.51 in.) diameter loading device		



adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25 000 cycles. When testion multiple section units the durability test shall be performed on each before the context of the plane of the backrest for 25 000 cycles. When testion multiple section units the durability test shall be performed on each before the context of the section units the durability test shall be performed on each before the context of the section units.			
Test for 'a,000 cycles. Reposition the load to the other front corner, and perform the test for an additional 4,000 cycles. Arm Strength Test – Vertical – Static This test applies to all chairs with arms. A loading adapter that is 127 mm (5 in.) long and at least as wide as the width of the arm shall be attached to the top of the arm rest structure such that the load will be applied at the apparent weakest point that is forward of the chair backrest. Functional load: A force of 750 N (169 lbf) shall be applied for one (1) minute then remove the force. There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test — Cyclic — Type I This test shall be performed on Type I Tilting chairs. A weight of 109 kg (
Arm Strength Test – Vertical – Static This test applies to all chairs with arms. A loading adapter that is 127 mm (5 in.) long and at least as wide as the width of the arm shall be attached to the top of the arm rest structure such that the load will be applied at the apparent weakest point that is forward of the chair backrest. Functional load: A force of 750 N (169 lbf) shall be applied for one (1) minute then remove the force. There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test — Cyclic — Type I This test shall be performed on Type I Tilting chairs. A weight of 109 kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initiall			
Arm Strength Test – Vertical – Static This test applies to all chairs with arms. A loading adapter that is 127 mm (5 in.) long and at least as wide as the width of the arm shall be attached to the top of the arm rest structure such that the load will be applied at the apparent weakest point that is forward of the chair backrest. Functional load: A force of 750 N (169 lbf) shall be applied for one (1) minute then remove the force. There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initiall			
This test applies to all chairs with arms. A loading adapter that is 127 mm (5 in.) long and at least as wide as the width of the arm shall be attached to the top of the arm rest structure such that the load will be applied at the apparent weakest point that is forward of the chair backrest. Functional load: A force of 750 N (169 lbf) shall be applied for one (1) minute then remove the force. There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test - Horizontal - Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test - Cyclic - Type I This test shall be performed on Type I Tilting chairs. A weight of 109 kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane			
A loading adapter that is 127 mm (5 in.) long and at least as wide as the width of the arm shall be attached to the top of the arm rest structure such that the load will be applied at the apparent weakest point that is forward of the chair backrest. Functional load: A force of 750 N (160 lbf) shall be applied for one (1) minute then remove the force. There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When		Arm Strength Test – Vertical – Static	Р
attached to the top of the arm rest structure such that the load will be applied at the apparent weakest point that is forward of the chair backrest. Functional load: A force of 750 N (169 lbf) shall be applied for one (1) minute then remove the force. There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test — Horizontal — Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test — Cyclic — Type I This test shall be performed on Type I Titing chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one		This test applies to all chairs with arms.	
weakest point that is forward of the chair backrest. Functional load: A force of 750 N (169 lbf) shall be applied for one (1) minute then remove the force. There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test - Horizontal - Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test - Cyclic - Type I Titing chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: the		A loading adapter that is 127 mm (5 in.) long and at least as wide as the width of the arm shall be	
Functional load: A force of 750 N (169 lbf) shall be applied for one (1) minute then remove the force. There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 645 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test — Cyclic — Type I This test shall be performed on Type I Titing chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating unities, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level — Stage 1: there shall be n		attached to the top of the arm rest structure such that the load will be applied at the apparent	
A force of 750 N (169 lbf) shall be applied for one (1) minute then remove the force. There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test + Horizontal - Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test — Cyclic — Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level — Stage 1: there shall be no loss of servicea		weakest point that is forward of the chair backrest.	
A force of 750 N (169 lbf) shall be applied for one (1) minute then remove the force. There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test + Horizontal - Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test — Cyclic — Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level — Stage 1: there shall be no loss of servicea			
There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.		Functional load:	
adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
is considered a loss of serviceability. Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.	24		
Proof load: A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test — Horizontal — Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test — Cyclic — Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level — Stage 1: there shall be no loss of serviceability.			
A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.		is considered a loss of serviceability.	
A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force. There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level — Stage 1: there shall be no loss of serviceability.			
adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
requirement. Loss of serviceability is acceptable. Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
Arm Strength Test – Horizontal – Static This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
This test applies to all chairs with arms. A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test - Cyclic - Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
A loading device or strap, not greater than 25 mm (1 in.) in horizontal width, shall be attached to the arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test - Cyclic - Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			Р
arm so that the load is initially applied horizontally to the armrest structure at the apparent weakest point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
point. Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.		point.	
A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
Force. A Normal (Functional) load applied once shall cause no loss of serviceability. Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.	25		
Proof load: A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.		A Normal (Functional) load applied once shall cause no loss of serviceability.	
A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.		Described	
force. An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
integrity of the unit. Loss of serviceability is acceptable. Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
Backrest Durability Test – Cyclic – Type I This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
This test shall be performed on Type I Tilting chairs. A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			NΙΛ
A weight of 109 Kg (240 lb.) shall remain in the center of the seat and be secured if necessary. Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			INA
Apply a force of 445 N (100 lbf) that is initially 90 degrees ± 10 degrees to the plane of the backrest for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
for 25,000 cycles. When testing multiple-seating units, the durability test shall be performed on each backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
backrest positions one by one on the same sample. The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.			
The loading device shall be set at a rate between 10 and 30 cycles per minute. For Safety Level – Stage 1: there shall be no loss of serviceability.	26		
For Safety Level – Stage 1: there shall be no loss of serviceability.			
major change in structural integrity. The product can show minor damage or loss of serviceability			
Backrest Durability Test – Cyclic – Type II and III			D
This test shall be performed on Type II and III chairs.			F
If adjustable features are available, all adjustments shall be set at normal use conditions.			
	27		
The loading device shall be adjusted to apply a 334 N (75 lbf) total force to the backrest for 25,000	.1		
cycles. When testing multiple-seating units the durability test shall be performed on each backrest			
r cycles, vyhen lestiny multiple-seatiny units the uurabiilty lest shall be behonned on each backlest - I			



Tests Conducted

Clause	Test item		
	The loading device shall be set at a rate between 10 and 30 cycles per minute.		
	For Safety Level – Stage 1: there shall be no loss of serviceability.		
	For Safety Level – Stage 2 or Performance Level (Stage 3): the product must not show sudden and		
	major change in structural integrity. The product can show minor damage or loss of serviceability.		
	Caster/Chair Base Durability Test for Pedestal Base Chairs	NA	
	This test applies to pedestal base chairs with casters.		
	Place a 122 kg (270 lb.) load on the seat of the chair.		
	The stroke of the cycling device shall be adjusted to ensure a minimum of 762 mm (30 in) of travel.		
	The cycling device shall be operated at a rate of 10 ± 2 cycles per minute.		
28	The chair or chair base shall be cycled 4,000 cycles over the obstacles and then 25,000 cycles on a		
20	smooth, hard surface without obstacles.		
	At the conclusion of cycling, a 22 N (5 lbf) pull force shall be applied to each caster in line with the		
	caster stem centerline.		
	There shall be no loss of serviceability.		
	No part of the caster shall separate from the chair as a result of the application of the 22 N (5 lbf)		
	force.		
	Caster/Chair Frame Durability Test for Chairs with Legs	NA	
	This test applies to chairs with legs and casters. This test is not applicable to chairs with glide/caster		
	combinations.		
	Place and secure a distributed 122 kg (270 lb.) on the center of seat of the chair or chair base.		
	The cycling device shall be operated at a rate of 10 ± 2 cycles per minute.		
29	The chair or chair base shall be cycled for 4,000 cycles over the obstacles and then 25,000 cycles		
23	on a smooth hard surface without obstacles.		
	At the conclusion of cycling, a 22 N (5 lbf) pull force shall be applied to each caster in line with the		
	caster stem centerline.		
	There shall be no loss of serviceability.		
	No part of the caster shall separate from the chair as a result of the application of the 22 N (5 lbf)		
	force.		
30	Leg Strength Test – Front and Side Application		
	This test applies to all chairs without pedestal bases.		
	Front load test	Р	
	If adjustable features are available, all adjustments shall be set at normal use conditions.		
	Functional load:		
30.3	A force of 334 N (75 lbf) shall be applied once to each front leg individually for one (1) minute then		
	remove the force.		
	Normal (Functional) load(s) applied once in each direction shall cause no loss of serviceability.		
	Proof load:		
	A force of 503 N (113 lbf) shall be applied once to each front leg individually for one (1) minute then		
	remove the force.		
	Abnormal (Proof) load(s) applied once each direction shall cause no sudden and major change in		
	the structural integrity of the chair. Loss of serviceability is acceptable.		
	Side load test	Р	
30.4	The load shall be applied to the apparent weakest point (front-to-back) of the leg.		
	For attending to		
	Functional load:		
	A force of 334 N (75 lbf) shall be applied once to a front and rear leg individually for one (1) minute		
	then remove the force.		
	Normal (Functional) load(s) applied once in each direction shall cause no loss of serviceability.		
	Droof loads		
	Proof load: A force of 503 N (413 lpf) shall be applied once to a front and room log individually for one (1) migute		
	A force of 503 N (113 lbf) shall be applied once to a front and rear leg individually for one (1) minute		
	and then remove the force.		



Tests Conducted

Clause	Test item	Verdict
	Abnormal (Proof) load(s) applied once each direction shall cause no sudden and major change in	
	the structural integrity of the chair. Loss of serviceability is acceptable.	
	Footrest Static Load Test – Vertical This test shall be performed on all chairs with a footrest feature and a seat height equal to or greater than (or can be adjusted to) 610 mm (24 in.). On chairs with adjustable features, all adjustments shall be set at normal use position.	NA
31	Functional load: 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. Next increase the force F1 to 200 lbf for one (1) minute. There shall be no loss of serviceability or sudden loss of footrest height.	
	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. The load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.	
32	Footrest Durability Test – Vertical – Cyclic The footrest durability test shall be performed on all chairs with a footrest feature and a seat height equal to or greater than (or can be adjusted to) 610 mm (24 in.). On chairs with adjustable features, all adjustments shall be set at normal use position. A 890 N (200-lbf) force shall 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 at the apparent weakest point of the structure.	NA
	The force shall be applied and removed 50,000 cycles at a rate between 10 and 30 cycles per minute. 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.	
	inge chair testing	
33	Chaise Lounge Chair	
33.1	Stability	
	A. Backrest in most upright position or fixed backrest with an angle equal to or greater than 55°. On chaise lounge chairs with adjustable features, all adjustments shall be set as follows: a) Most upright position for the backrest; b) The least stable condition of casters or glides. Load the chaise lounge chair (or, for multiple seat units, load the seat of one of the seating positions) with 6 disks.	NA
33.1.3	Apply a horizontal force to the highest disk. The location of the force application is 6 mm (0.25 in.) from the top of the disk. a) For chairs with seat height less than 710 mm (28.0 in.), calculate the force as follows: F = 0.1964 (1195 - H) Newton. H is the seat height in mm. [F = 1.1 (47 - H) pounds force.]. H is the seat height in inches. b) 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. The chaise lounge chair shall not tip over.	
	B. Backrest in the most reclined position or fixed backrest with an angle of less than 55° On chaise lounge chair with adjustable features, all adjustments shall be set at the apparent least stable condition for rearward stability. Load the back of the chair (or, for multiple seat units, load the back of one of the seating positions)	



Clause	Test item			Verdict
	with eight loading discs, and place			
	loading discs onto the footrest (or	, for multiple seat units, load	I the footrest of the same seating	
	position) at a distance Z from the	intersection of the seat and	back.	
	The chaise lounge chair shall not	tip over。		
	Values			
	degrees	mm		
	0	614		
	10	564		
	20	515		
	30	464		
	45			
		392		
	60	314		
	Sideways stability			NA
33.1.4	(16 in.) long, a vertical force of 25	0 N shall be applied at point int C. The forces shall be ap	If the arm rest is more than 406 mm: F (the central point of the armrest), plied simultaneously for a minimum of	
	Former detability	lip over.		NIA
	Forward stability	ha amplical to the local maint (C4 mans (2.5 in) from the feet and of the	NA
33.1.5	chaise lounge chair. Simultaneou	sly, and an outward horizont neight where the loading pad applied for a minimum of 10	64 mm (2.5 in.) from the foot end of the tal force of 20 N shall be applied to the l is in contact with the chaise lounge 0 s.	
	Backrest strength test – Static	up over.		NA
	If the chaise lounge chair has an	adjustable backrest angle, thion and then repeated with the	height less than 200 mm (7.9 in.). he test shall be performed with the he backrest in the first position from the	
33.2		I simultaneously to the two n	ne backstop position (For multiple nost adverse backrests) for one (1) of serviceability to the chair.	
	seating, the force shall be applied minute. Remove the load.	I simultaneously to the two months once shall cause no sudder	the backstop position (For multiple nost adverse backrests) for one (1) n and major change in the structural	
	Drop test – Dynamic This test applies to all chairs.	adjustable backrest angle, th	ne test shall be performed with the	NA
33.3	and released one time. Then remove the bag.	, ,	6 in.) above the uncompressed seat eating position on the same sample.	



Tests Conducted

Clause	Test item		
	There shall be no loss of serviceability.		
	Proof load:		
	Repeat setup as in the Normal (Functional) test and increase the weight of the test bag to an		
	Abnormal (Proof) load of 136 kg (300 lb.).		
	The test bag shall be raised 152 mm (6 in.) above the uncompressed seat and released one time.		
	Then remove the bag.		
	Repeat setup and proof procedures for each remaining seating position on the same sample.		
	There shall be no sudden and major change in the structural integrity of the chair. Loss of		
	serviceability is acceptable.		
	Seating Durability Tests – Cyclic	NA	
	This test applies to all chairs.		
	A 2-inch thick foam block shall be added to the top of the seat.		
	A test bag weighing 57 kg (125 lb.) shall be attached to a cycling device, permitting a free fall from		
	30 mm (1.2 in.) above the uncompressed seat.		
	The cycling device shall be set at a rate between 10 and 30 cycles per minute.		
24	For Multiple Seating, all seats not being cycled shall be loaded with 109 kg (240 lb.) of weight per		
34	seat.		
	For Multiple Seating, each seat on the same sample shall be subjected to the test.		
	The chair shall be tested to 10,000 cycles.		
	For Safety Level – Stage 1: there shall be no loss of serviceability to the chair after completion of the		
	impact test. For Safety Level – Stage 2 or Performance Level (Stage 3): the product must not show sudden and		
	major change in structural integrity after completion of the impact test. The product can show minor		
	damage or loss of serviceability.		
	Arm Strength Test – Vertical – Static	NA	
	This test applies to all chaise lounge chairs with arms.	147 (
	The test applies to all chalce loange shallo with arms.		
	Functional load:		
	A force of 750 N (169 lbf) shall be applied for one (1) minute then remove the force.		
	There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height		
25	adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading		
35	is considered a loss of serviceability.		
	Proof load:		
	A force of 1125 N (253 lbf) shall be applied for one (1) minute then remove the force.		
	There shall be no sudden and major change in the structural integrity of the chair. For a height		
	adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this		
	requirement. Loss of serviceability is acceptable.	A	
	Arm Strength Test – Horizontal – Static	NA	
	This test applies to all chaise lounge chairs with arms.		
	Eunational load:		
	Functional load: A force of 445 N (100 lbf) shall be applied for one (1) minute in the outward direction and remove the		
	force.		
36	A Normal (Functional) load applied once shall cause no loss of serviceability.		
	A Normal (1 unctional) load applied once shall cause no loss of serviceability.		
	Proof load:		
	A force of 667 N (150 lbf) shall be applied for one (1) minute in the outward direction and remove the		
	force.		
	An Abnormal (Proof) load applied once shall cause no sudden and major change in the structural		
	integrity of the unit. Loss of serviceability is acceptable.		
		NIA.	
37	Backrest Durability Test – Cyclic	NA	



Tests Conducted

Clause	Test item	Verdict
	If adjustable features are available, all adjustments shall be set at normal use conditions.	
	A weight of 109 kg (240 lb.) shall be secured in the center of the seat.	
	The loading device shall be adjusted to apply a 334 N (75 lbf) total force to the backrest for 25,000	
	cycles.	
	When testing multiple-seating units, the durability test shall be performed on each backrest positions	
	one by one on the same sample.	
	The loading device shall be set at a rate between 10 and 30 cycles per minute.	
	For Safety Level – Stage 1: there shall be no loss of serviceability.	
	For Safety Level – Stage 2 or Performance Level (Stage 3): the product must not show sudden and	
	major change in structural integrity. The product can show minor damage or loss of serviceability	
	Leg Strength Test – Front and Side Application	NA
38	This test applies to all chase lounges.	
	If adjustable features are available, all adjustments shall be set at normal use conditions.	
	Front load test	NA
	Functional load:	
	A force of 334 N (75 lbf) shall be applied once to each front leg individually for one (1) minute then	
	remove the force.	
	Normal (Functional) load(s) applied once in each direction shall cause no loss of serviceability.	
38.2	Thorntal (1 unctional) load(3) applied once in each direction shall cause no loss of serviceability.	
	Proof load:	
	A force of 503 N (113 lbf) shall be applied once to each front leg individually for one (1) minute then	
	remove the force.	
	Abnormal (Proof) load(s) applied once each direction shall cause no sudden and major change in	
	the structural integrity of the chair. Loss of serviceability is acceptable.	
	Side load test	NA
	Functional load:	
	A force of 334 N (75 lbf) shall be applied once to a front and rear leg individually for one (1) minute	
	then remove the force.	
38.3	Normal (Functional) load(s) applied once in each direction shall cause no loss of serviceability.	
30.3		
	Proof load:	
	A force of 503 N (113 lbf) shall be applied once to a front and rear leg individually for one (1) minute	
	and then remove the force.	
	Abnormal (Proof) load(s) applied once each direction shall cause no sudden and major change in	
	the structural integrity of the chair. Loss of serviceability is acceptable.	
	Lifting Test for Mobile Chaise Lounge Chair	NA
	This test applies when a chaise lounge is intended to be moved when a person is seating in it.	
	A load of 130 Kg shall be place on the chaise lounge at a point 175 mm (6.9 in.) forward of the	
39	seat/back junction on the longitudinal axis of the chaise lounge chair, or the point closest to this that	
	allows the seat force to be applied.	
	The test should be run for 800 cycles.	
	There shall cause no loss of serviceability.	
Markings		
	General	NC
	A furnishing shall be plainly and permanently marked with:	(See remark
	a) The company's name, trade name, trademark, or other descriptive marking by which the	1)
40	organization responsible for the product is identifiable;	
40	b) A distinctive catalog number or the equivalent;	
	c) The date or other dating period of manufacture not exceeding any three consecutive months.	
	Unless stated otherwise, all required markings shall be permanent die-stamped, ink-stamped, or	
	paint-stenciled lettering. Adhesive-backed label systems shall comply with the requirements for	
	outdoor-use labels in the Standard for Marking and Labeling Systems, UL 969. Minimum letter height	



Tests Conducted

Clause	Test item	Verdict
	shall be 2.4 mm (3/32 in.) as measured by characters such as b, 1, or H. A contrasting background	
	shall be provided for legibility.	
	When a furnishing is produced or assembled at more than one plant, each finished furnishing shall	
Instructio	have a permanent unique plant identifier marking.	
41	General	
41	A furnishing shall be provided with legible instructions pertaining to the risk of fire or injury to persons	NC
41.1	that is associated with the use of the furnishing, such as operation, user-maintenance, loading, and storage.	(See remark 1)
41.2	The instructions shall include the markings, or equivalent, specified in Section 40, excluding the date code (40.1(c)) and manufacturing plant identifier (40.3).	NC (See remark 1)
41.3	When parts of the furnishing are able to be adjusted or manipulated by the user, such as an adjustable chair or table, or a leveling mechanism, instructions shall be provided regarding their use.	NC (See remark 1)
41.4	An illustration is able to be used with a required instruction to clarify the intent, but shall not replace the written instruction.	NC (See remark 1)
41.5	Instructions pertaining to a risk of fire or injury to persons shall warn the user of foreseeable risks and state the precautions that are to be taken to reduce such risks.	NC (See remark 1)
41.6	Warnings pertaining to a risk of fire or injury to persons shall be in the first part of the instructions, before the operating instructions, separate in format, such as included in a border, from other instructions related to assembly, operation, maintenance, and storage.	NC (See remark 1)
41.7	The height of lettering in the text and illustrations of the instructions shall be as follows: a) Upper case letters – not less than 1.9 mm (5/64 in.); and b) Lower case letters – not less than 1.6 mm (1/16 in.).	NC (See remark 1)
41.8	The statement "IMPORTANT SAFETY INSTRUCTIONS" or the equivalent shall precede the list of instructions required by 41.9 and the statement "SAVE THESE INSTRUCTIONS" or the equivalent shall either precede or follow the list.	NC (See remark 1)
41.9	The instructions shall include the items in the following list, as applicable, and any other instructions that the company determines are required for the furnishing. The statement "Read all instructions before using" shall precede the list of items. The items are able to be numbered. IMPORTANT SAFETY INSTRUCTIONS When using furnishing, basic precautions should always be followed, including the following: Read all instructions before using (this furnishing). To reduce the risk of injury to persons: Close supervision is necessary when this furnishing is used by, or near children, or disabled persons, if applicable. Use this furnishing only for its intended use as described in these instructions. Do not use attachments not recommended by the manufacturer. If a chaise lounge chair with wheels is not intended to be portable while a user is seated in it, a statement not to move the chaise lounge chair when occupied shall be included. Tables which have a hole for an umbrella, but which are not intended to support an umbrella alone, a statement indicating that an umbrella shall always be used with a suitable base. A Test method and requirement for Swing or Hanging chairs	NC (See remark 1)
Appendix		NΙΛ
A1	Front and Rear Stability Test for Hanging Chairs This test applies to all hanging chairs. Load the chair with the 11 disks (18.3.1) or with 110 kg mass as alternative to rest against the chair back. For multiple seating, only load one of the most adverse position. Pull the seat back in the direction causing the least stability until the chair touches the support bar, or any restriction is reached, or up to 25°. Release the seat and allow it to swing.	NA
	The chair should not overturn.	



Tests Conducted

	This test applies to all hanging chairs. For Multiple Seating, all seats not being cycled shall be loaded with 109 kg (240 lb.) of weight per seat.	
	seat.	
	For Multiple Seating, each seat on the same sample shall be subjected to the test.	
	Functional load:	
	The test forces of 1500 N (337 lbf) shall be applied sufficiently slowly for 1time and maintain 60 s.	
	There shall be no loss of serviceability.	
	Proof load:	
	The test forces of 1870 N (420 lbf) shall be applied sufficiently slowly for 1time and maintain 60 s.	
	There shall be no sudden and major change in the structural integrity of the chair. Loss of	
	serviceability is acceptable.	
	Durability Load Test of Seat (Alternative Method to: Seating Durability Tests – Cyclic)	NA
	This test applies to all hanging chairs.	
	For Multiple Seating, all seats not being cycled shall be loaded with 109 kg (240 lb.) of weight per	
	Seat.	
	For Multiple Seating, each seat on the same sample shall be subjected to the test. The test forces of 1100 N (247 lbf) by Any pad covers 16 inch diameter area shall be applied	
A3	sufficiently slowly for 10,000 cycles.	
	For Safety Level – Stage 1: there shall be no loss of serviceability to the chair after completion of the	
	load test.	
	For Safety Level – Stage 2 or Performance Level (Stage 3): the product must not show sudden and	
	major change in structural integrity after completion of load test. The product can show minor	
	damage or loss of serviceability.	
	Structural Strength Test of the Swing (Alternative Method to: Leg Strength Test – Front and	NA
	Side Application)	
	This test applies to all hanging chairs.	
	If adjustable features are available, all adjustments shall be set at normal use conditions. Place a weight of 109 kg (240 lb.) in the center of each seating position.	
	Flace a weight of 109 kg (240 lb.) in the center of each seating position.	
	Functional load:	
	A force of 334 N (75 lbf) shall be applied once push and pull individually for one (1) minute then	
A4	remove the force.	
	Normal (functional) load(s) applied once in each direction shall cause no loss of serviceability.	
	Dreef lead:	
	Proof load: A force of 503 N (113 lbf) shall be applied once push and pull individually for one (1) minute then	
	remove the force.	
	Abnormal (proof) load(s) applied once each direction shall cause no sudden and major change in the	
	structural integrity of the chair. Loss of serviceability is acceptable.	
	Oscillation Fatigue Test (Additional Test for Seating with Oscillation Motion)	NA
	This test applies to all seating with oscillation motion.	
	If adjustable features are available, all adjustments shall be set at normal use conditions.	
	Place a weight of 109 kg (240 lb.) in the center of each seating position.	
	The cycling device shall be adjusted to apply a "push-pull" action, or alternately may be applied by	
A5	alternating pull (or push) force application on alternating sides of the unit. One cycle shall consist of	
	one outward oscillation and one inward oscillation movement up to 25° or 200 mm from middle	
	position in each oscillation direction whichever is lower, or to the swinging stop (whichever is the	
	less) in both directions. The swing shall be tested at an appropriate rate between 10 and 30 cycles per minute.	
	The device shall be cycled for 12,500 cycles.	
	There shall be no loss of serviceability.	

Abbreviation: P=Pass; F=Fail; NA= Not Applicable; NC= Not Conducted





Tests Conducted



Submitted Sample

Date Sample Received: Jul 12, 2022

Testing Period: Jul 12, 2022 To Jul 22, 2022

End of report

This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.

This report shall not be reproduced except in full, without written approval of the laboratory.

