



Entrapment Standard Development – LZB Proposal

8/7/2024

L A Z B O Y
I N C O R P O R A T E D

Task Group Info / Background

Entrapment research, proposed requirements, and test methods from LZB are based off the specification scope listed below

1. Title: **Standard Safety Specification for Residential Seating Designed to Recline with a Foot Support Lift Mechanism**

Children main target group, not pets or elderly

2. Scope:

a. **This safety specification is intended to minimize the injuries and deaths to children resulting from entrapment in the gap created by the operation of the foot support lift mechanism of residential seating typically designed to recline.**

b. **The foot support lift mechanism for seating covered by this standard can be either motorized or manually operated.**

c. **This safety specification does not cover the following, if no footrest lift mechanism is included; lift chairs, nursery gliders or rockers, massage chairs, any type of bed, , , outdoor furniture, chairs that lean back independently with or without a footstool or leg rest, chairs with adjustable height bases, commercial seating, i.e., movie theaters, airplanes, or motor vehicles, or seating intended for hospitality and healthcare.**

Task group scope has up to 72 months old

d. **This safety specification is intended to address hazards to children up to 72 months.**

i. **See Note 1.**

ii. **Note 1 – ‘the affected age group is defined by the incident data provided to the ASTM F15.42 Furniture Safety Subcommittee by CPSC for the period 01/01/2011 to 12/31/2021 including 8 fatalities, which involve children between 8 to 60 months.’**

Note 1 says data provided involves children up to 60 months, but actual data is 54 months

Defining Legrest Entrapment Focus Areas

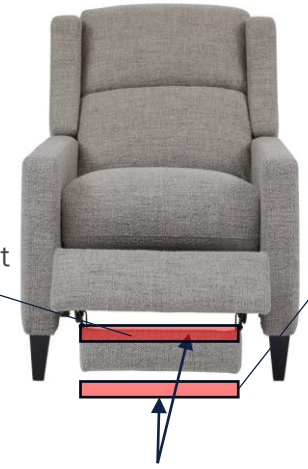
Higher risk units – includes standard unit risks plus :



Standard w/ chaise



No chaise pad



*Additional between seat and legrest

*Additional underneath legrest

Flip out legrest extensions



Underneath Legrest



Between Legrest and Chair Body/Arm



1) Between Seat and Legrest

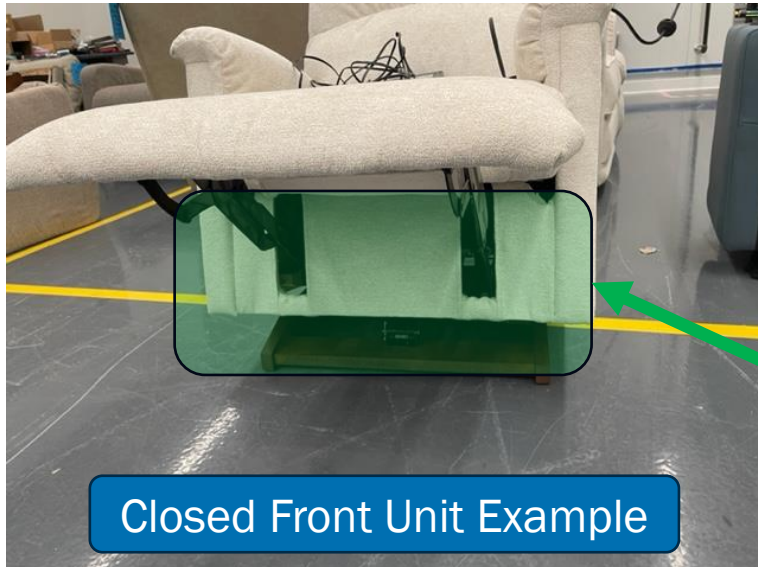


*Entrapment prevention on extension of the legrest is not normally considered and is excluded from this proposal. Future task group discussion required.

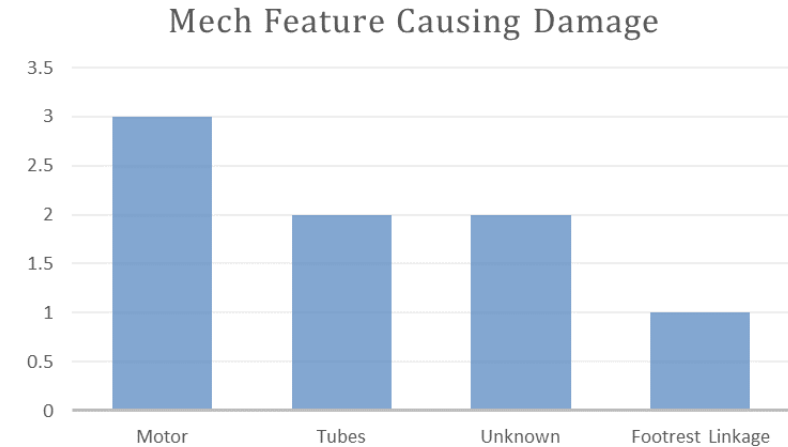
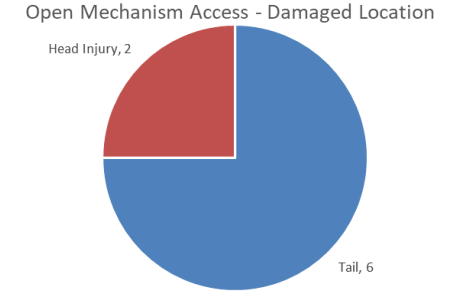
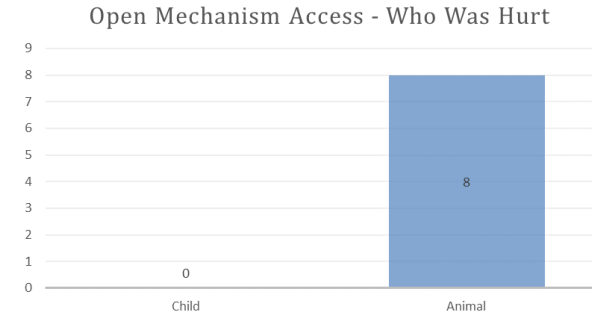
Not Entrapment - Access on Open Front Units



No prevention for pet/child to gain access to mechanism when legrest is open



Solid prevention for pet/child to prevent access to mechanism when legrest is open

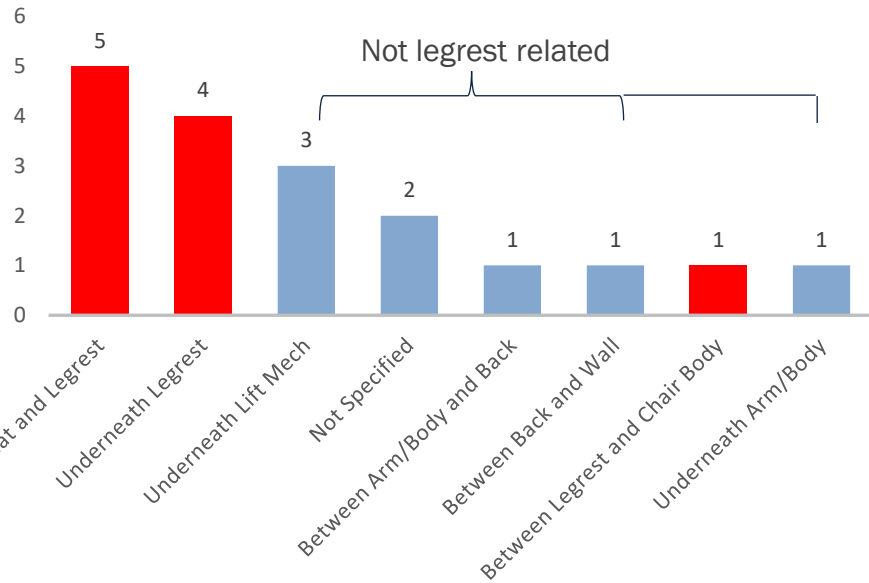


Data suggests this is not related to legrest entrapments and is not included in this proposal. It should be split off as a separate standard or addition if requested.

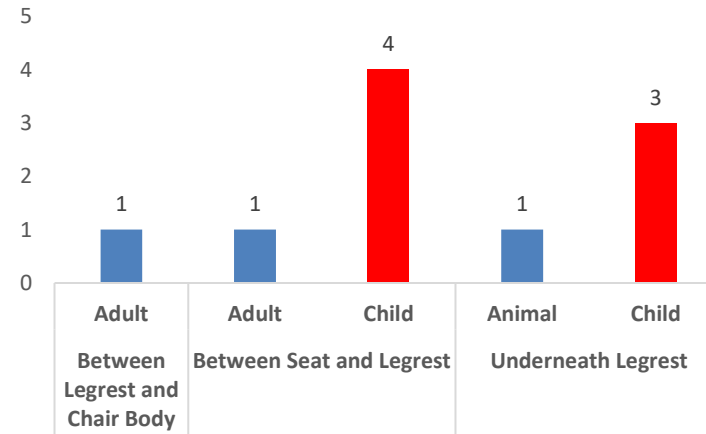
*Finger pinch and shear points are also excluded from this proposal

CPSC Entrapment Data

Where Entrapment Occurred - All Incidents



Who Was Entrapped in Legrest Locations



Age (yrs)	Effect
0.7	Death
0.9	Death
1.7	Death
1.8	Death
2.0	Near Miss
3.5	Near Miss
4.5	Non-Permanent Damage

10 out of 18 entrapment claims are related to the legrest

Between the seat and legrest, and underneath the legrest are the top 2 most likely areas for entrapment

For legrest claims, 7 out of 10 claims involve a child

Main concern areas for children are between seat and legrest and underneath legrest – this new standard should focus on these areas

Children affected are 4.5 years or younger. All four children under 2 years old have died

Target Size (8 months – 4.5 years)



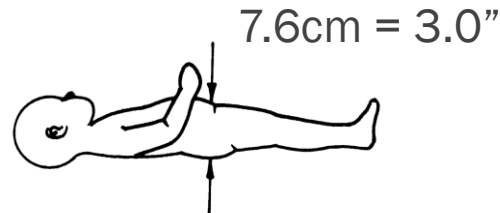
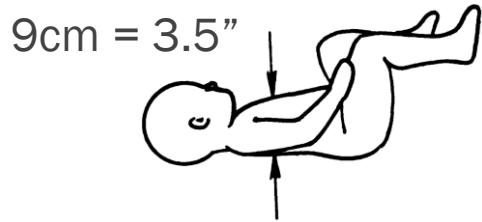
To prevent children from entering these openings...

CHEST DEPTH, IN CMS. - COMBINED SEXES

AGE(MO/YRS)	N	MEAN	S.D.	5%	50%	95%
0= 3	134	9.1	0.9	7.5	9.2	10.7
4= 6	95	9.9	0.9	8.1	9.9	11.1
7= 9	46	10.4	0.8	9.0	10.4	11.6

HIP DEPTH, IN CMS. - COMBINED SEXES

AGE(MO/YRS)	N	MEAN	S.D.	5%	50%	95%
0= 2	113	7.3	1.1	5.7	7.3	9.2
3= 4	54	8.7	1.1	6.9	8.5	10.7
5= 6	55	9.2	1.2	7.0	9.2	11.4
7= 8	22	9.3	1.2	7.6	9.2	11.0



We look at the smallest 5% size range for an 8-month-old in these locations to represent a feet first entry into the opening

Data shows a 3" size is worse case
This is to be tested on all units (manual and power)



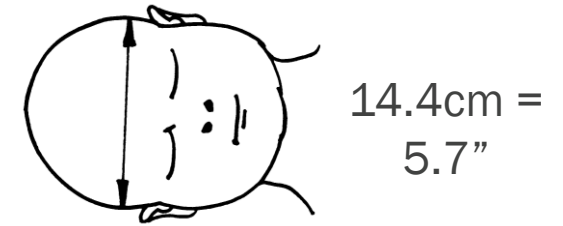
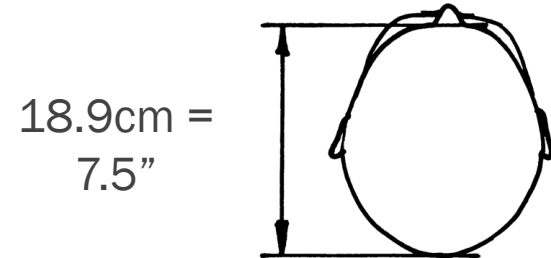
To prevent children from being crushed in these areas...

HEAD LENGTH, IN CMS. - COMBINED SEXES

AGE(MO/YRS)	N	MEAN	S.D.	5%	50%	95%
0= 3	139	13.3	0.9	11.7	13.1	14.9
4= 6	97	14.9	0.6	13.8	14.8	16.0
7= 9	54	15.9	0.6	14.8	15.7	16.9
10= 12 1	39	16.1	0.5	14.9	16.1	16.8
13= 18	52	16.7	0.6	15.3	16.7	17.6
19= 24 2	70	17.2	0.7	16.0	17.2	18.4
25= 30	65	17.5	0.6	16.6	17.4	18.6
31= 36 3	104	17.6	0.6	16.5	17.5	18.5
37= 42	272	17.8	0.6	16.6	17.7	18.9
43= 48 4	293	17.9	0.6	16.7	17.8	18.9

HEAD BREADTH, IN CMS. - COMBINED SEXES

AGE(MO/YRS)	N	MEAN	S.D.	5%	50%	95%
0= 3	139	10.3	0.6	9.3	10.2	11.5
4= 6	99	11.5	0.6	10.4	11.5	12.6
7= 9	54	12.2	0.6	11.0	12.2	13.2
10= 12 1	40	12.4	0.5	11.5	12.4	13.1
13= 18	53	12.7	0.5	11.8	12.6	13.5
19= 24 2	71	13.1	0.4	12.4	13.1	14.0
25= 30	65	13.4	0.5	12.4	13.3	14.3
31= 36 3	103	13.4	0.4	12.6	13.3	14.1
37= 42	271	13.5	0.5	12.6	13.5	14.2
43= 48 4	293	13.6	0.4	12.6	13.6	14.2
49= 54	358	13.7	0.5	12.9	13.6	14.4



We look at the largest 95% size range for a 4.5-year-old in these locations to represent the largest entrapment size

Data shows a 7.5" size is worse case
This is to be tested on only power units

Between Seat and Legrest Complaints



“...went to get out and slipped down in that space and the foot rest pushed in...”

“...was getting out of my reclining chair and stepped onto the foot rest and his leg went right through the slats...”

“...put both legs through the gap in the footrest...”

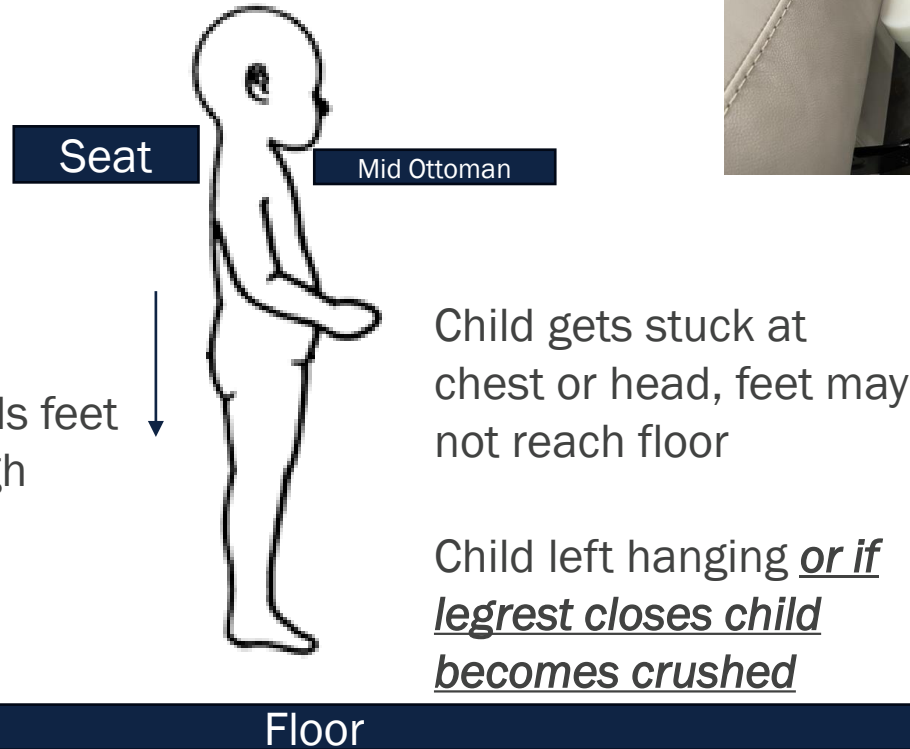
“...saw him between the chair and the recliner footrest......cause of death was determined to be asphyxiation...”

“...Head And Neck Wedged In Leg Rest Of Recliner...”

What Prevents This Failure Mode?

What does this failure mode look like?

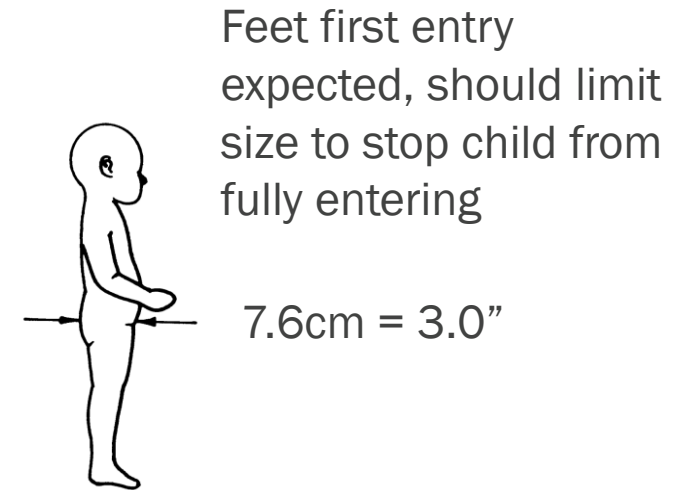
Note : Can happen on manual and power units



What prevents this from happening?

If we allow full access to this area like most standards (if torso probe passes through, head probe must pass through) we run into issues as this is not a static system. As the legrest closes eventually the head, and later the torso, will not pass through

Preventing hips from passing through will prevent entrapment to critical body parts



We should aim to prevent a 3" entrapment from gaining access through the non-chaise opening.

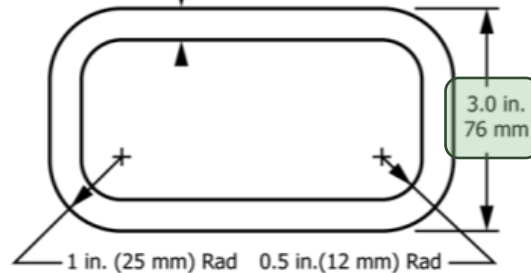
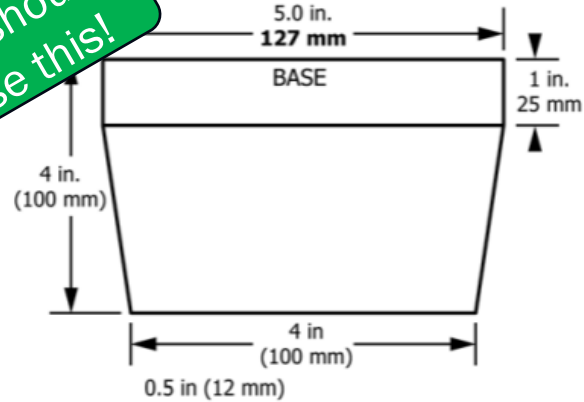
Between Seat and Legrest Existing Standards



1) Between Seat and Legrest

To prevent the above entrapments...

We should use this!



Material: Any rigid Material

FIG. 6 Torso Probe

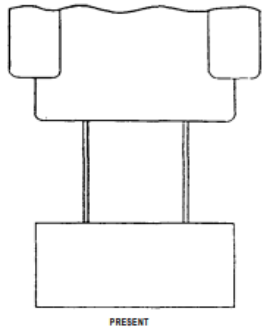
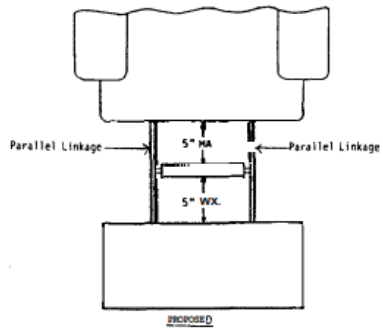
F2388 Torso Probe is sized at 3.0" and is used to check entrapment on changing tables, which matches exactly to the 3.0" target size from the previous slide



Replicates a child going feet first through an opening, just like F1487 for playground entrapment



The scenario the torso probe checks for is the exact scenario we see the highest number of entrapment related issues



The existing voluntary standard from 1987 allows for too large of an opening as shown by the CPSRMS data and child size estimates.

Build Off ASTM F1487 For New Standard

#. Performance Requirements

#.1 *Legrest Entrapment*—Reclining furniture with extendable legrest elements shall be designed and constructed or assembled so that any opening between the seat/body of the recliner and the extendable elements shall meet the following performance requirements to reduce the risk of accidental leg, head, or chest entrapment by either a head-first or feet-first entry into the opening.

#.1.1 *Non-Chaise Openings*—A non-chaise opening such as may be found in but not limited to the **space between a mid ottoman and seat, mid ottoman and legrest, and legrest and footrest** (see Fig. #.#.#) is considered accessible when a **torso test probe** (see Fig. #.#) can be inserted into the opening to a depth of 4.0 in. (102 mm) or more.

#.1.1.1 *Test Procedure for Non-Chaise Openings*—Place the torso probe (see Fig. #.#) in the opening, tapered end first, with the plane of the base of the probe parallel to the plane of the opening; rotate the probe to its most adverse orientation (that is, major axis of the base of the probe parallel to the major axis of opening). **Apply a force of 50 lbf (222 N) to the probe to attempt to pass it through the opening.** A chaise opening passes the test if the opening does not allow the torso probe to be inserted so deep that the opening admits the base of the probe when it is rotated to any orientation about its own axis. **A non-chaise opening fails the test if the opening allows full passage of the torso probe.**

ASTM F1487 Wording For Reference

6. Performance Requirements

6.1 *Head and Neck Entrapment*—Public playground equipment shall be designed and constructed or assembled so that any accessible opening shall meet the following performance requirements to reduce the risk of accidental head or neck entrapment by either a head-first or feet-first entry into the opening. Openings between the protective surfacing and the bottom edge of the equipment (that is, rails, platforms, steps, and so forth) are exempt from this requirement as indicated by Fig. A1.1.

6.1.1 *Accessible Openings*—A completely bounded rigid opening is accessible when a torso test probe (see Fig. A1.2) can be inserted into the opening to a depth of 4.0 in. (102 mm) or more.

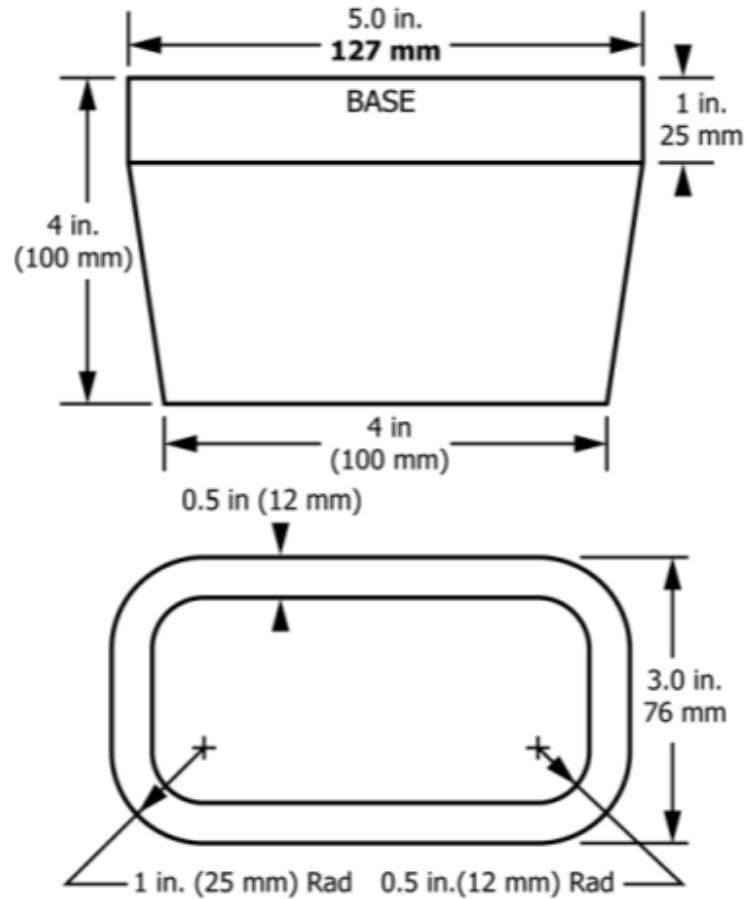
6.1.1.1 *Test Procedure for Completely Bounded Rigid Openings*—Place the torso probe (see Fig. A1.2) in the opening with the plane of the base of the probe parallel to the plane of the opening; rotate the probe to its most adverse orientation (that is, major axis of the base of the probe parallel to the major axis of opening). If the torso probe can be inserted into the opening to a depth of 4.0 in. (102 mm) or more, place the head probe (see Fig. A1.3) in the opening with the plane of the base of the probe parallel to the plane of the opening. An opening passes this test if (1) the opening does not admit the torso probe when it is rotated to any orientation about its own axis, or (2) the opening admits the torso probe and also admits the head probe. An opening fails the test if the opening admits the torso probe but does not admit the head probe.

6.1.2 *Nonrigid Completely Bounded Openings*—A nonrigid opening such as may be found in but not limited to flexible nets, tarps, and plastic enclosures is considered accessible if a torso probe will penetrate the opening to a depth of 4.0 in. (102 mm) or more when tested in accordance with the test procedure outlined in 6.1.2.1 (see Figs. A1.2 and A1.3 for probe dimensions).

6.1.2.1 *Test Procedure for Completely Bounded Nonrigid Openings*—Place the torso probe in the opening, tapered-end first, with the plane of its base parallel to the plane of the opening; rotate the probe to its most adverse orientation (that is, the major axis of the base of the probe parallel to the major axis of the opening); apply a force of 50 lbf (222 N) to the probe to attempt to pass it through the opening. If the base of the probe passes through the opening, place the large head probe in the opening, tapered end first, with the plane of its base parallel to the plane of the opening. Apply a force of 50

lbf (222 N) to the probe to attempt to pass it through the opening. A nonrigid opening passes the test if: (1) the opening does not allow the torso probe to be inserted so deep that the opening admits the base of the probe when it is rotated to any orientation about its own axis, or (2) the opening allows full passage of the torso probe and also allows the large head probe to pass completely through. A nonrigid opening fails the test if the opening allows full passage of the torso probe but does not admit the large head probe.

Associated Figures – Between Seat and Legrest

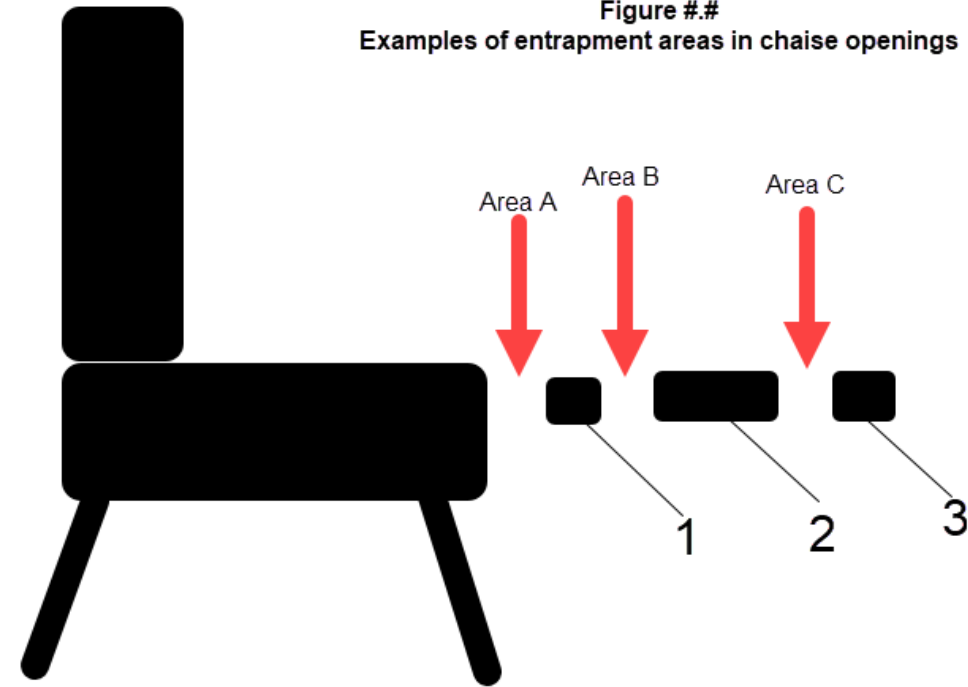


Material: Any rigid Material

FIG. 6 Torso Probe

ASTM F2388

Figure #.#
Examples of entrapment areas in chaise openings



- 1 : commonly referred to as but not limited to a mid ottoman bar
- 2 : commonly referred to as but not limited to a legrest deck
- 3 : commonly referred to as but not limited to a footrest deck

Area A - is considered to be an entrapment area because a head, leg, torso and other appendages can be pinched between the mid ottoman bar (1) and seat structure during motion of the moving members.

Area B - is considered to be an entrapment area because a head, leg, torso and other appendages can be pinched between the legrest deck (2) and mid ottoman bar (1) during motion of the moving members.

Area C - is considered to be an entrapment area because a head, leg, torso and other appendages can be pinched between the legrest deck (2) and footrest deck (3) during motion of the moving members.

Legrest to Floor Complaints



“...found unresponsive underneath a **power** reclining sectional...footrest was unknowingly closed on the decedent...”

“...The **motor** that closes the leg rest has no safety stop and could crush or kill a child or adult who is underneath the leg rest as it is closed...”

“...girl was found face-down wedged under the reclined couch, unresponsive, and not breathing. The official cause of death was determined to be mechanical asphyxia...”

“...decedent was found wedged between the floor and an **electric** recliner’s footrest that had been positioned in the lowered position...”

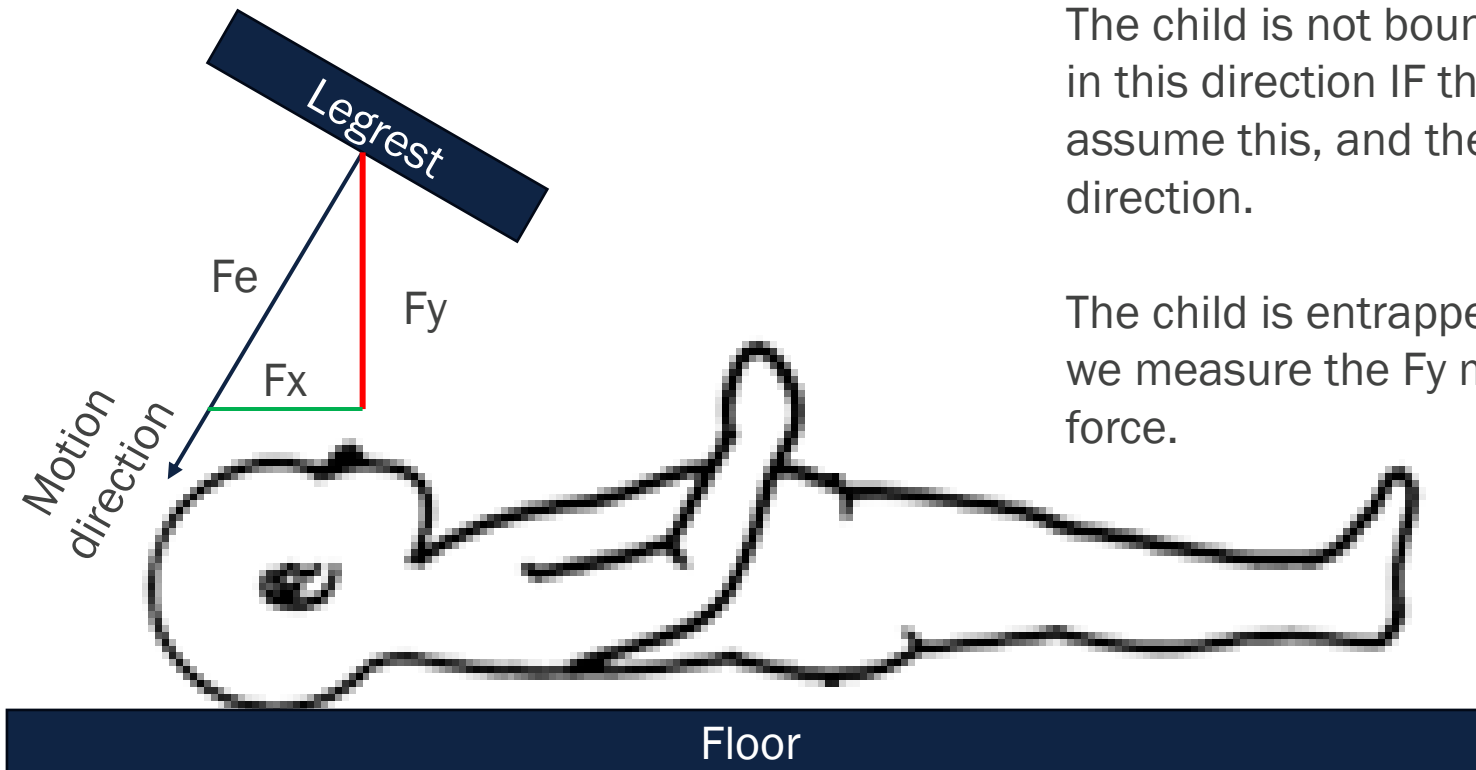
This issue is related to power recliners only. Manual recliners are excluded.

Force to Floor Vector

A typical legrest motion will travel towards the entrapped child at an angle. It will apply a force in the direction of its travel.

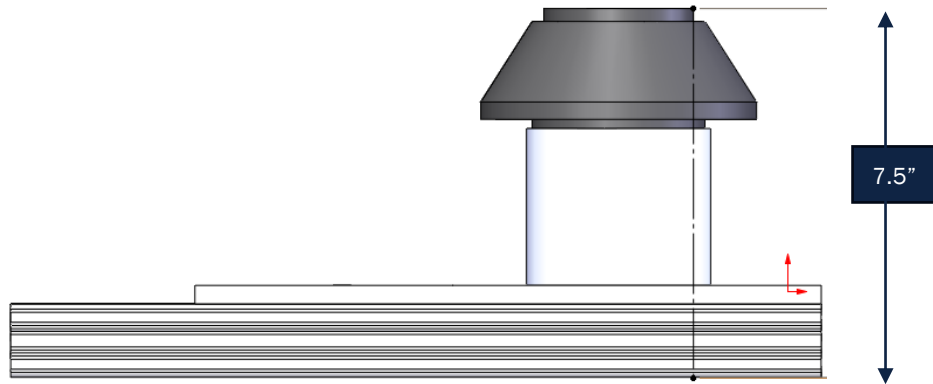
The child is not bound in the x-direction. There is no entrapment in this direction IF they are not bound by the chair body. We assume this, and therefore we do not measure the force in that direction.

The child is entrapped to the floor in the y-direction. Therefore, we measure the F_y magnitude as the floor provides the reaction force.

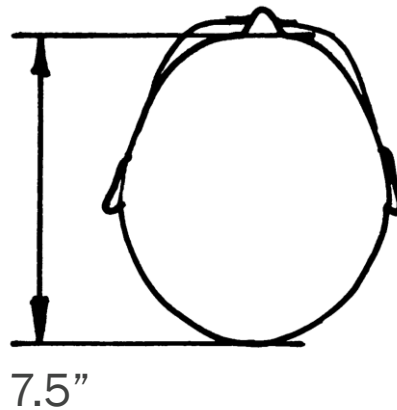


*When the child is up against the chair body/arm, that entrapment to the chair body/arm is considered as a different failure mode and addressed later in this presentation

Legrest to Floor Force Measurement



To measure the force, you would position the center of the force gage directly under the travel of the legrest. You then entrap the force gage and measure the peak force value at the worse case area of the entrapment.



This would measure a static/constant force for mechanical safety systems.



	Mech Style 1	Mech Style 2	Mech Style 3
STD	0.11005	0.107497	0.164655

Three different units with different recliner mechanisms were measured 10 times using this simple fixture. STD showed very repeatable measurements.

Build Off UL962 For New Standard Static Force

1.2 *Floor Entrapment*—A floor entrapment is produced any time the legrest member, or its associated mechanism and structure, travels from distance of 7.5” or greater, measured vertically from the floor to the lowest point of the moving member (see Fig #.#), and decreases the distance between itself and the floor such that its vertical distance to the floor is less than 7.5”. Any unit that does not produce any motion on its own and requires an occupant to apply a force to the legrest or legrest members to move the legrest through the entrapment area is not required to meet the force requirement as described in #.1.2.1.

#.1.2.1 *Test Procedure for Floor Entrapment*—The unit shall be in an unloaded state without any extra weight added to the structure. The unit is positioned in the upright most position possible, and the legrest is extended fully. The unit is tested in all configurations that it is offered in (sofa, chair, mod, etc). The moving member identified in 1.2 is operated in the retraction/closing direction and at the maximum velocity allowed by the design of the furnishing. A peak vertical force value is measured between the moving member and a spacer set at 7.5” in height, and is determined after the unit has completed its motion for 3 seconds. The measurement is repeated three times and the largest value of the three trials is recorded. A floor entrapment passes the test if the recorded value is less than 40 lbs (177.9 N).

UL962 Wording For Reference

61 Entrapment Tests

61.1 Force measurement

61.1.1 A motorized or otherwise powered moving part as required by 11.2.3 and 11.3.4 – 11.3.7 shall be subjected to the force measurement tests specified in 61.1.2 – 61.1.5. The force shall not exceed 40 pounds (177.9 N). There shall be no collapse or permanent damage to the furnishing or mounting means (if provided) resulting in a risk of injury during or following the test.

61.1.2 The furnishing shall be loaded in accordance with the functional load as specified in Section 46, Structural Test Requirements for Furnishings, as applicable to the furnishing under investigation or unloaded if determined to be more severe. Consideration shall be given to the load when the furnishing is in motion. For instance, a footrest may not have a pinch point until it is almost closed at which point, the weight may no longer be on the furnishing.

61.1.3 A furnishing that has accessories that can be removed or added shall be subjected to the force measurement in any configuration determined to be most severe. Normally the largest size accessory is used for the investigation but consideration may be given to smaller sizes when a more severe result may occur.

61.1.4 The motorized or powered moving part of the furnishing shall be operated at the maximum velocity allowed by the design of the furnishing. The force measurement shall be repeated three times and the maximum force measured shall not exceed 40 pounds (177.9 N).

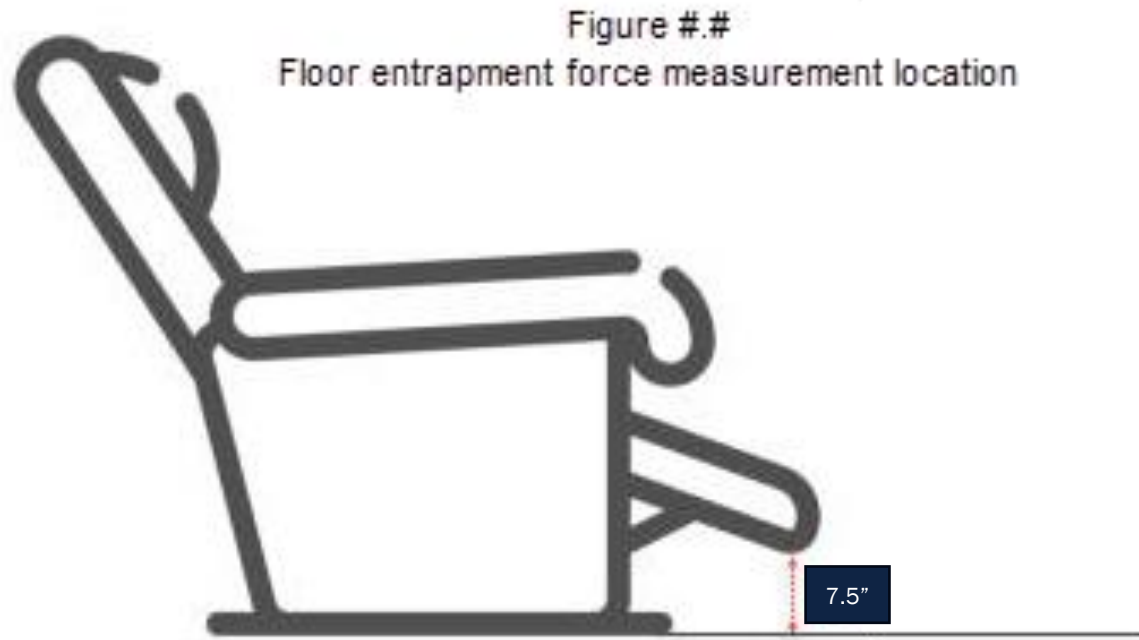
61.1.5 The force measurements shall be conducted in any location as required by 11.2.3 and 11.3.4 – 11.3.7. Figure 61.1 – Figure 61.4 are provided as typical examples of entrapment locations and shall be considered when conducting the force measurements.

61.1.6 As an alternative to the 40 lbs (178 N), the force measurements shall comply with the following values:

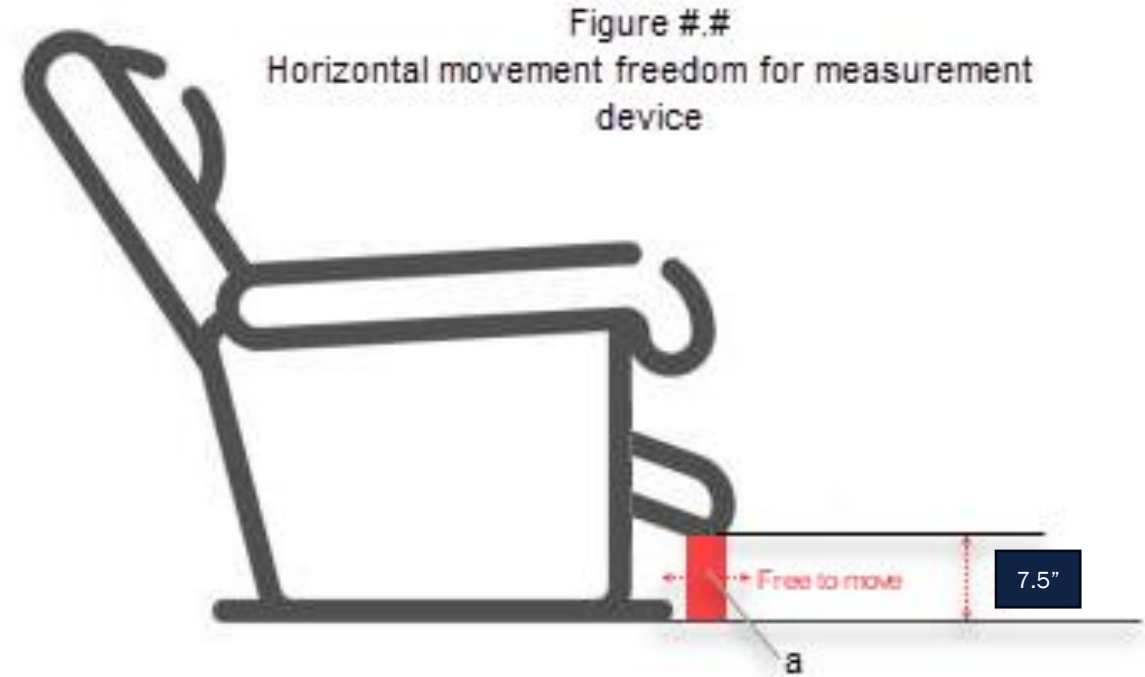
- First 0.75 seconds shall not exceed a dynamic force of 90.0 lbs (400 N);
- 0.75 to 5 seconds shall not exceed a static force of 34.0 lbs (150 N); and
- After 5 seconds shall not exceed a static force of 5.6 lbs (25 N).

The equipment used shall have a spring ratio of 2,857 lbs/in (500 N/mm) and a shall have a rising/falling time of 5 ms.

Associated Figures and Examples – Floor Entrapment



A floor entrapment is created when the lowest edge of a moving legrest member decreases in vertical distance to less than 7.5". The force to the floor is measured at this location.



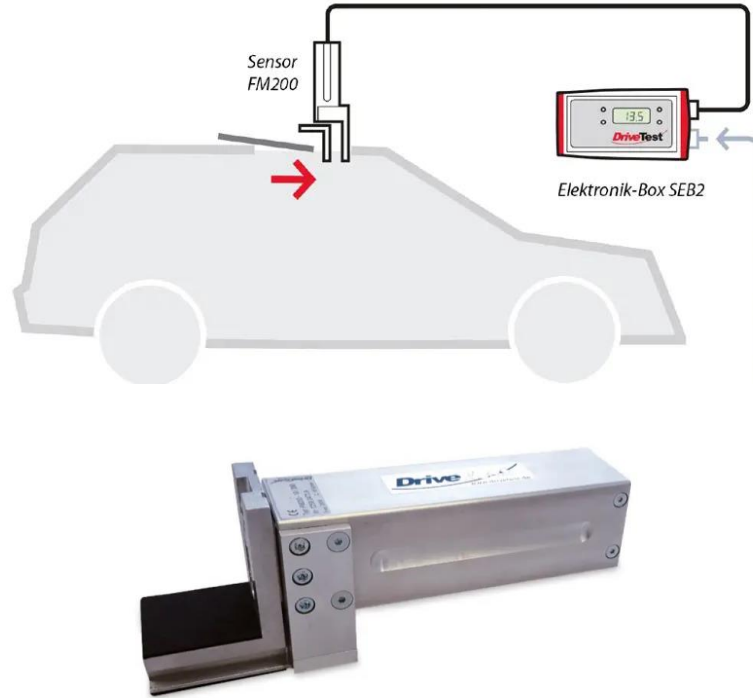
a is the force measurement device set to measure a 7.5" from the floor. The device can transverse horizontally during the measurement to ensure proper contact with the moving legrest members, but must always be kept at 7.5" vertical height throughout the movement

Dynamic Force Option in Other Standards



EN12453

Tests garage door entrapment force



FMVSS 118

Tests power operated window, partition, and roof panel entrapment forces



EN16005

Tests pedestrian operated powered door entrapment forces

A dynamic force measurement option is established in various other entrapment standards including UL962. Although it requires a more complicated logic/controller to capture, it should remain in the new standard as an option.

Dynamic Force Proposal For This Standard

UL962

61.1.5 The force measurements shall be conducted in any location as required by 11.2.3 and 11.3.4 – 11.3.7. Figure 61.1 – Figure 61.4 are provided as typical examples of entrapment locations and shall be considered when conducting the force measurements.

61.1.6 As an alternative to the 40 lbs (178 N), the force measurements shall comply with the following values:

- a) First 0.75 seconds shall not exceed a dynamic force of 90.0 lbs (400 N);
- b) 0.75 to 5 seconds shall not exceed a static force of 34.0 lbs (150 N); and
- c) After 5 seconds shall not exceed a static force of 5.6 lbs (25 N).

The equipment used shall have a spring ratio of 2,857 lbs/in (500 N/mm) and shall have a rising/falling time of 5 ms.

Both UL962 and EN12453 have identical callouts for the dynamic force values allowed during an entrapment. For computerized entrapment systems, LZB does not see a reason to challenge this original work.

Proposal : Use UL962 61.1.6 wording and add Figure A.1 Force versus time from EN12453 for clarity. This would require a different measurement device than the ‘simple’ static force fixture shown before.

EN12453

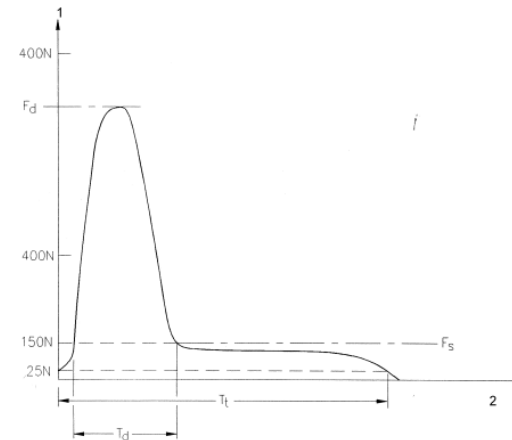
Industrial, commercial and garage doors and gates - Safety in use of power operated doors - Requirements

5.1.1.5 Limitation of forces

Forces shall be considered to be safe if the values specified in Annex A are not exceeded, when measured according to prEN 12445:2000 with an instrument incorporating a spring through a plate of 80 mm diameter. The spring shall have a spring ratio of 500 N/mm and the rising/falling time of the amplifier shall not be > 5 ms.

A.1 Specifications

The admissible values in reference to the requirements specified in 5.1.1.5 are according to the following specifications:



Key
1 Force
2 Time

Figure A.1 — Force versus time

- F_d** Maximum force measured with the instrument as specified in 5.1.1.5, during the dynamic period T_d
- F_s** Maximum force measured with the instrument as specified in 5.1.1.5, outside the dynamic period T_d
- T_d** Period of time during which the measured force exceeds 150 N
- T_t** Period of time during which the measured force exceeds 25 N

NOTE The forces shown relate to measurements made in accordance with the testing method specified in prEN 12445:2000.

A.2 Admissible dynamic forces

A.2.1 Admissible dynamic force

The maximum dynamic force F_d, is defined in A1.

The values of dynamic force, when force measurements are made at any point using the test method specified in prEN 12445:2000 shall not exceed the values specified in Table A.2.1.

Table A.2.1 — Admissible dynamic forces

Admissible dynamic forces	between closing edges and counterclosing edges		between flat areas other than closing edges and counterclosing edges, > 0,1 m ² with no side < 100 mm
	in gaps from 50 mm to 500 mm	in gaps > 500 mm	
horizontally moving door	400 N	1400 N	1400 N
door rotating around an axis perpendicular to the floor	400 N	1400 N	1400 N
vertically moving door	400 N	400 N	1400 N
door rotating around an axis parallel to the floor - barriers	400 N	400 N	1400 N

The values specified in Table A.2.1 are maximum values allowed within a period of time of maximum 0,75 s (T_d ≤ 0,75 s).

Entrapped to Arm/Body

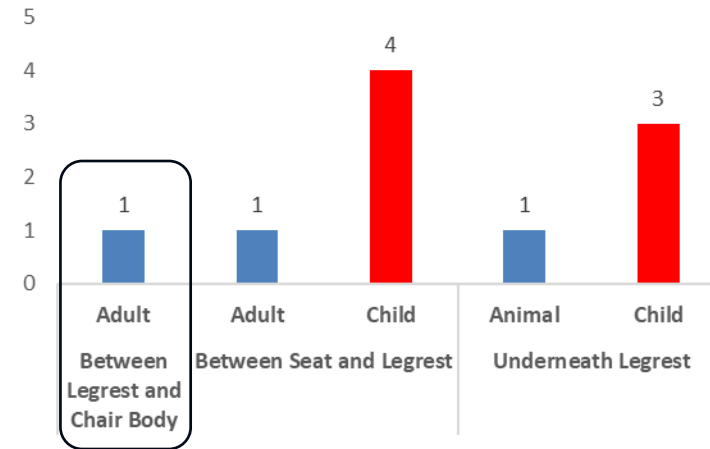
“...The buttons are...located on the seating surface...placed her legs in either side of the extended foot rest and accidentally pushed the button to make the recliner to an upright position. Her legs became trapped between the footrest and the body of the chair...”



The same methodology as the force to floor can be used to measure the force between the legrest and chair body/arm if rotated to the horizontal plane.

Static or dynamic forces would be measured.

Who Was Entrapped in Legrest Locations

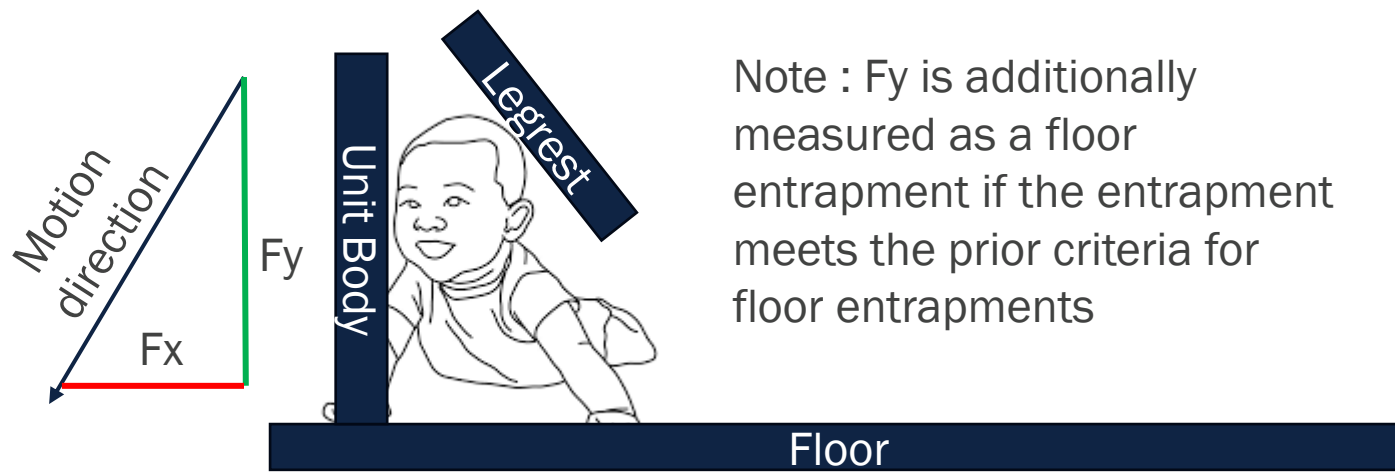


The potential for a child to be entrapped to the chair arm/body is very real, and the same methodology should be used from the floor entrapment, but in the x-direction

Build Off UL962 For New Standard Static Force

1.3 *Unit Body Entrapment*—A unit body entrapment is produced any time the legrest member, or its associated mechanism and structure, travels from distance of 7.5” or greater, measured horizontally from the body of the unit, to the closest point of the moving member (see Fig #.#), and decreases the distance between itself and the body of the unit such that its horizontal distance to the body of the unit is less than 7.5”. Any unit that does not produce any motion on its own and requires an occupant to apply a force to the legrest or legrest members to move the legrest through the entrapment area is not required to meet the force requirement as described in #.1.3.1.

#.1.3.1 *Test Procedure for Unit Body Entrapment*—The unit shall be in an unloaded state without any extra weight added to the structure. The unit is positioned in the upright most position possible, and the legrest is extended fully. The unit is tested in all configurations that it is offered in (sofa, chair, mod, etc). The moving member identified in 1.3 is operated in the retraction/closing direction and at the maximum velocity allowed by the design of the furnishing. A peak horizontal force value is measured between the moving member and a spacer set at 7.5” in length, and is determined after the unit has completed its motion for 3 seconds. The measurement is repeated three times and the largest value of the three trials is recorded. A unit body entrapment passes the test if the recorded value is less than 40 lbs (177.9 N).

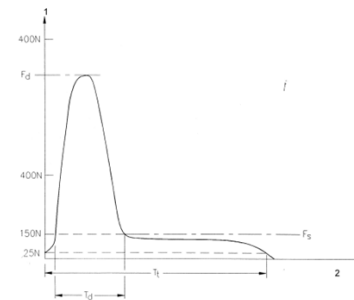


Note : F_y is additionally measured as a floor entrapment if the entrapment meets the prior criteria for floor entrapments

F_x is measured as the child is bound by the unit body.

A.1 Specifications

The admissible values in reference to the requirements specified in 5.1.1.5 are according to the following specifications:



Key
1 Force
2 Time

Figure A.1 — Force versus time

F_d Maximum force measured with the instrument as specified in 5.1.1.5, during the dynamic period T_d

F_s Maximum force measured with the instrument as specified in 5.1.1.5, outside the dynamic period T_d

T_d Period of time during which the measured force exceeds 150 N

T_t Period of time during which the measured force exceeds 25 N

NOTE The forces shown relate to measurements made in accordance with the testing method specified in prEN 12445:2000.

← Allow for the same dynamic force as the floor entrapment

Appendix

L A Z B O Y
I N C O R P O R A T E D



Between Seat and Legrest – CPSC Data

The below incidents relate to the entrapment area presented as #1) Between seat and legrest (mid-ottoman area)

211	221102HCC3124 2106275244	10/2021	20 MOM	CA	ON OCTOBER [REDACTED], 2021, A ONE-YEAR-OLD MALE (20MOM) WAS PLAYING IN THE DAY CARE CENTER WHILE THE DAY CARE PROVIDER WAS FEEDING ANOTHER CHILD. WHEN THE DAY CARE PROVIDER WENT TO LOOK FOR THE VICTIM, SHE SAW HIM BETWEEN THE CHAIR AND THE RECLINER FOOTREST. THE VICTIM WAS UNRESPONSIVE AND NOT BREATHING. THE OFFICIAL CAUSE OF DEATH WAS DETERMINED TO BE ASPHYXIATION DUE TO ENTRAPMENT OF HEAD AND NECK. THE PRODUCT INVOLVED IN THIS INCIDENT IS A RECLINER.
129	1948188240 X2091008A	12/2019	22 MOM	TX	1 YOM Found Unresponsive By Mother With Head And Neck Wedged In Leg Rest Of Recliner. Incident Location: Residence. COD: Mechanical Asphyxia. OSC: No data. Addtl ICD Codes: T71. Autopsy? Yes. Manner of Death: Accident.
9	I1730020A	03/2017	3 YOF	CA	My 3 1/2 daughter got stuck in recliner-- betw een the chair and the pop up foot rest. She was in the chair by herself and w ent to get out and slipped dow n in that space and the foot rest pushed in. She became stuck and I could not get her out w hile she cried. My husband w as thankfully home and w as Able to get her out. I've taken her to the doctor and hopefully she has not sustained any serious or life threatening injuries. The recliner w as the [REDACTED]
72	I1880060A	07/2018	4 YOM	CA	My 4.5 year old grandson was getting out of my reclining chair and stepped onto the foot rest and his leg w ent right through the slats. We w ere not able to get his leg out and he screamed the entire time as any movement to the chair w ould 'tighten' up the foot portion and squeeze his leg more. I called 911 after 5 minutes and the firemen and paramedics needed tw o large crow bars to 'pry' the foot portion of the recliner open to release his leg. He had a severe contusion and needed x-rays to ensure there w as no broken bones. The neighbor came to inquire and shared the same thing happened to his son and they no longer have a recliner. I believe the manufacturers should have a 'safety' release lever to prevent injuries such as this.
213	I21C0335A	11/2021	UnkF	ME	My elderly relative w ith confusion put both legs through the gap in the footrest of her [REDACTED] recliner, w hen the footrest w as extended. She w as yelling for help. I could not extricate her from the chair and called the local fire department w ho w as successful in getting her low er legs out. Had she fell she likely w ould have severely lacerated her low er legs and possibly have bilateral fractures. I have a picture of how her legs w ere stuck.

Underneath Legrest – CPSC Data

The below incidents relate to the entrapment area presented as #2) Underneath legrest (entrapped to floor)

232	220606HCC3940 I2260019A	05/2022	11 MOM	NV	ON MAY [REDACTED], 2022, AN 11-MONTH-OLD BOY WAS FOUND UNRESPONSIVE UNDERNEATH A POWER RECLINING SECTIONAL. IT IS BELIEVED THAT THE FOOTREST WAS UNKNOWINGLY CLOSED ON THE DECEDENT BY HIS 3-YEAR-OLD SISTER. THE 3-YEAR-OLD REPORTEDLY IS KNOWN TO PLAY WITH THE BUTTONS ON THE SECTIONAL. THE CHILDREN WERE UNATTENDED FOR APPROXIMATELY 7-10 MINUTES. THE DECEDENT'S SISTER WAS HEARD CALLING FOR HER BROTHER AND THE MOTHER AND GRANDFATHER OF THE DECEDENT BEGAN LOOKING FOR THE DECEDENT. WHEN THE DECEDENT WAS FOUND, 911 WAS CALLED. LIFESAVING MEASURES WERE TAKEN, AND THE DECEDENT WAS TRANSPORTED TO A LOCAL HOSPITAL. THE DECEDENT WAS PLACED ON A VENTILATOR, HAVING SUFFERED SEVERE BRAIN INJURIES. THE DECEDENT WAS TRANSPORTED TO A HOSPICE FACILITY WHERE HE DIED ON MAY [REDACTED], 2022.
180	I2130453A	03/2021	2 YO	ND	1 of my children was almost trapped under a motorized leg rest, on a sectional couch. The motor that closes the leg rest has no safety stop and could crush or kill a child or adult who is underneath the leg rest as it is closed.
201	220621HCC3020 X2191052A X2230029A	08/2021	4 YOF	TX	ON AUGUST [REDACTED], 2021, A 4-YEAR-OLD GIRL WAS SITTING ON THE COUCH, IN HER HOME, PLAYING ON HER ELECTRONIC DEVICE. THE MOTHER LEFT THE ROOM TO CARE FOR ANOTHER CHILD AND WHEN SHE RETURNED, THE GIRL WAS FOUND FACE-DOWN WEDGED UNDER THE RECLINED COUCH, UNRESPONSIVE, AND NOT BREATHING. THE OFFICIAL CAUSE OF DEATH WAS DETERMINED TO BE MECHANICAL ASPHYXIA. THE PRODUCT INVOLVED IN THIS INCIDENT IS A RECLINING COUCH.
110	1927016367	05/2019	8 MOF	MN	THE 8-MONTHS-17-DAYS-OLD FEMALE DECEDENT WAS FOUND WEDGED BETWEEN THE FLOOR AND AN ELECTRIC RECLINER'S FOOTREST THAT HAD BEEN POSITIONED IN THE LOWERED POSITION. CAUSE OF DEATH: A: ANOXIC ENCEPHALOPATHY AND TONSILLAR HERNIATION B: CARDIORESPIRATORY ARREST (RESUSCITATED) C: POSITIONAL/MECHANICAL ASPHYXIA. AUTOPSY: YES.

Between Legrest and Chair Body/Arm- CPSC Data

The below incidents relate to the entrapment area presented as #3) Between legrest and chair body/arm

219	I2350112A	01/2022	74 YOF	AZ	<p>My wife and I purchased a motorized recliner from [REDACTED] in Dec. 2021. The recliner is activated by push buttons on the right side of the recliner. The buttons are not located on the inside of the arm, but rather are located on the seating surface.</p> <p>On several occasions, my wife had reclined in the chair and was trying to get out of it. She placed her legs in either side of the extended foot rest and accidentally pushed the button to make the recliner to an upright position.</p> <p>Her legs became trapped between the footrest and the body of the chair. As it moved into the upright position, the footrest impacted her legs, trapping them and causing broken skin, bruises and extreme pain.</p> <p>This happened again when she accidentally dropped her [REDACTED] directly into the button resulting in the same situation as described above.</p> <p>The first incident occurred in Jan 2022 and subsequently about three months later.</p>
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Access Inside Mechanism – CPSC Data

The below incidents relate to the non-entrapment area presented as “Access to open front units”

174	I2140299A	02/2021	57 YOF	CA	I bought a leather reclining sofa from [REDACTED] and my cat almost died from this dangerous, hazardous product . My cats tail got caught in the motor and it had to be amputated leaving my cat disabled . This could have happened to a kids finger as my cat is 10+ pounds . I don't know why the motor mechanism was not guarded or covered but this has been the most devastating experience and it left my poor baby traumatized having to get his tail fist off as he was hanging for the couch for nearly two hours howling and distressed and three guys it took to finally release him as we didn't think he was going to make it and I got injured as he was in so much pain that when I went to try to get him initially he clenched his teeth into me and anything that was around to release his pain. He's had a come on his head for nearly 8 weeks and I had [REDACTED] take the couch back and refund me as I contacted the manufacturer and they responded and I'm waiting for a response in regards to the package I sent of pictures , a letter and costs incurred . [REDACTED] keeps taking my review down and it's kissing me off as I'm trying to notify other people that got this couch and they refuse to let them know and delete my review and they put that the couch was sold out
171	I2130015A	02/2021	Unk	AK	Family cat got hair of tail caught up in drive motor of power reclining couch. Tail was crushed in the worm drive and eventually amputated - moving parts have no guard, this could have just as easily been a child's finger or hair.
178	210412CCC2593 I2140054A	03/2021	Unk	GA	THE COMPLAINANT PURCHASED A POWERED RECLINING LOVESEAT AND SOFA COMBINATION FROM A BRICK AND MORTAR FURNITURE STORE. THE CONSUMER USED THE PRODUCT FOR NINE MONTHS. AT THE TIME OF THE INCIDENT, THE CONSUMER WAS IN A RECLINED POSITION AND WAS NOT AWARE HER CAT WAS LYING BENEATH THE FOOTREST. SHE ENGAGED THE MOTOR TO LOWER THE FOOTREST AND HEARD CRIES OF ANGUISH FROM THE CAT. SHE DISENGAGED THE MOTOR AND LOOKED TO FIND THAT THE CAT'S TAIL HAD BECOME ENTRAPPED IN THE MECHANISM USED FOR RAISING AND LOWERING THE FOOTREST. SHE FORCIBLY REMOVED THE CAT'S TAIL FROM THE MECHANISM; THE TAIL HAD TO BE AMPUTATED.
241	I22A0159A	09/2022	Unk	OK	We own an [REDACTED]. Our 16-year-old Papillon dog was sitting under the recliner with the footrest up and when I lowered the footrest her tail was caught in the mechanism. Her tail wind round the worming gear up to the base of her tail breaking the tail in several places. It took over an hour to cut the hair out of the mechanism and then had to disassemble the worming gear by removing every screw and motor to allow enough room to remove her tail. This mechanism should have a cover over it to prevent tails or a child's hair from getting caught in the mechanism. The nerves in her tail were so damaged that it affected her ability to urinate and defecate. We had to put her to sleep. We called Ashley and they refused to speak with us about filing a recall on this chair.
244	I22B0108A	10/2022	Unk	MN	Our kitten got his head stuck in-between bars underneath couch and we were unable to get him out for awhile and he suffered brain trauma and was unable to walk or open his eyes all the way and had to be euthanized
107	I1940225A	03/2019	UnkF	CT	My cat's tail became entangled in the mechanical mechanism under my power head recliner. The chair's footrest was beginning to be raised while the cat was under the chair (I did not know she was under the chair at the time - the footrest was raised about 6 inches). My cat began to scream and I was not able to dislodge her. After several seconds she broke free from the chair. Upon inspection I was horrified to find that a 4 inch section of her tail had been torn off by the chair. This necessitated an emergency trip to an ER Vet (this occurred on a Saturday afternoon), amputation surgery and several follow up visits to our regular vet. Not only am I concerned about pets being hurt by this mechanism, but could envision a small child having a finger injured by this type of chair.
245	H22B0012A	10/2022	UnkF	FL	(10/[REDACTED]/2022) The consumer has a safety concern about the way the mechanism on the back of the recliner is covered and held down by [REDACTED]. The consumer was wiping down the recliner and did not know that her cat had crawled into the back of the recliner. The consumer accidentally hit the button on the recliner which started the mechanism that goes around. Her cat's tail was caught in the mechanism and was cut off. The consumer contacted the place of purchase and had them to remove the sectional from her home.
63	X1841434A	04/2018	UnkM	WI	I purchased the [REDACTED] recliner for my son from [REDACTED] for \$249.99. It is engineered so that there is no protection for animals to not climb underneath into the frame. The bars underneath the foot rest come very close together. When my son when to put the foot rest down, he didn't realize my grandson's kitten had his head in between the bars that bring the foot rest together. The kitten was crushed and killed by this. When I took the kitten to the vet to be cremated, the vet said "you'd be surprised how often this happens to kittens, cats and small dogs." I believe there should be some kind of warning on recliner/rockers or they should be designed so that this cannot happen. They should either carry a warning or be designed so that can't happen. I am 62 years old and never thought about it and have had animals my entire life so I am sure others don't think about it either. This was devastating and something we can never forget and apparently it happens quite often to unsuspecting pets and their owners.