CR (EU) no. 2015/208 anx. XIII

Requirements of vehicle occupant protection systems including interior fittings, head rests, safety belts and vehicle doors

CR (EU) 2015/208 anx. XIII

- General
- Regulations
- Testing and exampes for implementation
- Open points

General

Aim of the directive

- To achieve a high level of safety at the work place and to minimise the risc of injury for vehicle occupants and other persons.

Scope

- All vehicles of classes T and C.

Nr.	Artikel	Gegenstand	Angabe des Rechtsakts	Kraft-fahrzeu-ge	Fahrzeugklassen																	
					T1a	T1b	T2a	T2b	T3a	T3b	T4.1a	T4.1b (+)	T4.2a	T4.2b (+)	T4.3a	T4.3b	Ca	Cb (++)	Ra	Rb	Sa	Sb
13	17(2)(e)	Insassenschutzsys-teme einschließlich Innenausstattung, Kopfstützen, Sicher-heitsgurten und Fahrzeugtüren	RVFSR		X	X	X	X	X	X	X	X	X	X	X	X	I	I	n.z.	n.z.	n.z.	n.z.

General requirements

- Within SAB A no dangerous uneven surfaces or sharp corners which could increase the risc of serious injury are allowed.
- For vehicles with seats in more than one row, the surroundings of the rear row must meet the requirements of annex XVII of CR (EU) 3/2014
- Shelfs and comparable parts have to be designed that supports do not have sharp edges
- parts which are likely to be touched by driver or passenger while driving, must not show sharp edges or have rough surfaces

General requirements

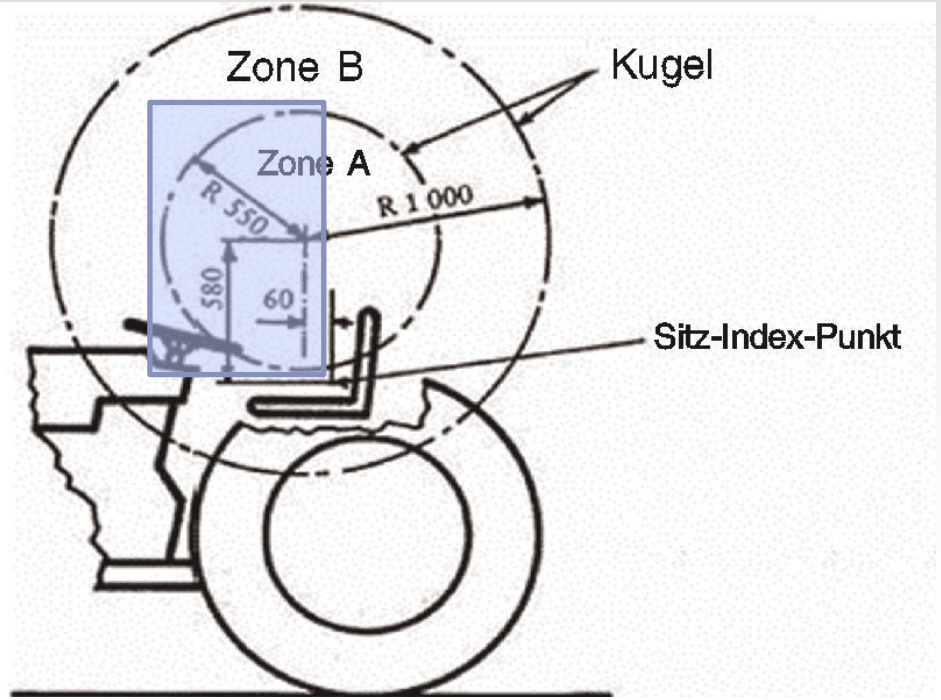
- Exempt from these requirements are:
  - Seat rails,
  - Adjustment devices for seat and backrest,
  - Roller for safety belts,
- if these parts are below a horizontal plane which runs through the seat index point of each seat.
- Area beneath the instument panel is tested with a separate device (knee-impact)

General requirements

- Head rests
  - If installed, they must meet directive no. 25, anx. I
- Seat belts
  - The requirements of §. 4 and § 18 section 2 (j) of CR (VO) 167/2013 apply
- Vehicle doors
  - If installed, powered windows and skylights have to meet directive no. 25, anx. I (sec. 5.8.1 to 5.8.5)

Safe distance area A (SAB A) **Driver**

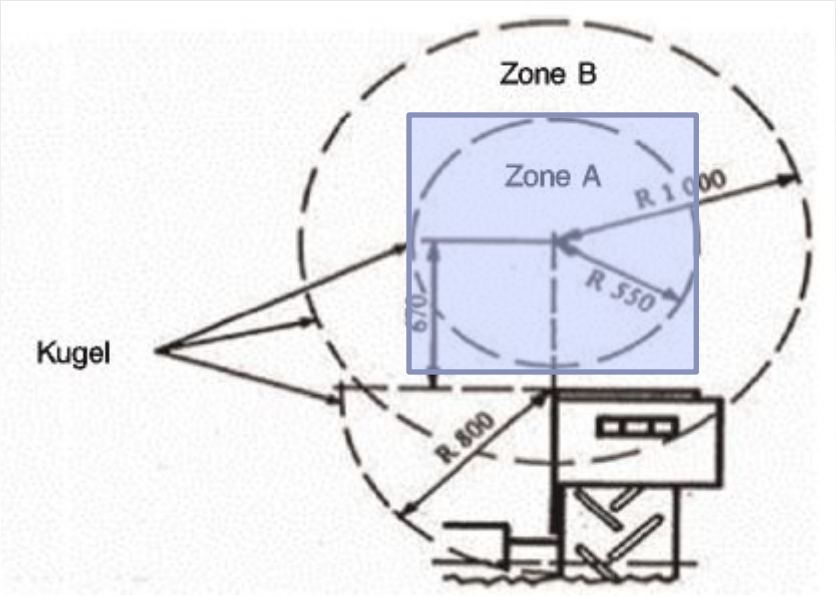
- Is defined by a ball of R = 550 mm (Zone A)
- Centre of the ball is defined in relation to the seat-index-point
- The seat-index-point has to be determined acc. to Iso 5353:1995
- All parts of the interior fittings which are inside the SAB A above and in front of the seat-index-point



Safe distance area A (SAB A) **passenger**

- Is defined by a ball of R = 550 mm (Zone A)
- Centre of the ball is 670 mm above the centre of the foreward edge of the passenger seat

- All parts of the interior fitting inside the SAB A above the seat-index-point and foreward the SAB A have to be tested



Regulations

Requirements for vehicles with design speed ≤ 40 km/h

- The general requirements apply

Requirements

Special requirements for vehicles 40 < designed top speed ≤ 60 km/h

- Additional to the previous requirements, the following has to be observed:
- Metal parts which are used for re-enforcement must not show sharp edges
- Parts within the SAB A which can be contacted with a 165 mm diameter when the ball is moved along the radius of SAB A, must be rounded to at least 2,5 mm
- Window winders – if installed – may protrude 35 mm from the surface
- Exempt are parts within a cone with the tip in the centre of SAB A and the lateral surface through the edge of the steering wheel

Special requirements for vehicles with a design speed > 60 km/h

- All previously mentioned special requirements also apply
- The bottom edge of the instrument panel has to rounded to a radius of min.19 mm
- Switches and buttons of hard material (> 60 Shore A):

	Min. cross section area	With distance from highest point
Protusion height 3.2 – 9.5 mm	2 cm^2	2.5 mm
Protusion height > 9.5 mm	6.5 cm^2	6.5 mm

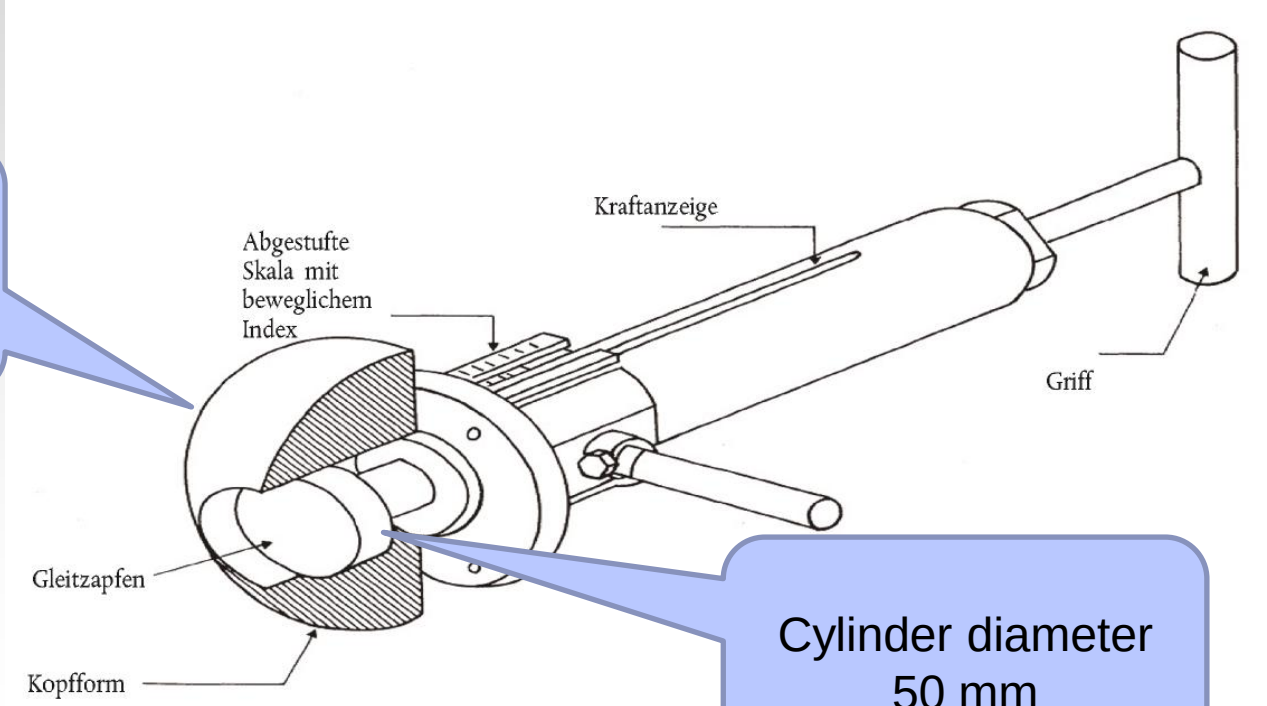
Special requirements for vehicles with a design speed > 60 km/h

- Requirements for nor non load bearing parts connected to the roof (such as handles, roof lights, sun visors):
  - Min. rounding radius 3.2 mm
  - Width of part ≥ vertical height
- For protruding parts with hardness less than 60 Shore A which are installed on a ridgit surface, the previously mentioned requirements are only applicable to the ridgit surface

Test device to measure protrusions

- According to regulation

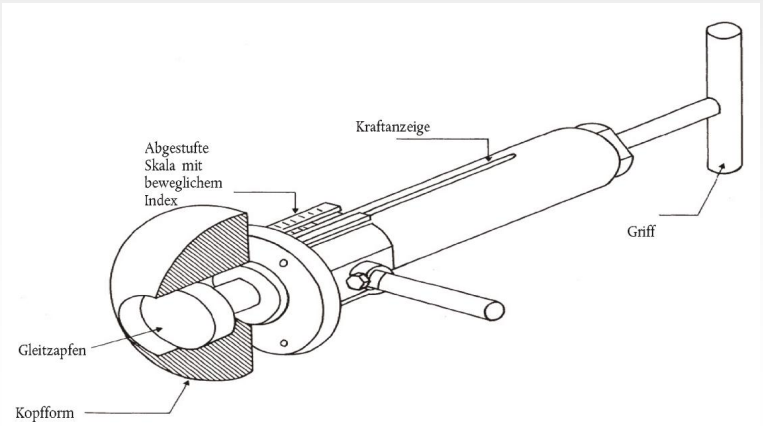
Ball diameter 165 mm



Cylinder diameter 50 mm

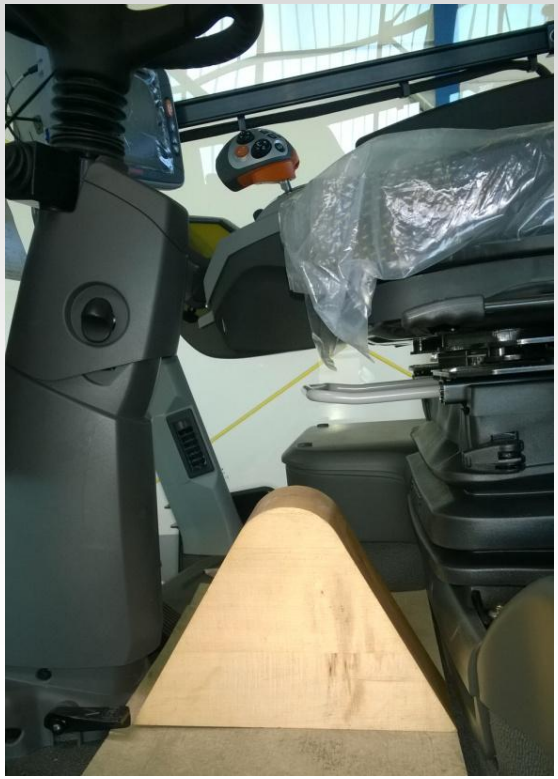
Testing of protrusions

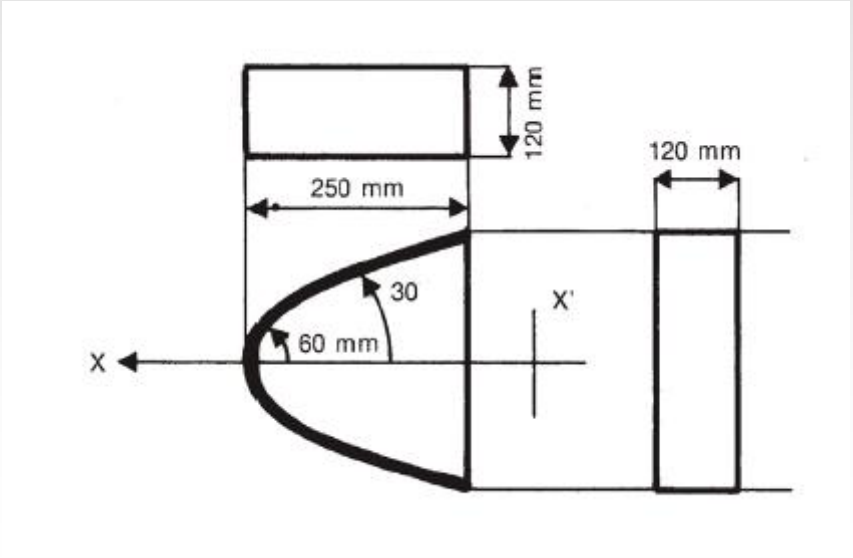
- Testing device has to adjusted to measure highest protrusion.
- During testing, the testing device has to pressed with a force of max. 2 daN onto the protrusion.
- If more than 1 actuating device fit into the cavity, they are treated as one protrusion.



Test device for knee impact

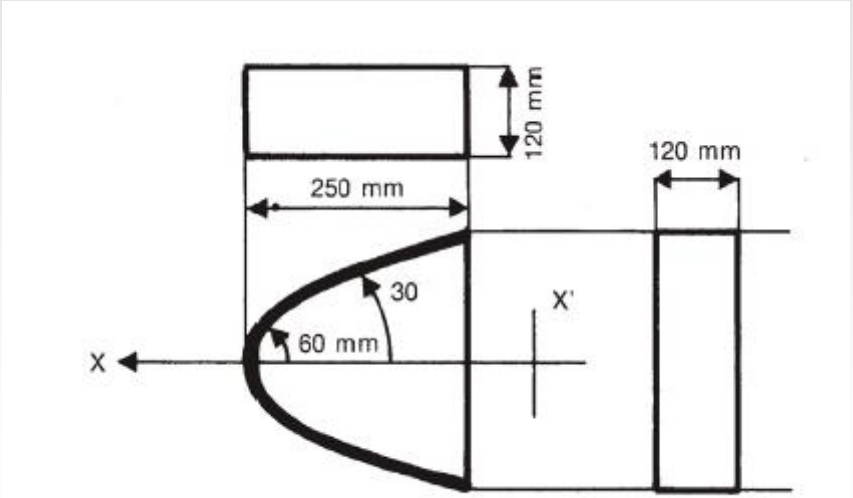
- Design according to regulation, application example





Test method for knee impact

- The testing device can be positioned in all positions beneath the instrument panel that:
  - The plane XX´ is parallel to the longitudinal centre plane of the vehicle
  - The axis is twisted up to 30° both directions horizonatlly
  - Materials of a hardness below 30 Shore A have to be removed before testing



Testing and application examples

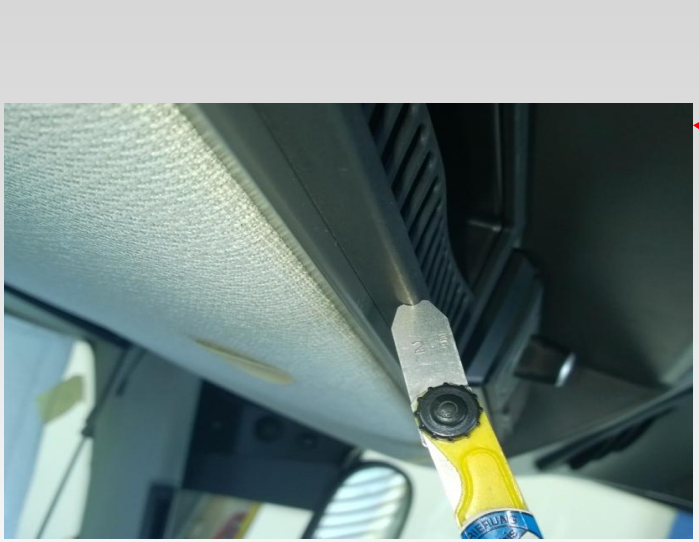
- Safe distance area A
  - Position the driver‘s seat in the middle position (length)
  - Seat-index-point from drawingentnommen aus Zeichnung

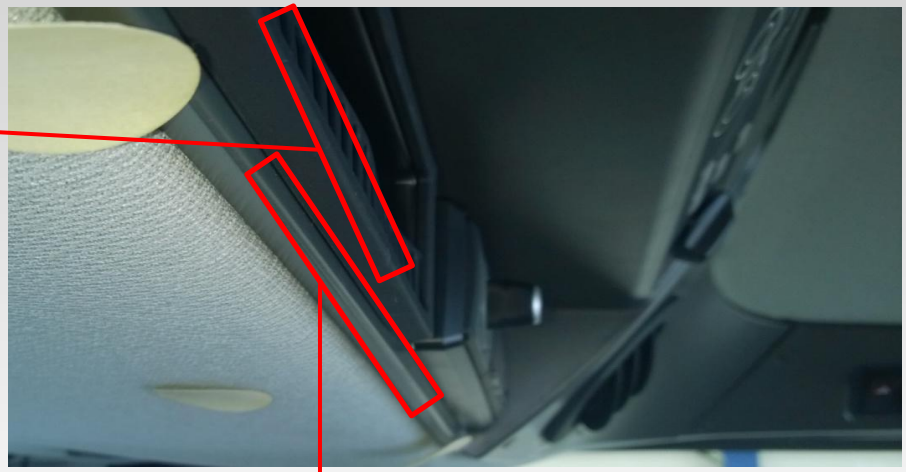
Intersection of outer surface of SAB with foreward headliner

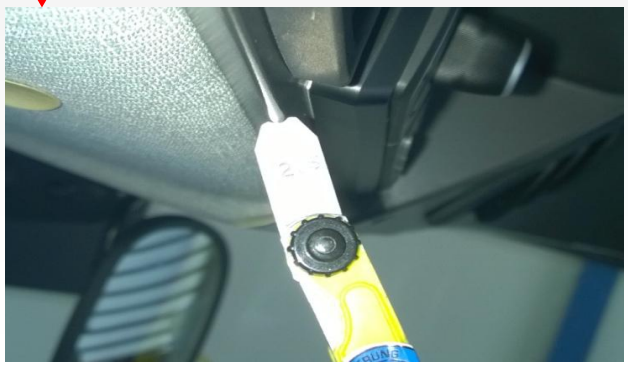
Perpendicular reference axis through centre of ball of the SAB

Testing and application examples

- Safe distance area A
  - Testing radii (Vehicle with design speed 50 km/h)







Thank you for listening

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