

**JASIC's Proposal Regarding Amendments to the CRS Lateral Impact Requirements and
Issues to Be Confirmed in RSP-47-06/Rev.1 (draft)**

25/6/2010

Proposal

Paragraph 7.1.3.1.1., amend to read:

“Frontal, rear and lateral impact”

Insert new paragraph 7.1.3.1.2., to read:

“Frontal impact”

Paragraph 7.1.3.1.1.4. to 7.1.3.1.1.5., renumber as 7.1.3.1.2.1 to 7.1.3.1.2.2.

Paragraph 7.1.3.1.1.4. to 7.1.3.1.1.4.5., renumber as 7.1.3.1.2.1 to 7.1.3.1.2.5.

Former Paragraph 7.1.3.1.2. to 7.1.3.1.2.4., renumber as 7.1.3.1.3. to 7.1.3.1.3.4.

Former Paragraph 7.1.3.1.3. to 7.1.3.1.3.6., renumber as 7.1.3.1.4. to 7.1.3.1.4.6

or

Paragraph 7.1.3.1.1., amend to read:

”Frontal, rear and lateral impact”

Justification

In S7.1.3.1.1, the provision of S7.1.3.1.1.1 states that “[t]he trolley and test seat used in the dynamic test shall meet the requirements of Annex 6 to this Regulation, and the dynamic crash test installation procedure is to be in accordance with Annex 18.”

In addition, S7.1.3.1.1.3.1 and S7.1.3.1.1.3.2 specify “Deceleration test device” and “Acceleration test device”, respectively.

However, the title of S7.1.3.1.1 says “Frontal and rear impact”, and for this reason, its requirements on the trolley, installation procedures, and deceleration/acceleration test devices can be interpreted not to cover the lateral impact, which is in the scope of S7.1.3.1.3. If interpreted this way, no provision on the trolley, installation procedures, and test devices used in the lateral impact test can be found in this regulation. Therefore, the title of S7.1.3.1.1 should be amended to clarify the provisions on the trolley, etc. used in the lateral impact test.

Proposal

“2.[XX] “Trolley” means a part of the test devices used in dynamic testing, excluding the test seat specified in Paragraph 3 of Annex 6. In the deceleration test device, it is the structure as a whole that is decelerated by the stopping device, and in the acceleration test device, it is the structure as a whole that is accelerated by the accelerating device which

applies driving force to the structure directly by a piston, etc.”

Justification

Upon the introduction of the lateral impact requirements, testing will be performed in various methods, especially in the lateral impact test using the acceleration test device. By defining the “trolley”, it can be made clear that the structure as a whole that weighs 380 kg or more as specified in Paragraph 1.1 of Annex 6 is acceptable, whether it is decelerated or accelerated as a part of the deceleration device or acceleration device.

* Paragraphs 6.7.1.4.1. 6.7.1.4.2.

6.7.1.4.1. Shoulder strap positioner

If a shoulder strap positioner is provided, it shall be designed so as to prevent incorrect manipulation. It must not be possible to use the device in a manner which would cause the shoulder straps to twist. It must be possible to fasten the device in no more than one action. The force required to fasten the device must not exceed 15N.

6.7.1.4.2. The shoulder strap positioner shall be easy to operate and to grasp. It shall be possible to open in one simple action, but shall be difficult for the child occupant to manipulate the release mechanism. The force required to release the device must not exceed 15N

Proposal

A new paragraph 6.7.6. for the shoulder strap positioner provisions should be provided so that these shoulder strap positioner requirements can be separated from the buckle provisions (Paragraph 6.7.1).

Furthermore, these provisions were drafted based on the clip-type device, but other types should also be considered and the provisions should be amended accordingly.

Justification

The shoulder strap positioner is not a restraining device and is functionally different from the buckle. Therefore, misunderstanding could occur if the shoulder strap positioner requirements were included in the provisions on the buckle. Or, if it were considered as a restraining device equivalent to the buckle, the 15N requirement would be inconsistent with the buckle's 40N requirement.

In addition to the type of shoulder strap positioner where the left and right straps are held together by a clip, there is another type, which passes one strap through a harness and holds the other strap in place on the harness (see Fig. 1). It is also possible that other types will be developed.



Fig.1

In the case of types other than the clip-type, including the type where straps are held

in place as shown above, the 15N standard cannot be provided. How would you specify requirements for these types?

* Paragraph 7.1.3.5.2.2.

Place the child restraint system on the test seat.

Place the manikin in the child restraint system, such that:

[- the dummy head is horizontal following the ...

- the arms of the dummy are placed following the]

Place a hinged board or a similar flexible spacer device 2.5 cm thick and 6 cm wide and of length equal to the shoulder height sitting (Annex 8) less the thigh height sitting (Annex 8) relevant to the manikin size being tested between the manikin and the seat back of the chair. The resulting length of the spacer is listed in the table below for the different dummy sizes. The board should follow as closely as possible the curvature of the chair and its lower end should be at the height of the manikin's hip joint.

| | Q0 | Q1 | Q1.5 | Q3 | Q6 | [Q10] (design targets) |
|---|----|-------|-------|-------|-------|---------------------------|
| Dimensions in [mm] | | | | | | |
| Height of spacer device for positioning of dummy | | 229±2 | 237±2 | 250±2 | 270±2 | 359±2 |

Adjust the belt in accordance with the manufacturer's instructions, but to a tension of 250 ± 25 N above the adjuster force, with a deflection angle of the strap at the adjuster of $45 \pm 5^\circ$, or alternatively, the angle prescribed by the manufacturer.

Complete the installation of the child restraint system to the test seat in accordance with Annex 18 to this Regulation.

Remove the flexible device.

This only applies to harness restraints and to restraints where the child is restrained by the adult three-point belt and where a lock-off device is used and does not apply to child restraining straps connected directly to a retractor.

Proposal

The height standard for the lower edge position of the hinged board is not adequate. Descriptions on how to measure the height should be added.

Justification

The specification of height for the lower edge position alone is not sufficient, because it is not specified where to measure.

In addition, the seating surface and the back surface of the CRS that are connected are curved and thus it is extremely difficult to make such measurement. A measuring jig that is similar to the one required for measuring the shoulder width, etc. would be required.

