

Proposal for Supplement 8 to the 04 series of amendments to Regulation No. 44

The text reproduced below was prepared by the expert from Spain on behalf of the Technical Services Group (TSG) on Regulation No. 44. The modifications to the current text of Regulation are marked in bold for new or strikethrough for deleted characters.

I. Proposal

Paragraph 2.7., amend to read:

"2.7. *"Impact shield"* means a device secured in front of the child and designed to distribute the restraining forces over the greater part of the height of the child's body in the event of a frontal impact.

With reference to clause 2.1.3 they are divided in two classes:

Class A: Integral

Class B: Non integral."

Paragraph 6.1.12., amend to read:

"6.1.12. Child restraint systems of group I shall belong to the integral class unless they are fitted with an impact shield **of Class B**, as defined in paragraph 2.7."

Paragraph 7.1.4.4.1.2.3., amend to read:

"7.1.4.4.1.2.3. Child restraints other than group 0 not supported by the dashboard:

The head of the manikin shall not pass the planes FD, FG and DE, as shown in Figure 4 below **and there shall be no direct contact of the manikin head with the bar**. This shall be judged up to 300 ms or the moment that the manikin has come to a definitive standstill whatever occurs first."

Paragraph 8.1.3.7.6., amend to read:

"8.1.3.7.6. If the child restraint system is suitable for two or more mass groups, the tests shall be carried out using the lightest and heaviest manikins specified above for ~~all~~ **each of** the groups concerned. ~~However, if the configuration of the device alters considerably from one group to the next, for instance when the configuration of the harness or the harness length is changed, the laboratory conducting the tests may, if it deems it advisable, add a test with a manikin of intermediate weight.~~

Paragraph 8.1.3.7.10., amend to read:

"8.1.3.7.10 The test specified in paragraph 7.1.4.1.10.1.2. ~~need~~ shall only be carried out with the largest manikin for which the child restraint is designed. **Where multiple configurations of the child restraint system are possible (e.g. upright/reclined), the configuration**

which generates the worst case horizontal head excursion shall be used for this test."

Paragraph 11.2., amend to read

"11.2. Qualifying the production of child restraint systems

The production of ...

For this purpose, a random sample of 5 child restraint systems will be taken from the first production batch **by the technical service who conducted the approval tests, or by a technical service appointed by the same Authority who will grant the approval, or by Authority itself.**

Six sample units may be selected randomly in case that the condition of 7.1.4.4.1.2.3 is selected as the test condition of conducting a test described in 11.2.1.1.)

The first production batch"

Paragraph 11.2.1.1., amend to read:

"11.2.1.1. Five child restraint systems must be subjected to the dynamic test described in paragraph 8.1.3. The Technical Service that conducted the type approval tests shall choose the conditions that produced the maximum horizontal head excursion during the type approval dynamic tests, excluding the conditions described in paragraphs **7.1.4.4.1.2.3, that refers to the test without 100 mm bar configuration only, and** 7.1.4.1.10.1.2. above. All the five child restraint systems shall be tested under the same conditions.

If during at least one of the five tests performed the CRS touches the bar a further test shall be performed in the condition described in paragraph 7.1.4.4.1.2.3, referring to the test without 100 mm bar. This further test shall not be used for the calculation described in paragraph 11.2.1.3.(a)."

Annex 13,

Paragraphs 2 and 3, amend to read:

"2. The three-point retracting belt has the following rigid parts: a retractor (R), a pillar loop (P), two anchorage points (A1 and A2) (see Figure **1b**)...

3. ...

The value of X in Figure **1b** below..."

Paragraphs 5 and 6, amend to read:

"5. The two-point static belt as shown in Figure **1a** consist of ...

6. ...The value of Y in Figure **1a** is ..."

Figure 1, amend to read:

"Figure 1
Standard seat belt configurations

Figure 1a
Two-point static belt

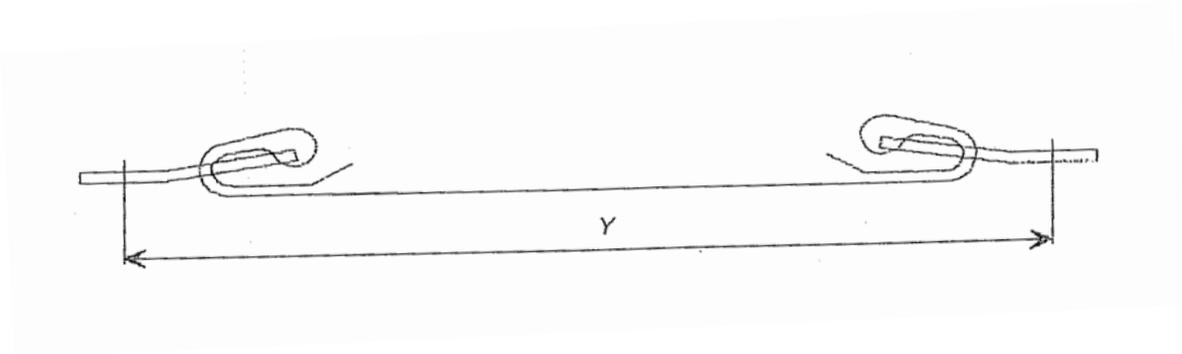
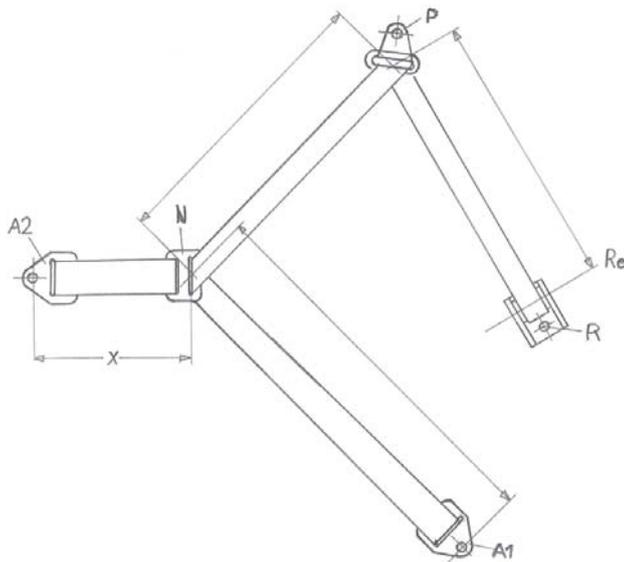


Figure 1b
Three-point retracting belt



"

II. Justification

Paragraph 2.7: Clause 6.1.12 requires that a group I Child Restraint Systems (CRS) falls into the integral class, except where an impact shield is installed. Based on definition of clause 2.1.3 an impact shield itself does not fall into this definition. Requirement of present regulation is therefore not aligned with definition. The proposed modification addresses this misalignment.

Paragraph 6.1.12.: Modification necessary to ensure consistency with the modified clause 2.7.

Paragraph 7.1.4.4.1.2.3.: A direct contact of the head with a rigid part of the vehicle is a potentially dangerous situation; the present requirements do not consider this situation, making it acceptable. The modification addresses this issue.

Paragraph 8.1.3.7.6.: Actual test leaves freedom to TS to test “an” intermediate dummy for multiple group CRS if there are differences in configuration between mass groups.

This usually always occurs: moving from group 0/0+ to I this happens 8from rearward to forward facing); it happens from groups I and II (integral to non integral configuration) and also between groups II and III(with and without backrest) and even if major changes do not occur, test set up can be different (i.e. P10 is tested offset while P6 not)

Paragraph 8.1.3.7.10.: A “misuse” test is specified for ISOFIX child restraint systems, requiring the CRS to be tested without the anti-rotation device. UN Regulation No. 44 specifies the use of the largest manikin for which the CRS is designed. The approval of some CRSs, require multiple tests with the largest manikin, for example, where a recline mechanism is present, in which case the CRS will be tested in both the upright and reclined position.

Amongst the Technical Services Group there are different interpretations of paragraph 8.1.3.7.10. Should the misuse test be carried out for every configuration where the largest manikin is used, or should it be a single test in the worst case condition with the largest manikin?

The proposed amendment is intended to provide clarification for the technical services.

Paragraph 11.2.: need to clarify who is in charge for picking up the samples from production line to perform qualification of production; in addition a sixth sample is required to fulfil the modification introduced in clause 11.2.1.1.

Paragraph 11.2.1.1.: need to clearly define which test configuration shall be considered to identify the maximum horizontal head excursion in order to conduct the qualification of production test. Furthermore a sixth test has been introduced to verify structural integrity of the system after prototype, type approval condition, has been engineered and production started, qualification of production condition.

Annex 13, paras. 5 and 6 and new Figure 1a.:

Text correction to refer to the right figure. The figure of standard lap belt was missing.
