

Proposal for collective amendments to Regulations Nos. 14 and 16

The text reproduced below was prepared by the expert from the Netherlands to ban confusion that has to do with the recently broadened height requirements for the effective upper belt anchorage (Supplement 4 to the 07 series of amendments to Regulation No. 14).

The proposed modifications to the existing text of both Regulation Nos. 14 and 16 are marked in **bold** for new and strikethrough for deleted characters.

This proposal is based on GRSP-55-04, taking on board comments expressed during and after 55th GRSP.

I. Proposal for Regulation No. 14 (Safety belt anchorages)

Paragraph 5.4.3.6.1., amend to read:

"5.4.3.6.1. Notwithstanding the requirements of paragraph 5.4.3.6 the effective upper belt anchorage for passenger seats of category M2 and M3 vehicles may be adjustable below that specification providing the following requirements are met:

- (a) The safety belt or seat shall be permanently marked to identify the position of the effective upper belt anchorage that is required to satisfy the minimum upper anchorage height position required by paragraph 5.4.3.6. This marking shall clearly indicate to the user when the anchorage is in a position suitable for use by an adult of average stature.
- (b) The effective upper anchorage shall be so designed to permit adjustment of its height by a manual adjusting device that is readily accessible to the wearer when seated and is convenient and easy to use.
- (c) The effective upper anchorage shall be so designed to prevent any unintended upward movement of the anchorage that would reduce the effectiveness of the device during normal use.
- (d) The manufacturer shall include within the vehicle handbook clear guidance on the adjustment of such systems, together with advice on the suitability and limitations for use by occupants of short stature.

However where the device for adjusting the height is not directly attached to the vehicle construction or seat construction, but is realized by means of a flexible adjustment device for height:

- (e) **the requirements mentioned in the subparagraph (a) and (d) above shall still be fulfilled as part of the Regulation No.14 type approval making use of the restraint system that is to be installed.**
- (f) **evidence is needed that the safety-belt together with its flexible adjustment for height complies with the requirements for restraint systems of Regulation No. 16; the requirements in the**

subparagraph (b) and (c) shall be fulfilled under paragraph 8.3. of the Regulation No.16 type approval."

II. Proposal for Regulation No. 16 (Safety belts and restraint systems)

Paragraph 2.14.6., amend to read:

"2.14.6. Belt adjustment device for height

A device enabling the position in height of the upper pillar loop (**directly connected to the vehicle or the rigid seat structure**) of a belt to be adjusted according to the requirements of the individual wearer and the position of the seat. Such a device may be considered as a part of the belt or a part of the anchorage of the belt."

Insert a new paragraph 2.14.7., to read:

"**2.14.7. "Flexible adjustment device for height"**

A device for adjusting to the height of the individual wearer, where the adjusting part is not directly attached to the vehicle construction (e.g. pillar) or the seat construction (e.g. the rigid seat structure)."

Paragraph 6.4.1.2.3., amend to read:

"6.4.1.2.3. In the case of a belt intended for use with a belt adjustment device for height, as defined in paragraph 2.14.6. above, the test shall be carried out with the device adjusted in the most unfavourable position(s) chosen by the Technical Service responsible for testing. However:

6.4.1.2.3.1. if the belt adjustment device for height is constituted by the belt anchorage, as approved in accordance with the provisions of Regulation No. 14, the Technical Service responsible for testing may, at its discretion, apply the provisions of paragraph 7.7.1. below;

6.4.1.2.3.2. **if a flexible adjustment device for height is part of the belt, it shall be tested as a restraint system and the Technical Service responsible for testing shall apply the provisions under paragraph 7.7.1. that count for testing on the part of the vehicle structure to which the restraint system is normally fitted.**"

Paragraph 8.3.3., amend to read:

"8.3.3. When the belt is being worn, it shall either adjust automatically to fit the wearer or be so designed that the manual adjusting device is readily accessible to the wearer when seated and is convenient and easy to use. It shall also be possible for it to be tightened with one hand to suit the build of the wearer and the position of the vehicle seat.

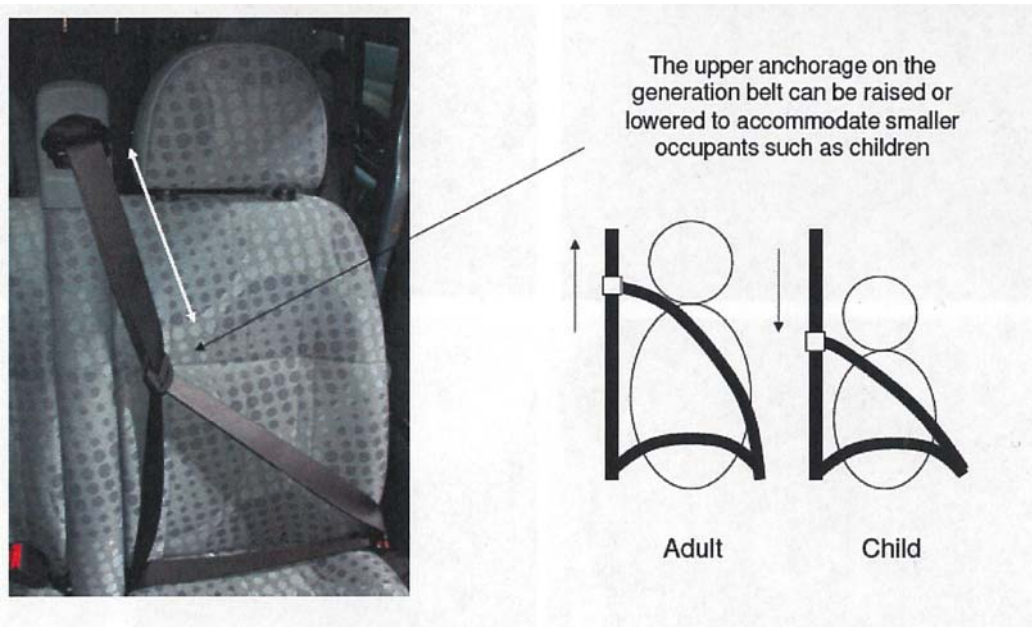
A manual adjustment device shall be so designed to prevent any unintended movement that would reduce the effectiveness of the device during normal use."

Annex 1B (Communication of a type of safety-belt or restraint system ...), item 12, to read:

"1. Restraint system (with)/three-point belt/lap belt/special type belt/fitted (with) energy absorber/retractor/device for height adjustment of the upper pillar loop/**flexible adjustment device for height** 3"

III. Justification

1. Up to now in Regulation No. 16, in the approval certificate, where strikethrough actions are done, only one system for “Belt adjustment for height” can be mentioned, namely upper-pillar loop.
2. Alas this proved to be the cause of confusion. Namely a belt/restraint system (later to be used for a Regulation No. 14 approval) could still be a system with height adjustment **but by means of a flexible adjustment device (sometimes called generation belt, see the explaining figure below).**
3. So it can happen that an authority (busy with a Regulation No. 14 approval) is not triggered by means of the Regulation No. 16 approval certificate that it concerns a belt system with height adjustment. But this belt system can be such that the location of the effective upper anchorage can be lower than the limit of 450 mm above the R-point. However this is allowed only on M2 and M3 vehicles!
4. Another point is that the complexity and sensibility of the here discussed Flexible adjustment device for height (generation belts) do not justify a dynamic test on the generic (hard) Reg.16 seat, therefore testing as restraint system is hereby proposed.



Source: this figure has been earlier showed in doc. GRSP-50-23 from Germany