

Proposal for changes to ECE/TRANS/WP.29/GRSG/2015/17
Proposal for the 03 series of amendments to Regulation No. 58
(Rear underrun protection)

The modifications to the ECE/TRANS/WP.29/GRSG/2015/17 are marked in **bold** for new or ~~double strikethrough~~ for deleted characters.

I. Proposals

Paragraph 16.5., amend to read:

- "16.5. The device shall be so fitted that after the application of the test forces specified in Annex 5 for vehicles of the categories N₂ with a gross vehicle weight exceeding 8 t, N₃, O₃ and O₄, the maximum ground clearance of the protective device, even when the vehicle is unladen, shall at any point not exceed **by more than 60 mm the value before test:**
- (a) ~~510 mm for motor vehicles and trailers with hydropneumatic, hydraulic or pneumatic suspension or with a device for automatic levelling according to load; and~~
 - (b) ~~560 mm for vehicles other than those listed in subparagraph (a) above.~~"

Paragraphs 31.1. to 31.5. on transitional provisions, amend to read:

- "31.2. Until **1 September 2018 2019** ~~18 months after the date of entry into force of this Regulation as amended by the 02-03 series of amendments~~, Contracting Parties applying this Regulation shall:
- (a) ... as amended by the **02** series of amendments;
 - (b) ... as amended by the **02** series of amendments;
 - (c) ... as amended by the **02** series of amendments;
 - (d) ... as amended by the **02** series of amendments.
- 31.3. **As from 1 September 2018 2019** ~~Starting 18 months after the date of entry into force of this Regulation as amended by the 02 series of amendments~~, Contracting Parties applying this Regulation:
- (a) May refuse ... as amended by the **03** series of amendments;
 - (b) Shall grant ... as amended by the **03** series of amendments;
 - (c) May prohibit ... as amended by the **03** series of amendments.
- 31.4. Until **1 September 2018 2019** ~~48 months following the date of entry into force of this Regulation as amended by the 02 series of amendments~~, Contracting Parties applying this Regulation shall:
- (a) Continue to grant ... as amended by the **02** series of amendments;
 - (b) Continue to accept ... as amended by the **02** series of amendments.

- 31.5. **As from 1 September 2020 2021** ~~As from 48 months after the date of entry into force of this Regulation as amended by the 02 series of amendments,~~ Contracting Parties applying this Regulation:
- (a) Shall grant ... as amended by the **03** series of amendments;
 - (b) May refuse national ... as amended by the **03** series of amendments."

Annex 5, paragraphs 3.1. to 3.1.3., amend to read:

"3.1. The requirements of paragraphs 7.3. and 25.7.6 of this Regulation shall be verified by means of suitable test mandrels; the forces for tests prescribed in paragraphs 3.1.1. and 3.1.2. below shall be applied separately and consecutively, via a surface not more than 250 mm in height (**but covering the maximum section height of the cross-member or RUP**, the exact height shall be indicated by at the vertical edges. **The RUP shall offer adequate resistance to forces applied parallel to the longitudinal axis of the vehicle. The surface shall not be rigidly fixed to the RUPD or to the RUP and shall be articulated in all directions.** The height above the ground of the centre of the surface shall be defined by on a vehicle the height shall not, however, exceed ~~600 mm~~ **the height as specified in paragraphs 16.1. and 16.2. or as specified in paragraphs 25.1. and 25.2. of this Regulation** when the vehicle is unladen. The order in which the forces are applied may be specified by the manufacturer.

The device used to distribute the test force over the stated flat surface shall be connected to the force actuator through a swivel joint. The arrangement of the force actuator, whether pulling or pushing, shall be arranged such that it does not add any stiffness or stability to the underrun protection system structure, i.e. it shall neither increase the instability threshold force nor decrease the maximum deflection of the underrun protection system."

3.1.1. **For vehicles of category N₂ with a GVW > 8 t, N₃, O₃ and O₄,** a horizontal force of ~~100-180~~ kN or ~~50~~ **85** per cent of the force by the manufacturer.

For vehicles of category M₁, N₁, N₂ with a GVW < 8 t, O₁, O₂ and G, a horizontal force of 100 kN or 50 per cent of the force by the manufacturer.

3.1.2. **For vehicles of category N₂ with a GVW > 8 t, N₃, O₃ and O₄,** in the cases defined in paragraphs 1.1.1. and 1.1.2. of this annex a horizontal force of ~~50-100~~ kN or ~~25~~ **50** per cent of the force generated by the maximum mass of the vehicle, whichever is the lesser, shall be applied consecutively to two points located 300 + 25 mm from the longitudinal planes tangential to the outer edges of the wheels on the rear axle or of the RUPD, if it exceeds the width of the rear axle, and to a third point located on the line joining these two points, in the median vertical plane of the vehicle.

For vehicles of category M₁, N₁, N₂ with a GVW < 8 t, O₁, O₂ and G, in the cases defined in paragraphs 1.1.1. and 1.1.2. of this annex, a horizontal force of 50 kN or 25 per cent of the force generated by the maximum mass of the vehicle, whichever is the lesser, shall be applied consecutively to two points located 300 + 25 mm from the longitudinal planes tangential to the outer edges of the wheels on the rear axle or of the RUPD, if it exceeds the width of the rear axle, and to a third point located on the line joining these two points, in the median vertical plane of the vehicle.

- 3.1.3. **Upon request of the manufacturer for vehicles of category N₂ with a GVW > 8 t, N₃, O₃ and O₄, the force levels can be reduced to [80] per cent of the requirement given in paragraphs 3.1.1. to 3.1.2. for the vehicles listed in Annex 6."**

II. Justifications

1. Paragraph 16.5: In the original proposal there is the possibility for vehicles of category G to have ground clearance up to 550 mm, for justified technical reasons of departure angle compatibility. These vehicles represent a very low production volume and are seldom used on motorways so that they are not the heart of the target this enhanced regulation aims at. As proposed so far the deformation allowance would be 60 mm as a general case, but only 10 mm for these vehicles, which creates technical burdens! OICA proposal is to allow the same deformation of 60 mm for all the RUPD, wherever they are fitted.
2. The application dates proposed by Germany in their document ECE/TRANS/WP.29/GRSG/2015/17 leaves only 2 full years from official date of publication for an OEM to take this new level of RUP performance into account. Complete new developments of RUPD and chassis interface must be considered. An extra year is necessary for industry to adapt their products. See also justification below.
3. During the long negotiation process, at the light of the justifications provided by OICA in GRSG-105-20, it was stated that, considering the very low input of these categories in the accident data, the final compromise would be with no change for vehicles of the category N₂ < 8 t. As specified in ECE/TRANS/WP.29/GRSG/2015/14, the N₂ < 8 t vehicle designs will have to stand changes (mostly on stamped parts common with N₁ versions). The lead time proposed above for the introduction of this new series of amendments does not take into account any change on N₂ < 8 t vehicle. OICA suggests limiting the new efforts values to the upper range of N vehicles, including N₂ > 8 t, in order to avoid any further introduction delay.