

Proposal for amendments to Regulation No. 58.03

Rear Underrun Protection Device

The text reproduced below is prepared by the Netherlands for an amendment of Part II and III of a type of rear underrun protective device (RUPD) pursuant to UN Regulation No. 58. The modifications to the current text of UN Regulation No. 58 are marked in bold characters and in strikethrough for deleted characters.

I. Proposal

Part II, Approval of a vehicle with regard to the installation of an RUPD of an approved type,

Article 16.4., Amend to read:

For vehicles of categories M, N1, N2 with a maximum mass not exceeding 8 t, O1 and O2, the device shall be so fitted that the horizontal distance between the rear of the cross-member of the device and the most rearward point at the rear extremity of the vehicle, including any platform lift system, does not exceed 400 mm diminished by the largest total deformation including both plastic and elastic deformation (paragraph 7.3. of Part I) measured and recorded during the test at any of the points where the test forces are applied (Annex 1, item 8) during the type approval of the rear underrun protective device in conformity with the provisions of Part I of this Regulation and recorded in the type approval communication form. In measuring this distance, any part of the vehicle which is more than 2 m above the ground for every loading condition of the vehicle shall be excluded.

For vehicles of categories N2 with a maximum mass exceeding 8 t, N3, and vehicles of categories O3 and O4, equipped with a platform lift **and access ramps** or being designed as a tipping trailer, the same requirement as above applies; however, for vehicles of these categories, the horizontal distance shall not exceed 300 mm measured to the rear of the cross-member before the test forces are applied.

For vehicles of categories O3 and O4, without any platform lift system **or access ramps** and not being designed as a tipping-trailer, the maximum horizontal distances are reduced to 200 mm before the test forces have been applied and 300 mm diminished by the largest total deformation including both plastic and elastic deformation (paragraph 7.3. of Part I) measured and recorded during the test at any of the points where the test forces are applied (Annex 1, item 8). In any case non-structural protrusions such as tail lamps and those of less than 50 mm of size in any direction, such as rubber bumpers, resilient buffers, hinges and latches shall be excluded from the determination of the most rearward point at the rear extremity.

Before the application of the test forces, the maximum allowed horizontal distance of a single, a segmented or an inclined cross-member of a RUPD is 100 mm between the rear of the cross-member measured at the most forward point and the rear of the cross-member measured at the most rearward point, measured in the longitudinal plane of the vehicle.

Part III, Approval of a vehicle with regard to its rear underrun protection (RUP),

Article 25.3, Amend to read:

For vehicles of categories M, N1, N2 with a maximum mass not exceeding 8 t, O1 and O2, the RUP shall be situated as close to the rear of the vehicle as possible. The maximum horizontal distance between the rear of the device and the most rearward point at the rear extremity of the vehicle, including any platform lift system, does not exceed 400 mm measured to the rear of the cross-member and recorded during the test when the test forces are applied.

For vehicles of categories N2 with a maximum mass exceeding 8 t, N3, and vehicles of categories O3 and O4, equipped with a platform lift **and access ramps** or being designed as a tipping trailer, the same requirement as above applies; however, for vehicles of these categories, the horizontal distance shall not exceed 300 mm measured to the rear of the cross-member before the test forces are applied.

For RUP for vehicles of categories O₃ and O₄, without any platform lift system **or access ramps** and not being designed as a tipping-trailer, the maximum horizontal distance is reduced to 200 mm before and 300 mm during the test when the test forces are applied. In any case nonstructural protrusions such as tail lamps and those of less than 50 mm of size in any direction, such as rubber bumpers, resilient buffers, hinges and latches shall be excluded from the determination of the most rearward point at the rear extremity.

Before the application of the test forces the maximum allowed horizontal distance of a single, a segmented or an inclined cross-member of a RUPD is 100 mm between the rear of the cross-member measured at the most forward point and the rear of the cross-member measured at the most rearward point, measured in the longitudinal plane of the vehicle.

II. Justification

In EU Commission Regulation No. 1230/2012 for masses and dimensions of motor vehicles and their trailers, the platform lift, access ramps and similar equipment are excluded for the determination of the vehicle length (see appendix 1, table 1, item 9 (max 300mm)). The RUPD is not excluded for the determination of the vehicle length.

The installation requirements for the RUPD in ECE R58.03;

General: The device shall be so fitted that the horizontal distance between the rear of the cross-member of the device and the most rearward point at the rear extremity of the vehicle, including any platform lift system, does not exceed 400 mm diminished by the largest total deformation

Additional: (1) For vehicles of categories N2 with a maximum mass exceeding 8 t, N3, and vehicles of categories O3 and O4, equipped with a platform lift or being designed as a tipping trailer, the same requirement as above applies; however, for vehicles of these categories, the horizontal distance shall not exceed 300 mm measured to the rear of the cross-member before the test forces are applied

(2) For vehicles of categories O3 and O4, without any platform lift system and not being designed as a tipping-trailer, the maximum horizontal distances are reduced to 200 mm before the test forces have been applied.

We believe that the additional requirement (1) is meant to make it possible to exclude the platform lift system (max 300 mm.) in the vehicle length in relation to EU Regulation 1230/2012. the “access ramps and similar equipment” seems to be forgotten.

The problem that now occurs has been illustrated in figure 1 below.

In situation (A)

A trailer equipped with access ramps and an ECE R58.02 approved RUPD. The vehicle complies with EU Regulation 1230/2012 as the vehicle length is max. 12 meter. The access ramps are excluded for 300 mm in length.

In situation (B)

The same trailer equipped with access ramps but now an ECE R58.03 approved RUPD. Vehicle does not comply with EU Regulation 1230/2012 as the vehicle length now is 12,1 meter. The access ramps are excluded for 300 mm in length but because the RUPD is now installed as additional requirement (2) the same vehicle becomes 12,1 meter.

By amending the articles 16.4. and 25.3. as suggested we have a common relation between ECE R58.03 and EU Regulation 1230/2012.

Figure 1.

