Proposal for supplement 2 to the 10 series of amendments to UN Regulation No. 16 (Safety-belts)

The text reproduced below was prepared by the expert from Germany on behalf of the TF GRSP AVRS, to enable the application of the regulation to vehicles equipped with an ADS[F-2]. The modifications to the existing text of the UN Regulation are marked in bold for new or strikethrough for deleted characters.

I. Proposal

Insert a new paragraph 0., to read:

- "0. Introduction
- 0.1. For supplement 2 to the 09 series and for supplement 2 to the 10 series of amendments:
- 0.1.1. The Regulation is amended to account for vehicles of category X. The scope is updated to reflect that this Regulation does not apply to vehicles of category Y, since no occupants are inside the vehicle under any circumstances.
- 0.1.2. The Regulation was originally drafted for vehicles with driver and manual driving controls and it is the intention of this new amendment to keep the spirit of the regulation and to extend its application to vehicles without driver and manual driving controls. In the absence of driver/manual driving controls, provisions related to them shall not be taken into account if not already covered by this amendment.
- 0.1.3. In case of vehicles with an ADS where those vehicles are also equipped with a manual driving mode operating at a speed of more than 6 km/h it is expected that in the manual driving mode the technical requirements can be applied as they would for a conventional vehicle. In a mode where an ADS feature is active the relevant ADS requirements have to be fulfilled."

Paragraph 1., amend to read:

"1. Scope

This Regulation applies to:

- 1.1. Safety-belts and restraint systems which are intended for separate use, i.e. as individual fittings, by persons of adult build occupying forward-facing, rearward-facing and side-facing seats, and are designed for installation in vehicles of categories M, N, O, L₂, L₄, L₅, L₆, L₇ and T ¹;
- 1.2. At the request of the manufacturer, it also applies to safety-belts designated for installation on side-facing seats in vehicles of category M_3 (Class II, III or B^1)."

This Regulation does not apply to vehicles of category Y."

Paragraph 1., footnote 1, amend to read:

"1 As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.78, para. 2 - https://unece.org/transport/vehicle-regulations/wp29/resolutions"

Paragraph 2.15.1., amend to read:

"2.15.1. "A front passenger seat" means any seat where the "foremost H-point" of the seat in question is in or in front of the vertical transverse plane through the

1

driver's R-point. For vehicles of category X, the "R" point of the most forward passenger seat shall be taken instead of the R-point of the driver's seat."

[Insert new paragraphs 2.26. to 2.27., to read:

- "2.26. "ADS feature of type 1 (ADSF-1)" means an ADS¹ feature which includes an ADS fallback response requiring a fallback user.
- 2.27. "ADS feature of type 2 (ADSF-2)" means an ADS feature which does not include an ADS fallback response requiring a fallback user."]

Paragraph 6.2.5.3.1.5., amend to read:

"6.2.5.3.1.5. In cases where the operation of a retractor depends on an external signal or power source, the design shall ensure that the retractor locks automatically upon failure or interruption of that signal or power source. However, this requirement need not be met in the case of a retractor with multiple sensitivities, provided only one sensitivity is dependent on an external signal or power source and the failure of the signal or power source is indicated to the driver by optical and/or acoustical means or whilst an ADS[F-2] [feature] is active, transmitted as a logic signal to the ADS."

Paragraph 6.4.1.4.1.1., amend to read:

"6.4.1.4.1.1. In the case of an occupant having a steering control in front the driver, contact of the chest with the steering control assembly would be allowed, if the latter meets the requirements of UN Regulation No. 12 and provided contact does not occur at a speed higher than 24 km/h. For this assessment the seat shall be considered to be in the positions specified in paragraph 7.7.1.5. below."

Paragraph 7.10.1., amend to read:

- "7.10.1. The test report shall record the results of all the tests in paragraph 7. above and in particular:
 - (a) The type of device used for the test (acceleration or deceleration device);
 - (b) The total velocity change;
 - (c) The trolley speed immediately before impact only for deceleration trolleys;
 - (d) The acceleration or deceleration curve during all the velocity change of the trolley;
 - (e) The maximum forward displacement of the manikin;
 - (f) The place if it can be varied occupied by the buckle during the test;
 - (g) The buckle-opening force;
 - (h) Any failure or breakage;
 - (i) For any restraint system other than the **one for the** driver the contour of the contact should be evaluated versus the movement of the manikin in the sled by the technical service in this report."

Annex 9, paragraph 2., amend to read:

"2. In the case of safety-belts fitted with a type 4N retractor, it shall be indicated in the installation instructions and on any packaging that this belt is not suitable for installation in motor vehicles used for the carriage of passengers having not more than nine seats, including that of the driver."

II. Justification

See paragraph 0. in the proposal.