

Proposal for supplement 4 to the 02 series of amendments to UN Regulation No. 135 (Pole side impact)

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 [feature type 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 4 to the 02 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:

1.1. This Regulation applies to:

- (a) Category M₁¹ vehicles with a gross vehicle mass of up to 3,500 kg; and
- (b) Category N₁ vehicles where, when positioned on a level surface with all tyres inflated as recommended by the vehicle manufacturer and the vehicle in unladen condition as defined in paragraph 2.24., the acute angle α (α), measured, between a horizontal plane passing through the centre of the front axle and an angular transverse plane passing through the centre of the front axle and the R-point of the driver's seat, as illustrated below, is less than 22.0 degrees; or the ratio between the distance from the driver's R-point to the centre of the rear axle (L101-L114) and the centre of the front axle and the driver's R-point (L114) is less than 1.30.2. **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.**

1.2. Other Category M and Category N vehicles with a gross vehicle mass of up to 4,500 kg may also be approved if requested by the manufacturer

1.3. 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~~⁷⁸, para. 2 - <https://unece.org/transport/vehicle-regulations/wp29/resolutions>”

Paragraph 2.2., amend to read:

- “2.2. “Back Door” is a door or door system on the back end of a motor vehicle through which ~~passengers~~ **occupant** can enter or depart the vehicle or cargo can be loaded or unloaded. It does not include:
- (a) A trunk lid; or
 - (b) A door or window that is composed entirely of glazing material and whose latches and/or hinge systems are attached directly to the glazing material.

Paragraph 2.9., amend to read:

- “2.9. “Hinge” is a device used to position the door relative to the body structure and control the path of the door swing for ~~passengers~~ **occupant** ingress and egress.”

Paragraph 2.28., amend to read:

- “2.28. “Vehicle width” means the distance between two planes parallel to the longitudinal median plane (of the vehicle) and touching the vehicle on either side of the said plane but excluding the rear-view mirrors, side marker lamps, tyre pressure indicators, direction indicator lamps, position lamps, flexible mud-guards, **sensors for Advanced Driver Assistance Systems, sensors for Automated Driving Systems**, and the deflected part of the tyre side-walls immediately above the point of contact with the ground.”

Paragraph 5.1.1., amend to read:

- “5.1.1. With the exception of vehicle types designed as described in paragraph 5.1.2. below, the approval test shall be conducted such that the vehicle impacts the pole on the driver's side. **In case of vehicles of category X, the manufacturer shall propose the tested side. For all vehicle categories, the procedure under 5.1.2.1 and 5.1.2.2 shall apply.**”

Paragraph 5.1.2.1., amend to read:

- “5.1.2.1. The Approval Authority will require the approval test to be conducted such that the vehicle impacts the pole on the ~~driver's~~ side **defined under paragraph 5.1.1.** where:
- 5.1.2.1.1. This is considered the least favourable side; or
 - 5.1.2.1.2. The manufacturer provides additional information (e.g. manufacturer's in house test data) sufficient to satisfy the Approval Authority that the design differences on each side of the vehicle do not appreciably affect performance in a test conducted in accordance with Annex 3.”

Paragraph 5.1.2.2., amend to read:

- “5.1.2.2. The Approval Authority will require the approval test to be conducted such that the vehicle impacts the pole on the side opposite the ~~driver's~~ side **defined under paragraph 5.1.1.**, where this is considered the least favourable side.”

Annex 3, paragraph 2.14., amend to read:

- “2.14. “Vehicle master control switch” means the device by which the vehicle's onboard electronics system is brought from being switched off, as is the case when the vehicle is parked without ~~the~~ **a** driver present, to the normal operating mode.”

II. Justification

See paragraph 0. in the proposal.
