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World Forum for Harmonization of Vehicle Regulations**Working Party on Passive Safety****Seventy-eighth session**

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Item 20 of the provisional agenda

**Collective amendments to UN Regulations
that impact automated vehicles****Proposal for supplement 4 to the 04 series of amendments to
UN Regulation No. 127 (Pedestrian safety performance)****Submitted by the expert from Germany on behalf of the GRSP Task
Force on Automated Vehicles Regulation Screening (TF-AVRS) ***

The text reproduced below was prepared by the expert from Germany on behalf of TF-AVRS, to enable the application of the regulation to vehicles equipped with an Automated Driving System (ADS). The modifications to the existing text of the UN Regulation are marked in bold for new or strikethrough for deleted characters. This document is superseding informal document GRSP-77-67.

* In accordance with the programme of work of the Inland Transport Committee for 2025 as outlined in proposed programme budget for 2025 (A/79/6 (Sect. 20), table 20.6), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



I. Proposal

Insert a new paragraph 0., to read:

- “0. Introduction
- 0.1. For supplement 4 to the 04 series of amendments:
 - 0.1.1. The Regulation is amended to account for vehicles of category X¹. Vehicles of category Y¹ are not in the scope of this Regulation.
 - 0.1.2. The Regulation was originally drafted for vehicles with driver and manual driving controls. 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 without manual driving controls inside the vehicle. In the absence of driver/manual driving controls in the vehicle, provisions related to them shall not be taken into account if not already covered by this amendment.
 - 0.1.3. In case of vehicles equipped with an Automated Driving System (ADS)¹ other than vehicles of categories X and Y, in the manual driving mode no special provisions or exemptions apply. In a mode where an ADS feature is active the relevant ADS requirements apply.”

Paragraph 1., amend to read:

- “1. This Regulation applies to motor vehicles of categories M₁ and N₁.¹

However, vehicles of category N₁ where the driver’s position "R-point" is either forward of the front axle or longitudinally rearwards of the front axle transverse centreline by a maximum of 1,100 mm, are exempted from the requirements of this Regulation. **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.**

This Regulation does not apply to vehicles of category M₁ above 2,500 kg maximum mass and which are derived from N₁ category vehicles, and where the driver’s position "R-point" is either forward of the front axle or longitudinally rearwards of the front axle transverse centreline by a maximum of 1,100 mm; for these vehicle categories Contracting Parties may continue to apply the requirements already in force for that purpose at the time of acceding to this Regulation. **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.**

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

Paragraph 2.27., amend to read:

- “2.27. "Mass in running order" means the nominal mass of a vehicle as determined by the sum of unladen vehicle mass and driver’s mass, **if applicable.**”

Paragraph 2.29., amend to read:

- “2.29. "Normal ride attitude" means the vehicle positioned on a flat horizontal surface with its mass in running order, with the tyres inflated to manufacturer recommended pressures, the front wheels in the straight-ahead position and with a passenger mass placed on the front passenger seat. The front seats are

placed at the nominal mid-track position. The suspension shall be set in normal running condition as specified by the manufacturer for a speed of 40 km/h.

For vehicles of category X, two passenger masses are placed on the front seats instead of the driver's and one passenger masses.”

Paragraph 5.3.1.2., amend to read:

“5.3.1.2. ARHSS can be engaged for use in exceptional low speed use cases (e.g. flood/heavy snow) on public roads. In such cases, ARHSS shall automatically return to the normal ride height when the vehicle speed exceeds 25 km/h or when the system is manually disengaged by the driver **or controlled by the ADS**. If an ARHSS for use in exceptional low speed use cases is engaged, it is indicated to the driver at least by an optical warning signal.”

II. Justification

See paragraph 0. in the proposal.
