

Transmitted by the experts of TF AVRS

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Proposal to replace ECE/TRANS/WP.29/GRBP/2025/24

Submitted by the Task Force on Automated Vehicles Regulation Screening

The text reproduced below was prepared by the Task Force on Automated Vehicles Regulation Screening (TF AVRS) in order to make the requirements of UN Regulation No. 138 fit for approval of Automated Driving Systems. The modifications to the current text of the UN Regulation are marked in bold for new or strikethrough for deleted characters.

I. Proposal

Table of Content, add a new annex to read

“5 **Special provisions for the testing of vehicles equipped with an ADS.....**”

Paragraphs 2.7. and 2.8., amend to read:

“2.7. “*Mass in running order*” means the mass of the vehicle, with its fuel tank(s) filled to at least 90 % of its or their capacity/ies, ~~including the mass of the driver (75 kg)~~, of the fuel and liquids, fitted with the standard equipment in accordance with the manufacturer’s specifications and, when they are fitted, the mass of the bodywork, the cabin, the coupling and the spare wheel(s) as well as the tools, **and the mass of the driver (75 kg) except in the case of vehicles of category X or category Y.**

2.8. “*Pause function*” means a mechanism to enable the driver **or ADS (as defined in paragraph 2.13.)** to halt the operation of an AVAS.”

Insert new paragraphs 2.13. to 2.17. to read:

“2.13. “*Automated Driving System (ADS)*” means the vehicle hardware and software that are collectively capable of performing the entire Dynamic Driving Task (DDT) on a sustained basis.¹

2.14. “*Dynamic Driving Task (DDT)*” means the real-time operational and tactical functions required to operate the vehicle¹.

~~2.15 “*Dual control vehicles*” are vehicles equipped with an ADS where the DDT can be performed by either the ADS or a driver, including at speeds exceeding 6 km/h.~~

2.15. “*Bi-directional vehicle*” means a vehicle that can operate in two opposite forward directions¹.

2.16. “*Forward direction*” (of a vehicle) means a direction that is intended to be used as main travelling direction of the vehicle¹.

Paragraph 2.13. (former), renumber to 2.18. and amend to read:

“~~2.17.2.13~~ Symbols and abbreviated terms and the paragraph in which they are first used.”

Paragraph 6.2.5., amend to read:

“6.2.5. ~~Driver-selectable~~ **Available** AVAS sounds

The vehicle manufacturer may define ~~alternative~~ **different available** sounds ~~which can be accepted by the driver~~. Each of these sounds shall be in compliance and approved with the provisions in paragraphs 6.2.1. to 6.2.4.

The compliance with paragraph 6.2.8., Tables 2a and 2b of non-tested sound modes during type approval in respect to Annex 3, paragraph 3.2.3. shall be confirmed by the manufacturer declaration (Annex 4).”

Annex 1, Addendum to the communication form, item 1.2.2., amend to read:

“1.2.2. No. of **available** AVAS sounds (1/2/3/...)”

Annex 3, paragraph 3.3.1, amend to read:

“3.3.1. General

For each operating condition, the vehicle can be tested either indoor or outdoor.

For constant speed and reversing tests the vehicle may be tested either in motion or in simulated operating condition. For simulated vehicle operation, signals shall be applied to the vehicle to simulate actual in-use operation.

If the vehicle is equipped with an internal combustion engine, it shall be turned off.

In the case of bi-directional vehicles, the measurements shall be conducted separately for each front plane of the vehicle and the requirements for forward driving apply to both forward directions.

If no reverse mode is available, the requirements of table 2b for reverse driving do not apply.

If one or more reverse modes are available, the requirements of table 2b for reverse driving apply to each of them and additional tests for reverse driving shall be conducted accordingly.”

Insert a new Annex 5 to read:

“Annex 5

Special provisions for the testing of vehicles equipped with an ADS

1. General

This Annex explains how to adapt UN-R138 to vehicles equipped with an ADS. It does not add nor remove any requirement.

2. Specifications

2.1 Preparations

When performing the tests of this regulation, the conditions prescribed in the Annexes shall be fulfilled.

Additional preparation of the test track, the vehicle or other equipment may be needed for vehicles equipped with an ADS. This additional preparation shall be approved by the Type Approval Authority and its designated Technical Service and described in the test report.

2.2 For vehicles equipped with an ADS, other than category X and category Y Dual Control Vehicles, it is sufficient to test either in the manual operation or in ADS operation when the two following conditions are fulfilled:

- the manufacturer declares that the vehicle is designed in such a way that there should be no difference in performance regardless of manual operation or ADS operation of the vehicle with regard to this Regulation;**
- the Type Approval Authority and its designated Technical Service agree to this single mode testing.**

2.3 Test procedure for vehicles of categories X and Y

- (a) When performing Methods (A) or (C), either the vehicle or the track or both shall be prepared to enable the test vehicle to fulfil the test conditions prescribed in Annex 3 of this regulation. Examples of preparations that could be used:
 - (i) the track might be prepared with additional lines, traffic signs and other measures.
 - (ii) the vehicle might have a test mode, be controlled by an operator in the vehicle or remote to drive the vehicle on the track.
- (b) When performing Methods (B) or (D) the simulated speed signal shall be used as described in Annex 3 of this Regulation.”

II. Justification

The objective of TF AVRS is to amend the UN Regulations in the purview of GRBP, where necessary, to make it possible for Automated Driving Systems (ADS) to meet the requirements of these Regulations. TF AVRS will not add new requirements to the UN Regulations in their current scope.

