

Draft Proposal for Revision 8 to the Consolidated Resolution on the Construction of Vehicles (R.E.3)

Submitted by the co-chairs of the Task Force on Automated Vehicle Categorisation (TF-AVC)*

The text produced below was prepared by the Task Force on Automated Vehicle Categorisation. It proposes to modify the document ECE/TRANS/WP.29/78/Rev.7 (Consolidated Resolution on the Construction of Vehicles (R.E.3)). The modifications to the existing text are indicated in red bold for new or red strikethrough for deleted characters.

* 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

Introduction, amend to read:

“Introduction

The text hereafter updates the recommendations of the Consolidated Resolution on the Construction of Vehicles and provides information on the legal texts under the framework of the 1958 Agreement (UN Regulations, Rules and specific requirements) applicable in the vehicle design, aiming the improvement of safety and the protection of the environment. Paragraphs 1. and 2. contain general definitions and the classification used in the documents referred. Paragraph 3. indicates the scope of the UN Regulation(s) and Rule(s). Tables of paragraphs 4. to 7. contain the main requirements for the construction of vehicles so far established and already included into UN Regulation(s) and Rule(s) by the World Forum. Similar requirements are grouped. For any requirement or group of requirements, references are made to the relevant UN Regulations, identified by the number allocated to them by the 1958 Agreement, to the still valid recommendations reproduced in paragraph 8. and to the standard annexes to UN Regulations reproduced in annexes to this Resolution. Annex 3 includes, as complementary information, an updated list of the distinguishing numbers allocated to Contracting Parties by the 1958 Agreement. Annex 4 includes the recommendation on market fuel quality, Annex 5 contains the design principles for control systems of Advanced Driver Assistance Systems (ADAS), Annex 6 contains the guideline on cybersecurity and data protection and Annex 7 contains provisions on software identification numbers.

Revision 8 updates R.E.3 by supplementing Section 1 and by amending Section 2 to introduce two new vehicle categories X and Y, and to make existing vehicle categories fit for the classification of vehicles equipped with Automated Driving Systems (ADS). These new categories aim to enable UN Regulations to set adapted technical requirements for automated vehicles with limited manual driving capabilities and/or without occupants.”

Title 1., amend to read:

1. **General Definitions of vehicles²**

Insert new paragraphs 1.16. and 1.17., to read:

- “1.16. “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.**
- 1.17. “Dynamic Driving Task (DDT)” means the real-time operational and tactical functions required to operate the vehicle.”**

Paragraphs 2.2. to 2.2.4., amend to read:

- “2.2. Category M - Power-driven vehicles having at least four wheels and used for the carriage of passengers.
- 2.2.1. “Category M_1 ”: Vehicles used for the carriage of passengers and comprising not more than ~~eight seats in addition to the driver’s seat~~ **nine seats**.
- 2.2.2. “Category M_2 ”: Vehicles used for the carriage of passengers, comprising more than ~~eight seats in addition to the driver’s seat~~ **nine seats**, and having a maximum mass not exceeding 5,000 kg.

² According to the Convention on Road Traffic of Vienna, 8 November 1968 and of the European Agreements supplementing that Convention, except paragraph 1.8., taken from OECD "Glossary of statistical terms".

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- 2.2.3. "Category M₃": Vehicles used for the carriage of passengers, comprising more than ~~eight seats in addition to the driver's seat~~ **nine seats**, and having a maximum mass exceeding 5,000 kg.
- 2.2.4. Vehicles of categories M₂ and M₃ belong to:
- 2.2.4.1. For vehicles having a capacity exceeding ~~22 passengers in addition to the driver~~ **23 occupants**, there are three classes of vehicles:
- 2.2.4.1.1. "Class I": Vehicles constructed with areas for standing passengers, to allow frequent passenger movement.
- 2.2.4.1.2. "Class II": Vehicles constructed principally for the carriage of seated passengers, and designed to allow the carriage of standing passengers in the gangway and/or in an area which does not exceed the space provided for two double seats.
- 2.2.4.1.3. "Class III": Vehicles constructed exclusively for the carriage of seated passengers.
- 2.2.4.1.4. A vehicle may be regarded as belonging in more than one class. In such a case it may be approved for each class to which it corresponds.
- 2.2.4.2. For vehicles having a capacity not exceeding ~~22 passengers in addition to the driver~~ **23 occupants**, there are two classes of vehicles:
- 2.2.4.2.1. "Class A": Vehicles designed to carry standing passengers; a vehicle of this class has seats and shall have provisions for standing passengers.
- 2.2.4.2.2. "Class B": Vehicles not designed to carry standing passengers; a vehicle of this class has no provision for standing passengers."

Paragraph 2.2.5.4., amend to read:

- "2.2.5.4. "Mass of a vehicle in running order" means the mass of an unladen vehicle with bodywork, and with coupling device in the case of a towing vehicle, or the mass of the chassis with cab if the manufacturer does not fit the bodywork and/or coupling device, including coolant, oils, 90 per cent of fuel, 100 per cent of other liquids except used waters, tools, spare wheel, driver (75 kg) **except in the case of vehicles of category X or category Y**, and, for buses and coaches, the mass of the crew member (75 kg) if there is a crew seat in the vehicle."

Paragraph 2.8.2.1., amend to read:

- "2.8.2.1. Vehicles in category N₁ with a maximum mass not exceeding 2,000 kg and vehicles in category M₁ shall be in running order, namely with coolant fluid, lubricants, fuel, tools, spare-wheel and, **except in the case of vehicles of category X or category Y**, a driver considered to weigh a standard 75 kg."

Insert new paragraphs 2.9., 2.10., 2.11., to read:

“2.9. Category X

2.9.1. Definition.

Category X vehicles are vehicles of categories M, N, L and T meeting all of the following conditions:

- (a) They are equipped with an ADS**
- (b) They are not capable of being driven manually at speeds exceeding 6 km/h**
- (c) They are designed to carry occupants**

2.10. Category Y

2.10.1. Definition.

Category Y vehicles are vehicles of categories N, L and T meeting all of the following conditions:

- (a) They are equipped with an ADS**
- (b) They are not capable of being driven manually at speeds exceeding 6 km/h**
- (c) They are not designed to carry occupants at any time**

2.11. Combined designations

Symbols M, N, L and T may be combined with symbols G, X and Y, as applicable. For example, a vehicle of category N₂ which meets the criteria of 2.10.1 may be designated as N₂Y; a vehicle of category M₁ which meets the criteria of 2.9.1 and is suited for off road use may be designated as M₁GX.”

Former Paragraphs 2.9. to 2.9.2.4., renumber to 2.12. to 2.12.2.4 and amend to read:

“2.912. Definition of type of bodywork (only for complete/completed vehicles)

The type of bodywork may be indicated by the following codification:

2.912.1. Passenger cars (M₁)

2.912.1.1. AA Saloon:

Standard ISO 3833:1977 term No. 3.1.1.1., but including also vehicles with more than 4 side windows.

2.912.1.2. AB Hatchback

Saloon (AA) with a hatch at the rear end of the vehicle.

2.912.1.3. AC Station Wagon (Estate car)

Standard ISO 3833:1977, term No. 3.1.1.4.

2.912.1.4. AD Coupé

Standard ISO 3833:1977 term No. 3.1.1.5.

2.912.1.5. AE Convertible

Standard ISO 3833:1977 term No. 3.1.1.6.

2.912.1.6. AF Multi-purpose vehicle

Motor vehicle other than those mentioned in AA to AC intended for carrying passengers and their luggage or goods, in a single compartment. However, if such a vehicle meets both of the following conditions it is not considered to be a vehicle of category M₁:

- (a) The number of seating positions ~~excluding the driver~~, is not more than ~~six~~ seven. A "seating position" shall be regarded as existing if the vehicle is provided with "accessible" seat anchorages. "Accessible"**

shall mean those anchorages to which can be used. In order to prevent anchorages being "*accessible*" the manufacturer shall physically obstruct their use, for example by welding over cover plates or by fitting similar permanent fixtures which cannot be removed by use of normally available tools; and

(b) $P - (M + N \times 68) > N \times 68$

[For category X vehicles:

$P - (M + N \times 68 + 7) > (N-1) \times 68]$

Where:

P = technically permissible maximum laden mass in kg

M = mass in running order in kg

N = number of seating positions excluding the driver's seating position, if any.

- 2.~~9~~12.2. Special purpose vehicles (M₁)
- 2.~~9~~12.2.1. SA Motor caravan: see paragraph 2.5.1.
- 2.~~9~~12.2.2. SB Armoured vehicle: see paragraph 2.5.2.
- 2.~~9~~12.2.3. SC Ambulance: see paragraph 2.5.3.
- 2.~~9~~12.2.4. SD Hearse: see paragraph 2.5.4."
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II. Justification

1. Paragraph 1. is amended to accommodate additional definitions for ADS and DDT. Both terms will be used in the proposed amended text of R.E.3. The definitions are aligned with the foreseen definitions for the new ADS Regulation. Therefore, the section should be renamed because the definitions now not only relate to vehicles.
2. Paragraphs 2.2.1., 2.2.2. and 2.2.3. are amended to accommodate potential new vehicle designs associated with vehicles of category X, which may not have a driver's seat.
3. Paragraphs 2.2.4.1. and 2.2.4.2. are amended to accommodate potential new vehicle designs associated with vehicles of category X, which may not have a driver. The total number of possible occupants has not been altered.
4. Paragraph 2.2.5.4. is amended to consider the case where no driver is present in the vehicle.
5. Paragraph 2.8.2.1. is amended to consider the case where no driver is present in the vehicle.
6. Paragraphs 2.9. and 2.10. are added to introduce category X and category Y vehicles. The introduction of these categories is requested by the GR screening task forces AVR/S/FADS to easily include or exclude specific requirements from existing UNRs.
7. Paragraph 2.11. is added to give an example of how category X and category Y vehicles can be combined with the existing categories e.g. M, N. This approach is consistent with the approach already taken in R.E.3.
8. Paragraph 2.12. is amended for editorial changes.
9. Paragraph 2.12.1.6. is amended to accommodate potential new vehicle designs associated with vehicles of category X and category Y, where a driver or driver's seating position may not be present.
10. [Paragraph 2.12.1.6. (b) is amended to accommodate category X vehicles and ensure that category X vehicles remain in the same vehicle category as their non-automated counterpart.]
11. The Task Force on Automated Vehicle Categorisation has amended R.E.3 to only consider vehicle category changes and any resultant consequences of such changes, to accommodate vehicle automation. There are other amendments which may need to be made more broadly in R.E.3, but which are not within the scope of this Task Force.
12. A detailed informal document GRVA-21-XX, explaining the changes and gathering questions and answers regarding this proposal, has been transmitted to GRVA by the Task Force on Automated Vehicle Categorisation.