

Proposal for supplement 2 to the 02 series of amendments to UN Regulation No. 137 (Frontal impact with focus on restraint systems)

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

Title, amend to read:

Uniform provisions concerning the approval of passenger cars in the event of a frontal collision with focus on the restraint system **and with regard to fuel system integrity and protection against electrical**

Insert a new paragraph 0., to read:

“0. Introduction

0.1. For supplement 2 to the 02 series of amendments:

0.1.1. The Regulation is amended to account for vehicles of category X. Vehicles of category Y with a maximum permissible mass < 2500 kg are not in the scope of this Regulation as this Regulation is focused on restraint systems. However, as UN Regulation No. 94 is limited to vehicles of category N1 with a maximum permissible mass of 2500 kg, vehicles of category Y are considered by this regulation, if their maximum permissible mass is between 2500 kg and 3500 kg. This ensures that vehicles of category Y have to show compliance with provisions on compatibility, fuel leakage and electric vehicle safety in case of a frontal impact.

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 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 vehicles of category M₁ with a maximum permissible mass not exceeding 3,500 kg and to vehicles of category N₁. This regulation does not apply to vehicles of category Y of a maximum permissible mass not exceeding 2500 kg.”

Paragraph 2.4.2., amend to read:

“2.4.2. The structure, dimensions, lines and materials of the part of the vehicle forward of the transverse plane through the "R" point of the driver's seat, in so far as they have a negative effect on the results of the impact test prescribed in 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."**

Paragraph 2.10., amend to read:

"2.10. "Passenger airbag" means an airbag assembly intended to protect occupant(s) in seats other than ~~the a~~ driver's in the event of a frontal collision."

Paragraph 5.2.3.1., amend to read:

"5.2.3.1. In the case of automatically activated door locking systems which are installed optionally and/or which can be de-activated ~~by the driver~~, this requirement shall be verified by using one of the following 2 test procedures, at the choice of the manufacturer:"

Paragraph 5.2.4.2., amend to read:

"5.2.4.2. In the case of vehicles equipped with automatically activated door locking systems which are installed optionally and/or which can be de-activated ~~by the driver~~, this requirement shall be verified by using one of the following 2 test procedures, at the choice of the manufacturer:"

[Insert new paragraph 5.2.9., to read:

"5.2.9. Insert compatibility criterion for category Y vehicles."]

Paragraph 6.1., amend to read:

"6.1. For a vehicle fitted with a passenger airbag intended to protect occupants other than ~~the a~~ driver, this information shall consist of the warning label described in paragraph 6.2. below."

Annex 3, paragraph 1.4.3.5.2., amend to read:

"1.4.3.5.2.2. The side doors on ~~the driver~~ **one** side shall be unlocked and the system overridden for these doors; for the side doors on the **other vehicle passenger** side, the system may be activated in order to lock these doors automatically before the moment of impact. At the choice of the manufacturer, these doors shall be locked manually before the start of propulsion of the vehicle. ~~This test is deemed to be fulfilled, if the unlocked and locked doors are reversed.~~"

Annex 3, paragraph 2.1.1., amend to read:

"2.1.1. A dummy corresponding to the specifications for Hybrid III fiftieth percentile male dummy meeting the specifications for its adjustment shall be installed in the driver seat in accordance with the conditions set out in Annex 5. A dummy corresponding to the specifications for Hybrid III fifth percentile female dummy¹ meeting the specifications for its adjustment shall be installed in the **front** passenger seat in accordance with the conditions set out in Annex 5. **For vehicles of category X, the manufacturer shall propose the position of the dummy on the front seat, provided that both dummies, the Hybrid III fiftieth percentile male dummy and the Hybrid III fifth percentile female dummy are used.**"

II. Justification

See paragraph 0. in the proposal.