

Proposal for Supplement 02 to the 01 series of amendments to Regulation No. 131

Submitted by the experts from the International Organization of Motor Vehicle Manufacturers

(The modifications to the current text of the Regulation are marked in **bold** characters)

I. Proposal

Paragraph 1., amend to read (addition of a reference to a new footnote No.2 and of a new footnote No.2):

"1. Scope and purpose

This Regulation applies to the approval of vehicles of category^{1,2} M₂, N₂, M₃ and N₃¹ with regard to an on-board system to avoid or mitigate the severity of a rear-end in lane collision.

¹ As defined in section 2 of the Consolidated Resolution on the Construction of Vehicles (R.E.3) (document TRANS/WP.29/78/Rev.2, para.2)

² **Contracting Parties applying this Regulation on a mandatory basis may exempt from mandatory application of this Regulation vehicle categories from the following list, taking into account e.g.:**

- the results of studies indicating that implementation of such kind of systems is technically not always feasible on certain vehicles (e.g. due to technical and physical constraints which make it impossible to install the obstacle detection equipment in a way that would ensure its reliable functioning),
- that some specific vehicle categories would seldom be used in the conditions where those systems become effective, or
- for other appropriate reasons like particular usage related to the dedicated purpose of the vehicle.

List of vehicle categories:

- (1) vehicles not equipped with a pneumatic rear-axle suspension;
- (2) category N2 tractor for semi-trailer with a maximum mass between 3,5 tonnes and 8 tonnes;
- (3) categories M₂ and M₃ vehicles of Class A, Class I and Class II;
- (4) category M₃ articulated buses of Class A, Class I and Class II;
- (5) off-road vehicles of categories M₂, M₃, N₂ and N₃ as referred to in paragraphs 2.8.1.2. and 2.8.1.3. of R.E.3.;
- (6) special purpose vehicles of categories M₂, M₃, N₂ and N₃ as referred to in paragraph 2.5 of R.E.3.;
- (7) vehicles of categories M₂, M₃, N₂ and N₃ with more than three axles and a maximum wheel diameter code exceeding 19.5 and with a maximum mass exceeding 25 t."

II. Justification

OICA believes that including the exemptions as a footnote in the UN regulation gives a valuable recommendation to the Contracting Parties applying this regulation that a proper cost/benefits analysis can provide relevant data for a consistent and appropriate political decision.

Vehicles not equipped with a pneumatic rear-axle suspension

Vehicles not equipped with a pneumatic rear-axle suspension have high pitch angle variations which are limiting and affecting the field of view of the sensors.

Category N2 tractor for semi-trailer with a maximum mass between 3,5 tonnes and 8 tonnes;

These vehicles are typical vehicles not much distributed because they have particular utilizations. Due to this rarity it is currently difficult to equip them with AEBS in an economically efficient way.

Category M₃ vehicles of Class A, Class I and Class II;

Category M₃ articulated buses of Class A, Class I and Class II

AEBS is most efficient for “long distance trucks and coaches” travelling on highways. AEBS has been primarily designed to support the driver during monotone driving conditions on highways.

Class A, Class I and Class II buses are mostly used in urban or sub-urban areas and rather seldom on highways. Thus AEBS is likely not to be as efficient as on a long distance truck or coach. This is even more the case for articulated buses.

Moreover, such City buses are also designed for conveying standing passengers and are usually not equipped with seatbelts. In cases of unintended interventions of AEBS the standing passengers are more endangered than the belted and seated ones. Despite such unintended interventions will be very seldom, the consequences of such a situation are more critical than for long distance trucks and coaches.

As information, the EU decided on exemptions on the basis of different contributions, which led to the exemptions of the following vehicles: categories M2 and M3 of Class A, Class I and Class II, and articulated buses of category M3 of Class A, Class I and Class II.

Off-road vehicles of categories M₃, N₂ and N₃ as referred to in paragraphs 2.8.1.2. and 2.8.1.3. of R.E.3.

Off road-vehicles are very seldom used on highways but mainly used in off-road areas and/or on graveled tracks. They are normally driven at lower speeds than on highway, in such conditions that monotone driving is not expected. In addition, Environment conditions for these vehicles (dust, mud, humidity etc.) can negatively affect the sensor. Bad driving surfaces (gravel etc.) are expected to quickly damage the sensor and may affect the whole system robustness. Last is that Off-road vehicles are designed for off-road conditions, and therefore have a high chassis height which might cause problems to install the sensor in accordance with the supplier recommendations.

Special purpose vehicles of categories M₃, N₂ and N₃ as referred to in paragraph 2.5 of R.E.3.

On special purpose vehicles, installation of the sensor is often not possible (snow plows, front pumps, external devices at or on the bumper etc.) and cannot fulfill the suppliers’ specifications for the installation of the sensor. Typically, these vehicles have a low mileage for a high number of operating hours.

Vehicles of categories M₃, N₂ and N₃ with more than three axles and a maximum wheel diameter code exceeding 19.5 and with a maximum mass exceeding 25 t

Vehicles with more than 3 axles in the EU are often construction vehicles, which are seldom used on highways and rarely in conditions where AEBS would be the most efficient. Moreover, the environment conditions for these construction vehicles can negatively affect the sensor, in a similar way as for off road vehicles. 4 axle vehicles in Japan are mostly used for long haulage transport, thus are excluded from the recommendation.