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PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 39
(Speedometer equipment)

Transmitted by the Expert from Sweden

Note: The text reproduced below was prepared by the expert from Sweden in order to harmonize the speedometer requirements with those of the European Directives and to adapt it to technical progress. It is based on document TRANS/WP.29/GRSG/1999/14 and the proposed European Community Directive for speedometers for two- or three-wheel motor vehicles. It supersedes document TRANS/WP.29/GRSG/1999/14.

Note: This document is distributed to the Experts on General Safety Provisions only

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A. PROPOSAL

Paragraph 1., amend to read:

" a maximum design speed exceeding 25 km/h."

Paragraphs 2.2. to 2.2.3., amend to read:

"2.2. "type of vehicle in respect of its speedometer" means vehicles which do not among themselves display any essential differences, where those differences can apply, in particular, to the following:"

2.2.1. the size designation of the tyres chosen from the range of tyres normally fitted;

2.2.2. the overall transmission ratio, including any reduction drives, to the speedometer;

2.2.3. the type of speedometer as characterised by:

2.2.3.1. the tolerances of the speedometer's measuring mechanism;

2.2.3.2. the technical constant of the speedometer;

2.2.3.3. the range of speeds displayed."

Insert new paragraphs 2.5.1. and 2.5.2., to read:

"2.5.1. "tolerances of the speedometer's measuring mechanism" shall mean the accuracy of the speedometer instrument itself, expressed as the upper and the lower speed indication limits for a range of speed inputs;

2.5.2. "technical constant of the speedometer" shall mean the relationship between the input revolutions or pulses per minute and a specified displayed speed;"

Paragraph 4.4.1., footnote 1/, amend to read:

"....., 24 for Ireland, 25 for Croatia,, 32 for Latvia, 33 (vacant), 34 for Bulgaria, 35-36 (vacant), 37 for Turkey, 38-39 (vacant), 40 for The former Yugoslav Republic of Macedonia, 41 (vacant), 42 for the European Community (Approvals are granted by its Member States using their respective ECE symbol) and 43 for Japan. Subsequent numbers shall be assigned to other countries in the chronological order in which they ratify or accede to the Agreement Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of

these Prescriptions, and the numbers thus assigned shall be communicated by the Secretary-General of the United Nations to the Contracting Parties to the Agreement."

Paragraph 5.1., amend to read:

"5.1. The dial of the speedometer must be located within the direct field of view of the driver and must be clearly legible both day and night. The range of speeds displayed must be sufficiently wide to include the maximum speed of this type of vehicle as stated by the manufacturer."

Insert a new paragraph 5.1.1., to read:

"5.1.1. Where the speedometer includes a dial instead of a digital readout that dial must be clearly graduated."

Paragraph 5.1.1. (former), renumber as paragraph 5.1.2. and amend to read:

"5.1.2. In the case of speedometers intended for vehicles of categories M, N, and L₂, L₃, L₄ and L₅ the graduation shall be 1, 2, 5 or 10 km/h. The numerical values of the speed shall be indicated on the dial as follows: when the highest value on the dial does not exceed 200 km/h, speed values shall be indicated at intervals not exceeding 20 km/h. When the maximum value on the dial exceeds 200 km/h, then the speed values shall be indicated at intervals not exceeding 30 km/h. The indicated numerical speed value intervals need not be uniform."

Insert new paragraphs 5.1.3. and 5.1.3.1., to read:

"5.1.3. In the case of speedometers intended for vehicles of category L₁ (mopeds) the dial readings must not exceed 80 km/h. The graduation shall be 1, 2, 5 or 10 km/h and the marked numerical values of the speed indicated shall not exceed 10 km/h. The indicated numerical speed value intervals need not be uniform.

5.1.3.1. In addition, the dial must show the speed of 45 km/h clearly and 25 km/h where the speedometer is intended for fitting to a vehicle of category L₁ having a maximum design speed not exceeding 25 km/h."

Paragraph 5.1.2. (former), renumber as paragraph 5.1.4. and amend to read:

"5.1.4. In the case of vehicles of categories M, N, and L₂, L₃, L₄ and L₅ manufactured for sale in any country where imperial units are used, the speedometer shall also be marked in mph (miles per hour); the graduation shall be of 1, 2, 5 or 10 mph. The numerical values of the speed shall be indicated on the dial at intervals not exceeding 20 mph and commencing at 10 or 20 mph. The indicated numerical speed value intervals need not be uniform."

Insert new paragraphs 5.1.5 and 5.1.5.1., to read:

"5.1.5. In the case of vehicles of categories L₁ (mopeds) manufactured for sale in any country where imperial units are used, the speedometer shall also be marked in mph (miles per hour); the graduation shall be of 1, 2, 5 or 10 mph. The highest value indicated on the dial shall not exceed 50 mph. The numerical values of the speed shall be indicated on the dial at intervals not exceeding 10 mph. The indicated numerical speed value intervals need not be uniform.

5.1.5.1. In addition, the dial must show the speed of [30] mph clearly and 15 mph where the speedometer is intended for fitting to a vehicle of category L₁ having a maximum design speed not exceeding 15 mph."

Paragraph 5.2.1., amend to read:

"5.2.1. The tyres will be one of the types normally fitted to the vehicle as defined in paragraph 2.3. of this Regulation. A test will have to be carried out for each type of speedometer intended to be fitted by the manufacturer."

Paragraph 5.2.5., amend to read:

"5.2.5. The vehicle is tested at the following speeds:

Maximum design speed (V _{max}) of the vehicle specified by the vehicle manufacturer (km/h)	Test speed (km/h)
V _{max} # 45	80 % of V _{max}
45 < V _{max} # 100	40 and 80 % V _{max} (if the resulting test speed is \$ 55)
100 < V _{max} # 150	40, 80 and 80% V _{max} (if the resulting test speed is \$ 100)
150 < v _{max}	40, 80 and 120

Paragraph 5.2.6., amend to read:

"..... used for measuring the actual vehicle speed"

Paragraph 5.2.6.2., amend to read:

"..... at least 2 m. In the case of a speedometer intended for mopeds, the test may be carried out on rollers with a diameter of at least 400 mm."

Paragraph 5.3., amend to read:

- "5.3. The speed indicated must never be less than the actual speed of the vehicle. At the test speeds specified in paragraph 5.2.5 above and between these speeds, there shall be the following relationship between the speed indicated on the dial of the speedometer (V_1) and the actual speed (V_2).

In the case of vehicles of categories M and N:

$$0 \# (V_1 - V_2) \# 0.1V_2$$

In the case of vehicles of categories L:

$$0 \# (V_1 - V_2) \# 0.1V_2 + 2 \text{ km/h}$$

Paragraphs 7.1 to 7.4., amend to read:

- "7.1. The conformity of production procedures shall comply with those set out in the Agreement, Appendix 2 (E/ECE/324-E/ECE/TRANS/505/Rev.2), with the following requirements:
- 7.2. Every vehicle approved under this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements of the relevant part(s) of this Regulation.
- 7.3. For each type of vehicle sufficient checks are carried out regarding the speedometer equipment and its installation; in particular, for each type of vehicle at least the test prescribed in annex 3 to this Regulation shall be carried out.
- 7.4. The authority, which has granted type approval, may at any time verify the conformity control methods applied in each production facility. The normal frequency of these verifications shall be once every two years."

Annex 3. paragraph 2., amend to read:

"2. Requirements

The production shall be deemed to conform to this Regulation if the following relationship between the speed indicated on the dial of the speedometer (V_1) and the actual speed (V_2) is observed:

In the case of vehicles of categories M and N:

$$0 \# (V_1 - V_2) \# 0.1V_2 + 2 \text{ km/h};$$

In the case of vehicles from categories L:

$$0 \# (V_1 - V_2) \# 0.1V_2 + 4 \text{ km/h};"$$

* * *

B. JUSTIFICATION

Re. para. 1.: To amend the scope to cover mopeds.

Re. para. 2.2. to 2.2.3.3.: To align with proposed European Community Directive for two- and three-wheel motor vehicles.

Re. para. 2.5.1. to 2.5.2.: To align with proposed European Community Directive for two- and three-wheel motor vehicles.

Re. para. 5.1.1.: To align with proposed European Community Directive for two- and three-wheel motor vehicles.

Re. para. 5.1.2.: Clarification that it is the numerical value, which shall be indicated.

Re. para. 5.1.3. and 5.1.3.1.: To add specific requirements for low speed vehicles (mopeds) and to align with proposed European Community Directive for two- and three-wheel motor vehicles.

Re. para 5.1.4.: Renumbering and clarification that it is the numerical value, which shall be indicated.

Re. paras. 5.1.5. and 5.1.5.1.: To add specific requirements for low speed vehicles (mopeds) and to align with proposed European Community Directive for two- and three-wheel motor vehicles.

Re. para. 5.2.1.: To align with proposed European Community Directive for two- and three-wheel motor vehicles.

Re. para. 5.2.5.: To add test requirements for the extended scope.

Re. para 5.2.6.: To align with proposed European Community Directive for two- and three-wheel motor vehicles.

Re. para. 5.2.6.2.: To align with proposed European Community Directive for two- and three-wheel motor vehicles.

Re. para. 5.3.: The formula is changed to make an improved relationship between the speed indicated on the speedometer (V_1) and the actual speed of the vehicle (V_2). The requirements for four-wheel vehicle and two- and three-wheel motor vehicle are separated.

Re. para. 7.: To align with the text set out in the Agreement, appendix 2 (E/ECE/324-ECE/TRANS/505/Rev.2).

Re. annex 3, para 2.: The formula is changed to make an improved relationship between the speed indicated on the speedometer (V_1) and the actual speed of the vehicle (V_2). The requirements for four-wheel vehicles and two- and three-wheel motor vehicles are separated.
