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DRAFT SUPPLEMENT 1 TO REGULATION No. 89

(Speed limitation devices)

Note: The text reproduced below was adopted by the Administrative Committee (AC.1) of the amended 1958 Agreement at its nineteenth session, following the recommendation by WP.29 at its one-hundred-and-twenty-fifth session. It is based on document TRANS/WP.29/2001/38, with some editorial corrections done by the secretariat (TRANS/WP.29/815, para. 140).

The title, amend to read:

"UNIFORM PRESCRIPTIONS FOR APPROVAL OF:

- I. ... maximum speed or their adjustable speed limitation function.
- II. ... speed limiting device (SLD) or adjustable speed limitation device (ASLD) of an approved type.
- III. ... (SLD) and adjustable speed limitation device (ASLD)."

The table of contents, insert a new annex 6, to read:

"Annex 6: Tests and performance requirements for adjustable speed limitation devices (ASLD)"

Text of the Regulation,

Paragraph 1.1.1. and its footnote 2/, amend to read:

"1.1.1. Part I: ... SLD and to vehicles of categories M and N equipped with an adjustable speed limitation device ASLD which have not been separately approved ... fulfilling the function of an SLD or ASLD, as appropriate.

2/ It is recommended to apply this Regulation with respect to SLDs to vehicles over 10 tonnes for which the limitation speed is less than the general speed limitation."

Paragraphs 1.1.2. and 1.1.3., amend to read:

"1.1.2. Part II: ... N₂ and N₃ of SLDs and installation on vehicles of categories M and N of ASLD which have been type approved to Part III of this Regulation."

1.1.3. Part III: ... and ASLD which are intended to be fitted to vehicles of categories M and N."

Paragraph 1.2., amend to read.

"1.2. Purpose

The purpose of this Regulation is to limit the road speed of vehicles by means of a vehicle system which has the primary function of controlling the fuel feed to the engine or via the engine management."

Insert new paragraphs 1.2.1. to 1.2.3., to read:

"1.2.1. Vehicles of categories M₃, N₂ and N₃ shall be limited to a maximum speed achieved by a speed limitation device (SLD) or function (SLF).

1.2.2. Vehicles of categories M₁, N₁ and M₂ shall be limited to a speed voluntarily set by the driver by means of an adjustable speed limitation device (ASLD) or function (ASLF), when it is activated.

- 1.2.3. Vehicles of categories M_3 , N_2 and N_3 may in addition be equipped with a ASLD or a ASLF."

Insert new paragraphs 2.1.5. to 2.1.7., to read:

- "2.1.5. "Adjustable limit speed V_{adj} " means the speed voluntarily set by the driver.
- 2.1.6. "Adjustable speed limitation function ASLF", means a function which allows the driver to set a vehicle speed V_{adj} , and when activated limits the vehicle automatically to that speed.
- 2.1.7. "Speed limitation function", means a function to control the fuel feed of the vehicle or engine management in order to limit the vehicle speed to a fixed maximum value."

PART I,

Paragraph 5.1., amend to read:

- "5.1. Requirements for vehicles of categories M_3 , N_2 and N_3 equipped with SLF."

Insert new paragraphs 5.2. to 5.2.7.3., to read:

- "5.2. Requirements for vehicles equipped with ASLF
- 5.2.1. The ASLF must be such that the vehicle in normal use, despite the vibrations to which it may be subjected, complies with the provisions of Part I of this Regulation.
- 5.2.1.1. In particular, the device and all components supporting the ASLF must be so designed, constructed and assembled as to resist corrosion and ageing phenomena to which it may be exposed.
- 5.2.2. The ASLF shall operate satisfactorily in its electromagnetic environment and conform to the technical prescriptions of Regulation No. 10 to the latest level of amendments in force at the time of type approval.
- 5.2.3. No malfunction or unauthorized interference with the system shall result in an increase in engine power above that demanded by the position of the driver's accelerator.
- 5.2.4. The V_{adj} value shall be permanently indicated to the driver and visible from the driver seat. This does not preclude temporary interruption of the indication for safety reasons or driver's demand.
- 5.2.5. The ASLF must satisfy the following requirements:
- 5.2.5.1. The ASLF shall not actuate the vehicle's service braking system except for vehicles of categories M_1 and N_1 , where the vehicle's service braking system may be actuated.
- 5.2.5.2. The ASLF must be effective whichever the engine type or transmission is used.
- 5.2.5.3. The vehicle speed shall be limited to V_{adj} .
- 5.2.5.4. It shall still be possible to exceed V_{adj} when tested in accordance with paragraph 5.3.

- 5.2.5.4.1. To exceed V_{adj} a positive action will be required. */
- 5.2.5.4.2. Whenever the vehicle speed is exceeding V_{adj} the driver must be informed by means of a suitable or warning signal other than the speedometer.
- 5.2.5.4.3. Compliance with paragraph 5.2.5.4.2. shall be demonstrated by conducting the tests according to paragraph 5.3.
- 5.2.6. Setting of V_{adj} :
 - 5.2.6.1. It shall be possible to set V_{adj} value by steps not greater than 10 km/h between 30 km/h and the maximum design speed of the vehicle.
 - 5.2.6.2. In the case of vehicles manufactured for sale in any country where imperial units are used, it shall be possible to set V_{adj} value by steps not greater than 5 mph between 20 mph and the maximum design speed of the vehicle.
 - 5.2.6.3. This shall be achieved by a control device operated directly by the driver.
- 5.2.7. Activation / de-activation:
 - 5.2.7.1. The ASLF must be capable of being activated/de-activated at any time.
 - 5.2.7.2. The ASLF must be de-activated each time the engine is stopped by a deliberate action of the driver.
 - 5.2.7.3. When the ASLF is activated the initial setting of V_{adj} shall not be less than the current vehicle speed.

*/ e.g. kickdown"

Paragraph 5.2. (former), renumber as paragraph 5.3., and amend to read:

- "5.3. Tests
- 5.3.1. The speed limitation tests (retain former paragraph of the current regulation for SLD)
- 5.3.2. The adjustable speed limitation tests to which the vehicle presented for approval are submitted are described in annex 6 of this Regulation.
 - 5.3.2.1. Three different speeds will be chosen for the tests at the discretion of the technical service."

PART II,

Paragraphs 13. and 13.1., amend to read:

- "13. REQUIREMENTS"
- 13.1. Requirements concerning the installation of an approved SLD."
Insert new paragraphs 13.2. and 13.2.1.. to read:
- "13.2. Requirements concerning the installation of an approved ASLD.

- 13.2.1. The vehicle on which the approved ASLD has been installed shall meet all requirements of paragraphs 5.2.2., 5.2.4., 5.2.5.4., 5.2.6. and 5.2.7."

PART III,

Paragraphs 21.2. and 21.2.1., amend to read:

"21.2. Requirements for ASLDs

- 21.2.1. The adjustable speed limitation device ASLD must be such that the vehicle in normal use, despite the vibrations to which it may be subjected, complies with the provisions of Part III of this Regulation."

Insert new paragraphs 21.2.1.1. to 21.3.2.1., to read:

- "21.2.1.1. In particular, the ASLD must be so designed, constructed and assembled as to resist corrosion and ageing phenomena to which it may be exposed.
- 21.2.2. The speed limitation function shall operate satisfactorily in its electromagnetic environment, in accordance with prescriptions of Regulation No. 10 to the latest level of amendments in force at the time of type approval.
- 21.2.3. No malfunction or unauthorized interference shall result in an increase in engine power above that demanded by the position of the driver's accelerator.
- 21.2.4. The V_{adj} value shall be permanently indicated to the driver by a visual display. This does not preclude temporary interruption of the display for safety reasons.
- 21.2.5. The ASLD must respect the following requirements:
- 21.2.5.1. The adjustable speed limitation device shall not actuate the vehicle's braking system except for vehicles of categories M_1 and N_1 , where the vehicle's service braking system may be actuated.
- 21.2.5.2. The method used to limit speed when reaching V_{adj} must be possible whichever transmission type (automatic or manual) of the vehicle.
- 21.2.5.3. The vehicle speed shall be limited to V_{adj} .
- 21.2.5.4. It shall still be possible to exceed speed V_{adj} .
- 21.2.5.4.1. To exceed V_{adj} a positive action will be required. */
- 21.2.5.4.2. Whenever the vehicle speed exceeds V_{adj} the driver must be informed by means of a suitable or warning signal other than the speedometer.

*/ e.g. kickdown

- 21.2.5.4.3. Compliance with paragraph 21.2.5.4.2. shall be demonstrated with paragraph 21.3.

- 21.2.5.5. The speed limitation function shall permit a normal use of the accelerator control for gear selection.
- 21.2.6. Setting of V_{adj} :
- 21.2.6.1. It shall be possible to set V_{adj} value by steps no greater than 10 km/h (5 mph) between 30 km/h (20 mph) and the maximum design max speed of the vehicle.
- 21.2.6.2. In the case of vehicles manufactured for sale in any country where imperial units are used, it shall be possible to set V_{adj} value by steps not greater than 5 mph between 20 mph and the maximum design speed of the vehicle.
- 21.2.6.3. This shall be achieved by a control device operated by the driver.
- 21.2.7. Activation / de-activation
- 21.2.7.1. When V_{adj} is set by the driver it shall not capable of being modified by any means other than the designated control device.
- 21.2.7.2. The ASLD must be capable to be activated / de-activated at any time.
- 21.2.7.3. The ASLD must be de-activated at each engine stop and the key removed.
- 21.3. Tests
- 21.3.1. The speed limitation tests to which the SLD presented for approval is submitted as well as the performances required are described in annex 5 to this Regulation.
- 21.3.2. The adjustable speed limitation tests to which the ASLD presented for approval are submitted are described in annex 6 of this Regulation.
- 21.3.2.1. Three different speeds will be chosen for the tests at the discretion of the technical service."

Footnote 3/, pertinent to paragraphs 4.4.1., 12.4.1. and 20.4.1., amend to read:

"3/ 1 for Germany, 2 for France, 3 for Italy, 4 for the Netherlands, 5 for Sweden, 6 for Belgium 7 for Hungary, 8 for the Czech Republic, 9 for Spain, 10 for Yugoslavia, 11 for the United Kingdom, 12 for Austria, 13 for Luxembourg, 14 for Switzerland, 15 (vacant), 16 for Norway, 17 for Finland, 18 for Denmark, 19 for Romania, 20 for Poland, 21 for Portugal, 22 for the Russian Federation, 23 for Greece, 24 for Ireland, 25 for Croatia, 26 for Slovenia, 27 for Slovakia, 28 for Belarus, 29 for Estonia, 30 (vacant) 31 for Bosnia and Herzegovina, 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), 43 for Japan, 44 (vacant), 45 for Australia, 46 for Ukraine and 47 for South Africa. 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."

Annex 1, annex 2 and annex 3, replace in all cases the following terms:

"speed limiting function" by "speed limiting function / adjustable speed limitation function",

"speed limitation device" by "speed limitation device / adjustable speed limitation device", and

"SLD" by "SLD/ASLD".

Insert a new annex 6, to read:

"Annex 6

TESTS AND PERFORMANCE REQUIREMENTS FOR ASLD

1. TESTS OF ADJUSTABLE SPEED LIMITATION SYSTEM
 - 1.1. Preparation of the vehicle
 - 1.1.1. A vehicle representative of the vehicle type to be approved or an ASLD representative of the type of ASLD, as appropriate, shall be submitted to the technical service.
 - 1.1.1.1. Where an ASLD is to be approved it shall be fitted by the manufacturer to a vehicle which is representative of the type for which the device is intended.
 - 1.1.2. The settings of the engine of the test vehicle, particularly the fuel feed (carburettor or injection system), shall conform to the specifications of the vehicle manufacturer.
 - 1.1.3. The tyres shall be bedded and the pressure shall be as specified by the manufacturer for the vehicle.
 - 1.1.4. The vehicle mass shall be the minimum kerb weight declared by the manufacturer.
 - 1.2. Characteristics of the test track
 - 1.2.1. The test surface shall be suitable for enabling stabilised speed to be maintained and shall be free from uneven patches. Gradients shall not exceed 2 per cent.
 - 1.2.2. The test surface shall be free from standing water, snow or ice.
 - 1.3. Ambient weather conditions
 - 1.3.1. The mean wind speed measured at a height of at least 1 m above the ground shall be less than 6 m/s with gusts not exceeding 10 m/s.

- 1.4. Test for the driver being informed that V_{adj} is being exceeded
- 1.4.1. The positive action (as referred to in paragraphs 5.2.5.4.1. and 21.2.5.4.1) required to enable V_{adj} to be exceeded shall be applied when the vehicle is running at a speed 10 km/h below V_{adj} .
- 1.4.2. The vehicle shall be accelerated up to a speed at least 10 km/h greater than V_{adj} .
- 1.4.3. This speed shall be maintained for at least 30 seconds.
- 1.4.4. Instantaneous vehicle speed shall be recorded during the test and measured with an accuracy of ± 1 per cent.
- 1.4.5. The test shall be considered satisfactory if the following conditions are met:
- 1.4.5.1. The driver is informed by a warning signal when the actual speed of the vehicle is exceeding V_{adj} by more than 3 km/h.
- 1.4.5.2. The driver continues to be informed for the duration of the time that V_{adj} is exceeded by more than 3 km/h.
- 1.5. Test of the adjustable speed limitation function/device.
- 1.5.1. With the ASLF/D deactivated, for each gear ratio selected for the chosen test speed V_{adj} , the technical service shall measure the forces required on the accelerator control to maintain V_{adj} and a speed (V_{adj}^*), which is 20 per cent or 20 km/h (whichever is the greater) faster than V_{adj} .
- 1.5.2. With the ASLF/D activated and set at V_{adj} , the vehicle shall be run at a speed of 10 km/h below V_{adj} . The vehicle shall then be accelerated by increasing the force on the accelerator control over a period of $1\text{ s} \pm 0.2\text{ s}$ to that required to attain V_{adj}^* . This force shall then be maintained for a period of at least 30 seconds, after the vehicle speed has stabilised.
- 1.5.3. The instantaneous vehicle speed shall be recorded during the test in order to establish the curve of the speed versus the time and during the operation of the ASLF/D as appropriate. The accuracy of the speed measurement shall be ± 1 per cent. The accuracy of the time measurement shall be less than 0.1 s.
- 1.5.4. The test shall be considered satisfactory if the following conditions are met:
- 1.5.4.1. The stabilized speed (V_{stab}) reached by the vehicle shall not exceed V_{adj} by more than 3 km/h
- 1.5.4.1.1. After V_{stab} is reached for the first time:
- 1.5.4.1.1.1. V_{max} shall not exceed V_{stab} by more than 5 per cent;
- 1.5.4.1.1.2. the rate of change of speed shall not exceed 0.5 m/s^2 when measured over a period greater than 0.1 s;
- 1.5.4.1.1.3. the stabilized speed conditions specified in 1.5.4.1.1. shall be attained within 10 s of first reaching V_{stab} ;

- 1.5.4.1.2. When stable speed control has been achieved:
 - 1.5.4.1.2.1. speed shall not vary by more than 3 km/h of V_{adj} ;
 - 1.5.4.1.2.2. the rate of change of speed shall not exceed 0.2 m/s^2 when measured over a period greater than 0.1 s;
 - 1.5.4.1.2.3. V_{stab} is the average speed calculated for a minimum time interval of 20 seconds beginning 10 seconds after first reaching V_{stab} ;
 - 1.5.4.1.3. Tests in acceleration shall be carried out and the acceptance criteria verified for each gear ratio allowing in theory V_{adj*} to be achieved."
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