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PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 89
(Speed limitation devices)

Transmitted by the expert from France

Note: The text reproduced below was prepared by the expert from France on behalf of the drafting group in charge of updating Regulation No. 89 (TRANS/WP.29/GRRF/47, para. 52). This document supersedes document TRANS/WP.29/GRRF/1999/15.

Note: This document is distributed to the Experts on Brakes and Running Gear only.

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Amend the title, to read:

"UNIFORM PRESCRIPTIONS FOR APPROVAL OF:

- I. ... maximum speed or their speed self-control function.
- II. ... speed limiting device (SLD) or self speed control device (SSCD) of an approved type.
- III. ... (SLD) and speed self-control device (SSCD)."

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

"Annex 6 Tests and performance requirements for self speed control devices (SSCD)"

Text of the Regulation,

Paragraphs 1.1.1., 1.1.2. and 1.1.3., amend to read:

- "1.1.1. Part I: ... SLD and to vehicles of categories M and N equipped with a speed self-control device SSCD which have not been separately approved ... fulfilling the function of an SLD or SSCD, as appropriate.
- 1.1.2. Part II: ... N2 and N3 of SLDs and installation on vehicles of categories M and N of SSCD which have been type approved to Part III of this Regulation."
- 1.1.3. Part III: ... and SSCD 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 vehicle by means of a vehicle system whose primary function is to control the fuel feed to the engine."

Insert new paragraphs 1.2.1. and 1.2.2., to read:

- "1.2.1. Vehicles of categories [M and N] shall be limited to a speed voluntarily set by the driver by means of a speed self-control device (SSCD) or function (SSCF).
- 1.2.2. Vehicles of categories M3, N2 and N3 shall [in addition] be limited to a maximum speed achieved by a speed limitation device (SLD) or function (SLF)."

Insert new paragraphs 2.1.5. and 2.1.6., to read:

- "2.1.5. 'Regulated speed Vreg' means the speed voluntarily set by the driver.
- 2.1.6. Speed self-control function SSCF, means a variable speed limitation function which allows the driver to set the vehicle maximum speed Vreg and for the vehicle to be automatically limited to that speed."

Paragraph 2.4.1.3., delete the word "and".

Paragraph 2.4.1.4., amend to read:

" of the tested vehicle, and"

Insert a new paragraph 2.4.1.5., to read:

- "2.4.1.5. The commercial type (for vehicles of categories M1, N1)."

Paragraph 5.1., amend to read:

- "5.1. Requirements for vehicles of categories M3, N2 and N3 equipped with SLF."

Insert new paragraphs 5.2. to 5.2.9., to read:

- "5.2. Requirements for vehicles of categories M and N equipped with SSCF.
- 5.2.1. ~~[Vehicles with a design maximum speed exceeding [X km/h] must be equipped with a Speed Self Control Function (SSCF).]~~
- 5.2.1.1. When a vehicle is equipped with a SSCF function, the function must fulfil all the requirements laid down in paragraph 5.2.2. of this Regulation.
- 5.2.2. The speed self-control function SSCF 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.
- 5.2.2.1. In particular, the SSCF must be so designed, constructed and assembled as to resist corrosion and ageing phenomena to which it may be exposed.
- 5.2.3. It shall be possible to set Vreg value by steps not bigger than 5 km/h between [30 km/h] and the maximum design speed of the vehicle.

- 5.2.3.1. This shall be achieved by either:
 - 5.2.3.1.1. A control device operated by the driver, or
 - 5.2.3.1.2. [Speed information provided independently of the driver].
- 5.2.4. The set up of this Vreg shall not be capable of being modified by the driver by other means than the above control device.
- 5.2.5. The Vreg value shall be permanently indicated to the driver and visible from the driver seat. This does not preclude temporary interruption.
- 5.2.6. The SSCF shall operate satisfactorily in its electromagnetic environment.
- 5.2.7. The SSCF must be de-activated at each engine stop and key removed and must be set after reignition.
- 5.2.8. The SSCF must satisfy the following requirements:
 - 5.2.8.1. [The speed limitation function shall not actuate the vehicle's braking systems.]
 - 5.2.8.2. The method used to limit speed when reaching Vreg must be possible whichever transmission type (automatic or manual) of the vehicle.
 - 5.2.8.3. The vehicle speed shall be limited to Vreg, when tested in accordance with paragraph 5.3.
 - 5.2.8.4. It shall still be possible to exceed Vreg.
 - 5.2.8.4.1. To exceed Vreg a positive action will be required.
 - 5.2.8.4.2. Whenever the vehicle speed exceeds Vreg the driver must be informed by means of a suitable or warning signal other than the tachometer.
 - 5.2.8.4.3. Compliance with paragraph 5.2.8.4.2. shall be demonstrated with paragraph 5.3.
 - 5.2.9. No malfunction or unauthorized interference shall result in an increase in engine power above that demanded by the position of the driver's accelerator. It must be demonstrated by conformance to the technical prescriptions of Regulation No. 10, 02 series of amendments."

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

- "5.3. Tests
 - 5.3.1. The speed limitation tests

- 5.3.2. The speed self-control tests to which the vehicle presented for approval is submitted are defined in annex 6 of this Regulation.
- 5.3.3. The SSCF must fulfil the tests defined in paragraphs 1.1. to 1.1.4. of annex 5 of this Regulation. Three different speeds will be chosen for the tests at the discretion of the technical service."

Paragraphs 13. and 13.1., amend to read:

"13. REQUIREMENT"

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 SSCD.

13.2.1. The vehicle on which the approved SSCD has been installed shall meet all requirements of paragraphs 5.2.3., 5.2.4., 5.2.6., 5.2.7.1., 5.2.7.4. and subparagraphs."

Paragraphs 21.2. and 21.2.1., amend to read:

"21.2. Miscellaneous for SSCDs

21.2.1. The speed self-control device SSCD 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 21.3.3., to read:

"21.2.1.1. In particular, the SSCF must be so designed, constructed and assembled as to resist corrosion and ageing phenomena to which it may be exposed.

21.2.2. It shall be possible to set Vreg value by steps no greater than 5 km/h between 30 km/h and the maximum design max speed of the vehicle.

21.2.2.1. This shall be achieved by either:

21.2.2.1.1. A control device operated by the driver, or

21.2.2.1.2. [Speed information independently of the driver such as by radio]

21.2.3. Vreg set up must not be capable of being modified by the driver by other means than the above control device.

21.2.4. The Vreg value shall be permanently indicated to the driver by a visual display.

- 21.2.5. [When the regulated speed is reached], the driver must be immediately and permanently informed.]
- 21.2.6. The speed limitation function shall operate satisfactorily in its electromagnetic environment.
- 21.2.7. The SSCD must be de-activated at each engine stop and key removed.
- 21.2.8. The SSCD must respect the following requirements:
 - 21.2.8.1. [The speed limitation function shall not actuate the vehicle's braking systems.]
 - 21.2.8.2. The method used to limit speed when reaching Vreg must be possible whichever transmission type (automatic or manual) of the vehicle.
 - 21.2.8.3. The SSCD and the SLD shall have the same control device [and must be capable of receiving speed information provided independently of the driver (such as by radio)].
 - 21.2.8.4. The above control device must provide set up by 5 km/h steps between 30 km/h and max design speed.
 - 21.2.8.5. It shall still be possible to exceed speed Vreg.
 - 21.2.8.6. The speed limitation function shall permit a normal use of the accelerator control for gear selection.
- 21.2.9. No malfunction or unauthorized interference shall result in an increase in engine power above that demanded by the position of the driver's accelerator. It must be demonstrated by conformance to the technical prescriptions of Regulation No. 10, 02 series of amendments.
- 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 tests to which the SSCD presented for approval is submitted are defined in annex 6 of this Regulation.
 - 21.3.3. The SSCD must fulfil the tests defined in paragraphs 1.1. to 1.1.4. of annex 5 of this Regulation. Three different speeds will be chosen for the tests at the descretion of the technical service."

Insert a new annex 6, to read:

"Annex 6

TESTS AND PERFORMANCE REQUIREMENTS FOR SSCD

1. TESTS OF SPEED SELF-CONTROL SYSTEM
 - 1.1. Preparation of the vehicle
 - 1.1.1. A vehicle representative of the vehicle type to be approved or an SSCD representative of the type of SSCD, as appropriate, shall be submitted to the technical service.
 - 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.
 - 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
 - 1.4.1. The vehicle running at a speed which is 10 km/h below the regulated speed shall be accelerated as much as possible using a fully positive action on the accelerator control.
 - 1.4.2. Instantaneous speed shall be recorded during test and measured with an accuracy of ± 1 per cent.
 - 1.4.3. The test shall be considered satisfactory if the following conditions are met:
 - 1.4.3.1. The overshoot information shall be transferred to the driver when the actual speed of the vehicle exceeds the V_{reg} speed of 3 km/h.

- 1.4.3.2. The tests shall be performed at 3 different speeds selected by the technical service and approval requirements verified by using the gear ratio which permits the maximum acceleration and for which the V_{reg} is possible."
