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ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Brakes and Running Gear (GRRF)

(Fifty-sixth session, 20-22 September 2004,
agenda item.1.3.)

PROPOSAL FOR DRAFT SUPPLEMENT 10 TO THE 09 SERIES OF AMENDMENTS
TO REGULATION No. 13

Transmitted by the expert from Germany

Note: The text reproduced below was prepared by the experts from Germany in order to introduce into the text of the Regulation the requirements for the generation of a signal to activate stop lamps.

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

Insert new paragraphs 5.2.1.30. to 5.2.1.30.6., with the corresponding footnotes, to read:

- "5.2.1.30. Generation of a signal to illuminate stop lamps.
- 5.2.1.30.1. Activation of the service braking system by the driver shall generate a signal that will be used to illuminate the stop lamps.
- 5.2.1.30.2. Signal generation applicable to Endurance Braking systems
- 5.2.1.30.2.1. It is permitted to generate the signal in conjunction with the operation of an endurance braking system but except when the retardation is generated by the engine braking alone.**
- 5.2.1.30.2.2. Activation of the endurance braking system by the driver shall generate the signal mentioned above for max. 4 sec ± 1.**
- 5.2.1.30.3. Activation of the service braking system by "automatically commanded braking" shall generate the signal mentioned above. However, when the retardation generated is less than 0.7 m/s^2 at a vehicle speed greater than 50 km/h the signal may be suppressed. */
- 5.2.1.30.4. Activation of part of the service braking system by "selective braking" shall not generate the signal mentioned above. **/
- 5.2.1.30.5. In the case of vehicles equipped with an electric control line the signal shall be generated by the motor vehicle when a message "illuminate stop lamps" is received via the electric control line from the trailer. ***/
- 5.2.1.30.6. Electric regenerative braking systems, which produce a retarding force upon release of the throttle pedal, shall not generate a signal mentioned above.

*/ During a "selective braking" event, the function may change to "automatically commanded braking".

***/ This requirement shall not apply until the ISO 11992 Standard has been amended to include a message "illuminate stop lamps".

Insert new paragraphs 5.2.2.21. to 5.2.2.21.2., with the corresponding footnotes, to read:

- "5.2.2.21. Activation of the service braking system.
- 5.2.2.21.1. In the case of trailers equipped with an electric control line the message "illuminate stop lamps" shall be transmitted by the trailer via the electric control line when the trailer braking system is activated during "automatically commanded braking" initiated by the trailer. However, when the retardation generated is less than 0.7 m/s^2 at a vehicle speed greater than 50 km/h the signal may be suppressed. **/ *****/
- 5.2.2.21.2. In the case of trailers equipped with an electric control line the message "illuminate stop lamps" shall not be transmitted by the trailer via the electrical control line during "selective braking" initiated by the trailer. ***/ *****/

**/ At the time of type approval, compliance with this requirement shall be confirmed by the vehicle manufacturer.

***/ During a "selective braking" event, the function may change to "automatically commanded braking".

****/ This requirement shall not apply until the ISO 11992 Standard has been amended to include a message "illuminate stop lamps".

*****/ This requirement shall not apply until the ISO 11992 Standard has been amended to include a message "illuminate stop lamps" and introduced into this Regulation."

Justification

The proposal „TRANS/WP29/2004/38“ had not found any agreement in the “COMMITTEE FOR ADAPTATION TO TECHNICAL PROGRESS” (CATP) of the EUROPEAN COMMISSION.

Against this proposal were: Sweden, Finland, Portugal und Germany.

The reason for the disagreement was the provisions concerning Endurance Braking systems.

With the provisions in proposal TRANS/WP29/2004/38 exist the possibility that the brake lights remain switched on for constantly drive. For example: A long driving downhill.

Under such conditions it is not possible to warn the following traffic when it comes to a danger situation.

This proposal has the advantage that the drivers behind the vehicle would be warned when the front driver intends to decelerate with the endurance brake.

Should in the first delay phase if one strengthens deceleration to be necessary, the driver will use the service brake. It can be assumed in the time belt of 4 seconds following traffic is still sufficiently attentive and the larger delay registered.

As the endurance braking system is not used to stop vehicles, can be assumed that the use of the endurance braking system longer as 4 seconds that is only to assistance for a constant speed. For these driving conditions is not necessary any stop light . If the activity of the service brake through a danger situation should become necessary in this phase now, the following drivers will be warned again through the illumination of the stop lamps.

Apart from the higher road safety the realization is substantially simpler.

The conventional braking systems have only the capability to illuminate the stop lamp from a triggering signal which is produced by a contact switch on the pedal, by a pressure sensing switch in the pneumatic or hydraulic system, or by setting a relais, when a device (e.g. the retarder) is switched on. An adaptation with a time relais is easy.

Direct deceleration measurement is possible with the evaluation of ABS-sensor signals, but for evaluation and transmitting of these signals to effect the illumination of the stop lamps, special equipment for calculation and data buses for transmission have to be available on-board of the vehicle. This is not the case in conventional vehicles, but only in more sophisticated new vehicles with electronic braking systems and bus-architecture on board.