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agenda item 1.5.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 13

(Brakes)

Transmitted by the Expert from the United Kingdom

Note: The text reproduced below was prepared by the expert from the United Kingdom in order to consolidate the views expressed at the fifty-second session of GRRF on the issue of illumination of stop lamps (TRANS/WP.29/GRRF/52, para. 14).

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

A. PROPOSAL

Insert new paragraphs 5.2.1.30. to 5.2.1.30.5., to read:

- "5.2.1.30. Activation of Stop Lamps
- 5.2.1.30.1. Operation of the service brake control must activate the stop lamps.
- 5.2.1.30.1.1. Operation of the secondary brake control must activate the stop lamps. Where the vehicle is equipped with a dual circuit service braking system activation of the stop lamps must still be achieved in the event of a failure in one of the circuits.
- 5.2.1.30.2. In the case of motor vehicles equipped with an endurance braking system, operation of the control must activate the stop lamps.
- 5.2.1.30.2.1. Endurance braking systems, which commence generating a retarding force upon the release of the throttle pedal, shall not activate the stop lamps.
- 5.2.21.30.2.2. Endurance braking systems, which provide four levels of retardation, need only activate the stop lamps with the selection of the two most powerful positions.
- 5.2.1.30.3. Where a vehicle is equipped with a device that actuates the braking system or brakes on certain axles for the purpose of generating vehicle retardation, with or without a direct action from the driver, the stop lamps must activate. (Automatically Commanded Braking)
- 5.2.1.30.4. Where a vehicle is equipped with a device, which actuates individual brakes, and retardation is secondary to vehicle behaviour, the stop lamps must not activate. (Selective Braking)
- 5.2.1.30.5. In the case of vehicles equipped with an electric control line the stop lamps shall be illuminated from the motor vehicle when a message "activate stop lamps" is received via the electric control line from the trailer */.

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

Insert new paragraphs 5.2.2.21. to 5.2.2.21.2., to read:

"5.2.2.21. Activation of Stop Lamps

5.2.2.21.1. In the case of trailers equipped with an electric control line and a device that actuates the braking system or the brakes on certain axles of the trailer for the primary purpose of generating vehicle retardation, with or without the direct action of the driver (Automatically Commanded Braking), the message "activate stop lamps" shall be transmitted via the electric control line **/. This requirement does not include the operation of the automatic brake referred to in paragraph 5.2.1.18.3. of this Regulation.

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

5.2.2.21.2. In the case of trailers equipped with an electric control line and a device, which actuates individual brakes, where retardation is secondary to vehicle behaviour (Selective Braking), the stop lamps must not activate."

* * *

B. JUSTIFICATION

The purpose of this amendment is to produce a standard protocol for the activation of stop lamps. It will ensure that all vehicles manufactured operate in a consistent manner thereby preventing confusion to following motorists and the devaluing of the stop lamp signal. The requirements have been included in both parts of the Regulation to cover the requirements for motor vehicles and for trailers.

Several points have been covered.

(a) Operation of the service brake control must activate the stop lamps; this will include Category B electrical regenerative braking systems. This prevents misinterpretation of the requirements concerning "phased braking" where it could have been interpreted that, during the regenerative braking phase, the stop lamps did not have to illuminate.

(b) Category A electric regenerative braking systems and devices of which the operation is initiated by the release of the throttle pedal shall not activate the stop lamps.

(c) Operation of the secondary braking system control must activate the stop lamps. This will include secondary systems activated by the use of the parking brake control.

(d) In the event of a device initiating automatically commanded braking the stop lamps must activate.

(e) In the event of a device initiating selective braking the stop lamps must not activate.

(f) An endurance braking system that provides 4 distinct levels of retardation is only required to activate the stop lamps with selection of the two most powerful positions.

The document recognizes the need for the motor vehicle to activate the stop lamps following a request from the trailer. Currently, there is not a code for a message to be sent via the ISO 11992 database requesting that the stop lamps are activated or indeed a requirement for the motor vehicle to do anything following a request from the trailer. The document addresses both these points.

The ISO 11992 protocol needs changing to accommodate this request because the trailer does not have the facilities to power the stop lamps. The stop lamps are a lighting function, not a braking or running gear function, and therefore cannot be powered via the ISO 7638 connector.

The amendments allow for activation of the stop lamps only with the selection of the higher performing levels of a multi-stage endurance brake. This has been proposed because the lower levels do not produce significant levels of deceleration. This is not intended to introduce a requirement for advanced warning systems which will be addressed once the fundamental principles for stop lamp activation have been introduced.
