



Informal document No. **GRRF-55-2**
(55th GRRF, 3-6 February 2004,
agenda item 1.3.)

DRAFT AMENDMENT TO REGULATION No. 13

Transmitted by the expert from the International Organization of Motor Vehicle Manufacturers
(OICA)

A. PROPOSAL

Insert new paragraphs 5.2.1.30. to 5.2.1.30.6., 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 not due to the retardation generated by the engine braking alone.
- 5.2.1.30.2.2. A signal shall be generated by the operation of an endurance braking system which has sufficient power to produce a vehicle deceleration $\geq 2.2 \text{ m/sec}^2$ under the following conditions:
- a) at an initial speed of 80 km/h.
 - b) in a gear which is normally used for running at this speed
 - c) with the vehicle at its unladen weight.
- 5.2.1.30.2.3. It is permissible to suppress this signal where an endurance braking system is operated so that it does not achieve the above performance due to being at a lower power level or due to the vehicle load condition being higher than that stated above.
- 5.2.1.30.2.4. Where an endurance braking system comes into operation on the release of the accelerator pedal, action shall be taken to prevent intermittent generation of the signal for example, during gear changes.
- 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".

*/ 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"."

Insert new paragraphs 5.2.2.21. to 5.2.2.21.2., 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 ISO11992 Standard has been amended to include a message "illuminate stop lamps" and introduced into this Regulation."

B. JUSTIFICATION

CLEPA and OICA still consider that the proposal of document TRANS/WP.29/GRRF/2003/25 introduced by United Kingdom and OICA at the 54th session of GRRF would result in the stop lights being illuminated in a more consistent and realistic manner. However, in order to permit other delegations to compromise with their own national rules and hence to better integrate the 1958 Agreement Community, CLEPA and OICA in conjunction with the United Kingdom propose that GRRF consider and adopt the above proposal which improves the text of document TRANS/WP.29/GRRF/2004/8.

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

Performance criteria for endurance brakes has been a difficult issue. This version of the proposal introduces the requirement, to be confirmed at the time of type approval, that, if in service the system has capability of deceleration rate equal or above 2.2 m/s^2 at 80 km/h, the signal for the stop lamps must be produced. At capability below this level the signal is allowed to be suppressed.

The amendment makes it clear that, whilst engine braking alone must not generate the signal, use of any additional endurance brake is permitted to produce the signal.

Further, with endurance brakes that come into operation on release of the accelerator pedal, action must be taken to suppress any intermittent signal such as that which might be produced during gear changes.

Performance criteria has been established for very low levels of deceleration generated by ACB systems below which the signal may be suppressed:

At deceleration rates less than 0.7 m/s^2 at speeds below 50 km/h the illumination of the stop lamps is however required because the following driver, due to the reduced gap between vehicles, needs as much notice as possible that the vehicle in front is decelerating. At the time of type approval the vehicle manufacturer will be required to confirm that the system complies.

The ISO 11992 protocol needs updating to accommodate a braking signal 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.

This base amendment is not intended to introduce a requirement for advanced warning systems, these systems will have to be addressed once the fundamental principles for stop lamp illumination have been introduced.
