Comments on ESS

Transmitted by the expert from Japan

At the 51st GRE session, Japan submitted a report on its study on the validity of emergency brake light display in Informal Document TRANS-WP29-GRE-51-09e. Based on the result of the study, Japan supports the Draft Amendments to Regulation No. 48 proposed in TRANS/WP.29/GRE/2005/2Rev1 with the exception of the following. As regards the requirement on the colours of the light emitted, a lamp that indicates application of the emergency brake is preferred to be in red (i.e., stop lamp), but Japan is not opposed to accepting the amber colour (i.e., hazard warning signal) as the alternative. In addition, Japan requests the provisions concerning automatic activation of the hazard warning signal in the proposal (TRANS/WP.29/GRE/2005/2Rev1) to be amended as follows.

A. Proposal

Paragraph 6.6.7.2., amend to read:

6.6.7.2. The hazard warning signal shall be capable of being activated and deactivated manually by the driver at any time using a separate control. However, when activated automatically in the event of para 6.6.7.3.2 (vehicle crash), the hazard warning signal shall be capable of being deactivated by a separate control or ignition switch.

Paragraph 6.6.7.3., insert new paragraph 6.6.7.3.3. to read:

6.6.7.3. The signal may be activated automatically under one or more of the following conditions:

6.6.7.3.1. the vehicle speed is less than [30] km/h and the conditions for the activation of the emergency stop signal had been achieved;

6.6.7.3.2. following a vehicle crash;

6.6.7.3.3. When the rear-end collision by the following vehicle is not avoided. (If the vehicle fitted with system which detection of the distance, relative speed, and location of the following vehicle indicates)

6.6.7.4. When activated automatically, the hazard warning signal shall remain activated until it is manually or automatically deactivated. The automatic deactivation shall occur when the vehicle accelerates.

6.6.7.5. The hazard warning signal shall not activate automatically at the same time as the emergency stop signal is operating."
B. Justification

Paragraph 6.6.7.2.
There should be no problems if, following the vehicle crash, the hazard warning signal can be deactivated by a separate control or ignition switch after a certain period of time.

Paragraph 6.6.7.3.3.
In Japan, there are a large number of accidents where the driver of the following vehicle is preoccupied with thought or looking sideways and thus fails to check the timely status of the leading vehicle (including when the leading vehicle is stopped at an intersection) resulting in a rear-end collision with the leading vehicle. There are said to be many similar accidents in Europe, too.

If the following vehicle is detected and the hazard warning signal automatically activated in advance, then the driver of the following vehicle will be less likely to fail to recognize the leading vehicle and thus the number of rear-end collisions or the degree of injury may be reduced. However, in the current proposal, only two conditions (paragraphs 6.6.7.3.1 and 6.6.7.3.2) are allowed, which is equivalent to prohibiting the use of such system as described above. Therefore, Japan believes that the text should be amended to allow for the use of such safety system.

Example:

In order to prevent the following vehicle from colliding with the leading vehicle (which is stopped), the hazard warning signal of the leading vehicle is automatically activated in advance and the driver of the following vehicle will thus be aware of the leading vehicle.

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Driving at approx. 30 km/h

1.4 seconds before crash (approx. 12 m)

Stopped

0.8 seconds

Free running

If the driver of the following vehicle applies a emergency braking (7 m/s²),

0.6 seconds it is possible to stop just before crash.