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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

World Forum for Harmonization of Vehicle Regulations

Working Party on Brakes and Running Gear

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Item 3(f) of the provisional agenda

REGULATIONS Nos. 13 AND 13-H (Braking)

Electronic Vehicle Stability Control

Proposal for amendment to Regulation No. 13

Submitted by the experts from the European Association of Automotive Suppliers and the  
International Organization of Motor Vehicle Manufacturers \*/

The text reproduced below was prepared by the experts from the European Association of Automotive Suppliers (CLEPA) and from the International Organization of Motor Vehicle Manufacturers (OICA) in order to define operating conditions which allow the vehicle stability function to be automatically disabled. The modifications to the existing text of the Regulation are marked in bold and strikethrough characters.

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\*/ In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance performance of vehicles. The present document is submitted in conformity with that mandate.

A. PROPOSAL

Annex 21

Paragraphs 2.1.1. and 2.1.2., amend to read:

"2.1.1. Where a vehicle is equipped with a vehicle stability function as defined in paragraph 2.34. of this Regulation, the following shall apply:

In the case of directional control the function shall have the ability to automatically control individually the speed of the left and right wheels on each axle or an axle of each axle group by selective braking based on the evaluation of actual vehicle behaviour in comparison with a determination of vehicle behaviour demanded by the driver.

In the case of roll-over control the function shall have the ability to automatically control the wheel speeds on at least two wheels of each axle or axle group 1/ by selective braking or automatically commanded braking based on the evaluation of actual vehicle behaviour that may lead to vehicle roll-over. 2/

In both cases, the function is not required:

- (a) When the vehicle speed is below 20 km/h;
- (b) Until the initial start-up self test and plausibility checks have been completed;
- (c) When the vehicle is being driven in reverse.
- (d) **When it has been automatically or manually disabled, in this case the provisions of paragraph 2.1.2. below shall apply.**

**2.1.2. When a vehicle is equipped with a means to automatically or manually disable the vehicle stability function, the following conditions shall apply as appropriate:"**

Insert new paragraphs 2.1.2.1. to 2.1.2.3., to read:

**"2.1.2.1. When a vehicle is equipped with a means to automatically disable the vehicle stability function to provide increased traction by modifying the functionality of the drive train, the disablement and its re-instatement shall be automatically linked to the operation which changes the functionality of the drive train.**

**2.1.2.2. When a vehicle is equipped with a means to manually disable the vehicle stability function, the vehicle stability function shall be automatically reinstated at the initiation of each new ignition cycle.**

**2.1.2.3. A constant optical warning signal shall inform the driver that the vehicle stability function has been disabled. The yellow warning signal specified in paragraph 2.1.5. below may be used for this purpose. The warning signals specified in paragraph 5.2.1.29. of this Regulation shall not be used."**

Paragraph 2.1.4., amend to read:

"2.1.4. Interventions of the vehicle stability function shall be indicated to the driver by a ~~specific~~ **flashing** optical warning signal. The indication shall be present as long as the vehicle stability function is in an intervention mode. The **yellow** warning signal specified in paragraph ~~5.2.1.29 of this Regulation shall not be used~~ **2.1.5. below may be used for this purpose.**

Interventions of the vehicle stability function used in any learning process ..."

Paragraph 2.1.5., amend to read:

"2.1.5. A vehicle stability function failure or defect shall be detected and indicated to the driver by ~~the specific~~ a **yellow** optical warning signal ~~referred to in paragraph 5.2.1.29. of this Regulation.~~

**The warning signals specified in paragraph 5.2.1.29. of this Regulation shall not be used for this purpose.**

The warning signal shall be constant and remain displayed as long as the failure or defect persists and the ignition (start) switch is in the 'on' (run) position."

B. JUSTIFICATION:

At the sixty-fifth GRRF, the group discussed document ECE/TRANS/WP.29/GRRF/2008/18 which proposed conditions when the stability control function was not available. Of the four specified conditions option d) was not accepted by delegates, and the document was subsequently adopted without option d). The World Forum at its 148<sup>th</sup> session in June 2009 finally adopted the GRRF proposal as document ECE/TRANS/WP.29/2009/60.

As a result of the above, industry has taken into consideration the comments of GRRF and the provisions for the Electronic Stability Control (ESC) switch off in Regulation No. 13-H and the global technical regulation on ESC. The proposal in this document relates to defining requirements associated with the following:

**EVSC switch off:**

Automatic switch off: When the driver selects a specific drive mode which may engage different traction options, i.e. front wheel drive, differential lock, etc. the stability control function will be disabled. In this case disablement and re-engagement of the function are linked to the selection of the respective drive mode and are independent of cycling of the ignition.

Manual switch off: When the driver selects a specific manual switch, the stability control function will be disabled. In this case, re-engagement of the function is

always realized when the ignition is cycled (turned off and then on) or when the driver re-selects the manual switch.

**Warning signals:**

**Current requirements:**

RED warning signal specified in paragraph 5.2.1.29.1.1. of Regulation No. 13:

Function:

- (a) To indicate failures or defects within the electric control transmission of the braking system where the prescribed performance is no longer being available.
- (b) Other specifically defined failures
- (c) Warning signal is constant

YELLOW warning signal specified in paragraph 5.2.1.29.1.2. of Regulation No. 13:

Function:

- (a) To indicate failures or defects within the electric control transmission of the braking system, where the prescribed performance is available;
- (b) Failures of the ABS system;
- (c) Failures of the EVSC system;
- (d) Other specifically defined failures;
- (e) Warning signal is constant.

EVSC Intervention warning defined in paragraph 2.1.4. of Annex 21:

Function:

- (a) To indicate to the driver that there is an intervention of the stability control function;
- (b) The warning signal may be flashing or constant;
- (c) The warning signals specified in paragraph 5.2.1.29 shall not be used for this purpose.

**Proposed requirements:**

RED warning signal specified in paragraph 5.2.1.29.1.1. of Regulation No. 13:

Function: No change in requirements or functionality

YELLOW warning signal specified in paragraph 5.2.1.29.1.2. of Regulation No. 13:

Function:

- (a) To indicate failures or defects within the electric control transmission of the braking system, where the prescribed performance is available;
- (b) Failures of the ABS system;
- (c) Other specifically defined failures;
- (d) Warning signal is constant.

EVSC warning signal:

The warning signals defined in paragraph 5.2.1.29. shall not be used for this purpose

Function 1:

- (a) To indicate to the driver that there is an intervention of the stability control function;
- (b) The warning signal shall be flashing.

Function 2:

- (a) To indicate to the driver that there is a failure or defect within the stability control function (failures that do not have an impact on the braking system e.g. steering sensor);
- (b) The warning signal shall be constant.

Function 3:

- (a) To indicate to the driver when the stability control function has been manually or automatically disabled;
- (b) The warning signal shall be constant.

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