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Regulation No. 121 (Identification of controls, tell-tales and indicators)

Proposal for Supplement 9 to Regulation No. 121 (Identification of controls, tell-tales and indicators)

Submitted by the expert from the International Organization of Motor Vehicle Manufacturers

The text reproduced below was prepared by the expert from the International Organization of Motor Vehicle Manufacturers (OICA) to adapt the provisions on multi-function displays to technical progress. It is based on informal document GRSG-105-21 (see report ECE/TRANS/WP.29/GRSG/84, para. 44). The modifications to the current text of UN Regulation No. 121 are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.
I. Proposal

Paragraphs 5.5.1.2. to 5.5.1.6., amend to read:

"5.5.1.2. When the underlying condition exists for actuation of two or more tell-tales, the information shall be either:

5.5.1.2.1. Repeated automatically in sequence,

5.5.1.2.2. Indicated by visible means and capable of being selected for viewing by the driver under the conditions of paragraph 5.6.2.,

5.5.1.2.3. Indicating the most safety-relevant failure, or

5.5.1.2.4. When two or more functions are integrated as a single function, or when functions are related to each other such as to be considered as a single function, the information relative to that single function may be indicated by one tell-tale.

5.5.1.3. The tell-tales for the brake system malfunction, when required to be red, headlamp driving beam, direction indicator and driver seat safety belt shall not be shown in the same common space.

5.5.1.4. If the tell-tale for the brake system malfunction, when required to be red, headlamp driving beam, direction indicator or driver seat safety belt is displayed in a common space it shall displace any other symbol in such common space if the underlying condition exists for its activation.

5.5.1.5. With the exception of tell-tales for the brake system malfunction, when required to be red, headlamp driving beam, direction indicator or driver seat safety belt, the information may be cancellable automatically or by the driver.

5.5.1.5.1. This requirement does not preclude replacing the display of errors by the display of more severe errors.

5.5.1.6. Unless prescribed in a specific Regulation, the colour requirements regarding tell-tales do not apply when tell-tales appear in a common space."

II. Justification

1. The progress in the display technology is such that some paragraphs currently in the UN Regulation have become inappropriate as they were written with obsolete technology in mind, while new technologies permit improved multi-function display.

2. With the use of updated Liquid Crystal Display (LCD) screens ("TFT" – "Thin-Film Transistor" technology) the technical restrictions of conventional tell-tales such as a lack of flexibility in terms of position, symbol and colour are no longer relevant.

3. On the other hand, new regulations and new vehicle functions (e.g. Automatic Frontlighting System) require increasing driver information. Despite the limitation that the display area can't be indefinitely extended, the relevant information shall still be presented in an easily visible, recognizable and clear manner for the driver in all driving conditions.

4. Current provisions for multifunction displays currently allow the display tell-tales in a common space. Yet these provisions should be updated to allow also the replacement of tell-tales.
5. There are two main areas where the replacement of tell-tales can be useful to prevent unnecessary driver confusion:

(a) Information to be displayed when severe errors must replace less severe errors.

As an example, it is already allowed to replace the yellow "Brake lining wear-out condition" (item 37) tell-tale by the red "Brake system malfunction" (item 25). Moreover this replacement can be used for advanced driver assistance systems or safety systems to indicate that different assistance levels are no longer available.

(b) Information to be displayed when high-level or integrated functions must replace related or lower-level functions.

As an example, it should be allowed to replace the side marker lamps tell-tale (item 19) by the dipped beam headlamps tell-tale (item 2) when the dipped beam headlamps are activated. Moreover, this tell-tale should itself be replaced by the high beam headlamps tell-tale (item 3) when the high beam headlamps are activated.

6. Paragraphs 5.5.1.3. to 5.5.1.5. need also to be updated because they currently prohibit the use, in a same common space, of a yellow tell-tale for indicating an electrical brake failure (see Figure 1). This is also requested for the sake of global harmonization because FMVSS 101 and EU Directive 78/316/EEC (Annex II) only regulate red tell-tales. Similarly, some safety belt reminders are voluntarily fitted to vehicles, e.g. for the passengers (see also Figure 1), while the restrictions for their location within a common space only aims the driver's safety belt reminder.

Figure 1

Examples of tell-tales

7. Finally, an editorial amendment is proposed, replacing the wording "seat belt" by "safety belt", which makes the text of the UN Regulation more consistent.