

Proposal to amend ECE R 13 to introduce the installation of router and repeater Based on ECE R 13, Series 11, Supplement 13.

Proposed amendments are **marked in red**.

- 5.1.3.6. (a) The electric control line shall conform to ISO 11992-1 and 11992-2:2003 including its amendment 1:2007 and be a point-to-point type using:
- (i) The seven pin connector according to ISO 7638-1 or 7638-2:2003 or,
 - (ii) In the case of systems where the connection of the electric control line is automated, the automated connector shall, as a minimum, provide the same number of pins as the above- mentioned ISO 7638 connector and meet the requirements specified in Annex 22 of this Regulation.

Trailers equipped with more than one electronic control unit [for brake control] and equipped with an electric control line and towing trailers shall be equipped with a message routing function as required by ISO 11992 [ISO 11992-2, paragraph 6.3. Message routing] [thus connecting all electronic control units to the electric control line].

This function is regarded to fulfill the point to point type requirement within the electric control line between electronic control units.

If the length of an electric control line installed in a trailer exceeds the maximum permissible length according to ISO 11992-1, a device shall be installed [within the electric control line] to amplify and repeat the transmitted messages [and thus ensure a reliable data communication].

The extension length capabilities of the device shall be stated by the manufacturer. In any case repeating of messages shall not delay messages to infringe requirements of ISO 11992

- (b) The data contacts of the ISO 7638 connector shall be used to transfer information exclusively for braking (including ABS) and running gear (steering, tyres and suspension) functions as specified in ISO 1992-2:2003 including its Amd.1:2007. The braking functions have priority and shall be maintained in the normal and failed modes. The transmission of running gear information shall not delay braking functions.
 - (c) The power supply, provided by the ISO 7638 connector, shall be used exclusively for braking and running gear functions and that required for the transfer of trailer related information not transmitted via the electric control line. However, in all cases the provisions of Paragraph 5.2.2.18. of this Regulation shall apply. The power supply for all other functions shall use other measures.
- 5.1.3.6.1. The support of messages defined within ISO 11992-2:2003 including Amd.1:2007 is specified within Annex 16 to this Regulation for the towing vehicle and trailer as appropriate.
- 5.1.3.6.2. The functional compatibility of towing and towed vehicles equipped with electric control lines as defined above shall be assessed at the time of type approval by checking that the relevant provisions of

ISO 11992:2003, including ISO 11992-2:2003 and its Amd.1:2007 parts 1 and 2, are fulfilled. Annex 17 to this Regulation provides an example of tests that may be used to perform this assessment.

- 5.1.3.6.3. When a power-driven vehicle is equipped with an electric control line and electrically connected to a trailer equipped with an electric control line, a continuous failure (> 40 ms) within the electric control line shall be detected in the power-driven vehicle and shall be signalled to the driver by the yellow warning signal specified in paragraph 5.2.1.29.1.2., when such vehicles are connected via the electric control line.