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DRAFT SUPPLEMENT 8 TO THE 09 SERIES OF AMENDMENTS TO REGULATION No. 13

(Braking)

Note: The text reproduced below was adopted by the Administrative Committee (AC.1) of the amended 1958 Agreement at its twenty-fourth session, following the recommendation of WP.29 at its one-hundred-and-thirtieth session. It is based on documents TRANS/WP.29/2003/3, as amended, and TRANS/WP.29/2003/45, not amended (TRANS/WP.29/926, paras. 58 and 98).

Throughout the Regulation and its annexes, replace the reference to "ISO 11992-1:1998" by the reference to "ISO 11992-1:2003"

Throughout the Regulation and its annexes, replace the reference to "ISO 11992-2:1998" by the reference to "ISO 11992-2:2003"

Text of the Regulation,

Paragraph 5.1.3.6., amend to read:

"5.1.3.6. The electric control line shall conform to ISO 11992-1 and 11992-2:2003 and be a point-to-point type using the seven pin connector according to ISO 7638-1 or 7638-2:1997. The data contacts of the ISO 7368 connector shall be used to transfer information exclusively for braking (including ABS) and running gear (steering, tyres and suspension) functions as specified in ISO 11992-2:2003. 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. 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."

Paragraph 5.1.3.6.1., amend to read:

" ..... type approval by checking that the relevant provisions of ISO 11992:2003 parts 1 and 2 are fulfilled. Annex 17 of this Regulation ..... "

Paragraphs 5.1.4. and 5.1.4.1., amend to read:

"5.1.4. Provisions for the periodic technical inspection of braking systems

5.1.4.1. It shall be possible to assess the wear condition of the components of the service brake that are subject to wear e.g. friction linings and drums/discs (in the case of drums or discs, wear assessment may not necessarily be carried out at the time of periodic technical inspection). The method by which this may be realized is defined in paragraphs 5.2.1.11.2 and 5.2.2.8.2. of this Regulation."

Paragraph 5.2.1.11.2., amend to read:

"5.2.1.11.2. Checking the wear of the service brake friction components"

Insert new paragraphs 5.2.1.11.2.1. and 5.2.1.11.2.2., to read:

"5.2.1.11.2.1. It shall be possible to easily check this wear on service brake linings from the outside or underside of the vehicle utilizing only the tools or equipment normally

supplied with the vehicle, for instance by the provision of appropriate inspection holes or by some other means. Alternatively, acoustic or optical devices warning the driver at his driving position when lining replacement is necessary are acceptable. The yellow warning signal specified in paragraph 5.2.1.29.1.2. below may be used as the optical warning signal.

5.2.1.11.2.2. Assessment of the wear condition of the friction surfaces of brake discs or drums may only be performed by direct measurement of the actual components, which may necessitate some level of disassembly. Therefore, at the time of type approval, the vehicle manufacturer shall define the following:

(a) The method by which wear of the friction surfaces of drums and discs may be assessed, including the level of disassembly required and tools and process required to achieve this.

(b) Information defining the maximum acceptable wear limit at the point at which replacement becomes necessary.

This information shall be made freely available e.g. vehicle handbook or electronic data record."

Paragraph 5.2.2.8.2., amend to read:

"5.2.2.8.2. Checking the wear of the service brake friction components"

Insert new paragraphs 5.2.2.8.2.1. and 5.2.2.8.2.2., to read:

"5.2.2.8.2.1. It shall be possible to easily check this wear on service brake linings from the outside or underside of the vehicle utilizing only the tools or equipment normally supplied with the vehicle, for instance, by the provision of appropriate inspection holes or by some other means.

5.2.2.8.2.2. Assessment of the wear condition of the friction surfaces of brake discs or drums may only be performed by direct measurement of the actual components, which may necessitate some level of disassembly. Therefore, at the time of type approval, the vehicle manufacturer shall define the following:

(a) The method by which wear of the friction surfaces of drums and discs may be assessed, including the level of disassembly required and tools and process required to achieve this.

(b) Information defining the maximum acceptable wear limit at the point at which replacement becomes necessary.

This information shall be made freely available e.g. vehicle handbook or electronic data record."

Paragraph 5.2.2.18., amend to read:

"5.2.2.18. Whenever power supplied by the ISO 7638:1997 connector is used for the functions defined in paragraph 5.1.3.6. above, the braking system shall have priority and be protected from an overload external to the braking system. This protection shall be a function of the braking system."

Annex 6,

Paragraph 3.4.1., amend to read:

"3.4.1. The simulator shall produce a digital demand signal in the electric control line according to ISO 11992-2:2003 and shall provide ..... (see paragraphs 6.4.2.2.24. and 6.4.2.2.25. of ISO 11992-2:2003)."

Annex 15, paragraph 4.6.3.1., amend the reference to "paragraph 1.7.4. of annex 4" to read "paragraph 1.7.2. of annex 4".

Annex 16, amend to read:

"Annex 16

(Reserved)"

Annex 17,

Paragraph 3.1.2., amend to read:

"3.1.2. be capable of receiving all of the messages transmitted by the motor vehicle to be type approved and be capable of transmitting all trailer messages defined within ISO 11992-2:2003;"

Paragraph 3.2.2.1.1., renumber as paragraph 3.2.2.2.1., and amend the heading of the third column of the table to read " Electrical Control Line Signal Value"

Paragraphs 3.2.2.3.1. and 3.2.2.3.2., amend the reference to "paragraph 5.2.1.29.2." to read "paragraph 5.2.1.29.1.2."

Insert a new paragraph 3.2.2.4., to read:

"3.2.2.4. Supply line braking request:

For power-driven vehicles which can be operated with trailers connected via an electric control line only:

Only the electric control line shall be connected.

Simulate message EBS 22, byte 4 with bits 3 - 4 set to 01b and check that when the service brake, secondary brake or parking brake is fully actuated the pressure in the supply line falls to 1.5 bar within the following two seconds.

Simulate a continuous absence of data communication and check that when the service brake, secondary brake or parking brake is fully actuated the pressure in the supply line falls to 1.5 bar within the following two seconds."

Paragraphs 3.2.2.4. and 3.2.2.4.1. (former), renumber as paragraphs 3.2.2.5. and 3.2.2.5.1.

Paragraph 4.1.3., amend to read:

"... vehicle messages defined within ISO 11992-2:2003."

Paragraph 4.2.2.1.1.1., amend the table to read:

"

Message Transmitted by the Simulator		Pressure at the Brake Chambers
Byte Reference	Digital Demand Value	
3 - 4	0	0 bar
3 - 4	33280d (6.5 bar)	As defined in the vehicle manufacturer's brake calculation

"

Paragraph 4.2.2.1.1.2., amend the table to read:

"

Message Transmitted by the Simulator		Pressure at the Brake Chambers
Byte Reference	Digital Demand Value	
3 – 4	0	0 bar
3 – 4	33280d (6.5 bar)	As defined in the vehicle manufacturer's brake calculation

"

Insert a new paragraph 4.2.2.1.3., to read:

"4.2.2.1.3. For trailers connected with only an electrical control line, the response of the trailer to a failure in the electric control transmission of the trailer which results in a reduction in braking performance to at least 30 per cent of the prescribed value shall be checked by the following procedure:

The pneumatic supply line at the start of each test shall be ≥ 7.0 bar.

The electric control line shall be connected to the simulator.

Byte 3, bits 5-6 of EBS 12 set to 00b to indicate to the trailer that a pneumatic control line is not available.

Byte 3, bits 1-2 of EBS 12 set to 01b to indicate to the trailer that the electric control line signal is generated from two independent circuits.

The following shall be checked:

Test Condition	Braking System Response
With no faults present in the trailer braking system	Check that the braking system is communicating with the simulator and that Byte 4, bits 3-4 of EBS 22 is set to 00b.
Introduce a failure in the electric control transmission of the trailer braking system that prevents at least 30 percent of the prescribed braking performance from being maintained	Check that Byte 4, bits 3-4 of EBS 22 is set to 01b Or The data communications to the simulator has been terminated

"

Paragraph 4.2.2.2.1.1., amend to read:

"4.2.2.2.1.1. Where a permanent failure within the electric control transmission of the trailer braking system precludes the service braking performance being met, simulate such a failure and check that byte 2, bits 3 - 4 of EBS 22 transmitted by the trailer is set to 01b. A signal should also be transmitted via pin 5 of the ISO 7638 connector (yellow warning)."
