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30 December 2009

AGREEMENT

CONCERNING THE ADOPTION OF UNIFORM TECHNICAL PRESCRIPTIONSFOR WHEELED VEHICLES, EQUIPMENT AND PARTS WHICH CAN BE FITTEDAND/OR BE USED ON WHEELED VEHICLES AND THE CONDITIONS FOR RECIPROCAL RECOGNITION OF APPROVALS GRANTED ON THE BASIS OF THESE PRESCRIPTIONS */

(Revision 2, including the amendments that entered into force on 16 October 1995)

Addendum 12: Regulation No. 13

Revision 6 - Amendment 3

Supplement 1 to the 11 series of amendments: Date of entry into force: 22 July 2009

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES OF CATEGORIES M, N AND O WITH REGARD TO BRAKING

UNITED NATIONS

*/ Former title of the Agreement:

Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958.

The list of contents,

The title of Annex 16, amend to read:

Annex 16: Compatibility between towing vehicles and trailers with respect to ISO11992 data communications

The text of the Regulation,

Throughout the text of Regulation No. 13, replace the reference to "ISO 11992:2003" by "ISO 11992:2003 including ISO 11992-2:2003 and its Amd.1:2007".

Insert a new paragraph 5.1.3.6.1., to read:

"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."

Paragraphs 5.1.3.6.1. and 5.1.3.6.2. (former), renumber as paragraphs 5.1.3.6.2. and 5.1.3.6.3. respectively.

Paragraph 5.2.1.30.5., delete the reference to footnote 12/ and the footnote 12/.

Paragraph 5.2.1.32., renumber the references (2 times) to footnote */ and footnote */ as footnote 12/

Paragraph 5.2.2.22.1., delete the reference to footnote 19/ and the footnote 19/.

Paragraph 5.2.2.22.2., renumber the reference to footnote 20/ and footnote 20/ as footnote 19/ and delete the reference to footnote 21/ and footnote 21/

Paragraph 5.2.2.23., renumber the reference to footnote 22/ and footnote 22/ as footnote 20/

Paragraph 12.1.6., renumber the reference to footnote */ and footnote */ as footnote 21/

Add a new paragraph 12.1.7., to read:

"12.1.7. Supplement 1 to the 11 series of amendments to this Regulation shall be applied as specified in paragraph 12.4.1."

Add a new paragraph 12.2.6., to read:

"12.2.6. As from 48 months after the entry into force of Supplement 1 to the 11 series of amendments to this Regulation, Contracting Parties shall grant approvals to vehicles exempted by paragraphs 5.2.1.32. and 5.2.2.23. including the footnotes, only if they comply with the requirements of Supplement 1 to the 11 series of amendments to this Regulation."

Paragraph 12.4.1., renumber the reference to footnote **/ and footnote **/ as footnote 22/

Annex 16, amend to read:

"Annex 16

COMPATIBILITY BETWEEN TOWING VEHICLES AND TRAILERS WITH RESPECT TO ISO11992 DATA COMMUNICATIONS

1. General

1.1. The requirements of this Annex shall only apply to towing vehicles and trailers equipped with an electric control line as defined in paragraph 2.24. of the Regulation.

1.2. The ISO7638 connector provides a power supply for the braking system or anti-lock braking system of the trailer. In the case of vehicles equipped with an electric control line as defined in paragraph 2.24. of the Regulation this connector also provides a data communication interface via Pins 6 and 7 – see paragraph 5.1.3.6. of the Regulation.

1.3. This Annex defines requirements applicable to the towing vehicle and trailer with respect to the support of messages defined within ISO 11992-2:2003 including Amd.1:2007.

2. The parameters defined within ISO 11992-2:2003 including Amd.1:2007 that are transmitted by the electric control line shall be supported as follows:

2.1. The following functions and associated messages are those specified within this Regulation that shall be supported by the towing vehicle or trailer as appropriate:

2.1.1. Messages transmitted from the towing vehicle to the trailer:

Function / Parameter	ISO 11992-2:2003 Reference	Regulation No. 13 Reference
Service/secondary brake demand value	EBS11 Byte 3-4	Annex 10, paragraph 3.1.3.2.
Two electrical circuits brake demand value	EBS12 Byte 3 Bit 1-2	Regulation No. 13, paragraph 5.1.3.2.
Pneumatic control line	EBS12 Byte 3 Bit 5-6	Regulation No. 13, paragraph 5.1.3.2.

2.1.2. Messages transmitted from the trailer to the towing vehicle:

Function / Parameter	ISO 11992-2:2003 Reference	Regulation No. 13 Reference
VDC Active / passive	EBS21 Byte 2 Bit 1-2	Annex 21, paragraph 2.1.6.
Vehicle electrical supply sufficient / insufficient	EBS22 Byte 2 Bit 1-2	Regulation No. 13, paragraph 5.2.2.20.
Red warning signal request	EBS22 Byte 2 Bit 3-4	Regulation No. 13, paragraphs 5.2.2.15.2.1., 5.2.2.16. and 5.2.2.20.
Supply line braking request	EBS22 Byte 4 Bit 3-4	Regulation No. 13, paragraph 5.2.2.15.2.
Stop lamps request	EBS22 Byte 4 Bit 5-6	Regulation No. 13, paragraph 5.2.2.22.1.
Vehicle pneumatic supply sufficient / insufficient	EBS23 Byte 1 Bit 7-8	Regulation No. 13, paragraph 5.2.2.16.

2.2. When the trailer transmits the following messages, the towing vehicle shall provide a warning to the driver:

Function / Parameter	ISO 11992-2:2003 Reference	Driver Warning Required
VDC Active / Passive 1/	EBS21 Byte 2 Bit 1-2	Annex 21, paragraph 2.1.6.
Red warning signal request	EBS22 Byte 2 Bit 3-4	Regulation No. 13, paragraph 5.2.1.29.2.1.

2.3. The following messages defined in ISO 11992-2:2003 including Amd.1:2007 shall be supported by the towing vehicle or trailer:

2.3.1. Messages transmitted from the towing vehicle to the trailer:

No messages currently defined.

1/ VDC (Vehicle Dynamic Control) as defined within ISO 11992-2:2003 including Amd.1:2007 is defined within this Regulation as Vehicle Stability Function – see paragraph 2.32. of the Regulation.

2.3.2. Messages transmitted from the trailer to the towing vehicle:

Function / Parameter	ISO 11992-2:2003 Reference
Vehicle service brake active / passive	EBS22 Byte 1, Bit 5-6
Braking via electric control line supported	EBS22 Byte 4, Bit 7-8
Geometric data index	EBS24 Byte 1
Geometric data index content	EBS24 Byte 2

2.4. The following messages shall be supported by the towing vehicle or trailer as appropriate when the vehicle is installed with a function associated with that parameter:

2.4.1. Messages transmitted from the towing vehicle to the trailer:

Function / Parameter	ISO 11992-2:2003 Reference
Vehicle type	EBS11 Byte 2, Bit 3-4
VDC (Vehicle Dynamic Control) Active / passive 2/	EBS11 Byte 2, Bit 5-6
Brake demand value for front or left side of vehicle	EBS11 Byte 7
Brake demand value for rear or right side of vehicle	EBS11 Byte 8
ROP (Roll Over Protection) system enabled/disabled 3/	EBS12 Byte 1, Bit 3-4
YC (Yaw Control) system enabled/disabled 4/	EBS12 Byte 1, Bit 5-6
Enable/disable trailer ROP (Roll Over Protection) system 3/	EBS12 Byte 2, Bit 1-2
Enable/disable trailer YC (Yaw Control) system 4/	EBS12 Byte 2, Bit 3-4
Traction help request	RGE11 Byte 1, Bit 7-8
Lift axle 1 - position request	RGE11 Byte 2, Bit 1-2
Lift axle 2 - position request	RGE11 Byte 2, Bit 3-4
Steering axle locking request	RGE11 Byte 2, Bit 5-6
Seconds	TD11 Byte 1

2/ VDC (Vehicle Dynamic Control) as defined within ISO 11992-2:2003 including Amd.1:2007 is defined within this Regulation as Vehicle Stability Function – see paragraph 2.32. of the Regulation.

3/ ROP (Roll Over Protection) as defined within ISO 11992-2:2003 including Amd.1:2007 is defined within this Regulation as Roll-Over Control – see paragraph 2.32.2.2. of the Regulation.

4/ YC (Yaw Control) as defined within ISO 11992-2:2003 including Amd.1:2007 is defined within this Regulation as Directional Control – see paragraph 2.32.2.1. of the Regulation.

Function / Parameter	ISO 11992-2:2003 Reference
Minutes	TD11 Byte 2
Hours	TD11 Byte 3
Months	TD11 Byte 4
Day	TD11 Byte 5
Year	TD11 Byte 6
Local minute offset	TD11 Byte 7
Local hour offset	TD11 Byte 8

2.4.2. Messages transmitted from the trailer to the towing vehicle:

Function / Parameter	ISO 11992-2:2003 Reference
Support of side or axle wise brake force distribution	EBS21 Byte 2, Bit 3-4
Wheel based vehicle speed	EBS21 Byte 3-4
Lateral acceleration	EBS21 Byte 8
Vehicle ABS active / passive	EBS22 Byte 1, Bit 1-2
Amber warning signal request	EBS22 Byte 2, Bit 5-6
Vehicle type	EBS22 Byte 3, Bit 5-6
Loading ramp approach assistance	EBS22 Byte 4, Bit 1-2
Axle load sum	EBS22 Byte 5-6
Tyre pressure sufficient / insufficient	EBS23 Byte 1, Bit 1-2
Brake lining sufficient / insufficient	EBS23 Byte 1, Bit 3-4
Brake temperature status	EBS23 Byte 1, Bit 5-6
Tyre / wheel identification (pressure)	EBS23 Byte 2
Tyre / wheel identification (lining)	EBS23 Byte 3
Tyre / wheel identification (temperature)	EBS23 Byte 4
Tyre pressure (actual tyre pressure)	EBS23 Byte 5
Brake lining	EBS23 Byte 6
Brake temperature	EBS23 Byte 7
Brake cylinder pressure first axle left wheel	EBS25 Byte 1
Brake cylinder pressure first axle right wheel	EBS25 Byte 2
Brake cylinder pressure second axle left wheel	EBS25 Byte 3
Brake cylinder pressure second axle right wheel	EBS25 Byte 4
Brake cylinder pressure third axle left wheel	EBS25 Byte 5
Brake cylinder pressure third axle right wheel	EBS25 Byte 6
ROP (Roll Over Protection) system enabled/disabled 5/	EBS25 Byte 7, Bit 1-2
YC (Yaw Control) system enabled/disabled 6/	EBS25 Byte 7, Bit 3-4

5/ ROP (Roll Over Protection) as defined within ISO 11992-2:2003 including Amd.1:2007 is defined within this Regulation as Roll-Over Control – see paragraph 2.32.2.2. of the Regulation.

6/ YC (Yaw Control) as defined within ISO 11992-2:2003 including Amd.1:2007 is defined within this Regulation as Directional Control – see paragraph 2.32.2.1. of the Regulation.

Function / Parameter	ISO 11992-2:2003 Reference
Traction help	RGE21 Byte 1, Bit 5-6
Lift axle 1 position	RGE21 Byte 2, Bit 1-2
Lift axle 2 position	RGE21 Byte 2, Bit 3-4
Steering axle locking	RGE21 Byte 2, Bit 5-6
Tyre wheel identification	RGE23 Byte 1
Tyre temperature	RGE23 Byte 2-3
Air leakage detection (Tyre)	RGE23 Byte 4-5
Tyre pressure threshold detection	RGE23 Byte 6, Bit 1-3

2.5. The support of all other messages defined within ISO 11992-2:2003 including Amd.1:2007 is optional for the towing vehicle and trailer."

Annex 17,

Add new paragraphs 3.2.2.6. and 3.2.2.7., to read:

"3.2.2.6. Illumination of stop lamps

Simulate message EBS 22 byte 4 bits 5 to 6 set to 00 and check that the stop lamps are not illuminated.

Simulate message EBS 22 byte 4 bits 5 to 6 set to 01 and check that the stop lamps are illuminated.

3.2.2.7. Intervention of Trailer Stability Function

Simulate message EBS 21 byte 2 bits 1 to 2 set to 00 and check that the driver warning defined in paragraph 2.1.6. of Annex 21 is not illuminated.

Simulate message EBS 21 byte 2 bits 1 to 2 set to 01 and check that the driver warning defined in paragraph 2.1.6. of Annex 21 is illuminated."

Add a new paragraph 3.2.3.2., to read:

"3.2.3.2. Paragraph 2.4.1. of Annex 16 defines additional messages that shall under specific circumstances be supported by the towing vehicle. Additional checks may be carried out to verify the status of supported messages to ensure the requirements of paragraph 5.1.3.6.2. of the Regulation are fulfilled."

Add new paragraphs 4.2.2.4. to 4.2.2.6., to read:

"4.2.2.4. Automatically commanded braking

In case the trailer includes a function where its operation results in an automatically commanded braking intervention, the following shall be checked:

If no automatically commanded braking intervention is generated, check that message EBS 22 byte 4 bits 5 to 6 are set to 00.

Simulate an automatically commanded braking intervention, when the resulting deceleration is ≥ 0.7 m/sec^2, check that message EBS 22 byte 4 bits 5 to 6 are set to 01.

4.2.2.5. Vehicle stability function

In the case of a trailer equipped with a vehicle stability function, the following checks shall be carried out:

When the vehicle stability function is inactive, check that message EBS 21 byte 2 bits 1 to 2 are set to 00.

Simulate an intervention of the vehicle stability control function as specified in paragraph 2.2.4. of Annex 21 and check that message EBS 21 byte 2 bits 1 to 2 are set to 01.

4.2.2.6. Support of the electric control line

Where the trailer braking system does not support braking via the electric control line check that message EBS 22 byte 4 bits 7 to 8 are set to 00.

Where the trailer braking system supports the electric control line, check that message EBS 22 byte 4 bits 7 to 8 are set to 01."

Add a new paragraph 4.2.3.2., to read:

"4.2.3.2. Paragraph 2.4.2. of Annex 16 defines additional messages that shall under specific circumstances be supported by the trailer. Additional checks may be carried out to verify the status of supported messages to ensure the requirements of paragraph 5.1.3.6.2. of the Regulation are fulfilled."
