

## **Proposal for amendments to Regulations Nos. 13 and 13-H (Brakes of vehicles)**

The text reproduced below was prepared by the experts from the International Organization of Motor Vehicle Manufacturers (OICA) in order to remove the ESC control and tell-tale requirements from Regulations Nos. 13 and 13-H, to insert these requirements into Regulation No. 121 (see ECE/TRANS/WP.29/2012/30 amending Regulation No. 121) and to review the transitional provisions of both Regulations Nos. 13 and 13-H. Changes to the current text of the Regulation are marked in bold characters for new or strikethrough for deleted characters.

### **I. Proposal**

#### **Proposal for draft Supplement 10 to the 11 series of amendments to Regulation No. 13**

*Paragraph 12*, delete and insert new paragraphs to read:

"12. Transitional provisions

##### **10 Series of Amendments**

- 12.1. As from the official date of entry into force of the 10 Series of amendments, no Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept UN type approvals under this UN regulation as amended by the 10 series of amendments.**
- 12.2. As from 4 April 2007, Contracting Parties applying this UN Regulation shall grant UN type approvals only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by the 10 series of amendments.**
- 12.3. As from 4 April 2009, Contracting Parties applying this Regulation shall not be obliged to accept, for the purpose of national or regional type approval, a vehicle type approved to the preceding series of amendments to this Regulation.**
- 12.4. As from the official date of entry into force of Supplements 1, 2 and 4 to the 10 Series of amendments to this Regulation, Contracting Parties applying this UN Regulation shall grant UN type approvals only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by Supplements 1, 2 and 4 respectively.**
- 12.5. As from the official date of entry into force of Supplements 3 and 5 to the 10 Series of amendments, no Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept UN type approvals under this UN regulation as amended by Supplements 3 and 5 to the 10 Series of amendments respectively.**
- 12.6. As from 4 April 2009, Contracting Parties applying this UN Regulation shall grant UN type approvals only if the vehicle type to be approved meets**

the requirements of this UN Regulation as amended by Supplement 3 to the 10 series of amendments.

- 12.7. As from 15 October 2010, Contracting Parties applying this UN Regulation shall grant UN type approvals only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by Supplement 5 to the 10 series of amendments.
- 12.8. Contracting Parties applying this UN Regulation shall not refuse to grant extensions of UN type approvals for existing types which have been granted according to any supplement to the 10 Series of amendments to this UN Regulation.

**11 Series of Amendments**

- 12.9. Requirements for the equipment of vehicles with vehicle stability functions as specified in paragraphs 5.2.1.32. and 5.2.2.23. of this Regulation, as amended by the 11 series of amendments to this Regulation, shall be applied as follows:

Vehicle category	Application date (as from the date after entry into force of the 11 series of amendments – 11 July 2008)	
	Contracting Parties applying this Regulation shall grant UN approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by the 11 series of amendments *	Contracting Parties applying this Regulation shall not be obliged to accept, for the purpose of national or regional type-approval, a vehicle type-approved to the preceding series of amendments to this Regulation
M <sub>2</sub>	60 months – 11 July 2013	84 months – 11 July 2015
M <sub>3</sub> (Class III) <sup>1</sup>	12 months – 11 July 2009	36 months – 11 July 2011
M <sub>3</sub> <16 tonnes (pneumatic transmission)	24 months – 11 July 2010	48 months – 11 July 2012
M <sub>3</sub> (Class II) <sup>1</sup> and B <sup>1</sup> (hydraulic transmission)	60 months – 11 July 2013	84 months – 11 July 2015
M <sub>3</sub> (Class III) (hydraulic transmission)	60 months – 11 July 2013	84 months – 11 July 2015
M <sub>3</sub> (Class III) <sup>1</sup> (pneumatic control transmission and hydraulic energy transmission)	72 months – 11 July 2014	96 months – 11 July 2016
M <sub>3</sub> (Class II) <sup>1</sup> (pneumatic control transmission and hydraulic energy transmission)	72 months – 11 July 2014	96 months – 11 July 2016
M <sub>3</sub> (other than above)	24 months – 11 July 2010	48 months – 11 July 2012
N <sub>2</sub> (hydraulic transmission)	60 months – 11 July 2013	84 months – 11 July 2015

Vehicle category	Application date (as from the date after entry into force of the 11 series of amendments – 11 July 2008)	
	<i>Contracting Parties applying this Regulation shall grant UN approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by the 11 series of amendments *</i>	<i>Contracting Parties applying this Regulation shall not be obliged to accept, for the purpose of national or regional type-approval, a vehicle type-approved to the preceding series of amendments to this Regulation</i>
N <sub>2</sub> (pneumatic control transmission and hydraulic energy transmission)	72 months – <b>11 July 2014</b>	96 months – <b>11 July 2016</b>
N <sub>2</sub> (other than above)	48 months – <b>11 July 2012</b>	72 months – <b>11 July 2014</b>
N <sub>3</sub> (2 axle tractors for semi-trailers)	12 months – <b>11 July 2009</b>	36 months – <b>11 July 2011</b>
N <sub>3</sub> (2 axle tractors for semi-trailers with pneumatic control transmission (ABS))	36 months – <b>11 July 2011</b>	60 months – <b>11 July 2013</b>
N <sub>3</sub> (3 axles with electric control transmission (EBS))	36 months – <b>11 July 2011</b>	60 months – <b>11 July 2013</b>
N <sub>3</sub> (2 and 3 axles with pneumatic control transmission (ABS))	48 months – <b>11 July 2012</b>	72 months – <b>11 July 2014</b>
N <sub>3</sub> (other than above)	24 months – <b>11 July 2010</b>	48 months – <b>11 July 2012</b>
O <sub>3</sub> (combined axle load between 3.5 - 7.5 tonnes)	48 months – <b>11 July 2012</b>	72 months – <b>11 July 2014</b>
O <sub>3</sub> (other than above)	36 months – <b>11 July 2011</b>	60 months – <b>11 July 2013</b>
O <sub>4</sub>	24 months – <b>11 July 2010</b>	36 months – <b>11 July 2011</b>
* This paragraph shall not prevent Denmark from continuing to mandate a vehicle stability function meeting the requirements of this Regulation.		
<sup>1</sup> As defined in R.E.3.		

**12.10** As from the official date of entry into force of Supplements 3, 4, 8 and 9 to the 11 Series of amendments, Contracting Parties applying this UN Regulation shall grant UN type approvals only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by Supplements 3, 4, 8 and 9 respectively

**12.11.** As from the official date of entry into force of Supplements 1, 2, 5, 6, 7 and 10 to the 11 Series of amendments, no Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept UN type approvals under this UN regulation as amended by Supplements 1, 2, 5, 6, 7 and 10 to the 11 Series of amendments respectively.

**12.12.** As from 23 July 2013, Contracting Parties applying this UN Regulation shall grant UN type approvals to a vehicle type exempted by paragraphs 5.2.1.32 and 5.2.2.23. including the footnote, only if the vehicle type to be

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approved meets the requirements of this UN Regulation as amended by Supplement 01 to the 11 series of amendments.

- 12.13 For the vehicles equipped with vehicle stability functions as specified in paragraph 5.2.1.32. and 5.2.2.23. of this regulation, Supplement 01 to the 11 Series of Amendments to this regulation shall be applied as specified in paragraph 12.9.
- 12.14. As from 25 October 2013, Contracting Parties applying this Regulation shall grant approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by Supplement 2 to the 11 series of amendments.
- 12.15. As from 25 October 2016, Contracting Parties applying this Regulation shall not be obliged to accept, for the purpose of national or regional type-approval, a vehicle type-approved without taking into account the provisions of Supplement 2 to the 11 series of amendments to this Regulation.
- 12.16. As from 28 October 2012, Contracting Parties applying this UN Regulation shall grant UN type approvals only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by Supplement 6 to the 11 Series of amendments.
- 12.17. As from 29 October 2014, Contracting Parties applying this Regulation shall grant UN approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by Supplement 7 to the 11 series of amendments.
- 12.19. As from 24 months after the date of entry into force of Supplement 10 to the 11 series of amendments, Contracting Parties applying this UN Regulation shall grant UN type approvals to vehicles equipped with vehicle stability functions as specified in paragraph 5.2.1.32. and 5.2.2.23., only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by Supplement 10 to the 11 series of amendments to this Regulation.
- 12.20. No Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept extensions of UN type approvals for existing types which have been granted according to any supplement to the 11 Series of amendments to this UN Regulation.”

*Annex 21, paragraph 2.1.4., amend to read:*

- "2.1.4. Interventions of the vehicle stability function shall be indicated to the driver by a flashing optical warning signal **fulfilling the relevant technical requirements of Regulation No. 121**. The indication shall be present as long as the vehicle stability function is in an intervention mode. ~~The yellow warning signals specified in paragraph 2.1.5. below may be used for this purpose. [The warning signal specified in paragraph 5.2.1.29.1.2. of this Regulation shall not be used for this purpose.]~~

Additionally ...

... shall not generate the above signal.

~~The signal shall be visible to the driver, even in daylight, such that the driver can easily verify the satisfactory condition of the signal without leaving the driver's seat."~~

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*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 ~~a yellow~~ **an optical warning signal fulfilling the relevant technical requirements of Regulation No. 121.**

The warning signal specified in paragraph 5.2.1.29.1.2. of this Regulation ~~may~~ **shall not** be used for this purpose ~~but shall not be used for interventions as defined in paragraph 2.1.4. of this annex.~~

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."

*Paragraph 2.1.6., amend to read:*

"2.1.6. In the case of a power-driven vehicle equipped with an electric control line and electrically connected to a trailer with an electric control line the driver shall be warned by a specific optical warning signal **fulfilling the relevant technical requirements of Regulation No. 121** whenever the trailer provides the information "VDC Active" via the data communications part of the electric control line. The optical signal defined in paragraph 2.1.4. above may be used for this purpose."

## **Proposal for draft Supplement 15 to the original series of amendments to Regulation No. 13-H**

*Paragraph 12, delete and insert new paragraphs to read:*

"12. Transitional provisions

**12.1. As from the official date of entry into force of the Supplement 9 to the original version of this Regulation, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept UN type-approvals, according to Supplement 9 to the original version of this Regulation, to vehicles fitted with an Electronic Stability Control System and a Brake Assist System, both meeting the requirements of Annex 9 to this Regulation.**

**12.2. Contracting Parties applying this Regulation shall not refuse to grant UN type-approvals and extensions thereof for the vehicles not fitted with an Electronic Stability Control System and a Brake Assist System.**

**12.3. As from 1 January 2011, Contracting Parties applying this UN Regulation shall grant UN type approvals to vehicles fitted with an Electronic Stability Control System and a Brake Assist System only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by Supplement 9.**

**12.4. Until 1 November 2013, no Contracting Party applying this Regulation shall refuse national or regional type approval of a vehicle type-approved to Supplement 6 to the original version of this Regulation.**

**12.5. As from the official date of entry into force of Supplements 10, 13 and 14 to the original version of this Regulation, Contracting Parties applying this UN Regulation shall grant UN type approvals to vehicles fitted with an Electronic Stability Control System and a Brake Assist System, both meeting the requirements of Annex 9 to this Regulation, only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by Supplements 10, 13 and 14 respectively.**

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- 12.6. As from the official date of entry into force of Supplements 11 and 12 to the original version of this Regulation, no Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept UN type approvals under this UN regulation as amended by Supplements 11 and 12 respectively.
- 12.7. As from 30 January 2014, Contracting Parties applying this UN Regulation shall grant UN type approvals to vehicles fitted with an Electronic Stability Control System and a Brake Assist System, both meeting the requirements of Annex 9 to this Regulation, only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by Supplement 11.
- 12.8. As from 28 October 2012, Contracting Parties applying this UN Regulation shall grant UN type approvals to vehicles fitted with an Electronic Stability Control System and a Brake Assist System, both meeting the requirements of Annex 9 to this Regulation, only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by Supplement 12.
- 12.9. As from the official date of entry into force of the Supplement 15 to the original version of this Regulation, no Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept UN type approvals under this UN Regulation as amended by the Supplement 15.
- 12.10. As from 24 months after the date of entry into force of the Supplement 15 to the original version of this Regulation, Contracting Parties applying this UN Regulation shall grant UN type approvals to vehicles fitted with an Electronic Stability Control System and a Brake Assist System, both meeting the requirements of Annex 9 to this Regulation, only if the vehicle type to be approved meets the requirements of this UN Regulation as amended by the Supplement 15.
- 12.11. Until 24 months after the date of entry into force of the Supplement 15 to the original version of this Regulation, no Contracting Party applying this Regulation shall refuse national or regional type approval of a vehicle type-approved to the preceding Supplement.
- 12.12. No Contracting Party applying this Regulation shall refuse to grant or refuse to accept extensions to UN type-approvals for existing vehicle types which have been granted according to any Supplement from 10 to 15 to the original version of this Regulation."

*Annex 9, part A, paragraph 3.4.1.1., amend to read:*

"3.4.1.1. ~~Shall be displayed in direct and clear view of the driver, while in the driver's designated seating position with the driver's seat belt fastened~~ **fulfil the relevant technical requirements of Regulation No. 121;**"

*Delete paragraphs 3.4.1.2. to 3.4.1.5.*

*Paragraphs 3.4.1.6. to 3.4.1.9. (former), renumber as paragraphs 3.4.1.2. to 3.4.1.5.*

*Throughout Regulation No. 13-H, renumber the references to these paragraphs accordingly.*

*Paragraphs 3.5.2. and 3.5.3., amend to read:*

"3.5.2. A control, whose only purpose is to place the ESC system in a mode in which it will no longer satisfy the performance requirements of paragraphs 3., 3.1., 3.2. and 3.3., ~~shall be identified by the symbol shown for "ESC Off" below or the text "ESC OFF"~~ **fulfil the relevant technical requirements of Regulation No. 121.**

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3.5.3. A control for an ESC system whose purpose is to place the ESC system in different modes, at least one of which may no longer satisfy the performance requirements of paragraphs 3., 3.1., 3.2., and 3.3., shall ~~be identified by the symbol below with the text "OFF" adjacent to the control position for this mode.~~ **fulfil the relevant technical requirements of Regulation No. 121.**

Alternatively, in the case where the ESC system mode is controlled by a multi-functional control, the driver display shall identify clearly to the driver the control position for this mode using ~~either the symbol in paragraph 3.5.2. or the text "ESC OFF".~~ the "off" symbol for electronic stability control system as defined in Regulation No. 121."

*Paragraph 3.6.2.1.*, amend to read:

"3.6.2.1. Shall ~~be displayed in direct and clear view of the driver while in the driver's designated seating position with the driver's seat belt fastened;~~ **fulfil the relevant technical requirements of Regulation No. 121.**"

*Delete paragraphs 3.6.2.2. to 3.6.2.5.*

*Paragraphs 3.6.2.6. to 3.6.2.8. (former)*, renumber as paragraphs 3.6.2.2. to 3.6.2.4.

*Throughout Regulation No. 13-H*, renumber the references to these paragraphs accordingly.

## II. Justification

1. The Working Party on Brakes and Running Gear (GRRF) tasked OICA to present a draft proposal in order to transfer the Electronic Stability Control (ESC) control and tell tale requirements from Regulations Nos. 13 and 13-H to Regulation No. 121.

2. The same principle has been applied by the United States of America who transposed the functional requirements of the Global Technical Regulation (GTR) No. 8 into Federal Motor Vehicle Safety Standard (FMVSS) 126 and the requirements on controls and telltales into FMVSS 101.

3. In addition, the present proposal harmonizes the ESC control and telltale requirements for vehicles with braking systems that are type approved according to Regulation Nos. 13 or 13-H.

4. A separate document introduces the relevant provisions into Regulation No. 121 (Controls and tell-tales) (see ECE/TRANS/WP.29/2012/30).

5. Concerning the vehicles equipped with a braking system type approved according to Regulation No. 13-H, the transfer of the requirements into Regulation No. 121 is neutral. However, for vehicles type approved according to Regulation No. 13, the amendments to Regulation No. 121 add new requirements as Regulation No. 13 currently does not require any ESC OFF indication.

6. Transitional provisions, as defined under paragraph 12, are necessary in particular for vehicles to be approved to Regulation No. 13. While the sensors and tell-tale wiring do exist on vehicles in current production, this additional symbol for "ESC OFF" implies that the logic signal must be now brought to two different lighting devices, hence bringing a revision of the manufacturer's Human-Machine-Interface (HMI), some changes in the Electronic Control Unit (ECU) and the necessary subsequent validations to ensure reliability.

7. As this new proposed tell-tale is primarily intended to harmonize ESC control and tell-tale requirements, and in view of the industrial efforts for redesigning the vehicles currently in production, or whose design is not compatible with the new requirements, it appears reasonable to limit the upgrade to the new types of vehicle. Especially for the vehicles currently in production, type approved to the 11 series of amendments to Regulation No. 13 and complying with the requirements of paragraphs 2.1.4. and 2.1.5. of Annex 21 (i.e. not equipped with the new proposed tell-tale) should allowance be made to still obtain approval to the preceding supplements to the 11 series of amendments to Regulation No. 13, until the end of their production.

8. It is important that the adoption of the amendments to the Regulation No. 121 and to the braking regulations are well synchronized in order to avoid legal vacuums or double requirements in the framework of the 1958 Agreement.

9. The deletion of several subparagraphs in Regulations Nos. 13 and 13-H is necessary in order to prevent double requirements in the braking regulations and Regulation No. 121. The following table recalls this transfer of requirements:

	<b><u>Relevant paragraphs in Regulation No. 13, Annex 21</u></b>	<b><u>Deleted paragraph in Regulation No. 13H, Annex 9</u></b>	<b><u>Equivalent paragraph in Regulation No. 121</u></b>
<b>ESC malfunction</b>	2.1.5.	3.4.1.2.	5.2.6.
		3.4.1.3. and 3.4.1.4.	Table 1
	2.1.4. (ESC intervention)	3.4.1.5	5.1.2. and 5.3.6.
<b>ESC OFF</b>	2.1.4. (ESC intervention)	3.6.2.1.	5.6.2.
	2.1.1.(d)(iii) and 2.1.5.	3.6.2.2.	5.2.6
	2.1.1.(d)(iii)	3.6.2.3. and 3.6.2.4.	Table 1
	2.1.1.(d)(iii) and 2.1.5.	3.6.2.5.	5.1.2. and 5.3.6.



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10. The proposal for amendments to paragraph 2.1.4. of Annex 21 to Regulation No. 13 contain between square brackets [ ] the reinsertion of the former wording of the Regulation which specifically prohibits the use of the warning signal devoted to braking system malfunctions as defined in paragraph 5.2.1.29.1.2. The transfer of the warning requirements to Regulation No. 121, which makes the yellow ESC symbol mandatory, theoretically makes such provision unnecessary. However, the case of Contracting Parties not signatory to Regulation No. 121 must be taken into account and GRRF may decide to reintroduce the provision.

11. Finally, OICA seeks GRRF to generate a debate about the below proposal for simplification:

It is suggested to replace the multiple references to Regulation No. 121 by a more general one, similar to the existing reference to Regulation No. 10, for example by introducing in both braking regulations a new paragraph 5.1.0. to read:

"5.1.0. All warning signals referred to in this Regulation shall fulfil the technical requirements of the Regulation No. 121, as appropriate."