

Proposal to introduce changes to ECE/TRANS/WP.29/GRPE/2013/8 and new amendments to the 06 series of amendments to Regulation No. 49

a. Changes to ECE/TRANS/WP.29/GRPE/2013/8

Paragraph 8.3.3.5., amend to read:

"8.3.3.5. Non-compliance of gas **and dual-fuel** engines
..."

Annex 1, table in Part 1, amend to read:

"

...	...							
3.2.9.7.2.	Volume of the exhaust system that is part of the engine system:dm ³							
...	...							
3.2.12.2.8.5-3.2.	Reference number of the OBD engine family considered when ensuring the correct operation of NO _x control measures the parent engine / the engine member belongs to Number of the OBD engine family the parent engine / the engine member belongs to							
...	...							
3.2.12.2.8.8.5.	Heated/non-heated reagent tank and dosing system (see point 2.4 of Annex 11)							
3.5.4.1.1.2.	For dual fuel engines, CO₂ mass emissions WHSC test in diesel mode^{13/17}:g/kWh For dual fuel engines, CO ₂ mass emissions WHSC test in dual- fuel mode ¹³ (if applicable):g/kWh							
...	...							

"

Annex 1, table in Part 2, amend to read:

"

...	...							
3.2.9.7.	Exhaust system volume (dm ³)							
3.2.9.7.1.	Acceptable exhaust system volume Actual volume of the complete Exhaust system (vehicle and engine system) (dm ³)..... dm ³							
...	...							
3.2.12.2.7.8.	OBD components on-board features related to the vehicle							

...	...						
3.2.12.2.8.1.0.	NO_x control systems features related to the vehicle						
3.2.12.2.8.1.0.1.	Alternative approval as defined in paragraph 2.1. of Annex 11¹¹ of this Regulation used. Yes/No¹						
3.2.12.2.8.1.0.2.	List of eComponents on board the vehicle of the systems ensuring the correct operation of NO_x control measures						
3.2.12.2.8.2.1.0.3.	Activation of the creep mode: "disable after restart"/"disable after fuelling"/"disable after parking"¹²						
3.2.12.2.8.3.1.0.4.	When appropriate, manufacturer reference of the documentation package related to the installation on the vehicle of the system ensuring the correct operation of NO_x control measures of an approved engine						
3.2.12.2.8.4.1.0.5.	Written description and/or drawing of the warning signal¹⁰						
3.2.12.2.8.5.1.0.6.	Heated/non heated reagent tank and dosing system (see paragraph 2.4. of Annex 11 of this Regulation)						
...	...						
3.2.12.2.8.2.	Driver inducement system						
3.2.12.2.8.2.1.	Engine with permanent deactivation of the driver inducement, for use by the rescue services or in vehicles designed and constructed for use by the armed services, civil defence, fire services and forces responsible for maintaining public order: Yes/No ¹						
3.2.12.2.8.2.2.	Activation of the creep mode 'disable after restart'/'disable after fuelling'/'disable after parking' ^{1,7}						
...	...						
3.2.12.2.8.8.	Components on-board the vehicle of the systems ensuring the correct operation of NO _x control measures						
3.2.12.2.8.8.1.	List of components on-board the vehicle of the systems ensuring the correct operation of NO _x control measures						
3.2.12.2.8.8.2.	When appropriate, manufacturer reference of the documentation package related to the installation on the vehicle of the system ensuring the correct operation of NO _x control measures of an approved engine						
3.2.12.2.8.8.3.	Written description and/or drawing of the warning signal ¹⁰						
3.2.12.2.8.8.5.	Heated/non-heated reagent tank and dosing system (see point 2.4 of Annex 11)						

"

Paragraph 5.3., table 1 and notes, amend to read:

"5.3. Emission limits

Table 1 provides the emissions limits that apply to this Regulation.

Table 1

Emission Limits

	Limit values							
	CO (mg/kWh)	THC (mg/kWh)	NMHC (mg/kWh)	CH ₄ (mg/kWh)	NO _x [*] (mg/kWh)	NH ₃ (ppm)	PM mass (mg/kWh)	PM number (#/kWh)
WHSC (CI)	1,500	130			400	10	10	8.0 x 10 ^{11±}
WHTC (CI)	4,000	160			460	10	10	6.0 x 10 ^{11**}
WHTC (PI)	4,000		160	500	460	10	10	6.0 x 10 ^{11**}

Notes:
 PI= Positive Ignition
 CI= Compression Ignition
^{*} The admissible level of NO₂ component in the NO_x limit value may be defined at a later stage. ~~Until the implementation date, new types, specified in row C of table 1 in Annex 3, the applicable emission limit shall be 8,0 x 10¹¹ #/kWh~~
^{**} The limit shall apply as from the dates set out in row B of table 1 in Appendix 9 to Annex I. ~~Until the implementation date, new types, specified in row C of table 1 in Annex 3, the applicable emission limit for ED95 engine shall be 6,0 x 10¹² #/kWh~~

Note:

PI = Positive Ignition

CI = Compression Ignition "

Annex 9B, paragraph 4.7.1.5.1., amend to read:

"4.7.1.5.1. The manufacturer may request, subject to approval by the Type Approval Authority, ~~that~~ the ready status for a monitor to be set to indicate "complete" without the monitor having run and concluded the presence or the absence of the failure relevant to that monitor.

Such a request may only be approved; ~~if during monitoring is disabled for a~~ multiple number of operating sequences (minimum 9 operating sequences or 72 operation hours):

- (a) monitoring is temporarily disabled according to paragraph 5.2. of this Annex due to the continued presence of extreme operating conditions (e.g. cold ambient temperatures, high altitudes); or
- (b) the system that is monitored is not in operation and the DTC associated to that system ~~does~~ not have the confirmed and active or the previously active status at the time when the readiness status becomes incomplete during a repair.

Any such request must specify the conditions for monitoring system disablement and the number of operating sequences that would pass without monitor completion before ready status would be indicated as "complete".

The extreme ambient or altitude conditions considered in the manufacturer's request shall never be less severe than the conditions specified by this annex for temporary disablement of the OBD system."

Annex 9B, Appendix 3, Item 1, amend to read:

"Appendix 3 - Item 1

...

Wherever a feedback control loop exists, the OBD system shall monitor the system's ability to maintain feedback control as designed (possible errors are for example: not e.g. to entering feedback control within a manufacturer specified time interval, or: whensystem fails to maintain ~~feedback control~~, feedback control has used up all the adjustment capability allowed by the manufacturer and the system cannot achieve the target) - component monitoring.

..."

Annex 11, paragraph 5.3., add footnote 2 to read:

"5.3. Low-level inducement system

The low-level inducement system shall reduce the maximum available engine torque across the engine speed range by 25 per cent between the peak torque speed and the governor breakpoint as described in Appendix 3 to this annex. The maximum available reduced engine torque below the peak torque speed of the engine before imposition of the torque reduction shall not exceed the reduced torque at that speed.

The low-level inducement system shall be activated when the vehicle becomes stationary² for the first time after the conditions specified in paragraphs 6.3., 7.3., 8.5. and 9.4., have occurred.

² A vehicle shall be considered as stationary at the latest 1 minute after ~~operation of~~ the vehicle speed has been reduced to zero km/h. The engagement of any device such as a park-brake, a trailer-brake, or a hand-brake shall not be necessary for being stationary."

b. New amendments to the 06 series of amendments to Regulation No. 49

Paragraphs 13.3.2 and 13.3.3. amend to read

"13.3.2. As from 1 September 2015, type-approvals granted to this Regulation as amended by the 06 series of amendments, which do not comply with the requirement of paragraph 13.2.~~42~~., shall cease to be valid.

13.3.3. As from 31 December 2016, type-approvals granted to this Regulation as amended by the 06 series of amendments, which do not comply with the requirements of paragraph 13.2.~~23~~., shall cease to be valid."

Annex 3, Table 1, amend to read:

"Table 1

Letters with reference to requirements of OBD and SCR systems

Character	NO _x OTL ¹	PM OTL ²	Reagent quality and consumption	Additional OBD monitors ³	Implementation dates: new types	Date when type approval cease to be valid
A ⁴	Row "phase-in period" of Tables 1 and 2 of Annex 9A	Performance monitoring ⁵	Phase in ⁶	N/A	Date of entry into force of 06 series of R49	1 September 2014 31 August 2015
B ⁴	Row "phase-in period" of Tables 1 and 2 of Annex 9A	Row "phase-in period" of Table 1 of Annex 9A	Phase in ⁶	N/A	1 September 2014	31 December 2016

C	Row "general requirements" of Tables 1 and 2 of Annex 9A	Row "general requirements" of Table 1 of Annex 9A	General ⁷	Yes	31 December 2015	
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Notes:

- ¹ "NO_x OTL" monitoring requirements as set out in Tables 1 and 2 of Annex 9A.
- ² "PM OTL" monitoring requirements as set out in Table 1 of Annex 9A.
- ³ The requirements regarding the plan and implementation of the monitoring techniques according to paragraphs 2.3.1.2. and 2.3.1.2.1. of Annex 9A.
- ⁴ During the phase-in period set out in paragraph 4.10.7. of this Regulation, the manufacturer shall be exempted from providing the statement required by paragraph 6.4.1. of Annex 9A.
- ⁵ "Performance monitoring" requirements as set out in paragraph 2.3.2.2. of Annex 9A.
- ⁶ Reagent quality and consumption "phase-in" requirements as set out in paragraphs 7.1.1.1. and 8.4.1.1. of Annex 11.
- ⁷ Reagent quality and consumption "general" requirements as set out in paragraphs 7.1.1. and 8.4.1. of Annex 11.

Annex 11, paragraph 7.1.1.1., amend to read:

"7.1.1.1. During the phase-in period specified in paragraph 4.10.7. of this Regulation and upon request of the manufacturer for the purpose of paragraph 7.1. ~~+~~ the reference to the NO_x emission limit specified in paragraph 5.3. to this Regulation shall be replaced by the value of 900 mg/kWh."

Annex 11, Appendix 6, Paragraph A.6.1., amend to read:

"A.6.1. The manufacturer shall demonstrate the correct value of **the minimum acceptable reagent quality** CD_{min} during type approval by performing the hot part of the WHTC cycle, in accordance with the provisions of Annex 4, using a reagent with the concentration CD_{min}."