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Item 4.2.44 of the provisional agenda

1958 AGREEMENT

Consideration of draft amendments to existing Regulations

Proposal for the 06 series of amendments to Regulation No. 83
(Emissions of M₁ and N₁ vehicles)

Submitted by the expert of the European Commission */

The text reproduced below was prepared by the representative of the European Commission to align Regulation No. 83 with the European Union Directives 715/2007/EC and 692/2008/EC regarding Euro 5 emissions level. The amendments to ECE/TRANS/WP.29/2009/57 and ECE/TRANS/WP.29/2009/134 are marked in bold characters or strikethrough and are based on document No. WP.29-148-12 and on the conclusions of the meeting held in Brussels with the participation of several interested parties and stakeholders (European Community, Finland, France, Germany, Hungary, the Netherlands and the European Automobile Manufacturers' Association (ACEA)). The World Forum agreed to prepare the corresponding document to be submitted to a vote either at the March or the June 2010 session of WP.29, after its consideration by the Working Party on Pollution and Energy (GRPE) at its January 2010 session.

*/ In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance performance of vehicles. The present document is submitted in conformity with that mandate.

Paragraph 2.1.1., amend to read:

"2.1.1. the equivalent inertia determined in relation to the reference mass as prescribed in **Annex 4a, Table 3** and"

Paragraph 2.2., amend to read:

"2.2. "Reference mass" means the "unladen mass" of the vehicle increased by a uniform figure of 100 kg for test according to Annexes **4a** and 8;"

Paragraph 2.5., amend to read:

"2.5. "Particulate pollutants" means components of the exhaust gas which are removed from the diluted exhaust gas at a maximum temperature of 325 K (52 °C) by means of the filters described in **Annex 4a; Appendix 4.**"

Paragraph 3.1.1., subparagraph (a), amend to read:

"... from the start of a Type I test as described in **Annex 4a** to this Regulation ..."

Paragraph 4.4.3., amend to read:

"4.4.3. The approval mark shall contain an additional character after the **type approval number**, the purpose of which is to distinguish **vehicle category and class** for which the approval has been granted. **This letter should be chosen according to the Table 1 in Annex 3 to this Regulation.**"

Paragraph 5.2.3. Table A, amend as follows (the complete table is reproduced with the amendments):

For bi-fuel vehicles with P.I. engines fuelled with Petrol (E5) or hydrogen, the test requirements "... (petrol only)" shall be replaced by "...(**petrol only**)⁽²⁾",

and for flex fuel vehicles with C.I. engines including hybrids, the test requirements "Yes" shall be replaced by "**Yes (B5 only)**"⁽²⁾",

For flex-fuel vehicles with P.I. engines fuelled with Petrol (E5) or ethanol, the test requirements for the Type VI test "Yes (both fuels)" shall be replaced by "**Yes (both fuels)**"⁽³⁾",

and notes (2) and (3) shall be added below the table:

"(2) **This provision is temporary, further requirements for biodiesel and hydrogen shall be proposed later on.**"

"(3) **For this test, fuel applicable to low ambient temperatures should be used. In the absence of a winter grade reference fuel specification, the applicable winter grade fuel for this test should be agreed between the approval authority and the manufacturer according to the existing market specifications.**"

"Table A. REQUIREMENTS
Application of test requirements for type approval and extensions

	Vehicles with positive ignition engines including hybrids								Vehicles with C.I. engines including hybrids	
	Mono fuel				Bi fuel ⁽¹⁾			Flex fuel ⁽¹⁾	Flex fuel	Mono fuel
Reference fuel	Petrol (E5)	LPG	NG/ Biomethane	Hydrogen	Petrol (E5)	Petrol (E5)	Petrol (E5)	Petrol (E5)	Diesel (B5)	Diesel (B5)
					LPG	NG/ Biomethane	Hydrogen	Ethanol (E85)	Biodiesel	
Gaseous pollutants (Type I test)	Yes	Yes	Yes		Yes (both fuels)	Yes (both fuels)	Yes (petrol only) ⁽²⁾	Yes (both fuels)	Yes (B5 only) ⁽²⁾	Yes
Particulates (Type I test)	Yes (direct injection)	-	-		Yes (direct injection) (petrol only)	Yes (direct injection) (petrol only)	Yes (direct injection) (petrol only) ⁽²⁾	Yes (direct injection) (both fuels)	Yes (B5 only) ⁽²⁾	Yes
Idle emissions (Type II test)	Yes	Yes	Yes		Yes (both fuels)	Yes (both fuels)	Yes (petrol only) ⁽²⁾	Yes (both fuels)	-	-
Crankcase emissions (Type III test)	Yes	Yes	Yes		Yes (petrol only)	Yes (petrol only)	Yes (petrol only) ⁽²⁾	Yes (petrol)	-	-
Evaporative emissions (Type IV test)	Yes	-	-		Yes (petrol only)	Yes (petrol only)	Yes (petrol only) ⁽²⁾	Yes (petrol)	-	-
Durability (Type V test)	Yes	Yes	Yes		Yes (petrol only)	Yes (petrol only)	Yes (petrol only) ⁽²⁾	Yes (petrol)	Yes (B5 only) ⁽²⁾	Yes
Low temperature emissions (Type VI test)	Yes	-	-		Yes (petrol only)	Yes (petrol only)	Yes (petrol only) ⁽²⁾	Yes (both fuels) ⁽³⁾	-	-
In-service conformity	Yes	Yes	Yes		Yes (both fuels)	Yes (both fuels)	Yes (petrol only) ⁽²⁾	Yes (both fuels)	Yes (B5 only) ⁽²⁾	Yes
On-board diagnostics	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes

(1) When a bi fuel vehicle is combined with a flex fuel vehicle, both test requirements are applicable.

(2) **This provision is temporary, further requirements for biodiesel and hydrogen shall be proposed later on.**

(3) **For this test, fuel applicable to low ambient temperatures should be used. In the absence of a winter grade reference fuel specification, the applicable winter grade fuel for this test should be agreed between the approval authority and the manufacturer according to the existing market specifications. Development of a reference fuel for this application is underway."**

Paragraph 5.3.1.3., amend to read:

"5.3.1.3. The test is carried out using the procedure of Type I test as described in Annex 4a. The method used to collect and analyse the gases is prescribed in Appendix 2 and 3 of Annex 4a, and the method to sample and analyse the particulates shall be as prescribed in Appendix 4 and 5 of Annex 4a."

Paragraph 5.3.1.4., Table I (emission limits), amend to read (the table is reproduced with the amendments):

Amend the header of the column "Mass of particulate matter⁽¹⁾ (PM)" to read "Mass of particulate matter (PM)", and

in the the column "Mass of particulate matter (PM)", delete limit value 5.0 in both subcolumns (for PI and DI engines), and retain only 4.5, and

delete notes (1) and (2), and renumber note (3) as (1).

Table 1:
Emissions limits

Limit values																
		Reference mass (RM) (kg)	Mass of carbon monoxide (CO)		Mass of total hydrocarbons (THC)		Mass of non- methane hydrocarbons (NMHC)		Mass of oxides of nitrogen (NO _x)		Combined mass of hydrocarbons and oxides of nitrogen (THC + NO _x)		Mass of particulate matter (PM)		Number of particles (P)	
			L ₁ (mg/km)	L ₂ (mg/km)	L ₃ (mg/km)	L ₄ (mg/km)	L ₂ + L ₃ (mg/km)	L ₅ (mg/km)	L ₆ (number/km)							
Category	Class		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI ⁽¹⁾	CI	PI	CI
M	-	All	1,000	500	100	-	68	-	60	180	-	230	4.5	4.5	-	6.0 x 10 ¹¹
N ₁	I	RM ≤ 1,305	1,000	500	100	-	68	-	60	180	-	230	4.5	4.5	-	6.0 x 10 ¹¹
	II	1,305 < RM ≤ 1,760	1,810	630	130	-	90	-	75	235	-	295	4.5	4.5	-	6.0 x 10 ¹¹
	III	1,760 < RM	2,270	740	160	-	108	-	82	280	-	350	4.5	4.5	-	6.0 x 10 ¹¹
N ₂	-	All	2,270	740	160	-	108	-	82	280	-	350	4.5	4.5	-	6.0 x 10 ¹¹

Key: PI = Positive Ignition, CI = Compression Ignition
(1) Positive ignition particulate mass standard shall apply only to vehicles with direct injection engines.

Paragraph 5.3.5.1., the first part of the paragraph, amend to read:

"5.3.5.1. This test shall not be applied to compression ignition vehicles

However, for compression ignition vehicles when applying for type approval, manufacturers shall present to the approval authority information showing that the NO_x after treatment device reaches a sufficiently high temperature for efficient operation within 400 seconds after a cold start at -7 °C as described in Type VI test.

In addition..."

Paragraph 5.3.5.1.2., amend to read:

"5.3.5.1.2. The test consists of the four elementary urban driving cycles of Part One of the Type I test. The Part One test is described in **paragraph 6.1.1. of Annex 4a, and illustrated in figure 1 of the same Annex.** The low ambient temperature ..."

Paragraph 9.3.1., amend to read (the text of document ECE/TRANS/WP.29/2009/57 remains):

"9.3.1. The information gathered by the manufacturer shall be sufficiently comprehensive to ensure that in-service performance can be assessed for normal conditions of use as defined in paragraph 9.2. The manufacturer's sampling shall be drawn from at least two **Contracting Parties with substantially different vehicle operating conditions** ~~geographic regions when substantially different vehicle operating conditions exist within the Contracting Party.~~ Factors such as differences in fuels, ambient conditions, average road speeds, and urban/highway driving split shall be taken into consideration in the selection of the Contracting Parties."

Paragraph 9.3.2., amend to read:

"9.3.2. In selecting the **Contracting Parties** ~~geographic regions~~ for sampling vehicles, the manufacturer may select vehicles from a ~~region~~ **Contracting Party** that is considered to be particularly representative. In this case, the manufacturer shall demonstrate to the approval authority which granted the type approval that the selection is representative (e.g. by the ~~region~~ **market** having the largest annual sales of a vehicle family within the ~~Contracting Party~~ **applicable Contracting Party**). When an in-service family requires more than one sample lot to be tested as defined in paragraph 9.3.5., the vehicles in the second and third sample lots shall reflect different vehicle operating conditions from those selected for the first sample. ~~if such differences exist within the Contracting Party.~~"

Paragraph 12, amend to read (paragraphs 12.1.2. (New type approvals), 12.1.3. (New vehicles) and 12.1.4. (On board diagnostic (OBD) system) and their sub-paragraphs shall be deleted):

"12. TRANSITIONAL PROVISIONS

12.1. General provisions

12.1.1. As from the official date of entry into force of the 06 series of amendments, no Contracting Party applying this Regulation shall refuse to grant approval under this Regulation as amended by the 06 series of amendments.

12.2. Special provisions

12.2.1. Contracting Parties applying this Regulation may continue to grant approvals to those vehicles which comply with previous levels of this Regulation, provided that the vehicles are intended for export to countries to apply the relating requirements in their national legislations."

Appendix 3,

Paragraph 4.1., amend to read:

"4.1. When a check on vehicles is deemed necessary, emission tests in accordance with **Annex 4a** to this Regulation are performed on pre-conditioned vehicles selected in accordance with the requirements of paragraphs 2. and 3. of this Appendix. Pre-conditioning cycles additional to those specified in **paragraph 6.3. of Annex 4a** to this Regulation will only be allowed if they are representative of normal driving."

Annex 1,

Item 1.1.1., renumber as item 1.3.3.

Item 2.1., renumber as item 2.6.

Item 2.2., renumber as item 2.8.

Item 3.2.9., delete the first of the two items 3.2.9.1.

Item 3.2.9.4., renumber as item 3.2.10.

Item 3.2.12.2.5.1., amend to read:

"3.2.12.2.5.1. ~~Complete~~ Detailed description of the devices and their state of tune:"

Item 3.2.12.2.6.4., amend to read:

"3.2.12.2.6.4. Regeneration system/method. Description and/or drawing:..... "

Item 3.5 and its sub-items, shall be deleted.

Item 6.6.1., amend to read:

6.6.1. Tyre / wheel combination(s)

(a) for all tyre options indicate size designation, load-capacity index, speed category symbol. ~~rolling resistance to ISO 28580 (where applicable)~~

(b) for tyres of category Z intended to be fitted on vehicles whose maximum speed exceeds 300 km/h equivalent information shall be provided; for wheels indicate rim size(s) and off-set(s)

Annex 2.

Addendum to Type approval Communication

Item 2.1., amend to read:

"2.1. Tailpipe emissions test results:
Emissions classification: 06 series of amendments ~~/07 series of amendments~~ 2/

Type approval..."

Item 2.5. and its sub-paragraphs, shall be deleted.

Annex 3., amend to read:

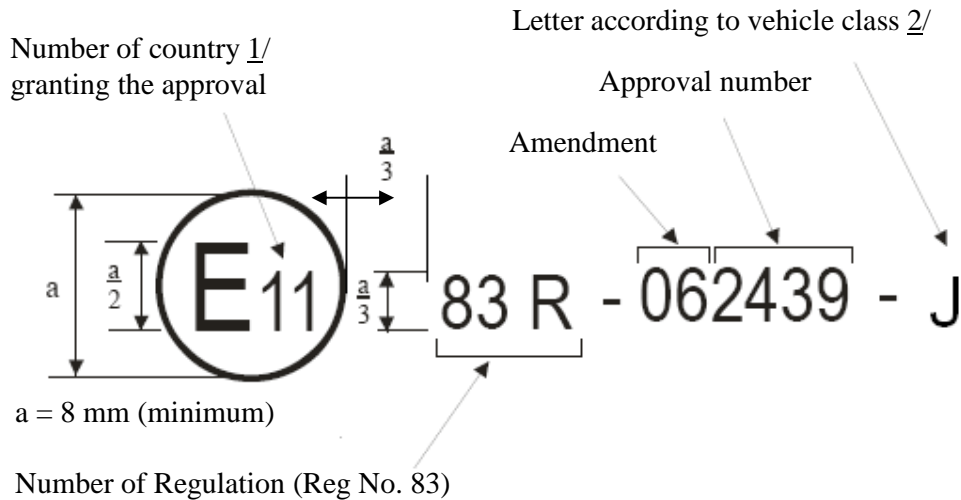
"Annex 3

ARRANGEMENTS OF THE APPROVAL MARK

In the approval mark issued and affixed to a vehicle in conformity with paragraph 4. of this Regulation, the type approval number shall be accompanied by an alphabetical character assigned according to Table 1 of this Annex, reflecting the vehicle category and class that the approval is limited to.

This annex outlines the appearance of this mark, and gives an example how it shall be composed.

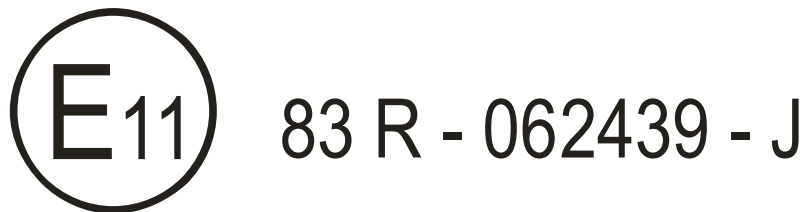
The following schematic graph presents the general lay-out, proportions and contents of the marking. The meaning of numbers and alphabetical character are identified, and sources to determine the corresponding alternatives for each approval case are also referred.



1/ Number of country according to footnote in paragraph 4.4.1. of this Regulation

2/ According to Table 1 of this Annex

The following graph is a practical example of how the marking should be composed.



The preceding approval mark affixed to a vehicle in conformity with paragraph 4. of this Regulation shows that the vehicle type concerned has been approved in the United Kingdom (E₁₁), pursuant to Regulation No. 83 under approval number 2439. This mark indicates that the approval was given in accordance with the requirements of this Regulation with the 06 series of amendments incorporated. Furthermore, the accompanying letter (J) denotes that the vehicle belongs to vehicle category M or N_{1,I}.

Table 1**Letters with reference to fuel, engine and vehicle category**

Character	Vehicle category and class	Engine type
J	M, N ₁ class I.	PI CI
K	M ₁ to fulfill specific social needs (excluding M _{1G})	CI
L	N ₁ class II	PI CI
M	N ₁ class III, N ₂	PI CI

Annex 4 and all its appendices, shall be deleted

Annex 4a,

Paragraph 1, amend to read:

"1. APPLICABILITY

This Annex effectively replaces former Annex 4.

Annex 4a, Appendix 7,

Paragraph 4.1.2., amend to read:

"4.1.2. **The widest tyre shall be chosen. If there are more than three tyre sizes, the widest minus one shall be chosen.**"

Annex 7,

Paragraph 4.1., amend to read:

"4.1. Chassis dynamometer

The chassis dynamometer shall meet the requirements of **Appendix 1 of Annex 4a.**"

Paragraph 5.2.1., amend to read:

"... Type I test as specified in **Annex 4a** ..."

Paragraph 5.4.1., amend to read:

"... Type I test as described in **Annex 4a** (cold start urban and extra urban test) ..."

Annex 7 - Appendix 1,

Paragraph 3.2., amend to read:

"3.2. Calibration of the HC analyser

The analyser should be calibrated using propane in air and purified synthetic air. See paragraph 3.2. of Appendix 3 of **Annex 4a**

Establish a calibration curve as described in paragraphs 4.1. to 4.5. of this appendix."

Annex 8,

Paragraph 2.1.1., amend to read:

"... requirements for the Type I test as specified in Annex 4a, ... "

Paragraph 2.2.1., amend to read:

"2.2.1. The requirements of **Appendix 1 of Annex 4a** apply. The dynamometer shall be adjusted to simulate the operation of a vehicle on the road at 266 K (-7 °C). Such adjustment may be based on a determination of the road load force profile at 266 K (-7°C). Alternatively the driving resistance determined according to **Appendix 7 of Annex 4a** may be adjusted for a 10 per cent decrease of the coast-down time. The technical service may approve the use of other methods of determining the driving resistance."

Paragraph 2.2.2., amend to read:

"2.2.2. For calibration of the dynamometer the provisions of **Appendix 1 of Annex 4a** apply."

Paragraph 2.3.1., amend to read:

"2.3.1. The **provisions of Appendix 2 and Appendix 3 of Annex 4a** apply."

Paragraph 2.4.1., amend to read:

"2.4.1. The provisions of **Appendix 3 of Annex 4a** apply, but only for carbon monoxide, carbon dioxide, and **total** hydrocarbon testing."

Paragraph 2.4.2., amend to read:

"2.4.2. For calibrations of the analytical equipment the provisions of **Annex 4a** apply"

Paragraph 2.5.1., amend to read:

"2.5.1. The provisions of **paragraph 3 of Appendix 3 of Annex 4a** apply, where they are relevant."

Paragraph 2.6.1., amend to read:

"2.6.1. For equipment used for the measurement of volume, temperature, pressure and humidity the provisions in **paragraph 4.6 of Annex 4a** apply"

Paragraph 3.2., amend to read:

"3.2. The Part One urban driving cycle according to **Figure 1 in Annex 4a** ..."

Paragraph 3.2.1., amend to read:

"... operation of the first cycle shall be in accordance with **Table 1 and Figure 1 in Annex 4a** ..."

Paragraph 3.3.1., amend to read:

"3.3.1. For the test vehicle the provisions of **paragraph 3.2 of Annex 4a** apply. For setting the equivalent inertia mass on the dynamometer the provisions of **paragraph 6.2.1 of Annex 4a** apply."

Paragraph 4.2.3., amend to read:

"4.2.3. The preconditioning consists of ~~the~~ **one complete** driving cycle, Parts One and Two, **according to Tables 1 and 2 and Figure 1 of Annex 4a**. At the request of the manufacturer, vehicles with a positive-ignition engine may be preconditioned with one Part One and two Part Two driving cycles."

Paragraph 4.2.5., amend to read:

"4.2.5. The drive-wheel tyre pressure shall be set in accordance with the provisions of **paragraph 6.2.3. of Annex 4a**."

Paragraph 4.2.7., amend to read:

"... Part One cycle as described in **Table 1 and Figure 1 of Annex 4a**. ..."

Paragraph 5.1.1., amend to read:

"... Part One cycle (**Annex 4a, Table 1 and Figure 1**)..."

Paragraph 5.2.1.4., amend to read:

"5.2.1.4. The vehicle speed as measured from the dynamometer roll(s) shall be used (**paragraph 1.2.6. of Appendix 1 of Annex 4a.**)"

Paragraph 5.3.1., amend to read:

"5.3.1. The provisions of **paragraph 6.4., excluding 6.4.1.2., of Annex 4a** apply ..."

Paragraph 5.3.2., amend to read:

"...the provisions of **paragraph 6.5., excluding paragraph 6.5.2., of Annex 4a** apply.
In..."

Paragraph 5.3.3., amend to read:

"... the provisions of **paragraph 6.6. of Annex 4a** apply."

Annex 9,

Paragraph 6.3.1.2., amend to read:

"... those described in **Appendix 7 of Annex 4a.**"

Paragraph 6.3.1.4., amend to read:

"... those described in **Annex 4a** ..."

Annex 11,

Paragraph 2.9., amend to read:

"2.9. **"Type I test"** means the driving cycle (Parts One and Two) used for emission approvals, as detailed in **Tables 1 and 2 of Annex 4a.**"

Annex 11 - Appendix 1,

Paragraph 3.1., amend to read:

"3.1. The test vehicle shall meet the requirements of **paragraph 3.2. of Annex 4a.**"

Paragraph 4.1., amend to read:

"... Type I test as described in **paragraph 3.2. of Annex 4a.**"

Paragraph 5.1., amend to read:

"... the requirements of **Appendix 1 of Annex 4a.**"

Paragraph 6.1., amend to read:

"... the requirements **of Annex 4a.**"

Annex 12,

Paragraph 3.1.1.1., amend to read:

"... pre-conditioning cycle referred to in **paragraph 6.3. of Annex 4a** may be extended."

Annex 13,

Paragraph 3.1., amend to read:

"... calculations shall be carried out according to **Annex 4a, paragraphs 6.4. to 6.6.**
Determination of ..."

Paragraph 3.2.1., amend to read:

"... preparation cycles in **paragraph 6.3. of Annex 4a ...**"

Paragraph 3.2.2., amend to read:

"... Type I test described in **Annex 4a ...**"

Paragraph 3.2.6., amend to read:

"... shall be calculated according to **Annex 4a, paragraph 6.6., ...**"

Annex 14,

Paragraph 1.2., amend to read:

"... shall be tested according to **Annex 4a, 5, ...**"

Paragraph 3.1.2.2.1., amend to read:

"... Part Two cycle described in **Table 2 (and Figure 3) of Annex 4a ...**"

Paragraph 3.1.2.5.3., amend to read:

"3.1.2.5.3. The vehicle shall be driven according to **provisions in Annex 4a**, or in case of special gear shifting strategy, according to the manufacturer's instructions, as incorporated in the drivers' handbook of production vehicles and indicated by a technical gear shift instrument (for drivers' information). For these vehicles the gear shifting points prescribed **in Annex 4a** are not applied. For the pattern of the operating curve the description according to **paragraph 6.1.3. of Annex 4a** shall apply.

Paragraph 3.1.2.5.4., amend to read:

"3.1.2.5.4. The exhaust gases shall be analyzed according to provisions in **Annex 4a.**"

Paragraph 3.1.3.4.3., amend to read:

"3.1.3.4.3. The vehicle shall be driven according to **Annex 4a**, or in case of special gear shifting strategy, according to the manufacturer's instructions, as incorporated in the drivers' handbook of production vehicles and indicated by a technical gear shift instrument (for drivers' information). For these vehicles the gear shifting points prescribed in **Annex 4a** are not applied. For the pattern of the operating curve the description according to **paragraph 6.1.3.2. of Annex 4a** shall apply."

Paragraph 3.1.3.4.4., amend to read:

"3.1.3.4.4. The exhaust gases shall be analysed according to provisions in **Annex 4a.**"

Paragraph 3.2.2.3.1., amend to read:

"3.2.2.3.1. For compression-ignition engined vehicles the Part Two cycle described in **Table 2 (and Figure 3) of Annex 4a** shall be used. Three consecutive cycles shall be driven according to paragraph 3.2.2.6.3. below."

Paragraph 3.2.2.6.3., amend to read:

3.2.2.6.3. The vehicle shall be driven according to **Annex 4a**, or in case of special gear shifting strategy, according to the manufacturer's instructions, as incorporated in the drivers' handbook of production vehicles and indicated by a technical gear shift instrument (for drivers' information). For these vehicles the gear shifting points prescribed in **Annex 4a** are not applied. For the pattern of the operating curve the description according to **paragraph 6.1.3. of Annex 4a** shall apply.

Paragraph 3.2.2.6.4., amend to read:

3.2.2.6.4. The exhaust gases shall be analysed according to **Annex 4a.**

Paragraph 3.2.3.1.1., amend to read:

"... Part Two cycle described in **Table 2 and Figure 2 of Annex 4a**..."

Paragraph 3.2.3.4.3., amend to read:

"3.2.3.4.3. The vehicle shall be driven according to **Annex 4a**, or in case of special gear shifting strategy, according to the manufacturer's instructions, as incorporated in the drivers' handbook of production vehicles and indicated by a technical gear shift instrument (for drivers' information). For these vehicles the gear shifting points prescribed in **Annex 4a** are not applied. For the pattern of the operating curve the description according to **paragraph 6.1.3. of Annex 4a** shall apply."

Paragraph 3.2.3.4.4., amend to read:

"3.2.3.4.4. The exhaust gases shall be analysed according to provisions in **Annex 4a**."

Paragraph 3.3.1., amend to read:

"3.3.1. These vehicles shall be tested according to **Annex 4a**."

Paragraph 3.3.3., amend to read:

"3.3.3. The vehicle shall be driven according to **Annex 4a**, or in case of special gear shifting strategy according to the manufacturer's instructions, as incorporated in the drivers' handbook of production vehicles and indicated by a technical gear shift instrument (for drivers information). For these vehicles the gear shifting points prescribed in **Annex 4a** are not applied. For the pattern of the operating curve the description according to **paragraph 6.1.3. of Annex 4a** shall apply."

Paragraph 3.4.1., amend to read:

"... tested in hybrid mode according to **Annex 4a**. If several hybrid ..."

Paragraph 3.4.3., amend to read:

"3.4.3. The vehicle shall be driven according to **Annex 4a**, or in case of special gear shifting strategy according to the manufacturer's instructions, as incorporated in the drivers' handbook of production vehicles and indicated by a technical gear shift instrument (for drivers information). For these vehicles the gear shifting points prescribed in **Annex 4a**, are not applied. For the pattern of the operating curve the description according to **paragraph 6.1.3.2. of Annex 4a** shall apply."