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ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL

Consumer goods
Automotive industry

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Amendments to Regulations 692/2008 and 715/2007

This document provides draft texts for an intended 2009 Comitology revision and update of Euro 5/6 Regulations suggested by the Commission service for discussion at the MWEG of 22 September 2009

Please note that it does not commit or limit the Commission in any respect for its final proposal.

Whereas:

- Footnotes (1), (2) of table 1 and 2 of Annex I to Regulation 692/2008 require the Commission to introduce the new test procedure for particle mass and numbers emitted by light duty vehicles;
- Directive 2008/89/EC mandates the use of daylight running lamps for safety reasons. The effect of these devices, which are switched on permanently during the operation of the vehicle, should be appropriately reflected in the measured pollutant and CO₂ emissions;
- The risk of tampering and total failures suggests the monitoring of diesel particle filters (DPFs) against such events, regardless of the exceedance of the applicable OBD threshold limit;
- Due to its permanent nature, the monitoring of electric circuits should be exempt from the reporting resulting from the in-use-performance-ratio requirements on the OBD system;
- The limited frequency of driving situations during which monitors of the boost control system or requiring a cold start can be operated requires special performance requirements for these monitors;
- The statistical conditions under which compliance with in-use-performance-ratio requirements is assessed by default should be harmonised;;
- The conditions under which the driver inducement of a SCR system is activated should be defined when identifying tampering of the SCR system by monitoring NOx emissions;
- The recording of activation of the driver inducement system should be clarified with regard to possible future use of this information at roadworthiness inspections;

- The protection of the emission control computer against tampering should be open for technical improvements due to innovation;
- Recording and reporting of its data are essential parts of a mandated OBD monitor and should not be waived by claimed deficiencies, in particular not in a systematic manner in case of choice of certain standards for on/off board communication by the manufacturer;
- Raw data on parts of particular vehicles are essential repair and maintenance information, their use by certain independent operators, such as distributors and publishers, requires them to be made available in a consistent format allowing data processing in the systems of independent operators;
- Work units are important technical repair and maintenance information for independent operators and clarification that they are covered by the provisions of Article 6 of Regulation 715/2007 is expected to create commercial certainty for the market players;
- More flexibility should be given for the re-programming of vehicle control units and the data exchange between vehicle manufacturers and independent operators to accommodate innovative developments;
- It should be ensured that vehicles approved to an UNECE Regulation equivalent to the emission related requirements of Regulations 715/2007 and 692/2008 and fulfilling the requirements of the mentioned Regulations on access to information will be approved to Regulation 715/2007 without any administrative burden;
- No common structured process for the exchange of raw data between vehicle manufacturers and independent operators exists at present, the Regulation should define some general qualitative principles in this respect. A future common structured process should be developed by CEN as a formal standard, whereupon the mandate given to CEN does not anticipate the level of detail this standard will provide. In particular the work of CEN should reflect the interests and needs of vehicle manufacturers and independent operators alike and should investigate also solutions such as open data formats described by a set of well defined meta-data in order to facilitate the accommodation of existing IT infrastructure.

1. PMP TEST PROCEDURE¹

1.1. Section 3.1 of Annex III of Regulation 692/2008 shall be amended as follows:

"The technical requirements shall be those set out in Annex 4 to UN/ECE Regulation No 83 with the exceptions set out in sections 3.2 to 3.12. As from the dates set out in the second sentence of Article 10(6) of Regulation 715/2007 the mass of particulate matter (PM) and the number of particles (P) shall be determined according the emission test procedure set out in section 6 of Annex 4a of [UNECE Regulation 83, series of amendments 05, supplement 7 (in force since 26 February

¹ Amendment required by paragraph 6 of Article 10 of Regulation 715/2007.

2009)], using the test equipment described in sections 4.4 and 4.5 thereof, respectively."

- 1.2. Footnotes 1 and 2 of Table 1 and footnotes 1, 2 and 5 Table 2 of Annex I to Regulation 715/2007 as amended by Regulation 692/2008 shall be deleted. The other footnotes of these tables shall be renamed accordingly.

2. DAYTIME RUNNING LAMP²

- 2.1. A new section 3.14 shall be added to Annex III of Regulation 692/2008:

"3.14 As from the dates provided by Article 2 of Directive 2008/89/EC the daytime running lamps of the vehicle as defined in paragraph 2 of UN/ECE Regulation No 48 () shall be switched on during the test cycle. The vehicle tested shall be equipped with the daytime running lamp system that has the highest electrical energy consumption among the daytime running lamp systems, which are fitted by the manufacturer to vehicles in the group represented by the type approved vehicle. The manufacturer has to supply appropriate technical documentation to the type approval authorities in this respect.*

() OJ L 135, 23.5.2008, p. 1."*

- 2.2. A new section 3.5 shall be added to Annex XII of Regulation 692/2008:

"3.5 During the test cycle used for determining the CO₂ emissions and fuel consumption of the vehicle the provision of section 3.14 of Annex III shall apply."

3. OBD ETC.

3.1. Mandate DPF total failure monitoring³

A new section 2.14 shall be added to annex XI of Regulation 692/2008:

"2.14 In deviation from the provisions of section 3.3.5 of Annex 11 to UN/ECE Regulation 83 a particulate trap, where fitted as a separate unit or integrated into a combined emission control device, shall always be monitored at least for total failure or removal if the latter resulted in exceeding the applicable emission limits. It shall also be monitored for any failure that would result in exceeding the applicable OBD threshold limits."

² Amendment necessary to reflect mandatory use of daylight driving lamps from the dates set out in the text.

³ Amendment agreed in OBD working party, supporting documents see "On-Board Diagnostics of Light Duty Vehicles" Circa group.

3.2. Exemptions for monitoring of short/open circuit failure³³

Section 3.6.2 of Appendix 1 to Annex XI of Regulation 692/2008 shall be amended as follows:

"3.6.2 For specific components or systems that have multiple monitors, which are required to be reported by this section (e.g. oxygen sensor bank 1 may have multiple monitors for sensor response or other sensor characteristics), the OBD system shall separately track numerators and denominators for each of the specific monitors except those monitoring for short circuit or open circuit failures and report only the corresponding numerator and denominator for the specific monitor that has the lowest numerical ratio. If two or more specific monitors have identical ratios, the corresponding numerator and denominator for the specific monitor that has the highest denominator shall be reported for the specific component."

3.3. Denominators of monitors requiring a cold start³³

3.3.1. A new paragraph 33 shall be added to Article 2 of Regulation 692/2008:

"33. "Cold start" means for the purposes of Annex XI an engine coolant temperature (or equivalent temperature) at engine start less than or equal to 35 °C and less than or equal to 7 K higher than ambient temperature (if available) at engine start."

3.3.2. A new point (e) shall be added to section 3.3.2 of Appendix 1 to Annex XI of Regulation 692/2008:

"(e) The denominators of monitors of the following components shall be incremented if and only if the driving cycle has been started with a cold start:

(i) Liquid (oil, engine coolant, fuel, SCR reagent) temperature sensors

(ii) Clean air (ambient air, intake air, charge air, inlet manifold) temperature sensors

(iii) Exhaust (EGR recirculation/cooling, exhaust gas turbo-charging, catalyst) temperature sensors.

These provisions shall not have any impact on requirements for the increment of denominators of other monitors using temperature signals as input information."

3.4. Denominators for boost pressure control³³

A new point (f) shall be added to section 3.3.2 of Appendix 1 to Annex XI of Regulation 692/2008:

"(f) The denominators of monitors of the boost pressure control system shall be incremented if the following conditions are met:

(i) the general denominator conditions are fulfilled, and;

(ii) the boost pressure control system is active for a time greater than or equal to 15 seconds."

3.5. Statistical test procedure for compliance with in-use-performance requirements⁴

3.5.1. Sections 3.1.7 and 3.1.8 of Appendix 1 to Annex XI of Regulation 692/2008 shall be amended as follows:

"3.1.7 The manufacturer shall demonstrate to the approval authority and that these statistical conditions are satisfied for all monitors required to be reported by the OBD system according to section 3.6 of this Appendix not later than 18 months after the entry onto the market of the first vehicle type with IUPR in an OBD family and every 18 months thereafter. For this purpose, for OBD families consisting of more than 1000 EU registrations that are subject to sampling within the sampling period the process described in Annex II of this Regulation shall be used, notwithstanding the provisions of Section 3.1.9.

In addition to the requirements set out in Annex II and regardless of the result of the audit described in section 2 of Annex II, the authority, which has issued the approval, shall apply the in-service conformity check for IUPR described in Appendix 1 to Annex II in an appropriate number of randomly determined cases. "In an appropriate number of randomly determined cases" means, that this measure has a dissuasive effect on —non-compliance with the requirements of section 3 of this Annex or manufacturers to the provision~~de~~ of manipulated, false or non-representative data for the audit by the approval authority. If no special circumstances apply and can be demonstrated by the type approval authorities, random application of the in-service conformity check to 5% of the type approved OBD families shall be considered as sufficient for compliance with this requirement. For this purpose approval authorities may find arrangements with the manufacturer for the reduction of double testing of a given OBD family as long as these arrangements do not harm the dissuasive effect of the authority's own in-service conformity check on non-compliance with the requirements of section 3 of this Annex. Data collected in the framework of surveillance testing programmes of Member States may be used for the in-service conformity checks. On request approval authorities shall report data on the audits and random in-service conformity checks performed, including the methodology used for identifying those cases, which are made subject to the

⁴ Amendment discussed in OBD working party, German proposal (supported by ACEA) with further Commission amendments. For additional documents see "On-Board Diagnostics of Light Duty Vehicles" Circa group.

random in-service conformity check, to the Commission and other approval authorities.

3.1.8. For the entire test sample of vehicles the manufacturer must report to the authorities all of the in-use performance data to be reported by the OBD system according to section 3.6 of this Appendix in conjunction with an identification of the vehicle being tested and the methodology used for the selection of the tested vehicles from the fleet. Upon request, the approval authority which grants the approval shall make these data and the results of the statistical evaluation available to the Commission and other approval authorities."

3.5.2. A new section 3.1.10 shall be added to Appendix 1 to Annex XI of Regulation 692/2008:

"3.1.10 Non-compliance with the requirements of section 3.1.6 established by tests described in sections 3.1.7 or 3.1.9 of this Appendix shall be considered as an infringement subject to the penalties lined out in Article 13 of Regulation 715/2007. This reference does not limit the application of such penalties to other infringements, which do not explicitly refer to Article 13 of Regulation 715/2007. "

3.5.3. Annex II of Regulation 692/2008 shall be amended as follows:

See text proposed by Germany and with ACEA corrections in annex. The Commission could agree to the principles outlined, would however like to clarify some wordings, like the ACEA reference to "significant extensions of the OBD family" or section 6.1.2.

3.6. Activation of the SCR Driver Warning System⁵

A new phrase shall be added at the end of section 6.2 of Annex XVI of Regulation 692/2008:

"For the purposes of this section these situations are presumed to occur, if the applicable NOx emission limit of Table 1 of Annex I of Regulation 715/2007, multiplied by a factor of 1,5, is exceeded. By way of exception, for a vehicle approved to the interim Euro 6 OBD threshold limits of section 2.3.2 of Annex XI, these situations are presumed to occur if the applicable NOx emission limit of Table 2 of Annex I of Regulation 715/2007 is exceeded by 100 mg/km or more. NOx emissions during the test to demonstrate compliance with these requirements should be not more than 20% higher than the values referred to in the previous two sentences."

⁵ Amendment following a German proposal following claimed technical difficulties of manufacturers with SCR systems of "Euro 6-" vehicles. The proposal reflects the political intention that "Euro 6-" has to implement Euro 6 emission limits but follows alleviated rules for OBD monitoring.

3.7. Record of activation of SCR Driver Inducement system⁶

Section 7.1 of Annex XVI of Regulation 692/2008 shall be amended as follows:

"Where reference is made to this section, non-erasable Parameter Identifiers (PID) shall be stored identifying the reason for and the distance travelled by the vehicle during the inducement system activation. The vehicle shall retain a record of the PID for at least 800 days or 30 000 km of vehicle operation. The PID shall be made available via the serial port of a standard diagnostic connector upon request of a generic scan tool according to the provisions of section 6.5.3.1 of Appendix 1 of Annex 11 of UN/ECE Regulation 83 as amended by section 2.5 of Appendix 1 to Annex XI of this Regulation. As from the dates provided for by Article 17, the information stored in the PID shall be linked to the period of cumulated vehicle operation, during which it has occurred, with an accuracy of not less than 300 days or 10 000 km."

3.8. Electronic system security⁷

The third phrase of paragraph 2.3.1 of Annex I of Regulation 692/2008 shall be amended as follows:

"Any reprogrammable computer codes or operating parameter must be resistant to tampering and afford a level of protection at least as good as the provisions in ISO 15031-7: dated 15 March 2001 (SAE J2186 dated October 1996)."

3.9. Deficiencies⁸

Section 3.3 of Annex XI of Regulation 692/2008 shall be amended as follows:

"3.3 The approval authority will not accept any deficiency request that includes the complete lack of a required diagnostic monitor or of mandated recording and reporting of data related to a monitor."

⁶ Commission proposal to clarify uncertainties with the interpretation of provisions on the PID containing information on the activation of the SCR driver's inducement system, which appeared in discussions at the OBD working party.

⁷ ACEA request to allow for more advanced methods of protection of the electronic vehicle control than ISO 15031-7. Supported by FIGIEFA.

⁸ Commission proposal, which should make sure that recording and reporting of monitoring data is not claimed as a deficiency by a manufacturer, e.g. because of the choice of an incompatible protocol for on/off board communication.

4. ACCESS TO INFORMATION

4.1. Component information~~Raw data~~⁹

A new paragraph shall be inserted at the end of section 2.1 of Annex XIV of Regulation 692/2008:

"Items such as the parts, equipment, systems, components or separate technical units, as identified by their original parts numbers, with which the vehicle, as identified by the vehicle identification number (VIN) and any additional criteria such as wheelbase, engine output, trim level or options, -is originally equipped or which have been fitted by parties controlled by the manufacturer (e.g. certain national importers), shall be made available as bulk data in a machine-readable format that can be electronically processed with generally available IT systems. These data include all parts of the vehicle, which can be replaced by spare parts offered by the vehicle manufacturer to its authorised repairers or dealers or third parties by means of reference to original parts numbers. Until the Commission has adopted a common structured process for making these data available, the vehicle manufacturer may use a proprietary format for fulfilling the requirements of this paragraph without being obliged to tailor it to the demands of individual independent operators."

4.2. Work units⁹¹⁰

The following point shall be inserted at the end of paragraph 2 of Article 6 of Regulation 715/2007:

"(j) standard work units or time periods for repair and maintenance tasks if they are made available to authorised dealers or repairers of the manufacturer, either directly or through a third party."

4.3. Reprogramming of vehicle control units¹⁰

Section 2.3 of Annex XIV to Regulation 692/2008 shall be amended as follows:

"2.3. Reprogramming of vehicle control units shall be conducted in accordance with either ISO 22900 or SAE J2534. For the validation of the compatibility of the manufacturer-specific application and the vehicle communication interfaces (VCI) complying to ISO 22900 or SAE J2534, the manufacturer shall offer a validation of independently developed VCIs. The conditions of Article 7(1) of Regulation (EC) No 715/2007 apply to fees for such validation.

By way of derogation the reprogramming of non-emission related control units in accordance with either ISO 22900 or SAE J2534 shall be made

⁹ FIGIEFA request, supported by the Commission, to clarify uncertainties (as perceived by some OEMs) on the scope of Euro 5/6 provisions on access to vehicle information.

¹⁰ ACEA request and comments by FIGIEFA, proposed by the Commission.

available at the latest by 1 September 2010 for all vehicles type-approved under Regulation (EC) 715/2007, regardless of the date of the type-approval. From 1 March 2010 and until the date where the manufacturer offers full re-programming in accordance with either 22900 or SAE J2534, reprogramming shall be offered by a manufacturer via the sale or lease of its own proprietary tool. In such a case, access must be given in a non-discriminatory, prompt and proportionate way, and the tool must be provided in a usable form. The provisions of Article 7 of Regulation (EC) 715/2007 apply to fees for the access to these tools."

4.4. Data protocol for exchange security features¹¹

Section 2.2 of Annex XIV of Regulation 692/2008 shall be amended as follows:

"2.2 Access to vehicle security features used by authorised dealers and repair shops shall be made available to independent operators under protection of security technology according to the following requirements:

(i) data shall be exchanged ensuring confidentiality, integrity and protection against replay,

(ii) the standard https // ssl-tls (RFC4346) shall be used,

(iii) security certificates in accordance with ISO 20828 shall be used for mutual authentication of independent operators and manufacturers,

(iv) the independent operator's private key shall be protected by secure hardware.

The Forum on Access to Vehicle Information provided for by paragraph 9 of Article 13 will specify the parameters for fulfilling these requirements according to the state-of-the-art.

The independent operator shall be approved and authorised for this purpose on the basis of documents demonstrating that they pursue a legitimate business activity and have not been convicted of relevant criminal activity."

4.5. Calculation of fees¹²

The following sentence should be added to Article 7(2) of Regulation 715/2007:

"In addition to time-based access, for special cases like reprogramming and technical assistance, manufacturers may establish and make available fees per transaction."

¹¹ ACEA request, agreed by FIGIEFA and the Commission.

¹² ACEA request agreed by independent operators.

4.6. Editorial correction

The third sentence of Article 13(9) of Regulation 692/2008 shall be replaced by the following:

"In particular the Forum shall advise the Commission on the introduction of a process for approving and authorising independent operators by accredited organisations to access information on vehicle security features."

5. TYPE APPROVAL¹³

The following text shall be inserted after the first phrase of Article 6(1) of Regulation 692/2008:

"The approval authority shall presume that the relevant requirements are met if the following conditions hold:

- (1) The requirements of Article 13 are met*
- (2) The vehicle has been approved according to UNECE Regulation N° 83, series of amendments 06.*

The provisions of Article 14 apply in such case.

"

6. EDITORIAL CLARIFICATION

6.1. Table 1 of Appendix 6 to Annex I

The following text shall be added to the key of table 1 of Appendix 6 to Annex I of Regulation 692/2008:

"Euro 5b emissions standard = Full Euro 5 emission requirements including revised measurement procedure for particulates, particle number standard and flex fuel vehicle low temperature emission testing with bio-fuel

Euro 6b emissions standard = Full Euro 6 emission requirements including revised measurement procedure for particulates, particle number standard and flex fuel vehicle low temperature emission testing with bio-fuel

¹³ After its adoption UNECE Regulation N° 83, series of amendments 06, should be technically equivalent to the requirements of Euro 5/6 on emissions. The suggested legal provision should ensure that manufacturers can get a Euro 5/6 type approval of a vehicle with regard to emissions and access to vehicle repair and maintenance information when having an equivalent UNECE approval with regard to emissions and fulfilling Euro 5/6 requirements related to access to vehicle repair and maintenance information. Consequently, in deviation from the usual habits, UNECE Regulation N° 83, series of amendments 06, will not be listed anymore in Part II of Annex IV of the automotive Framework Directive 2007/46/EC.

Euro 5 OBD standards = Base Euro 5 OBD requirements excluding in use performance rati^on (IUPR), NO_x monitoring for petrol vehicles and tightened PM threshold limits for diesel

Euro 6 OBD standards = Full Euro 6 OBD requirements."

6.2. Correction of wrong references in information document

Sections 3.4.8 of Appendix 3 to Annex I of Regulation 692/2008 and of Annex XVIII shall read as follows:

"Vehicle electric rangekm (according to Annex 9 of Regulation no 101)"

6.3. Correction of Figure I.2.4 in Annex I of Regulation 692/2008

6.3.1. The column corresponding to the vehicle category "*Vehicles with positive ignition engines including hybrids, Bi fuel*" and the reference fuel "*Petrol (E5), Hydrogen*" should be changed as follows:

- Add an indent "-" to the row titled "*Smoke opacity*"
- Add the text "*Yes (petrol (E5))*" to all other columns

6.3.2. The column corresponding to the vehicle category "*Vehicles with compression ignition engines including hybrids, Flex fuel*" and the reference fuel "*Diesel (B5), Biodiesel*" should be changed as follows:

- Add an indent "-" to each of the rows titled "*Idle emissions (Type 2 test)*", "*Crankcase emissions (Type 3 test)*" and "*Evaporative emissions (Type 4 test)*".
- Add the text "*Yes (Diesel (B5))*" to all other columns