

OICA PROPOSAL FOR AMENDMENTS TO REGULATION No. 83

This proposal, submitted by OICA, is intended to address issues identified after further consideration of the OICA proposal, document ECE/TRANS/WP.29/GRPE/2009/8.

A. PROPOSAL

Additions and deletions to the text of the Regulation as it would be if amended by ECE/TRANS/WP.29/GRPE/2009/8 are shown in **bold** and ~~strikethrough~~ text, respectively.

Annex 4, paragraph 4.3.1.1., amend to read:

"4.3.1.1. Pollutant gases shall be analysed with the following instruments:

Carbon monoxide (CO) and carbon dioxide (CO₂) analysis:
Analysers shall be of the non-dispersive infra-red (NDIR) absorption type.

Hydrocarbons (HC) analysis:
The analyser shall be of the flame ionisation type with detector, valves, pipework, etc.
At the manufacturers request, it may For compression-ignition engines approved to the emission limits of category A in paragraph 5.3.1.4. of the 05 series of amendments to this Regulation, and for other engines if requested by the Manufacturer, it shall be heated to 463 K (190 °C) ± 10 K (HFID). It shall be calibrated with propane gas expressed equivalent to carbon atoms (C₁)."

Annex 4a, Appendix 3

Paragraphs 1.3.2. and 1.3.3., amend to read:

"1.3.2. ~~Hydrocarbons (HC) analysis – spark ignition engines:~~

~~The analyser shall be of the flame ionisation (FID) type calibrated with propane gas expressed equivalent to carbon atoms (C₁).~~

~~1.3.3.~~ Hydrocarbons (HC) analysis ~~– compression ignition engines:~~

The analyser shall be of the flame ionisation type ~~with detector, valves, pipework, etc.~~. **At the manufacturers request, the detector, valves, pipework, etc. may be** heated to 463 K (190 °C) ± 10 K (HFID). It shall be calibrated with propane gas expressed equivalent to carbon atoms (C₁)."

Paragraphs 1.3.4. to 1.3.9., renumber as 1.3.3. to 1.3.8.

Paragraph 1.2.12., amend to read:

"1.2.12. Hydrocarbon Sampling System – ~~Diesel Engines~~ **Heated FID (HFID)**"

Paragraph 6.5.3.8., amend to read:

"6.5.3.8. The figure adopted for the content of the gases in each of the pollutants measured shall be that read off after stabilisation of the measuring device. Hydrocarbon mass emissions ~~of compression-ignition engines~~ **measured using heated FID devices** shall be calculated from the integrated HFID reading, corrected for varying flow if necessary, as shown in paragraph 6.6.6. below."

Paragraph 6.6.6., amend to read:

"6.6.6. Determination of HC ~~for compression-ignition engines~~ **using HFID**

To calculate HC-mass emission ~~for compression-ignition engines~~ **using HFID**, the average HC concentration is calculated as follows:"

B JUSTIFICATION

Since compilation of document ECE/TRANS/WP.29/GRPE/2009/8, it has been noted that:

- a) although the justification describes differences between Euro 3 specification vehicles and Euro 4 and later specifications, the proposal allows the use of non-heated FID for all ECE Regulation No. 83 approvals including those to pre-Euro 4 standards (under Category A in paragraph 5.3.1.4.) and;
- b) the proposal amends Annex 4 but not the recently approved Annex 4a.

This document therefore proposes amendments to Annex 4 to clarify that the allowance to choose between heated and non-heated FID is first introduced with application of the Euro 4 standards and does not apply to vehicle types approved to the pre-Euro 4 standards.

As Annex 4a in the currently approved status of the Regulation only applies for approvals to the Euro 5 and later standards, the amendments proposed here would permit the use of both FID alternatives for all tests.

The changes required in Annex 4a following the inclusion of Euro 5 and 6 limits can only be assessed after the relevant text is known.
