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 *strike* through 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 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.

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