

Proposal for additional content in ECE/TRANS/WP.29/GRPE/2023/10

The text reproduced below was prepared by the expert from the International Organization of Motor Vehicle Manufacturers (OICA). This document aims to harmonize the requirements of the 05, 06 and 07 series of amendments to UN Regulation No. 83. The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted characters.

I. Proposal

In the 05 and 06 series of amendments

Annex 11, Appendix 1, add a new paragraph 6.5.3.3.1. to read:

"6.5.3.3.1. The standards ISO 27145 "Road vehicles – Implementation of World-Wide Harmonized On-Board Diagnostics (WWH-OBD)" dated 2012-08-15; or SAE J 1979-2 "E/E Diagnostic Test Modes: OBDonUDS", dated April 2021, may be used as an option instead of ISO 15031-5 "Road vehicles - communication between vehicles and external test equipment for emissions-related diagnostics – Part 5: Emissions-related diagnostic services" for the transmission of OBD relevant information."

Annex 11, Appendix 1, paragraphs 6.5.3.3. and 6.5.3.4., amend to read:

"6.5.3.3. Basic diagnostic data, (as specified in paragraph 6.5.1.) and bi -directional control information must be provided using the format and units described in ISO DIS 15031 -5 "Road vehicles – Communication between vehicle and external test equipment for emissions -related diagnostics – Part 5: Emissions - related diagnostic services", dated 1 November 2001, and must be available using a diagnostic tool meeting the requirements of ISO DIS 15031 -4. The vehicle manufacturer shall provide to ~~a national~~ **the responsible** standardisation body the details of any emission -related diagnostic data, e.g. PID's, OBD monitor Id's, Test Id's not specified in ISO DIS 15031 -5 but related to this Regulation.

6.5.3.4. When a fault is registered, the manufacturer must identify the fault using an appropriate fault code consistent with those given in Section 6.3. of ISO DIS 15031 -6 "Road vehicles – Communication between vehicle and external test equipment for emissions -related diagnostics – Part 6: Diagnostic trouble code definitions", relating to "emission related system diagnostic trouble codes". If such identification is not possible, the manufacturer may use diagnostic trouble codes according to Sections 5.3. and 5.6. of ISO DIS 15031 -6. The fault codes must be fully accessible by standardised diagnostic equipment complying with the provisions of paragraph 6.5.3.2. of this annex. The vehicle manufacturer shall provide to ~~a national~~ **the responsible** standardisation body the details of any emission -related diagnostic data, e.g. PID's, OBD monitor Id's, Test Id's not specified in ISO DIS 15031 -5 but related to this Regulation."

In the 07 series of amendments

Annex 11, Appendix 1, paragraphs 6.5.3.4. and 6.5.3.5., amend to read:

"6.5.3.4. Basic diagnostic data, (as specified in paragraph 6.5.1.) and bi -directional control information shall be provided using the format and units described in the standard listed in paragraph 6.5.3.2.(a) of this appendix and must be available using a diagnostic tool meeting the requirements of the standard listed in paragraph 6.5.3.2.(b) of this appendix.

The vehicle manufacturer shall provide to ~~a national~~ **the responsible** standardisation body the details of any emission -related diagnostic data, e.g. PID's, OBD monitor Id's, Test ID's not specified in the standard listed in paragraph 6.5.3.2.(a) of this appendix but related to this Regulation.

6.5.3.5. When a fault is registered, the manufacturer shall identify the fault using an appropriate ISO/SAE controlled fault code specified in one of the standards listed in paragraph 6.5.3.2.(d) of this appendix relating to "emission related system diagnostic trouble codes". If such identification is not possible, the manufacturer may use manufacturer controlled diagnostic trouble codes according to the same standard. The fault codes shall be fully accessible by standardised diagnostic equipment complying with the provisions of paragraph 6.5.3.3. of this appendix. The vehicle manufacturer shall provide to ~~a national~~ **the responsible** standardisation body the details of any emission -related diagnostic data, e.g. PID's, OBD monitor Id's, Test Id's not specified in the standard listed in paragraph 6.5.3.2.(a) of this appendix but related to this Regulation."

In the 05, 06 and 07 series of amendments

Annex 11, paragraph 3.2.1.2., amend to read:

"3.2.1.2. A manufacturer may disable any specific OBD monitor for a given driving cycle for ambient or engine **coolant** temperatures below 266 K (-7° C) or at elevations over 2,500 metres above sea level provided the manufacturer submits data and/or an engineering evaluation which adequately demonstrate that monitoring would be unreliable when such conditions exist. A manufacturer may also request disablement of any specific OBD monitor at other ambient **or engine coolant** temperatures or other elevations if they demonstrate to the authority with data and/or an engineering evaluation that misdiagnosis would occur under such conditions. It is not necessary to illuminate the Malfunction Indicator (MI) if OBD thresholds are exceeded during a regeneration provided no defect is present.

Engine coolant temperature is only deemed subject to approval, if it is used as a substitute to ambient temperature."

In the 06 and 07 series of amendments

Annex 11, Appendix 1, paragraph 6.5.1.3., amend to read:

"6.5.1.3. For all emission control systems for which specific on-board evaluation tests are conducted **according to this annex** (catalyst, oxygen sensor, etc.), except misfire detection, fuel system monitoring and comprehensive component monitoring, the results of the most recent test performed by the vehicle and the limits to which the system is compared shall be made available through the serial data port on the standardised data link connector according to the specifications given in paragraph 6.5.3. of this appendix. For the monitored components and systems excepted above, a pass/fail indication for the most recent test results shall be available through the data link connector.

All data required to be stored in relation to OBD in-use performance according to the provisions of paragraph 7.6. of this appendix shall be available through the serial data port on the standardized data link connector according to the specifications given in paragraph 6.5.3. of this appendix."

II. Justification

1. In GRPE-86-12 the introduction of SAE J 1979-2 was proposed for Series 05, 06 and 07 of Regulation No. 83. Due to the different structure of Series 05 and 06 compared to 07, this proposal introduces the new standard to additional paragraph in Series 05 and 06.
 2. The standards used for transmission of OBD information are maintained by international standardisation bodies (ISO, SAE). These standardisation body have to be informed.
 3. Alignment of wording between the first sentence of paragraph 3.2.1.2. (“ambient or engine **coolant** temperatures”) and the second sentence, where “or engine” was missing to avoid misunderstanding and ambiguity. Engine **coolant** temperature is sometimes used as a substitute for ambient temperature. In this case, the engine **coolant** temperature is evaluated once after a longer engine shut off phase. Only in this case an approval is necessary, as this is the only case, where an OBD monitor is disabled for the complete trip.
 4. Align Paragraph 6.5.1.3. with GTR No. 15 to avoid ambiguity.
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