Corrigenda to the proposal for an amendment to Regulation No. 49 (ECE/TRANS/WP.29/GRPE/2011/16)

A. <u>Justification</u>:

This document provides amendments to the text provided in ECE/TRANS/WP.29/GRPE/2011/16. It proposes to correct an amendment, which already includes bold and strikethrough text, the text that differs from that provided in ECE/TRANS/WP.29/GRPE/2011/16, or which should have been shown as bold or strikethrough text in ECE/TRANS/WP.29/GRPE/2011/16, is shown as <u>underlined</u> text.

B. <u>Proposal</u>:

Page 2 of ECE/TRANS/WP.29/GRPE/2011/16, correct "Annex 9" to read "Annex 9"

Page 2, paragraph 4.2.3., correct to read:

"4.2.3. Monitoring frequency

.....

When a monitor does At the request of the manufacturer, the approval authority may approve monitors that do not run continuously. In that case the manufacturer shall clearly inform the Approval Authority and describe the conditions under which the monitor runs and justify the proposal by appropriate design elements (such as good engineering practice).

A monitor shall be regarded as running continuously, if it samples at a rate not less than <u>twice</u> per second **and concludes the presence or the absence of the failure relevant to that monitor within 15 seconds**. If a computer input or output component is sampled less frequently than twice per second for engine control purpose, a monitor shall also **be** regarded as running continuously, if the signal of the component is evaluated system concludes the presence or the absence of the failure relevant to that monitor each time sampling occurs."

Page 4, paragraph 4.6.4.2., correct to read:

"4.6.4.2. Presence / absence of a malfunction

Following the sequence described in paragraph 4.6.4.1, the MI shall indicate the presence of a malfunction by a series of flashes or a continuous illumination, depending on the applicable activation mode, as described in the following paragraphs, or absence of a malfunction by a series of single flashes. When applicable, each flash consists of a 1s MI-on followed by a 1s MI-off, and the series of flashes will be followed by a period of $\frac{5}{5}$ four seconds with the MI off."

Page 4, paragraph 4.7.1.5., correct to read:

"4.7.1.5. Readiness

With the exceptions specified in paragraphs 4.7.1.5.1., 4.7.1.5.2. and 4.7.1.5.3., a readiness shall only be set to "complete" when a monitor or a group of monitors addressed by this status have run and concluded the presence (that means stored a confirmed and active DTC) or the absence of the failure relevant to that monitor since the last erasing by request of an external OBD scan tool an external request or command (for example through an OBD scan-tool). Readiness shall be set to "not complete" by erasing the fault code memory (see paragraph 4.7.4.) of a monitor or group of monitors

by an external request of an external scan tool or command (for example through an OBD scan-tool)."

Page 4, where ECE/TRANS/WP.29/GRPE/2011/16 reads:

"Insert new paragraphs 4.7.1.5.1. to 4.7.1.5.3., to read:"

amend to read:

"Amend paragraph 4.7.1.5.1. and add new paragraphs 4.7.1.5.2. and 4.7.1.5.3., to read:"

Page 6, Appendix 2, Figure 4, correct to read:

"Appendix 2

<u>Renumber Figure 4 as</u> Figure 4<u>A</u>, and amend to read:

"[Note: Figure not shown in Corrigenda for ease of reading amendments]

Note: Details related to the deactivation of the continuous MI are illustrated in <u>Figure 4B</u> below in the specific case where a potential state is present."

A new Figure 4B is introduced, to read:

"Figure <u>4B</u>: Illustration of the continuous MI deactivation principle

[Note: Figure not shown in Corrigenda for ease of reading amendments]

Notes:

- **4** means the point where monitoring of the concerned malfunction occurs.
- M means the operating sequence when the monitor concludes for the first time that a confirmed and active failure is no longer present.
- case 1 means the case where the monitor does not conclude the presence of failure during the operating sequence M.
- case 2 means the case where the monitor has previously concluded, during the operating sequence M, the presence of the malfunction.
- case 3 means the case where the monitor concludes during <u>the</u> operating sequence M the presence of the malfunction after having first concluded to its absence."

Note: a renumbering of Figure 4 to Figure 4A will require an amendment to the list of figures in Annex 9B, Appendix 2 as follows:

...

...

Figure 4A: Class A malfunction -activation of the MI and MI counters

Figure 4B: Illustration of the continuous MI deactivation principle

Page 7, Appendix 6, correct to read:

...'

"Reference standard documents

This appendix contains the references to the industry standards that are to be used in accordance to the provisions of this annex to provide the serial communications interface to the vehicle/engine. There are three two allowed solutions identified:

ISO 15765-4 or SAE J1939-73 or ISO/PAS 27145.

- (a) ISO 27145 with either ISO 15765-4 (CAN based) with either ISO 15765-4 (CAN based) or with ISO 13400 (TCP/IP based),
- (b) SAE J1939-73.

In addition, there are other ISO or SAE standards that are applicable in accordance with the provisions of this annex.

Reference by this annex to ISO 27145 means reference to:

- (a) ISO 27145-1 Road vehicles Implementation of WWH-OBD communication requirements Part 1 General Information and use case definitions
- (b) ISO 27145-2 Road vehicles Implementation of WWH-OBD communication requirements Part 2 Common emissions-related data dictionary;
- (c) ISO 27145-3 Road vehicles Implementation of WWH-OBD communication requirements Part 3 Common message dictionary;
- (d) ISO 27145-4 Road vehicles Implementation of WWH-OBD communication requirements Part 4 Connection between vehicle and test equipment.

Reference by this annex to J1939-73 means reference to:

J1939-73 "APPLICATION LAYER - DIAGNOSTICS", dated on year 2011.

Reference by this annex to ISO 13400 means reference to:

ISO 13400: [information on date, "exact title", several parts etc. shall be added]

ISO 15765 4 and those specifications included by reference therein to accomplish the WWH OBD requirements.

ISO 15765-4 "Road vehicles - Diagnostics on Controller Area Network (CAN) - Part 4: Requirements for emissions related systems", dated on year 2006.

SAE J1939-73 and those specifications included by reference therein to accomplish the WWH OBD requirements.

J1939-73 "Application layer - Diagnostics", dated on year 2006.

ISO/PAS 27145 and those specifications included by reference therein to accomplish the WWH OBD requirements.

- (a) ISO/PAS 27145-1:2006 Road vehicles On board diagnostics (WWH-OBD) implementation Part 1 General Information and use case definitions
- (b) ISO/PAS 27145-2:2006 Road vehicles Implementation of WWH OBD communication requirements Part 2 Common emissions related data dictionary;
- (c) ISO/PAS 27145 3:2006 Road vehicles Implementation of WWH-OBD communication requirements Part 3 Common message dictionary;
- (d) ISO/PAS 27145-4:2006 Road vehicles Implementation of WWH-OBD communication requirements - Part 4 - Connection between vehicle and test equipment;

<u>The following International Organization of Standards (ISO) documents are incorporated by reference into this Regulation:</u>

ISO 15031-3:2004 "Road vehicles Communication between vehicle and external equipment for emissions related diagnostics Part 3: Diagnostic connector and related electrical circuits, specification and use".

The following Society of Automotive Engineers (SAE) (ISO) documents are incorporated by reference into this Regulation:

SAE J2403 "Medium/Heavy Duty E/E Systems Diagnosis Nomenclature", dated on August 2004.

SAE J1939-13 "Off-Board Diagnostic Connector", dated on March 2004.