
Proposal to amend Working Documents GRPE/2024/2, GRPE/2024/3, GRPE/2024/10, GRPE/2024/11 for the 00, 01, 02 and 03 Series of Amendments to Regulation No. 154

The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted characters.

I. Proposal

In the 00, 01, 02 and 03 Series of Amendments,

Paragraph 2.4.3 of Annex B6, amend to read:

"2.4.3. The vehicle's exhaust system shall not exhibit any leak likely to reduce the quantity of gas collected. **In the case of there being openings in the exhaust downstream of the exhaust after-treatment system, which are designed to remove condensate, the manufacturer shall provide information on these openings in the documentation described in Annex A1. During emissions testing, these openings shall be sealed to ensure there is no exhaust gas leakage in the test setup.**"

Paragraph 6.1.1 of Annex C3, amend to read:

"6.1.1. The vehicle shall be mechanically prepared before the test as follows:

- (a) The exhaust system of the vehicle shall not exhibit any leaks. **Intended openings in the exhaust system as described in paragraph 2.4.3. of Annex B6 shall be plugged before the test is conducted;**
- (b) The vehicle may be steam-cleaned before the test;
- (c) In the case of use of the gasoline canister load option (paragraph 6.5.5.3. of this annex) the fuel tank of the vehicle shall be equipped with a temperature sensor to enable the temperature to be measured at the mid-point of the fuel in the fuel tank when filled to 40 per cent of its capacity;
- (d) Additional fittings, adapters of devices may be fitted to the fuel system in order to allow a complete draining of the fuel tank. For this purpose it is not necessary to modify the shell of the tank;
- (e) The manufacturer may propose a test method in order to take into account the loss of hydrocarbons by evaporation coming only from the fuel system of the vehicle."

Paragraph 1.1.6 of Annex A1 – Appendix 1 – Part I, amend to read:

1.1.6. Exhaust system and anti-evaporative system (if applicable)

For more than one, please repeat the point

First catalytic converter	:	make & reference (1) principle: three way / oxidising / NOx trap / NOx storage system / Selective Catalyst Reduction...
Second catalytic converter	:	make & reference (1) principle: three way / oxidising / NOx trap / NOx storage system / Selective Catalyst Reduction...
Particulate trap	:	with/without/not applicable catalysed: yes/no make & reference (1)
Reference and position of oxygen and/or lambda sensor(s)	:	before catalyst / after catalyst
Air injection	:	with/without/not applicable
Water injection	:	with/without/not applicable
EGR	:	with/without/not applicable cooled/non-cooled HP/LP
Evaporative emission control system	:	with/without/not applicable
Reference and position of NOx sensor(s)	:	Before/ after
Openings for condensation removal (if applicable)	:	Position in exhaust downstream of the exhaust after-treatment system.
General description (1)	:	

Paragraph 1.1.6 of Annex A1 – Appendix 1 – Part II, amend to read:

1.1.6. Exhaust system and anti-evaporative system (if applicable)

For more than one, please repeat the point

First catalytic converter	:	make & reference (1) principle: three way / oxidising / NOx trap / NOx storage system / Selective Catalyst Reduction...
Second catalytic converter	:	make & reference (1) principle: three way / oxidising / NOx trap / NOx storage system / Selective Catalyst Reduction...
Particulate trap	:	with/without/not applicable catalysed: yes/no make & reference (1)
Reference and position of oxygen and/or lambda sensor(s)	:	before catalyst / after catalyst
Air injection	:	with/without/not applicable
Water injection	:	with/without/not applicable
EGR	:	with/without/not applicable cooled/non-cooled HP/LP
Evaporative emission control system	:	with/without/not applicable
Reference and position of NOx sensor(s)	:	Before/ after
Openings for condensation removal (if applicable)	:	Position in exhaust downstream of the exhaust after-treatment system.

General description (1)	:	
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II. Justification

1. Water is one product of the combustion process of internal combustion engines which may condensate and remain in the exhaust system. As modern vehicles rely heavily on sensors within the exhaust system to control the engine or exhaust-aftertreatment system, high sensor data availability and quality is crucial. Both, data availability and quality, can be negatively impacted by condensate in the exhaust system. This proposal seeks to clarify the existing requirements of 2.4.3. and 6.1.1. in conjunction with solutions to remove condensate from the exhaust system.
