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**Road vehicles — Localization of exhaust
system leaks and equipment specifications**

*Véhicules routiers — Localisation des fuites de la ligne d'échappement et
spécifications de l'équipement*



Reference number
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Foreword

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Road vehicles — Localization of exhaust system leaks and equipment specifications

1 Scope

This International Standard specifies a method to verify the gas tightness of the exhaust system of road vehicles equipped with an international combustion engine.

It is primarily intended to establish a method to detect and localize exhaust system leaks in order to improve the quality of exhaust gas measurements. It is also intended to complete the requirements of ISO 3929¹⁾ and applicable regulations.

The users of this International Standard are warned that:

- a) certain engines with high valve overlaps camshaft events, especially engines with eight or more cylinders, may not have all exhaust valves closed when the engine is stopped. This issue may cause the leak test to fail. This situation could be corrected by the disassembly of the exhaust valve actuation mechanism using the vehicle or engine manufacturer's recommended procedure;
- b) national regulations on the subject of pressurizing should be checked before testing;
- c) detected leakage can be quantified under certain test conditions.

This International Standard also specifies the measurement apparatus and necessary devices.

This method is particularly recommended for:

- a) automotive workshops,
- b) laboratories before any emission tests,
- c) testing and diagnostic stations.

The measurement apparatus can be used at the end of line of automotive and exhaust parts manufacturers.

2 Definitions

For the purposes of this International Standard, the following definitions apply.

2.1 exhaust system

all parts between the joint face between the manifold to cylinder head and the outlet pipe(s)

2.2 leaks

all outward exhaust gas flow or inward air flow which can affect the exhaust emission measurement results

1) ISO 3929:1995, *Road vehicles — Measurement methods for exhaust gas emissions produced during inspection or maintenance.*