



ANSI Internet Doc Sect

Road vehicles — Smoke measurement of compression-ignition (diesel) engines — Survey of short in-service tests

Véhicules routiers — Mesure des émissions de fumée des moteurs à allumage par compression (diesel) — Étude sur les essais simplifiés en service

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- type 1, when the necessary support within the technical committee cannot be obtained for the publication of an International Standard, despite repeated efforts;
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ISO/TR 9310 was prepared by Technical Committee ISO/TC 22, *Road vehicles*.

This type 3 Technical Report only describes and assesses the different short in-service test methods which exist in different countries according to laws, rules or preferences. This report cannot and does not give any recommendation as to which of the methods should be used internationally.

1 SCOPE

The purpose of this Technical Report is to describe and assess the different simplified short tests for the determination of the exhaust smoke emission of diesel engines of vehicles in service .

2 FIELD OF APPLICATION

The test methods described shall serve for checking and quantitatively evaluating the exhaust smoke emissions of passenger cars and commercial vehicles as defined in ISO 3833, and equipped with diesel engines when they are in service.

3 REFERENCES

- ISO 1585 - Road vehicles - Engine test code - Net power
- ISO 3173 - Road vehicles - Apparatus for measurements of the opacity of exhaust gas from diesel engines operating under steady state conditions
- ISO 3534 - Statistics - Vocabulary and symbols
- ISO 3833 - Road vehicles - Types - Terms and definitions
- ISO 7644 - Road vehicles - Measurement of opacity of exhaust gas from diesel-engined vehicles - Lug-down test
- ISO 7645 - Road vehicles - Measurement of opacity of exhaust gas from diesel-engined vehicles - Steady single-speed test

4 DEFINITIONS

4.1 Smoke

Visible constituents of exhaust emissions.

4.2 Comparability

The possibility of drawing conclusions on the smoke emission as it would be determined according to ISO 1585 in spite of the differing methods of quantitative evaluation of these emissions.

4.3 Repeatability

As defined in ISO 3534.

4.4 Reproducibility

As defined in ISO 3534.

4.5 Speed gradient

This term, unit s^{-2} , gives the rate of change of engine speed per unit time (revolutions per second per second). A test method approaches the steady speed conditions more closely the lower the speed gradient is.

4.6 Roadside test

Test which can be carried out with the vehicle stationary, using simple and transportable equipment.

Two levels of equipment transportability are envisaged:

- 4.6.1 Equipment readily handled by one or two persons and suitable for carrying in a passenger car.