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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 1147.2-2025

Replacing GB/T 1147.2-2017

**Small and medium power internal combustion engines - Part
2: Test methods**

中小功率内燃机 第2部分：试验方法

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 2 of GB/T 1147 "Internal Combustion Engines of Medium and Small Power". GB/T 1147 has already published the following parts.

1.General Technical Specifications;

2.Experimental Methods. This document replaces GB/T 1147.2-2017 "Small and Medium Power Internal Combustion Engines - Part

2.Test Methods", and is consistent with GB/T 1147.2-2017. In comparison, aside from structural adjustments and editorial changes, the main technical changes are as follows:

a) Added terms and definitions (see Chapter 3);

b) The exhaust back pressure requirements for the test apparatus have been changed (see 4.2,

3.2 in the.2017 edition);

c) The pre-test break-in requirements have been changed (see 4.3,

3.3 in the.2017 version);

d) Fuel and oil requirements have been changed (see 4.5;

3.5 in the.2017 edition);

e) The testing site requirement has been removed (see

3.6 in the.2017 version);

1 Scope

GB/T 1147.2-2025 is the Chinese national standard on small and medium power internal combustion engines - part 2:test methods, in the field of energy and heat transfer engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 October 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2026. Classification: ICS 27.020, CCS J 91. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document describes the test methods for small and medium power internal combustion engines (rated power not exceeding 560kW). This document applies to small and medium power vehicles, ships, agricultural tractors and forestry machinery, construction machinery, generator sets, and irrigation and drainage machinery. For internal combustion engines (hereinafter referred to as "internal combustion engines"), other small and medium power internal combustion engines for which there are currently no applicable standards shall refer to this standard.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 384 Determination of calorific value of petroleum products

GB/T 1147.1-2025 Small and Medium Power Internal Combustion Engines - Part

3 Test measurements

GB/T 7184 Vibration Assessment Method for Reciprocating Internal Combustion Engines

GB/T 9486 Steady-state exhaust smoke opacity and its determination method for diesel engines

GB/T 9487 Method for measuring exhaust smoke opacity of diesel engines under free acceleration

GB/T 9911 Measurement Method for Airborne Noise Radiated by Marine Diesel Engines

GB/T 10398 Vibration rating and test methods for small gasoline engines

GB 11121 Gasoline Engine Oil

GB 11122 Diesel Engine Oil

GB/T 12542-2020 Road Test Method for Thermal Balance Capability of Automobiles

GB 14023 Radio interference characteristics of vehicles, ships and internal combustion engines - Limits and methods of measurement for protection of external receivers

GB 14762-2008 Emission limits and measurement methods for exhaust pollutants from gasoline engines and automobiles for heavy-duty vehicles (China Stage III and IV)

GB 15097-2016 Emission Limits and Measurement Methods for Exhaust Pollutants from Marine Engines (China Phase I and II)

GB/T 15371 Evaluation Method for Torsional Vibration of Crankshaft System in Reciprocating Internal Combustion Engines

GB/T 17619 Limits and methods for measuring electromagnetic radiation immunity of electronic and electrical components in motor vehicles

GB 17691-2018 Emission Limits and Measurement Methods for Pollutants from Heavy-Duty Diesel Vehicles (China Stage VI)