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

GB 20997-2024

Replacing GB 20997-2015

**Limits and evaluation targets of fuel consumption for light-duty
commercial vehicles**

轻型商用车辆燃料消耗量限值及评价指标

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Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part

1.Rules for the structure and drafting of standardizing documents". This document replaces GB 20997-2015 "Limits of fuel consumption for light-duty commercial vehicles". Compared with GB 20997-2015, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

a) CHANGE the scope of application (see Chapter 1; Chapter 1 of the 2015 edition);

- b) CHANGE the method for determining fuel consumption (see 5.1 ~ 5.7; Chapter 5 of the 2015 edition);
- c) ADD the calculation method of the reference value of CO2 emissions (see 5.8);
- d) CHANGE the requirements for fuel consumption limits (see Chapter 6; Chapter 7 of the 2015 edition);
- e) ADD relevant requirements for enterprise average fuel consumption (see Chapter 7);
- f) CHANGE the production consistency requirements (see Chapter 8; Chapter 8 of the 2015 edition);
- g) CHANGE the requirements for the determination of same type (see Chapter 9; Chapter 9 of the 2015 edition);
- h) ADD hybrid vehicle's energy consumption type certification report/type certification application report (see Appendix B, Appendix C). Please note that some of the contents of this document may involve patents. The issuing agency of this document does not assume the responsibility for identifying patents. This document was proposed by AND shall be under the jurisdiction of the Ministry of Industry and Information Technology of the People's Republic of China. This document was first issued in 2007. It was revised for the first time in 2015. This is the second revision. Limits and evaluation targets of fuel consumption for light-duty commercial vehicles

1 Scope

GB 20997-2024 is the Chinese national standard on limits and evaluation targets of fuel consumption for light-duty commercial vehicles, in the field of road vehicles engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 23 August 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2026. Classification: ICS 43.020, CCS T40. 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 specifies the limit of fuel consumption of light commercial vehicles, the calculation method and evaluation index of enterprise average fuel consumption, the production consistency requirements, and the determination of the same type. This document applies to all category N1 vehicles with a maximum design speed greater than or equal to 50 km/h and category M2 vehicles with a maximum design gross mass not exceeding 3500 kg, including vehicles that can burn gasoline or diesel fuel, pure electric vehicles, fuel cell vehicles, vehicles that burn gas fuel and alcohol ether fuel. This document

does not apply to special-purpose vehicles for work.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, for referenced documents with dates, only the version corresponding to that date applies to this document; for referenced documents without dates, the latest version (including all amendments) applies to this document.

GB/T 15089 Classification of power-driven vehicles and trailers

GB/T 17350 Terms marks and designation for special purpose vehicles and special trailers

GB 18352.6-2016 Limits and measurement methods for emissions from light-duty vehicles (CHINA 6)

GB/T 18386.1-2021 Test methods for energy consumption and range of electric vehicles - Part

3 Terms and definitions

The terms and definitions, which are defined in GB/T 15089, GB/T 17350, GB 18352.6-2016, GB/T 19596, GB 27999-2019, apply to this document.

4 Application for type certification

4.1 The application for type certification of a certain model or family of fuel consumption shall be submitted by the manufacturer or its legal representative.

4.2 The application shall be accompanied by the type certification application report of the corresponding model specified in Appendix A ~ Appendix C; however, the contents of A.7, B.7, C.5.3, C.6.3, C.7.3, C.7.4 shall not be filled in.

5 Determination of fuel consumption

5.1 For gasoline, diesel, dual-fuel, bi-fuel models, the model fuel consumption type certification value shall be determined, according to GB/T 19233-2020, using the Worldwide Harmonized Light Vehicle Test Cycle (WLTC).

5.2 For externally rechargeable hybrid electric vehicles (OVC-HEV), the model OVC- HEV fuel consumption type certification value and OVC-HEV power consumption type certification value shall be determined, according to GB/T 19753-2021 using WLTC;

5.3 For pure electric models, the energy consumption type certification value shall be determined according to GB/T 18386.1-2021, which shall be converted into the

corresponding gasoline fuel consumption according to GB/T 37340. Before 2030, its fuel consumption shall be calculated as zero 1).

5.4 For hydrogen fuel cell vehicles, the energy consumption shall be determined in accordance with GB/T 43252-2023. Before 2030, the fuel consumption shall be calculated as zero 1).

5.5 For CNG vehicles, the comprehensive cycle fuel consumption test shall be simulated on the chassis dynamometer in accordance with GB/T 29125, to determine the gas fuel consumption, then converted to gasoline fuel consumption in accordance with GB/T 29125.

5.8 The CO₂ emission reference value corresponding to the vehicle fuel consumption limit and target value shall be calculated in accordance with

7.3 of GB 19578-2021 and formula (4) of GB 27999-2019, respectively.

6.1.1 For light commercial vehicles that can be fueled by gasoline or diesel fuel, the

1 The calculation method of fuel consumption after 2030 shall be determined separately. fuel consumption limit shall be calculated in accordance with 6.2; the result shall be rounded to two decimal places.

6.2 Vehicle fuel consumption limit

6.2.1 Category N1 vehicle model fueled by gasoline The fuel consumption limit of category N1 vehicle model fueled by gasoline shall be calculated according to formula (1). Where.

6.2.3 Category M2 vehicle fueled by gasoline The fuel consumption limit of category M2 vehicle fueled by gasoline shall be calculated according to formula (3).

6.2.4 Diesel-fueled category M2 vehicles The fuel consumption limit of diesel-fueled category M2 vehicles shall be calculated according to formula (4).

6.3 Description of vehicles with special structures For vehicles with dump structures, the limit is the corresponding limit in

6.2 multiplied by 1.05; the numerical result is rounded to two decimal places.

7.1 General

7.1.1 The target value of vehicle fuel consumption shall be calculated according to 7.2. For pure electric, fuel cell, compressed natural gas, liquefied natural gas, liquefied petroleum gas, alcohol ether and other fuel type vehicles, the fuel consumption target value of category N1 vehicles shall be calculated according to 7.2.1;

7.1.2 For vehicles using one or more off-cycle technologies/devices, when calculating the enterprise average fuel consumption specified in 7.4, the vehicle fuel consumption may be