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

GB/T 12545-1990

Replacing GB/T 12545.1-2001; GB/T 12545.2-2001

**Measurement methods of fuel consumption for automobiles --
Part 1: Measurement methods of fuel consumption for
passenger cars
(English Translation)**

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Foreword

GB/T 1255 "Test Method for Automobile Fuel Consumption" is expected to be divided into two parts.

--- Part 1. Test method for fuel consumption of passenger cars;

--- Part 2. Test method for fuel consumption of commercial vehicles.

This part is the first part of GB/T 12545, and the United Nations European Economic Commission ECER101-00 (1997) on carbon dioxide emissions the degree of consistency between the relevant contents of the Uniform Provisions on the Approval of Passenger Cars with Internal Combustion Engines and Fuel Consumption is not equivalent.

This section replaces GB/T 125.45.1-2001 "Test Methods for Fuel Consumption of Passenger Cars" and partially replaces GB/T 12542.2-the 2001 "Test Method for Fuel Consumption of Commercial Vehicles" is related to the requirements of N1 vehicles.

Compared with GB/T 125.45.1-2001, the main changes in this section are as follows.

--- The scope of application of the standard has been expanded from the originally specified scope to M1 and N1 vehicles with a maximum design total mass not exceeding 3.5t;

--- Use the cycle fuel consumption test specified in GB 18352.3-2005 to replace the simulated city cycle in the original standard.

Fuel consumption test, and delete the content of the original Appendix A accordingly;

--- Clearly stipulated that the cycle fuel consumption test under working conditions should be performed on the chassis dynamometer;

--- In 5.3.3, the calculation of theoretical fuel consumption, mileage allocation ratio and fuel consumption were adjusted and provided.

Calculation method

--- The content of the report on the results of the comprehensive fuel consumption test is specified in Appendix A.

Appendix A, Appendix B, and Appendix C of this part are normative appendixes, and Appendix D is an informative appendix.

This section is proposed by the National Development and Reform Commission.

This section is under the jurisdiction of the National Automotive Standardization Technical Committee.

This section was drafted. China Automotive Technology and Research Center.

1 Scope

This part of GB/T 12545 specifies the fuel consumption test method for passenger cars.

This section applies to M1 and N1 vehicles with a maximum design total mass not exceeding 3.5t.

2 Normative references

The clauses in the following documents have become the clauses of this section through the reference of this part of GB/T 12545. Any quotes with dates Documents, all subsequent amendments (excluding errata) or revisions are not applicable to this section, however, it is encouraged to achieve the parties to the agreement investigate whether the latest versions of these documents are available. For undated references, the latest edition applies to this document.

section.

GB 18352.3-2005 Emission limit and measurement method of pollutants for light vehicles

(China III, IV) GB/T 19233-2008 Fuel consumption test method for light vehicles
(ECER101-00, NEQ) GB/T 15089 Classification of motor vehicles and trailers (GB/T 1589-2001, eZevECER.E. 3..1997)

3 Test items

3.1

Cycle fuel consumption test under the conditions specified in GB 185352.3.

3.2

Fuel consumption test of 90km/h constant speed driving.

3.3

Fuel consumption test at 120 km/h at constant speed. For vehicles with a maximum speed of less than 120 km/h, reference should be made to the test is carried out at the highest speed.

4.1 Test vehicle

4.1.1

The test vehicle does not need to run in during the test specified in 3.1. Run-in shall be carried out before the tests specified in 3.2 and 3.3 are carried out.

Should travel less than 3000km.

4.1.2

The engine and vehicle controls should be adjusted in accordance with the manufacturer's regulations. In particular, the idling device should be adjusted (adjust the speed and CO in the exhaust).

Volume), starting devices and exhaust purification systems.

4.1.3

In order to avoid the formation of mixed gas due to accidental air intake, the tightness of the test vehicle's air intake system should be checked.

4.1.4

The performance of the test vehicle shall meet the requirements of the manufacturer, and it shall be able to drive normally and smoothly start cold and hot.

4.1.5

Before the test, the test vehicle should be placed in an environment with an ambient temperature of 20 ° C to 30 ° C and maintained for at least 6 hours until the engine oil temperature the temperature and the temperature of the coolant reach the ambient

temperature $\pm 2^{\circ}\text{C}$. The vehicle shall be tested within 30 hours after running at normal temperature.

4.1.6

The test vehicle must be clean, and the windows and vents should be closed; only the equipment necessary for the vehicle to travel can be used. If there is manual control the thermal device shall be in the position specified by the manufacturer in accordance with the ambient temperature at the time of the test.

4.1.7

If the cooling fan of the test vehicle is temperature-controlled, it should be guaranteed to work normally. The passenger cabin air-conditioning system is turned off, but its the compressor should be in normal working condition.

4.1.8

If the test vehicle is equipped with a supercharger, the supercharger should be in normal working condition during the test.

4.1.9

If a four-wheel drive test vehicle uses only coaxial two-wheel drive for testing, it shall be indicated in the test report.

4.2 Lubricant

The test vehicle shall use the lubricant specified by the manufacturer and noted in the test report.

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4.3 Tires

The tire should be selected by the manufacturer as the type required by the original parts, and the maximum test load and maximum test speed recommended by the manufacturer the inflation pressure corresponding to the degree of tire inflation. The tire can run in with the vehicle at the same time or the pattern depth should be 50% of the initial pattern depth.

4.4 Test fuel

The test fuel shall comply with the regulations of the vehicle manufacturer.

4.5 Measurement Conditions for Fuel Consumption

4.5.1

The measurement accuracy of distance shall be 0.3%, and the measurement accuracy of time shall be 0.2s. Fuel consumption, distance traveled and time the measuring device shall