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

GB 19578-2024

Replacing GB 19578-2021

Fuel consumption limits for passenger cars

乘用车燃料消耗量限值

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Foreword

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GB 19578-2024 Replacing GB 19578-2021

Fuel Consumption Limits for Passenger Cars

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives for Standardization - Part 1: Rules for the Structure and Drafting of Standardizing Documents .This document serves as a replacement for GB 19578-2021 Fuel Consumption Limits for Passenger Cars . In comparison with GB 19578-2021, apart from structural adjustments and editorial modifications, the main technical changes are as follows:

- a) The requirement that the vehicle type approval values of fuel consumption shall not exceed the limit values is added (see 7.1);
- b) The fuel consumption limits of vehicle types are modified (see 7.2 of Version 2021);
- c) The relevant requirements for production consistency are modified (see Chapter 8; Chapter 8 of Version 2021);
- d) The requirements for modification and certification extension are deleted (see Chapter 9 of Version 2021);
- e) The same type determination is added (see Chapter 9);

f) The fuel consumption type approval report / type approval application report for non-off-vehicle-chargeable hybrid electric vehicles is added (see Appendix C);

1 Scope This document specifies the application for type approval of passenger cars, the determination of fuel consumption, the determination and recording of type approval values, the limits of fuel consumption, production consistency and the same type determination. This document applies to Category-M1 vehicles that can be fueled by gasoline or diesel fuel and have a maximum design total mass not exceeding 3,500 kg. This document is not applicable to vehicles that only use gas fuel or alcohol-ether fuel. #

2 Normative References The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document. GB/T 19233-2020 Measurement Methods of Fuel Consumption for Light-duty Vehicles GB/T 19596 Terminology of Electric Vehicles GB/T 19753-2021 Test Methods for Energy Consumption of Light-duty Hybrid Electric Vehicles GB/T 37340 Conversion Methods for Energy Consumption of Electric Vehicles #

3 Terms and Definitions The terms and definitions defined in GB/T 19596 are applicable to this document. #

4 Application of Type Approval

4.1 For a vehicle type or a system of vehicles that complies with the requirements of 10.2.1 in GB/T 19233-2020 or

8.1 in GB/T 19753-2021, the application for type approval of fuel consumption shall be submitted by the manufacturer or its legal representative.

4.2 The application shall be accompanied by the following documents and detailed information (if there is a schematic diagram, it shall thoroughly explain the details in an appropriate scale):

b) The fuel consumption type approval application report specified in Appendix B ~ Appendix D as applicable, but without filling in the test values, type approval values, limit values and inspection institution information, etc.

4.3 A sample vehicle representing the type or system of vehicles to be approved shall be submitted to the inspection institution responsible for type approval test. #

5 Determination of Fuel Consumption The fuel consumption of gasoline, diesel, bi-fuel, and dual-fuel vehicles shall be determined in accordance with the test method specified in GB/T 19233-2020 using the World Light Vehicle Test Cycle (WLTC). The fuel consumption of off-vehicle-chargeable and non-off-vehicle-chargeable hybrid electric vehicles shall be

determined using the WLTC in accordance with the test method specified in GB/T 19753-2021. #

6 Determination and Recording of Type Approval Values The inspection institution responsible for type approval test shall determine and record the vehicle type approval values in accordance with the following requirements.

a) In accordance with GB/T 19233-2020, determine the fuel consumption type approval values (comprehensive fuel consumption) of gasoline, diesel, bi-fuel, and dual-fuel vehicles, compare the results with the corresponding limits calculated by Formula (1) and Formula (2), and record the comparison results in the fuel consumption type approval report specified in Appendix B.

b) In accordance with GB/T 19753-2021, determine the fuel consumption type approval values (comprehensive fuel consumption) of non-off-vehicle-chargeable hybrid electric vehicles, compare the results with the corresponding limits calculated by Formula (1) and Formula (2), and record the comparison results in the fuel consumption type approval report specified in Appendix C.

c) In accordance with GB/T 19753-2021, determine the OVC-HEV fuel consumption and OVC-HEV power consumption type approval values of off-vehicle-chargeable hybrid electric vehicles, and in accordance with G.3 in GB/T 19753-2021 (convert it in accordance with the simple conversion method in GB/T 37340), calculate the OVC-HEV converted fuel consumption. Compare the OVC-HEV converted fuel consumption with the corresponding limits calculated by Formula (1) and Formula (2), and record the comparison results in the energy consumption type approval report specified in Appendix D. #

9 Same Type Determination

9.1 If the following provisions are satisfied, then, they are considered to be of the same type:

a) The basic characteristics, parameters and components of the engines are the same; > NOTE: for the basic characteristics and parameters of the engines, see relevant requirements of

6.1.1 in GB 18352.6-2016.

b) The exhaust pollution control device is the same; > NOTE: for exhaust pollution control devices, see relevant requirements of

6.1.2 in GB 18352.6-2016.

c) The front of the vehicle has the same shape, and the frontal area is the same or reduced;

d) The number of seats (rows) is the same or reduced, and the type-approved fuel consumption value of the basic vehicle type satisfies the corresponding limit requirements

of the vehicle type that is deemed to be the same;

e) The drive type is the same;

f) The transmission type is the same;

g) The transmission ratio of each gear is the same or varies by no more than 8%;

h) The total speed ratio change caused by the different rolling circumferences of the optional tires does not exceed 8%;

i) The curb mass is the same or reduced, and the type-approved fuel consumption value of the basic vehicle type satisfies the corresponding limit requirements of the vehicle type that is deemed to be the same;

j) The vehicles use the same minimum fuel designation.

--- The End - - -