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

GB/T 38146.1-2019

China automotive test cycle - Part 1: Light-duty vehicles

中国汽车行驶工况 第1部分：轻型汽车

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Foreword

GB/T 38146 "China automotive test cycle" is divided into 3 parts. - Part

1 Scope

Part 1 of the China Automotive Test Cycle, covering light-duty vehicles. It specifies the terms and definitions and the construction of the cycle, with a normative annex on the underlying data. A test cycle is the speed-against-time profile a vehicle follows on a dynamometer while its fuel consumption and emissions are measured, and everything reported about a vehicle depends on it. China used cycles derived from European practice for years, and the gap between their results and real Chinese driving became indefensible: Chinese traffic is slower, more congested, and stops more often than the European cycle assumed, so vehicles optimised for the test performed worse on the road than the figures implied. The CATC was built from millions of kilometres of logged driving data collected across Chinese cities, which is what makes it a cycle representing the country's actual conditions rather than an inherited one.

This Part of GB/T 38146 specifies the construction of the test cycle of light-duty vehicles (including passenger cars and light-duty commercial vehicles). This Part applies to M1 and N1 type vehicles, M2 type vehicles with a maximum design total mass not exceeding 3500 kg.

2 Normative references

The following documents are indispensable for the application of this document. For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB/T 3730.1 Motor vehicles and trailers - Types - Terms and definitions

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

3 Terms and definitions

The terms and definitions defined in GB/T 3730.1 and GB/T 15089 and the following ones apply to this document.

3.1 Light-duty vehicle M1 and N1 type vehicles, M2 type vehicles with a maximum design total mass not exceeding 3500 kg.

3.2 China automotive test cycle The time-speed curve which describes the driving characteristics of a particular vehicle (such as a passenger car, a commercial vehicle, a city bus, etc.) in a Chinese traffic environment.

3.3 China light-duty vehicle test cycle; CLTC The general term for China automotive test cycle used by M1 and N1 type vehicles, M2 type vehicles with a maximum design total mass not exceeding 3500 kg.

4 Cycle construction

4.1 Overview China light-duty vehicle test cycle includes China light-duty vehicle test cycle for passenger car and China light-duty vehicle test cycle for commercial vehicle.

4.2 China light-duty vehicle test cycle for passenger car China light-duty vehicle test cycle for passenger car (CLTC-P) includes 3 speed intervals.

4.3 China light-duty vehicle test cycle for commercial vehicle China light-duty vehicle test cycle for commercial vehicle (CLTC-C) includes 3 speed intervals.

Appendix A

(Normative) Data of China light-duty vehicle test cycle A.1 The CLTC-P cycle data is shown in Table A.1.

Appendix B

(Normative) General method for development of China automotive test cycle B.1 General rule for development method of cycle This method is a summary of the technical route development of China automotive test cycle, including links such as test planning, data acquisition and processing, weighting factor development, cycle synthesis, cycle verification, mainly serving the development of automotive test cycle. B.2 Test planning B.3 Data acquisition and processing B.3.1 USE the free driving method to continuously collect the vehicle running data in the corresponding city (The acquisition frequency is not less than