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

中华人民共和国国家标准

GB/T 18386-2005
Replace GB/T 18386-2001

**Electric vehicles—Energy consumption and
range—Test procedures**

电动汽车 能量消耗率和续驶里程 试验方法

(ISO 8714: 2002 Electric road vehicles – Reference energy consumption and range – Test procedures for passenger cars and light commercial vehicles, MOD)

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Foreword

This Standard is revised and adopted for ISO 8714: 2002 *Electric road vehicles -- Reference energy consumption and range -- Test procedures for passenger cars and light commercial vehicles* (English Version).

Standard format is compiled according to the requirements of GB/T 1.1-2000, the comparison list of the chapter and article numbers in this Part and those in ISO 8714: 2002 is listed in Annex B.

In view of actual situation of development of domestic electric vehicles, when referring to ISO 8714: 2002, some amendments were made in this Standard. The relevant technical differences have been written in the text and simply marked by vertical line in the margin of relevant clauses. There technical differences and their causes are listed in Annex C for your reference.

This Standard will replace GB/T 18386-2001 *Electric vehicles-Reference energy consumption and range-Test procedures*.

Comparison with GB/T 18386-2001, main changes of this Standard are as follows:

- Changed the application scope of standard, changed the “apply to electric drive vehicles which total mass of maximum design not exceed 3500kg” as “apply to pure electric vehicles”. Due to extension of application scope, in order to meet the requirements of pure electric vehicles over 3500kg, some amendments were made in this Standard.
- Adjusted the permutation and the combination of this Standard, e.g.: adjust the A2.3 to 4.4.2.
- Running mode of this Standard applies to category M₁ and N₁ vehicles; uniform velocity method divided into uniform velocity test with (60±2) km/h for category M₁ and N₁ and uniform velocity test with (40±2) km/h for category M₁ and N₁, detailed in uniform velocity (4.4.4.3) of previous edition as per categories. Meanwhile, deleted the “carry out test as per test speed selected by manufacturer” specified in previous edition.

Annex A of this Standard is normative, Annex B and Annex C is informative.

This Standard was proposed by NDRC (National Development and Reform Committee).

This Standard was under the jurisdiction of National Technical Committee on Road Vehicles of Standardization Administration of China.

Draft units of this Standard are China Automotive Technology and Research Center and Tsinghua University.

Main drafters of this Standard are Zhao Jingwei, Sun Hui and Chen Quanshi.

This Standard was first issued on 2001, this is first revision.

Electric vehicles—Energy consumption and range—Test procedures

1 Scope

This Standard specifies the test procedures of energy consumption and range of pure electric vehicles.

This Standard is applicable to pure electric vehicles. Electric three-wheeled motorcycle can be executed as a reference.

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 17883 Alternating current static watt-hour meters for active energy (classes 0.2S and 0.5S) (GB/T 17883-1999, eqv IEC 60678: 1992)

GB 18352.1 Limits and measurement methods for emissions of pollutants from light-duty vehicles (I)

GB/T 18385-2005 Electric vehicles-Power performance-Test method (ISO 8715: 2001, MOD)

GB/T 19596-2004 Terminology of electric vehicles (ISO 8713: 2002, NEQ)

3 Terms and Definitions

For the purpose of this Standard, the following terms and definitions shall apply.

3.1

complete electric vehicle kerb mass

Mass of the vehicle including energy storing device [Definition of 3.1.3.4.1 in GB/T 19596-2004].

3.2

test mass of electric vehicle

sum of the complete vehicle kerb mass plus [Definition of 3.1.3.4.2 in GB/T 19596-2004]. Mass plus is as follow:

- the maximum authorized pay mass (including driver) if it is equal or less than 180 kg;
- 180 kg, if the maximum authorized pay mass exceeds 180 kg but is less than or equal to 360 kg;
- half of the maximum authorized pay mass if this pay mass exceeds 360 kg

NOTE: Maximum authorized pay mass includes mass of the driver.

3.3

reference energy consumption

quantity of electrical energy from the mains needed to recharge the traction battery, divided by the distance covered after the vehicle has been driven through the specified test sequence, in Wh/km



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