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

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**The safety requirement of fuel system for compressed natural
gas vehicle in the collision**
(English Translation)

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Foreword

This Standard was drafted as per the rules specified in GB/T 1.1-2009.

The technical contents of this Standard refers to the United States FMVSS 303 Regulation Fuel System Integrity of Compressed Natural Gas Vehicles (2006 English Version).

This Standard was proposed by the Ministry of Industry and Information Technology.

This Standard shall be under the jurisdiction of National Technical Committee for Standardization of Vehicles (SAC/TC 114).

Drafting organizations of this Standard. China Automotive Technology & Research Center, Dongfeng Peugeot Citroen Automobile Company LTD, Chery Automobile Co., Ltd., and Beiqi Foton Motor Co., Ltd..

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The Safety Requirement of
Fuel System for Compressed
Natural Gas Vehicle in the Collision

1 Scope

This Standard specifies the safety requirement and test methods of the fuel system for compressed natural gas vehicle in the collision.

This Standard is applicable to the M1 vehicles with fuel system adopting compressed natural gas, which include bi-fuel CNG vehicle and dedicated CNG vehicle; other related types of vehicles can also refer to this Standard for implementation.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

GB 11551 The Protection of the Occupants in the event of a Frontal Collision for Passenger Vehicle

GB/T 17895 Natural Gas Vehicle and Liquefied Petroleum Gas Vehicle - Vocabulary

3 Terms and Definitions

The following terms and definitions and those ones stipulated in GB/T 17895 are applicable to this document.

3.1 Bi-fuel CNG vehicle

The vehicle with two mutually-independently fuel supply systems, thereof one set of system supplies compressed natural gas, while the other set of system supplies the fuel beyond the compressed natural gas; these two sets of fuel supply systems can respectively rather than jointly supply fuels to the motor.

4 Technical Requirements

Respectively complete the rear-end collision test, frontal collision test, lateral collision test specified in 5.2, 5.3, 5.4; the CNG fuel system after each collision test shall meet the following requirements.

5.1.1 Select and Reserve an appropriate location on the high-pressure piping system

of the test vehicle to install an inlet horn, where a three-way connector shall be

mounted; the two ends of the three-way connector shall be installed pressure sensor and cut-off valve for gas inlet and outlet, and the third end shall be connected with high-pressure piping system.

5.2 Rear-end collision test

The test forms and methods shall be performed as per the relevant provisions of GB 20072; while after the test, it shall conform to the provisions of Chapter 4.

5.3 Frontal collision test

The test forms and methods shall be performed as per the relevant provisions of GB 11551; while after the test, it shall conform to the provisions of Chapter 4.

5.4 Lateral collision test

The test forms and methods shall be performed as per the relevant provisions of GB 20071; while after the test, it shall conform to the provisions of Chapter 4.

5.5 Sealability test of CNG fuel system

After the completion of collision test, connect the pressure gauge with working pressure range of 1.5 times with pressure sensor end on the three-way connector;

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