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

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**Mounting requirements for liquefied natural gas vehicle special
equipment**

液化天然气汽车专用装置安装要求

(English Translation)

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Table of Contents

Foreword...	3
1 Scope...	4
2 Normative references...	4
3 Terms and definitions...	5
4 Installation...	5
5 Protection...	8
6 Inspection...	8
7 Blowing and cleaning of pipeline system...	9
8 Mark...	9
Annex A...	10

Foreword

The Annex A in this Standard is normative.

This Standard was proposed by and shall be under the jurisdiction of National Technical Committee of Auto Standardization.

Drafting organizations of this Standard. Natural Gas Application Technology Development Department of Zhongyuan Petroleum Exploration Bureau, China Automotive Technology & Research Center, and Shanghai Jiao Tong University.

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National Technical Committee of Auto Standardization is responsible for the interpretation of this Standard.

Mounting requirements for
liquefied natural gas vehicle special equipment

1 Scope

This Standard specifies technical requirements for installation, inspection and others of liquefied natural gas vehicle special equipment.

This Standard applies to automobiles using liquefied natural gas vehicle special equipment.

2 Normative references

The articles contained in the following documents have become part of this document when they are quoted herein. For the dated documents so quoted, all subsequent modifications (including all corrections) or revisions made thereafter do not apply to this Standard. However, the parties who reach an agreement according to this Standard are encouraged to study whether the latest versions of these documents may be used. For the undated documents so quoted, the latest versions (including all modification sheets) apply to this document.

GB 7258 Safety specifications for power-driven vehicles operating on roads

GB/T 17676 Natural gas vehicle and liquefied petroleum gas vehicle Identification marks

3 Terms and definitions

Terms and definitions defined in GB/T 17895 AND the following terms and definitions apply to this Standard.

3.1

Liquefied natural gas

A colourless fluid under liquid situation. It is mainly composed of methane, and its composition may include small amounts of ethane, propane, nitrogen or other components usually existed in natural gas.

4.1.1 The non-low temperature portion of the entire vehicle gas system, namely the gas

device behind the vaporizer, shall be installed and tested according to GB/T 19240.

4.1.6 The vehicle shall pass performance and safety performance of LNG automobile; it

shall comply with the provisions of GB 7258.

4.2.2.1 It shall not use installation method that will reduce the strength and stiffness of gas

cylinder, such as welding on the cylinder, mending by replacing a damage part on it, and so on.

4.2.2.4 The gas cylinder shall be installed firmly. Flexible non-slip pad with thickness being

not less than 2 mm shall be used between the gas cylinder and the fixing base; the fastening bolts shall be equipped with slack-preventing device; the tightening torque shall comply with the design requirements.

4.2.3.5 The installation of all pipe joints shall use joint seals or other seal structures; it

shall be carried out according to requirements of technical document.

4.2.3.6 For location using thread sealing, it shall use sealant to ensure the sealing effect;

for contact between thread and the low-temperature gas or liquid, it shall use low-temperature sealant.

4.2.4.1 Pressure gauge shall be installed at a position being easy to observe; however, it

shall not directly be installed in the cab or passenger compartment. When it is installed at the exposed position, there shall be additionally installed with protective cover.

4.3.1 The installation location of vaporizer shall be determined according to manufacturer's requirements.

4.3.2 The vaporizer shall be installed correctly and fixed firmly according to the technical

documents; there shall be no air resistance of circulating water to cause poor heat transfer.

5 Protection

Appropriate protective measures shall be taken for different system components depending on their installation location. It can use the protective structure of the car body, and also can install the fence, bumper, partitions, shields, etc. to directly prevent the damage of direct mechanical impact or pavement gravel.

6.1 Pipeline pressure test

After the installation of LNG vehicle gas system, it shall carry out pressure test to pipeline in accordance with relevant provisions of GB 50235; the specific measures are shown in Annex A.

6.2 Mounting strength test to gas cylinder

The mounting strength test to gas cylinder is usually carried out in the new model type testing in accordance with relevant requirements of GB/T 19240;

6.3 Cold test

The cold test shall be done after the blowing and cleaning of pipeline system; it can be done with the trial production at the same time before the first formal filling of LNG.

6.3.2 When the system has reached normal operating pressure, carry out leak testing to

the liquid-filled pipeline.

7 Blowing and cleaning of pipeline system

After the installation of pipeline system, blowing and cleaning shall be done to the pipeline in accordance with relevant provisions of GB 50235.

8 Mark

The mark of LNG automobile shall comply with provisions of GB/T 17676.

Annex A

(Normative)

Pipeline pressure test