

ICS 43.020
CCS T 09



中华人民共和国国家标准
NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 44131-2024

Post-Crash Safety Requirement for Fuel Cell
Electric Vehicle

燃料电池电动汽车碰撞后安全要求

(English Translation)

Issued on 2024-05-28

Implemented on 2024-05-28

Jointly Issued by

State Administration for Market Regulation of the People's Republic of China &
Standardization Administration of the People's Republic of China

CONTENTS

Foreword	1
1 Scope	1
2 Normative References	1
3 Terms and Definitions.....	1
4 Measurement Parameters, Units, Accuracy and Resolution	3
5 Safety Requirements.....	3
5.1 General.....	3
5.2 Post-Crash Safety Requirement for CHSS	4
5.3 Requirement for Protection Against Electric Shock	4
5.4 Other Requirements	4
6 Test Procedure	5
6.1 Vehicle Preparation Before Test.....	5
6.2 Crash Tests	5
7 Test Methods	6
7.1 Post-Crash CHSS Fuel Leakage Test	6
7.2 Post-Crash Gas Concentration Test in Enclosed or Semi-Enclosed Spaces.....	7
7.3 Trolley Test	8
7.4 Impact Test.....	10
Annex A (Informative) Procedure for Verification of Pressure and Temperature Sensors	11
A.1 Inspection of Sample Vehicle	12
A.2 Verification for Accuracy of Temperature Sensor	13
A.3 Verification for Accuracy of Temperature vs. Pressure	14
Bibliography.....	15

Post-Crash Safety Requirement for Fuel Cell Electric Vehicle

1 SCOPE

This document specifies the special post-crash safety requirements for fuel cell electric vehicles and describes the corresponding test methods.

This document is applicable to the fuel cell electric vehicles of categories M and N, fueled with compressed gaseous hydrogen, with a nominal working pressure of onboard hydrogen system not exceeding 70 MPa.

2 NORMATIVE REFERENCES

The following normative documents contain provisions which, through normative reference in this text, constitute essential provision of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendment) applies.

GB 11551	The protection of the occupants in the event of a frontal crash for motor vehicle
GB/T 15089	Classification of power-driven vehicles and trailers
GB 17578	Requirements and test methods of strength for the superstructure of bus
GB/T 18385	Electric Vehicles-Power Performance-Test Method
GB/T 19596	Terminology of electric vehicles
GB 20071	The Protection of the Occupants in the Event of a Lateral Crash
GB 20072	The requirements of fuel system safety in the event of rear-end collision for passenger car
GB/T 24548	Fuel cell electric vehicles - Terminology
GB/T 24549-2020	Fuel cell electric vehicles—Safety requirements
GB 26512-2021	The protection of the occupants of the cab of commercial vehicles
GB/T 26990	Fuel cell electric vehicles—Onboard hydrogen system technical specifications
GB/T 31498-2021	Post crash safety requirement for electric vehicle
GB 38032-2020	Electric buses safety requirements
ISO 6487:2015	Road vehicles - Measurement techniques in impact tests - Instrumentation

3 TERMS AND DEFINITIONS

For the purpose of this document, the terms and definitions established in GB/T 19596, GB/T 24548, GB/T 24549-2020, GB/T 26990 and GB/T 15089, as well as the following apply.

3.1 Main shut-off valve

A valve used to shut off the supply of hydrogen from the hydrogen storage cylinder to the downstream of the valve

[Source: GB/T 24549-2020, 3.1, modified]

3.2 Enclosed or semi-enclosed spaces

The space within the vehicle liable to be exposed to the hydrogen storage cylinder and the environment space or area where the hydrogen may accumulate

Note: e.g., passenger compartment, luggage compartment, goods compartment or space under the engine hood.



ChinaAutoRegs

中国汽车标准译文库

The following pages are left blank intentionally.

- 现成译文，到款即发。
 - 下单前可任取样页验证译文质量。
 - 免费提供正规普通增值税数电发票。
 - 请联系手机/微信: 13306496964/Email: standardtrans@foxmail.com 获取完整译文。
 - 本英文译本为纯人工专业精翻版本，保证语法术语准确率和专业度！
 - 专业源于专注|ChinaAutoRegs 始终专注于汽车标准翻译领域！
 - 「中国汽车标准译文库」已收录上千个现行汽车国家标准和行业标准的英文版译本，涵盖传统燃油车、新能源汽车和摩托车标准化体系！独家打造千万级汽车专业术语库和记忆库。
-
- ◆ The English Translation of this document (GB, GB/T, QC/T, CNCA, CQC, CAV, etc.) is readily available, and delivered immediately upon payment.
 - ◆ You may request for sample pages to your preference before placing an order.
 - ◆ Please contact standardtrans@foxmail.com for the complete PDF version in English.
 - ◆ Almost all of Chinese automotive/automobile standards, regulations and norms in effect have been included in our well-established database, providing one-stop, up-to-date, efficient and professional solution.
-