

Translated English of Chinese Standard: GB/T38796-2020

www.ChineseStandard.net → Buy True-PDF → Auto-delivery.

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 43.040.99

T 34

GB/T 38796-2020

**Performance requirements and test methods of
automobile blow-out emergency safety device**

汽车爆胎应急安全装置性能要求和试验方法

Issued on: June 02, 2020

Implemented on: June 01, 2021

**Issued by: State Administration for Market Regulation;
Standardization Administration of the People's Republic of
China.**

Table of Contents

Foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions	5
4 Technical requirements	5
5 Test method	7
6 Same type determination	10
Appendix A (Normative) Performance requirements and test methods of mechanical automobile blow-out emergency safety device	12

Performance requirements and test methods of automobile blow-out emergency safety device

1 Scope

This Standard specifies the terms and definitions, technical requirements, test methods and the same type determination of automobile blow-out emergency safety device.

This Standard applies to automobile blow-out emergency safety devices and M₂, M₃, N₂, N₃ automobiles which are installed with automobile blow-out emergency safety devices; other types of automobiles can implement by reference.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version applies to this document. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2423.1-2008, Environmental testing for electric and electronic products
- Part 2: Test methods - Tests A: Cold

GB/T 2423.2-2008, Environmental testing for electric and electronic products
- Part 2: Test methods - Tests B: Dry heat

GB/T 5909-2009, Performance requirements and test methods of commercial vehicles wheels

GB/T 10125-2012, Corrosion tests in artificial atmospheres - Salt spray tests

GB/T 12534, Motor vehicles - General rules of road test method

GB 12676, Technical requirements and testing methods for commercial vehicle and trailer braking systems

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

GB/T 28046.3-2011, Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 3: Mechanical loads

4.2.4 Other requirements

During the test, the automobile blow-out emergency safety device shall not have failure phenomenon such as obvious deformation, falling off, cracking and fracture.

5 Test method

5.1 Test conditions

5.1.1 Test equipment

The installation of measuring instruments must not affect the driving safety of the vehicle. The measuring instruments and accuracy are as follows:

- a) Speedometer: 1%;
- b) Braking distance tester: 1%;
- c) Time measuring instrument: 1%;
- d) Steering wheel dynamometer: 1%.

5.1.2 Test vehicle and mass status

5.1.2.1 The technical status of the test vehicle that is equipped with an automobile blow-out emergency safety device shall meet the requirements of GB/T 12534.

5.1.2.2 The test vehicle shall be set at the maximum manufacturer's total mass status; the load shall be evenly distributed; the axle load distribution shall comply with the factory regulations. The tractor shall be tested in the train condition.

5.1.3 Test site and environment

The requirements for test site and environment are as follows:

- a) The test road shall be a dry, hard, smooth and clean cement or asphalt road; the slope of the test road in any direction shall not exceed 2%;
- b) The wind speed is not more than 5 m/s;
- c) The temperature does not exceed 40 °C.

5.1.4 Tire blow-out simulation requirements

restricted after a blow-out and cannot reach the specified speed, the corresponding test after the blow-out shall be performed at the maximum speed that the vehicle can reach.

5.2.3 Corner driving blow-out test

5.2.3.1 The test vehicle travels at a constant speed of $50 \text{ km/h} \pm 2 \text{ km/h}$ along a curve with a radius of 150 m; the tire on the outer side of the simulated steering shaft blows out; after the tire blow-out, the driver immediately conducts the type-0 test of engine engagement; during the whole process, use the steering wheel dynamometer to measure the maximum steering force that is applied by the driver to the outer edge of the steering wheel during the process of maintaining a curve driving before and after the tire blow-out; calculate the maximum steering force increment before and after the tire blow-out; at the same time, record the test vehicle speed and braking distance; confirm whether the test vehicle exceeds the test track.

Note: Early braking during the test may affect the overall test effect, so, the driver should avoid such situations.

5.2.3.2 For dual-steering shaft vehicles, it is available to simulate a single-sided tire blow-out only on the primary shaft.

5.2.3.3 For vehicles which are equipped with electronic control systems such as ESC or non-mechanical automobile blow-out emergency safety device, if the vehicle speed is automatically restricted after a blow-out and cannot reach the specified speed, the corresponding test after the blow-out shall be performed at the maximum speed that the vehicle can reach.

5.2.4 Steering ability test after a blow-out

Before the blow-out test and after the blow-out test according to either method of 5.2.2 or 5.2.3, respectively drive the test vehicle around the pile at a speed of $50 \text{ km/h} \pm 2 \text{ km/h}$; arrange the stakes in accordance with Figure 1; measure the steering force that is applied to the outer edge of the steering wheel during the driving process; calculate the average value of the two steering force peaks when the steering wheel turns left and right before and after the tire burst-out in the effective stake area; respectively calculate the increment of average value of the front and rear steering wheels when the steering wheel turns left and right before and after the tire blow-out; the vehicle shall not knock down the stake during the test.

For vehicles which are equipped with electronic control systems such as ESC or non-mechanical automobile blow-out emergency safety device, if the vehicle speed is automatically restricted after a blow-out and cannot reach the specified

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----