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GB 44497-2024

**Intelligent and connected vehicle - Data storage system for
automated driving**

智能网联汽车 自动驾驶数据记录系统

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Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part

1.Rules for the structure and drafting of standardizing documents". Please note that some contents of this document may involve patents. The issuing agency of this document does not assume the responsibility for identifying patents. This document was proposed by AND shall be under the jurisdiction of the Ministry of Industry and Information Technology of the People's Republic of China. Intelligent and connected vehicle - Data storage system for automated driving

1 Scope

GB 44497-2024 is the Chinese national standard on intelligent and connected vehicle - data storage system for automated driving, in the field of road vehicles engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 23 August 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2026. Classification: ICS 43.040.10, CCS T36. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the technical requirements, test methods, same type determination of the automatic driving data recording system of intelligent and connected vehicles. This document applies to the automatic driving data recording system equipped on Category M and Category N vehicles.

2 Normative references

The contents of the following documents constitute the essential terms of this document through normative references in the text. Among them, for dated references, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies to this document.

GB/T 1865-2009 Paints and varnishes - Artificial weathering and exposure to artificial

radiation - Exposure to filtered xenon-arc radiation

GB 11551 The protection of the occupants in the event of a frontal collision for motor vehicle

GB 16735 Road vehicle - Vehicle identification number (VIN)

GB/T 19951-2019 Road vehicles - Disturbances test methods for electrical/electronic component from electrostatic discharge

GB 20071 The protection of the occupants in the event of a lateral collision

GB/T 20913 The protection of the occupants in the event of an off-set frontal collision for passenger car

GB/T 21437.3-2021 Road vehicles - Test method of electrical disturbances from conduction and coupling - Part

3. Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines

GB/T 28046.1-2011 Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part

3 Terms and definitions

The terms and definitions, as defined in GB 39732-2020 and GB/T 40429-2021, as well as the following terms and definitions, apply to this document.

3.1 Data storage system for automated driving A system equipped on a vehicle with an automated driving function, that has the functions of monitoring, collecting, storing data and supports data reading during the activation of the automated driving system.

3.2 Impact event A collision or other physical event that reaches or exceeds the trigger threshold, or any other event that causes the deployment of an irreversible restraint device, whichever occurs first.

3.3 Starting point of event T

0 The moment when the automated driving data recording system confirms that a specific event has occurred.

3.4 Ending point of event T_{end} The moment when the automated driving data recording system confirms that a specific event has ended.

3.5 Locked status The status in which data cannot be overwritten.

3.6 Field of view angle In a camera device, the angle formed by the two edges of the maximum range of lens through which the phase of tested object, using the center of the

camera device as the vertex.

4 Technical requirements

4.1 General Automatic driving data recording systems are divided into Type I and Type II systems. The automated driving data recording system equipped on M1 and N1 vehicles shall be a Type I system or a Type II system. The automated driving data recording system equipped on M2, M3, N2, N3 vehicles shall be a Type II system. The relevant

4.2.2.1 Triggering conditions When the vehicle meets the requirements of

4.1.1 in GB 39732-2020, the event shall be recorded.

4.2.3 Events with collision risk

4.2.3.1 Trigger conditions When the longitudinal deceleration requested by the automated driving system is greater than 5 m/s^2 , the event shall be recorded.

4.3 Data recording requirements for type II system During the activation of the automated driving system, the type II system shall record at least the following data.

4.4 Data element requirements

4.4.1 Data element grading The data elements recorded by the automated driving data recording system shall be divided into two grades according to the following requirements.

4.5 Data storage requirements

4.5.1 Storage medium The data recorded by the automated driving data recording system shall be stored in the vehicle-side non-volatile memory.

4.5.2 Storage capacity The automated driving data recording system shall meet the following requirements.

4.5.3 Storage overwrite mechanism

4.5.3.1 Type I system When the storage area of a Type I system is full, the following storage overwrite requirements shall be met.

5.1 Test field and test environment requirements

5.1.1 The test field shall meet the following conditions.

5.1.2 Weather conditions The test vehicle shall be tested in a good weather and normal lighting environment.