



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

GB/T 34590.2-2022

**Road vehicles - Functional safety - Part 2: Management of
functional safety**

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives

for Standardization - Part 1.Rules for the Structure and Drafting of Standardizing Documents.

This document is Part 2 of GB/T 34590 Road Vehicles - Functional Safety. GB/T 34590 has

issued the following parts.

- Part 1.Vocabulary;
- Part 2.Management of Functional Safety;
- Part 3.Concept Phase;
- Part 4.Product Development at the System Level;
- Part 5.Product Development at the Hardware Level;
- Part 6.Product Development at the Software Level;
- Part 7.Production, Operation, Service and Decommissioning;
- Part 8.Supporting Processes;
- Part 9.Automotive Safety Integrity Level (ASIL)-oriented and Safety-oriented Analyses;
- Part 10.Guideline;
- Part 11.Guidelines on Applications to Semiconductors;
- Part 12.Adaptation for Motorcycles.

This document serves as a replacement of GB/T 34590.2-2017 Road Vehicles - Functional Safety - Part 2.Management of Functional Safety. In comparison with GB/T 34590.2-2017, apart from structural adjustments and editorial modifications, the main technical changes are as follows.

- The Scope of the Standard is modified from "series production passenger cars" into "series production road vehicles, excluding mopeds" (see Chapter 1; Chapter 1 of Version 2017);
- The adaptation for motorcycles is added (see 4.5);
- The adaptation for goods vehicles, buses, special vehicles and trailers is added (see 4.6);
- The objectives of overall safety management are modified, and the goals to be achieved by organizations executing safety activities are clarified (see 5.1; 5.1 of Version 2017);
- The definitions of different phases and sub-phases of the safety lifecycle are modified (see 5.2.2.2; 5.2.2 of Version 2017);
- The concepts of confirmation measures, impact analysis at the item level, impact analysis at the element level, and release for production in other key concepts that need

to be considered in the safety lifecycle are added (see 5.2.2.3);

---The communication between functional safety, cybersecurity, intended functional safety and other disciplines that are related to the achievement of functional safety is modified (see 5.4.2.3; 5.4.2.3 of Version 2017);

---The management of safety anomalies regarding functional safety is modified, and the conditions of the closure of safety anomalies and the management of safety anomalies are added (see 5.4.3; 5.4.2.5 of Version 2017);

---The work products of the overall safety management are modified, and evidence of a quality management system and identified safety anomaly reports are added (see 5.5;

5.5 of Version 2017);

---The objectives of project dependent safety management are modified (see 6.1; 6.1 of Version 2017);

---The general rules of project dependent safety management are modified (see 6.2; 6.2 of Version 2017);

---The requirements of project dependent safety management are modified (see 6.4; 6.4 of Version 2017);

---The impact analysis at the item level is added (see 6.4.3);

---The reuse of an existing element is added (see 6.4.4);

---The tailoring requirements for an evaluation of hardware elements and a qualification of software components, as well as the requirements for item developments for T&B are added (see 6.4.5);

---The requirements for the planning and coordination of the safety activities are modified (see 6.4.6; 6.4.3 of Version 2017);

---The requirements for safety case are modified, and the requirements for safety case in the case of a distributed development and the requirement that the safety case can be released progressively during the safety lifecycle to provide evidence for the safety arguments are added (see 6.4.8; 6.4.6 of Version 2017);

---The requirements for confirmation measures are modified, and the requirements for a

functional safety audit to judge the implementation of the processes and a functional safety assessment to judge the achieved functional safety of the item, or the contribution to the achievement of functional safety are added (see 6.4.9; 6.4.7 of Version 2017);

---The requirements for confirmation reviews are added (see 6.4.10);

---The requirements for functional safety audit are modified, and the requirements for evaluation report are added (see 6.4.11; 6.4.8 of Version 2017);

---The requirements for functional safety assessment are modified, the requirements for the phase, scope and personnel of functional safety assessment are added, and the conditions for acceptance of the assessment are modified (see 6.4.12; 6.4.9 of Version 2017);

---The conditions and requirements for release for production are added (see 6.4.13);

---The work products are modified (see 6.5; 6.5 of Version 2017);

---The requirements for safety management regarding production, operation, service and decommissioning are modified, and the description of the phase after release for production is modified into the phase of production, operation, service and decommissioning (see Chapter 7; Chapter 7 of Version 2017).

This document has been modified using ISO 26262-2:2018 Road Vehicles - Functional Safety

- Part 2. Management of Functional Safety.

In comparison with ISO 26262-2:2018, this document makes the following structural adjustment.

---Appendix C, Appendix D and Appendix E of this document correspond with Appendix E, Appendix C and Appendix D of ISO 26262-2:2018.

The technical differences between this document and ISO 26262-2:2018 and the causes for

these differences are as follows.

-- The description of T&B is modified from "truck, bus, trailer and semi-trailer" into "goods vehicle, bus, special vehicle, trailer" (see 4.6; 4.6 of ISO 26262-2:2018), so as to maintain the consistency with the types of vehicles specified in GB/T 3730.1-2022