

Survey on Automobile Standards

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Abstract

In this paper, I have challenge different standards related to automobile production recently. In this survey, I will have a review to important standards for hybrid and electrical cars.

1. Introduction

Nowadays, advanced countries produce cars with high quality related to best standards. Recent years, electric cars have been popular and people drive hybrid cars a lot and new technology has been influence on car technology such as automated driving, electric vehicle and etc... are popular. My aim in this paper is illustration different views of investigation quality in car production in different countries.

1.1 Car Standards in Different Countries

1.1.1 ASTM Car Standard

• ASTM D8226-25

Standard Test Method for Measurement of Effects of Automotive Engine Oils on Fuel Economy of Passenger Cars and Light-Duty Trucks in Sequence VIF Spark Ignition Engine

• ASTM F1649-20

Standard Test Methods for Evaluating Wet Braking Traction Performance of Passenger Car Tires on Vehicles Equipped with Anti-Lock Braking Systems

• ASTM B67-14(2022)

Standard Specification for Car and Tender Journal Bearings, Lined

• ASTM D8114-25

Standard Test Method for Measurement of Effects of Automotive Engine Oils on Fuel Economy of Passenger Cars and Light-Duty Trucks in Sequence VIE Spark Ignition

1.1. 2 Germany Car Standard

• DIN 70028

Passenger cars - Measuring the stopping distance with ABS in straight-ahead stops

Edition 2004-05

• DIN ISO 2416

Passenger cars; mass distribution; identical with ISO 2416:1992

Edition 1993-09

• DIN ISO 27955

Road vehicles - Securing of cargo in passenger cars, station wagons and multi-purpose vehicles - Requirements and test methods (ISO 27955:2010)

Edition 2012-01

• DIN ISO 4000 – 1

Passenger car tyres and rims - Part 1: Tyres (metric series) (ISO 4000-1:2021)

Edition 2022-11

• DIN 70020 – 7

Road vehicles - Automotive engineering - Part 7: Engine mass of combustion engines in passenger cars, which are only propelled by combustion engines

DIN EN IEC 63193 ; VDE 0510-193:2021-11

Lead-acid batteries for propulsion power of lightweight vehicles - General requirements and methods of test (IEC 63193:2020); German version EN IEC 63193:2021

• DIN EN 16662-2

Road vehicles - Supplementary grip devices for tyres of passenger cars and light duty vehicles - Part 2: Specific test procedures; German and English version prEN 16662-2:2023

Edition 2023-09

• **DIN EN ISO 19363**

Electrically propelled road vehicles - Magnetic field wireless power transfer - Safety and interoperability requirements (ISO 19363:2020); English version EN ISO 19363:2021

Edition 2022-04

DIN EN 50342-1 ; VDE 0510-101:2022-08

Lead-acid starter batteries - Part 1: General requirements and methods of test; German version EN 50342-1:2015 + A1:2018 + A2:2021

Edition 2022-08

DIN EN 50342-5 ; VDE 0510-24:2025-01

Lead-acid starter batteries - Part 5: Mechanical properties of battery housings and handles; German and English version prEN 50342-5:2024

Edition 2025-01

• **DIN ISO 5130**

Acoustics - Measurements of sound pressure level emitted by stationary road vehicles (ISO 5130:2019)

Edition 2020-11

• **DIN 74363-1**

Brake drums for passenger car trailers with 5 bolt mounting and pitch circle dia. 112 mm (BZ 5 × 112); maximum outline

Edition 1982-10

• **DIN EN ISO 14505-3**

Ergonomics of the thermal environment - Evaluation of the thermal environment in vehicles - Part 3: Evaluation of thermal comfort using human participants (ISO/DIS 14505-3:2025); German and English version prEN ISO 14505-3:2025

Edition 2025-06

• **DIN SPEC 74118**

Road vehicles - R744-Air-conditioning systems - CO2-sensor; Text in German and English

Edition 2017-06

• **wdk 129 Blatt 1**

Tyres for passenger cars; diagonal tyres; coasting sizes

Edition 1981-09

• **DVS 2505**

Repair welding of passenger cars made of steel - Tasks of repair at the car body

Edition 1997-04

• **VDI 3455**

Emission control - High-volume car body painting plants

Edition 2013-08

• **CSA ANSI/CAN/UL/ULC 338**

Vehicle Theft Deterrent Equipment and Systems: Electronic Immobilization System and Aftermarket Installation Requirements

Edition 2025-06-24

• **ISO 3958**

Passenger cars - Driver hand-control reach

• **ABNT NBR ISO 4131**

Road vehicles - Dimensional codes for passenger cars

Edition 2008-02-0

• **ABNT NBR ISO 3409**

Passenger cars - Lateral spacing of foot controls

Ed

• **ISO 2958**

Road vehicles - Exterior protection for passenger cars

Edition 2024-07

• **SAE J 2562**

Biaxial Wheel Fatigue Test

Edition 2021-07-16

• **ISO 8720**

Passengers cars; specifications for mechanical jacks

Edition

• **SAE J 3203**

Wheel Radial Impact Test Procedure for Passenger Cars

Edition 2023-01-25

• **SAE J 1618**

Continuously Variable Transmission Test Code for Passenger cars

Edition 2011-09-06

• **BS ISO 2958**

Road vehicles. Exterior protection for passenger cars

Edition 2024-07-24

• **UNE 26196**

PASSENGER CARS. LATERAL SPACING OF FOOT CONTROLS.

Edition 1983-05-15

• **ISO 3468**

Passenger cars - Windscreen defrosting and demisting systems - Test method

Edition 2014-06

2. Conclusion

In this report, you see kinds of car standards to build. Some standards are related to specifications and other test procedures [1-3]. By reading the text inside each standard, you will study different kinds of technical report and test procedure.

References

1. ASTM standard catalogue.
2. DIN standard catalogue.
3. ISO organization.

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