

Reason for withdrawal of JASO Standard

1. Applicable standard

JASO D 001:1994 General rules of environmental testing methods for automotive electronic equipment

2. Background to withdrawal of standard

This standard was proposed based on the results of an investigation by the Electronics Research Committee of the Technology Board of the Society of Automotive Engineers of Japan, Inc. It was established in 1978 ahead of a related standard issued by the International Organization for Standardization (ISO). Its contents were revised and fully updated in 1982, 1987, and 1994, and it was valued as an extremely effective standard by automakers and electronic equipment manufacturers due to its description of durability test methods under general environments, including electromagnetic, as well as temperature, humidity and vibration conditions.

Then, starting in around 1983, ISO/TC22/SC3/WG3 began work to establish standards describing electromagnetic environment test methods for vehicles and automotive components. Despite Japan strongly urging the adoption of **JASO D 001**, a majority agreed to pursue the proposals made by Europe and the U.S., which resulted in the establishment of series of basic standards from the second half of the 1990s. Work to revise these standards and add new hardware remains ongoing to this day.

During the previous revision of this JASO standard in 1994, the committee studied whether to include it in the general policy of harmonization with international standards. However, since most of the related standards at the time were only Committee Drafts (CD) or Draft International Standards (DIS), it was decided to create JASO standards with reference to these related standards once the ISO standards had been finalized. For this reason, the committee decided to consider continuing or withdrawing **JASO D 001** at each periodic revision timing, considering the progress of these JASO standards.

In addition, the **ISO 16750** series related to general environmental testing under other than electromagnetic conditions was also established in 1998. In response to this and the situation in Japan, the **JASO D 014** series was established in 2006. This completed preparation to switch over to methods in harmony with international standards in the same way as the electromagnetic environmental testing methods.

3. Reference

For reference, the following **ISO** and **JASO** standards are alternatives to **JASO D 001**.

ISO 7637-1 Road vehicles—Electrical disturbances from conduction and coupling

- Part1: Definitions and general considerations

ISO 7637-2

- Part 2: Electrical transient conduction along supply lines only

4.3: Voltage transient emissions test

4.4: Transient immunity test

ISO 7637-3

- Part 3: Electrical transient transmission by capacitive and inductive coupling
vialines other than supply lines

4.5: CCC method

4.6: DCC method

4.7: ICC method

ISO 16750-2 Road vehicles – Environmental conditions and testing for electrical and electronic equipment

– Part 2: Electrical loads

4.6.3: Starting profile

4.6.4: Load dump

JASO D 010 Road vehicles and automotive parts – Test methods for electrical disturbances from electrostatic discharges (equivalent to **ISO 10605**)

JASO D 011 Automotive parts - Testing methods of electrical disturbance by narrowband radiated electromagnetic energy (equivalent to **ISO 11452-1, -2, -3, -4, -5 and -7**)

JASO D 012 Road vehicles – Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy (equivalent to **ISO 11451-1, -2, -3 and -4**)

JASO D 014-1 Automotive parts - Environmental conditions and testing for electrical and electronic equipment - Part 1: General (equivalent to **ISO 16750-1**)

JASO D 014-2 Automotive parts - Environmental conditions and testing for electrical and electronic equipment - Part 2: Electrical loads (equivalent to **ISO 16750-2**)

JASO D 014-3 Automotive parts - Environmental conditions and testing for electrical and electronic equipment - Part 3: Mechanical loads (equivalent to **ISO 16750-3**)

JASO D 014-4 Automotive parts - Environmental conditions and testing for electrical and electronic equipment - Part 4: Climatic loads (equivalent to **ISO 16750-4**)

JASO D 014-5 Automotive parts - Environmental conditions and testing for electrical and electronic equipment - Part 5: Chemical loads (equivalent to **ISO 16750-5**)

Comparison of test items between the former JASO D 001 and JASO D 014*

General environmental characteristics	Test type	Item in former D 001	General environmental characteristic in new D014 series	Test type	
Normal power supply voltage operation	Normal power supply voltage test	5.1	Electrical load D014-2 :2006	4.1	Voltage range test
	Power supply voltage on start test	5.2.		4.5.3	Start voltage test
	Power supply interruption test	5.3		4.5.1	Momentary voltage drop test
Abnormal power supply voltage resistance	Power supply reverse polarity connection test	5.4		4.6	Reverse polarity voltage test
	Overvoltage test (method A)	5.5		4.2	Overvoltage test
	Overvoltage test (method B)	5.6			
Vibration resistance	Vibration test	5.23	Mechanical load D014-3	4.1	Vibration test
Impact resistance	Impact test	5.24		4.2	Mechanical shock test
				4.3	Free drop test
High and low temperature resistance	Temperature characteristics test	5.11	Climatic load D014-4	5.2.	Stepped temperature change test
	Low-temperature exposure test	5.12		5.1.1	Low-temperature test
	Low-temperature operation test	5.13		5.1.1.1	Storage state
				5.1.1	Low-temperature test
	High-temperature exposure test	5.14		5.1.1.2	Operational state
				5.1.2	High-temperature test
	High-temperature operation test	5.15		5.1.2.1	Storage state
5.1.2				High-temperature test	
Temperature cycle test	5.16	5.1.2.2		Operational state	
		5.3.1		Thermal cycle test at set rate of change	
Thermal shock test	5.17	5.3.2		Temperature change shock test	
		5.6.2		Temperature/humidity combination cycle test	
Humidity resistance	Temperature/humidity cycle test	5.18		5.7	Steady-state high-temperature/high-humidity test
	Steady-state humidity test	5.19		5.6.1	High-temperature/high humidity cycle test
Water resistance	Moisture condensation test	5.20	7.	Dust and waterproofing level	
	Water resistance test	5.21	5.5	Salt water spray test	
Salt water resistance	Salt water spray test	5.22	5.5.1	Corrosion test	
			5.5.2	Electrical leakage and function test	
			7.	Dust and waterproofing level	
Dust resistance	Dust test	5.25			
Oil resistance	Oil resistance test	5.26	Electrical load D014-5		No specific items: 1 test in whole of Section 5.
EMC characteristics	Test type	Item in former D 001	EMC characteristics	Type of test in D 010 and D 011 (Refer to ISO 7637-1)	
Transient voltage resistance	Transient voltage characteristics test	5.7	No corresponding characteristic	(Refer to ISO 7637-2, 7637-3 and 16750-2)	
	Static electricity test	5.8	D010	Electrical disturbance by electrostatic discharges	
Electromagnetic resistance	Conductive electromagnetism test	5.9	No corresponding characteristic	(Refer to ISO 11452-10.)	
	Radiated electromagnetism test	5.10	D011	Electronic disturbance by narrow band radiated electromagnetic energy However, the Fig. 16 test is not part of D011. Refer to ISO 11452-8.	

* This comparison table is based on JASO D 014 : 2006 series.
The content of this table will be updated in or after 2023.