UDC 621.43.045

JIS

JAPANESE INDUSTRIAL STANDARD

Spark plugs for internal combustion engines

JIS B 8031–1995

Translated and Published

by

Japanese Standards Association

This is a preview. Click here to purchase the full publication.

In the event of any doubt arising,
the original Standard in Japanese is to be final authority

Errata for JIS (English edition) are printed in *Standardization Journal*, published monthly by the Japanese Standards Association.

Errata will be provided upon request, please contact:
Business Department,
Japanese Standards Association
4-1-24, Akasaka, Minato-ku,
Tokyo, JAPAN 107
TEL. 03-3583-8002
FAX. 03-3583-0462

Errata are also provided to subscribers of JIS (English edition) in *Monthly Information*.

Copyright by the Japanese Industrial Standa
Sun Aug 21 23:30:15 2011
This is a preview. Click here to purchase the full publication.

UDC 621.43.045

JAPANESE INDUSTRIAL STANDARD J I S

Spark plugs for internal combustion engines B 8031-1995

1. Scope This Japanese Industrial Standard specifies the spark plugs (hereafter, referred to as "plugs") used for the internal combustion engines. However, the spark plugs for aircraft are excluded.

Remarks: The cited standards and corresponding International Standards are given in Attached Table 1.

2. Classification Plugs shall be classified into three classes of 14 mm, 12 mm and 10 mm according to the designations of plug threads, and further subdivided by the shape, length of threads, and presence of incorporated resistor (hereafter, those of incorporating resistor are referred to as the "resistor spark plugs").

Table 1. Types, shapes, plug threads and incorporation or non-incorporation of resistor

Type	Shape	Plug threads		Incorporation or non-incorporation of resistor
		Designation of thread	Length mm	
14 mm	General type	M14S	9.5	All of the divisions include two types of with or without incorporated resistor.
			12.7	
			19	
	Small-size hexagon type		12.7	
			19	
	Compact type		9.5	
12 mm	General type	M12S	12.7	
			19	
	Small-size hexagon type		12.7	
			19	
10 mm	General type	M10S	12.7	
			19	
	Half thread type		19 (1)	

Note (1) This indicates the dimension A of Fig. 1.4.

3. Performances The performances of the plugs, when tested in accordance with the requirements of 6., shall be as given in Table 2. However, the items (8) to (10) of Table 2 shall not apply to the plugs which are not incorporated with the resistor.

Copyright by the Japanese Industrial Standa
Sun Aug 21 23:30:16 2011
This is a preview. Click here to purchase the full publication.

Table 2. Performances

Item	Performance	Article of test method
(1) Insulation resistance	Insulation resistance shall be 50 MΩ or over.	6.2
(2) Spark performance	Discharge conditions shall be satisfactory, and discharge shall not take place at the place other than the spark gap.	6.3
(3) Impact resistance	No abnormality shall cause on each part of plug. Further, the variation of the resistance value of resistor spark plug shall be ±10 % the resistance value before testing.	6.4
(4) Airtightness	Air leakage from inside of the plug shall be 1 ml/min or under.	6.5
(5) Thermal resistance	Such abnormalitites as cracks and the like shall not be caused on each part of the plug.	6.6
(6) Thermal shock resistance	Such abnormalitites as cracks and the like shall not be caused on each part of the plug.	6.7
(7) Heat insulation resistance	Heat insulation resistance shall be 1 MΩ or over.	6.8
(8) Resistance value of incorporated resistor	Resistance value of resistor spark plug shall be $5^{+2.5}_{-2.0}$ kΩ.	6.9
(9) Loading life of incorporated resistor	Variation of resistance value of resistor spark plug shall be ±30 % in respect to the resistance value before testing.	6.10
(10) Heating characteristic of incorporated resistor	Variation of resistance value of resistor spark plug shall be as specified in Table 3.	6.11

Table 3. Variation rates of resistance value

Unit: %

Test temperature	Variation rates in respect to resistance value before testing	
	Heated condition	Restored condition to ordinary temperature
150 °C	+25 −40	±10
300 °C	—	±25

4. Shapes and dimensions

4.1 External dimensions The external dimensions of the plugs shall be as given in Figs. 1.1 to 1.4 and Table 4. However, the dimensions of the spark gaps shall be as agreed between the parties concerned with delivery.

Copyright by the Japanese Industrial Standa
Sun Aug 21 23:30:17 2011

This is a preview. Click here to purchase the full publication.