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Automotive parts — Ignition coils — Test methods

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Descriptors : road vehicles, private cars, ignition coils, engine components

Reference number : **JIS D 5121 : 1998 (E)**

Foreword

This Standard has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently, **JIS D 5121** : 1980 is replaced with **JIS D 5121** : 1998.
This revision has been modified to test methods of ignition coils based on **ISO/DIS 13476**, *Road vehicles — Ignition coils — Electrical characteristics and test methods*, and specifications of the ignition coils in the former Standard were deleted.

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

Automotive parts—Ignition coils — Test methods

Introduction This Standard is the Japanese Industrial Standard prepared based on **ISO/DIS 13476**, *Road vehicles — Ignition coils — Electrical characteristics and test methods* which was passed in the international vote as **ISO/DIS** in September, 1996, without modifying its technical content, and the Annex specifies the test items (except those specified in the draft International Standard) which have been conventionally specified in Japanese Industrial Standard.

The parts underlined with dots in this Standard show the matters not given in the original International Standard.

1 Scope This Standard applies to ignition coils (hereafter referred to as "coils") of the induced energy accumulation type. The test methods are specified for the coils to be used in the ignition device using the semi-conductor switching structure of the spark ignition internal combustion engine.

Remarks : The International Standard corresponding to this Standard (draft) is as follows.

ISO/DIS 13476 *Road vehicles — Ignition coils —Electrical characteristics and test methods*

2 Definitions and symbols (parameters) The performance of the coils are influenced by the following major 3 sets of parameters.

a) Parameters specific to the coils

b) Parameter associated with the external condition to influence the primary side of the coils

c) Parameter to influence the output or secondary side of the coils

The coil characteristics on the low voltage terminal side shall be informed the supplier of the interruption mechanism. Similarly, the output of the high voltage terminal shall be informed those to decide the specifications of required ignition plugs and high voltage output circuit. Some parameters are related to each other; but shall be given in a complete set.

The parameters in **2.1** to **2.3** include no temperature rise caused by the operation of the coils.

2.1 Structural parameters of coil

a) Primary resistance (R_p)

b) Primary inductance (L_p) (only as informative reference)

c) Turns ratio (only as informative reference)

d) Secondary resistance (R_s) (only as informative reference)

e) Primary current rise reference time (t_{ref})

f) Primary leakage inductance (L_{pl})

2.2 Primary parameters (switching)

a) Nominal primary interruption current (I_{Np})

b) Primary clamp voltage (U_{plim})