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Automobiles—
Electric fuel pumps

ICS 43.060.40

Descriptors : road vehicles, private cars, fuel pumps, petrol engines, gasoline

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Foreword

This translation 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:

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In the event of any doubts arising as to the contents,
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Automobiles — Electric Fuel Pumps

1. Scope

This Japanese Industrial Standard specifies electric fuel pumps used in gasoline engines for automobiles ⁽¹⁾, hereinafter referred to as the "pumps".

Note ⁽¹⁾ They shall include those pumps used for gasoline injection engines.

Remarks: Normative references are as follows:

JIS B 0203 Taper Pipe Threads

JIS B 0207 Metric Fine Screw Threads

JIS D 0203 Method of Moisture, Rain and Spray Test for Automobile Parts

JIS D 1601 Vibration Testing Methods for Automobile Parts

JIS D 5403 Cable Terminals for Automobiles

JIS K 2201 Gasoline for Industrial Purpose

JIS K 2202 Motor Gasoline

JIS K 2203 Kerosine

2. Definition

The meanings of the main terms used in this standard are as follows:

- (1) in-line type pump A pump of the type installed halfway of the fuel pipe line.
- (2) in-tank type pump A pump of the type installed in the fuel tank.
- (3) motor-driven rotor type pump A pump of the type in which the construction of the pump part is of the rotary type and which is driven by an electric motor.

3. Capacity

The pump capacity shall be expressed by the specified discharge ⁽²⁾ at the specified delivery pressure ⁽²⁾.

Note ⁽²⁾ These values shall be specified by agreement between the purchaser and supplier. Their units shall respectively be kPa and l/h.

4. Nominal Voltage

The values of nominal voltage of pumps shall be 6 V, 12 V, and 24 V.

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5. Performance

5.1 Dry Suction Pressure When the inside of the pump and suction pipe is kept in dry condition, and with the discharge side opened and the suction side closed, the pump is operated at the nominal voltage, the suction pressure shall be -5 kPa or lower. However, this does not apply to in-tank type

5.2 Shut-Off Delivery Pressure

5.2.1 Average Value of Shut-Off Delivery Pressure ⁽³⁾ The average value of delivery pressure when the discharge side is closed while operating the pump at the nominal voltage shall be within the range of 70 to 100 % of the specified shut-off delivery pressure ⁽⁴⁾.

Notes ⁽³⁾ Average value of pulsating pressure.

⁽⁴⁾ To be specified by agreement between the purchaser and supplier.

5.2.2 Maximum Value of Shut-Off Delivery Pressure For pumps for carbureter, the maximum value of the delivery pressure measured at the carbureter inlet when the pump is operated at a voltage ranging from 90 to 120 % of the nominal voltage with the piping arranged in practical service condition shall not exceed 130 % of the specified shut-off delivery pressure ⁽⁴⁾. However, this requirement does not apply to gasoline injection pumps.

5.3 Discharge The discharge values corresponding to respective temperatures and voltages when the discharge-side pressure is made agree with the specified delivery pressure ⁽²⁾ shall be as shown in Table 1.