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Road vehicles — Shapes and dimensions of fuel injection nozzles for diesel engines — Size "S"

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Descriptors : road vehicles, private cars, diesel engines, fuel injectors, shape, dimensions, flow nozzles

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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. Consequently **JIS D 3604 : 1984** is replaced with **JIS D 3604 : 1998**.

This revision has attained to conformity with the corresponding International Standard, **ISO 2697 : 1974 Road vehicles — Fuel injection nozzles — Size "S"**.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

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Road vehicles—Shapes and dimensions of fuel injection nozzles for diesel engines—Size “S”

Introductions This Standard is the Japanese Industrial Standard prepared based on ISO 2697, *Road vehicles—Fuel injection nozzles—Size “S”* issued in 1974 as the first edition, without modifying the technical content excepting Annex 2 and Annex 3.

Annex 2 specifies the nozzle shank length (dimensions and tolerances of type “A0”) specific to Japan, and Annex 3 specifies the dowel and arrangement method (optional) of fuel feed holes in the assembly of nozzles in nozzle holders.

The parts underlined with dots in this Standard show the matters not specified in the original International Standard except Annex 2 and Annex 3.

1 Scope This Standard specifies the essential dimensional requirements for a certain category (size “S”) of fuel injection nozzles used in diesel engines.

These requirements shall allow the assembly and interchangeability of the nozzles in the corresponding nozzle holders.

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

ISO 2697 : 1974 Road vehicles—Fuel injection nozzles—Size “S”

2 Field of application This Standard is applicable to size “S” injection nozzles, which comprise the hole type, long stem (types “A1” and “A2”) nozzles and the pintle nozzles (type “B”) (refer to Table 1).

Remarks: Type A1 and type B injection nozzles are the preferred types. The “non-preferred” hole type, short stem nozzle type “C” shall be specified in Annex 1. The hole type, long stem nozzle type “A0” shall be specified in Annex 2.

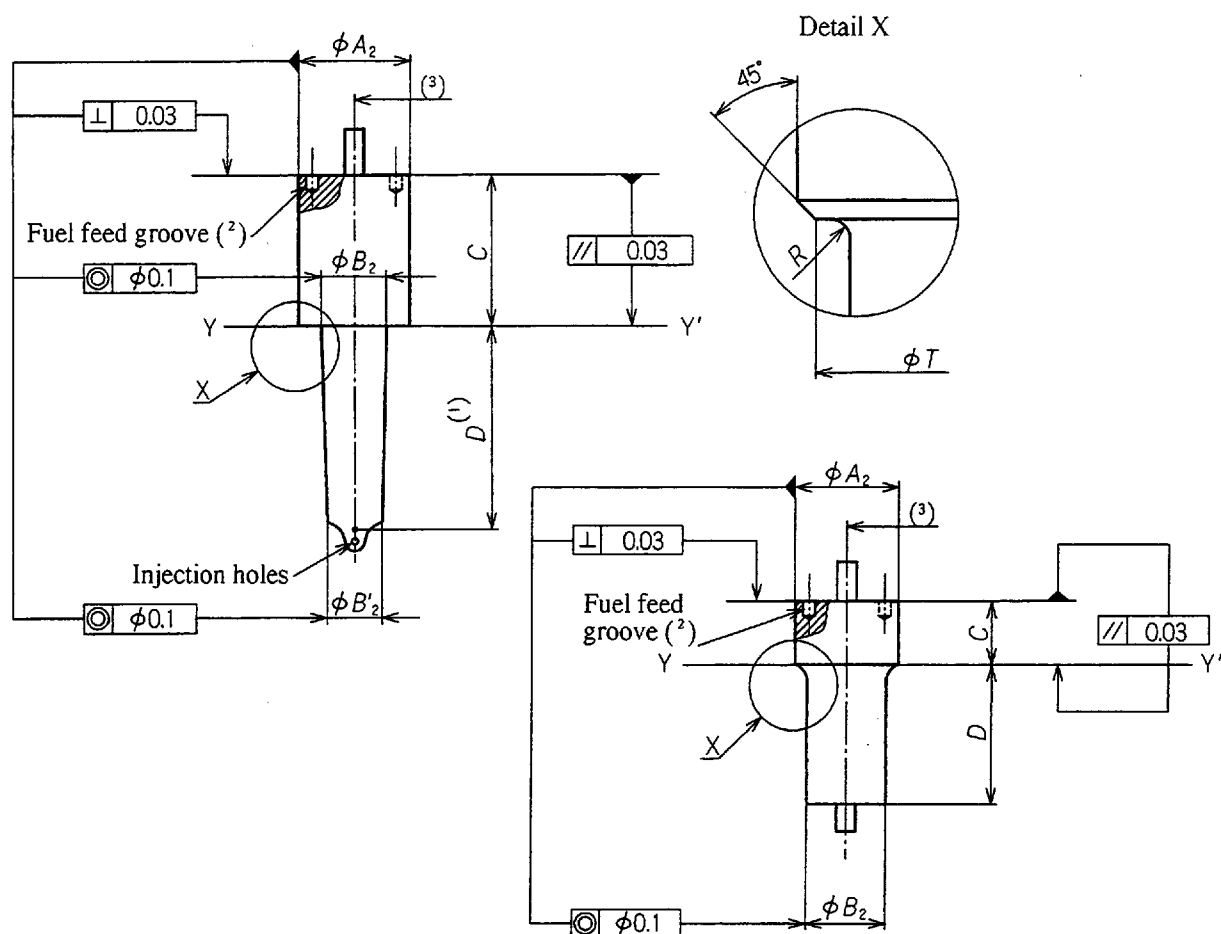
3 Normative reference

JIS D 3631 Road vehicles—Shapes and dimensions of fuel injection nozzle holders for diesel engines—Size “S”

Remarks 1 ISO 2699, Diesel engines—Flange-mounted fuel injectors, size “S”—Types 2, 3, 4, 5 and 6, ISO 7026, Diesel engines—Screw-in injection nozzle holders, types 20, 21, 21.1 and 27 for pintle nozzle size “S”, type “B” and, types 12, 13, 14 and 15 of ISO 7030, Road vehicles—Screw-mounted injection nozzle holders, types 12, 13, 14, 15, 16, 17, 18 and 19, correspond to JIS D 3631, and cited matters therefrom are equivalent to the corresponding items of this Standard.

2 ISO 2699 and ISO 2700 were respectively noted as DIS when the corresponding International Standard ISO 2697 : 1974 was published. After that, they were published as the ISO Standards, but later on ISO 2700 was withdrawn in 1992 while ISO 7026 and ISO 7030 were published to replace ISO 2699.

4 Dimensions and tolerances Dimensions and tolerances of the nozzle shall be as given in Figs. 1 and 2, and Table 1.



Notes (1) This dimension determines the distance between the reference plane YY' and the point of intersection of the injection holes axes with the nozzle axis.

(2) A fuel feed groove is necessary only on nozzles without dowel holes and on nozzles having multiple fuel feed holes.

(3) The reference axis for the nozzle passes through the center of the circle of diameter A_2 .

Fig. 1 Hole type, long stem nozzle
— Type "A1" and "A2"

Fig. 2 Pintle nozzle — Type "B"

Table 1

Unit: mm

Nozzle type	A_2	B_2	B'_2	C	D	T	R
A1 (preferred type)	17h11	9.2 max. ($B_2 \geq B'_2$)	8.9 min.	$25^{0}_{-0.6}$	$26.5^{+0.2}_{-0.3}$	$15.5^{+0.5}_{0}$	0.6 max.
A2					$38.5^{+0.2}_{-0.3}$		
B		14c11	—	$8^{0}_{-0.4}$	19 ± 0.2	$16.3^{+0.2}_{0}$	0.25 max.