■1ND-TV ENGINE

1. General

The major differences between the new 1ND-TV engine and previous 1ND-TV engine are as follows:

System	Major Difference
Engine Proper	The shape of the combustion chamber for the piston has been changed to comply with the EURO 5 regulations.
Fuel System	The number of the injector injection holes has been changed from 6 to 7 to comply with the EURO 5 regulations.
Exhaust System	The cooling core and the shape of the bypass passage for the EGR cooler have been changed to comply with the EURO 5 regulations.
Engine Control System	The ECM software has been changed to comply with the EURO 5 regulations.

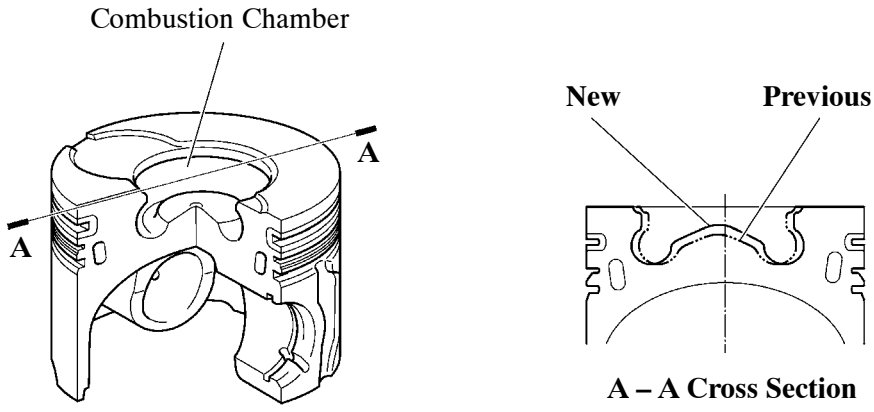
▶ Engine Specification ◀

Model			New	Previous
No. of Cyls. & Arrangement			4-cylinder, In-line	←
Valve Mechanism			8-valve, SOHC, Chain Drive	←
Combustion Chamber			Direct Injection Type	←
Manifolds			Cross-flow	←
Fuel System			Common-rail Type	←
Displacement			1364 cm^3 (83.2 cu. in.)	←
Bore × Stroke			73.0 × 81.5 mm (2.87 × 3.21 in.)	←
Compression Ratio			16.5 : 1	←
Max. Output (EEC)			66 kW @ 3800 rpm	←
Max. Torque (EEC)			205 N·m @ 1800 – 2800 rpm	←
Valve Timing	Intake	Open	4° BTDC	←
		Closed	36° ABDC	←
	Exhaust	Open	44° BBDC	←
		Closed	4° ATDC	←
Injection Order			1 – 3 – 4 – 2	←
Emission Regulation			EURO 5	EURO 4
Fuel Cetane Number			48 or higher	←
Engine Service Mass* (Reference)			124 kg (273.4 lb)	119 kg (262.3 lb)

*: Weight shows the figure with the oil and water fully filled.

2. Piston

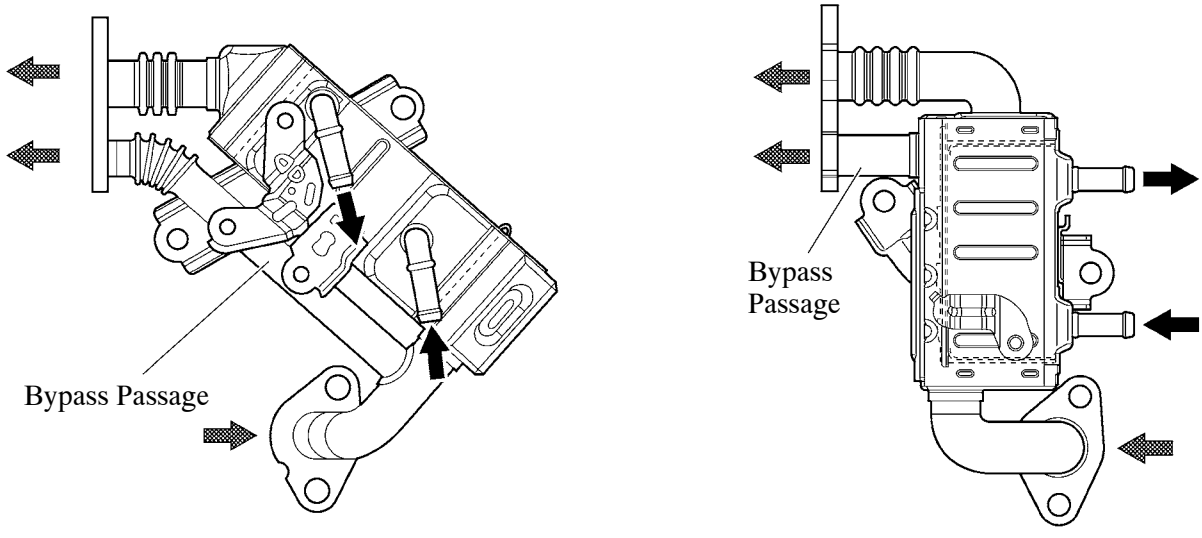
The combustion chamber has been reshaped, improving the combustion efficiency.



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3. EGR Cooler

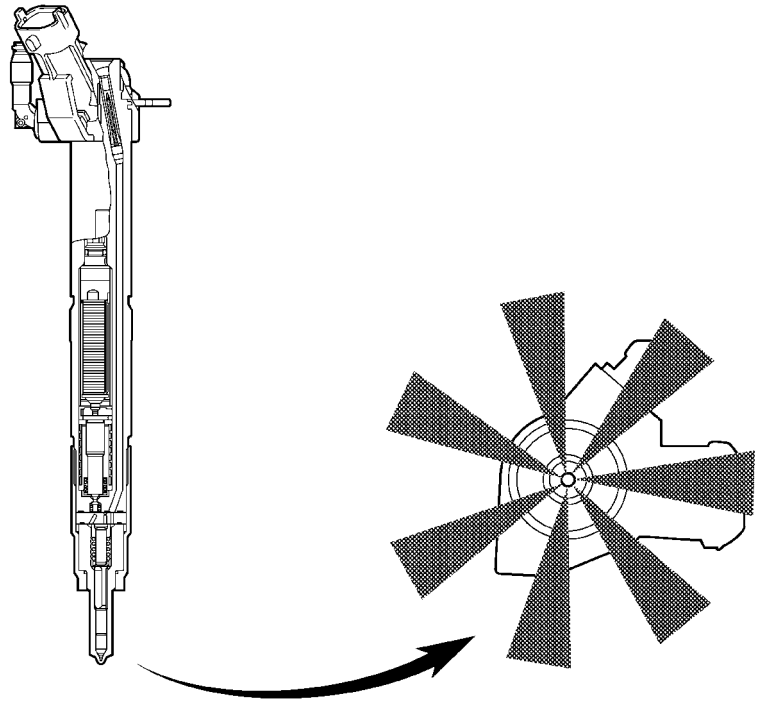
- In order to enhance the cooling performance, the cooling core has been enlarged.
- The EGR bypass passage has been provided separately, reducing cooling loss when exhaust gases are bypassed.



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4. Injector

In addition to an enhancement of fuel atomization by changing the number of injection holes to 7, the fuel spray angle has been optimized, and as a result, the combustion efficiency has been improved.



Injection hole and spray angle

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