5L-E ENGINE

■ DESCRIPTION

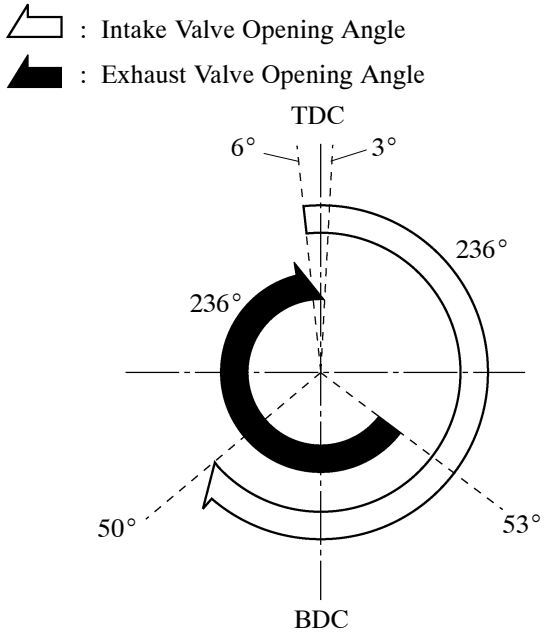
The 5L-E engine is an inline 4-cylinder, 3.0-liter, 8-valve OHC diesel engine. In addition, an EFI (Electronic Fuel Injection) system is used to realize cleaner emissions.

▶ Engine Specifications ◀

Model			New	Previous
Engine Type			5L-E	5L
No. of Cyls. & Arrangement			4-Cylinder, In-Line	←
Valve Mechanism			8-Valve OHC, Belt Drive	←
Combustion Chamber			Swirl Type	←
Manifolds			Cross-Flow	←
Fuel System			Distributor Type (Electronically Controlled)	Distributor Type (Mechanically Controlled)
Displacement cm^3 (cu. in.)			2986 (182.2)	←
Bore × Stroke mm (in.)			99.5 × 96.0 (3.92 × 3.78)	←
Compression Ratio			22.2 : 1	←
Max. Output			68 kW @ 4000 rpm (SAE-NET)	66 kW @ 4000 rpm (EEC)
Max. Torque			197 N·m @ 2200 rpm (SAE-NET)	192 N·m @ 2400 rpm (EEC)
Valve Timing	Intake	Open	6° BTDC	←
		Close	50° ABDC	42° ABDC
	Exhaust	Open	53° BBDC	←
		Close	3° ATDC	←
Firing Order			1 - 3 - 4 - 2	←
Fuel Cetan Number			50 or higher	←
Oil Grade			CF-4 10W-30	←
Emission Regulation			EURO I	—
Engine Service Mass* (Reference) kg (lb)			Approx. 225 (496)	Approx. 213 (470)

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

▶ Valve Timing ◀



■ FEATURES OF 5L-E ENGINE

The 5L-E engine has the adoption of the items listed below.

Item	Outline
Engine Proper	• A 4-layer steel laminate type cylinder head gasket, which excels in sealing performance and heat resistance, is used. • Along with the adoption of the diesel EFI system, a crankshaft position sensor has been provided in the cylinder block, and a protrusion has been provided on the crankshaft to generate a crankshaft position signal.
Intake and Exhaust System	• A step motor type intake restrictor valve is used. • A ball joint is used in the middle section of the front exhaust pipe.
Fuel System	An electronically controlled injection pump is used.
Engine Control	• Diesel EFI system is used. • Intake restrictor control is used. • The no-contact type accelerator pedal position sensor is used. • The engine ECU controls the glow system. • The diagnosis system and the fail-safe control have been provided.