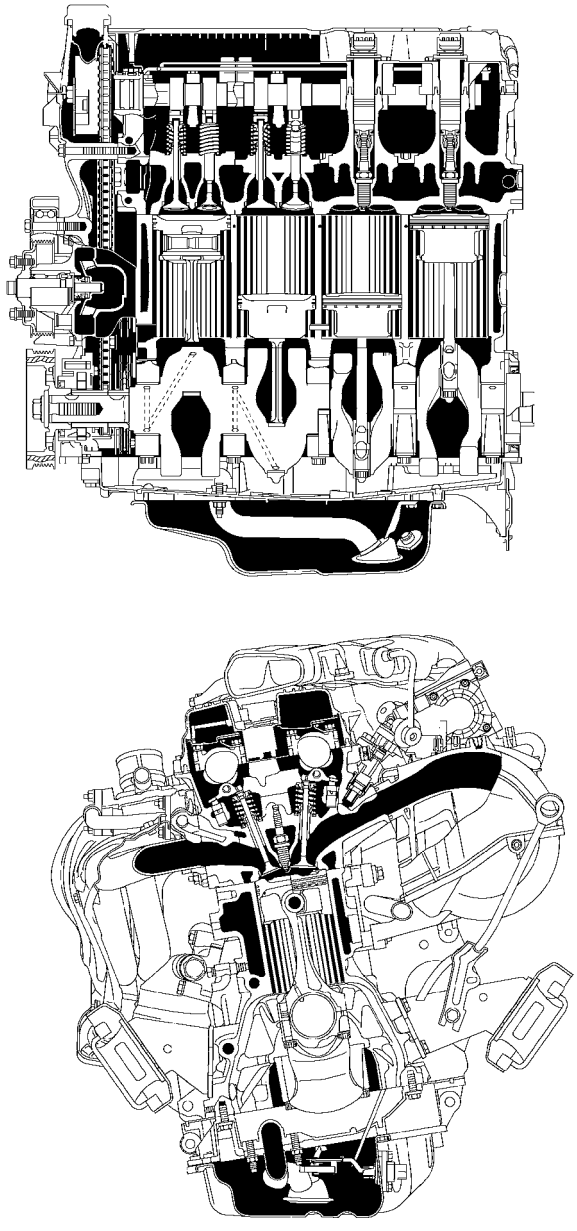
NEW FEATURES

1TR-FE ENGINE

■ DESCRIPTION

- The 1TR-FE engine is an in-line 4-cylinder, 2.0-liter, 16-valve DOHC engine.
- These engines use the DIS (Direct Ignition System), ETCS-i (Electronic Throttle Control System-intelligent), VVT-i (Variable Valve Timing-intelligent) system, and air injection system. They have been developed to achieve high performance, quietness, fuel economy and clean emission.



04Z7EG01D

▶ Engine Specifications ◀

Engine Type			1TR-FE
No. of Cyls. & Arrangement			4-Cylinder, In-line
Valve Mechanism			16-Valve DOHC, Chain Drive (with VVT-i)
Combustion Chamber			Pentroof Type
Manifolds			Cross-flow
Fuel System			EFI
Ignition System			DIS
Displacement cm^3 (cu. in.)			1,998 (121.9)
Bore × Stroke mm (in.)			86.0 × 86.0 (3.39 × 3.39)
Compression Ratio			9.8 : 1
Max. Output [EEC]			98 kW @ 5,600 rpm
Max. Torque [EEC]			182 N·m @ 4,000 rpm
Valve Timing	Intake	Open	40° BTDC – 0° BTDC
		Close	24° ABDC – 64° ABDC
	Exhaust	Open	44° BBDC
		Close	8° ATDC
Firing Order			1 – 3 – 4 – 2
Fuel			Unleaded Gasoline
Research Octane Number			91 or higher
Oil Grade			API SN, RC or ILSAC GF-5
Emission Regulation			EURO V
Engine Service Mass* (Reference) kg (lb)			114.3 (252.0)

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

▶ Valve Timing ◀

