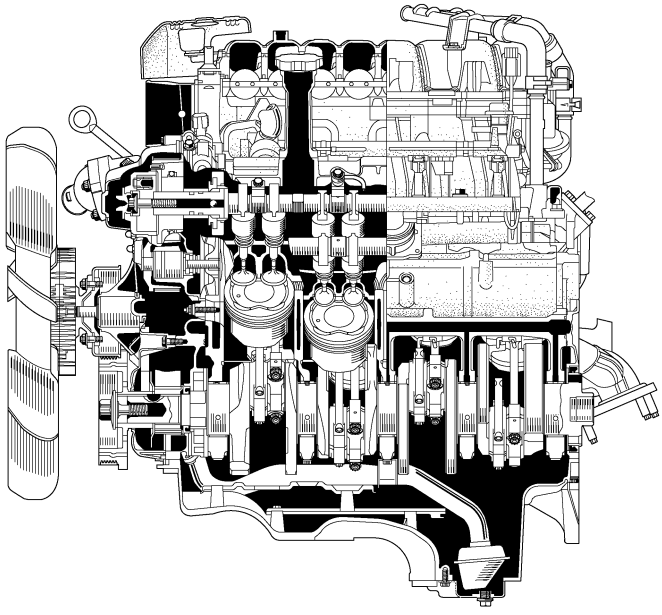
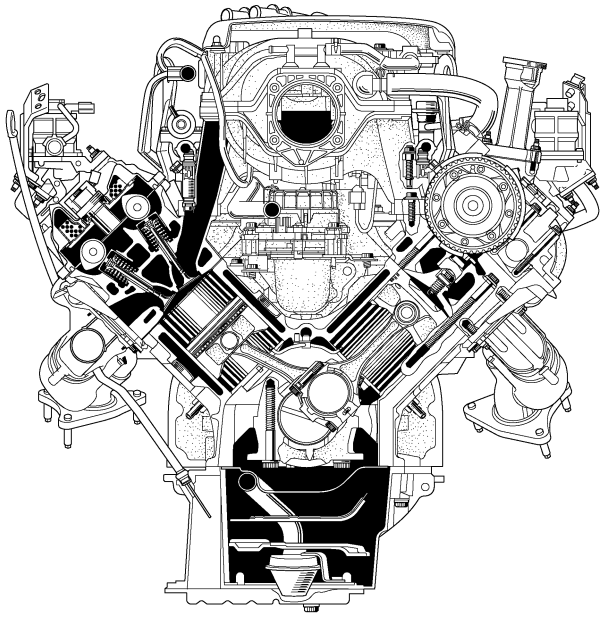
2UZ-FE ENGINE

■DESCRIPTION

The 2UZ-FE engine is a 4.7-liter, 32-valve DOHC V8. This engine uses the VVT-i (Variable Valve Timing-intelligent) system, DIS (Direct Ignition System), ACIS (Acoustic Control Induction System), ETCS-i (Electronic Throttle Control System-intelligent), and AI (Air Injection) system. These control functions achieve stable engine performance, fuel economy, and clean emissions.



04E0EG35Z



04E0EG34Z

▶ Engine Specification ◀

Engine Type			**2UZ-FE**
No. of Cyls. & Arrangement			8-Cylinder, V Type
Valve Mechanism			32-Valve DOHC, Belt & Gear Drive (with VVT-i)
Combustion Chamber			Pentroof Type
Flow of Intake and Exhaust Gasses			Cross-Flow
Fuel System			SFI
Ignition System			DIS
Displacement cm^3 (cu. in.)			4664 (284.5)
Bore × Stroke mm (in.)			94.0 × 84.0 (3.70 × 3.31)
Compression Ratio			10.0 : 1
Max. Output (SAE-NET)*1			202 kW @ 5400 rpm (271 HP @ 5400 rpm)
Max. Torque (SAE-NET)*1			425 N·m @ 3400 rpm (313 ft·lbf @ 3400 rpm)
Oil Capacity	Dry		7.1 liters (7.5 US qts, 6.2 Imp. qts)
	With Oil Filter		6.2 liters (6.6 US qts, 5.5 Imp. qts)
	Without Oil Filter		5.7 liters (6.0 US qts, 5.0 Imp. qts)
Oil Grade			ILSAC
Engine Coolant	Type		TOYOTA Genuine Super Long Life Coolant or the following*2
	Capacity		9.9 liters (10.5 US qts, 8.7 Imp. qts)
Spark Plug	Type	DENSO	SK20R11 (Iridium)
		NGK	IFR6A11 (Iridium)
	Plug Gap mm (in.)		1.0 - 1.1 (0.0394 - 0.0433)
Firing Order			1 - 8 - 4 - 3 - 6 - 5 - 7 - 2
Fuel Octane Rating			87 or higher
Emission Regulation	Tailpipe	California	ULEVII, SFTP
		Except California	Tier2-Bin5, SFTP
	Evaporative		LEVII, ORVR
Engine Service Mass*3 (Reference) kg (lb)			237 (523)

*1: Maximum output and torque rating are determined using the revised SAE J1349 procedure.

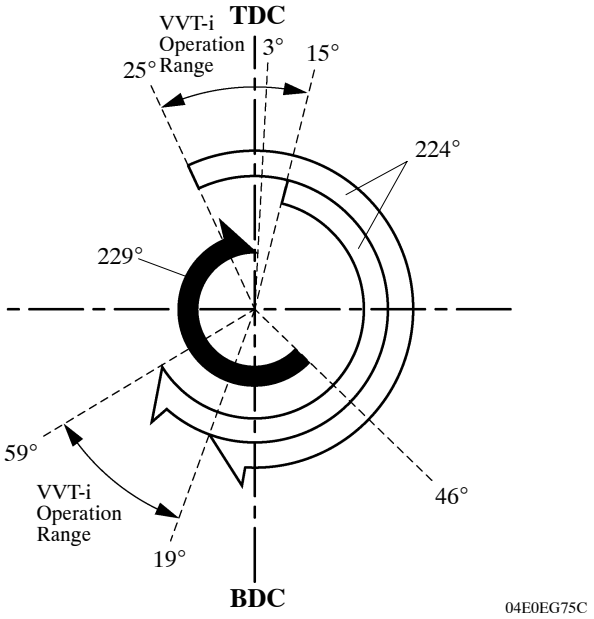
*2: Similar high quality ethylene glycol based non-silicate, non-amine, non-nitrite, and non-borate coolant with long-life hybrid organic acid technology. (Coolant with long-life hybrid organic acid technology consists of a combination of low phosphates and organic acids.)

*3: The figure shown is the weight of the part without coolant and oil.

▶ Valve Timing ◀

: Intake Valve Opening Angle

: Exhaust Valve Opening Angle



Intake	Open	15° ATDC to 25° BTDC
	Close	59° to 19° ABDC
Exhaust	Open	46° BBDC
	Close	3° ATDC

EG

▶ Performance Curve ◀

