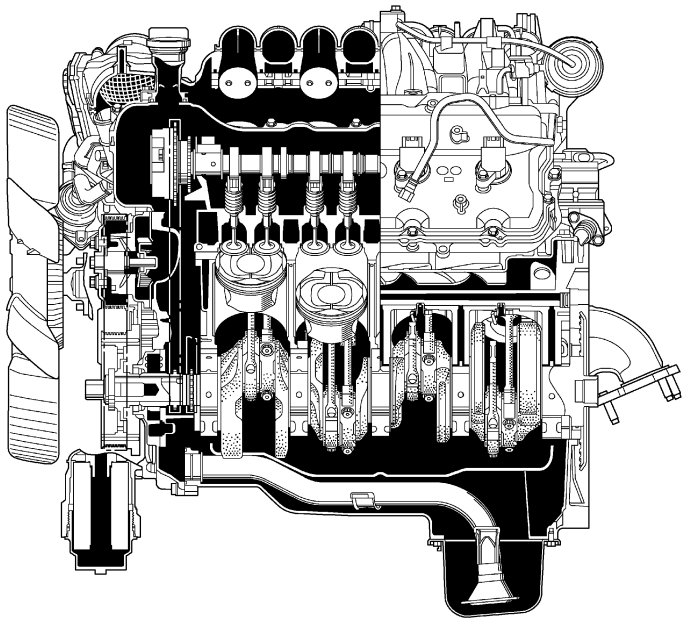
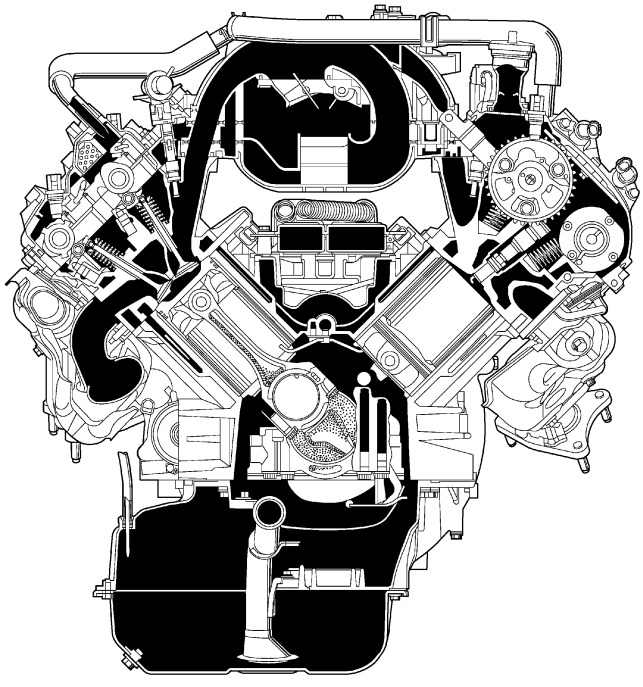
3UR-FE ENGINE

■ DESCRIPTION

The 3UR-FE engine is a 5.7-liter, 32-valve DOHC V8. This engine uses the Dual 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 improved engine performance, fuel economy, and clean emissions.



04E1EG01Z



04E1EG02Z

▶ Engine Specification ◀

Engine Type				**3UR-FE**
No. of Cyls. & Arrangement				8-Cylinder, V Type
Valve Mechanism				32-Valve DOHC, Chain Drive (with Dual 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.)				5663 (345.6)
Bore × Stroke mm (in.)				94.0 × 102.0 (3.70 × 4.02)
Compression Ratio				10.2 : 1
Max. Output (SAE-NET)*1				284 kW @ 5600 rpm (381 HP @ 5600 rpm)
Max. Torque (SAE-NET)*1				544 N·m @ 3600 rpm (401 ft·lbf @ 3600 rpm)
Oil Capacity		With Oil Filter		7.0 L (7.4 US qts, 6.2 Imp. qts)
		Without Oil Filter		6.6 L (7.0 US qts, 5.8 Imp. qts)
Oil Grade				ILSAC
Engine Coolant	Type			TOYOTA Genuine Super Long Life Coolant or the following*2
	Capacity	With Oil Cooler		13.0 L (13.7 US qts, 11.4 Imp. qts)
		Without Oil Cooler		12.1 L (12.8 US qts, 10.6 Imp. qts)
Spark Plug	Type		DENSO	SK20HR11 (Iridium)
	Plug Gap mm (in.)			1.0 - 1.1 (0.0394 - 0.0433)
Firing Order				1 - 8 - 7 - 3 - 6 - 5 - 4 - 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)				219.3 (483.5)

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

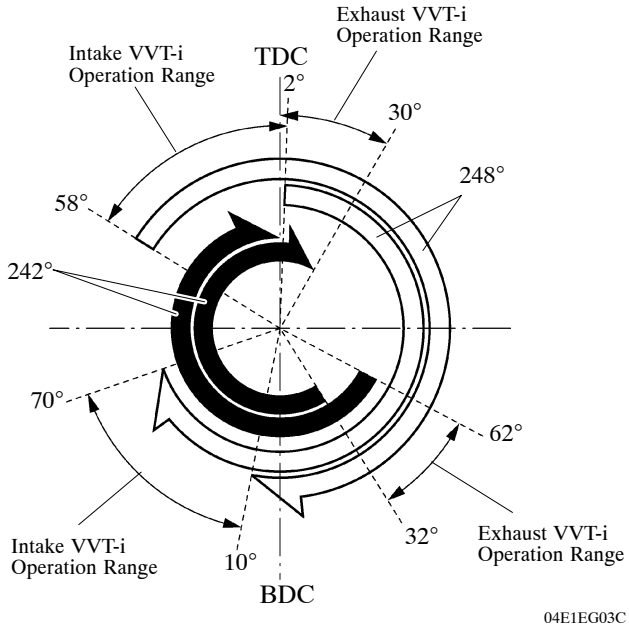
*2: Similar high quality ethylene glycol based non-silicate, non-amine, non-nitrite, and non-borate coolant with long-life hybrid organic acid technology. (Coolant with long-life hybrid organic acid technology consists of a combination of low phosphates and organic acids.)

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

▶ Valve Timing ◀

: Intake Valve Opening Angle

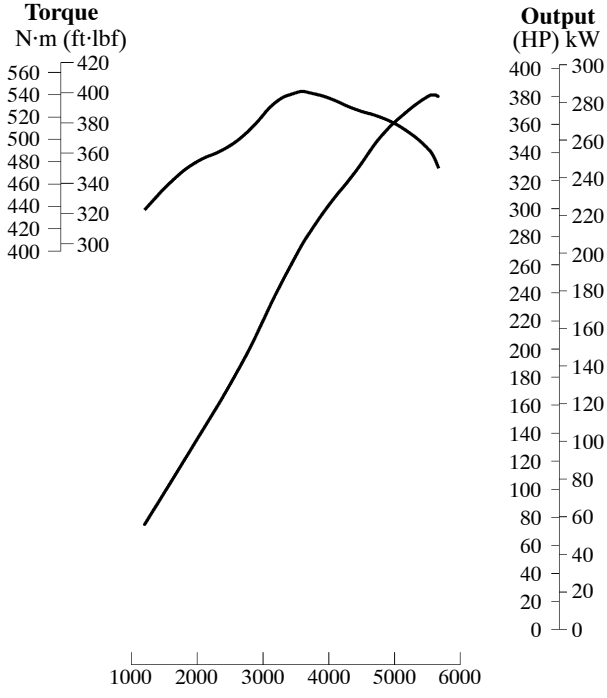
: Exhaust Valve Opening Angle



04E1EG03C

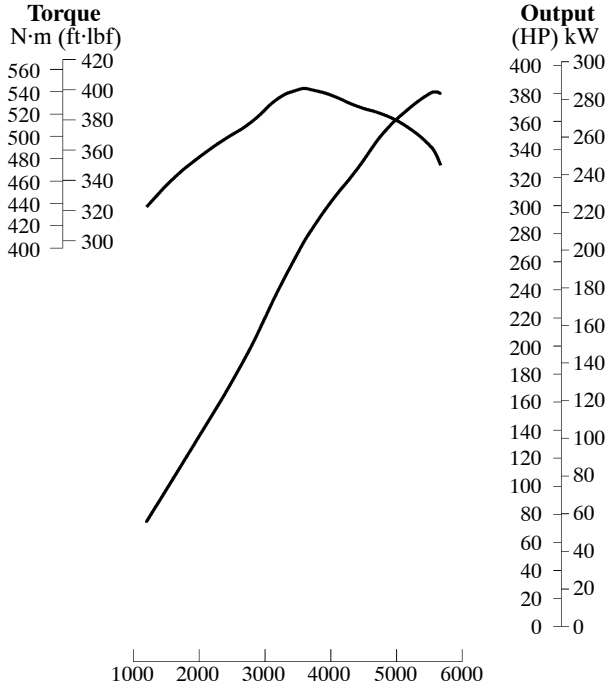
Intake	Open	2° ATDC to 58° BTDC
	Close	70° to 10° ABDC
Exhaust	Open	62° to 32° BBDC
	Close	0° to 30° ATDC

▶ Performance Curve ◀



Double Cab with Long Deck

04E1EG04C



Models except Double Cab with Long Deck

04E1EG05C