■ENGINE SPECIFICATION

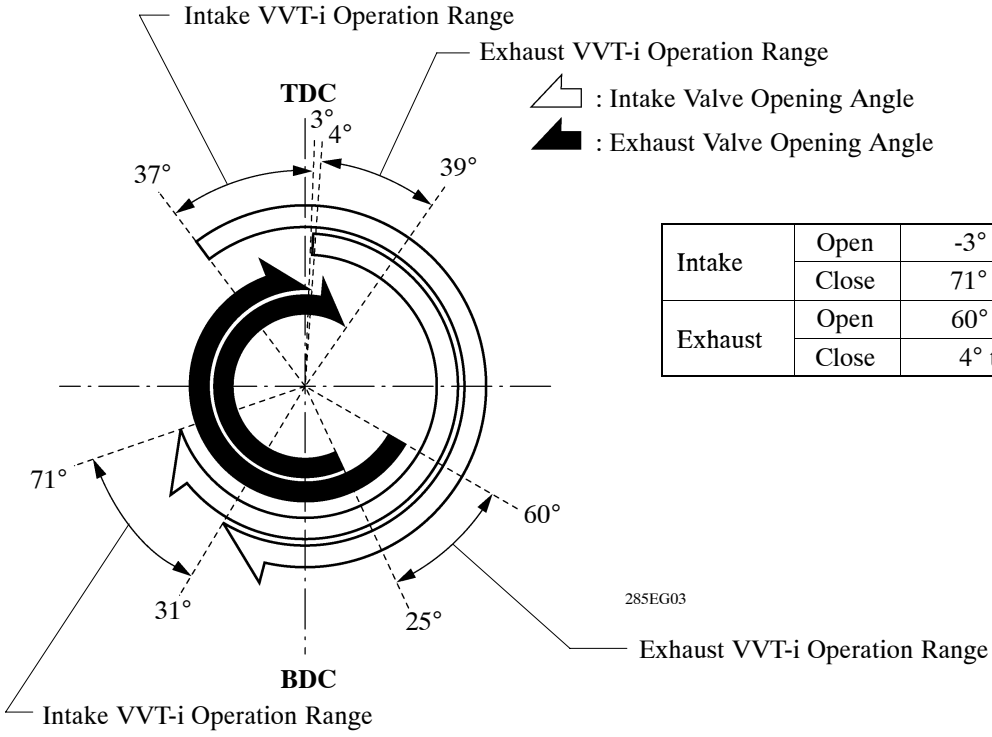
Engine Type				2GR-FE
No. of Cyls. & Arrangement				6-Cylinder, V Type
Valve Mechanism				24-Valve DOHC, Chain Drive (With Dual VVT-i)
Combustion Chamber				Pentroof Type
Flow of Intake and Exhaust Gasses				Cross-Flow
Fuel System				SFI
Ignition System				DIS
Displacement cm^3 (cu. in.)				3456 (210.9)
Bore × Stroke mm (in.)				94.0 × 83.0 (3.70 × 3.27)
Compression Ratio				10.8 : 1
Max. Output (SAE-NET)*1				201 kW @ 6200 rpm (270 HP @ 6200 rpm)
Max. Torque (SAE-NET)*1				336 N·m @ 4700 rpm (248 ft·lbf @ 4700 rpm)
Oil Capacity	Standard (Without Oil Cooler)		Dry	6.8 liters (7.2 US qts, 6.0 Imp. qts)
			With Oil Filter	6.1 liters (6.4 US qts, 5.4 Imp. qts)
			Without Oil Filter	5.7 liters (6.0 US qts, 5.0 Imp. qts)
	Towing Package (With Oil Cooler)		Dry	7.1 liters (7.5 US qts, 6.2 Imp. qts)
			With Oil Filter	6.1 liters (6.4 US qts, 5.4 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	Standard	With Front Heater	8.8 liters (9.3 US qts, 7.7 Imp. qts)
			With Front and Rear Heater	11.0 liters (11.6 US qts, 9.7 Imp. qts)
		Towing Package	With Front Heater	9.5 liters (10.0 US qts, 8.4 Imp. qts)
			With Front and Rear Heater	11.7 liters (12.4 US qts, 10.3 mp. qts)
Spark Plug	Type		DENSO Made	FK20HR11 (Iridium)
	Plug Gap mm (in.)			1.0 - 1.1 (0.0394 - 0.0433)
Firing Order				1 - 2 - 3 - 4 - 5 - 6
Fuel Octane Rating				87 or higher
Emission Regulation	Tailpipe	California		LEVII-ULEV, SFTP
		Except California		Tier2-Bin5, SFTP
	Evaporative			LEVII, ORVR
Engine Service Mass*3 (Reference)				163 kg (359 lb)

*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	Open	-3° to 37° BTDC
	Close	71° to 31° ABDC
Exhaust	Open	60° to 25° BBDC
	Close	4° to 39° ATDC

▶ Performance Curve ◀

