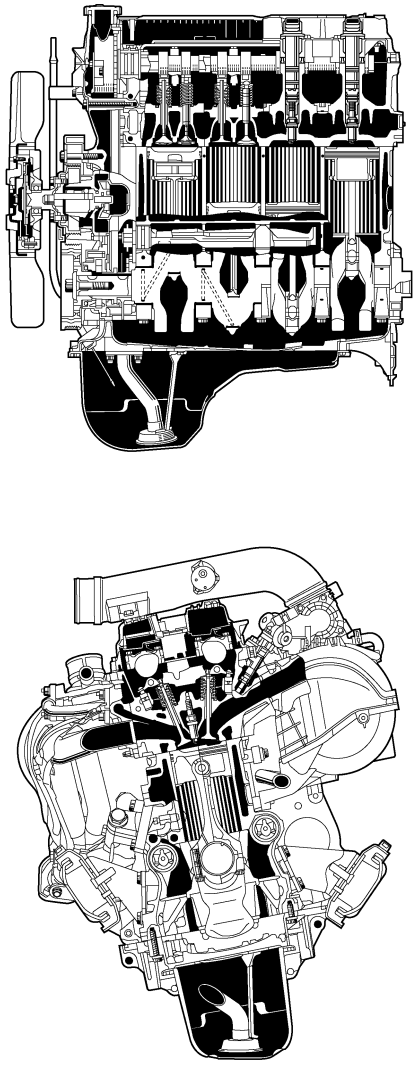
ENGINE

2TR-FE ENGINE

■ DESCRIPTION

- The 2TR-FE engine is an in-line 4-cylinder, 2.7-liter, 16-valve DOHC engine.
- The ETCS-i (Electronic Throttle Control System-intelligent), VVT-i (Variable Valve Timing-intelligent) system, DIS (Direct Ignition System) and air injection system* are used on this engine to realize high performance and fuel economy, and reduce exhaust emission.
- Both an unleaded gasoline engine and a leaded gasoline engine are available for TGN51L-NKMSKN. Only the unleaded gasoline engine is provided on other models.

*: Models compliant with EURO III and BR-LEV emission regulations



280EG17

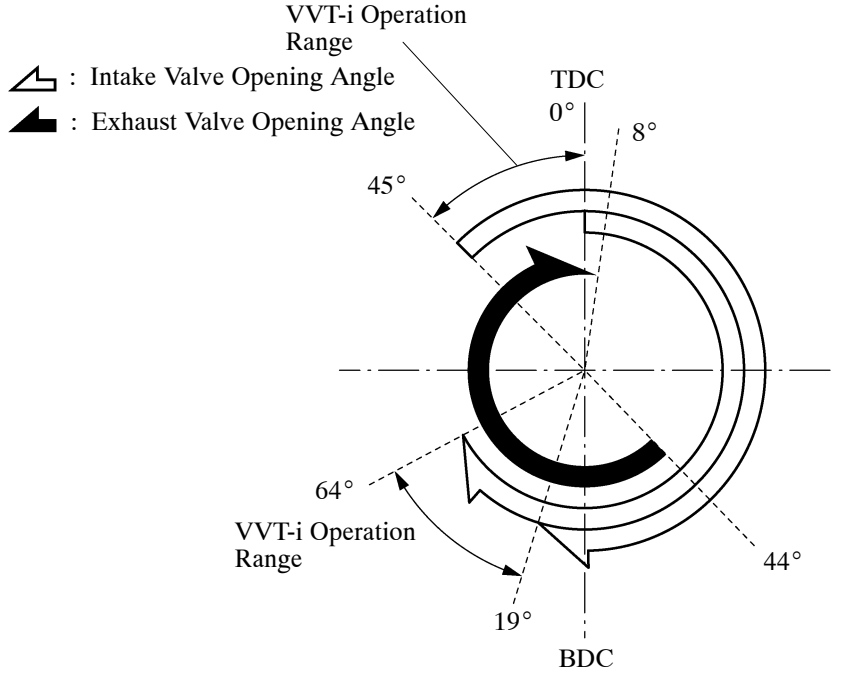
▶ Engine Specifications ◀

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.)	2694 (164.4)
Bore × Stroke		mm (in.)	95.0 × 95.0 (3.74 × 3.74)
Compression Ratio			9.6 : 1
Max. Output		[SAE-NET]	116 Kw @ 5200 rpm*2 118 Kw @ 5200 rpm*3
Max. Torque		[SAE-NET]	240 N·m @ 3800 rpm*2 241 N·m @ 3800 rpm*3
Valve Timing	Intake	Open	45° BTDC - 0° BTDC
		Close	19° ABDC - 64° ABDC
	Exhaust	Open	44° BBDC
		Close	8° ATDC
Firing Order			1-3-4-2
Fuel			Unleaded Gasoline, Leaded Gasoline*4
Research Octane Number			91 or Higher
Emission Regulation			EURO III*5
			EURO II*6
			—*4
			BR-LEV*2
Engine Service Mass*1 (Reference)			157 kg (346 lb)

*1: Weight shows the figure with oil and water fully filled.
*2: Models for Brazil
*3: Except models for Brazil
*4: Models with leaded gasoline engine
*5: Models for Thailand and Central and South America
*6: Models for South Africa, Indonesia, Philippines, G.C.C. Countries, Malaysia and Vietnam

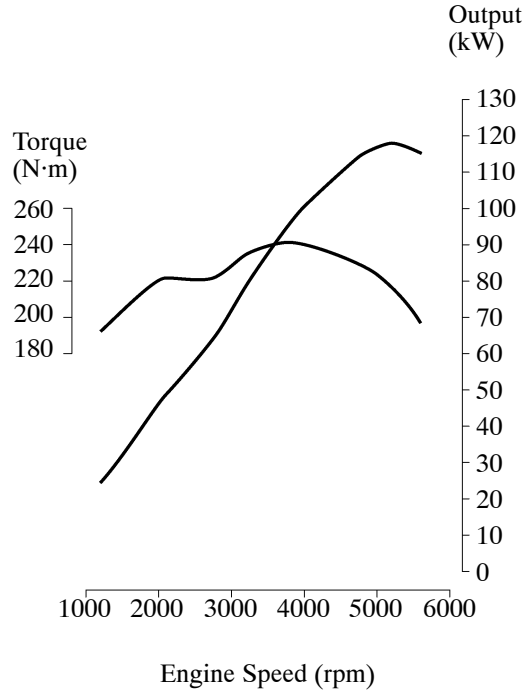
EG

▶ Valve Timing ◀



271EG04

▶ Performance Curve ◀



280MO28