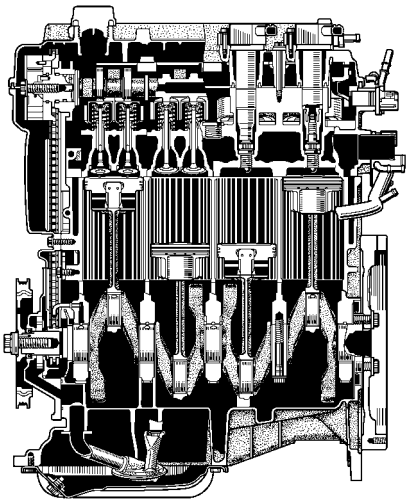
ENGINE

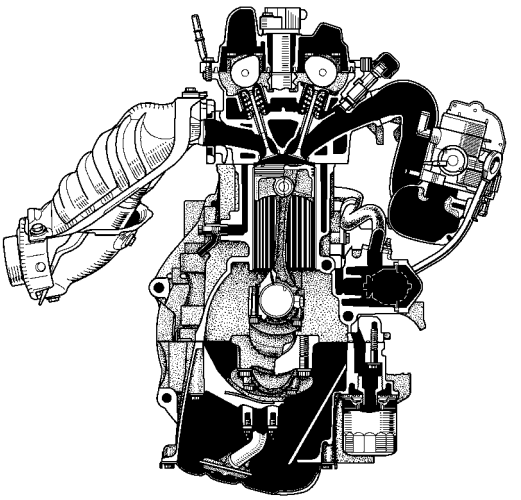
1NZ-FXE ENGINE

■DESCRIPTION

- As on the previous Prius, the new Prius continues to use the 1NZ-FXE engine that has been developed for the hybrid system application.
- This engine uses a high-expansion ratio Atkinson cycle, VVT-i (Variable Valve Timing-intelligent) system and ETCS-i (Electric Throttle Control System-intelligent) to realize high performance, quietness, fuel economy and clean emissions.
- In this engine, various areas of the pistons have been changed to reduce friction and improve combustion efficiency, in order to realize further improvements in fuel economy and low exhaust emissions.
- As on the previous model, this engine for Europe complies with European STEP IV regulations.
- For the main changes made to this engine from the new Prius, see page EG-4.



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255EG02

▶ Engine Specifications ◀

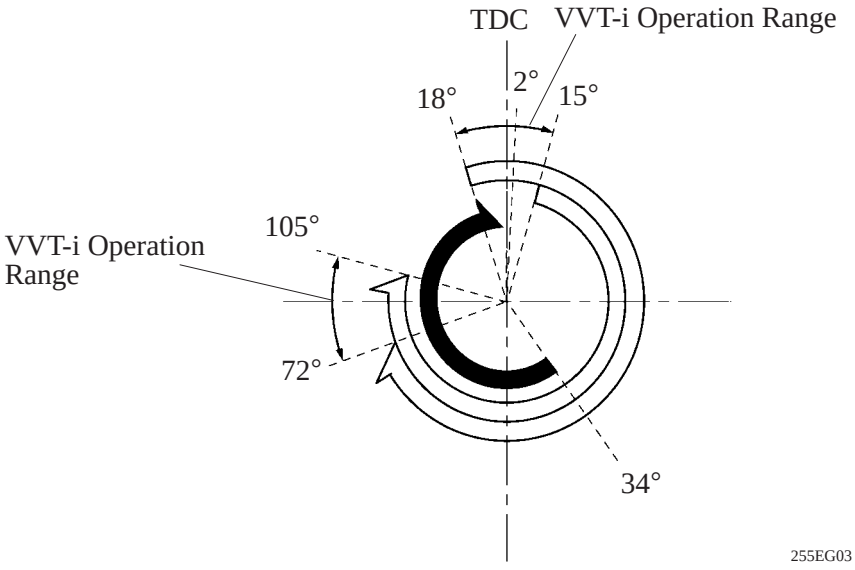
Model			New Prius	Previous Prius
Engine Type			1NZ-FXE	←
No. of Cyls. & Arrangement			4-Cylinder, In-line	←
Valve Mechanism			16-Valve DOHC, Chain Drive (with VVT-i)	←
Combustion Chamber			Pentroof Type	←
Manifolds			Cross-Flow	←
Fuel System			SFI	←
Displacement		cm^3 (cu. in.)	1497 (91.3)	←
Bore × Stroke		mm (in.)	75.0 × 84.7 (2.95 × 3.33)	←
Compression Ratio			13.0 : 1	←
Max. Output		(SAE-NET)	57 kw @ 5000 rpm	52 kw @ 4500 rpm
Max. Torque		(SAE-NET)	115 N·m @ 4000 rpm	115 N·m @ 4200 rpm
Valve Timing	Intake	Open	18° ~ –15° BTDC	18° ~ –25° BTDC
		Close	72° ~ 105° ABDC	72° ~ 115° ABDC
	Exhaust	Open	34° BBDC	←
		Close	2° ATDC	←
Firing Order			1-3-4-2	←
Research Octane Number		Europe	95 or higher	95 or higher
		Australia	91 or higher	
Engine Service Mass* (Reference)		kg (lb)	86.1 (189.8)	86.6 (190.9)
Oil Grade			API SJ, SL, EC or ILSAC	API SH, SJ, EC or ILSAC
Tailpipe Emission Regulation			European STEP IV	←
Evaporative Emission Regulation			European STEP IV	←

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

▶ Valve Timing ◀

: Intake Valve Opening Angle

: Exhaust Valve Opening Angle



EG