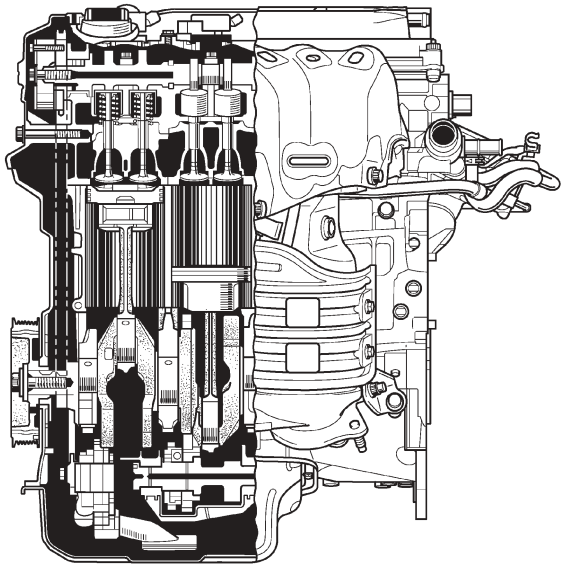
ENGINE

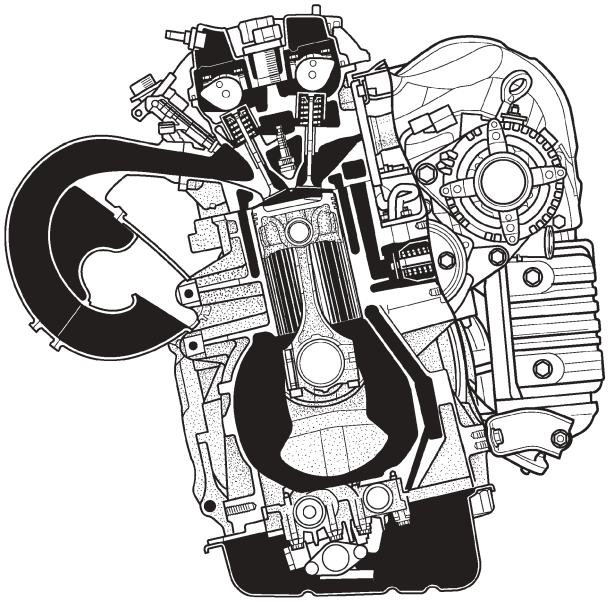
1AZ-FE AND 2AZ-FE ENGINES

■ DESCRIPTION

The 1AZ-FE and 2AZ-FE engines on the new Camry are inline 4-cylinder, 2.0/2.4-liter, 16-valve DOHC engines. These engines use the VVT-i (Variable Valve Timing-intelligent) system, DIS (Direct Ignition System), ETCS-i (Electronic Throttle Control System-intelligent).
These control functions achieve improved engine performance, fuel economy, and reduced exhaust emissions.



02KEG01TE



02KEG02TE

2AZ-FE Engine

▶ Engine Specifications ◀

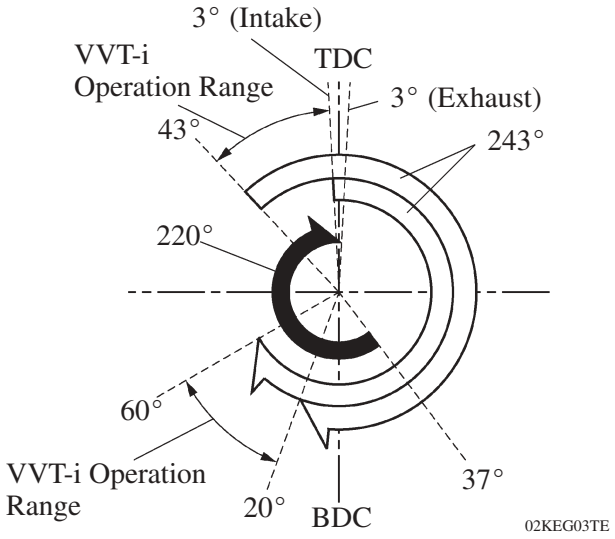
Engine Type			1AZ-FE	2AZ-FE	
				Models except for Australia and G.C.C. Countries	Models for Australia and G.C.C. Countries
No. of Cyls. & Arrangement			4-Cylinder, In-line	←	←
Valve Mechanism			16-Valve DOHC, Chain Drive (with VVT-i)	←	←
Combustion Chamber			Pentroof Type	←	←
Manifolds			Cross-Flow	←	←
Fuel System			EFI	←	←
Ignition System			DIS	←	←
Displacement cm^3 (cu. in.)			1998 (121.9)	2362 (144.2)	←
Bore x Stroke mm (in.)			86.0 x 86.0 (3.39 x 3.39)	88.5 x 96.0 (3.48 x 3.78)	←
Compression Ratio			9.8 : 1	←	9.6 : 1
Max. Output [EEC]			108 kW @ 6000 rpm	123 kW @ 6000 rpm	117 kW @ 5700 rpm
Max. Torque [EEC]			190 N·m @ 4000 rpm	224 N·m @ 4000 rpm	218 N·m @ 4000 rpm
Valve Timing	Intake	Open	3° ~ 43° BTDC	←	←
		Close	60° ~ 20° ABDC	65° ~ 25° ABDC	60° ~ 20° ABDC
	Exhaust	Open	37° BBDC	45° BBDC	←
		Close	3° ATDC	←	←
Firing Order			1 – 3 – 4 – 2	←	←
Oil Grade			API grade SL "Energy-Conserving", SM "Energy-Conserving" or ILSAC	←	←
Research Octane Number			95 or higher	91 or higher	←
Emission Regulation			Tier 1*2	EURO II*5	EURO II*6
			EURO II*3		
			EURO III*4	EURO III*4	EURO IV*7
Engine Service Mass*1 (Reference) kg (lb)			130 (287)	←	131 (289)

*1: Weight shows the figure with the oil and engine coolant fully filled.
*2: Taiwanese Models
*3: Malaysian, Chinese and Thai (only for Singapore/Brunei package models) models
*4: Thai and Chinese models (only for Beijing package models)
*5: Vietnamese, Philippine, Thai (only for Singapore/Brunei package models), Indonesian, Malaysian and Chinese models
*6: Australian (only for Papua New Guinea/Fiji package models) and G.C.C. countries (including Iran package models) models
*7: Australian (including New Zealand package models) models

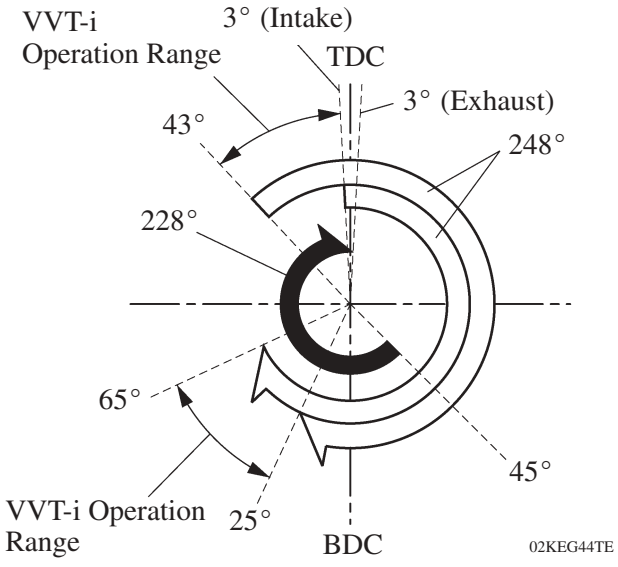
▶ Valve Timing ◀

: Intake Valve Opening Angle

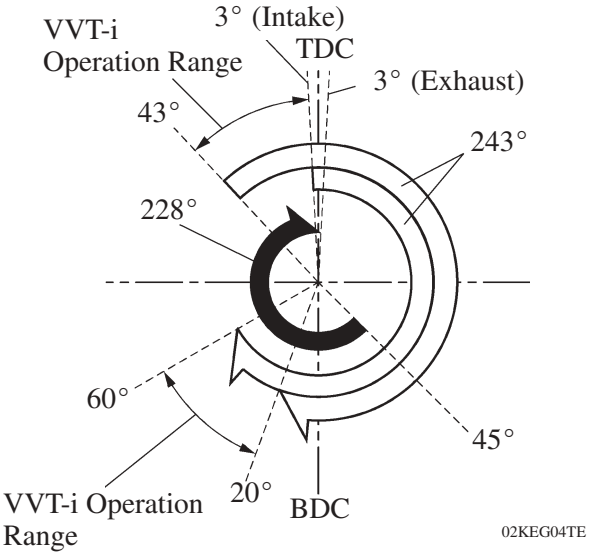
: Exhaust Valve Opening Angle



1AZ-FE Engine



2AZ-FE Engine
(Models except for Australia and G.C.C. Countries)



2AZ-FE Engine
(Models for Australia and G.C.C. Countries)