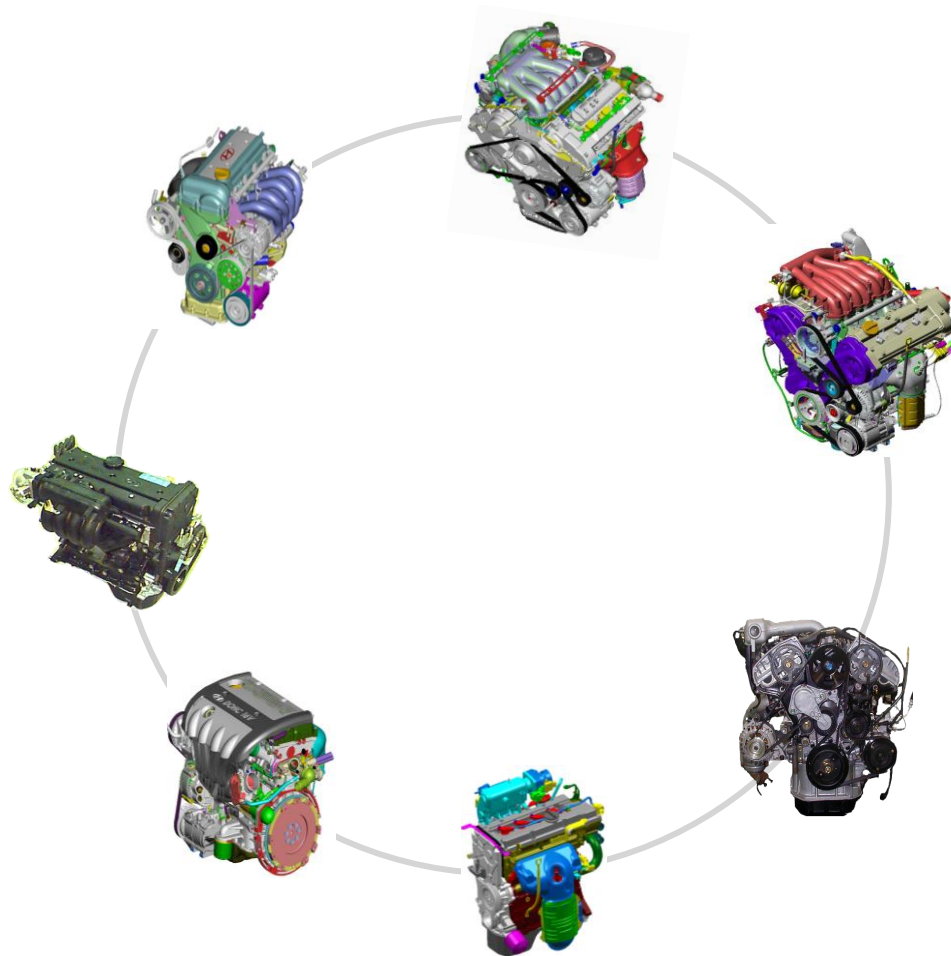


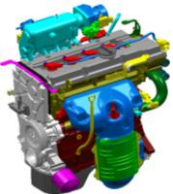





Gasoline Engine Diagnosis

Gasoline Engine Line-up



Engine Line-up

Application in 2008


Engine	Image	Application	Engine	Image	Application
α(Alpha)-Engine (1,399/1,599cc)		Rio (JB), Spectra (LD)	μ(Mu)-Engine (2,656cc)		Carnival (VQ) Magentis (MG) Carens (UN)
γ(Gamma)-Engine (1,582cc)		Spectra (LD) Cee'd (ED) Forte (TD)	λ (Lambda)-Engine (3,342/3,778cc)		Sorento FL Mohave (HM) Carnival (VQ) Opirus FL
β(Beta)-Engine (1,975cc)		Spectra (LD) Cee'd (ED) Sportage (KM) Soul (AM)			
θ(Theta)-Engine (1,798/1,998/2,359cc)		Magentis (MG) Carens (UN)			

Alpha engine

Engine	α- 1.4 DOHC	α-1.6 CVVT
Displacement	1,399 cc	1,599cc
Power/Torque	95 PS/12.7 kg·m	112 PS/14.8 kg·m
Bore x Stroke	75.5×78.1	75 x 84.5
Cylinder block	G4EE	G4ED
Compression ratio	10.0:1	←
valve	HLA	HLA
Firing order	1-3-4-2	←
Ignition timing	BTDC 5° ± 5°	←
Idle speed	720 ± 100 RPM	720 ± 100 RPM
Compression pressure	15kg/cm ² (14kg/cm ²)	15kg/cm ² (14kg/cm ²)
EMS	Bosch	←
CKP	Magnetic inductive type	←
CMP	Hall IC type	←
Oxygen sensor	Zirconia	←
Intake air detection	MAP Sensor	Hot Film Air Flow Sensor
Others	-	CVVT

Engine Line-up

Gamma engine

Items	Specification	Technical features
Appearance		<ul style="list-style-type: none"> - Reversed intake & exhaust - Offset crankshaft (10mm) - Ladder frame - Timing chain - CVVT system - Shimless MLA - Plastic intake manifold - Stainless exhaust manifold - Bosch EMS
Displacement	1,582 cc	
Power/Torque	121 PS/15.6 kg·m	
Bore x Stroke	77×85.44	
Compression ratio	10.0:1	
valve	MLA	
Idle speed	620 ± 100 RPM	
EMS	Bosch	
CKP	Magnetic inductive type	
CMP	Hall IC type	
Oxygen sensor	Zirconia	
Intake air detection	MAP Sensor	
Others	CVVT	