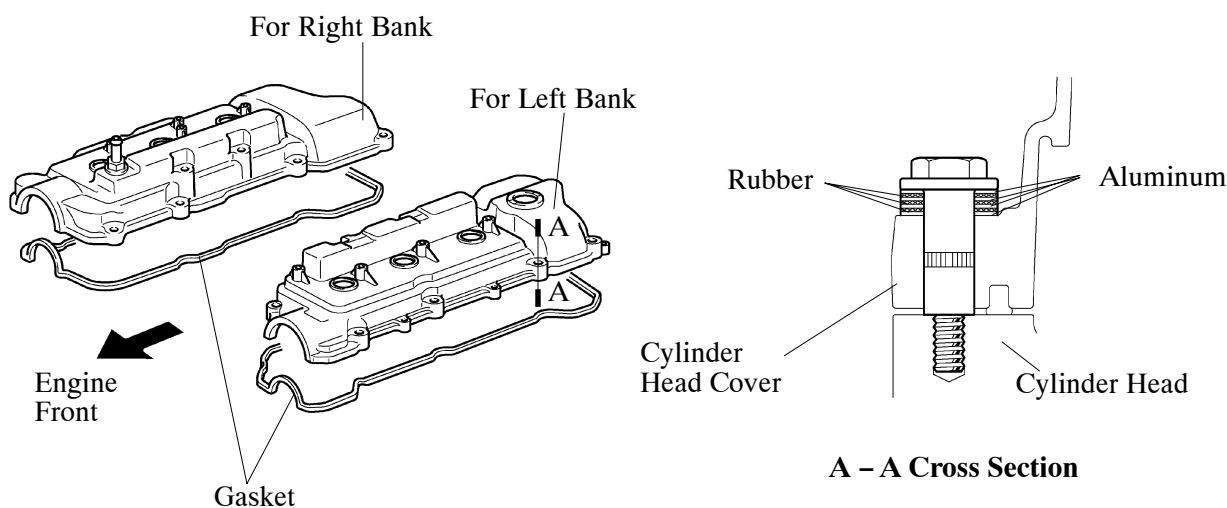


ENGINE PROPER

1. Cylinder Head Cover

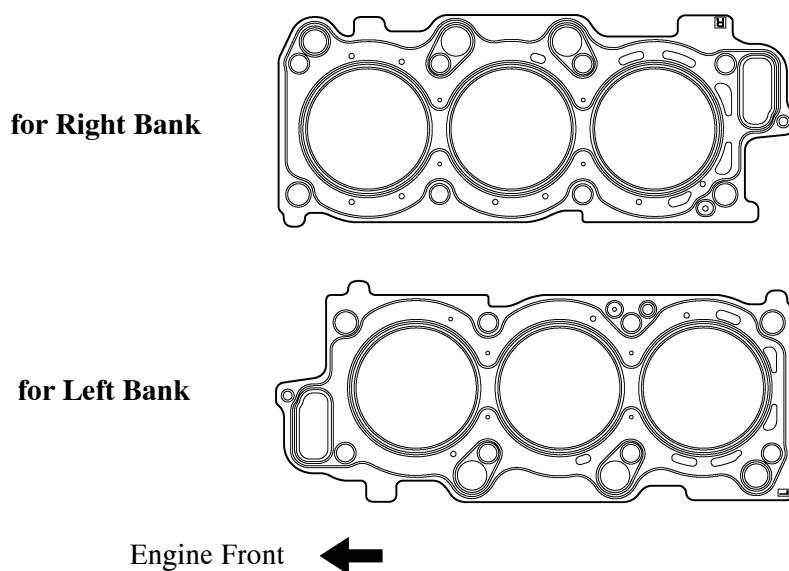
- Lightweight yet high-strength aluminum diecast cylinder head covers are used.
- An aluminum washer made of vibration-damping laminated aluminum sheet is used on the evenly spaced shoulder bolts which fasten the cylinder head covers.



209EG101

2. Cylinder Head Gasket

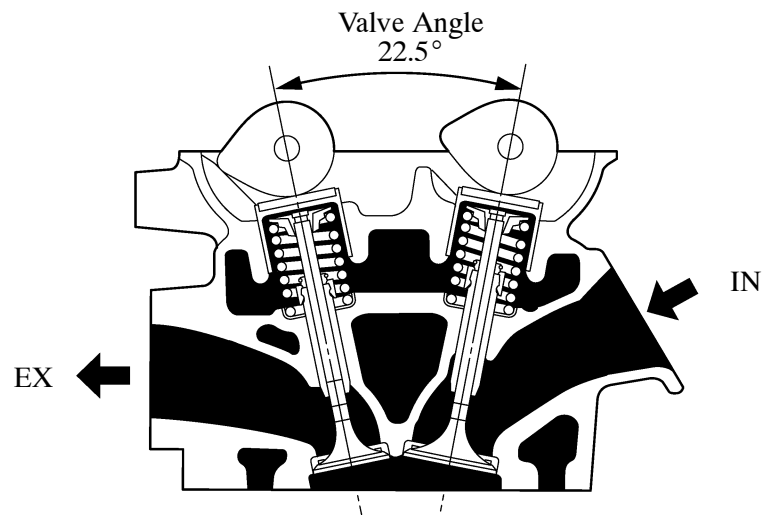
A metal type cylinder head gasket which offers superior pressure resistance and sealing performance is used.



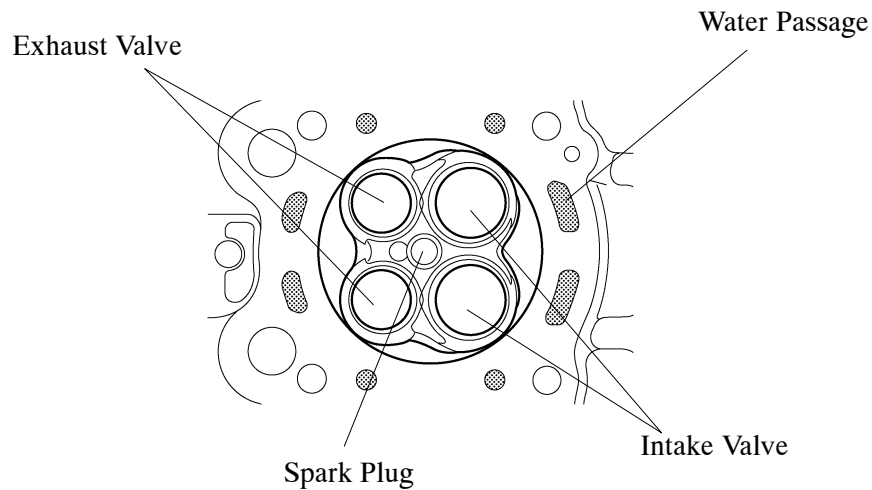
241EG05

3. Cylinder Head

- The cylinder head, which is made of aluminum, uses a pentroof-type combustion chamber. The spark plug has been located in the center of the combustion chamber in order to improve the engine's antiknocking performance.
- The angle of the intake and exhaust valves is narrowed and set at 22.5° to permit a compact cylinder head.
- Upright, small-diameter intake ports are used to improve the torque at low-to-medium speeds.
- In order to reduce intake and exhaust air resistance, the cross section of the protrusion of the valve guide into the intake port has been reduced by decreasing the valve stem diameter and the valve guide outer diameter.
- Plastic region tightening bolts are used for the cylinder head bolts for good axial tension.



187EG06

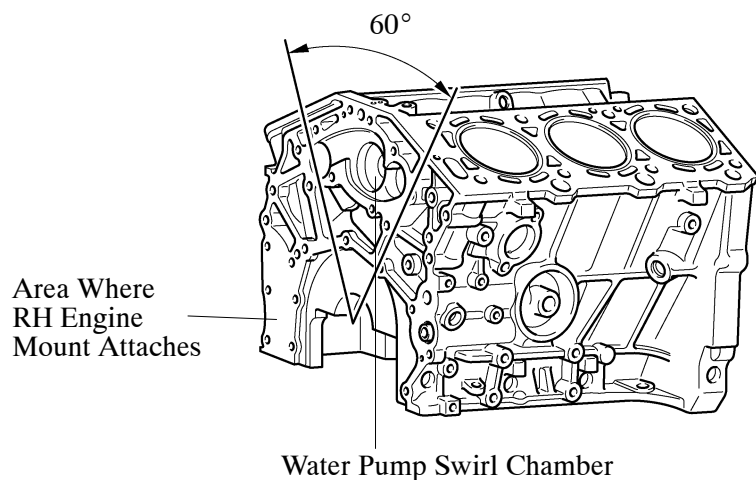


View of Back Side

277EG04

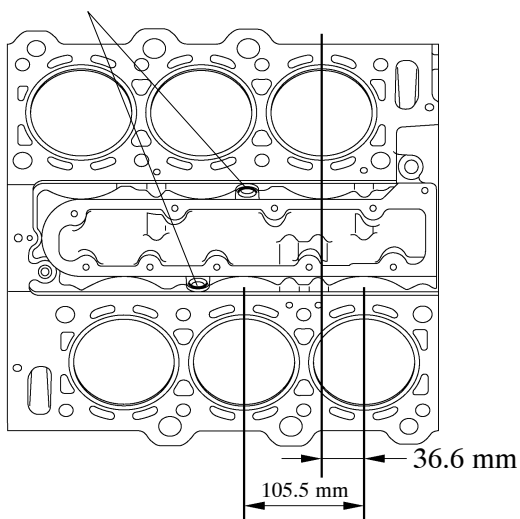
4. Cylinder Block

- The cylinder block has a bank angle of 60° , a bank offset of 36.6 mm (1.44 in.) and a bore pitch of 105.5 mm (4.15 in.), resulting in a compact block.
- Lightweight aluminum alloy is used for the cylinder block.
- A thin cast-iron liner is press-fit inside the cylinder to ensure an added reliability. This liner is thin, so that boring is not possible.
- A water pump swirl chamber and an inlet passage to the pump are provided in the V-bank to help make the engine compact.
- Knock sensor bosses are provided at 2 locations in V-bank.



198EG38

Knock Sensor Bosses



View of Top Side

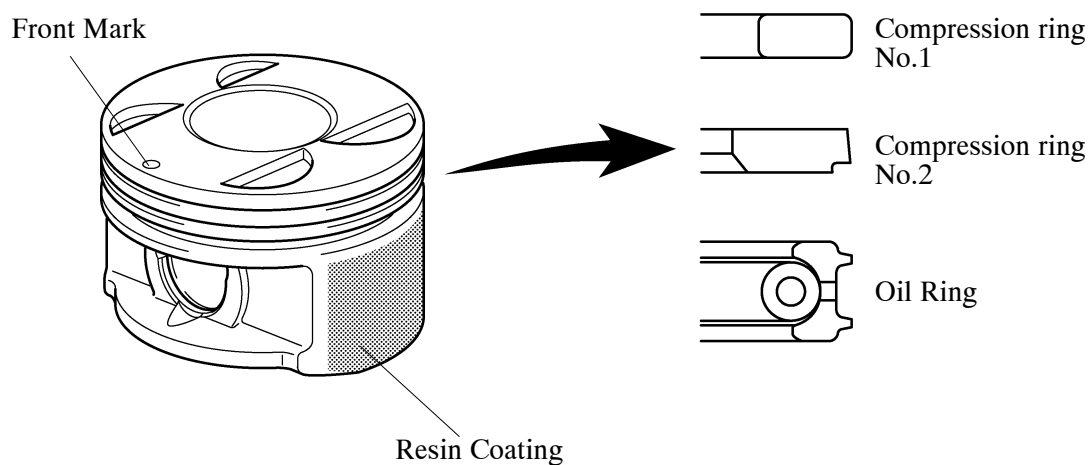
208EG63

5. Piston and Piston Ring

- The piston is made of aluminum alloy and skirt area is made compact and lightweight.
- The piston skirt has been coated with resin to reduce the friction loss.
- Full floating type piston pins are used.

— Main Changes from Current RX330 —

- A PVD (Physical Vapor Deposition) coating has been applied on the surface of No.1 compression ring.
- A two-piece type oil ring is used.



277EG05

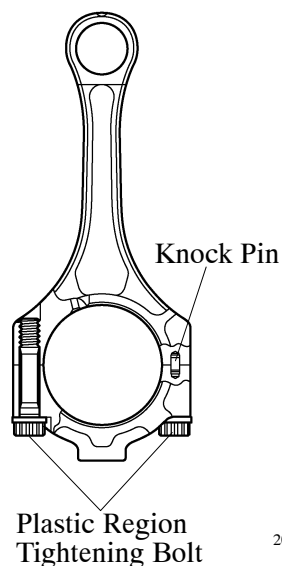
EG

► Piston Ring Specifications ◀

	Shape		Surface Treatment	
	RX400h	RX330	RX400h	RX330
Compression Ring No.1	Barrel	←	PVD	Zinc Phosphate
Compression Ring No.2	Tapered + Undercut	←	Zinc Phosphate	←
Oil Ring	Two-Piece	Three-Piece	Gas Nitriding	←

6. Connecting Rod

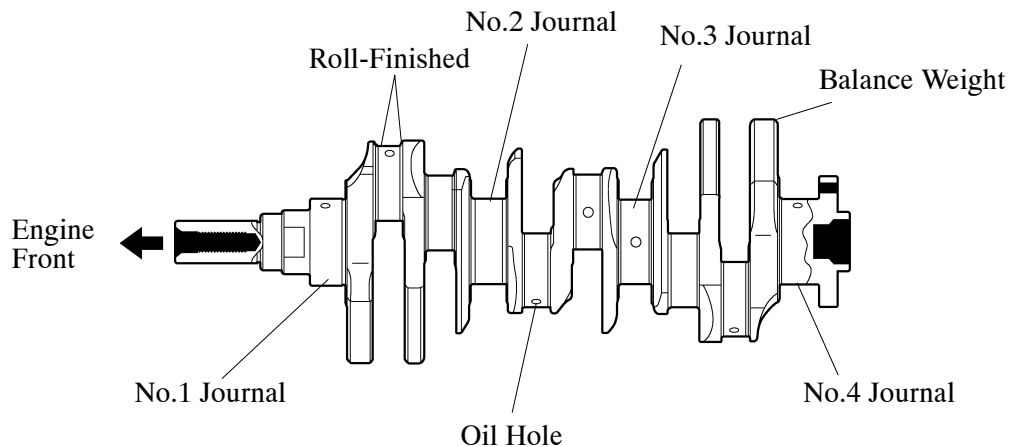
- Connecting rods that have been forged for high strength are used for weight reduction.
- An aluminum bearing with overlay is used for the connecting rod bearings.
- Plastic region tightening bolts are used.
- Knock pins are used at the mating surfaces of the bearing caps of the connecting rod to minimize the shifting of the bearing caps during assembly.



208EG106

7. Crankshaft

- The crankshaft is made of forged steel and has 4 journals and 9 balance weights.
- All pin and journal fillets are roll-finished to maintain adequate strength.
- The crankshaft bearings for the No.1 and No.4 journals are made wider to decrease noise and vibration, and the No.2 and No.3 journals are made narrower to reduce friction.



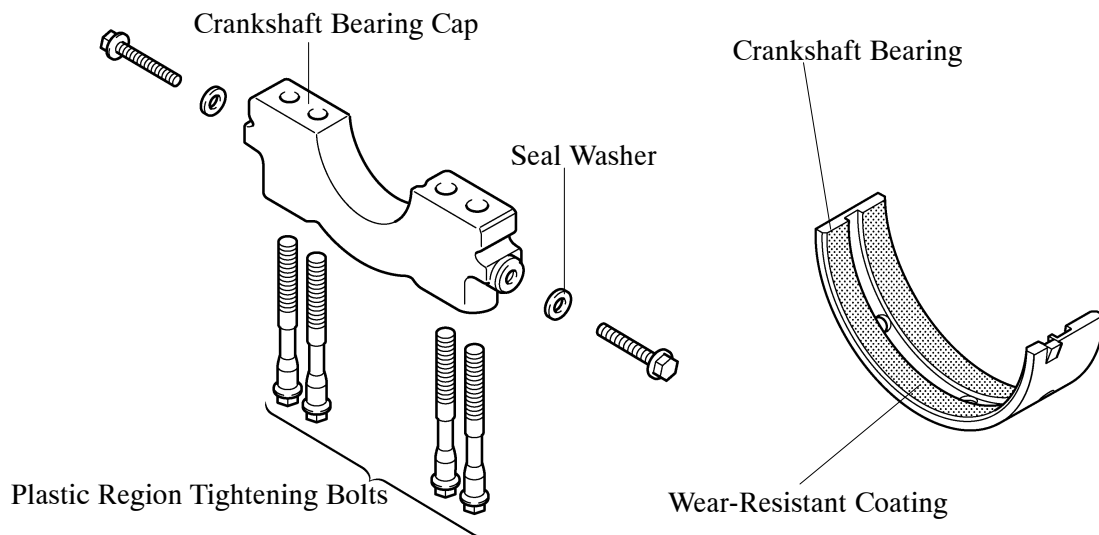
208EG72

8. Crankshaft Bearing and Bearing Cap

The crankshaft bearing caps are tightened using 4 plastic-region bolts for each journal. In addition, each cap is tightened laterally to improve reliability.

— Main Changes from Current RX330 —

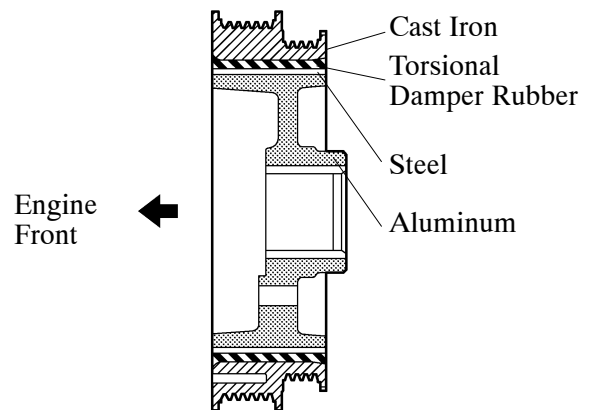
A wear resistant coating is used on the sliding surfaces of the crankshaft bearings for the upper and lower No. 1 and No. 4 journals.



EG

9. Crankshaft Pulley

- The crankshaft pulley hub is made of aluminum to reduce weight and vibration.
- The rigidity of the torsional damper rubber has been optimized to reduce noise.



241EG09