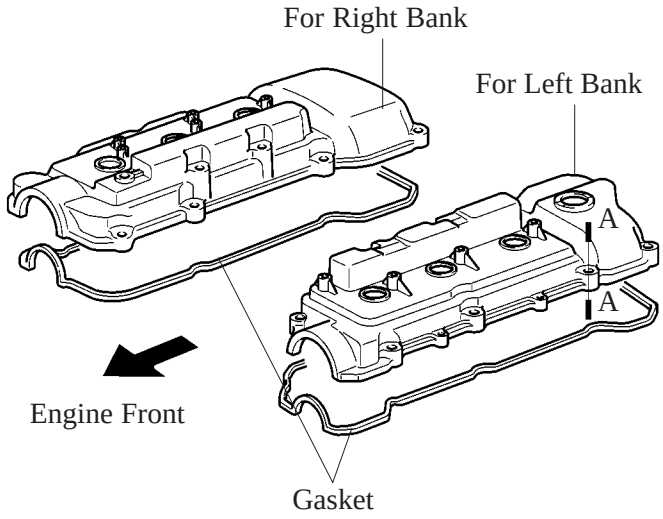
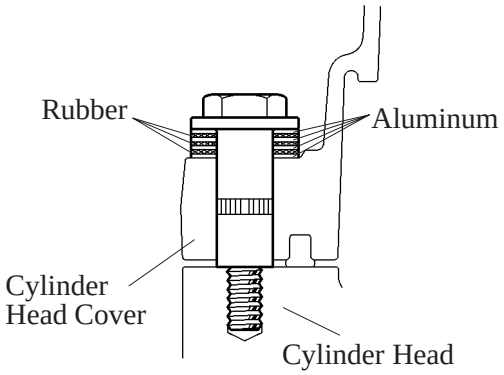
■ENGINE PROPER

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.





A – A Cross Section

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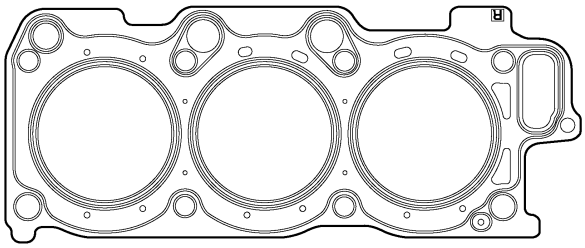
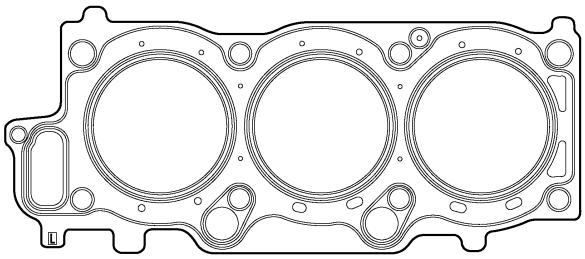
2. Cylinder Head Gasket

- A Metal type cylinder head gasket which offers superior pressure resistance and sealing performance has been adopted.

for Right Bank



for Left Bank



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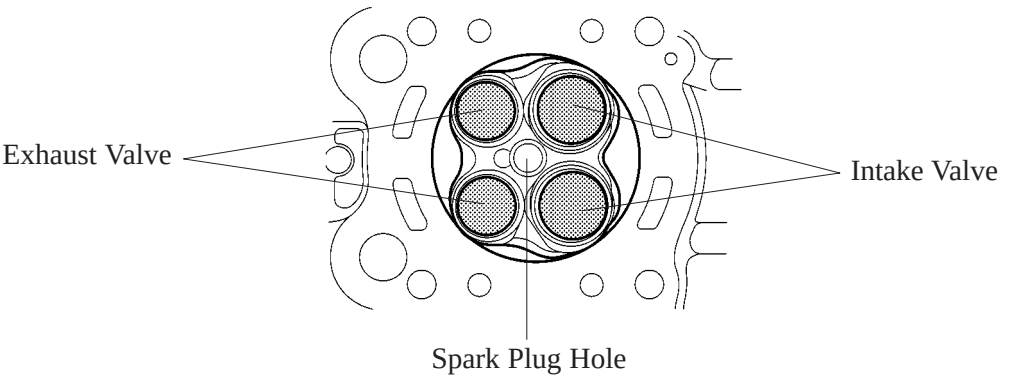
Engine Front ←

3. Cylinder Head

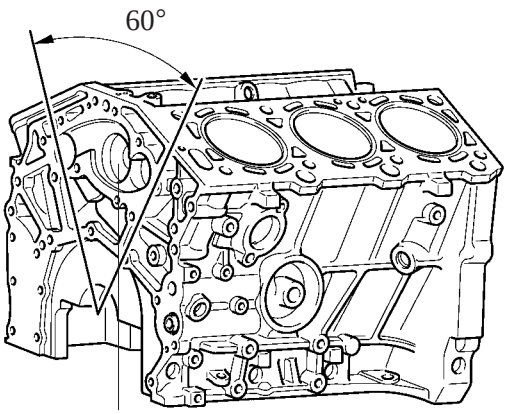
- The cylinder head, which is made of aluminum, has adopted a pentroof-type combustion chamber. The spark plug has been located in the center of the combustion chamber.
- The angle of the intake and exhaust valves is narrowed and set at 22.5° to permit a compact cylinder head.
- Upright, small-diameter intake ports are adopted.
- 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 bolt is used for the cylinder head bolts for good axial tension.



View of Back Side 187EG07

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



Water Pump Swirl Chamber

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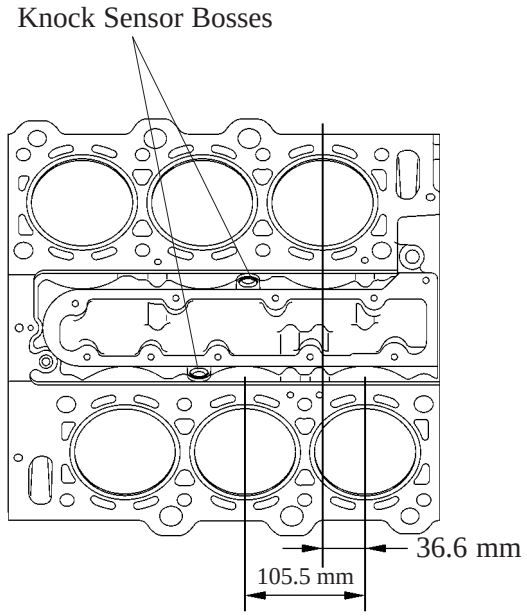

View of Top Side

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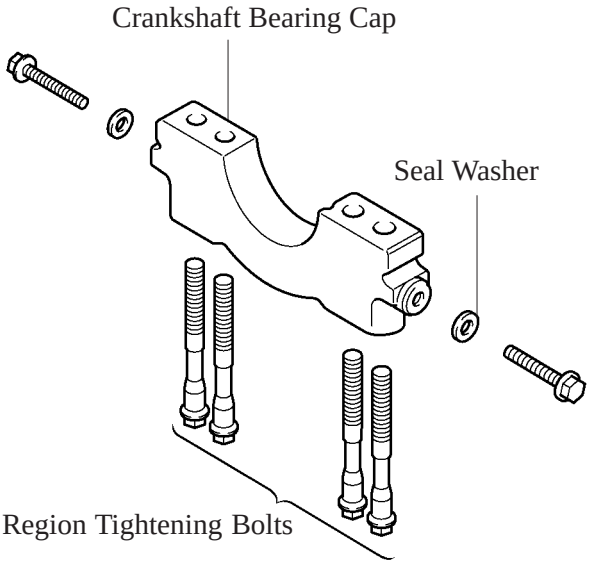

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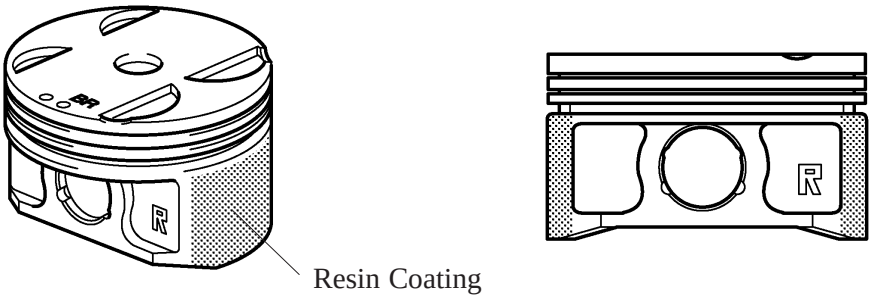
5. Piston

- 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.
- Each of the pistons is made specifically for the right or left bank.



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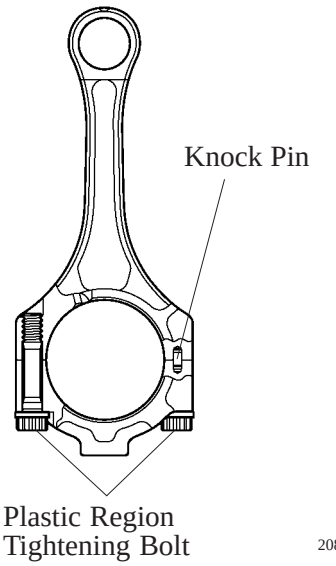
For Right Bank

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.



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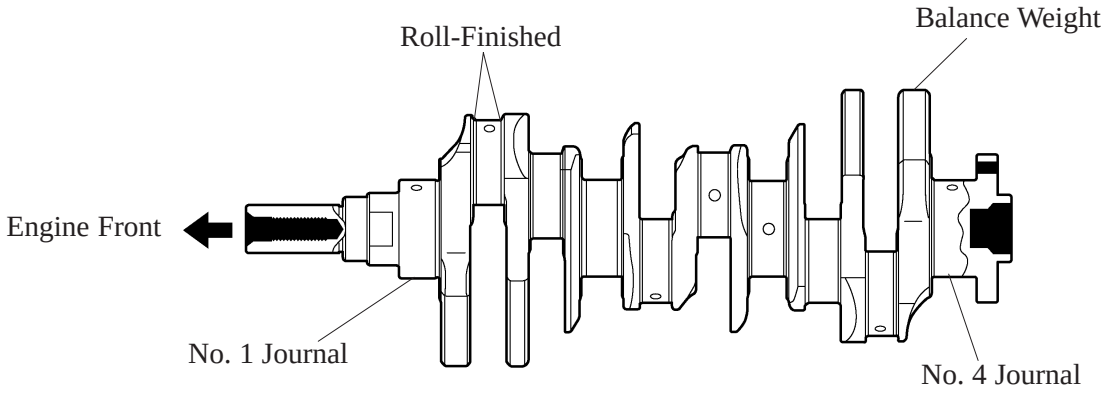
7. Crankshaft

- 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 those for the No.2 and No.3 journals are made narrower friction.



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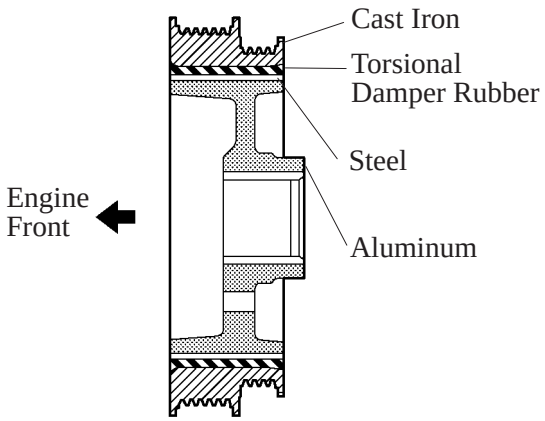
8. Crankshaft Pulley

- 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.



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