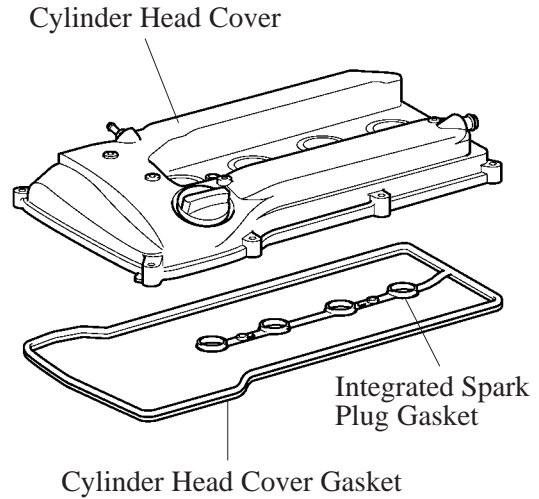


ENGINE PROPER

1. Cylinder Head Cover

- A lightweight magnesium alloy diecast cylinder head cover is used.
- The cylinder head cover gasket and the spark plug gasket have been integrated to reduce the number of parts.
- Acrylic rubber, which excels in heat resistance and reliability, has been adopted for the cylinder head cover gasket.

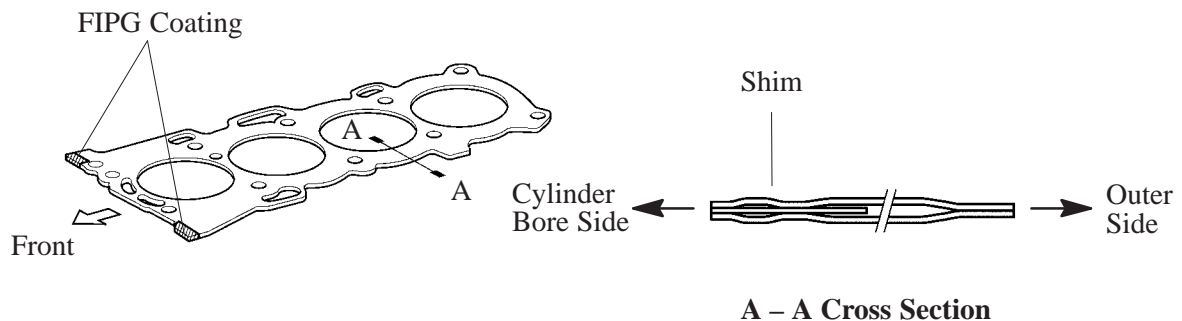


185EG35

2. Cylinder Head Gasket

A steel-laminate type cylinder head gasket has been adopted.

A shim has been added around the cylinder bore to increase the sealing surface, thus improving the sealing performance and durability.



181EG04

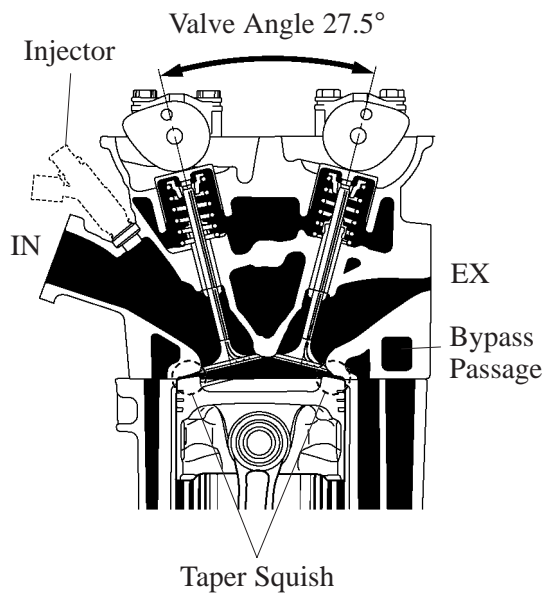
178EG40

Service Tip

Please coat the contact points on the front of the gasket (cylinder head, cylinder block and chain cover) with FIPG at the time that the gasket is installed.

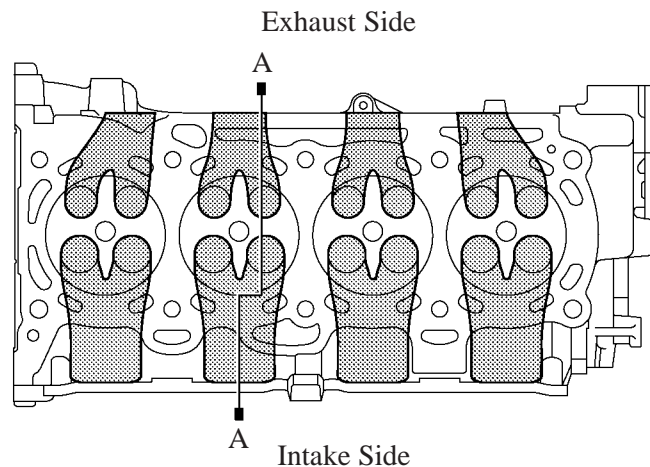
3. Cylinder Head

- Through the adoption of the taper squish combustion chamber, the engine's knocking resistance and fuel efficiency have been improved.
- An upright intake port has been adopted to improve the intake efficiency.
- Installing the injectors in the cylinder head enables the injectors inject fuel as close as possible to the combustion chamber. This prevents the fuel from adhering to the intake port walls, which reduces HC exhaust emissions.
- The routing of the water jacket in the cylinder head has been optimized to improve the cooling performance. In addition, a water bypass passage has been provided below the exhaust ports to reduce the number of parts and to achieve weight reduction.



A – A Cross Section

206EG04

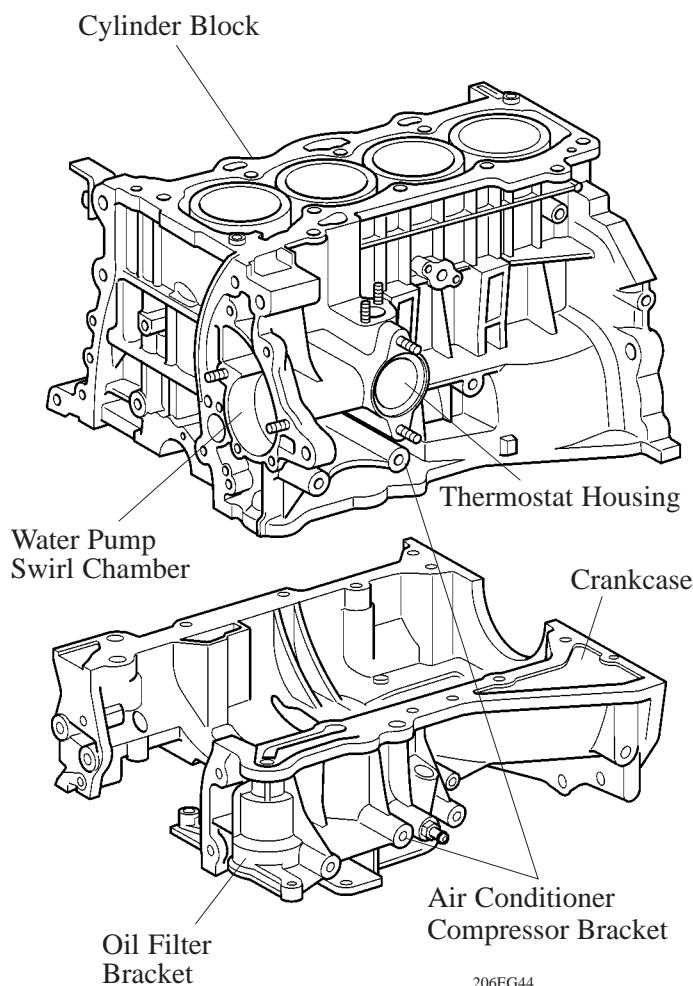


View From The Back Side

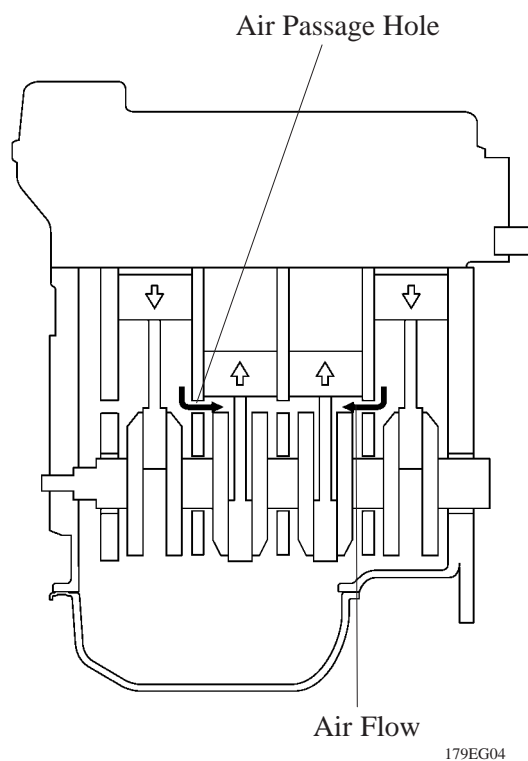
198EG29

4. Cylinder Block

- Lightweight aluminum alloy is used for the cylinder block.
- By producing the thin cast-iron liners and cylinder block as a unit, compaction is realized.
- Passage holes are provided in the crankshaft bearing area of the cylinder block. As a result, the air at the bottom of the cylinder flows smoother, and pumping loss (back pressure at the bottom of the piston generated by the piston's reciprocal movement) is reduced to improve the engine's output.
- The oil filter and the air conditioner compressor bracket are integrated the crankcase, also the water pump swirl chamber, and the thermostat housing integrated the cylinder block to reduce the number of parts.

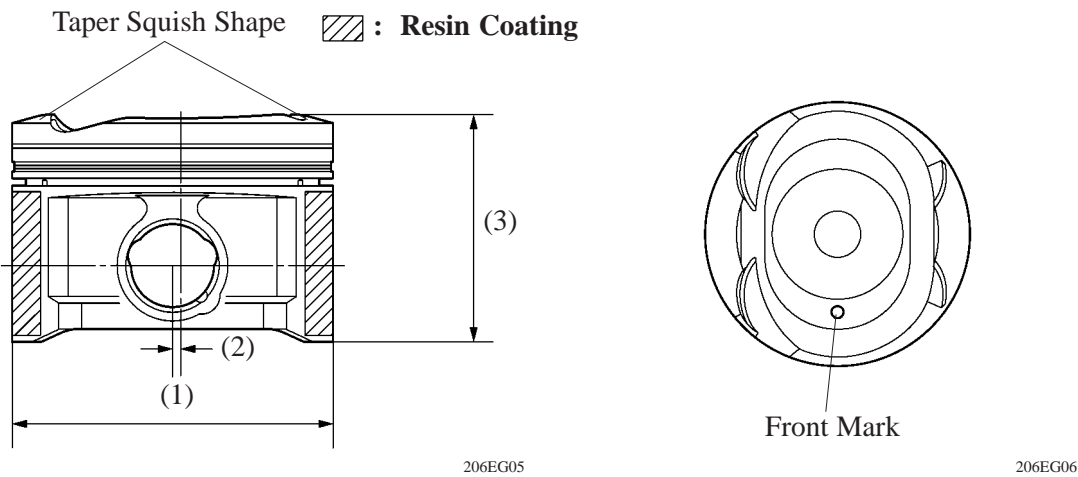


► Air Flow During Engine Revolution ◀



5. Piston

- The piston is made of aluminum alloy and skirt area is made compact and lightweight.
- The piston head portion has adopted a taper squish shape to improve the fuel combustion efficiency.
- The piston skirt has been coated with resin to reduce the friction loss.
- Full floating type piston pins are used.
- By increasing the machining precision of the cylinder bore diameter, the outer diameter of the piston has been made into one type.



View From The Top Side

► Specification ◀

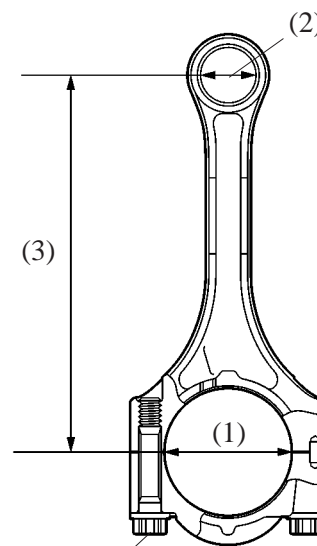
| | | | |
|------------|-----------------------|----------------|---------------------------|
| Piston | (1) Basic Diameter | mm (in.) | 8.5932 (3.38) |
| | (2) Piston Pin Offset | mm (in.) | 0.5 (0.02) |
| | (3) Height | mm (in.) | 60.9 (2.40) |
| | Material | Aluminum Alloy | |
| Piston Pin | Diameter × Length | mm (in.) | 22.0 × 56.0 (0.87 × 2.20) |
| | Material | Chromium Steel | |

6. Connecting Rod

- The connecting rods and caps are made of high-strength material for weight reduction.
- Nutless-type plastic region tightening bolts of the connecting rod are adopted for a lighter design.
- The connecting rod bearings have been reduced in width to reduce friction.

► Specification ◀

| | | |
|-----|---|-----------------|
| (1) | Big End Inside Diameter mm (in.) | 51.0 (2.01) |
| (2) | Small End Inside Diameter mm (in.) | 22.0 (0.87) |
| (3) | Center distance between big and small ends mm (in.) | 149.5 (5.89) |



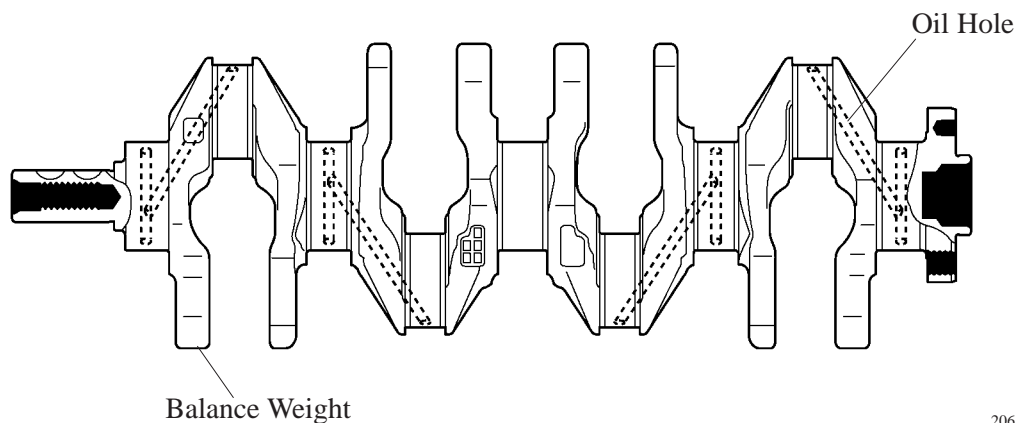
Plastic Region Tightening Bolt

206EG07

EG

7. Crankshaft

- The forged crankshaft has 5 journals and 8 balance weights.
- The crankshaft bearings have been reduced in width to reduce friction.
- The precision and surface roughness of the pins and journals have been improved to reduce friction.



206EG08