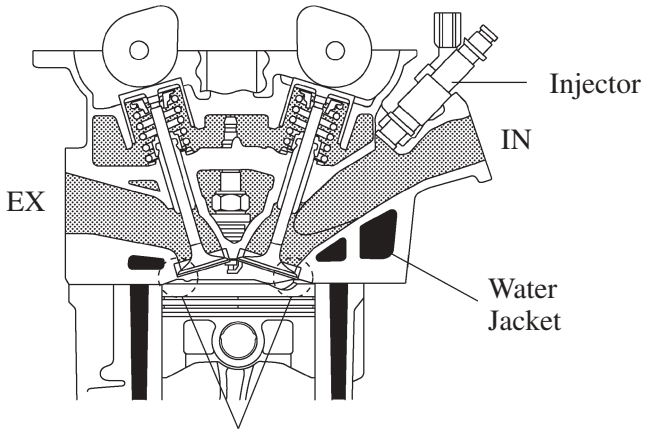
■ENGINE PROPER

1. Cylinder Head

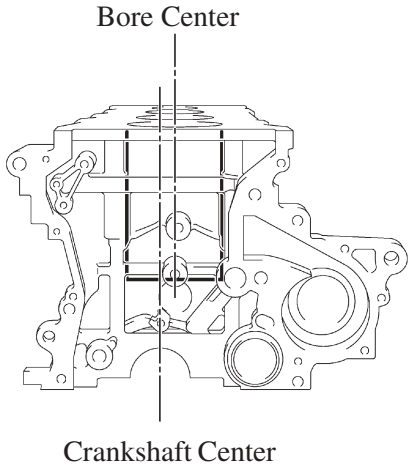
- The injectors are installed in the cylinder head to reduce the distance from injector to intake valve, thus it prevents the fuel from adhering to the intake port walls, and reduces exhaust emissions.
- The routing of the water jacket in the cylinder head is optimized to achieve high cooling performance.
- Through the use of the taper squish combustion chamber, the engine's knocking resistance and fuel efficiency have been ensured.



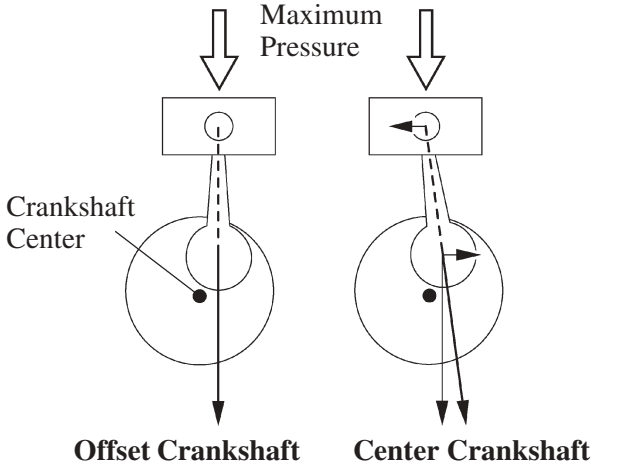
247EG03

2. Cylinder Block

- Lightweight aluminum alloy is used for the cylinder block.
- Through the use of the offset crankshaft, the bore center is shifted 12 mm (0.472 in.) towards the intake, in relation to the crankshaft center. Thus, the side force to cylinder wall is reduced when the maximum pressure is applied, which contributes to fuel economy.

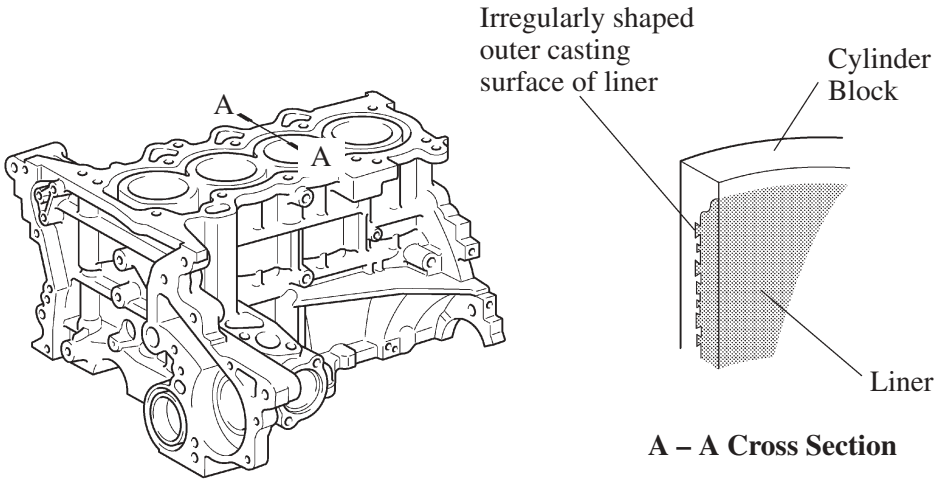


247EG04



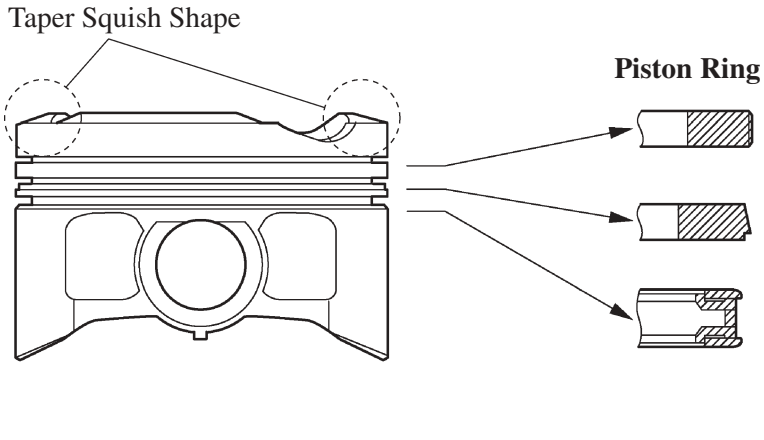
193EG05

- The liners are the spiny-type, which have been manufactured so that their casting exterior forms a large irregular surface in order to enhance the adhesion between the liners and the aluminum cylinder block. The enhanced adhesion helps heat dissipation, resulting in a lower overall temperature and heat deformation of the cylinder bores.



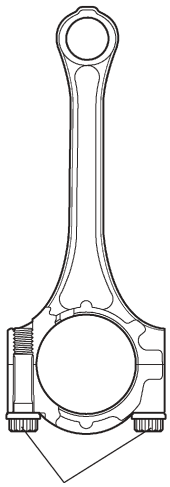
3. Piston

- The piston is made of aluminum alloy.
- The piston head portion uses a taper squish shape to accomplish fuel combustion efficiency.
- Semi-floating type piston pins are used.
- By increasing the machining precision of the cylinder bore diameter, only one size of piston is available.



4. Connecting Rod

- The connecting rods and caps are made of high strength steel for weight reduction.
- Nutless-type plastic region tightening bolts are used for a lighter design.

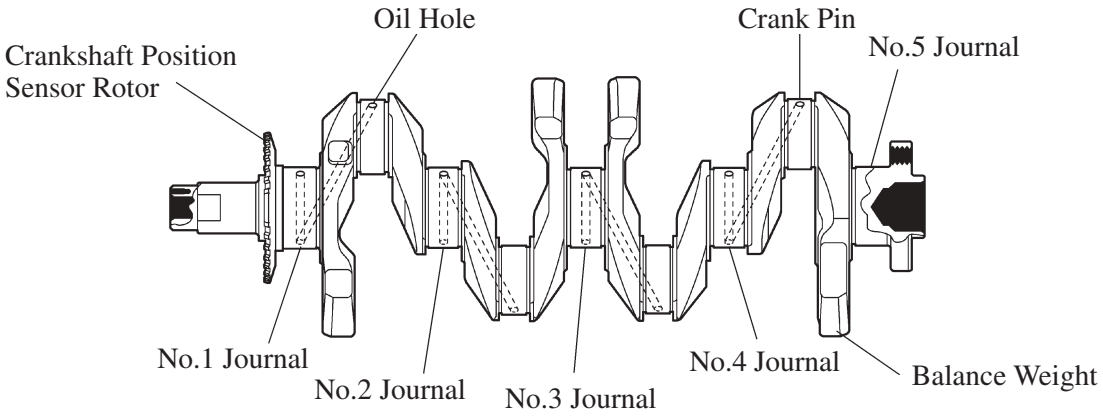


Plastic Region Tightening Bolts

171EG07

5. Crankshaft

- The diameter and the width of the pins and journals have been reduced, and the pins for the No.1 and No.4 cylinders have been made highly rigid to realize a lightweight and low-friction performance.
- The crankshaft has 5 journals and 4 balance weights.
- A crankshaft position sensor rotor is pressed into the crankshaft to realize an integrated configuration.



171EG08