PISTON, PISTON RING, PISTON PIN [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

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Purpose, Function

Piston

- The piston in the cylinder of the cylinder block moves reciprocally by the pressure received when the air-fuel mixture combusts.

Piston ring

- The piston ring consists of the compression ring (top ring, second ring) and the oil ring, and has the following functions.
  - — The compression ring prevents leakage of pressure in the cylinder from the piston circumference.
  - — The oil ring clears off extra engine oil adhered to the cylinder wall.
- The piston ring transmits piston heat to the cylinder wall to cool the piston.

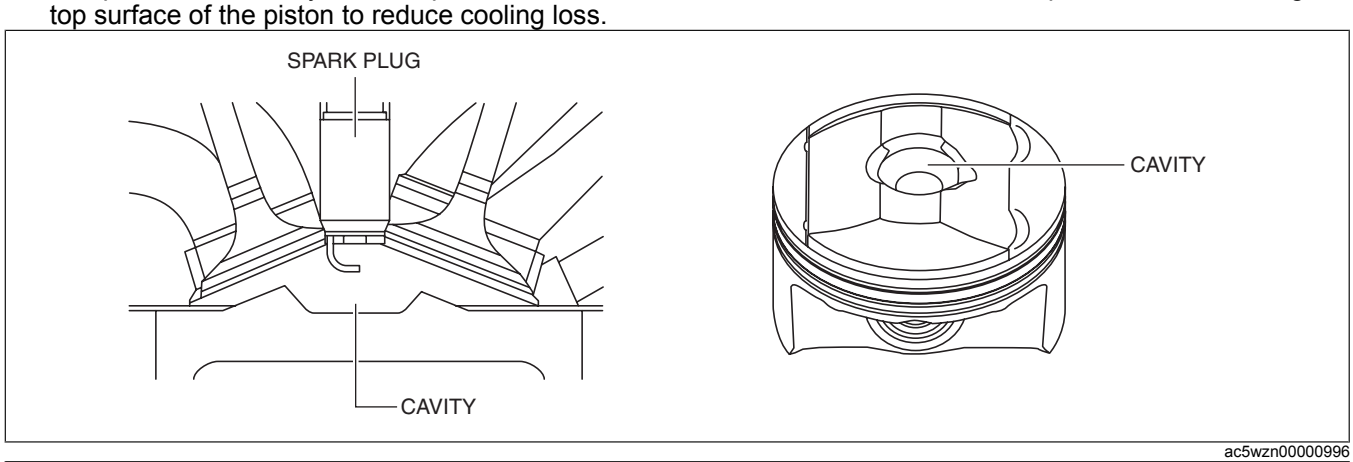
Piston pin

- The reciprocating movement of the piston is transmitted to the connecting rod by the connection of the piston pin to connecting rod.

Construction

Piston

- The high-temperature strength piston is made of aluminum alloy with excellent thermal conductivity.
- The piston has a cavity on the top surface. As a result, the initial combustion flame is prevented from hitting the top surface of the piston to reduce cooling loss.



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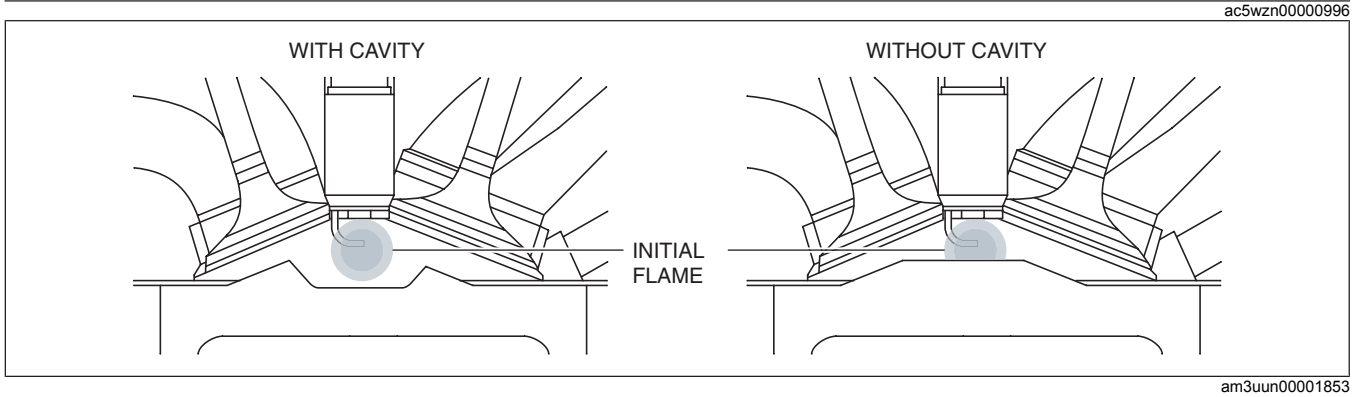

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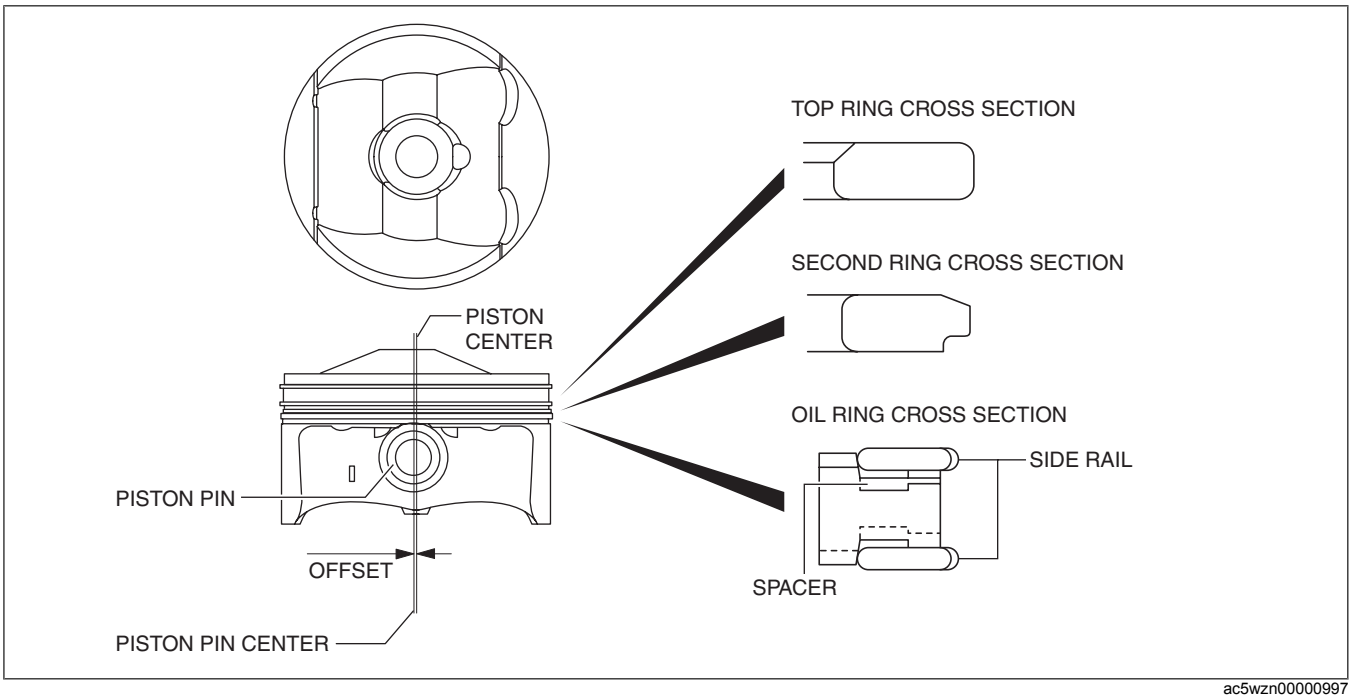
- The sliding resistance has been reduced by optimizing the piston skirt shape.
- A weight reduction is realized by optimizing the piston shape.
- With the adoption of the offset piston, piston slap is suppressed.



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Piston ring

- A barrel-face ring for the top ring and a taper under cut ring for the second ring have been adopted.
- A three-piece oil ring consisting of a side rail and spacer have been adopted for the oil ring.
- Tracking capability to the cylinder wall has been improved by thinning down the piston ring. As a result, a low-tension piston ring has been implemented without increasing the engine oil consumption, and the sliding resistance has been reduced during reciprocating movement.

Piston pin

- The piston is a full-floating type.