

## PISTON, PISTON RING, PISTON PIN [SKYACTIV-G 2.5T]

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### Purpose, Function

#### Piston

- The piston in the cylinder of the cylinder block moves reciprocally while transmitting pressure to the piston pin and connecting rod 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.

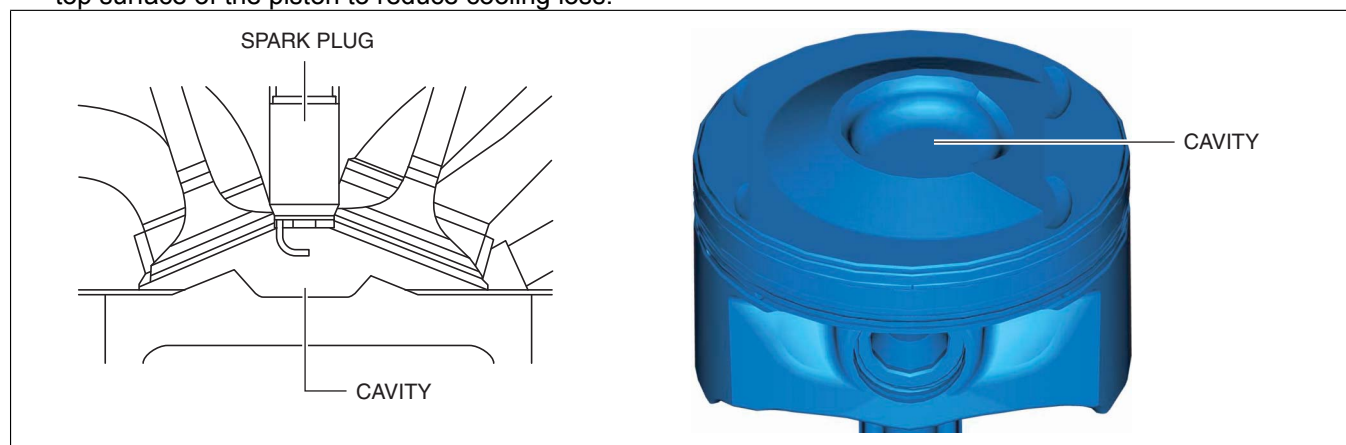
#### Piston pin

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

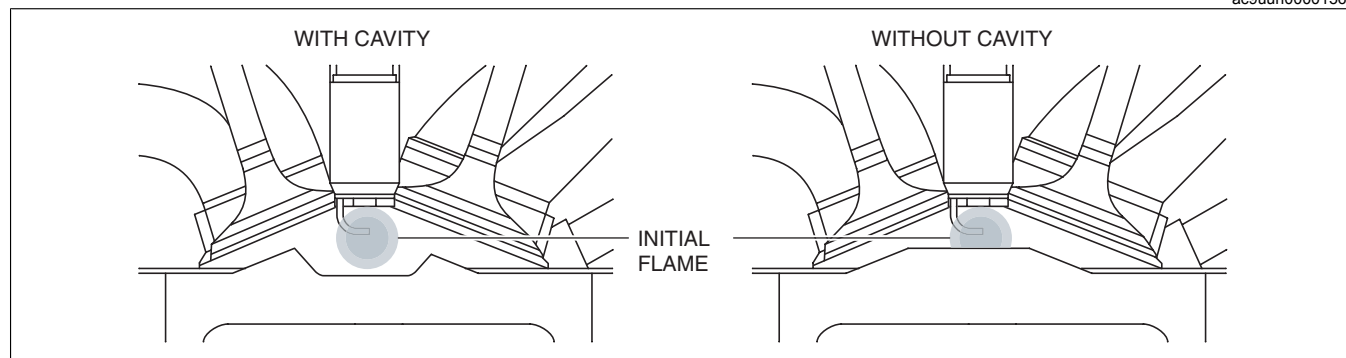
### Construction

#### Piston

- The piston is made of aluminum alloy with superior high-temperature strength and 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.

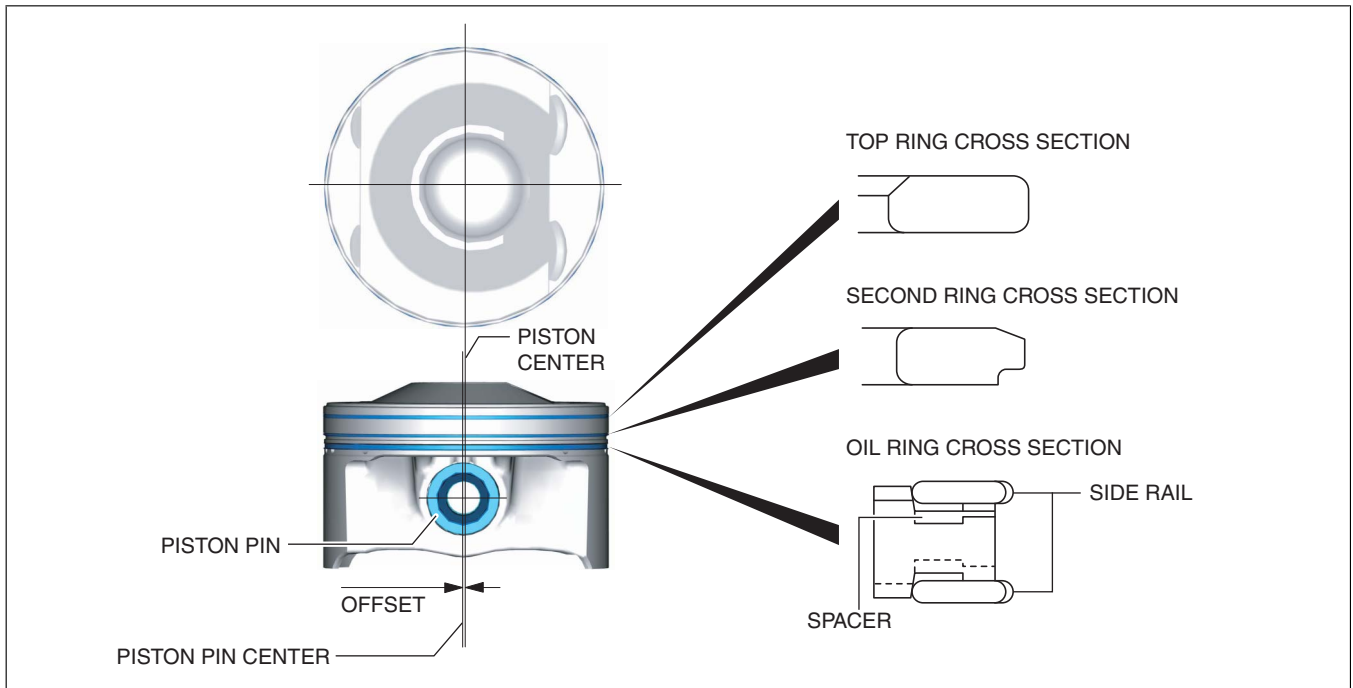


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- The sliding resistance and the part mass have been minimized by reducing the surface area of the piston skirt and reducing the thickness.
- An offset piston has been adopted in which the center of the piston pin has been offset from the piston center. As a result, 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.
- The tracking capability to the cylinder wall has been improved by reducing the thickness of 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

- A full-floating type piston pin has been adopted to reduce piston knocking noise.