

CONNECTING ROD, CONNECTING ROD BEARING [SKYACTIV-D 2.2]

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Purpose, Function

Connecting rod

- The connecting rod transmits the reciprocating movement of the piston to the crankshaft by engaging the piston pin and crank pin.

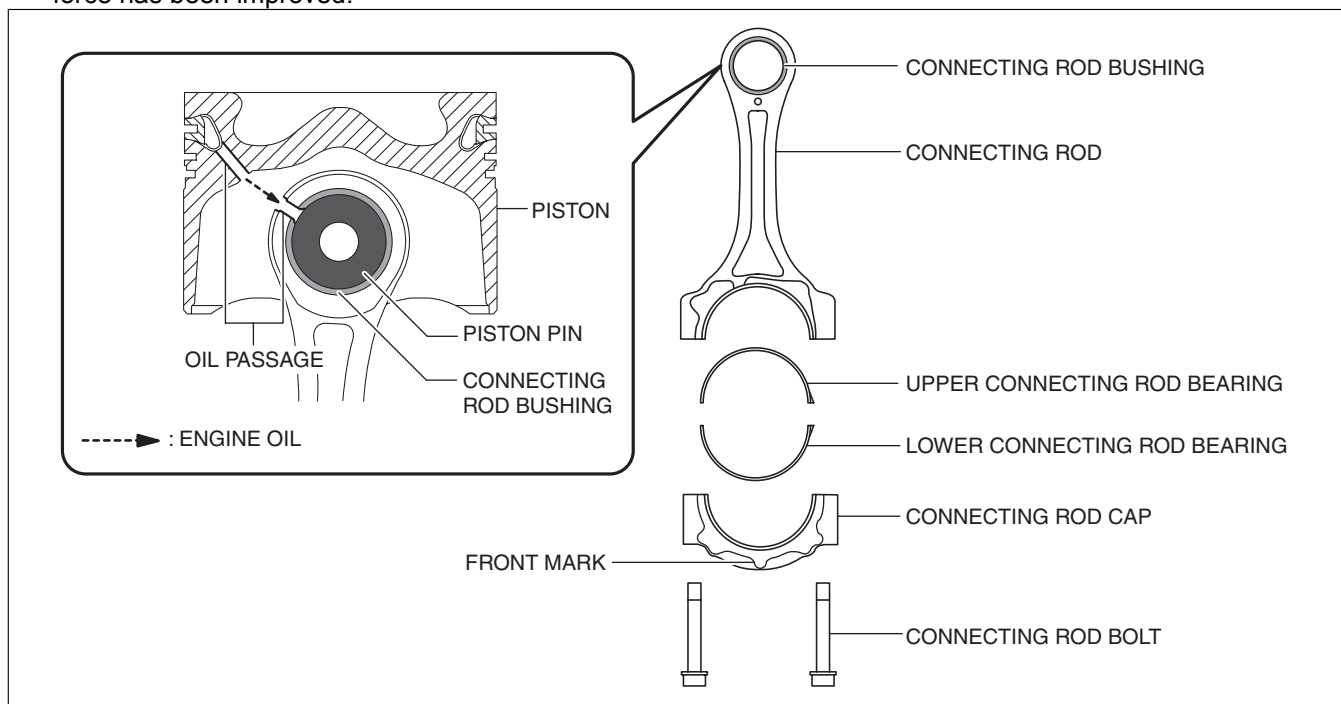
Connecting rod bearing

- The connecting rod bearing forms an oil film on the outer surface of the crank pin to prevent wear due to sliding.

Construction

Connecting rod

- The connecting rod is installed between the piston pin and crank pin.
- High-strength, forged carbon steel has been adopted for weight reduction.
- A cracking method^{*1} for breaking off and separating the connecting rod from the connecting rod cap has been adopted for improved accuracy.
- Reciprocating inertial weight, including the piston, has been reduced with the use of a full-float type for the connection with the piston and further tapering of the small end shape.
- An oil film is formed on the inner surface of the connecting rod bushing by the engine oil supplied from the piston.
- With the adoption of the plastic region tightening method^{*2} for the connecting rod bolt, the stability of the axial force has been improved.



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*1 : Method of breaking off the large end proportion of the connecting rod after it has been integrally molded to separate the connecting rod from the connecting rod cap. When assembling the connecting rod and connecting rod cap, dowel pins are required to use the mating surface shape which was created during breaking process.

*2 : Plastic region tightening is a method of controlling the tightening using the rotation angle of a bolt. By tightening to the region (plastic tightening region) in which bolt deformation does not become irreversible, variation in axial force is suppressed.

Connecting rod bearing

- The connecting rod bearing is installed on the outer surface of the crank pin.
- The upper connecting rod bearing and lower connecting rod bearing are made of aluminum alloy.