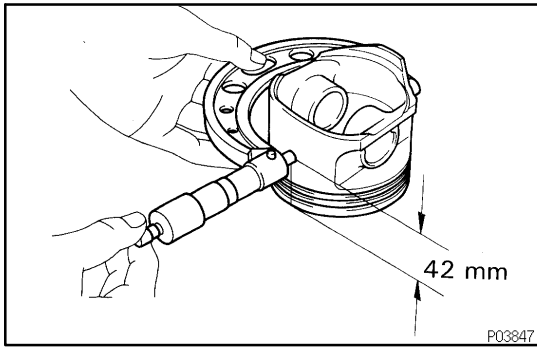




REPLACEMENT

1. REPLACE OVERSIZED (O/S) PISTONS FOR CYLINDER BORING

HINT:

- Bore all the 6 cylinders for the oversized piston outside diameter.
- Replace all the piston rings with ones to match the oversized pistons.

(a) Select the oversized pistons.

Oversized piston diameter:

O/S 0.50

100.450 – 100.480 mm (3.9547 – 3.9559 in.)

O/S 1.00

100.950 – 100.980 mm (3.9744 – 3.9756 in.)

(b) Calculate the amount to bore cylinder.

- (1) Using a micrometer, measure the piston diameter at right angles to the piston pin center line, 42 mm (1.65 in.) from the piston head.
- (2) Calculate the amount of each cylinder is to be re-bored as follows:

$$\text{Size to be re-bored} = P + C - H$$

P = Piston diameter

C = Piston clearance

0.040 – 0.060 mm (0.0016 – 0.0024 in.)

H = Allowance for honing

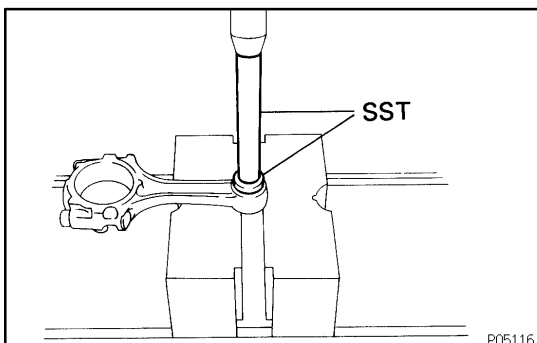
0.02 mm (0.0008 in.) or less

- (3) Bore and hone the cylinders to calculated dimensions.

Maximum honing: 0.02 mm (0.0008 in.)

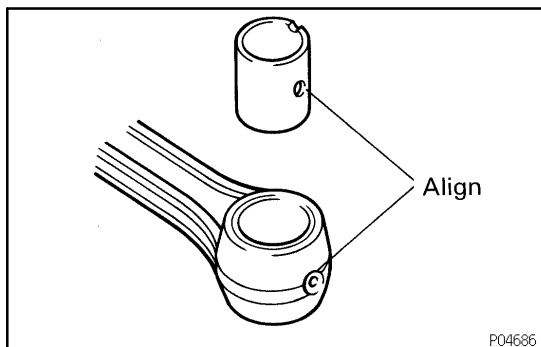
NOTICE:

Excess honing will destroy the finished roundness.

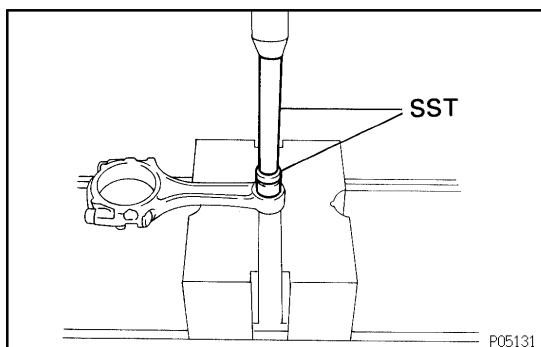


2. REPLACE CONNECTING ROD BUSHING

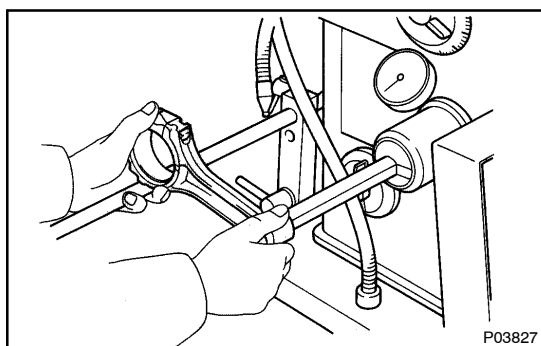
- (a) Using SST and a press, press out the bushing.
SST 09950-60010 (09951-00280),
09950-70010 (09951-07100)



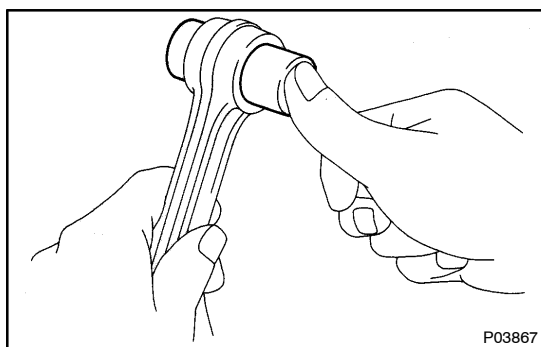
- (b) Align the oil holes of a new bushing and the connecting rod.



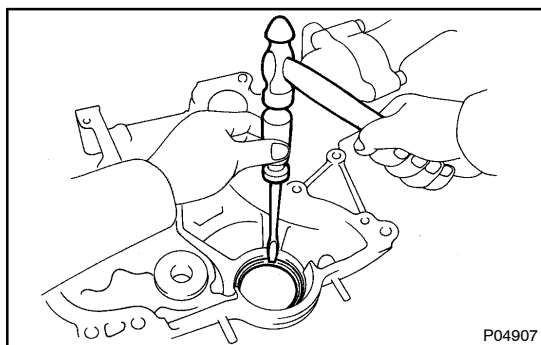
- (c) Using SST and a press, press in the bushing.
SST 09950-60010 (09951-00280), 09950-70010 (09951-07100)



- (d) Using a pin hole grinder, hone the bushing to obtain the standard specified clearance (see step 15 above) between the bushing and piston pin.



- (e) Check the piston pin fit at normal room temperature. Coat the piston pin with engine oil, and push it into the connecting rod with your thumb.

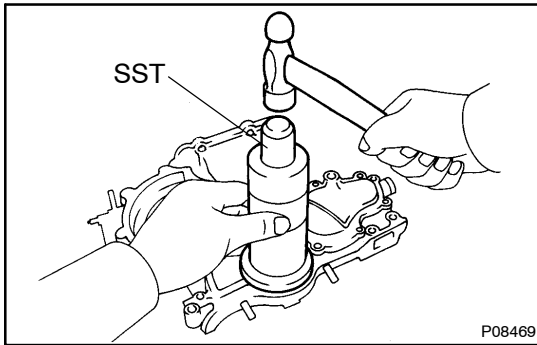


3. REPLACE CRANKSHAFT FRONT OIL SEAL

HINT:

There are 2 methods to replace the oil seal which are as follows:
If timing chain cover is removed from cylinder block.

- (a) Using a screwdriver and a hammer, tap out the oil seal.



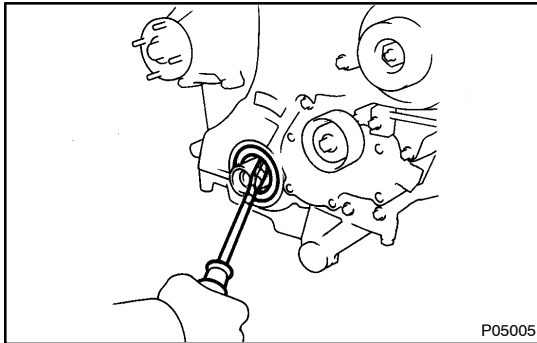
- (b) Using SST and a hammer, tap in a new oil seal until its surface is flush with the timing chain cover edge.
SST 09316-60010 (09316-00010, 09316-00050)

- (c) Apply MP grease to the oil seal lip.

NOTICE:

Do not let foreign matter get onto the lip of the oil seal.

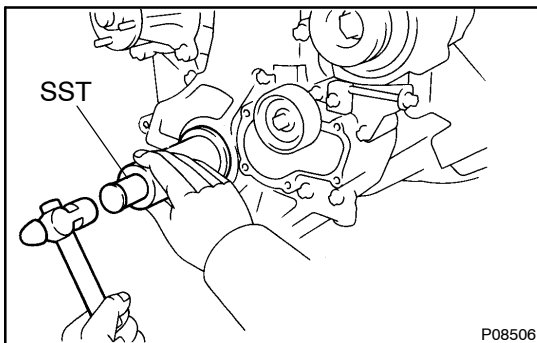
If timing chain cover is installed to cylinder block.



- (d) Using a screwdriver, pry out the oil seal.

NOTICE:

Be careful not to damage the crankshaft. Tape the screwdriver tip.

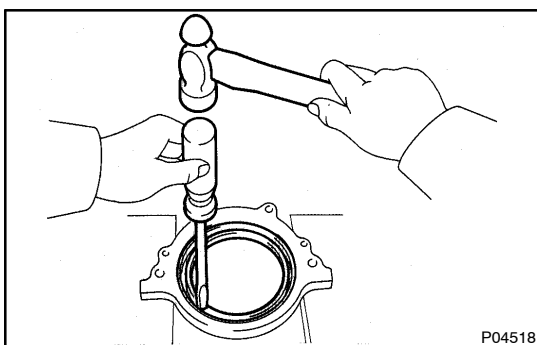


- (e) Apply MP grease to a new oil seal lip.

NOTICE:

Do not let foreign matter get onto the lip of the oil seal.

- (f) Using SST and a hammer, tap in the oil seal until its surface is flush with the timing chain cover edge.
SST 09316-60011 (09316-00011, 09316-00051)

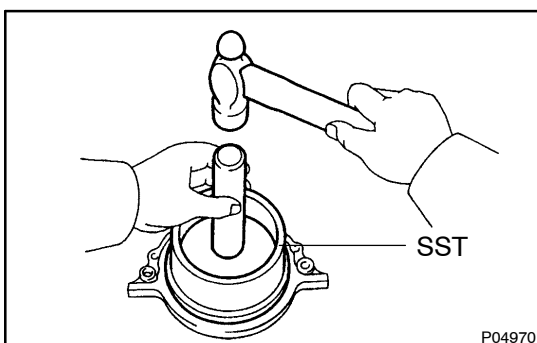


4. REPLACE CRANKSHAFT REAR OIL SEAL

HINT:

There are 2 methods to replace the oil seal which are as follows:
If rear oil seal retainer is removed from cylinder block.

- (a) Using a screwdriver and a hammer, tap out the oil seal.

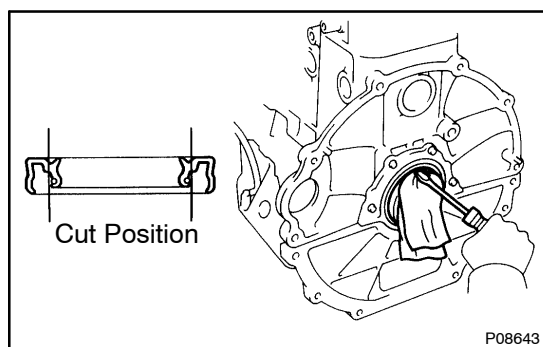


- (b) Using SST and a hammer, tap in a new oil seal until its surface is flush with the rear oil seal edge.
SST 09223-15030, 09950-70010 (09951-07150)

NOTICE:

Do not let foreign matter get onto the lip of the oil seal.

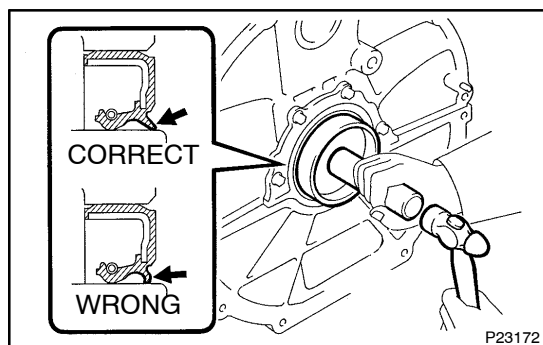
If rear oil seal retainer is installed to cylinder block.



- (c) Using a knife, cut off the oil seal lip.
- (d) Using a screwdriver, pry out the oil seal.

NOTICE:

Be careful not to damage the crankshaft. Tape the screwdriver tip.



- (e) Using SST and a hammer, tap in a new oil seal until its surface is flush with the rear oil seal retainer edge.

SST 09223-15030, 09950-70010 (09951-07150)

NOTICE:

Do not let foreign matter get onto the lip of the oil seal.

- (f) Check that the lip of the oil seal is not bent inward.