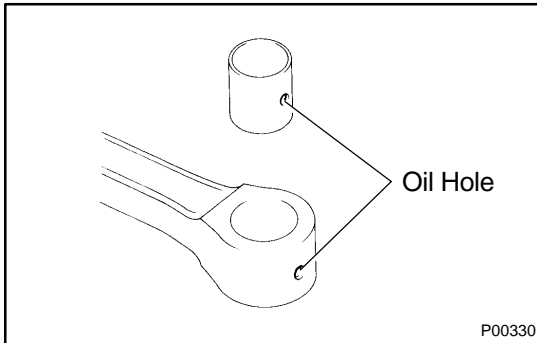


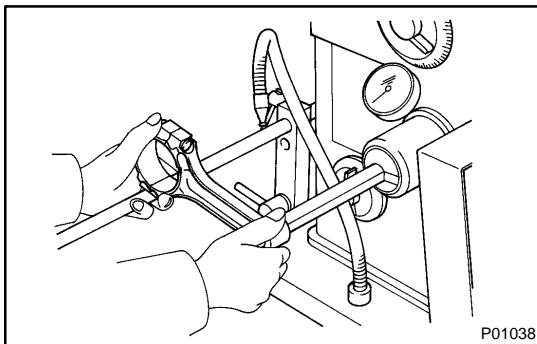
## REPLACEMENT

### 1. REPLACE CONNECTING ROD BUSHINGS

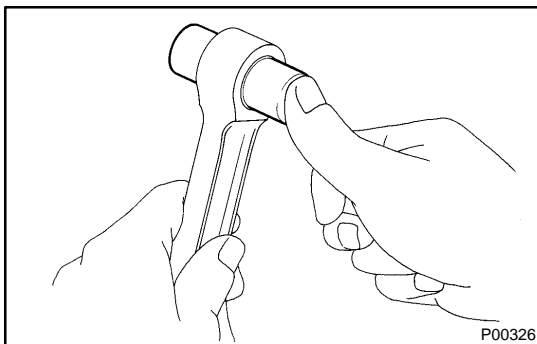
- (a) Using SST and a press, press out the bushing.  
SST 09222-30010



- (b) Align the oil holes of a new bushing and the connecting rod.  
(c) Using SST and a press, press in the bushing.  
SST 09222-30010



- (d) Using a pin hole grinder, hone the bushing to obtain the standard specified clearance (See page [EM-88](#)) 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.

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

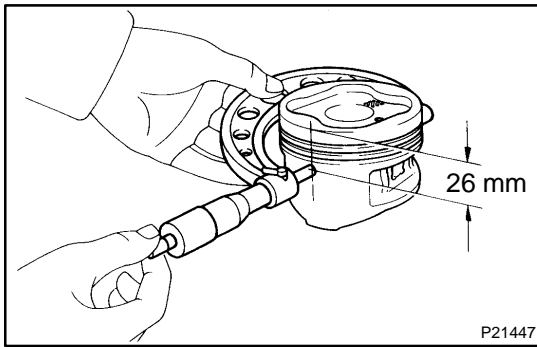
#### HINT:

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

- (a) Keep the oversized pistons.

**O/S 0.50 piston diameter:**

**93.856 - 93.886 mm (3.6951 - 3.6963 in.)**



- (b) Using a micrometer, measure the piston diameter at right angles to the piston pin center line, 26 mm (1.02 in.) from the piston head.

- (c) Calculate the amount of each cylinder is to be rebored as follows:

**Size to be rebored = P + C - H**

**P = Piston diameter**

**C = Piston oil clearance**

**0.134 - 0.154 mm (0.0053 - 0.0060 in.)**

**H = Allowance for honing**

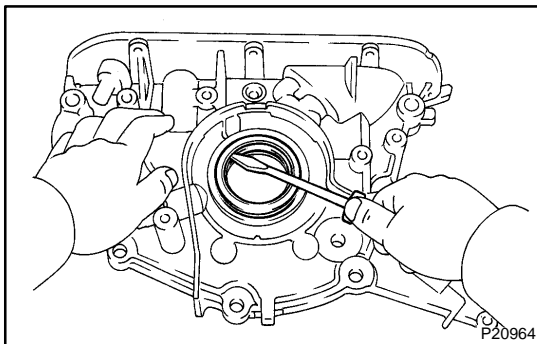
**0.02 mm (0.0008 in.) or less**

- (d) Bore and hone cylinder to the calculated dimensions.

**Maximum honing: 0.02 mm (0.0008 in.)**

**NOTICE:**

**Excess honing will destroy the finished roundness.**



### 3. REPLACE CRANKSHAFT FRONT OIL SEAL

**HINT:**

There are 2 methods ((a) and (b)) to replace the oil seal.

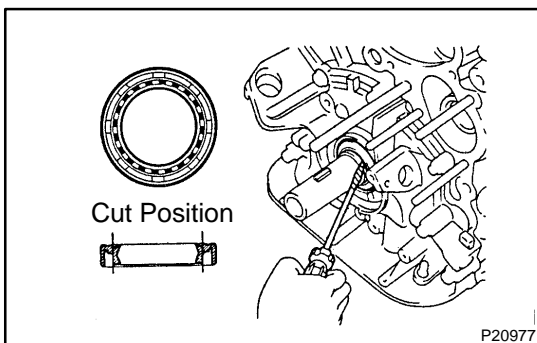
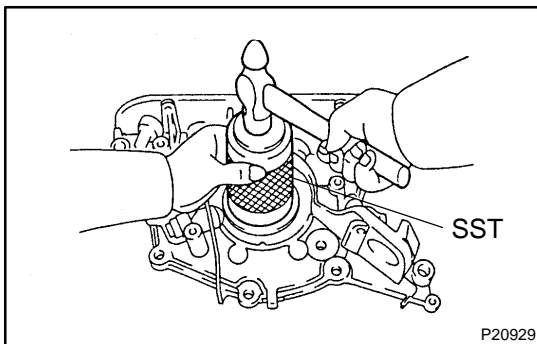
- (a) If oil pump is removed from the cylinder block:

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

- (2) Using SST and a hammer, tap in a new oil seal until its surface is flush with the oil pump body edge.

**SST 09309-37010**

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



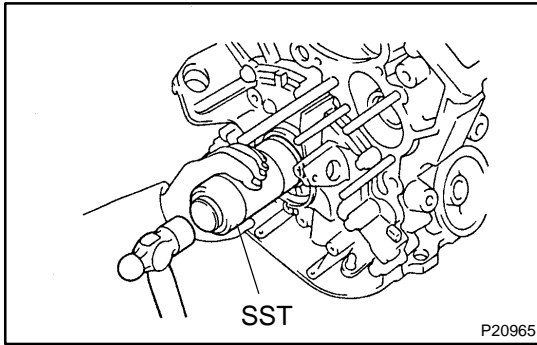
- (b) If oil pump is installed to the cylinder block:

- (1) Using a knife, cut off the oil seal lip.

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

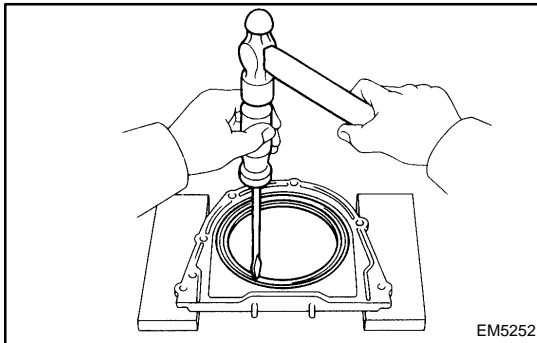
**NOTICE:**

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



- (3) Apply MP grease to the to a new oil seal lip.
- (4) Using SST and a hammer, tap in the oil seal until its surface is flush with the oil pump body edge.

SST 09306-37010

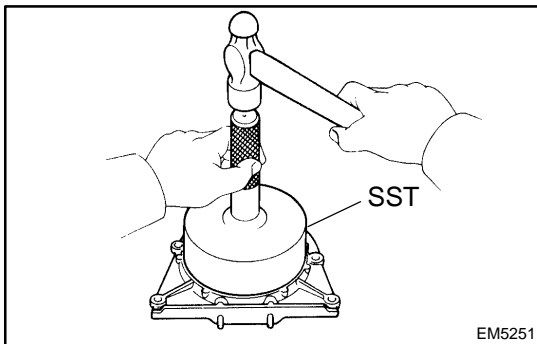


#### 4. REPLACE CRANKSHAFT REAR OIL SEAL

##### HINT:

There are 2 methods ((a) and (b)) to replace the oil seal.

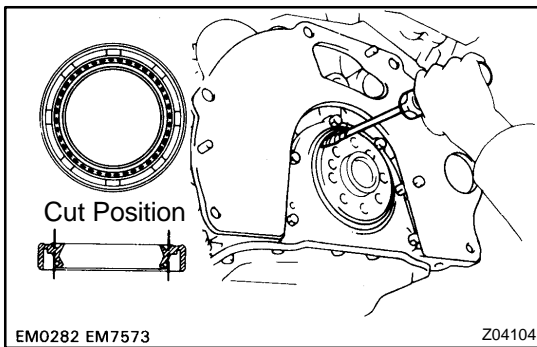
- (a) If rear oil seal retainer is removed from the cylinder block:
  - (1) Using a screwdriver and hammer, tap out the oil seal.



- (2) 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)

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

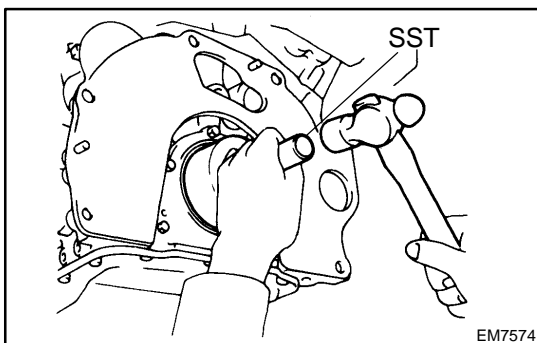


- (b) If rear oil seal retainer is installed to the cylinder block:

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

##### NOTICE:

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



- (3) Apply MP grease to a new oil seal lip.
- (4) Using SST and a hammer, tap in the oil seal until its surface is flush with the rear oil seal retainer edge.

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