

## REPLACEMENT

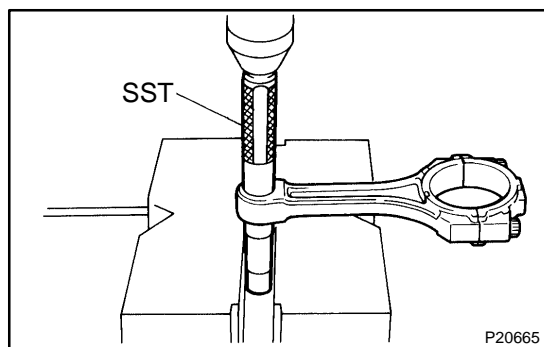
### 1. REPLACE OVERSIZED (O/S) PISTONS FOR CYLINDER BORING

#### HINT:

- Bore all the 8 cylinders to match the oversized piston outside diameter.
  - Replace all the piston rings with ones to match the oversized pistons.
- (a) Keep 8 new oversized pistons.  
**O/S 0.50 piston diameter:**  
**94.392 to 94.440 mm (3.7162 to 3.7181 in.)**
  - (b) Using a micrometer, measure the piston diameter at right angles to the piston pin center line, 30.75 mm (1.2106 in.) from the piston head.
  - (c) Calculate the size to be rebored for each cylinder as follows:  
**Size to be rebored = P + C – H**  
**P = Piston diameter**  
**C = Piston clearance:**  
**0.030 to 0.071 mm (0.0012 to 0.0028 in.)**  
**H = Allowance for honing: 0.02 mm (0.0008 in.) or less**
  - (d) Bore and hone the cylinders to calculated dimensions.  
**Maximum honing: 0.02 mm (0.0008 in.)**

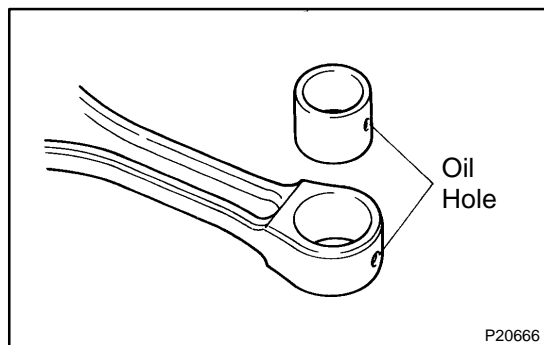
#### NOTICE:

Excess honing will destroy the finished roundness.

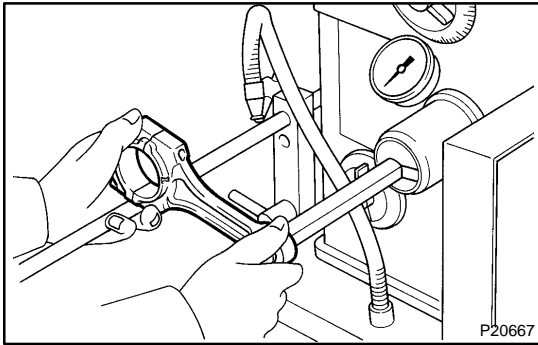


### 2. REPLACE CONNECTING ROD BUSHINGS

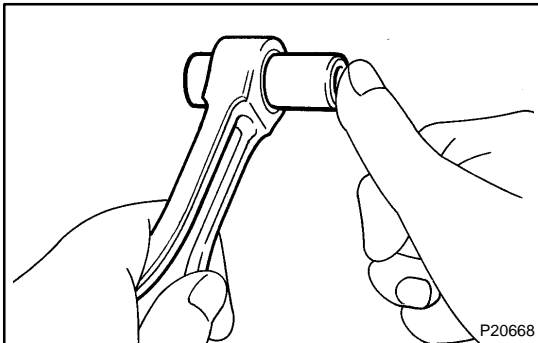
- (a) Using SST and a press, press out the bushing.  
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- (b) Align the oil holes of a new bushing and the connecting rod.
- (c) Using SST and a press, press in the bushing.  
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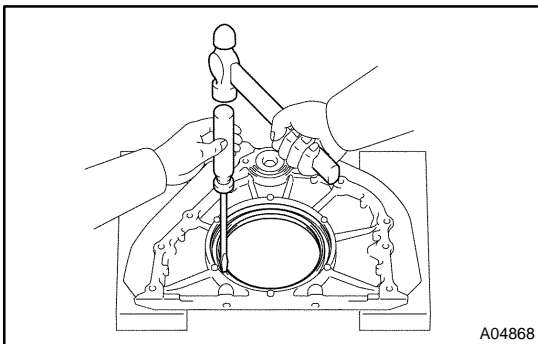


- (d) Using a pin hole grinder, hone the bushing to obtain the standard specified clearance (See page [EM-100](#)) between the bushing and piston pin.



- (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 (See page [LU-13](#))



### 4. REPLACE CRANKSHAFT REAR OIL SEAL

#### HINT:

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

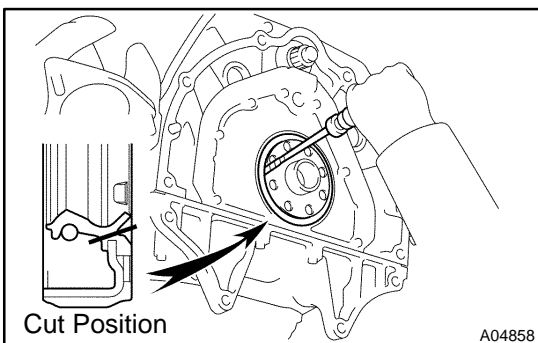
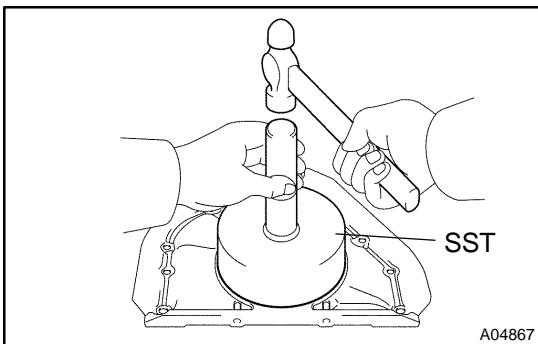
- (a) If the rear oil seal retainer is removed from the cylinder block:

- (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.

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



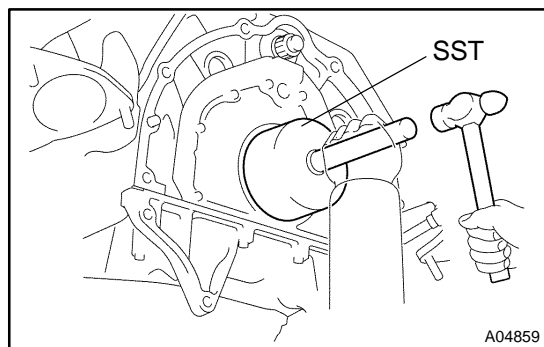
- (b) If the rear oil seal retainer is installed to the cylinder block:

- (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.

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