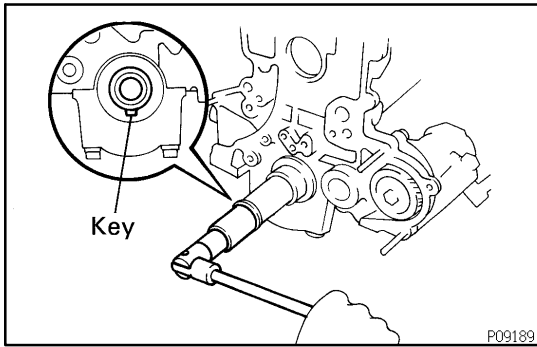
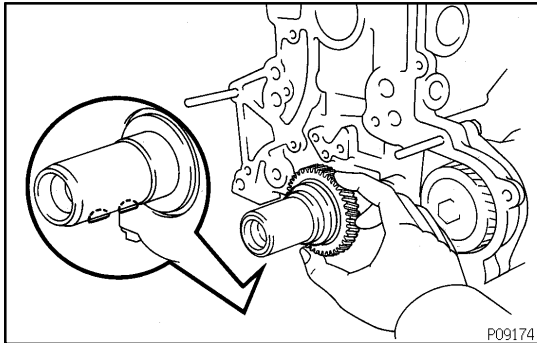




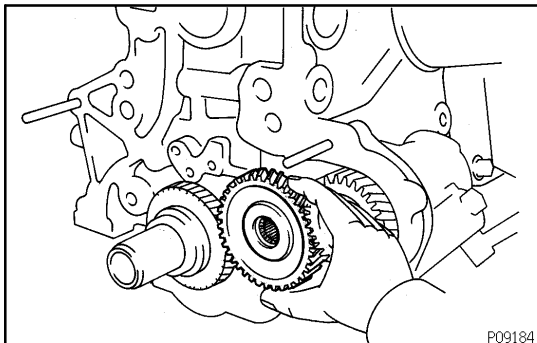
INSTALLATION

1. SET CRANKSHAFT

Turn the crankshaft until the set key on crankshaft facing downward.

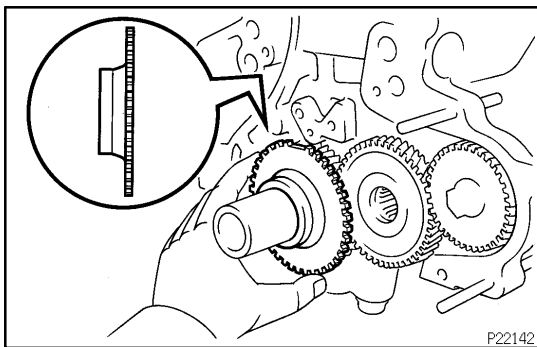


2. INSTALL PUMP DRIVE SHAFT GEAR



3. INSTALL OIL PUMP DRIVE SHAFT GEAR

- (a) Apply a light coat of engine oil on the shaft portion of the gear.
- (b) Install the gear.

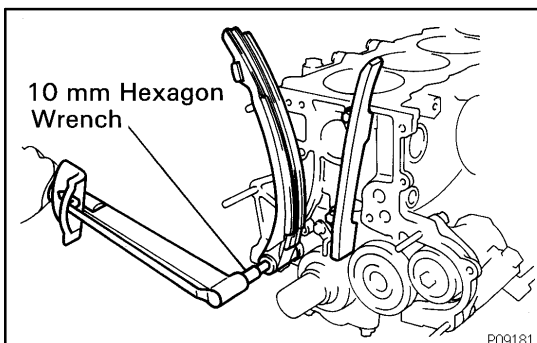


4. INSTALL CRANKSHAFT ROTOR

5. INSTALL OIL JET

Install the oil jet with the bolt.

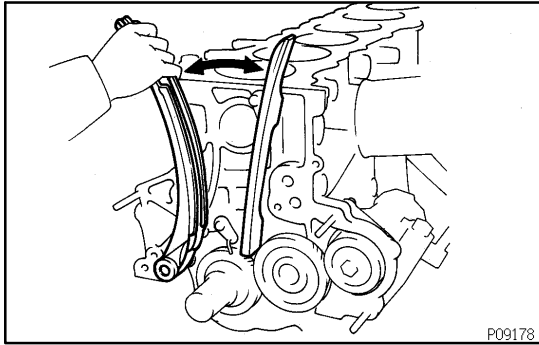
Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)



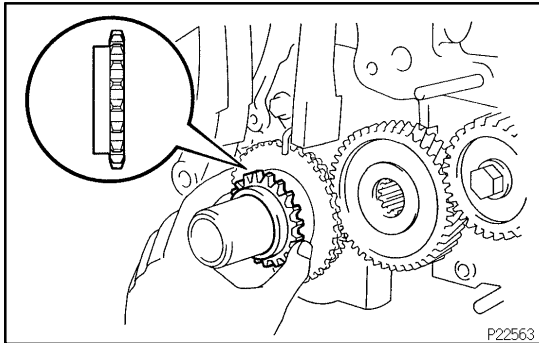
6. INSTALL CHAIN TENSIONER SLIPPER AND VIBRATION DAMPER

- (a) Install the damper with the 2 bolts.
- (b) Using a 10 mm hexagon wrench, install the slipper with the bolt.

Torque: 69 N·m (700 kgf·cm, 51 ft·lbf)



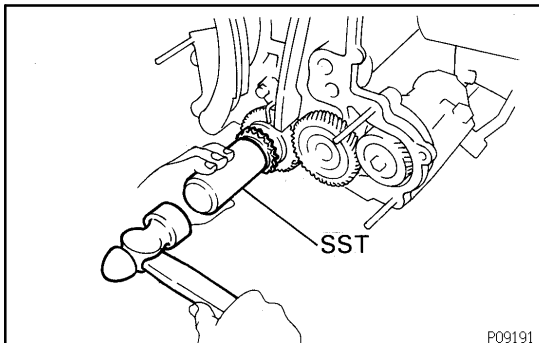
- (c) Check that the slipper moves smoothly.



7. INSTALL CRANKSHAFT TIMING GEAR

NOTICE:

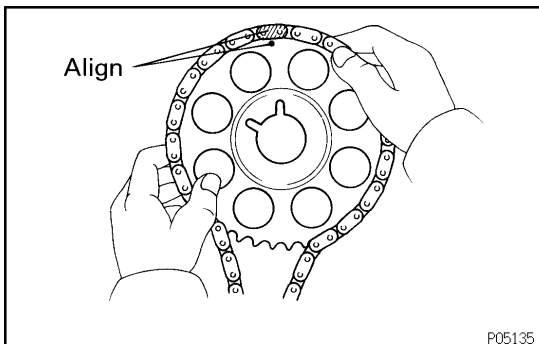
Be careful of the installation direction.



HINT:

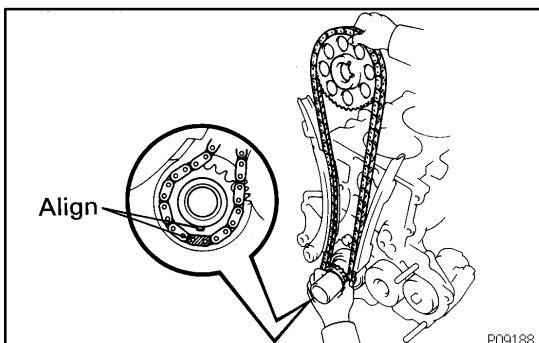
If necessary, install the gear with SST.

SST 09636-20010

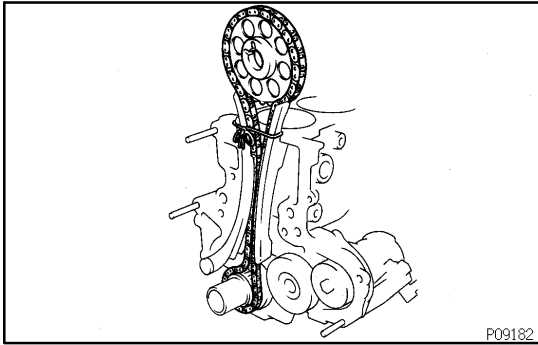


8. INSTALL TIMING CHAIN AND CAMSHAFT TIMING GEAR

- (a) Install the timing chain on the camshaft timing gear with the bright link aligned with the timing mark on the camshaft timing gear.



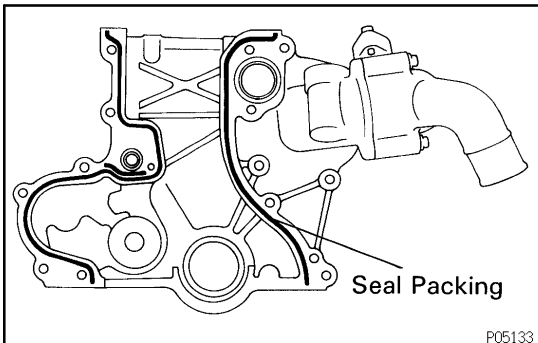
- (b) Install the timing chain on the crankshaft timing gear with the other bright link aligned with the timing mark on the crankshaft timing gear.



- (c) Tie the timing chain with a cord as shown in the illustration and make sure it doesn't come loose.

9. INSTALL TIMING CHAIN COVER

- (a) Remove any old packing (FIPG) material and be careful not to drop any oil on the contact surfaces of the timing chain cover and cylinder block.
- Using a razor blade and gasket scraper, remove all the old packing (FIPG) material from the gasket surfaces and sealing grooves.
 - Thoroughly clean all components to remove all the loose material.
 - Using a non-residue solvent, clean both sealing surfaces.



- (b) Apply seal packing to the timing chain cover as shown in the illustration.

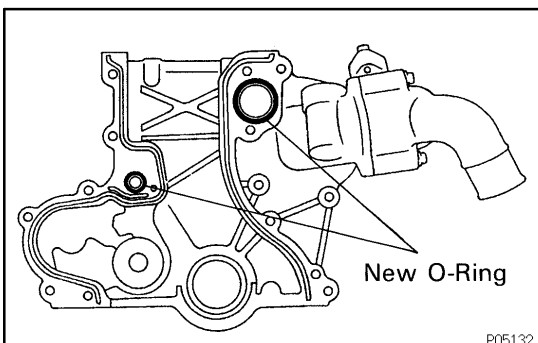
Seal packing: Part No. 08826-00080 or equivalent

- Install a nozzle that has been cut to a 2 – 3 mm (0.08 – 0.12 in.) opening.

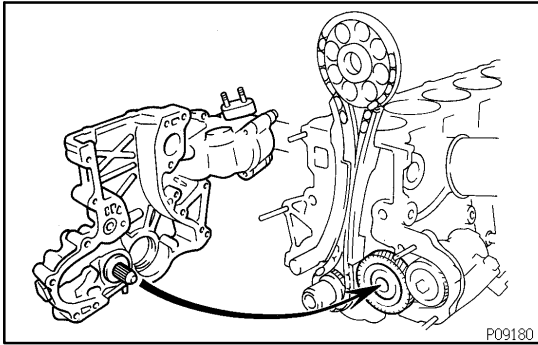
HINT:

Avoid applying an excessive amount to the surface.

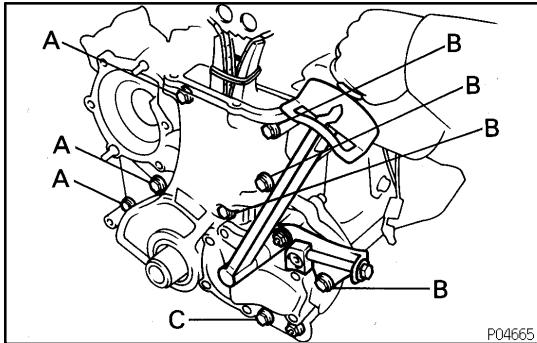
- Parts must be assembled within 5 minutes of application. Otherwise the material must be removed and reapplied.
- Immediately remove nozzle from the tube and reinstall cap.



- (c) Place 2 new O-rings in position on the timing chain cover.



- (d) Engage the gear of the oil pump drive rotor with the gear of the oil pump drive gear, and install the oil pump.



- (e) Install the oil pump and drive belt adjusting bar with the 9 bolts and 2 nuts.

Torque: 21 N·m (210 kgf·cm, 15 ft·lbf)

HINT:

Each bolt length is indicated in the illustration.

Bolt A: 30 mm (1.18 in.)

Bolt B: 50 mm (1.97 in.)

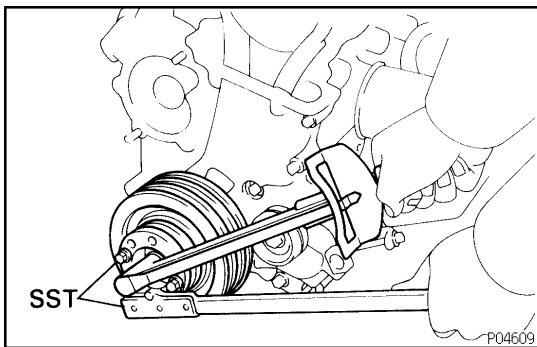
Bolt C: 60 mm (2.38 in.)

- (f) Remove the cord from the chain.

10. INSTALL DRIVE BELT IDLER PULLEY

Install the pulley with the bolt.

Torque: 43 N·m (440 kgf·cm, 32 ft·lbf)



11. INSTALL CRANKSHAFT PULLEY

- (a) Align the pulley set key with the key groove of the pulley, and slide on the pulley.

- (b) Using SST, install and torque the pulley bolt.

SST 09213-58012, 09330-00021

Torque: 412 N·m (4,200 kgf·cm, 304 ft·lbf)

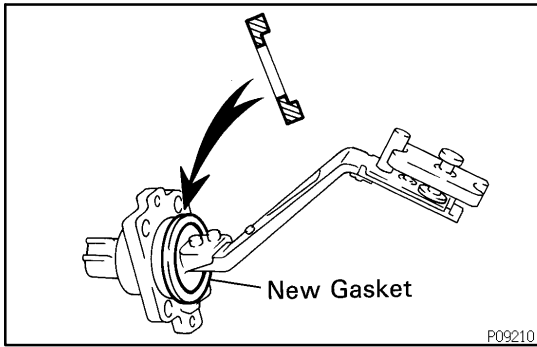
12. INSTALL NO. 1 OIL PAN (See page [LU-12](#))

13. INSTALL NO. 2 OIL PAN (See page [LU-12](#))

14. INSTALL BOLTS HOLDING NO. 1 OIL PAN TO TRANSMISSION HOUSING

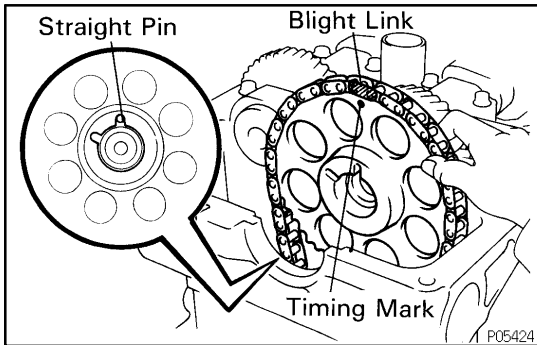
Install the 6 bolts.

Torque: 72 N·m (730 kgf·cm, 53 ft·lbf)

**15. INSTALL OIL LEVEL SENSOR**

- (a) Install a new gasket to the level sensor.
- (b) Install the level sensor with the 4 bolts.

Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)

16. CONNECT OIL COOLER PIPE BRACKET TO NO. 1 OIL PAN**17. INSTALL CYLINDER HEAD (See page [EM-54](#))****NOTICE:**

However, for the installation of the camshaft timing gear and timing chain, follow the below procedure. Align the blight link of the timing chain and camshaft timing gear mark, and install them to the camshaft.

18. INSTALL WATER PUMP

Install a new gasket and water pump with the 4 bolts and 2 nuts.

Torque: 21 N·m (210 kgf·cm, 15 ft·lbf)

19. INSTALL RADIATOR PIPE

- (a) Connect the No.2 radiator hose to the water inlet.
- (b) Install the 2 nuts holding the radiator pipe to the No.1 oil pan.

Torque: 21 N·m (210 kgf·cm, 15 ft·lbf)

20. INSTALL A/C COMPRESSOR AND BRACKET

- (a) Install the A/C compressor bracket with the 5 bolts.

Torque: 37 N·m (375 kgf·cm, 27 ft·lbf)

- (b) Install the A/C compressor with the 4 bolts.

Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)

- (c) Install and adjust the drive belt (See page [CH-2](#)).

21. INSTALL RADIATOR (See page [CO-16](#))**22. FILL ENGINE WITH OIL****23. INSTALL ENGINE UNDER COVER****24. START ENGINE AND CHECK FOR LEAKS**