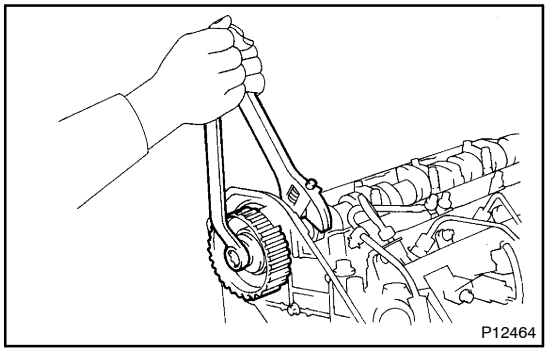
EM0RU–02

INSTALLATION



1. INSTALL NO.1 CAMSHAFT TIMING PULLEY

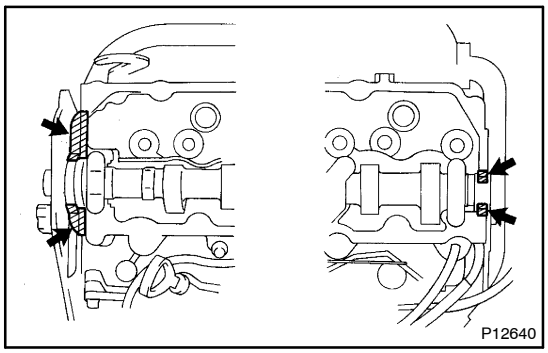
(a) Install the set key to the key groove of the camshaft.

(b) Align the pulley set key with the key groove of the No.1 camshaft timing pulley, slide the No.1 camshaft timing pulley.

(c) Temporarily install the No.1 timing pulley bolt.

(d) Hold the hexagon wrench head portion of the camshaft with a wrench, and tighten the No.1 camshaft timing pulley bolt.

Torque: 98 N·m (1,000 kgf·cm, 72 ft·lbf)

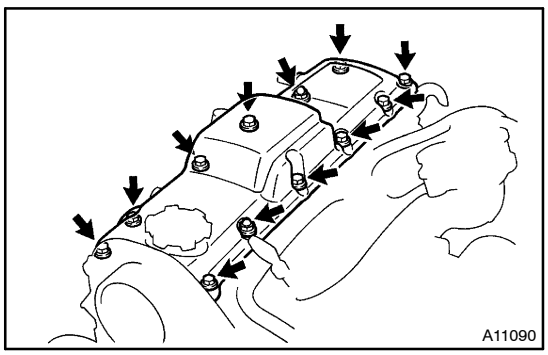


2. INSTALL CYLINDER HEAD COVER

(a) Remove any old packing (FIPG) material.

(b) Apply seal packing to the cylinder head s shown the illustration.

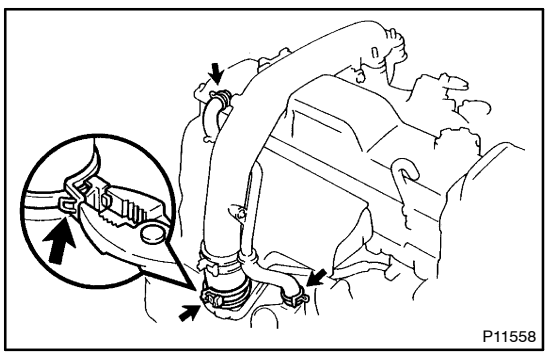
Seal packing: Part No. 08826–0080 or equivalent



(c) Install a new gasket to the cylinder head cover.

(d) Install the cylinder head cover with the 10 bolts and 2 nuts.

Torque: 9 N·m (90 kgf·cm, 78 in.·lbf)



3. INSTALL INTAKE PIPE

(a) Place a new gasket on the intake manifold.

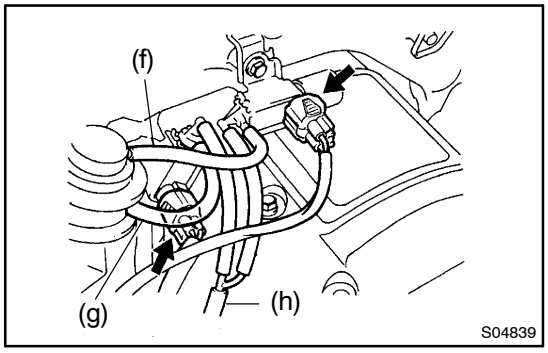
(b) Connect the air hose and install the intake pipe.

(c) Press the clamp lock together with the pliers and press down the tip of the lock plate. Carefully let the lock spread apart. Take care not to let the pliers slip.

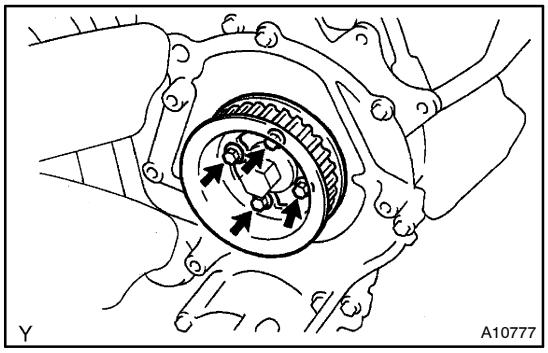
(d) Connect the 2 PCV hoses.

(e) Install the 4 seal washers and nuts.

Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)



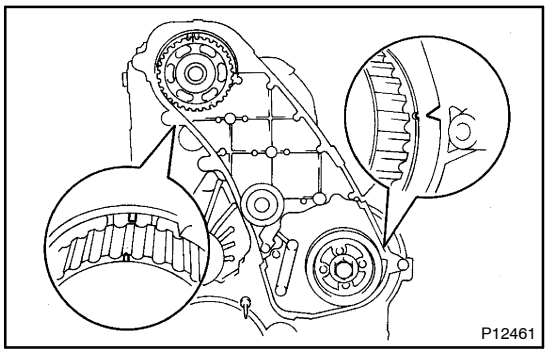
(f) Connect the vacuum hose to the acutuator of the chamber A.
(g) Connect the vacuum hose to the acutuator of the chamber B.
(h) Connect the vacuum hose to the 3–way (from vacuum pump).
(i) Connect the VSV for the No.1 and No.2 intake constrictor control connectors.



4. INSTALL NO.2 CAMSHAFT TIMING PULLEY

Align the knock pin of the injection pump drive gear with the knock pin hole of the No.2 camshaft timing pulley, install the pulley and No.2 camshaft timing pulley flanges with the 4 bolts.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

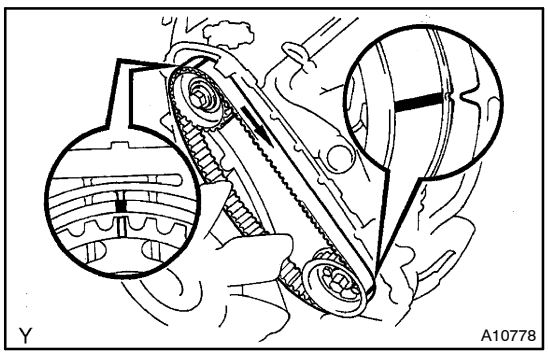


5. SET NO.4 CYLINDER TO TDC / COMPRESSION

Set the timing pulley at each position.

NOTICE:

When turning the crankshaft, the valve heads will hit against the position top. So do not turn it more than necessary.



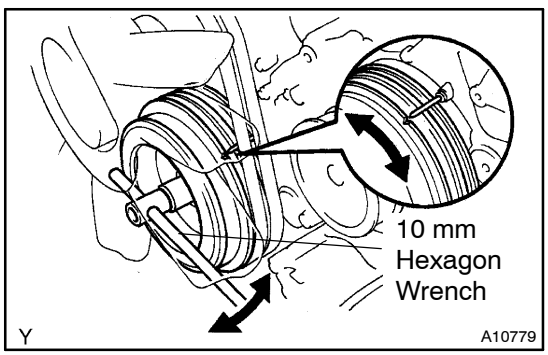
6. INSTALL TIMING BELT

NOTICE:

The engine should be cold.

HINT:

If re–using the timing belt, align the points marked during removal, and install the belt with the arrow pointing in the direction of engine revolution.



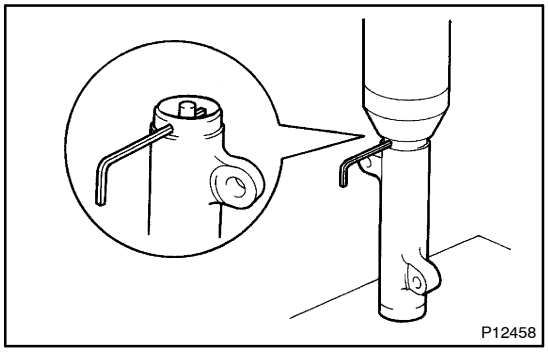
7. INSTALL TIMING BELT IDLER PULLEY

(a) Using a 10 mm hexagon wrench, install the washer and timing belt idler pulley with the bolt.

Torque: 35 N·m (350 kgf·cm, 25 ft·lbf)

(b) Check that the idler pulley moves smoothly.

If it doesn't move smoothly, check the idler pulley and washer.

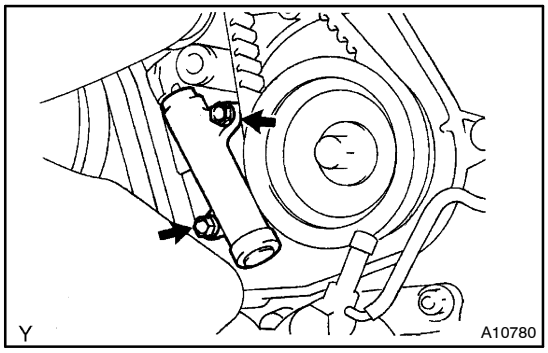


8. SET TIMING BELT TENSIONER

(a) Using a press, slowly press in the push rod using 981 – 9,807 N (100 – 1,000 kgf, 220 –2,205 lbf) of force.

(b) Align the hoses of the push rod and housing, pass a 1.5 mm hexagon wrench through the hoses to keep the setting position of the push rod.

(c) Release the press.

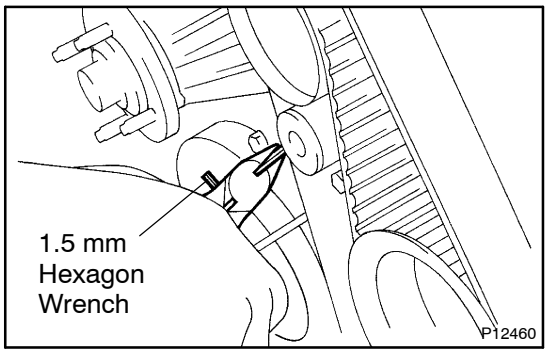


9. INSTALL TIMING BELT TENSIONER

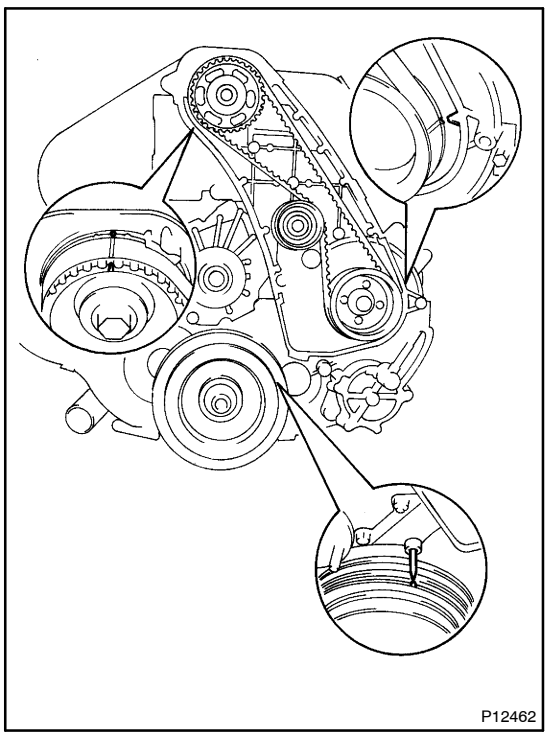
(a) Temporarily install the timing belt tensioner with the 2 bolts while pushing the idler pulley toward the timing belt.

(b) Tighten the 2 bolts.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)



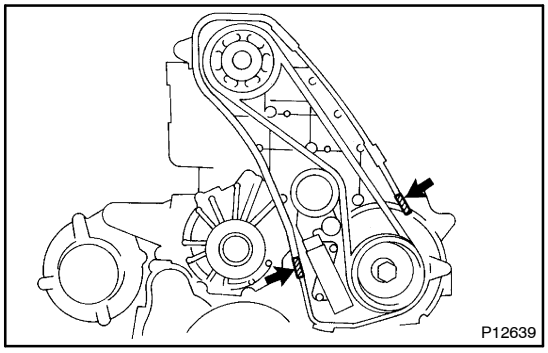
(c) Remove the 1.5 mm hexagon wrench from the tensioner.



10. CHECK VALVE TIMING

Turn the crankshaft pulley clockwise and check that each pulley aligns with the timing marks (TDC mark) as shown in the illustration.

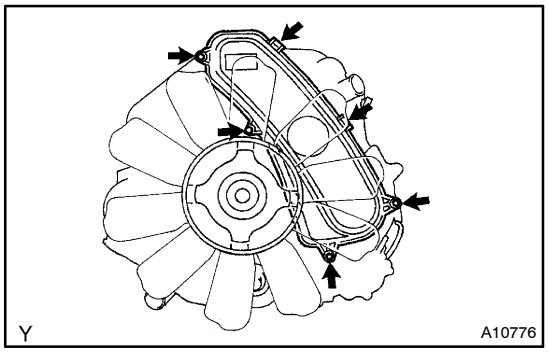
If the marks do not align, remove the timing belt and reinstall it.



11. INSTALL TIMING BELT COVER

(a) Remove any old packing (FIPG) material.

(b) Apply seal packing to the camshaft oil seal retainer and timing gear cover as shown in the illustration.
Seal packing: Part No. 08826–00080 or equivalent



(c) Install the gasket to the timing belt cover.

(d) Install the timing belt cover with the 4 seal washers, 4 bolts and 2 clips.