

## INSTALLATION

### 1. INSTALL TIMING CHAIN

- (a) After setting the crankshaft at ATDC40-140 °, set cams of intake and exhaust timing sprockets at ATDC 20 ° and then the reset the crankshaft at ATDC 20 °.
- (b) Install the chain vibration damper with the 2 bolts.  
**Torque: 9.0 N·m (92 kgf·cm, 80 in.-lbf)**
- (c) Align the match marks of timing chain mark plate (Yellow), camshaft timing sprocket, camshaft timing gear and crankshaft timing sprocket to install the timing chain as shown in the illustration.

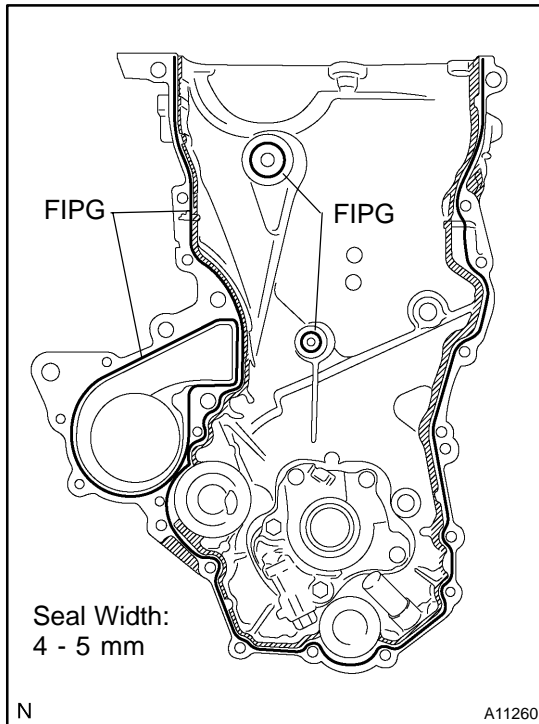
#### HINT:

To prevent the exhaust camshaft from spring back turn it using a wrench and set it at the mark on a chain.

- (d) Install the chain tensioner slipper.

### 2. INSTALL CHAIN TENSIONER

- (a) While rotating the lock plate of the tensioner up-ward, push in the plunger of the tensioner as shown in the illustration.
- (b) While rotating the lock plate of the tensioner down-ward, insert a bar of 2.5 mm (0.098 in.) into the holes in the lock plate.
- (c) Install the chain tensioner with the 2 bolts.  
**Torque: 9.0 N·m (92 kgf·cm, 80 in.-lbf)**
- (d) Remove the bar from the chain tensioner.
- (e) Check that the tension between the intake and exhaust camshaft timing sprocket.



### 3. INSTALL TIMING CHAIN COVER AND WATER PUMP

- (a) Remove any old packing (FIPG) material and be careful not to drop any oil on the contact surfaces of the timing chain cover, cylinder head and cylinder block.
- Using a razor blade and a 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:

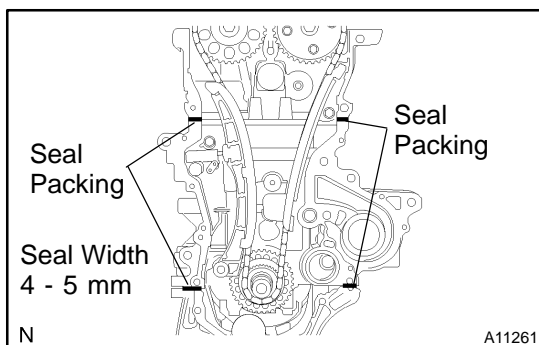
##### Part No. 08826 - 00100 or equivalent

- Install a nozzle that has been cut to a 4 - 5 mm (0.16 - 0.20 in.) opening.
- FIPG shall be accumulated in the groove for FIPG to a depth of 2.5 mm (0.10 in.) or more.

#### HINT:

Avoid applying an excessive amount to the surface.

- Parts must be assembled within 3 minutes of application. Otherwise the material must be removed and reapplied.
- Immediately remove nozzle from the tube and re-install cap.



- (c) Apply seal packing to 4 locations as shown in the illustration.

#### Seal packing:

##### Part No. 08826 - 00080 or equivalent

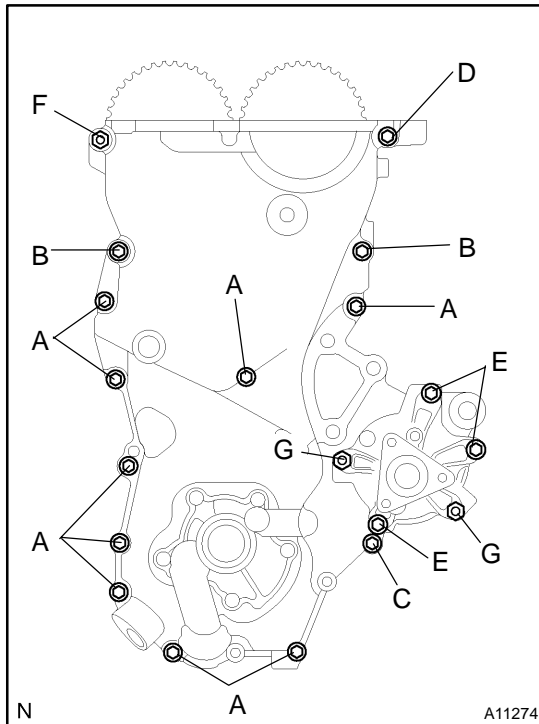
- Install a nozzle that has been cut to a 4 - 5 mm (0.16 - 0.20 in.) opening.

#### HINT:

Avoid applying an excessive amount to the surface.

- Parts must be assembled within 3 minutes of application. Otherwise the material must be removed and reapplied.
- Immediately remove nozzle from the tube and re-install cap.

- (d) Install 2 new O-rings to the cylinder block and oil pan No. 1.



- (e) Install the timing chain cover, new O-ring and water pump with the 16 bolts and 3 nuts. Uniformly tighten the bolts and nut in several passes.

**Torque:**

- Bolt A 11 N·m (113 kgf·cm, 8 ft·lbf)**  
**Bolt B 24 N·m (245 kgf·cm, 18 ft·lbf)**  
**Bolt C 11 N·m (113 kgf·cm, 8 ft·lbf)**  
**Bolt D 24 N·m (245 kgf·cm, 18 ft·lbf)**  
**Bolt E 11 N·m (113 kgf·cm, 8 ft·lbf)**  
**Nut F 24 N·m (245 kgf·cm, 18 ft·lbf)**  
**Nut G 11 N·m (113 kgf·cm, 8 ft·lbf)**

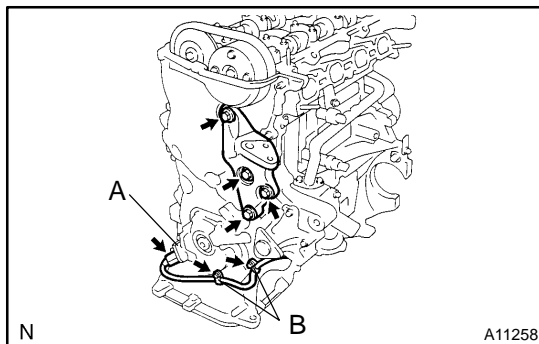
**NOTICE:**

- Pay attention not to wrap the chain and slipper over the chain cover seal line.
- After installing the chain cover, must install the mounting bracket and water pump within 15 minutes.

**HINT:**

Each bolt length in indicated in the illustration.

- A 20 mm (0.787 in.)  
 B 30 mm (1.181 in.)  
 C 35 mm (1.378 in.)  
 D 20 - 14 mm (0.787 - 0.551 in.)  
 E 35 mm (1.378 in.)

**4. INSTALL RH ENGINE MOUNTING BRACKET**

- (a) Apply seal packing to threads of the mounting bolt.

**Seal packing:**

**Part No. 08826 - 00080 or equivalent**

**HINT:**

Do not apply seal packing to 2 or 3 threads of the bolt end.

- (b) Install the mounting bracket with the 4 bolts.

**Torque: 55 N·m (561 kgf·cm, 41 ft·lbf)**

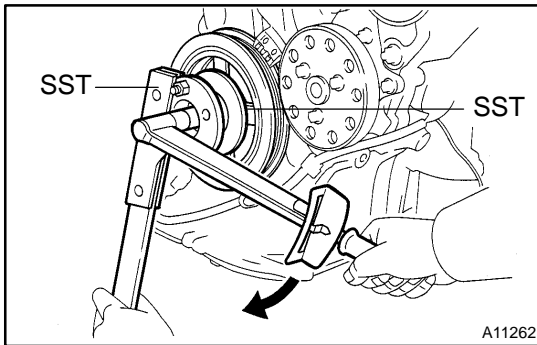
**5. INSTALL CRANKSHAFT POSITION SENSOR****Torque:**

**Bolt A 7.5 N·m (76 kgf·cm, 66 in.-lbf)**

**Bolt B 11 N·m (113 kgf·cm, 8 ft·lbf)**

- 6. INSTALL OIL CONTROL VALVE (See page [EM-44](#) )**

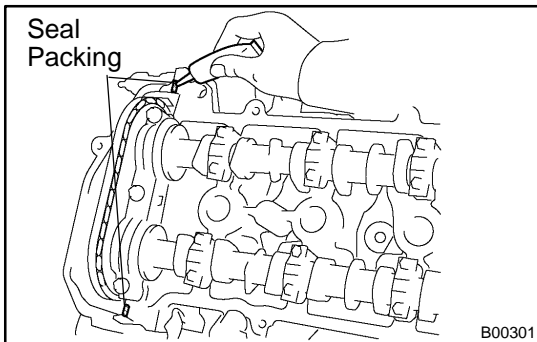
**Torque: 8.0 N·m (82 kgf·cm, 71 in.-lbf)**

**7. INSTALL CRANKSHAFT PULLEY**

- (a) Clean the crankshaft pulley inside.
- (b) Install the pin to the crankshaft.
- (c) Align the hole in the crank pulley with the pin position and install the crank pulley.
- (d) Using SST, install the pulley bolt.

SST 09213-70010, 09330-00021

**Torque: 128 N·m (1,300 kgf·cm, 94 ft·lbf)**

**8. INSTALL CYLINDER HEAD COVER**

- (a) Remove any old packing (FIPG) material.
- (b) Apply seal packing to 2 locations as shown in the illustration.

**Seal packing:**

**Part No. 08826 - 00080 or equivalent**

- (c) Install the gasket to the cylinder head cover.

**HINT:**

Part must be assembled within 3 minutes of application.

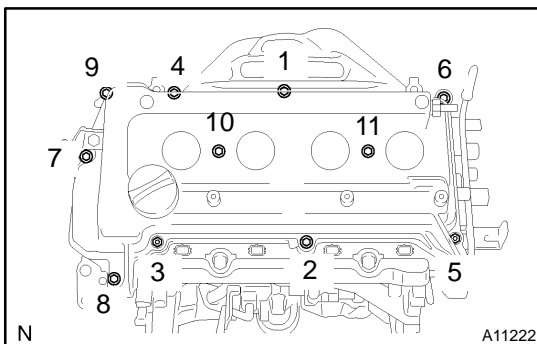
Otherwise the material must be removed and reapplied.

- (d) Install the cylinder head cover and cable bracket with the 7 bolts, 2 seal washers and 2 nuts.

Uniformly tighten the bolts and nuts, in the several passes, in the sequence shown.

**Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)**

- (e) Connect the 2 PCV hoses to the cylinder head cover.
- (f) Install the ignition coil (See page [IG-7](#)).

**9. INSTALL RH ENGINE MOUNTING INSULATOR**

- (a) Install the RH engine mounting insulator with the 5 bolts and nut.

**Torque:**

**Bolt A 45 N·m (459 kgf·cm, 33 ft·lbf)**

**Bolt B and nut 52 N·m (530 kgf·cm, 38 ft·lbf)**

- (b) w/ A/C:  
Install the liquid tube with the bolt.

**10. INSTALL PS PUMP (See page [SR-32](#))****11. INSTALL GENERATOR AND DRIVE BELT (See page [CH-17](#))****12. INSTALL RH ENGINE UNDER COVER****13. INSTALL RH FRONT WHEEL****14. FILL WITH ENGINE COOLANT****15. START ENGINE AND CHECK FOR COOLANT LEAKS**