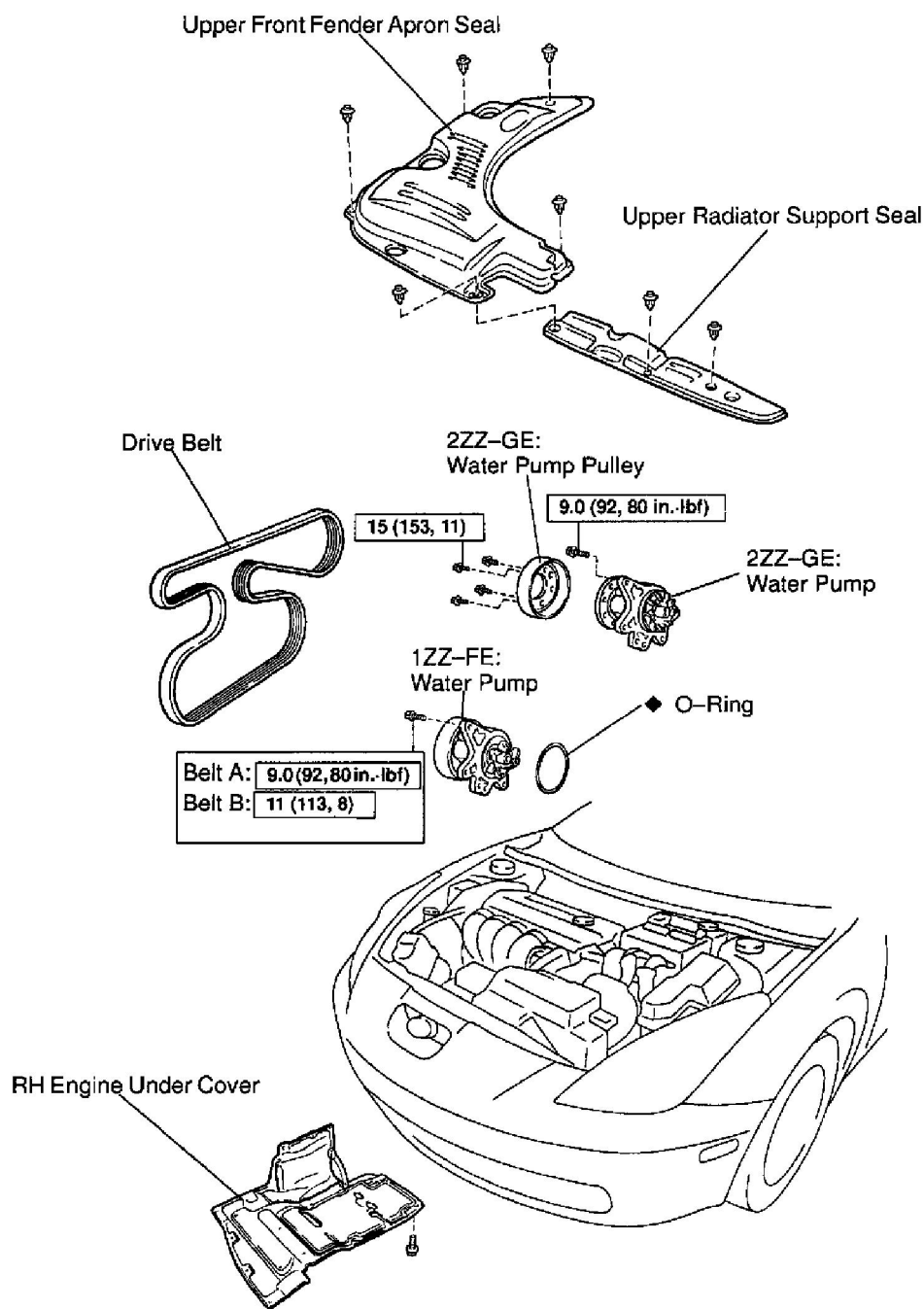


Water Pump: Service and Repair

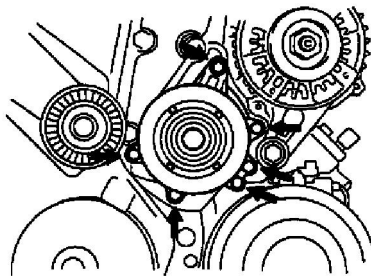


N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

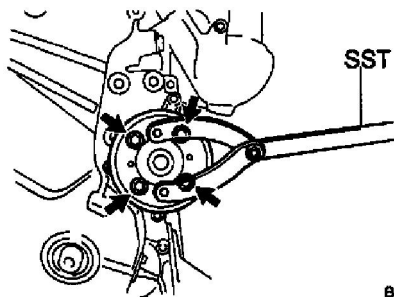
REMOVAL

1. REMOVE RIGHT-HAND ENGINE UNDER COVER
2. DRAIN ENGINE COOLANT
3. REMOVE DRIVE BELT



4. 1ZZ-FE: REMOVE WATER PUMP

- Remove the 6 bolts, water pump and O-ring.
- Clean up the engine coolant from the water chamber room.



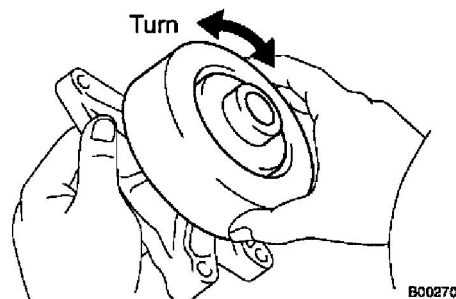
5. 2ZZ-GE: REMOVE WATER PUMP

- Using Special Service Tool (SST), remove the 4 water pump pulley set bolts. (SST) 09960-10010 (09962-01000, 09963-00600)
- Remove the water pump pulley.
- Remove the 6 bolts, water pump and O-ring.
- Clean up the engine coolant from the water chamber room.

NOTICE: Do not remove the Right-Hand engine mounting bracket and generator when the water pump alone is replaced.

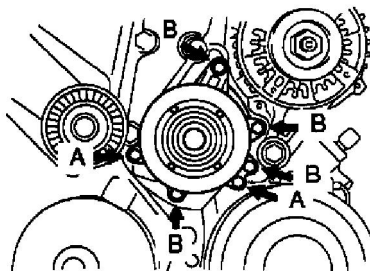
INSPECTION

Inspect Water Pump



- Visually check the drain hole for coolant leakage. If leakage is found, replace the water pump.
- Turn the pulley, and check that the water pump bearing moves smoothly and quietly. If necessary, replace the water pump.

INSTALLATION



1. 1ZZ-FE: INSTALL WATER PUMP

- a. Place a new O-ring on the timing chain cover.
- b. Install the water pump with the 6 bolts.

Torque:

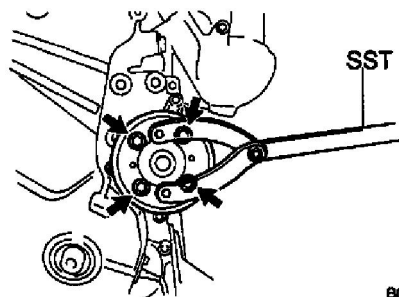
Bolt A: **9.0 Nm (92 kgf-cm, 80 inch lbs.)**

Bolt B: **11 Nm (113 kgf-cm, 8 ft. lbs.)**

HINT: Each bolt length is indicated in the illustration.

A: **30 mm (1.18 inch)**

B: **35 mm (1.38 inch)**

**2. 2ZZ-GE: INSTALL WATER PUMP**

- a. Place a new O-ring on the timing chain cover.
- b. Install the water pump with the 6 bolts.

Torque: **9.0 Nm (92 kgf-cm, 80 inch lbs.)**

HINT: Each bolt length is indicated in the illustration.

A: **30 mm (1.18 inch)**

B: **35 mm (1.38 inch)**

- c. Install the water pump pulley.
- d. Using Special Service Tool (SST), tighten the 4 water pump pulley set bolts.
(SST) 09960-10010 (09962-01000, 09963-00600)

Torque: **15 Nm (153 kgf-cm, 11 ft. lbs.)**

3. INSTALL RIGHT-HAND ENGINE UNDER COVER**4. INSTALL DRIVE BELT****5. FILL WITH ENGINE COOLANT****6. START ENGINE AND CHECK FOR LEAKS****7. RECHECK ENGINE COOLANT LEVEL**