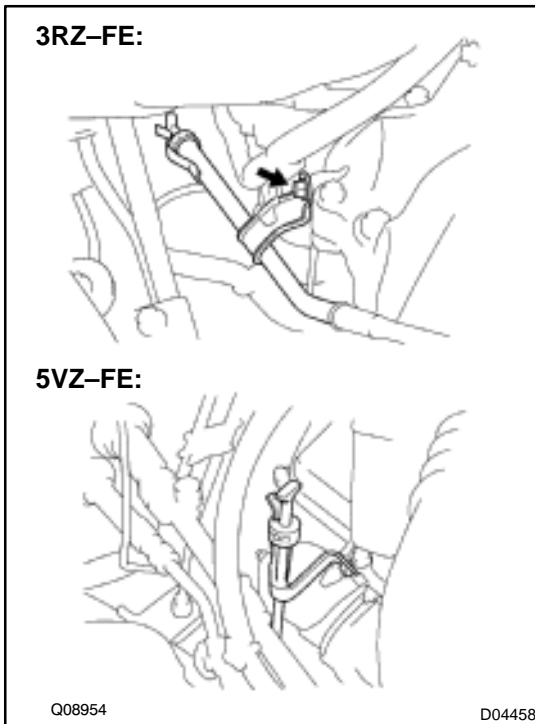


## REMOVAL

### 1. DISCONNECT THROTTLE CABLE

- Loosen the 2 nuts and disconnect the throttle cable.
- Disconnect the throttle cable from cable clamps in the engine compartment.

### 2. REMOVE ATF LEVEL GAUGE



### 3. REMOVE OIL FILLER PIPE

Remove the bolt and oil filler pipe with the O-ring.

**Torque: 12 N·m (120 kgf-cm, 9 ft-lbf)**

#### HINT:

At the time of installation, please refer to the following item.  
Replace the used O-ring with a new one.

### 4. REMOVE ENGINE UNDER COVER

**Torque: 29 N·m (296 kgf-cm, 21 ft-lbf)**

### 5. REMOVE PROPELLER SHAFT (See page [PR-2](#))

### 6. REMOVE FRONT EXHAUST PIPE

(See page 3RZ-FE: EM-117, 5VZ-FE: EM-107)

### 7. DISCONNECT OIL COOLER PIPE

- Loosen the 2 oil cooler pipe unions.  
**Torque: 34 N·m (350 kgf-cm, 25 ft-lbf)**
- Remove the 3 oil cooler clamp set bolts and disconnect the 2 oil cooler pipes.  
**Torque: 4.9 N·m (50 kgf-cm, 43 in.-lbf)**



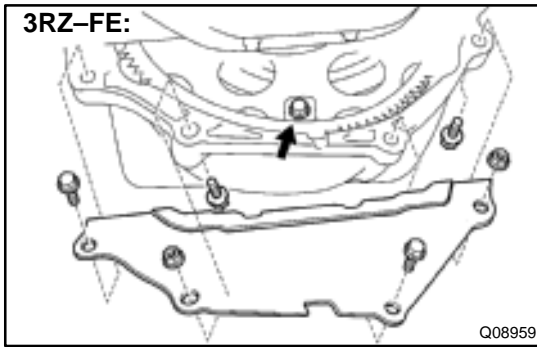
### 8. DISCONNECT SHIFT CONTROL ROD FROM SHIFT LEVER

Remove the nut and washer, and disconnect the shift control rod.

**Torque: 13 N·m (130 kgf-cm, 10 ft-lbf)**

### 9. DISCONNECT CONNECTOR FROM TRANSMISSION

- Disconnect the No.1 vehicle speed sensor connector (3RZ-FE only).
- Disconnect the No.2 vehicle speed sensor connector.
- Disconnect the solenoid wire connector.
- Disconnect the ATF temperature sensor connector.
- Disconnect the park/neutral position switch connector.

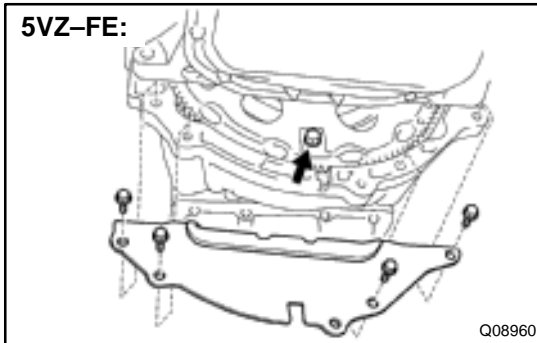


**10. REMOVE REAR END PLATE AND TORQUE CONVERTER CLUTCH MOUNTING BOLT**

(a) **3RZ-FE:**

Remove the 2 nuts, 4 bolts and rear end plate.

**Torque: 37 N·m (380 kgf-cm, 27 ft-lbf)**



(b) **5VZ-FE:**

Remove the 4 bolts and rear end plate.

**Torque: 18 N·m (185 kgf-cm, 13 ft-lbf)**

(c) Turn the crankshaft to gain access and remove the 6 bolts with holding the crankshaft pulley set bolt by a wrench.

**Torque: 41 N·m (420 kgf-cm, 30 ft-lbf)**

**HINT:**

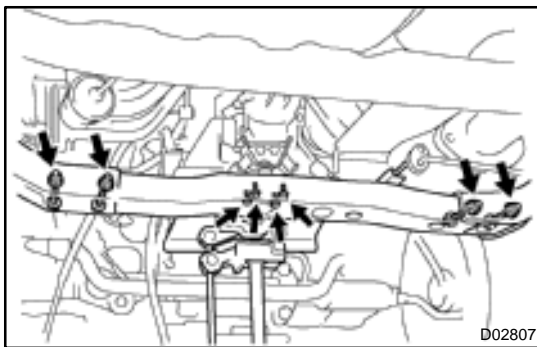
At the time of installation, please refer to the following item.  
First install green colored bolt and then 5 other bolts.

**11. JACK UP TRANSMISSION SLIGHTLY**

Securely support the transmission on a transmission jack. Lift the transmission slightly from the crossmember.

**12. REMOVE CROSSMEMBER**

(a) Disconnect the crossmember from the O-ring.

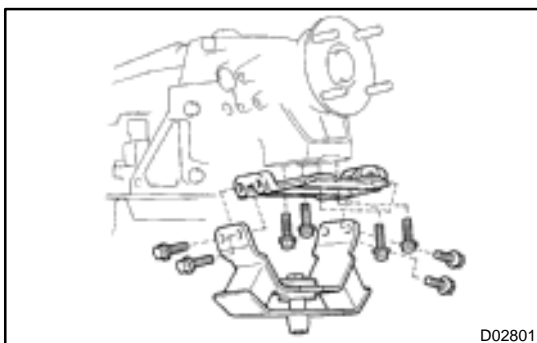


(b) Remove the 4 bolts on the rear mounting side from the engine rear mounting insulator.

**Torque: 18.5 N·m (189 kgf-cm, 14 ft-lbf)**

(c) Remove the 4 nuts, bolts, washers and crossmember.

**Torque: 72 N·m (734 kgf-cm, 53 ft-lbf)**



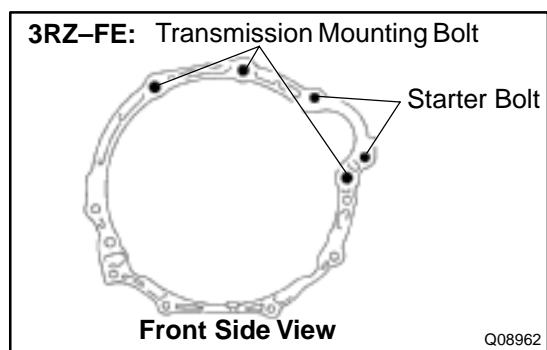
**13. REMOVE ENGINE REAR MOUNTING INSULATOR AND ENGINE MOUNTING SPACER**

(a) Remove the 4 bolts and engine rear mounting insulator from the engine mounting spacer.

**Torque: 65 N·m (660 kgf-cm, 48 ft-lbf)**

(b) Remove the 4 bolts and engine mounting spacer from the transmission.

**Torque: 28.5 N·m (291 kgf-cm, 21 ft-lbf)**

**14. REMOVE STARTER**

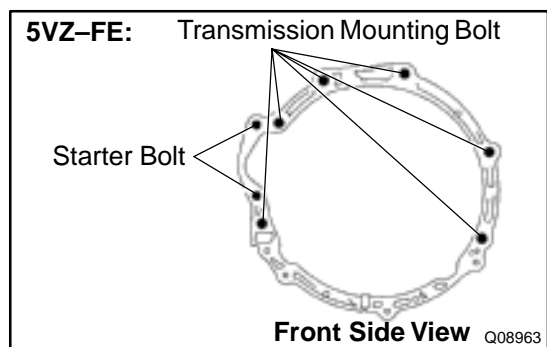
- (a) Remove the nut and disconnect the starter wire and connector.
- (b) Remove the 2 bolts and starter.

**Torque: 39 N·m (400 kgf-cm, 29 ft-lbf)**

**15. REMOVE TRANSMISSION**

- (a) 3RZ-FE:  
Remove the 3 bolts and transmission.

**Torque: 71 N·m (730 kgf-cm, 53 ft-lbf)**



- (b) 5VZ-FE:  
Remove the 6 bolts and transmission.

**Torque: 71 N·m (730 kgf-cm, 53 ft-lbf)**