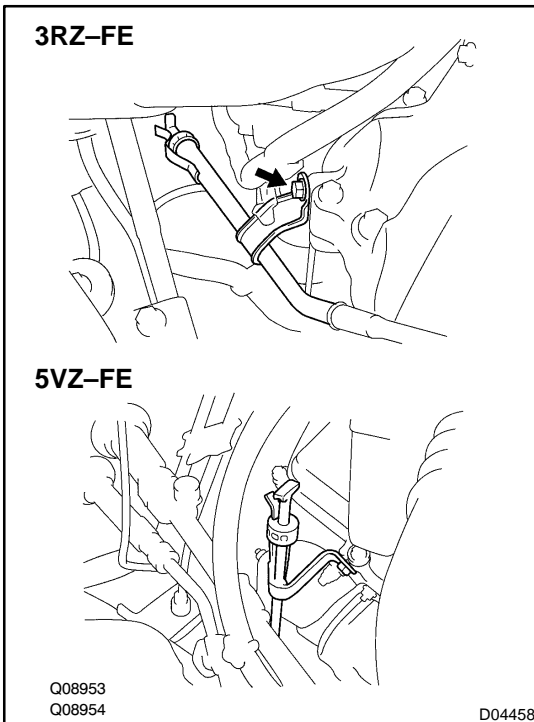


REMOVAL

1. **3RZ-FE:**
DISCONNECT THROTTLE CABLE
 - (a) Loosen the 2 nuts and disconnect the throttle cable.
 - (b) 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, 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-108](#), 5VZ-FE: [EM-105](#))

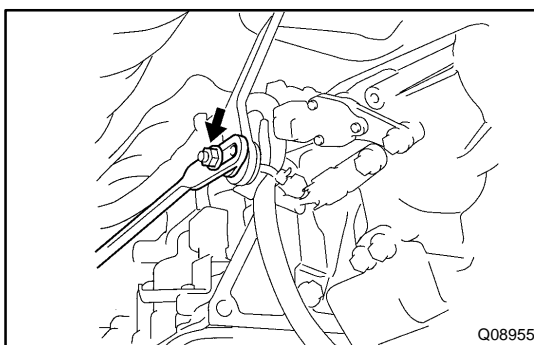
7. **DISCONNECT OIL COOLER PIPE**

- (a) Loosen the 2 oil cooler pipe unions.

Torque: 34 N·m (350 kgf·cm, 25 ft·lbf)

- (b) 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)



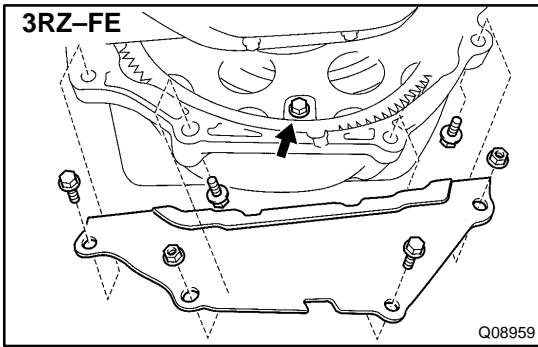
8. **DISCONNECT SHIFT CONTROL ROD FROM SHIFT LEVER**

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

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

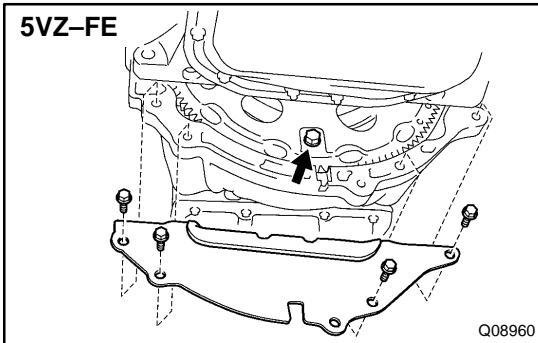
9. **DISCONNECT CONNECTOR FROM TRANSMISSION**

- (a) Disconnect the No.1 vehicle speed sensor connector (3RZ-FE only).
- (b) Disconnect the No.2 vehicle speed sensor connector.
- (c) Disconnect the solenoid wire connector.
- (d) Disconnect the ATF temperature sensor connector.
- (e) Disconnect the park/neutral position switch connector.
- (f) Separate wire harness from transmission.



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:

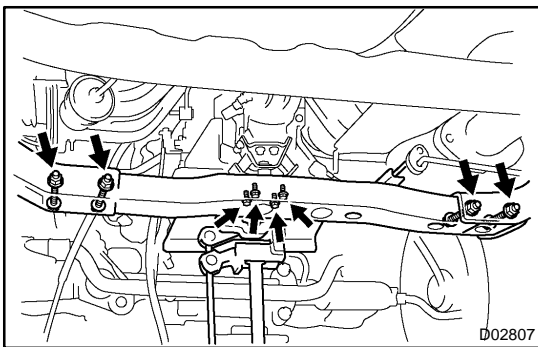
At the time of installation, first install green colored bolt and then 5 other bolts.

11. JACK UP TRANSMISSION SLIGHTLY

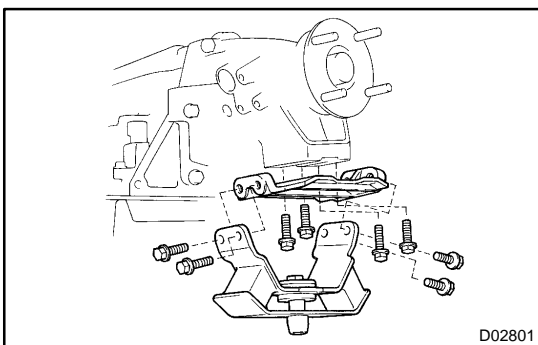
Securely support the transmission on a transmission jack. Lift the transmission slightly from the crossmember.

12. REMOVE CROSSMEMBER

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

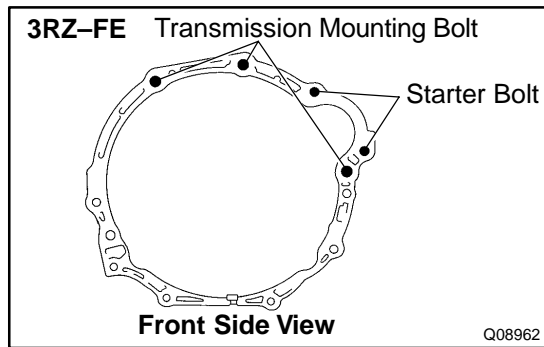


- (b) Remove the 4 bolts on the rear mounting side from the engine rear mounting insulator.
Torque: 18.5 N·m (189 kgf-cm, 14 ft-lbf)
- (c) Remove the 4 nuts, bolts, washers and crossmember.
Torque: 72 N·m (734 kgf-cm, 53 ft-lbf)



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**

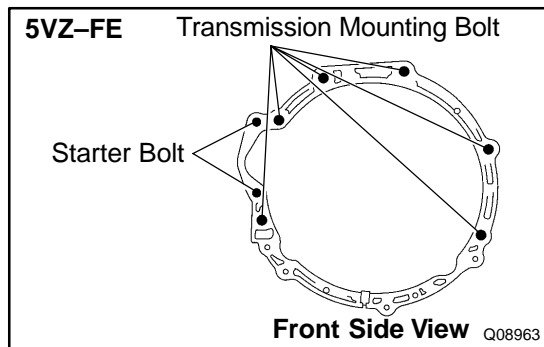
- (a) Remove the nut and disconnect the starter wire and connector.
- (b) Remove the 2 bolts and starter.

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)