

REMOVAL

1. REMOVE HOOD

HINT:

At the time of installation, please refer to the following item.

Adjust the hood. ([See page BO-9](#))

2. REMOVE NO. 2 CYLINDER HEAD COVER

(a) 1ZZ-FE engine:

Remove the 2 nut caps, clips and No. 2 cylinder head cover.

Torque: 7.0 N·m (71 kgf·cm, 62 in·lbf)

(b) 2ZZ-GE engine:

Remove the 4 bolts and No. 2 cylinder head cover.

Torque: 7.0 N·m (71 kgf·cm, 62 in·lbf)

3. DISCONNECT RADIATOR RESERVOIR

Remove the bolt and disconnect the radiator reservoir.

Torque: 4.9 N·m (50 kgf·cm, 43 in·lbf)

4. REMOVE BATTERY

5. REMOVE AIR CLEANER CASE ASSEMBLY WITH AIR HOSE AND ECM BOX

(a) Remove the 2 bolts and ECM cover.

Torque: 6.9 N·m (70 kgf·cm, 61 in·lbf)

(b) Disconnect the ECM connectors from the ECM.

(c) Remove the ECM outlet duct.

(d) Remove the air cleaner case assembly with the air hose.

(e) Remove the 3 bolts and ECM box.

Torque: 6.9 N·m (70 kgf·cm, 61 in·lbf)

(f) Disconnect the wire harness, and remove the 2 nuts, bolt and battery carrier.

Torque:

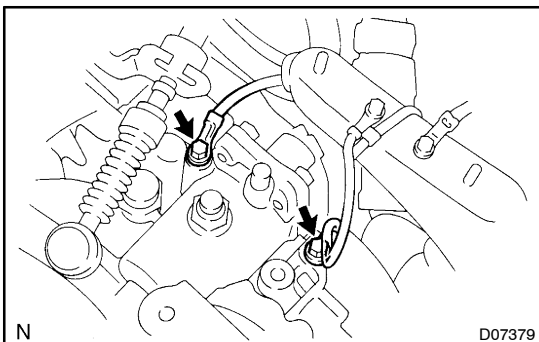
Bolt: 18 N·m (185 kgf·cm, 13 ft·lbf)

Nut: 12 N·m (120 kgf·cm, 9 ft·lbf)

6. DISCONNECT CONTROL CABLE

(a) Remove the 2 clips and washers.

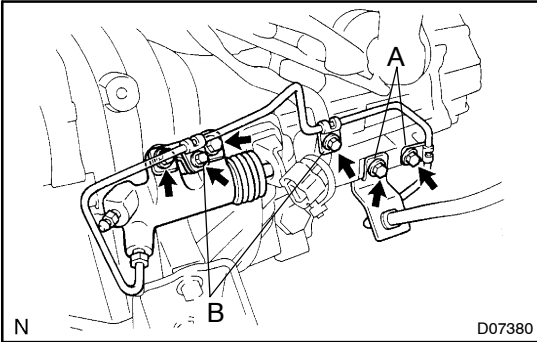
(b) Remove the 2 clips and disconnect the control cables from the transaxle.



7. DISCONNECT GROUND CABLE

Remove the 2 set bolts of the 2 ground cables from the transaxle.

8. DISCONNECT SPEED SENSOR AND BACK-UP LIGHT SWITCH CONNECTORS

**9. DISCONNECT CLUTCH RELEASE CYLINDER**

- (a) Remove the 4 set bolts of the clutch line.

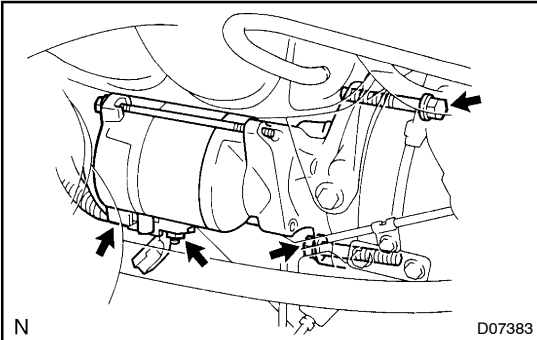
Torque:

Bolt A: 12 N·m (120 kgf·cm, 9 ft·lbf)

Bolt B: 4.9 N·m (50 kgf·cm, 43 in·lbf)

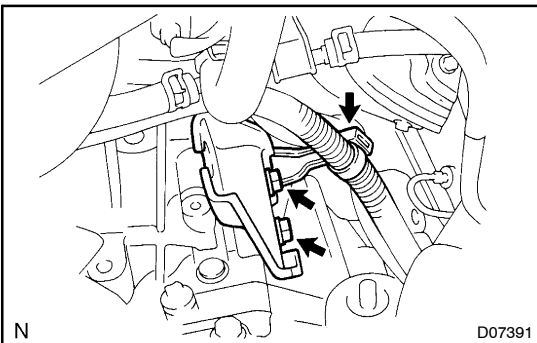
- (b) Remove the 2 set bolts of the clutch release cylinder and clutch line bracket.

Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)

**10. REMOVE STARTER**

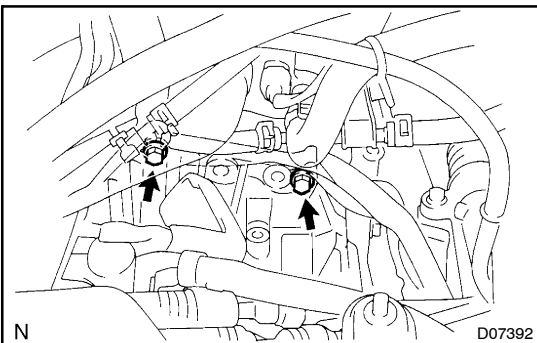
- (a) Disconnect the starter connector.
(b) Remove the nut and disconnect the starter wire.
(c) Remove the 2 bolts and starter.

Torque: 37 N·m (378 kgf·cm, 28 ft·lbf)

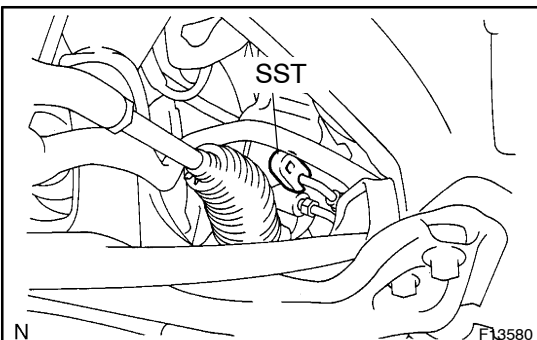
**11. REMOVE CONTROL CABLE BRACKET**

- (a) Disconnect the wire harness from the clamp.
(b) Remove the 2 bolts, clamp and control cable bracket from the transaxle.

Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)

**12. REMOVE 2 TRANSAXLE UPPER SIDE MOUNTING BOLTS**

Torque: 64 N·m (650 kgf·cm, 47 ft·lbf)

13. DISCONNECT RH AND LH TIE ROD ENDS (See page SA-12)**14. DISCONNECT NO. 2 INTERMEDIATE SHAFT ASSEMBLY (See page SR-11)****15. DISCONNECT PRESSURE FEED AND RETURN TUBES**

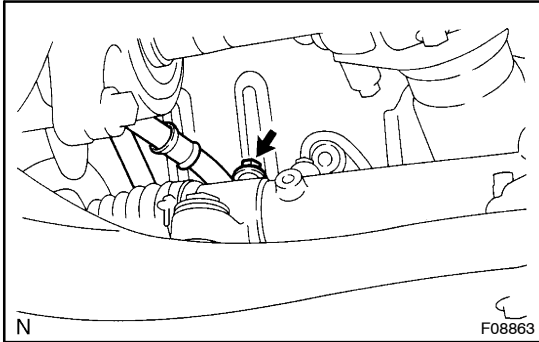
Using SST, disconnect the pressure feed and return tubes.

SST 09023-38400

Torque: 40 N·m (410 kgf·cm, 30 ft·lbf)

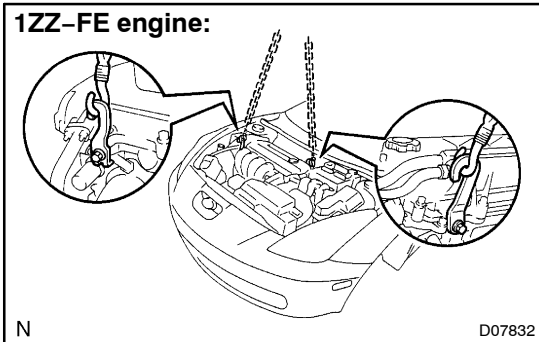
HINT:

- Use torque wrench with a fulcrum length of 345 mm (13.58 in.).
- This torque value is effective in case that SST is parallel to a torque wrench.

**16. DISCONNECT TUBE CLAMP**

Remove the bolt and disconnect the tube clamp.

Torque: 7.8 N·m (80 kgf·cm, 69 in·lbf)

**17. ATTACH ENGINE SLING DEVICE TO ENGINE HANGER**

(a) Disconnect the 2 PCV hoses.

(b) 1ZZ-FE engine:

Install the No. 1 and No. 2 engine hangers in the correct direction.

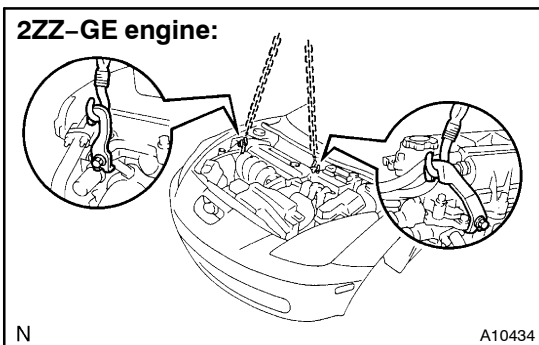
Parts No.:

No. 1 engine hanger: 12281-22021

No. 2 engine hanger: 12281-15040 or 12281-15050

Bolt: 91512-B1016

Torque: 38 N·m (387 kgf·cm, 28 ft·lbf)



(c) 2ZZ-GE engine:

Install the No. 1 and No. 2 engine hangers in the correct direction.

Parts No.:

No. 1 engine hanger: 12281-88600

No. 2 engine hanger: 12282-88600

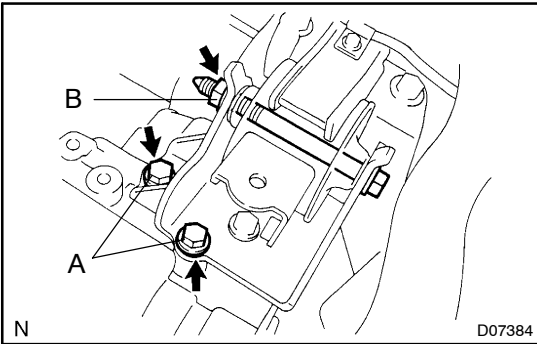
Bolt: 91512-61020

Torque: 38 N·m (387 kgf·cm, 28 ft·lbf)

(d) Attach the engine chain hoist to the engine hangers.

CAUTION:

Do not attempt to hang the engine by hooking the chain to any other part.

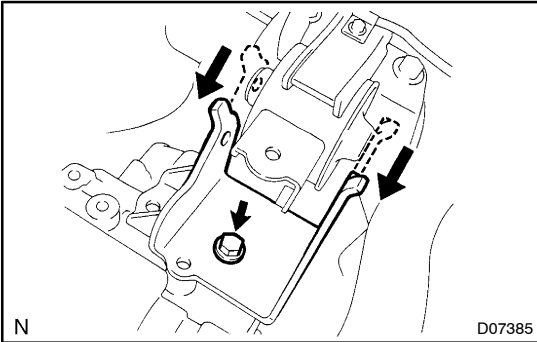


18. REMOVE ENGINE LEFT MOUNTING BRACKET 3 SET BOLTS AND NUT

Torque:

Bolt A: 60 N·m (610 kgf·cm, 44 ft·lbf)

Nut B: 80 N·m (820 kgf·cm, 59 ft·lbf)



19. REMOVE ENGINE LEFT MOUNTING BRACKET

Lower the transaxle side, and remove the bolt and engine left mounting bracket.

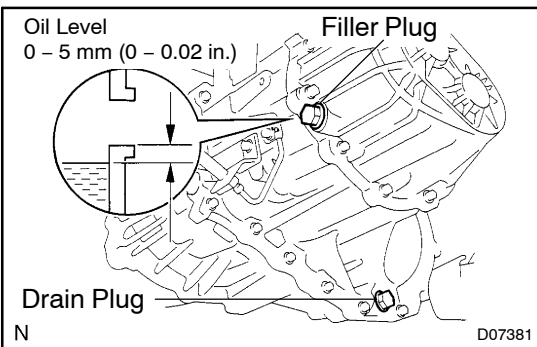
Torque: 60 N·m (610 kgf·cm, 44 ft·lbf)

20. RAISE VEHICLE

CAUTION:

Make sure that the vehicle is securely supported.

21. REMOVE CENTER, LH AND RH ENGINE UNDER COVERS



22. DRAIN TRANSAXLE OIL

Oil grade: API GL-4 or GL-5

Viscosity: SAE 75W-90

Capacity: 2.3 liters (2.4 US qts, 2.0 Imp. qts)

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

23. REMOVE LH AND RH FRONT DRIVE SHAFTS

(See page SA-18)

24. REMOVE FRONT EXHAUST PIPE

(a) Europe:

Disconnect the 2 heated oxygen sensors.

Torque: 44 N·m (450 kgf·cm, 33 ft·lbf)

(b) Australia:

Disconnect the heated oxygen sensor.

Torque: 44 N·m (450 kgf·cm, 33 ft·lbf)

HINT:

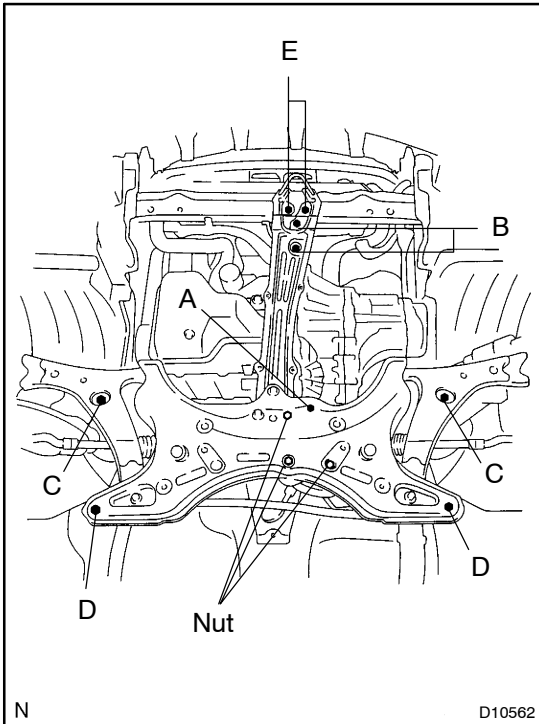
At the time of installation, please refer to the following items.

- Before installing the heated oxygen sensor, twist the sensor wire counterclockwise 3 and 1/2 turns.
- After installing the heated oxygen sensor, check that the sensor wire is not twisted. If it is twisted, remove the heated oxygen sensor and reinstall it.
- (c) Remove the 4 bolts, compression springs and 2 gaskets.
Torque: 43 N·m (440 kgf·cm, 32 ft·lbf)
- (d) Disconnect the front exhaust pipe from the pipe supports and remove it.

25. DISCONNECT LOWER BALL JOINT FROM LOWER SUSPENSION ARM (See page SA-42)

26. DISCONNECT STABILIZER BAR LINK

- (a) Remove the nut and disconnect the stabilizer bar link.
Torque: 44 N·m (450 kgf·cm, 33 ft·lbf)
- (b) Employ the same manner described above to the other side.

**27. DISCONNECT ENGINE REAR MOUNT INSULATOR AND FRONT SUSPENSION MEMBER**

Remove the bolt (bolt A) and 3 nuts, and disconnect the engine rear mount insulator and front suspension member.

Torque: 52 N·m (530 kgf·cm, 38 ft·lbf)

28. DISCONNECT ENGINE FRONT MOUNT INSULATOR AND FRONT SUSPENSION MEMBER

Remove the 2 bolts (bolt B) and disconnect the engine front mount insulator and front suspension member.

Torque: 52 N·m (530 kgf·cm, 38 ft·lbf)

29. SUPPORT FRONT SUSPENSION MEMBER WITH LOWER SUSPENSION ARM

Using a transmission jack, support the front suspension member with lower suspension arm.

30. REMOVE FRONT SUSPENSION MEMBER WITH LOWER SUSPENSION ARM AND PS GEAR ASSEMBLY

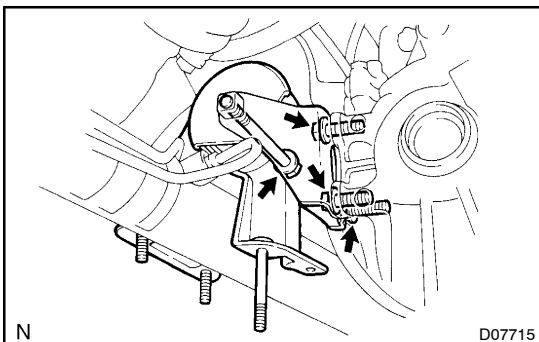
Remove the 6 bolts (bolt C, D and E) and front suspension member with lower suspension arm and PS gear assembly.

Torque:

Bolt C: 157 N·m (1,600 kgf·cm, 116 ft·lbf)

Bolt D: 157 N·m (1,600 kgf·cm, 116 ft·lbf)

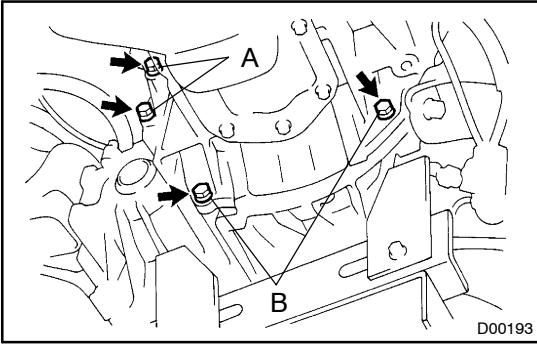
Bolt E: 39 N·m (400 kgf·cm, 29 ft·lbf)

**31. REMOVE ENGINE REAR MOUNTING INSULATOR AND BRACKET**

- (a) Remove the bolt and engine rear mounting insulator.
Torque: 87 N·m (890 kgf·cm, 64 ft·lbf)
- (b) Remove the 3 bolts and engine rear mounting bracket.
Torque: 64 N·m (650 kgf·cm, 47 ft·lbf)

32. JACK UP TRANSAXLE SLIGHTLY

Using a transmission jack, support the transaxle.

**33. REMOVE 4 TRANSAXLE LOWER SIDE MOUNTING BOLTS**

Torque:

Bolt A: 47 N·m (480 kgf·cm, 35 ft·lbf)

Bolt B: 23 N·m (230 kgf·cm, 17 ft·lbf)

34. REMOVE TRANSAXLE

Lower the engine left side and remove the transaxle from the engine.

HINT:

At the time of installation, please refer to the following items.

- Align the input shaft with the clutch disc and install the transaxle to the engine.
- Temporarily tighten the transaxle mounting bolts.