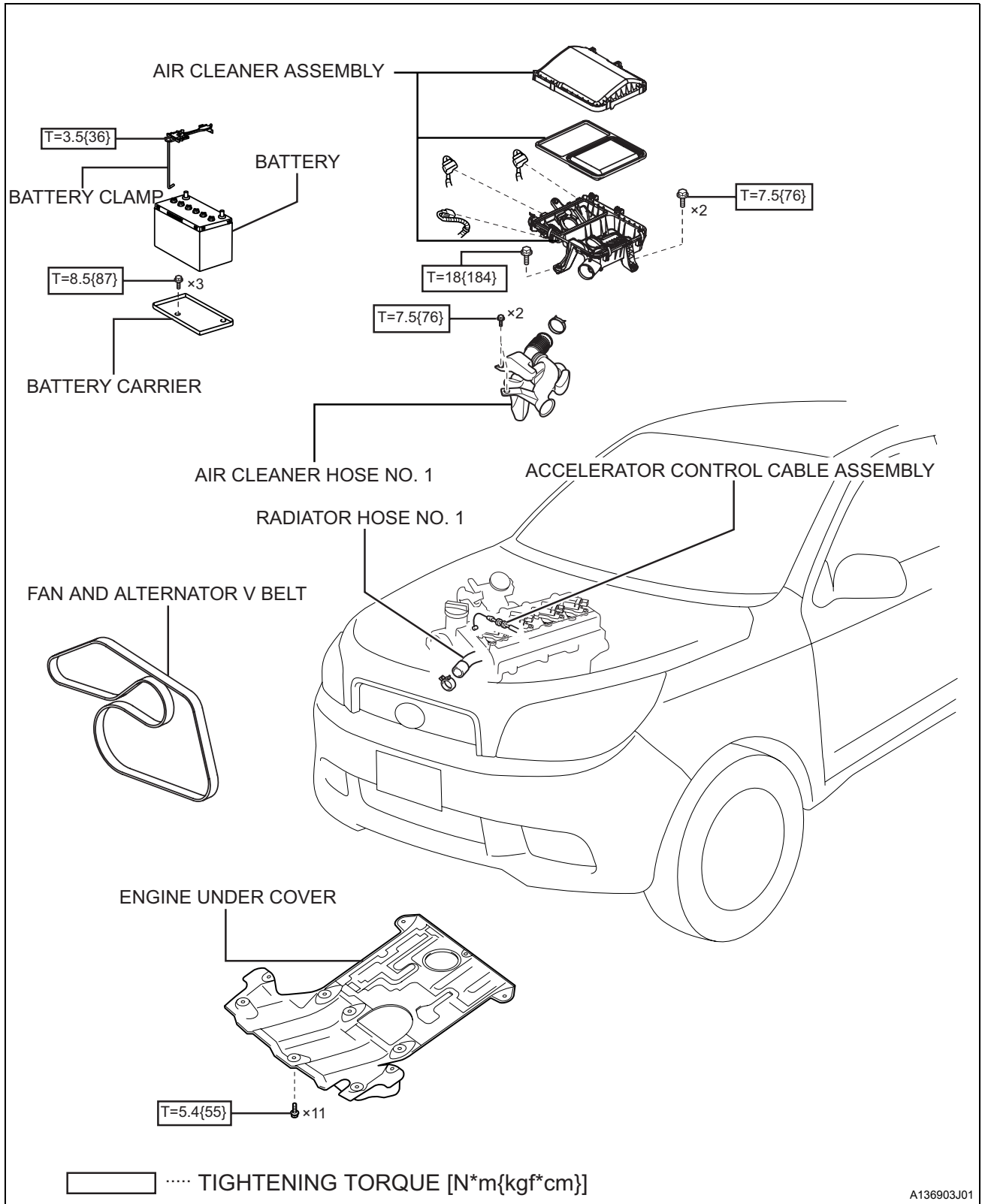


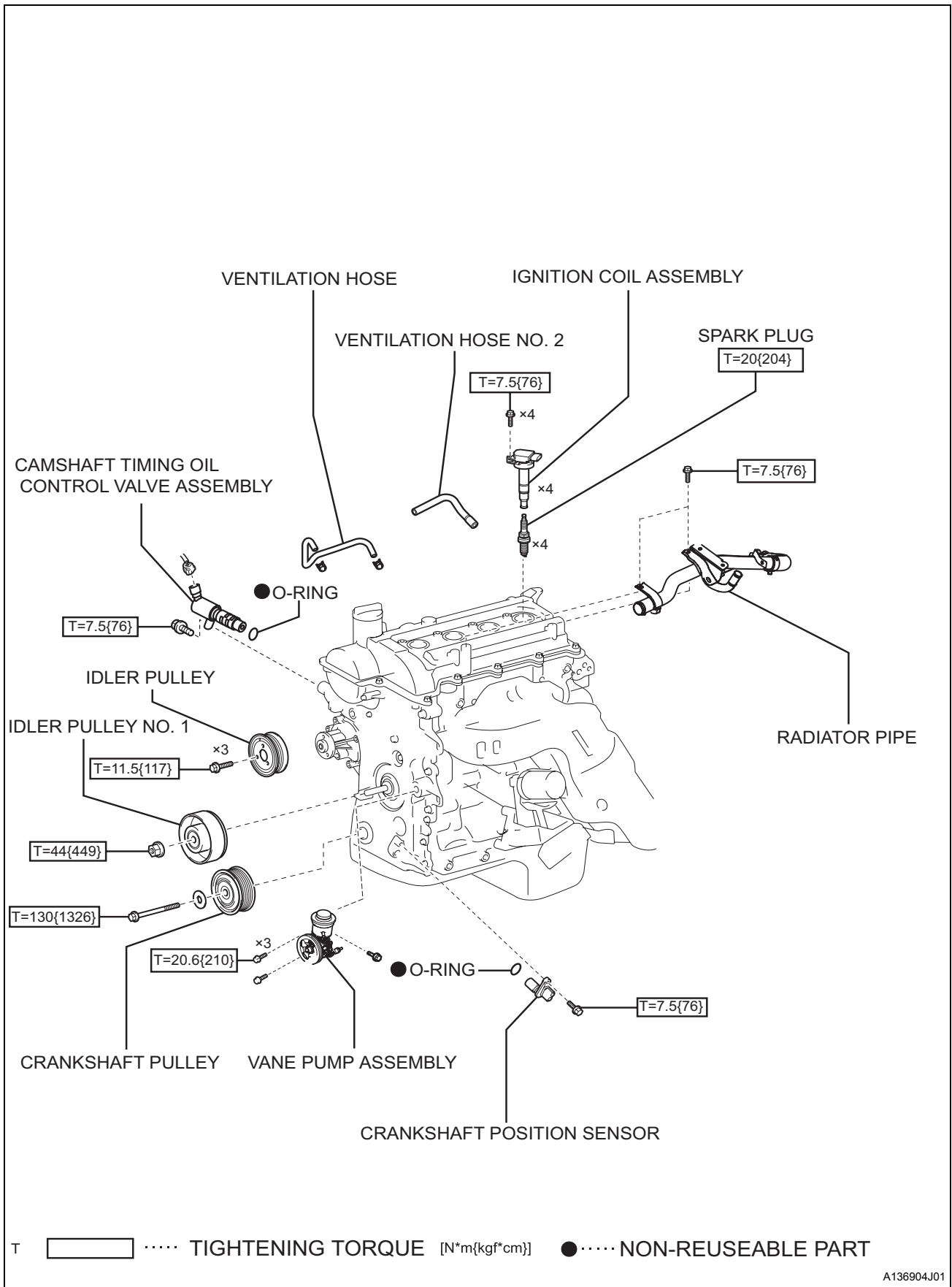
OIL PUMP ASSEMBLY (K3-VE)

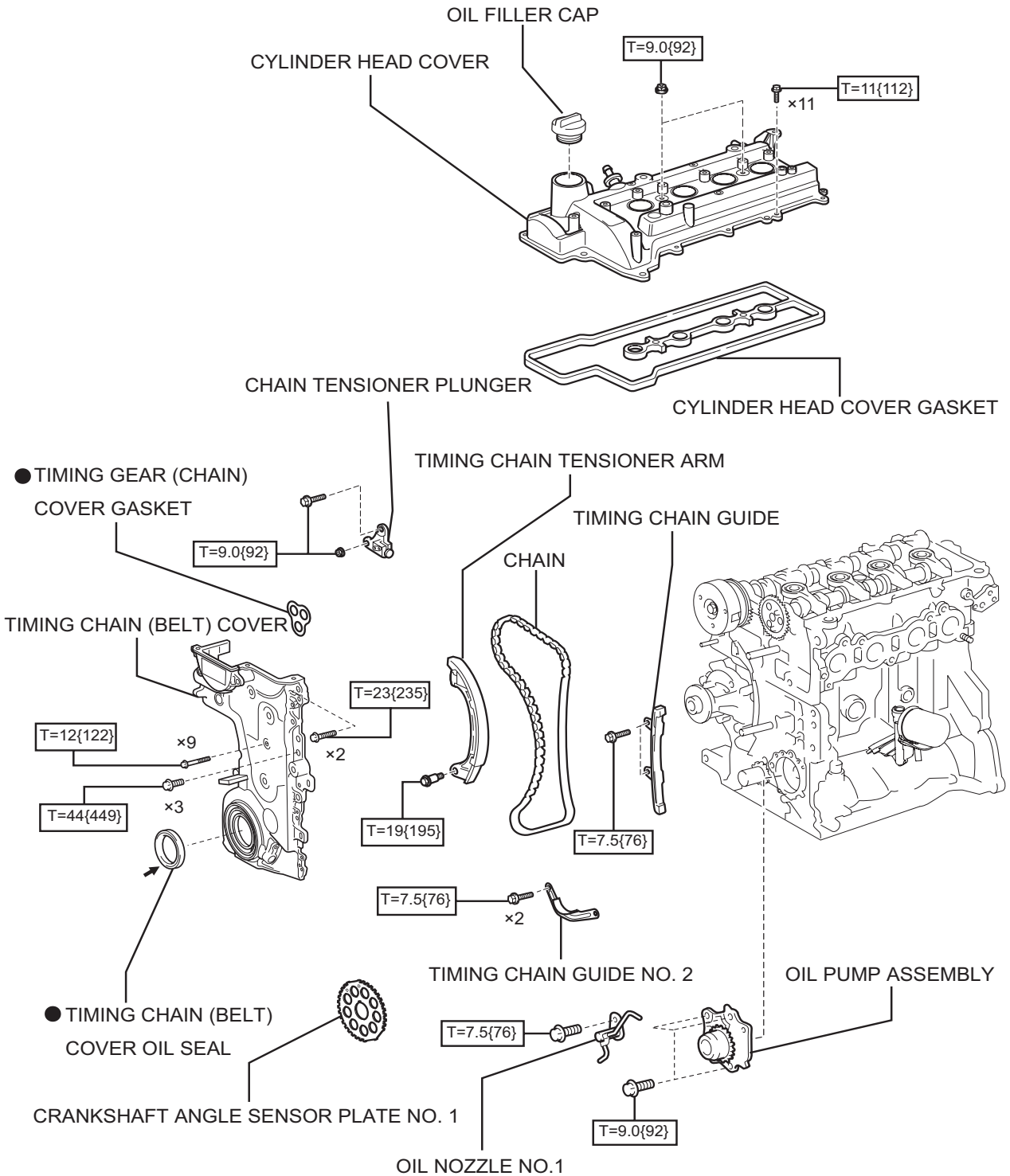
COMPONENTS



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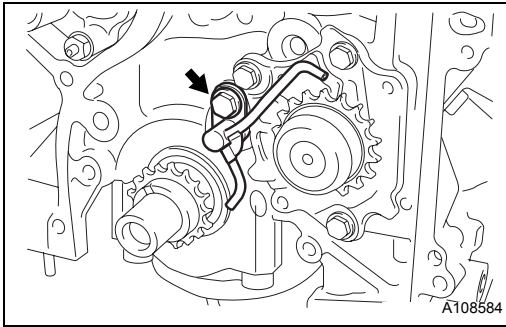
← MP GREASE

..... TIGHTENING TORQUE [N*m{kgf*cm}]

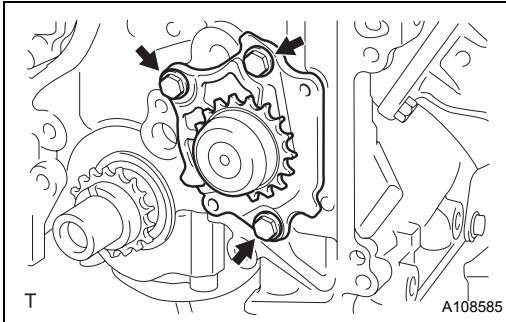
● NON-REUSEABLE PART

REMOVAL

1. DISCONNECT NEGATIVE BATTERY TERMINAL
(See page RS - 164.)
2. REMOVE BATTERY CARRIER (See page EM - 173)
3. REMOVE ENGINE UNDER COVER
4. DRAIN ENGINE OIL
5. DRAIN ENGINE COOLANT (See page CO - 11)
6. REMOVE AIR CLEANER ASSEMBLY (See page EM - 173)
7. REMOVE RADIATOR HOSE NO. 1 (See page CO - 22)
8. REMOVE ACCELERATOR CONTROL GAUGE ASSEMBLY (See page EM - 175)
9. REMOVE FAN AND ALTERNATOR BELT (See page EM - 12)
10. REMOVE VANE PUMP WITH BRACKET (See page EM - 79)
11. REMOVE FAN PULLEY (See page CO - 33)
12. REMOVE IDLER PULLEY NO. 1 (See page EM - 177)
13. DISCONNECT VENTILATION HOSE (See page EM - 175)
14. DISCONNECT NO. 2 VENTILATION HOSE (See page EM - 174)
15. REMOVE ENGINE ROOM MAIN WIRE (See page EM - 175)
16. REMOVE RADIATOR PIPE (See page EM - 174)
17. REMOVE IGNITION COIL ASSEMBLY (See page EM - 178)
18. REMOVE CYLINDER HEAD COVER (See page EM - 178)
19. REMOVE CRANKSHAFT PULLEY (See page EM - 179)
20. REMOVE CAMSHAFT TIMING OIL CONTROL VALVE ASSEMBLY
(See page EM - 180)
21. REMOVE TIMING CHAIN (BELT) COVER (See page EM - 180)
22. REMOVE TIMING CHAIN (BELT) COVER OIL SEAL (See page EM - 180)
23. REMOVE CRANK ANGLE SENSOR PLATE NO. 1 (See page EM - 116)
24. REMOVE CHAIN TENSIONER PLUNGER (See page EM - 116)
25. REMOVE TIMING CHAIN TENSION ARM (See page EM - 117)
26. REMOVE TIMING CHAIN GUIDE (See page EM - 117)
27. REMOVE TIMING CHAIN GUIDE NO. 2 (See page EM - 118)
28. REMOVE CHAIN

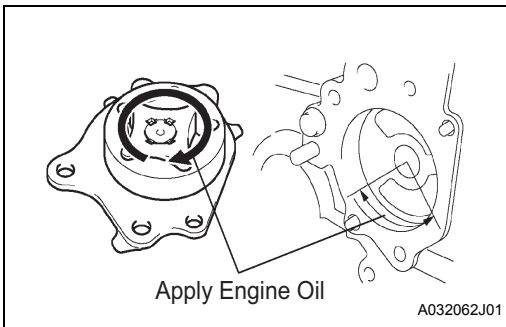
**29. REMOVE OIL NOZZLE NO. 1**

- (a) Remove the bolt. Then remove the oil nozzle No. 1.

**30. REMOVE OIL PUMP ASSEMBLY***

- (a) Remove the 3 bolts. Then remove the oil pump assembly.

INSTALLATION

**1. INSTALL OIL PUMP ASSEMBLY**

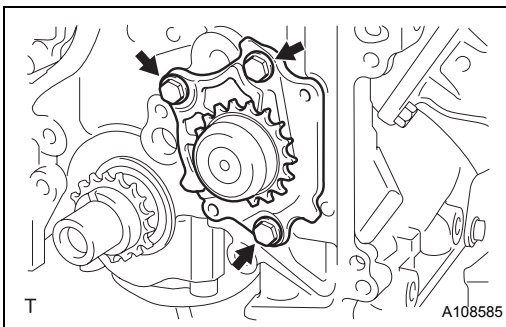
- (a) Apply a generous amount of engine oil to the location shown in the illustration.

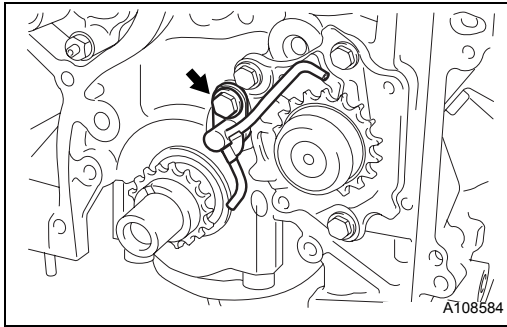
HINT:

- On the oil pump assembly side, apply the oil between the teeth of the inner and the outer rotors.
- On the cylinder block side, apply the oil to the lower outside periphery of the rotor hole (more than 90°).
- There is no distinction between the front and back sides of the outer rotor.
- Check the positioning pin.

- (b) Install the oil pump assembly with the 3 bolts.

Torque: 9.0 N*m (92 kgf*cm)





2. **INSTALL OIL NOZZLE NO. 1**
 - (a) Install the oil nozzle No. 1 with the bolt.
Torque: 7.5 N*m (76 kgf*cm)
3. **INSTALL CHAIN (See page EM - 118)**
4. **INSTALL TIMING CHAIN GUIDE NO. 2 (See page EM - 118)**
5. **INSTALL TIMING CHAIN GUIDE (See page EM - 119)**
6. **INSTALL TIMING CHAIN TENSION ARM (See page EM - 119)**
7. **INSTALL CHAIN TENSIONER PLUNGER (See page EM - 119)**
8. **INSTALL CRANK ANGLE SENSOR PLATE NO. 1 (See page EM - 119)**
9. **INSTALL TIMING CHAIN (BELT) COVER (See page EM - 188)**
10. **INSTALL TIMING CHAIN (BELT) COVER OIL SEAL (See page EM - 206)**
11. **INSTALL CRANK POSITION SENSOR (See page EM - 92)**
12. **INSTALL CRANKSHAFT PULLEY (See page EM - 189)**
13. **INSTALL CYLINDER HEAD COVER (See page EM - 190)**
14. **INSTALL SPARK PLUG (See page EM - 190)**
15. **INSTALL IGNITION COIL ASSEMBLY (See page EM - 190)**
16. **INSTALL RADIATOR PIPE (See page EM - 194)**
17. **INSTALL ENGINE ROOM MAIN WIRE (See page EM - 193)**
18. **INSTALL VENTILATION HOSE (See page EM - 193)**
19. **INSTALL VENTILATION HOSE NO. 2 (See page EM - 193)**
20. **INSTALL IDLER PULLEY NO. 1 (See page EM - 191)**
21. **INSTALL FAN PULLEY (See page CO - 33)**
22. **INSTALL VANE PUMP WITH BRACKET (See page EM - 103)**
23. **INSTALL FAN AND ALTERNATOR V BELT (See page EM - 12)**
24. **ADJUST FAN AND ALTERNATOR V BELT (See page EM - 13)**
25. **CHECK FAN AND ALTERNATOR V BELT (See page EM - 13)**
26. **INSTALL ACCELERATOR CONTROL GAUGE ASSEMBLY (See page EM - 193)**
27. **INSTALL RADIATOR HOSE NO. 1 (See page CO - 25)**
28. **INSTALL AIR CLEANER ASSEMBLY (See page EM - 194)**
29. **INSTALL AIR CLEANER HOSE NO. 1 (See page CO - 26)**
30. **INSTALL BATTERY CARRIER (See page EM - 194)**
31. **INSTALL BATTERY**
32. **CONNECT NEGATIVE BATTERY TERMINAL (See page EM - 120)**
33. **REFILL ENGINE COOLANT (See page CO - 11)**
34. **REFILL ENGINE OIL**
35. **CHECK FOR ENGINE COOLANT LEAKS (See page CO - 12)**

36. CHECK FOR ENGINE OIL LEAKS
37. CHECK ENGINE OIL LEVEL (See page EM - 195)
38. CHECK IGNITION TIMING (See page EM - 4)
39. CHECK IDLE SPEED (See page EM - 5)
40. INSTALL ENGINE UNDER COVER (See page EM - 104)

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