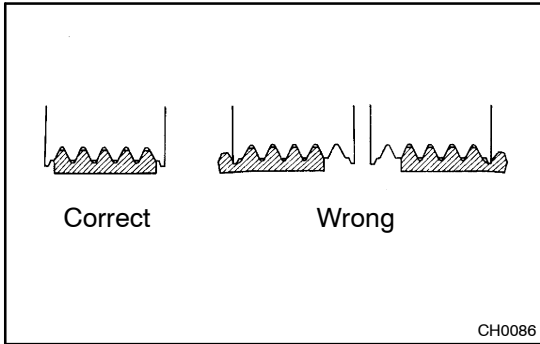


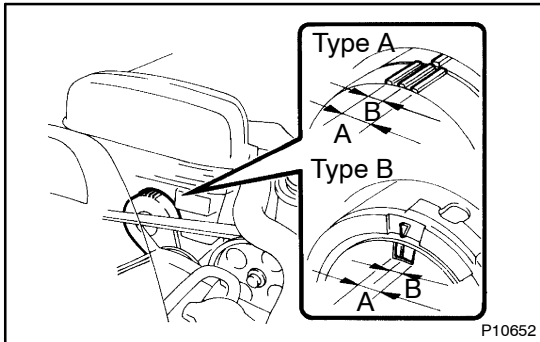


DRIVE BELT (2JZ-GE) ON-VEHICLE INSPECTION

AC3L8-01

1. INSPECT DRIVE BELT'S INSTALLATION CONDITION

Check that the drive belt fits properly in the ribbed grooves.



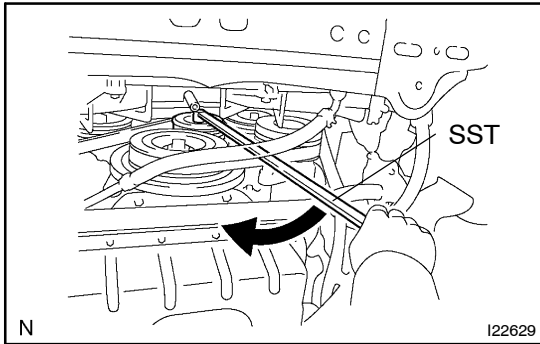
2. INSPECT DRIVE BELT TENSION

Check that the arrow mark on the belt tensioner falls within area "A" of the scale.

If it is out side area "A", replace the drive belt.

HINT:

When a new belt is installed, it should be lie within area B.



REMOVAL

REMOVE DRIVE BELT

Loosen the drive belt tension by turning the drive belt tensioner clockwise and remove the drive belt.

SST 09216-00041

INSTALLATION

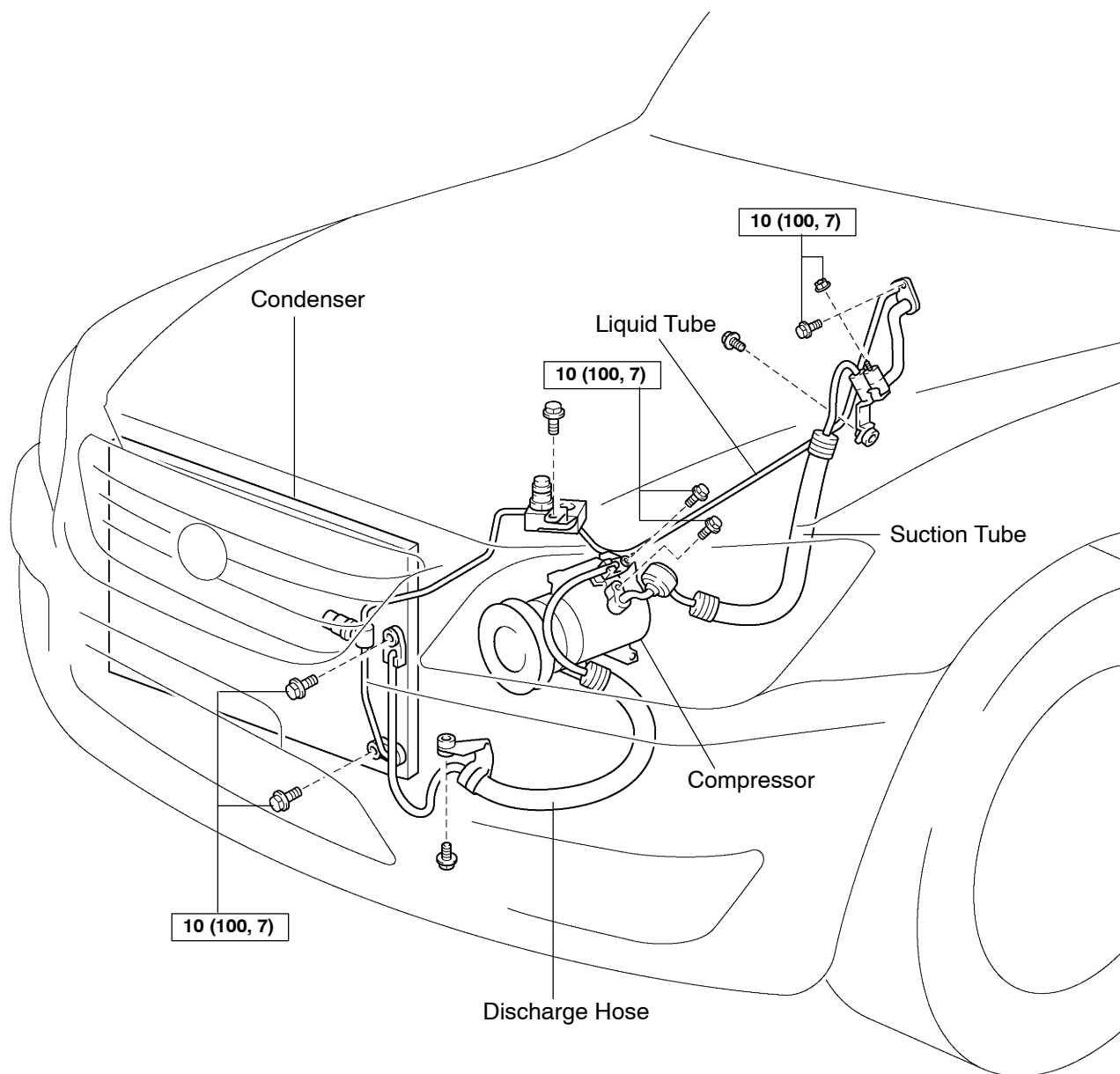
Installation is in the reverse order of removal. (See page AC-2).

AFTER INSTALLATION, CHECK DRIVE BELT'S INSTALLATION CONDITION

REFRIGERANT LINE (2JZ-GE)

COMPONENTS

AC3LB-01



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

N

I18042

COMPRESSOR AND MAGNETIC CLUTCH (2JZ-GE)

ON-VEHICLE INSPECTION

AC3LC-01

1. INSPECT COMPRESSOR FOR METALLIC SOUND

Check there is abnormal metallic sound from the compressor when the A/C switch is ON.

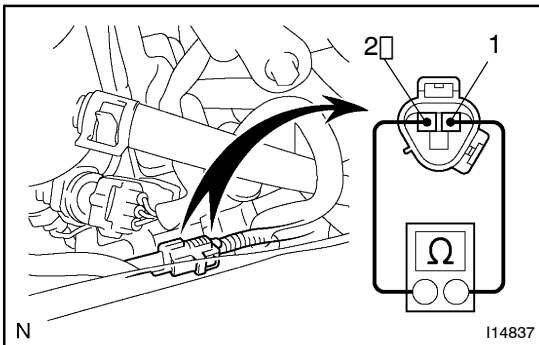
If abnormal metallic sound is heard, replace the compressor assembly.

2. INSPECT REFRIGERANT PRESSURE (See Pub. No. RM684E on page AC-3)

3. INSPECT VISUALLY FOR LEAKAGE OF REFRIGERANT

Using a gas leak detector, check for leakage of refrigerant.

If there is any leakage, replace the compressor assembly.



4. INSPECT COMPRESSOR LOCK SENSOR RESISTANCE

(a) Disconnect the connector.

(b) Measure resistance between terminals 1 and 2.

Standard resistance: 990 – 1,210 Ω at 20°C (68 °F)

If resistance is not as specified, replace the compressor.

5. MAKE THESE VISUAL CHECKS:

(a) Leakage of grease from the clutch bearing.

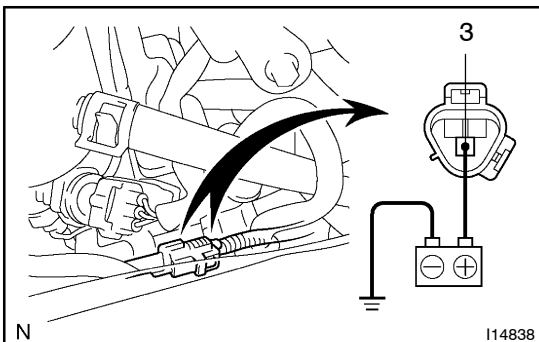
(b) Signs of oil on the pressure plate or rotor.

6. INSPECT MAGNETIC CLUTCH BEARING FOR NOISE

(a) Start engine.

(b) Check for abnormal noise from the compressor when the A/C switch is OFF.

If abnormal noise is being emitted, replace the rotor of magnetic clutch.



7. INSPECT MAGNETIC CLUTCH OPERATION

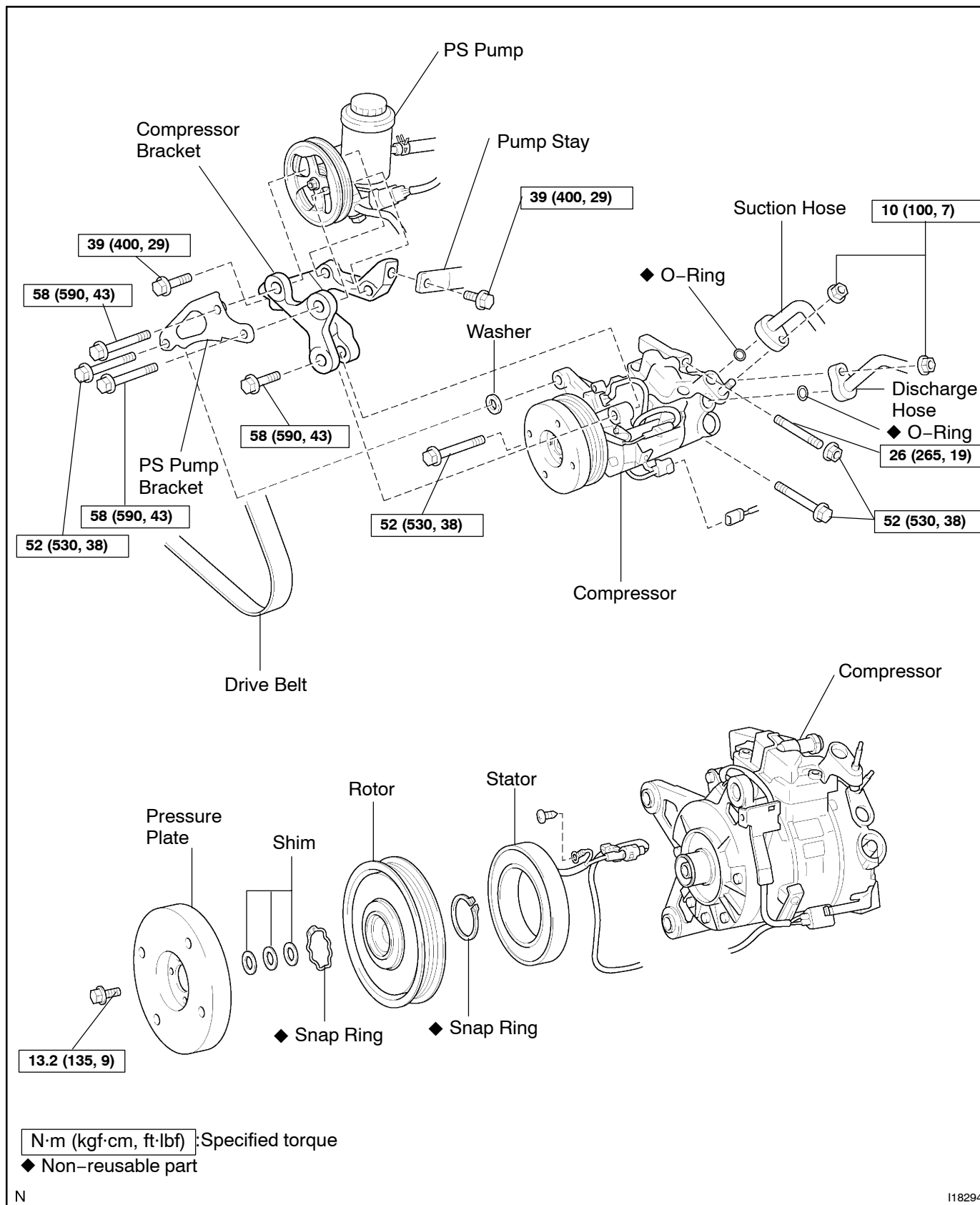
(a) Disconnect the connector.

(b) Connect the positive (+) lead from the battery to terminal 3 and the negative (-) lead to the body ground.

(c) Check that the magnetic clutch is energized.

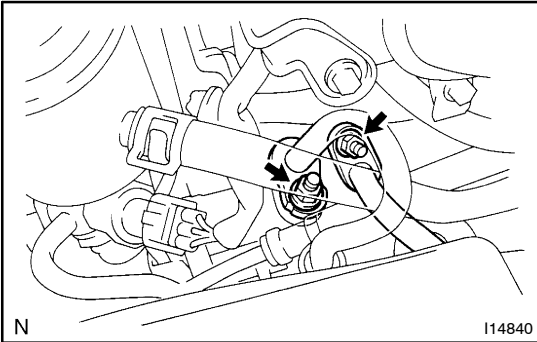
If operation is not as specified, replace the magnetic clutch.

COMPONENTS



REMOVAL

1. RUN ENGINE AT IDLE SPEED WITH A/C ON FOR APPROX. 10 MINUTES
2. STOP ENGINE
3. DISCONNECT NEGATIVE (-) TERMINAL CABLE FROM BATTERY
4. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM
5. REMOVE DRIVE BELT (See page AC-2)

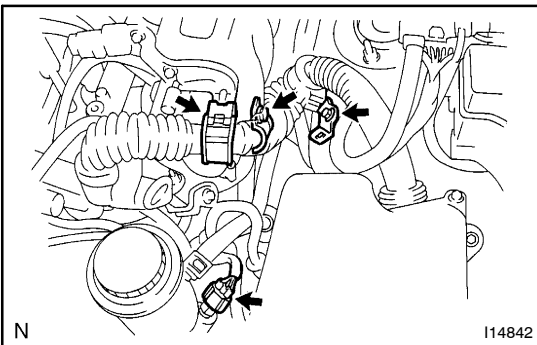


6. DISCONNECT DISCHARGE AND SUCTION HOSES

Remove the 2 nuts and disconnect the both hoses.

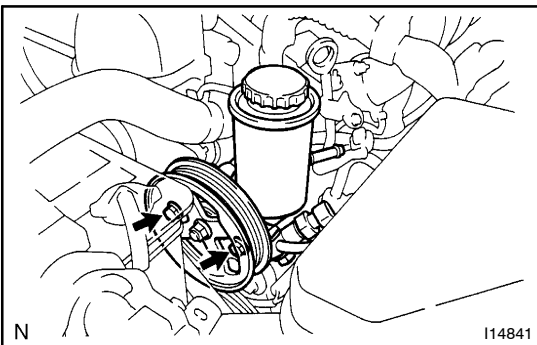
NOTICE:

Cap the open fitting immediately to keep moisture or dirt out of the system.

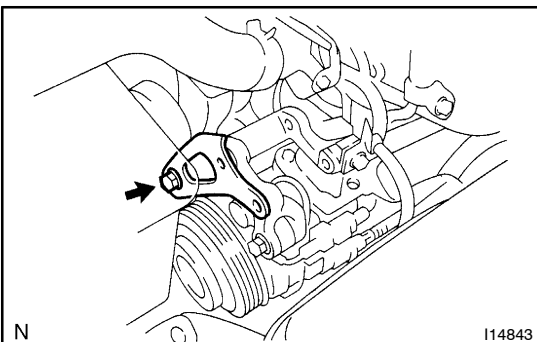


7. REMOVE PS PUMP WITH PRESSURE FEED AND RETURN TUBES STILL CONNECTED

- (a) Disconnect the PS pump connector and PS pump tube clamp.
- (b) Disconnect the engine wire.

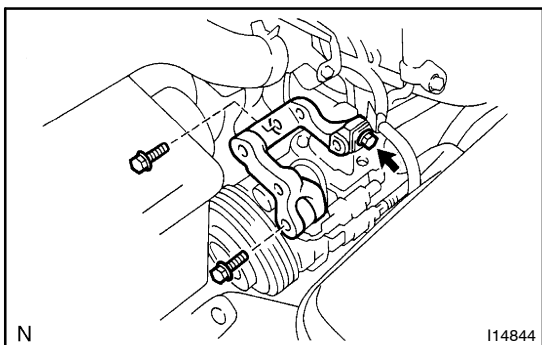


- (c) Remove the 2 PS pump set bolts and slide the PS pump backward.

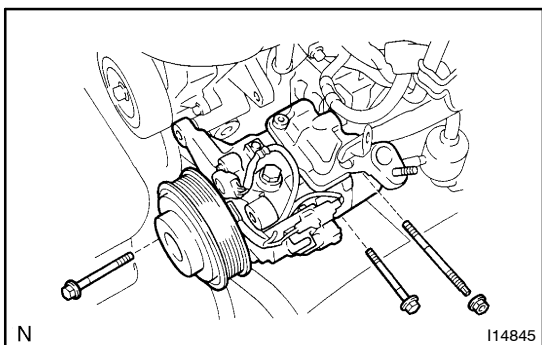


8. REMOVE COMPRESSOR

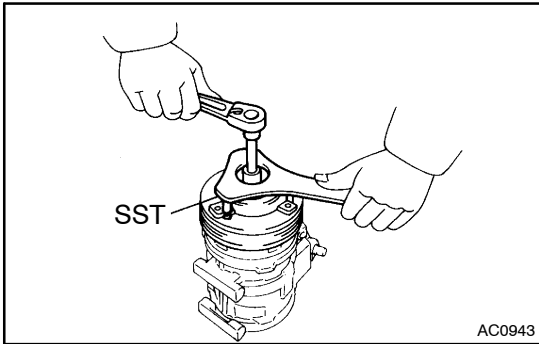
- (a) Remove the bolt and PS pump bracket.



- (b) Remove the 3 bolts and compressor bracket.
- (c) Disconnect the connector.



- (d) Remove the nut and 2 bolts.
- (e) Using a torx socket (E10), remove the stud bolt and compressor.



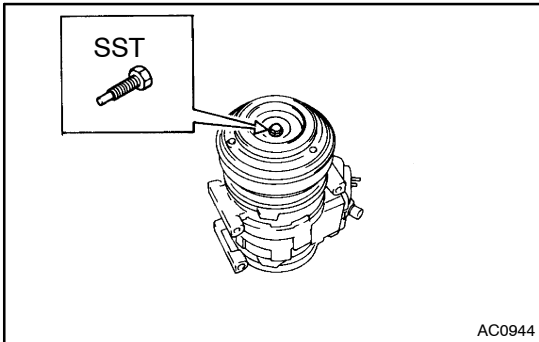
DISASSEMBLY

DISASSEMBLE MAGNETIC CLUTCH

(a) Remove the pressure plate.

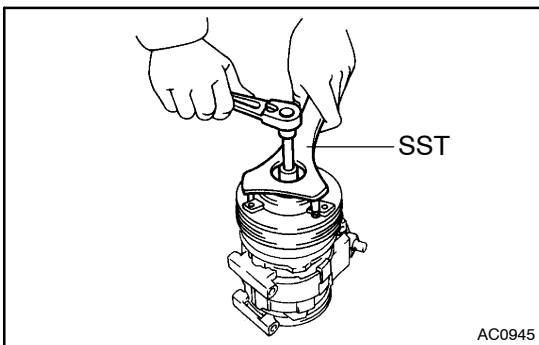
(1) Using SST and a socket wrench, remove the shaft bolt.

SST 07112-76060



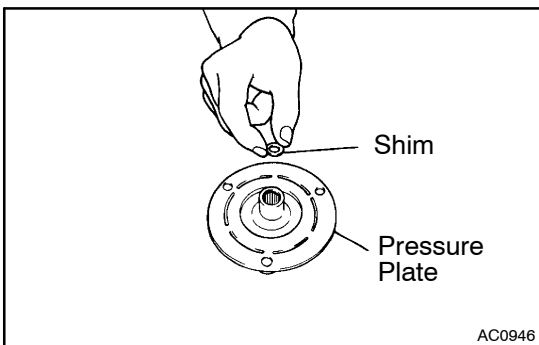
(2) Install SST on the pressure plate.

SST 07112-66040

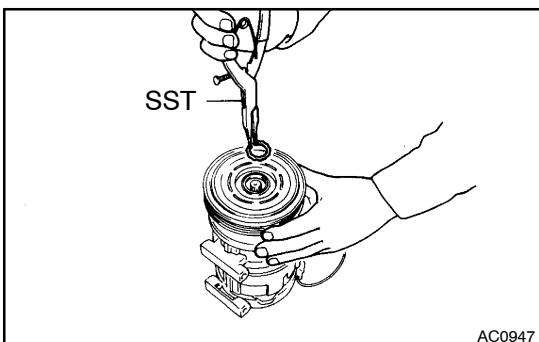


(3) Using SST and a socket wrench, remove the pressure plate.

SST 07112-66040, 07112-76060

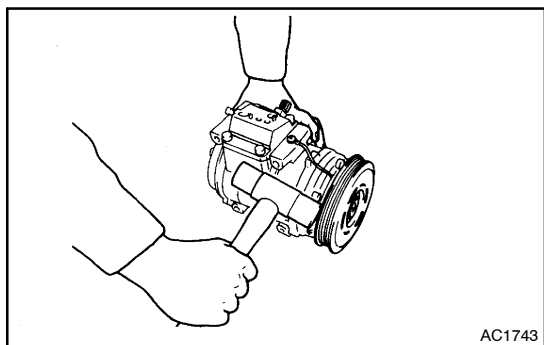


(4) Remove the shims from the pressure plate.

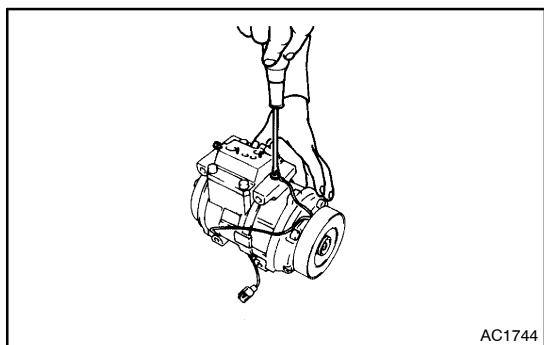


(b) Remove the rotor.

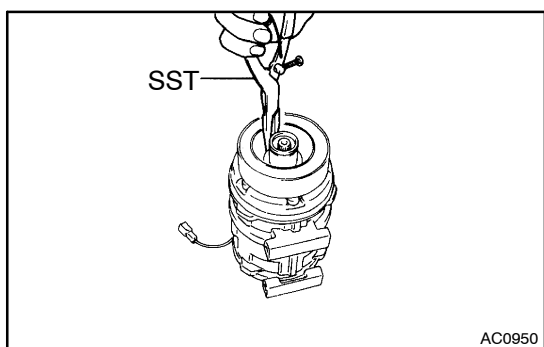
(1) Remove the snap ring.



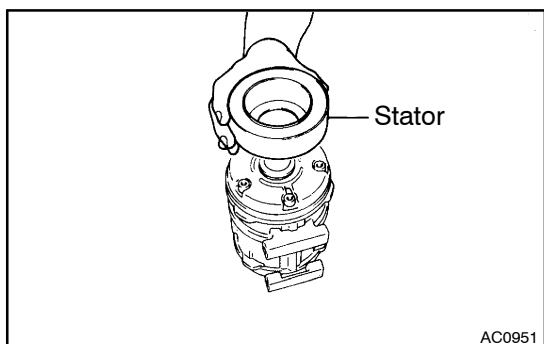
- (2) Using a plastic hammer, tap the rotor off the shaft.
- NOTICE:**
Be careful not to damage the pulley when tapping on the rotor.



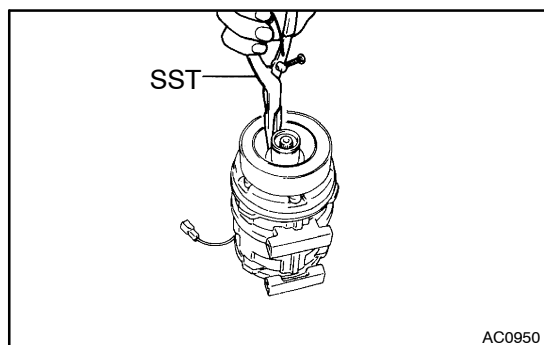
- (c) Remove the stator.
- (1) Disconnect the stator lead wire from the compressor.



- (2) Remove the snap ring.



- (3) Remove the stator.



REASSEMBLY

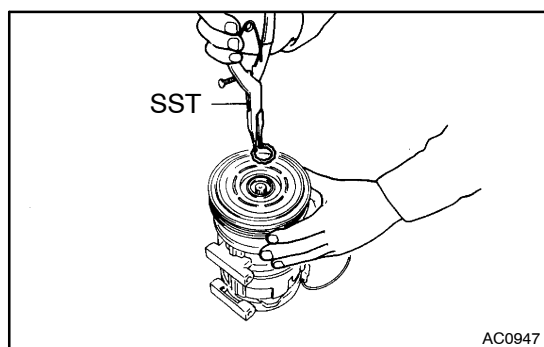
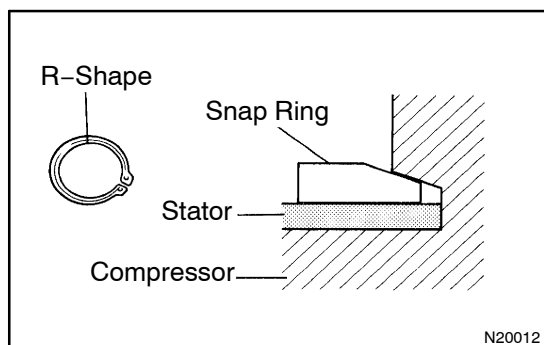
1. ASSEMBLE MAGNETIC CLUTCH

- (a) Install the stator.
- (1) Install the stator on compressor.
 - (2) Install the new snap ring.

NOTICE:

The snap ring should be installed so that its beveled side faces up.

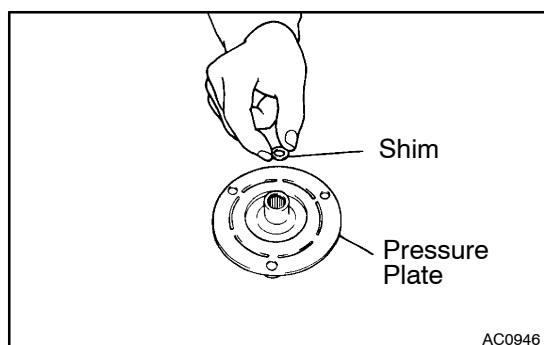
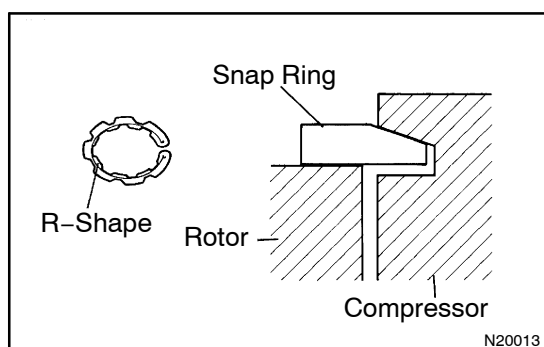
- (3) Connect the stator lead wire to the compressor.



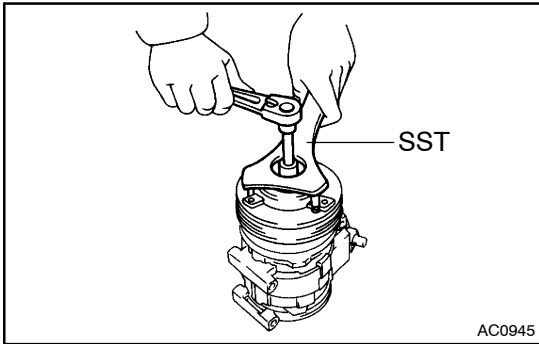
- (b) Install the rotor.
- (1) Install the rotor on the compressor.
 - (2) Install the new snap ring.

NOTICE:

The snap ring should be installed so that its beveled side faces up.



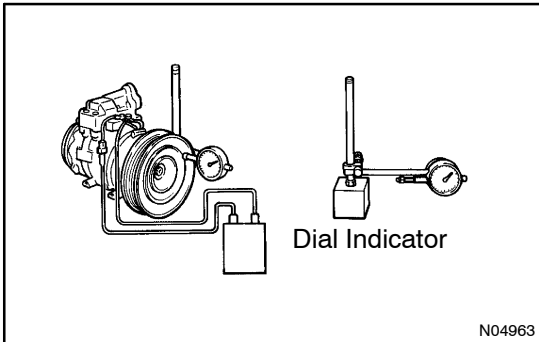
- (c) Install the pressure plate.
- (1) Install the shims to the pressure plate.
 - (2) Install the pressure plate on the rotor.



- (3) Using SST and a torque wrench, install the shaft bolt.

Torque: 13.2 N·m (135 kgf·cm, 9 ft·lbf)

SST 07112-76060



2. AFTER REASSEMBLY, CHECK MAGNETIC CLUTCH CLEARANCE

- Set the dial indicator to the pressure plate of the magnetic clutch.
- Connect the magnetic clutch lead wire to the positive (+) terminal of the battery.
- Check the clearance between the pressure plate and rotor when connecting the negative (–) terminal to the battery.

Standard clearance:

0.5 ± 0.15 mm (0.020 ± 0.0059 in.)

If the clearance is not within the standard clearance, adjust the clearance using shims to obtain the standard clearance.

Shim thickness:

0.1 mm (0.004 in.)

0.3 mm (0.012 in.)

0.5 mm (0.020 in.)

INSTALLATION

1. INSTALL COMPRESSOR

- (a) Install the compressor with the stud bolt.

Torque: 26 N·m (265 kgf·cm, 19 ft·lbf)

- (b) Install the 2 bolts and nut.

Torque:

Bolt: 52 N·m (530 kgf·cm, 38 ft·lbf)

Nut: 52 N·m (530 kgf·cm, 38 ft·lbf)

- (c) Connect the connector.

- (d) Install the compressor bracket with the 3 bolts.

Torque:

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

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

- (e) Install the PS pump bracket with the bolt.

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

2. INSTALL PS PUMP

- (a) Install 2 PS pump set bolt.

Torque: 58 N·m (590 kgf·cm, 43 ft·lbf)

- (b) Connect the engine wire.

- (c) Connect the PS pump connector and wire harness clamp.

3. CONNECT DISCHARGE AND SUCTION HOSES

Connect the both hoses with 2 nut.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

NOTICE:

Hose should be connected immediately after the caps have been removed.

HINT:

Lubricate the new O-rings with compressor oil and install them to the hoses.

4. INSTALL DRIVE BELT (See page AC-3)

5. CONNECT NEGATIVE (-) TERMINAL CABLE TO BATTERY

6. EVACUATE AIR FROM REFRIGERATION SYSTEM AND CHARGE SYSTEM WITH REFRIGERANT

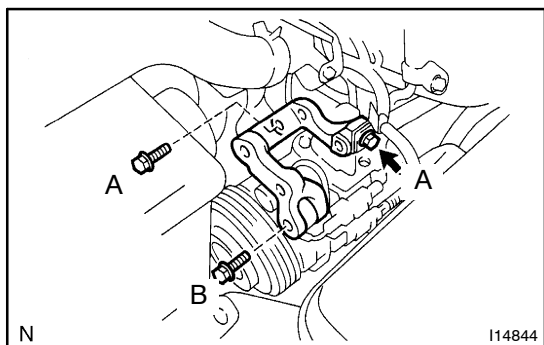
Specified amount: 600 ± 50 g (21.16 ± 1.76 oz.)

7. INSPECT FOR LEAKAGE OF REFRIGERANT

Using a gas leak detector, check for leakage of refrigerant.

If there is leakage, check the tightening torque at the joints.

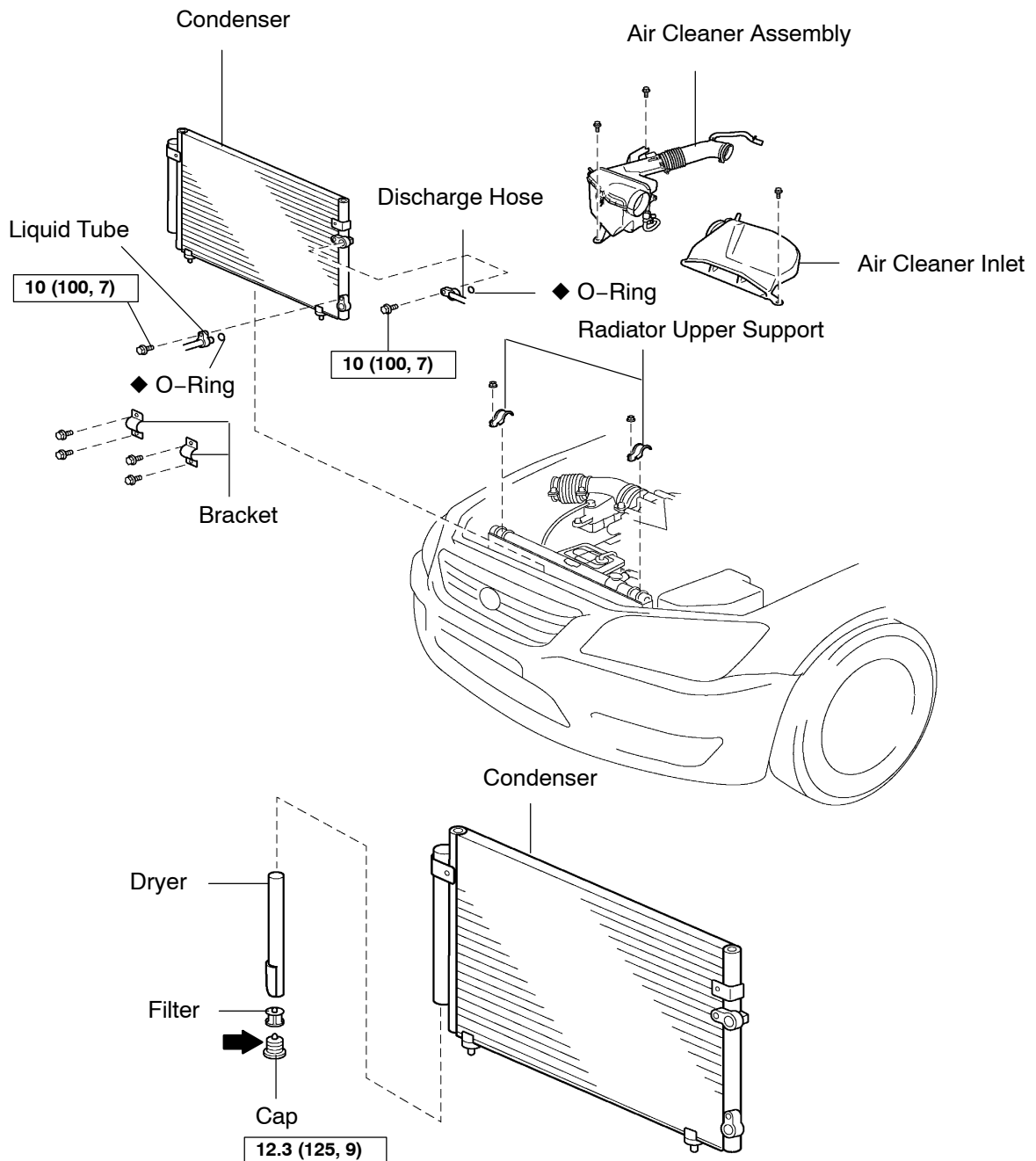
8. INSPECT A/C OPERATION



CONDENSER (2JZ-GE)

COMPONENTS

AC3LI-01



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

◆ Non-reusable part

➡ Compressor oil ND-OIL 8 or equivalent

I18097

REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

HINT:

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

Evacuate air from refrigeration system.

Charge system with refrigerant and inspect for leakage of refrigerant.

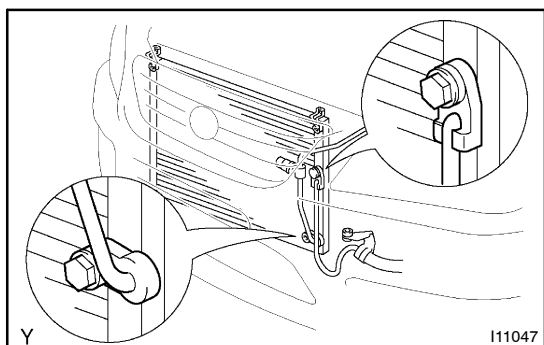
Specified amount : 600 ± 50 g (21.16 ± 1.76 oz.)

2. REMOVE AIR CLEANER DUCT AND AIR CLEANER ASSEMBLY

3. REMOVE ECU OUTLET DUCT

4. REMOVE 2 RADIATOR UPPER SUPPORTS

Remove the 2 bolts and upper supports.



5. DISCONNECT DISCHARGE HOSE AND LIQUID TUBE

Remove the 2 bolts and disconnect the hose and tube.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

NOTICE:

Cap the open fittings immediately to keep moisture or dirt out of the system.

HINT:

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

Lubricate 2 new O-rings with compressor oil and install them to the hose and tube.

6. REMOVE CONDENSER

(a) Remove the 4 bolts and 2 brackets.

(b) Push the radiator toward engine.

(c) Push the condenser toward radiator and pull it upward.

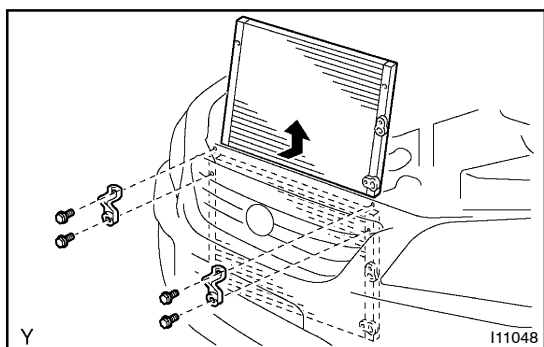
HINT:

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

If condenser is replaced, add compressor oil to the condenser.

Add 40 cc (1.4 fl. oz)

Compressor oil: ND – OIL 8 or equivalent



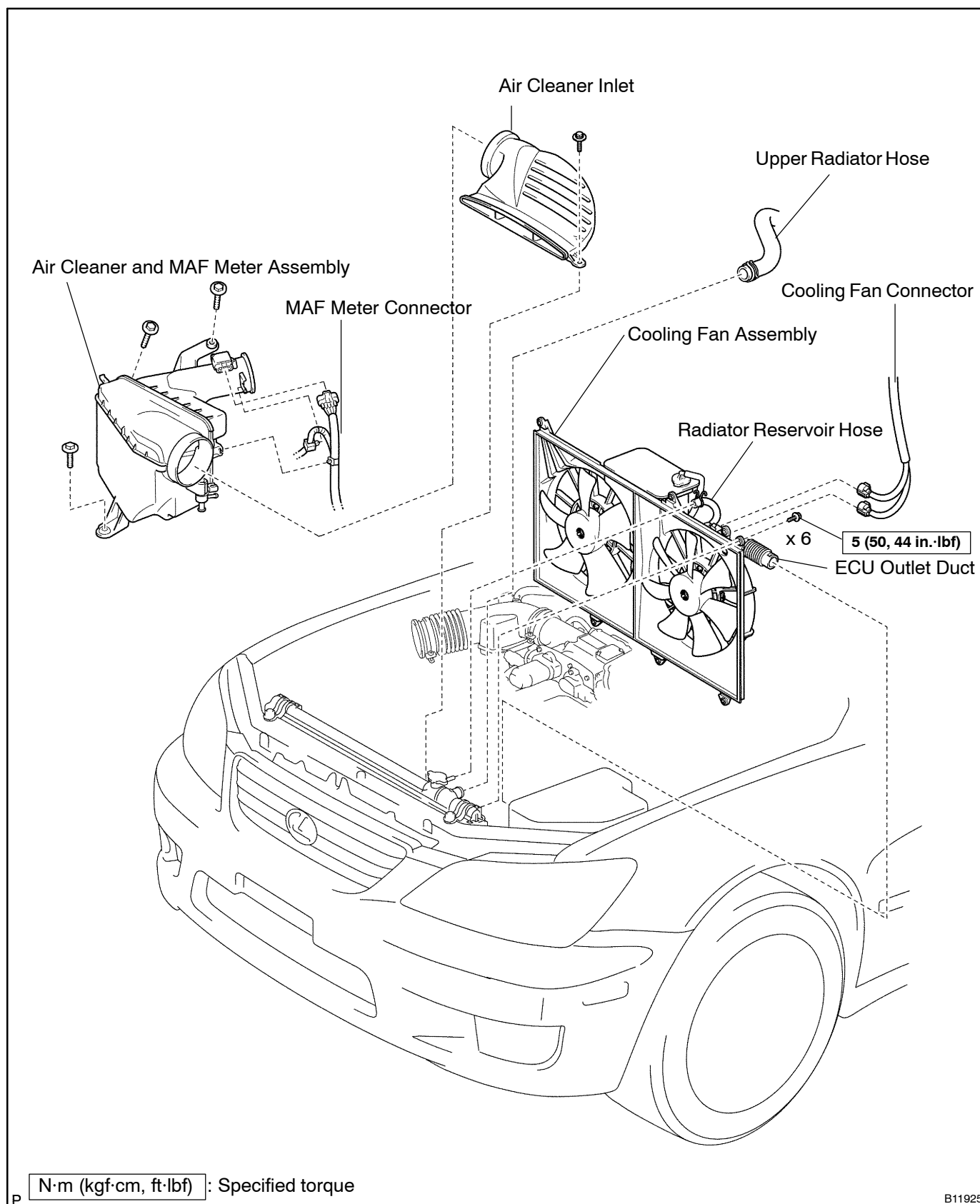
INSTALLATION

Installation is in the reverse order of removal (See page AC-15).

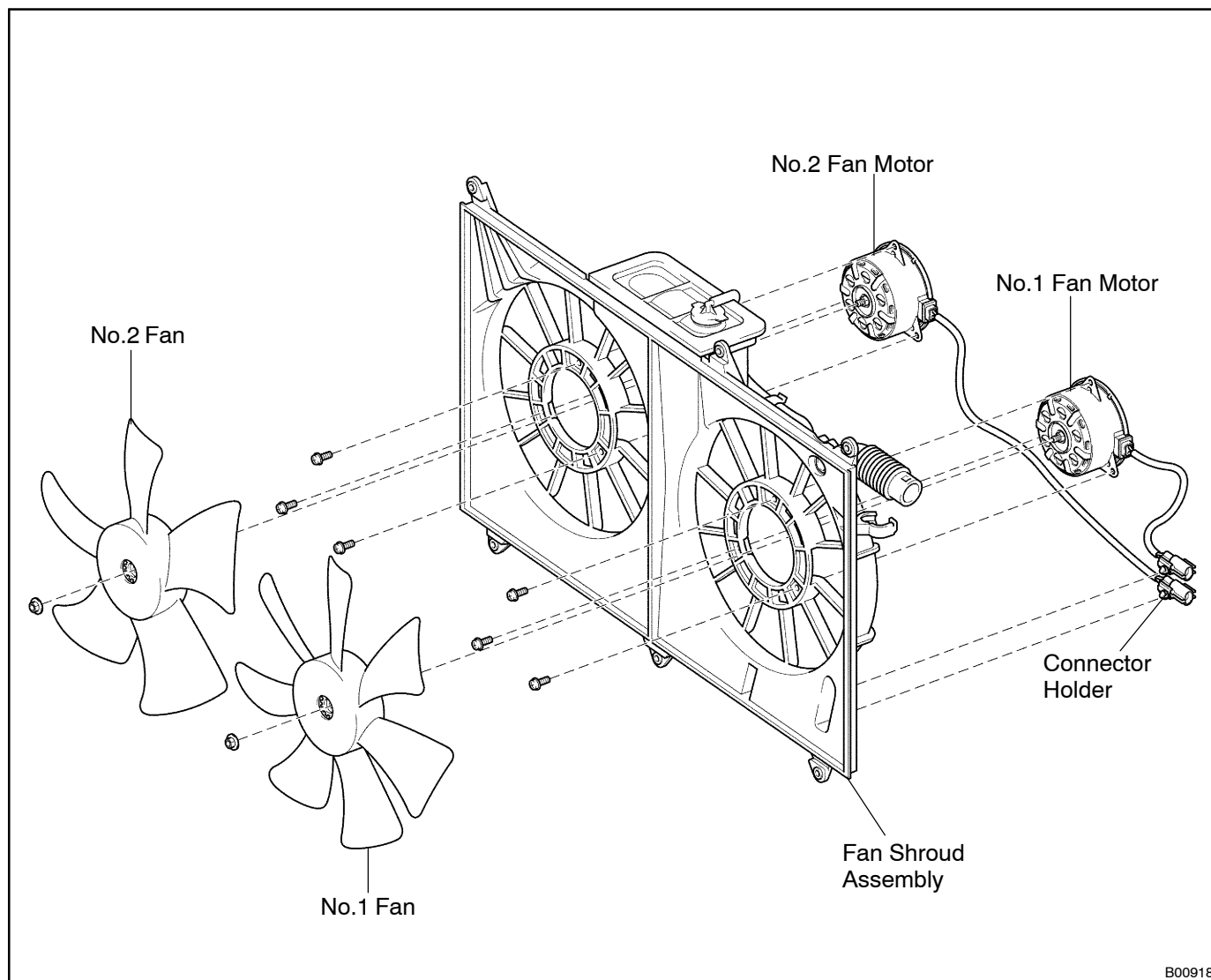
CONDENSER FAN (2JZ-GE)

COMPONENTS

AC3LL-01



B11925



B00918

REMOVAL

1. DRAIN ENGINE COOLANT FROM RADIATOR

HINT:

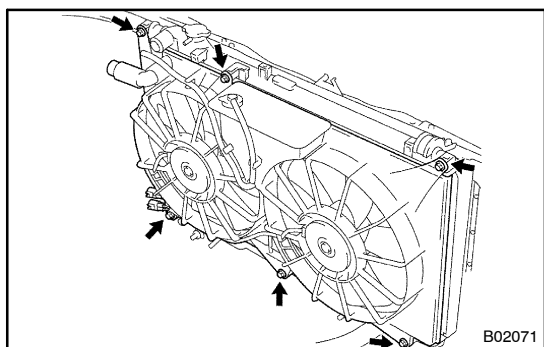
It is not necessary to drain out all coolant.

2. REMOVE AIR CLEANER INLET

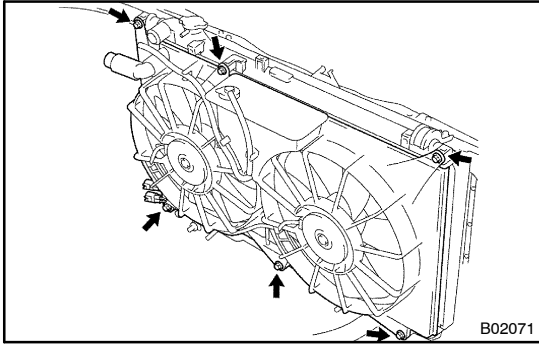
3. REMOVE AIR CLEANER AND MAF METER ASSEMBLY

4. REMOVE COOLING FAN

- (a) Disconnect the upper radiator hose from the radiator.
- (b) Disconnect the ECU outlet duct from the ECU box.
- (c) Disconnect the wire for cooling fan from the clamp on the cooling fan.
- (d) Disconnect the 2 cooling fan connector.
- (e) Disconnect the radiator reservoir hose from the radiator.



- (f) Remove the 6 bolts and cooling fan.



INSTALLATION

1. INSTALL COOLING FAN

- (a) Install the cooling fan with the 6 bolts.

Torque: 5.0 N·m (50 kgf·cm, 44 in·lbf)

- (b) Connect the upper radiator hose to the radiator.
(c) Connect the ECU outlet duct to the ECU box.
(d) Connect the wire for cooling fan to clamp on the cooling fan.
(e) Connect the 2 cooling fan connectors.
(f) Connect the radiator reservoir hose to the radiator.

2. INSTALL AIR CLEANER AND MAF METER ASSEMBLY

3. INSTALL AIR CLEANER INLET

4. FILL WITH ENGINE COOLANT

5. START ENGINE AND CHECK FOR COOLANT LEAKS