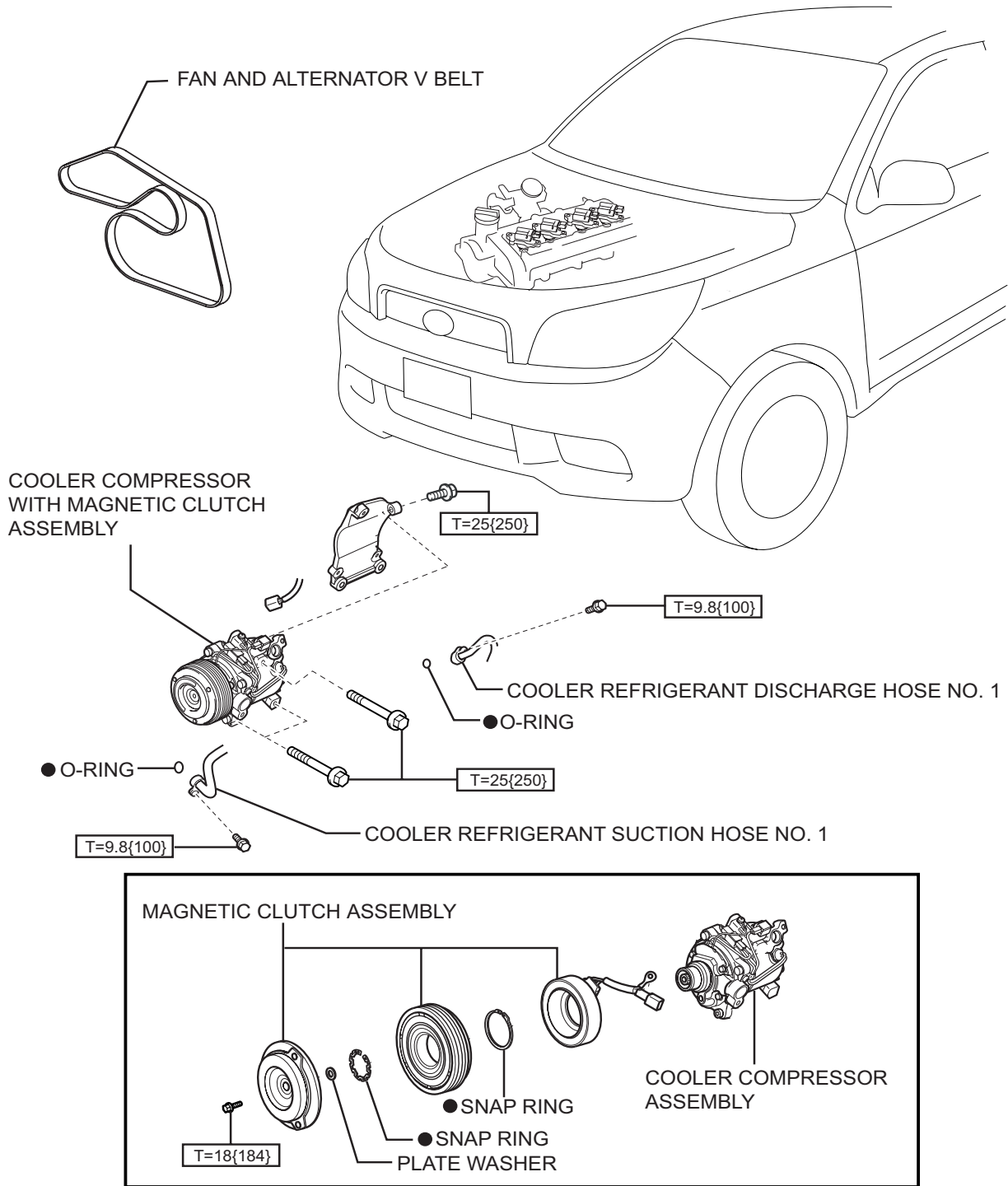


COOLER COMPRESSOR ASSEMBLY

COMPONENTS

AC



..... TIGHTENING TORQUE [N*m{kgf*cm}] ●..... NON-REUSEABLE PART



REMOVAL

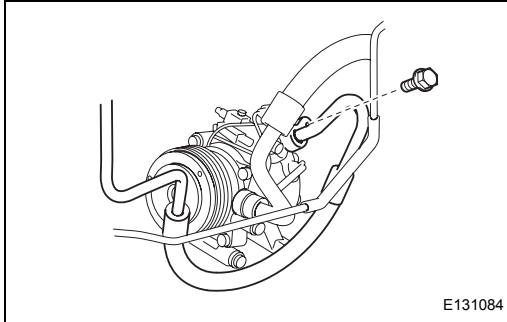
1. REMOVE REFRIGERANT HFC - 134a (R134a) (See page AC-27)
2. DISCONNECT NEGATIVE BATTERY TERMINAL
3. REMOVE FAN AND ALTERNATOR BELT (See page EM-8)
4. DISCONNECT COOLER REFRIGERANT SUCTION HOSE NO. 1

AC

- (a) Remove the bolt and disconnect cooler refrigerant discharge hose No. 1.
- (b) Remove the O-ring from the No. 1 cooler refrigerant discharge hose.

NOTICE:

Seal the opening of the disconnected cooler refrigerant discharge hose No. 1 and cooler compressor assembly using vinyl tape to prevent moisture and foreign matter from entering.

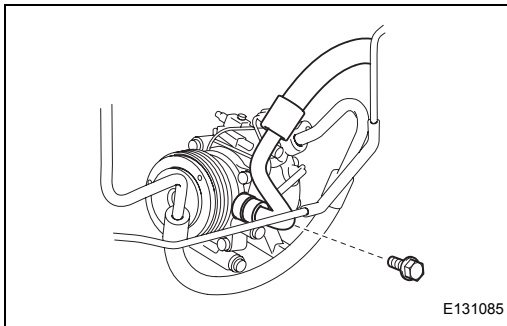


5. REMOVE COOLER REFRIGERANT SUCTION HOSE NO. 1

- (a) Remove the bolt and disconnect cooler refrigerant suction hose No. 1.
- (b) Remove the O-ring from the No. 1 cooler refrigerant suction hose.

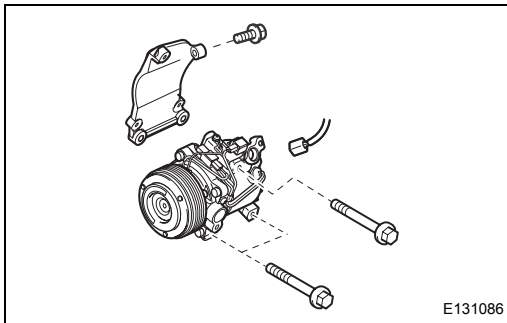
NOTICE:

Seal the opening of the disconnected cooler refrigerant discharge hose No. 1 and cooler compressor assembly using vinyl tape to prevent moisture and foreign matter from entering.



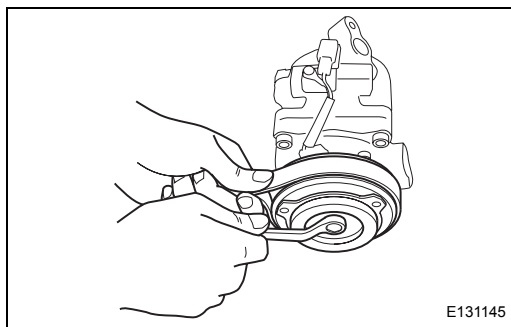
6. REMOVE COOLER COMPRESSOR WITH MAGNETIC CLUTCH ASSEMBLY

- (a) Disconnect the connector.
- (b) Remove the 4 bolts and cooler compressor with magnetic clutch assembly.



DISASSEMBLY

AC



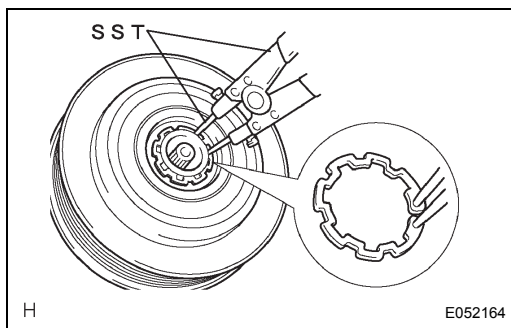
1. REMOVE MAGNETIC CLUTCH ASSEMBLY

- (a) Apply current to magnetic clutch assembly and secure the hub and rotor.

- (b) Remove the bolt, the magnetic clutch's hub and the magnetic clutch's washers.

HINT:

The number of washers used to adjust the magnetic clutch clearance may vary.



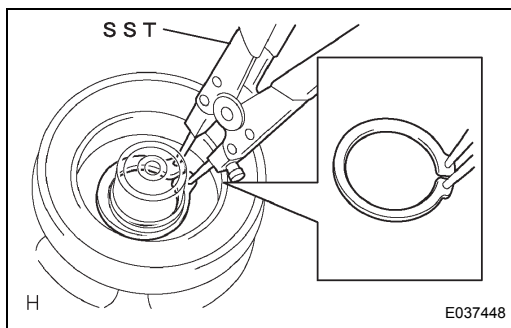
- (c) Using SST, remove the snap ring and clutch rotor from cooler compressor assembly.

SST 09904-00010 (09904-00050)

NOTICE:

Do not damage the bearing seal cover when removing the snap ring.

- (d) Detach the screws and disconnect the ground wire.
(e) Disconnect the the magnetic clutch assembly connector.



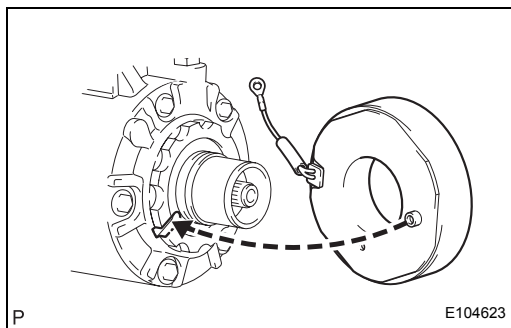
- (f) Using SST, remove the snap ring and the magnetic clutch stator from the cooler compressor assembly.

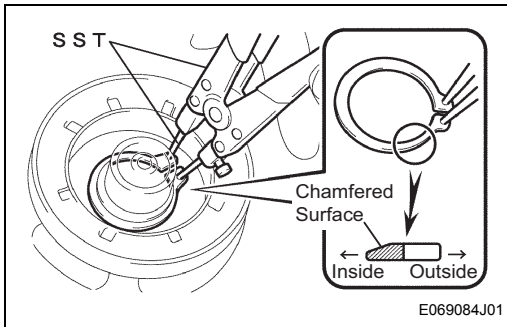
SST 09904-00010 (09904-00050)

REASSEMBLY

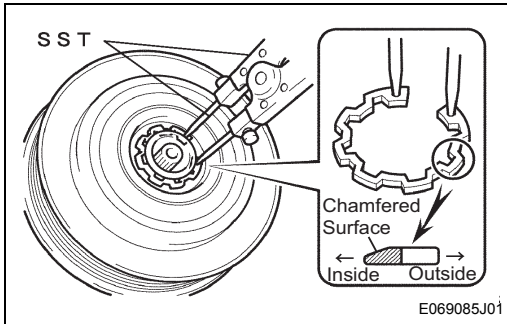
2. INSTALL MAGNETIC CLUTCH ASSEMBLY

- (a) Install the magnetic clutch stator to the cooler compressor assembly as shown in the illustration.





- (b) Using SST, install a new snap ring at chamfered side up.
SST 09904-00010 (09904-00050)
- (c) Connect the connector.
- (d) Connect the ground wire with screws.
- (e) Install the magnetic clutch rotor to the cooler compressor assembly.



- (f) Using SST, install a new snap ring at chamfered side up.
SST 09904-00010 (09904-00050)

NOTICE:

- Do not expand the inside diameter more than $\phi 30.5\text{mm}$ when installing the snap ring.
- Do not damage the bearing seal cover when installing the snap ring.

- (g) Temporarily install the magnetic clutch washer and hub to the cooler compressor assembly using bolts.

NOTICE:

Use the exact combination of washers for the magnetic clutch as that used before disassembly.

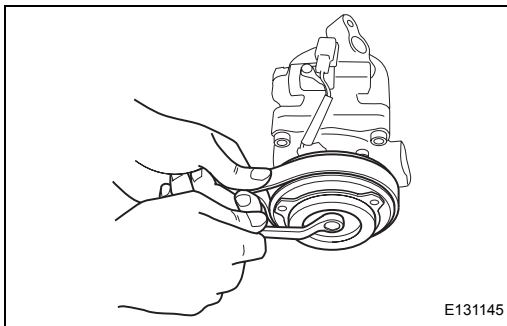
- (h) Apply current to the magnetic clutch assembly and secure the hub and rotor.

- (i) Wrap the V belt around the pulley, hold the pulley securely with your hand and tighten the bolt.

Torque: 18 N*m (184 kgf*cm)

NOTICE:

- When tightening the bolt, do not allow oil or foreign matter to come in contact with the clutch hub seating surface, or to be caught in between the compressor shaft edge and the screw or between the bolt seating surface and the screw.

**3. CHECK MAGNETIC CLUTCH AIR GAP**

- (a) Set the dial gauge so that it is perpendicular to the magnetic clutch hub.
- (b) Connect the positive battery lead to terminal 1 of the connector, and the negative battery lead to the ground wire. Turn the magnetic clutch ON and OFF, and measure the air gap when the magnetic clutch is OFF.

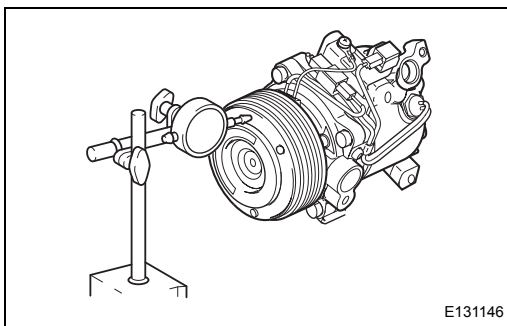
Standard:

0.5 (+0.15, -0.20) mm

- (c) If the result is not as specified, remove the clutch hub and adjust by changing the number of the magnetic clutch washers.

NOTICE:

Do not use more than 3 magnetic clutch washers in making the adjustment.



INSTALLATION

1. CHECK COMPRESSOR OIL AMOUNT

- (a) When replacing the cooler compressor assembly with a new one, first gradually discharging inert gas (helium) from the service valve, then drain the oil from the new cooler compressor assembly (using the calculation shown below). When this procedure is complete, install the new cooler compressor assembly.

Standard:

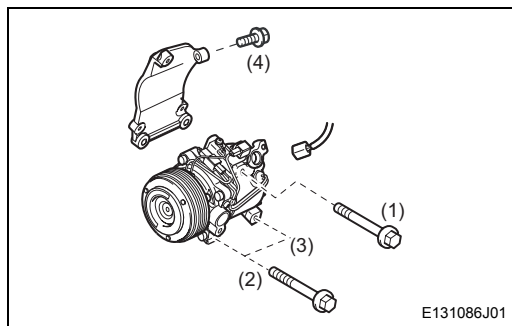
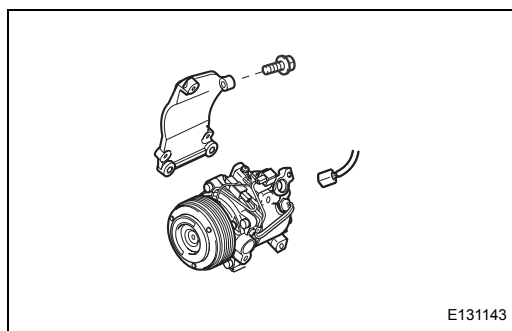
(Oil amount in the new cooler compressor assembly 80 [+20] ml) - (Remaining oil amount in the removed cooler compressor assembly) = (Oil amount to be removed when replacing the assembly)

NOTICE:

- Observe the precautions found in the removal/installation procedures when checking the amount of compressor oil.
- Compressor oil remains in the pipes of the vehicle. Oil is subtracted from the new cooler compressor assembly in order to compensate for this oil remaining in the pipes. If oil is not subtracted, the amount of oil will be excessive, preventing heat exchange in the refrigerant cycles and causing refrigeration failure.
- If the volume of oil remaining in the removed cooler compressor assembly is too small, check for oil leakage.
- Use only ND-OIL 8 for the compressor oil.

2. INSTALL COOLER COMPRESSOR WITH MAGNETIC CLUTCH ASSEMBLY

- (a) Temporarily tighten the cooler compressor assembly with the bolts.



- (b) Install the cooler compressor assembly with the 3 bolts.

Torque: 25 N*m (250 kgf*cm)

NOTICE:

Tighten the bolts in the order shown in the illustration.

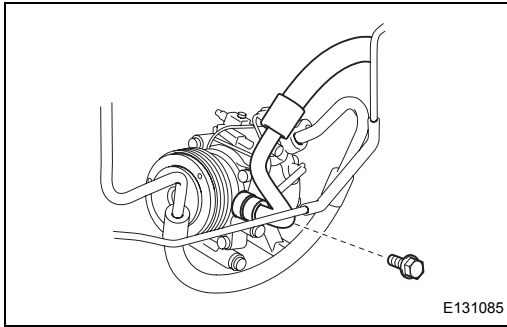
- (c) Connect the connector.

3. INSTALL COOLER REFRIGERANT SUCTION HOSE NO. 1

- (a) Remove the attached vinyl tape from the connector part of cooler refrigerant suction hose No. 1 and the air conditioner tube assembly.
- (b) Sufficiently apply compressor oil (ND-OIL8) to new O-ring and the fitting surface of the cooler compressor assembly.
- (c) Install the O-ring on the No. 1 cooler refrigerant suction hose.

NOTICE:

Do not allow foreign objects caught on the O-ring or O-ring seal.



- (d) Install cooler refrigerant suction hose No. 1 with the bolt.

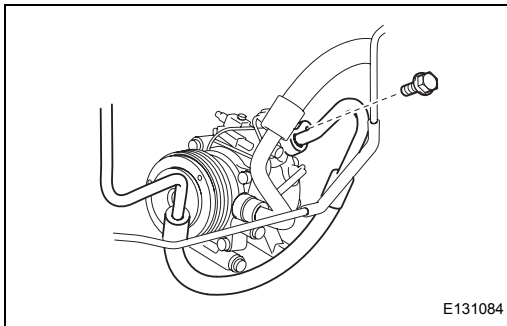
Torque: 9.8 N*m (100 kgf*cm)

4. INSTALL COOLER REFRIGERANT DISCHARGE HOSE NO. 1

- (a) Remove the attached vinyl tape from the connector part of cooler refrigerant suction hose No. 1 and the air conditioner tube assembly.
- (b) Sufficiently apply compressor oil (ND-OIL8) to new O-ring and the fitting surface of the cooler compressor assembly.
- (c) Install the O-ring on the No. 1 cooler refrigerant discharge hose.

NOTICE:

Do not allow foreign objects caught on the O-ring or O-ring seal.



- (d) Install the No. 1 cooler refrigerant discharge hose with bolt.

Torque: 9.8 N*m (100 kgf*cm)

5. INSTALL FAN AND ALTERNATOR V BELT (See page CH-10)

6. ADJUST FAN AND ALTERNATOR V BELT (See page EM-9)

7. CHECK FAN AND ALTERNATOR V BELT (See page EM-9)

8. CONNECT NEGATIVE BATTERY TERMINAL

9. CHARGE REFRIGERANT HFC - 134a [R134a] (See page AC-27)

10. WARM UP ENGINE (See page AC-28)

11. CHECK FOR REFRIGERANT LEAKS (See page AC-28)

12. PERFORM INITIALIZATION

(See page SS-10 for details.)

INSPECTION

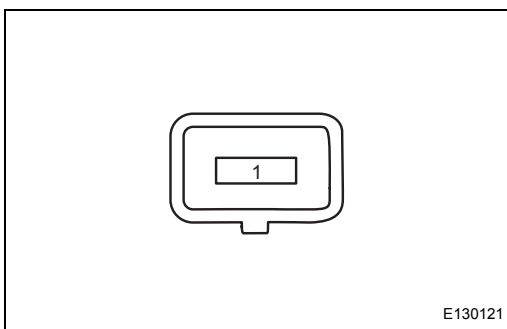
1. CHECK COOLER COMPRESSOR WITH MAGNETIC CLUTCH ASSEMBLY

- (a) Disconnect the cooler compressor assembly connector.
- (b) Using the tester, check the continuity between connector terminal 1 (MG+) and the ground.

Standard:

Continuity

- (c) When connector terminal 1 (MG+) is connected to the positive battery terminal and the body ground is connected to the negative battery terminal, check that the magnetic clutch makes a sound indicating that it is operating, and check that the magnetic clutch's hub and rotor lock.



AC

