550CK–01

REPLACEMENT

HINT:

COMPONENTS: See page 55–58

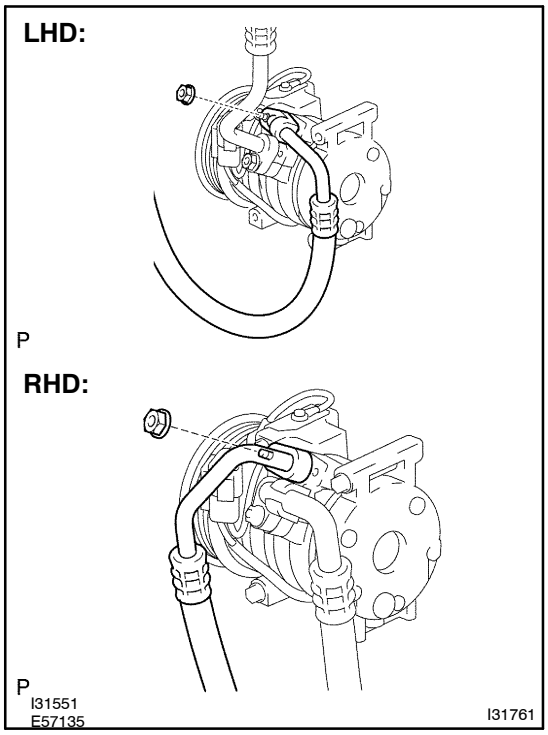
1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM (See page 55–8)

SST 07110–58060 (07117–58080, 07117–58090, 07117–78050, 07117–88060, 07117–88070, 07117–88080)

2. REMOVE FAN AND GENERATOR V BELT (See page 14–5)

SST 09249–63010

3. REMOVE GENERATOR ASSY (See page 19–7)



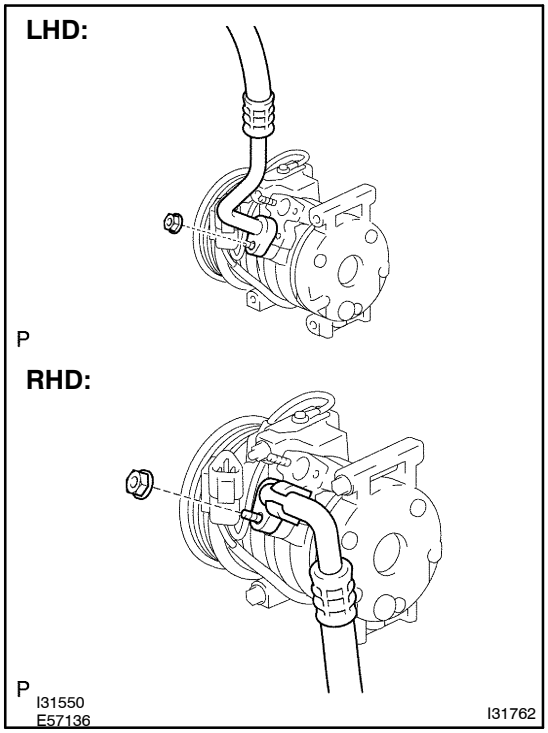
4. DISCONNECT COOLER REFRIGERANT DISCHARGE HOSE NO.1

(a) Remove the nut and disconnect the cooler refrigerant discharge hose No. 1.

(b) Remove the O–ring from the cooler refrigerant discharge hose No. 1.

NOTICE:

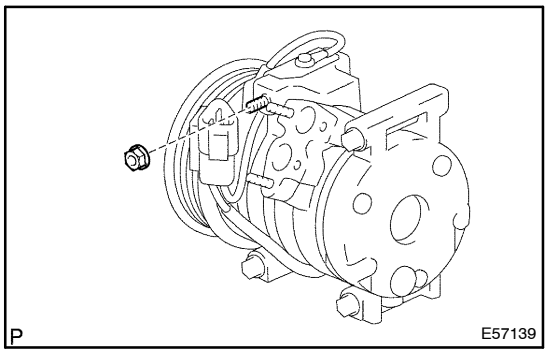
Seal the opening of the disconnected parts using vinyl tape to prevent moisture and foreign matter from entering.



5. DISCONNECT COOLER REFRIGERANT SUCTION HOSE NO.1

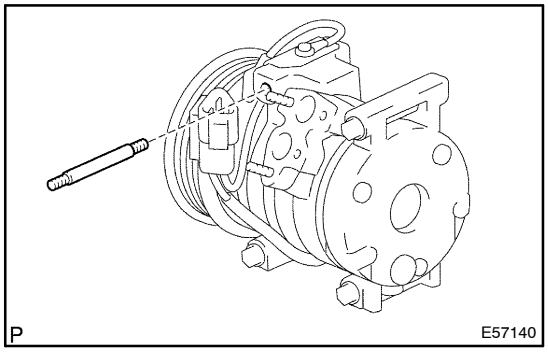
(a) Remove the nut and disconnect the cooler refrigerant suction hose No. 1.
(b) Remove the O–ring from the cooler refrigerant suction hose No. 1.

NOTICE:
Seal the opening of the disconnected parts using vinyl tape to prevent moisture and foreign matter from entering.

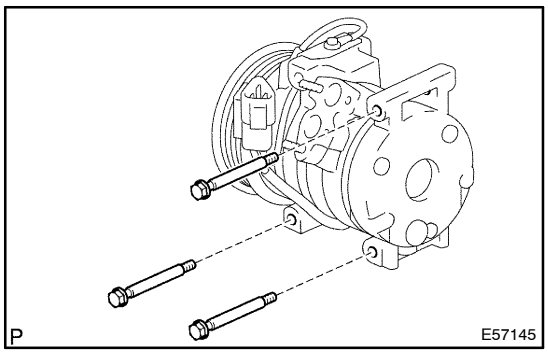


6. REMOVE COMPRESSOR AND MAGNETIC CLUTCH

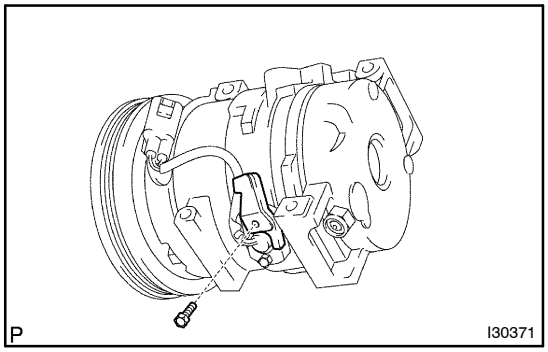
(a) Disconnect the connector.
(b) Remove the nut.



(c) Using a torque socket wrench (E8), remove the bolt.

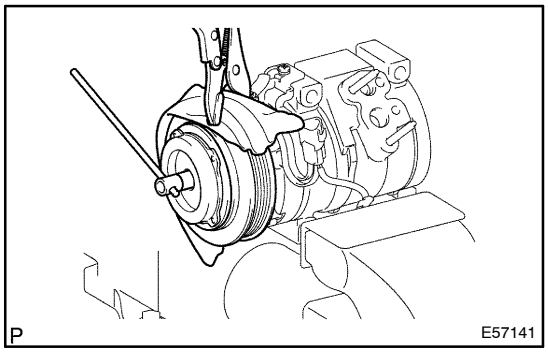


(d) Remove the 3 bolts and compressor and magnetic clutch.

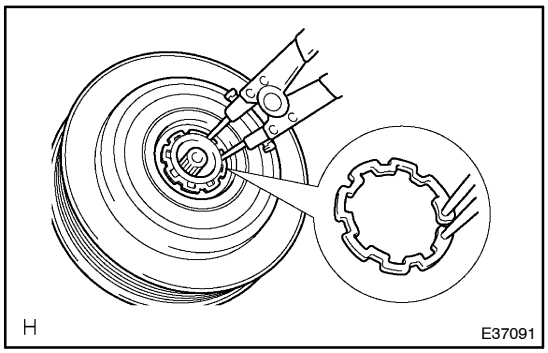


7. REMOVE MAGNET CLUTCH ASSY

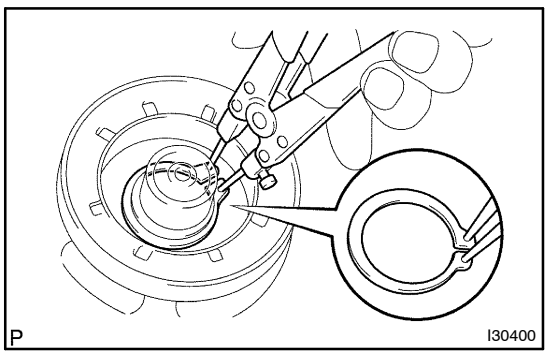
(a) Remove the bolt and bracket.
(b) Place the compressor and magnetic clutch in vise.



(c) Using a vise pliers, hold the magnet clutch hub.
(d) Remove the bolt, magnet clutch hub and magnet clutch washer.

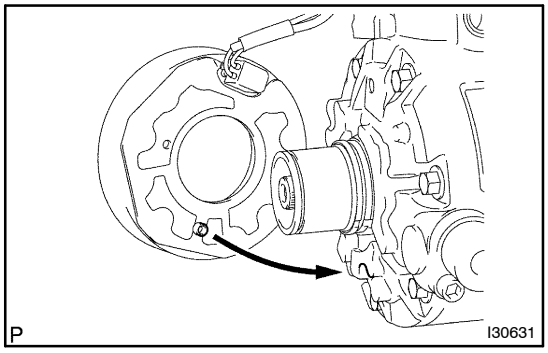


(e) Using a snap ring expander, remove the snap ring and magnet clutch rotor.
(f) Disconnect the connector.



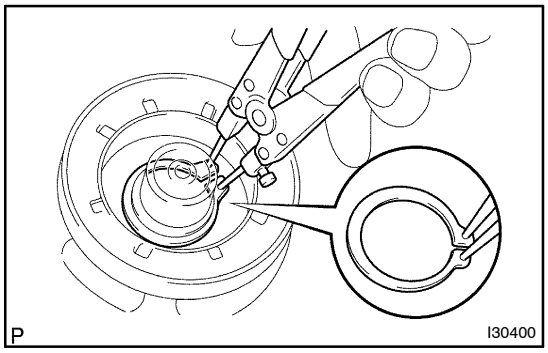
(g) Using a snap ring expander, remove the snap ring and magnet clutch starter.

8. REMOVE COOLER COMPRESSOR ASSY

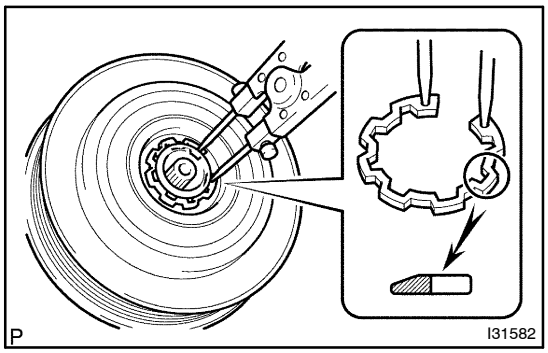


9. INSTALL MAGNET CLUTCH ASSY

(a) Matching the parts shown in the illustration, install the magnet clutch starter.

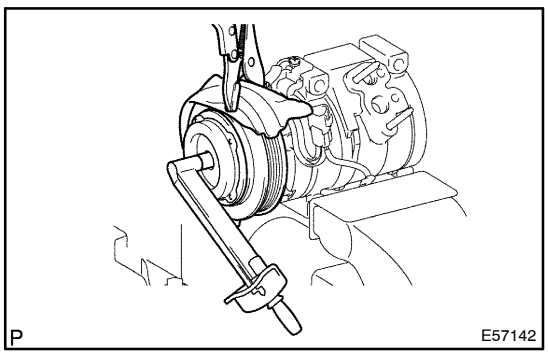


(b) Using a snap ring expander, install a new snap ring with the chamfered side facing up.
(c) Connect the connector.

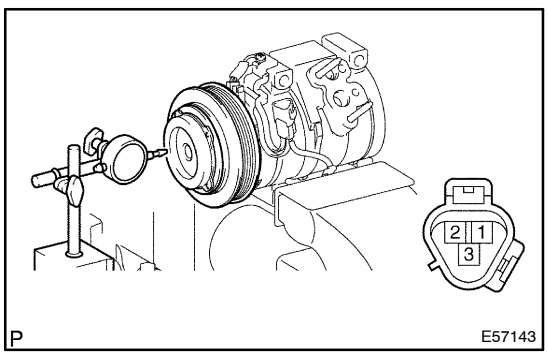


(d) Using a snap ring expander, install the magnet clutch rotor and a new snap ring with the chamfered side facing up.
(e) Install the magnet clutch washer and magnet clutch hub.

NOTICE:
Do not change the combination of the magnet clutch washers used before disassembly.



(f) Using a vise pliers, hold the magnet clutch hub and install the bolt.
Torque: 18 N·m (184 kgf·cm, 13 ft·lbf)



10. INSPECT MAGNETIC CLUTCH CLEARANCE

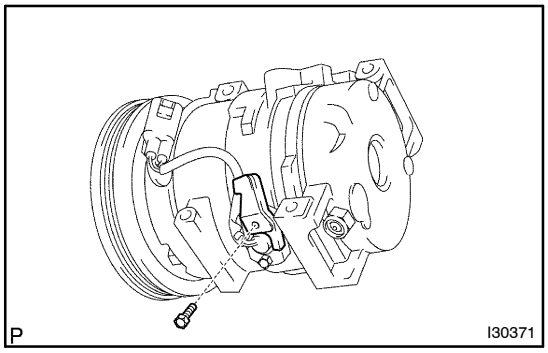
(a) Set the dial indicator to the magnet clutch hub.
(b) Connect the battery positive lead to the terminal 3 of magnet clutch connector and the negative lead to the earth wire. Turn on and off the magnet clutch and measure the clearance.
Standard clearance:
0.35 – 0.60 mm (0.014 – 0.024 in.)

If the measured value is out of the standard range, remove the magnet clutch hub and adjust it with magnet clutch washers.

NOTICE:
Adjustment shall be performed with 3 or less magnet clutch washers.

(c) Remove the compressor and magnetic clutch from the vise.

(d) Install the bolt and bracket.



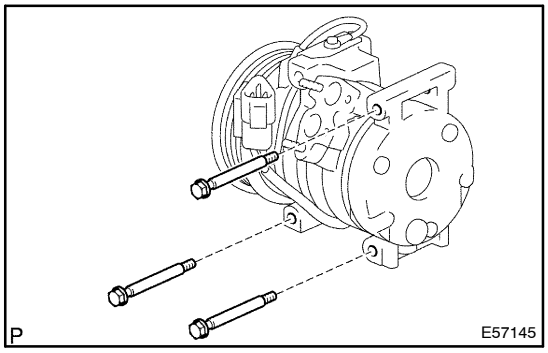
11. INSPECT COMPRESSOR OIL

(a) When replacing the compressor and magnetic clutch with new one, after gradually removing the refrigerant gas from the service valve, drain the following amount of oil from the new compressor and magnetic clutch before installation.

Standard:
(Oil capacity inside new compressor and magnetic clutch: 120 + 15 cc (4.1 + 0.51 fl.oz.)) – (Remaining oil amount in the removed compressor and magnetic clutch) = (Oil amount to be removed when replacing)

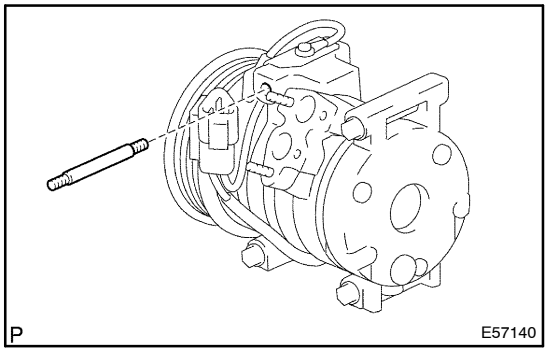
NOTICE:

- **When checking the compressor oil level, observe the precautions on the cooler removal/installation.**
- **Because compressor oil remains in the pipes of the vehicle, if a new compressor and magnetic clutch is installed without removing some oil inside, the oil amount becomes too much, preventing heat exchange in the refrigerant cycle and causing refrigerant failure.**
- **If the remaining oil in the removed compressor and magnetic clutch is too small in volume, check for oil leakage.**
- **Be sure to use ND–OIL8 for compressor oil.**



12. TEMPORARY TIGHTEN COMPRESSOR AND MAGNETIC CLUTCH

(a) Temporarily the compressor and magnetic clutch with the 3 bolts.



13. FULLY TIGHTEN COMPRESSOR AND MAGNETIC CLUTCH

(a) Using a torque socket wrench (E8), install the bolt.
Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)

(b) Tighten the compressor and magnetic clutch with the 3 bolts and nut.
Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)

(c) Connect the connector.

NOTICE:

Tighten the bolts and nuts in following order shown in the illustration to install the compressor magnetic clutch.

14. INSTALL COOLER REFRIGERANT SUCTION HOSE NO.1

(a) Remove the attached vinyl tape from the hose.

(b) Sufficiently apply compressor oil to the new O–ring and fit surface of the compressor and magnetic clutch.
Compressor oil: ND–OIL 8 or equivalent

(c) Install a O–ring to the cooler refrigerant suction hose No. 1.

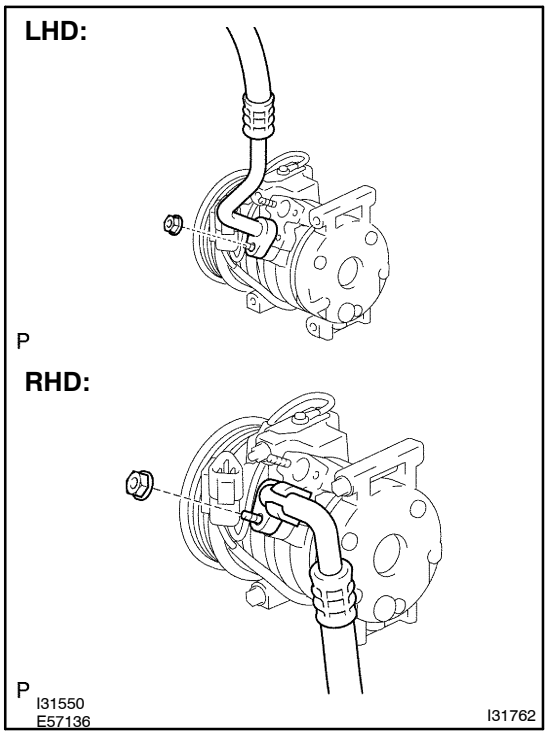
(d) Install the cooler refrigerant suction hose No. 1 to the compressor and magnetic clutch with the nut .
Torque: 9.8 N·m (100 kgf·cm, 87 in.·lbf)

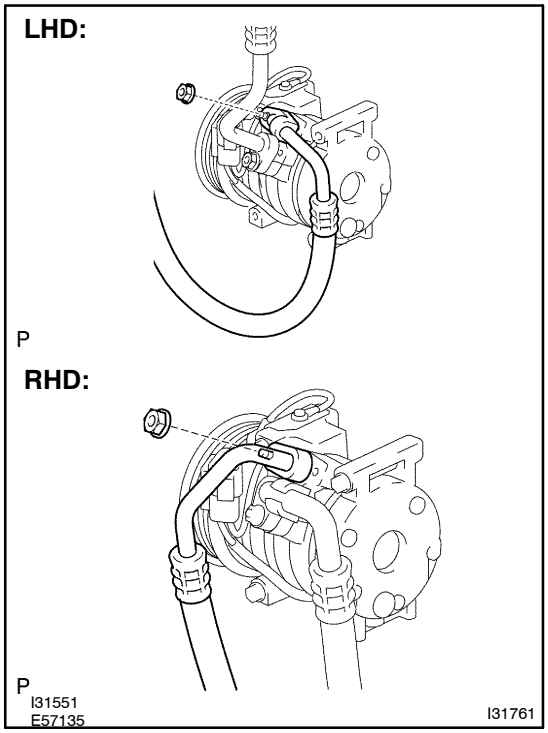
15. INSTALL COOLER REFRIGERANT DISCHARGE HOSE NO.1

(a) Remove the attached vinyl tape from the hose.

(b) Sufficiently apply compressor oil to the new O–ring and fit surface of the compressor and magnetic clutch.
Compressor oil: ND–OIL 8 or equivalent

(c) Install a O–ring to the cooler refrigerant discharge hose No. 1.





(d) Install the cooler refrigerant discharge hose No. 1 to the compressor and magnetic clutch with the nut.
Torque: 9.8 N·m (100 kgf·cm, 87 in.·lbf)

16. INSTALL GENERATOR ASSY
(See page 19–7)

17. INSTALL FAN AND GENERATOR V BELT
(See page 14–5)
SST 09249–63010

18. CHARGE REFRIGERANT (See page 55–8)
SST 07110–58060 (07117–58060, 07117–58070, 07117–58080, 07117–58090, 07117–78050, 07117–88060, 07117–88070, 07117–88080)
Specified amount:
LHD: 550 ± 50 g (19.37 ± 1.76 oz.)
RHD: 580 ± 50 g (21.86 ± 1.76 oz.)

19. WARM UP ENGINE

20. INSPECT LEAKAGE OF REFRIGERANT (See page 55–8)