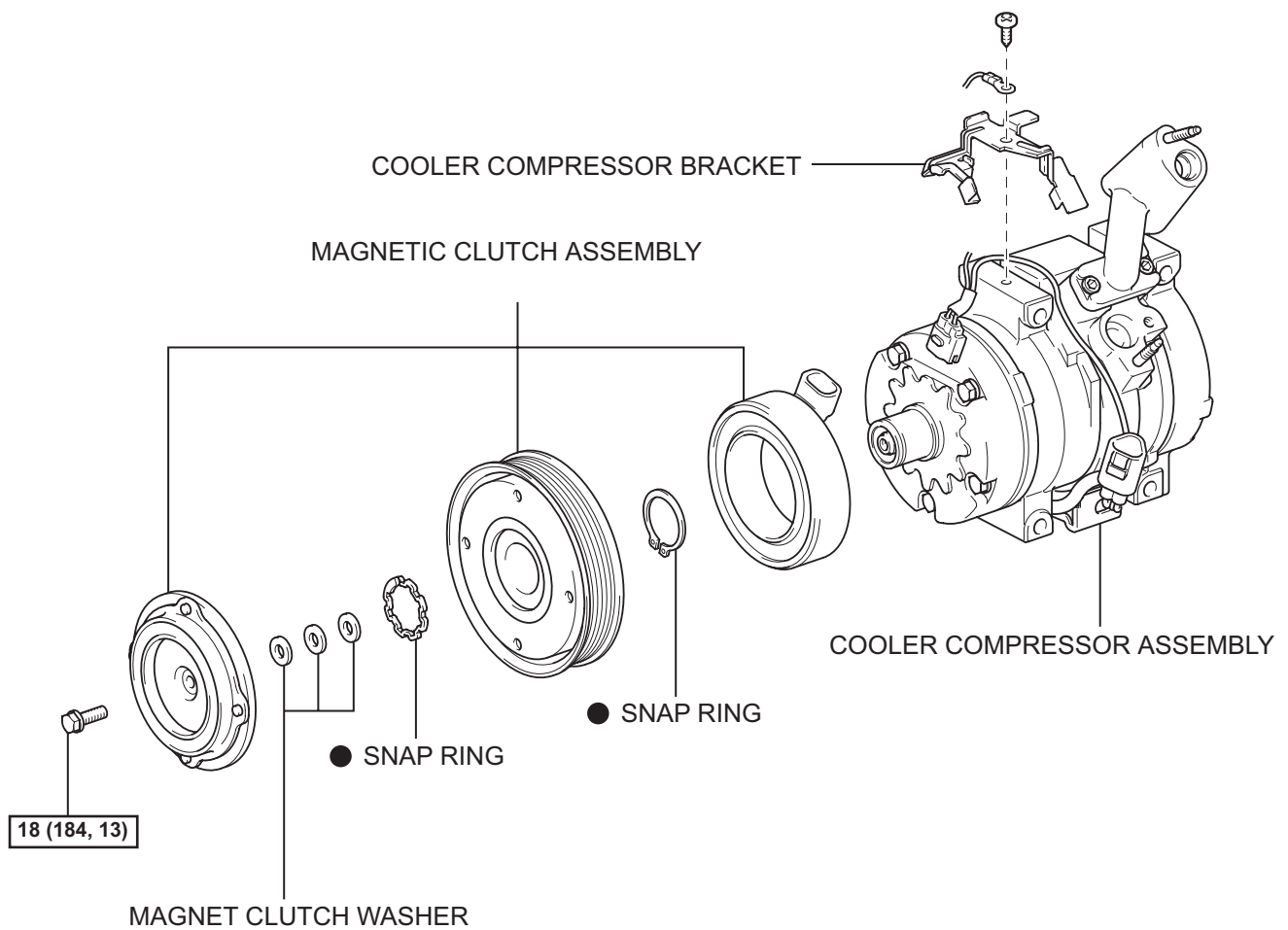


# COMPRESSOR AND MAGNETIC CLUTCH

## COMPONENTS

AC



**N\*m (kgf\*cm, ft.\*lbf)** : Specified torque

● Non-reusable part

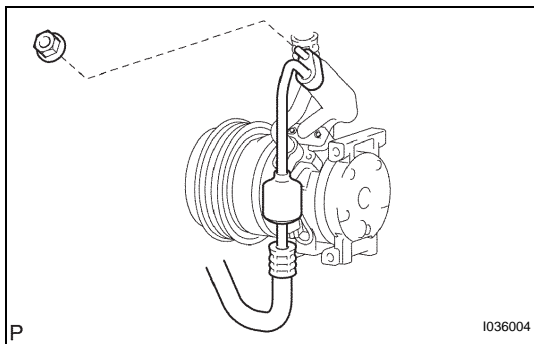
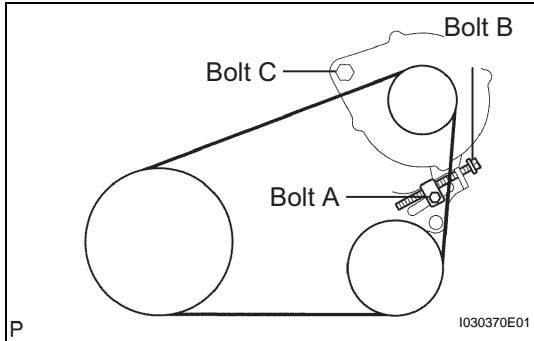
## REMOVAL

### 1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

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

### 2. REMOVE V (COOLER COMPRESSOR TO CRANKSHAFT PULLEY) BELT NO.1

- Loosen the bolt C.
- Loosen the bolt A.
- Loosen the bolt B and remove the V (cooler compressor to crankshaft pulley) belt No. 1.



### 3. DISCONNECT COOLER REFRIGERANT DISCHARGE HOSE NO.1

- Remove the nut and disconnect the cooler refrigerant discharge hose No. 1 from the compressor and magnetic clutch.
- 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.

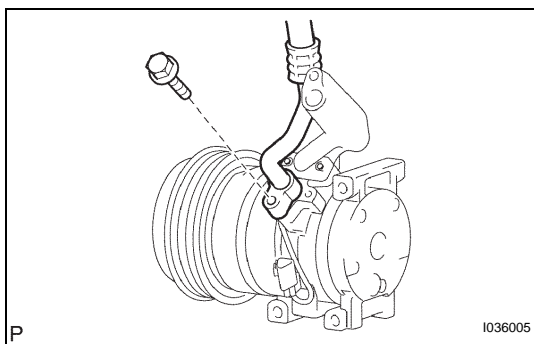
### 4. REMOVE ENGINE UNDER COVER NO.1

### 5. DISCONNECT COOLER REFRIGERANT SUCTION HOSE NO.1

- Remove the bolt and disconnect the cooler refrigerant suction hose No. 1 from the compressor and magnetic clutch.
- Remove the O-ring from the cooler refrigerant suction hose No. 1.

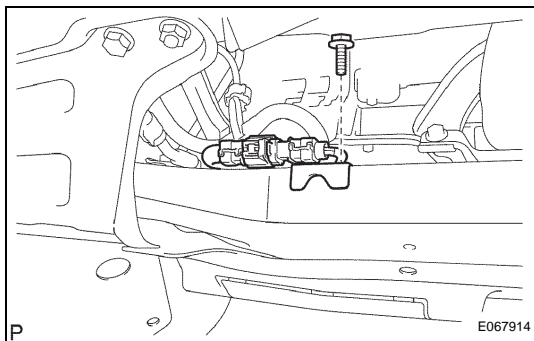
**NOTICE:**

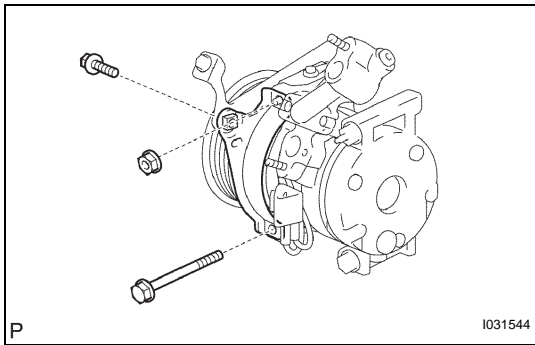
Seal the opening of the disconnected parts using vinyl tape to prevent moisture and foreign matter from entering.



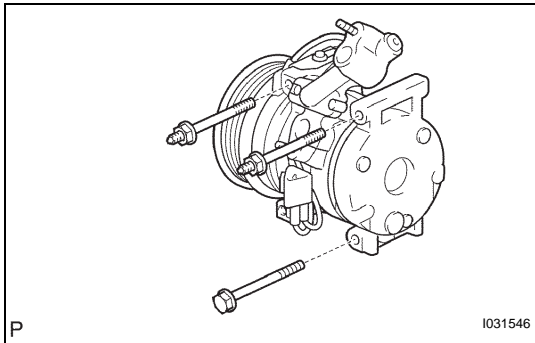
### 6. REMOVE COMPRESSOR AND MAGNETIC CLUTCH

- Remove the bolt and bracket.
- Disconnect the connector and clamp.

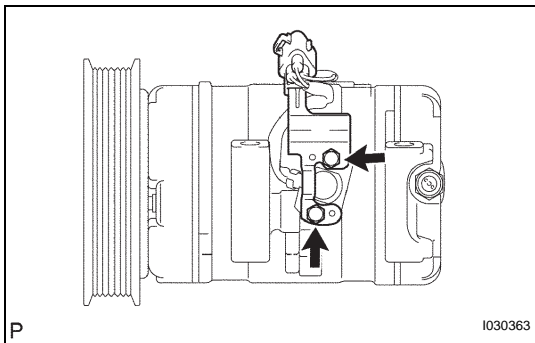




- (c) Remove the 2 bolts, nut and the cooler compressor bracket.



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



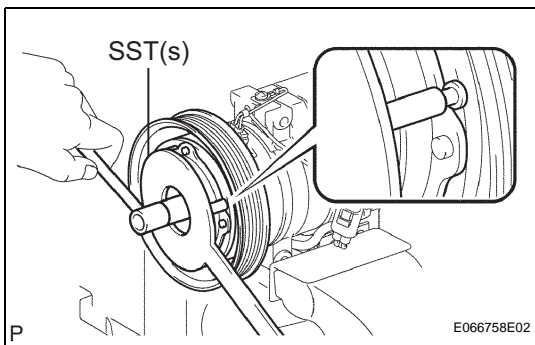
## DISASSEMBLY

### 1. REMOVE MAGNETIC CLUTCH ASSEMBLY

- (a) Remove the 2 bolts and the bracket.
- (b) Place the compressor and magnetic clutch in a vise.

**NOTICE:**

**Do not get the bracket and harness caught in the vise.**



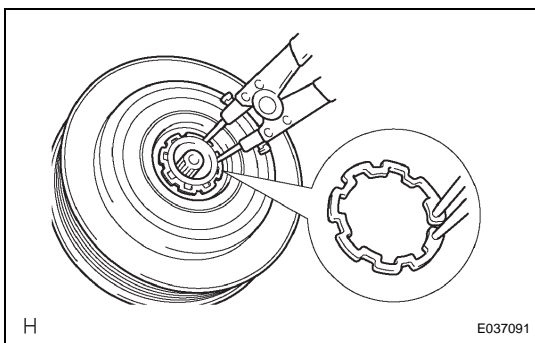
- (c) Using SST(s), hold the magnet clutch hub.

**SST 95047-10040**

- (d) Remove the bolt, magnet clutch hub and magnet clutch washer.

**HINT:**

There is no set number of magnet clutch washers since they are used for adjusting.

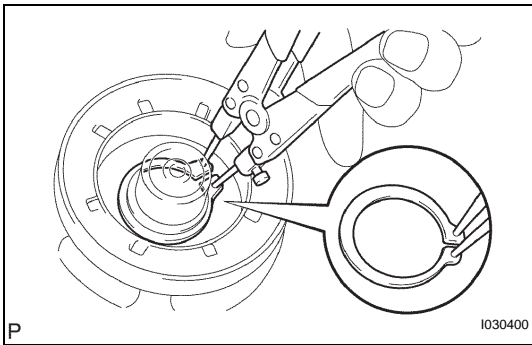


- (e) Using a snap ring expander, remove the snap ring and magnet clutch rotor.

**NOTICE:**

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

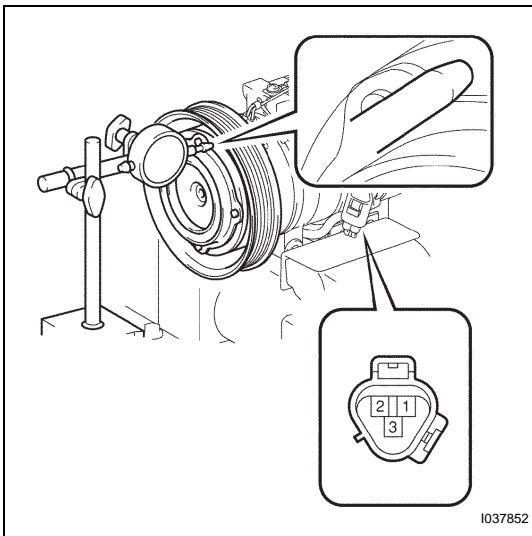
- (f) Remove the screw and disconnect the connector.



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

## 2. REMOVE COOLER COMPRESSOR ASSEMBLY

AC



## INSPECTION

### 1. INSPECT MAGNETIC CLUTCH CLEARANCE

- (a) Set the dial gage to the magnet clutch hub.  
 (b) Connect the positive battery lead to terminal 3 of the 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 to 0.60 mm (0.013 to 0.023 in.)**

If the measured value is not within 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 bracket with the 2 bolts.

### 2. INSPECT COMPRESSOR OIL

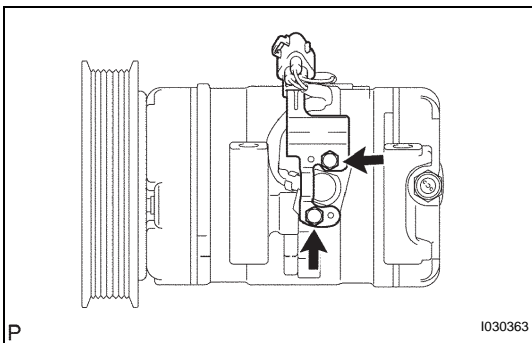
- (a) When replacing the compressor and magnetic clutch with a new one, after gradually removing the refrigerant gas from the service valve, drain the following amount of oil from the new compressor and magnetic clutch before installation.

#### Standard:

**(Oil capacity inside new compressor and magnetic clutch: 120 + 15 cc (4.0 + 0.5 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.
- When a new compressor and magnetic clutch is installed without removing the oil remaining in the pipes (of the vehicle), the oil amount will become excessive, which prevents heat exchange in the refrigerant and causes refrigerant failure.

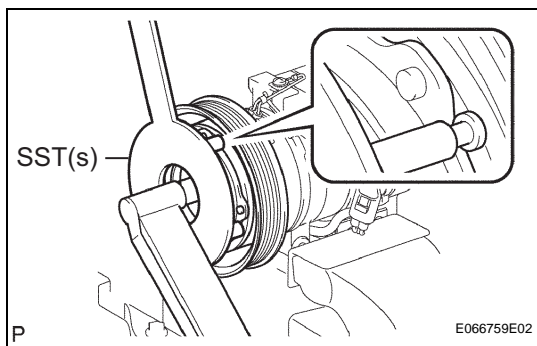
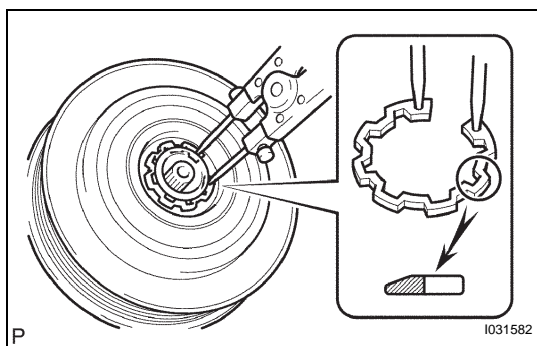
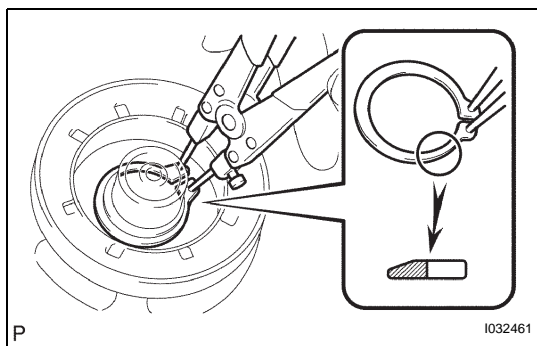
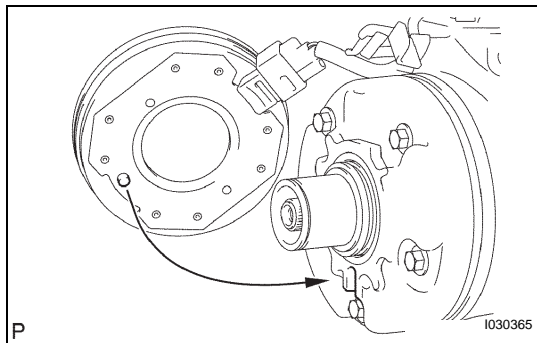


- If the remaining oil in the removed compressor and magnetic clutch is too small in volume, check for oil leakage.
- Be sure to use ND-OIL 8 for compressor oil.

## REASSEMBLY

### 1. INSTALL MAGNETIC CLUTCH ASSEMBLY

- (a) Fit the parts as shown in the illustration and install the magnet clutch stator.



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

**NOTICE:**

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

- (c) Install the screw and 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.

**NOTICE:**

- Do not expand the snap ring by more than 30.5 mm when installing it.
- Do not damage the seal cover of the bearing when removing the snap ring.

- (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 SST(s), hold the magnet clutch hub and install the bolt.

**Torque: 18 N\*m (183 kgf\*cm, 13 ft.\*lbf)**

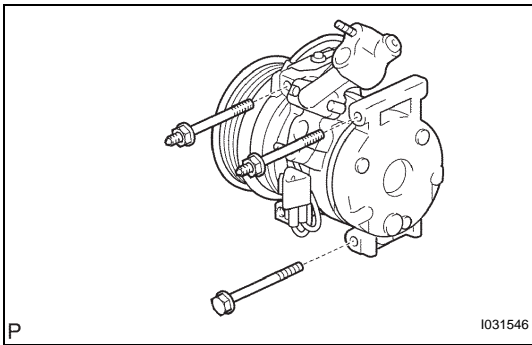
**NOTICE:**

**Make sure that there is no foreign matter or oil on the compressor shaft, bolt, and clutch hub.**

## INSTALLATION

### 1. TEMPORARILY TIGHTEN COMPRESSOR AND MAGNETIC CLUTCH

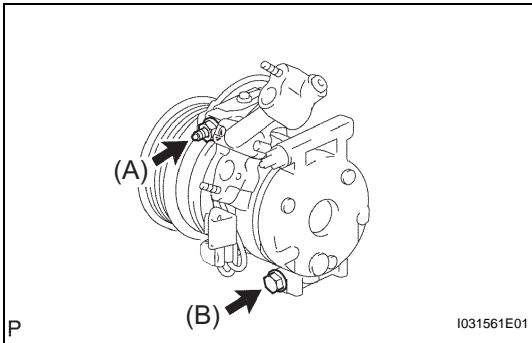
- (a) Temporarily tighten the compressor and magnetic clutch with the 3 bolts.



### 2. FULLY TIGHTEN COMPRESSOR AND MAGNETIC CLUTCH

- (a) Fully tighten the compressor and magnetic clutch with the bolt (A) and bolt (B).

**Torque: 25 N\*m (250 kgf\*cm, 18 in.\*lbf)**



- (b) Install the cooler compressor bracket with the 2 bolts and nut.

**Torque: Bolt (C)**

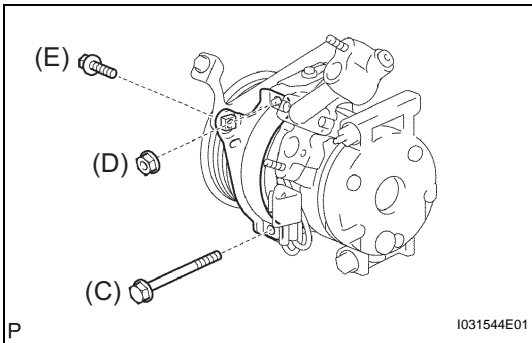
**25 N\*m (250 kgf\*cm, 18 in.\*lbf)**

**Nut (D)**

**25 N\*m (250 kgf\*cm, 18 in.\*lbf)**

**Bolt (E)**

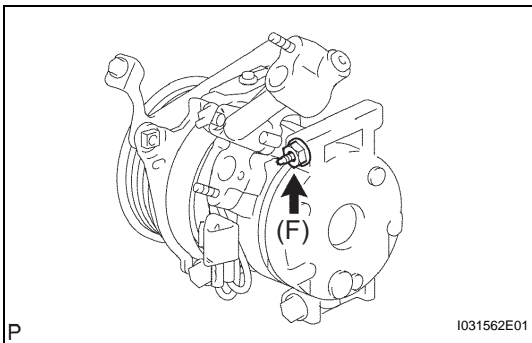
**18 N\*m (184 kgf\*cm, 13 in.\*lbf)**



- (c) Tighten the compressor and magnetic clutch with the bolt (F).

**Torque: 25 N\*m (250 kgf\*cm, 18 in.\*lbf)**

- (d) Connect the connector and clamp on the cooler compressor bracket.



- (e) Install the bracket with the bolt.

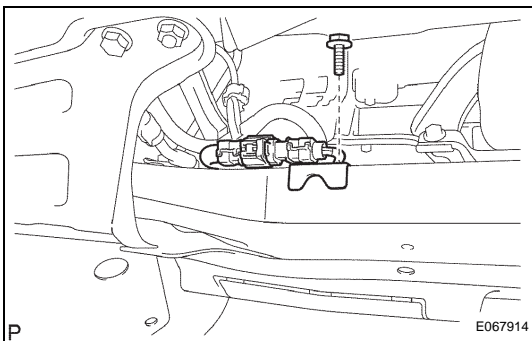
### 3. INSTALL COOLER REFRIGERANT SUCTION HOSE NO.1

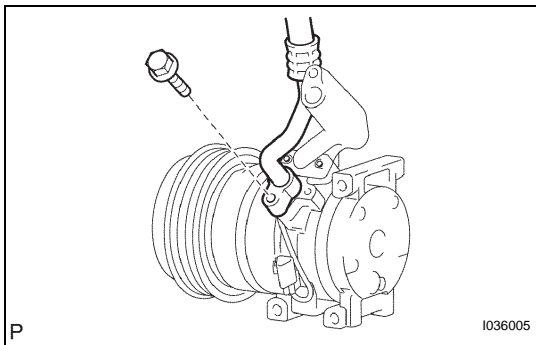
- (a) Remove the attached vinyl tape from the hose.

- (b) Sufficiently apply compressor oil to the new O-ring and fitting surface of the compressor and magnetic clutch.

**Compressor oil:**

**ND-OIL 8 or equivalent**





- (c) Install the 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 bolt.  
**Torque: 9.8 N\*m (100 kgf\*cm, 87 in.\*lbf)**

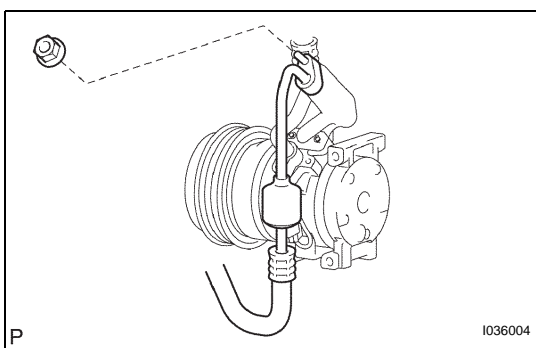
**4. INSTALL COOLER REFRIGERANT DISCHARGE HOSE NO.1**

- (a) Remove the attached vinyl tape from the hose.
- (b) Sufficiently apply compressor oil to the new O-ring and fitting surface of the compressor and magnetic clutch.

**Compressor oil:**

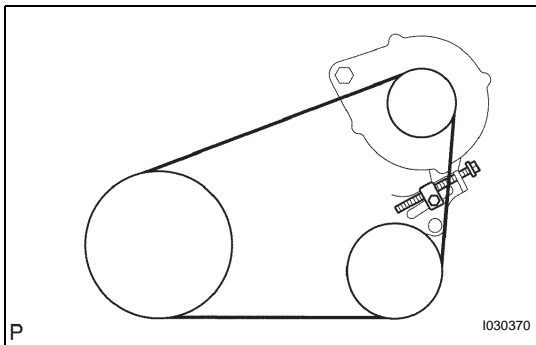
**ND-OIL 8 or equivalent**

- (c) Install the 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)**



**5. INSTALL V (COOLER COMPRESSOR TO CRANKSHAFT PULLEY) BELT NO.1**

- (a) Temporarily install the V (cooler compressor to crankshaft pulley) belt No. 1 as illustrated.



**6. ADJUST V (COOLER COMPRESSOR TO CRANKSHAFT PULLEY) BELT NO.1**

- (a) Apply drive belt tension by turning the bolt B.

**Drive belt tension:**

**New Belt:**

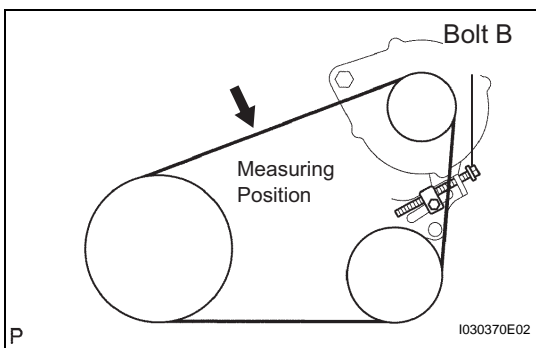
**170 +/- 10 lbf**

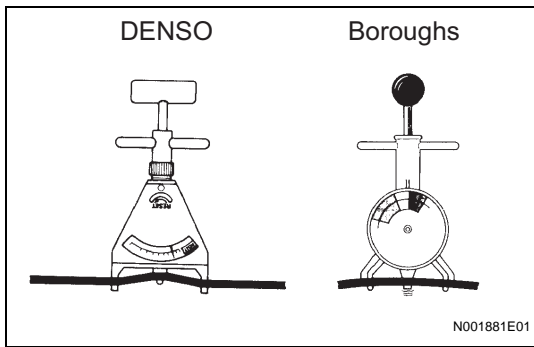
**Used belt:**

**125 +/- 10 lbf**

**HINT:**

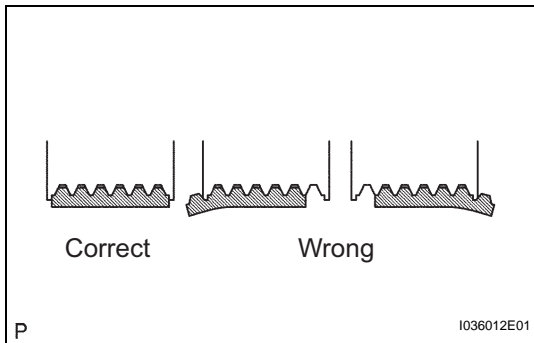
- "New belt" refers to a belt which has been used on a running engine at idling for 5 minutes or more.
- "Used belt" refers to a belt which has used on a running engine at idling for 5 minutes or more.



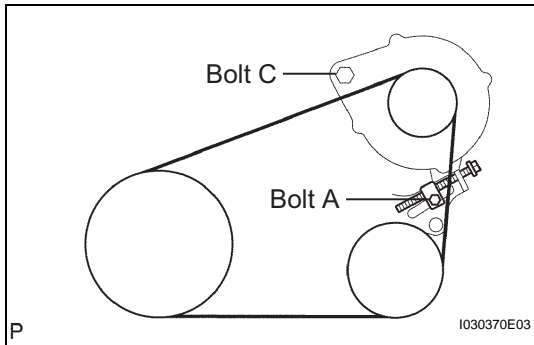


- (b) Using a belt tension gauge, check the V belt tension.

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- (c) Check that the drive belt fits properly in the ribbed grooves.



**7. FULLY TIGHTEN V (COOLER COMPRESSOR TO CRANKSHAFT PULLEY) BELT NO.1**

- (a) Tighten the bolt A.  
**Torque: 18 N\*m (183 kgf\*cm, 13 ft.\*lbf)**
- (b) Tighten the bolt C.  
**Torque: 58 N\*m (591 kgf\*cm, 43 ft.\*lbf)**

**8. CHARGE REFRIGERANT**

**SST 07110-58060 (07117-58060, 07117-58070, 07117-58080, 07117-58090, 07117-78050, 07117-88060, 07117-88070, 07117-88080)**

**Specified amount:**

**600 +- 50 g (21.15 +- 1.76 oz.)**

**9. WARM UP ENGINE**

**10. INSPECT REFRIGERANT LEAKAGE**