

# COMPRESSOR

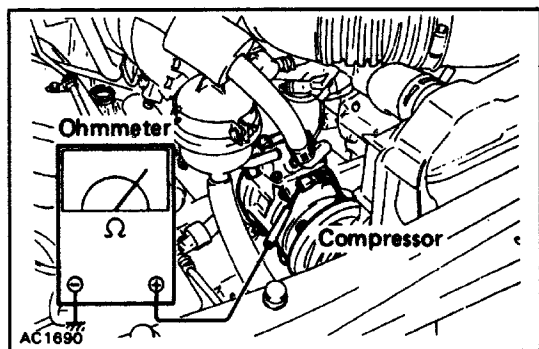
## ON – VEHICLE INSPECTION

### 1. INSTALL MANIFOLD GAUGE SET

### 2. RUN ENGINE AT APPROX. 1,500 RPM

### 3. CHECK COMPRESSOR FOR THESE:

- High pressure gauge reading is not low and low pressure gauge reading is not higher than normal.
- Metallic sound
- Leakage from shaft seal
- If defects are found, repair the compressor.



### 4. CHECK MAGNETIC CLUTCH

- Inspect the pressure plate and the rotor for signs of oil.
- Check the clutch bearing for noise and grease leakage.
- Using an ohmmeter, measure the resistance of the stator coil between the clutch lead wire and ground.

#### Standard resistance:

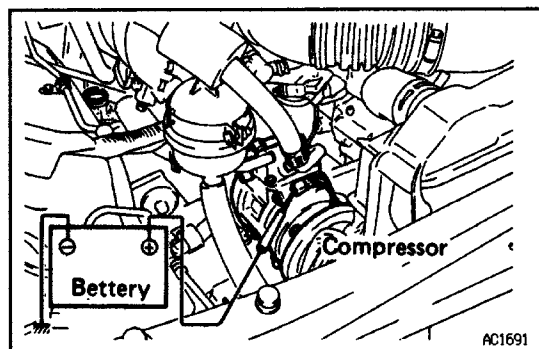
$3.6 \pm 0.2 \Omega$  at  $20^\circ \text{C}$  ( $88^\circ \text{F}$ )

If resistance value is not as specified, replace the coil.

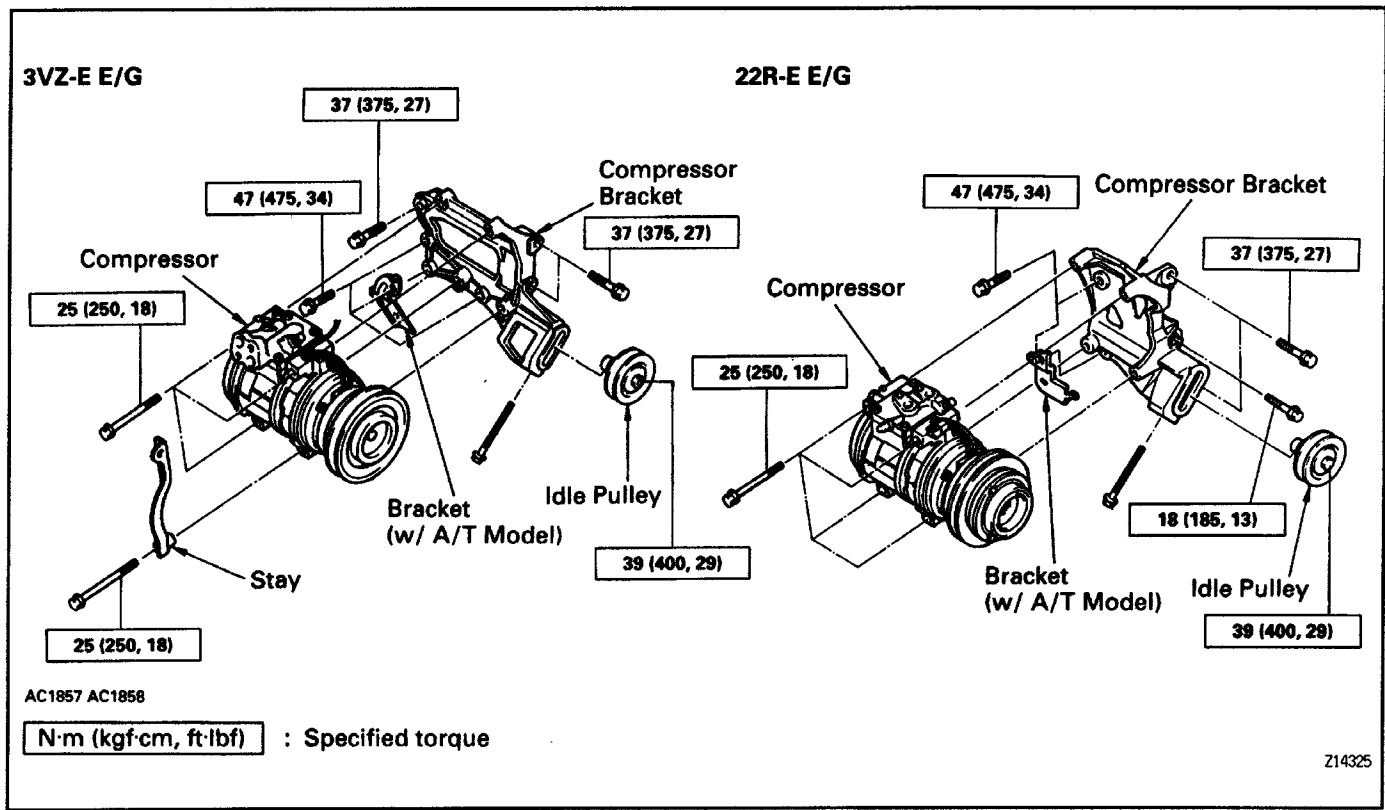
- Connect the positive (+) lead from the battery to terminal, check that the magnetic clutch is energized.

If magnetic clutch is not energized, replace the oil.

**NOTICE: Do not short the positive (+) lead wire on the vehicle by applying battery positive voltage.**

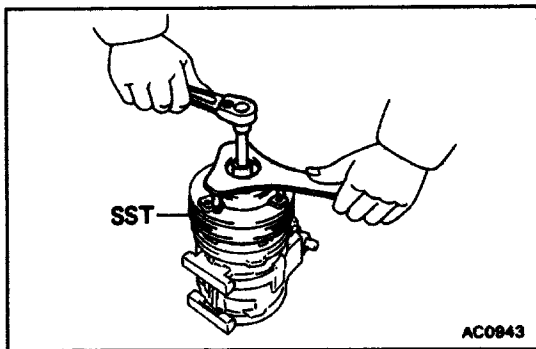
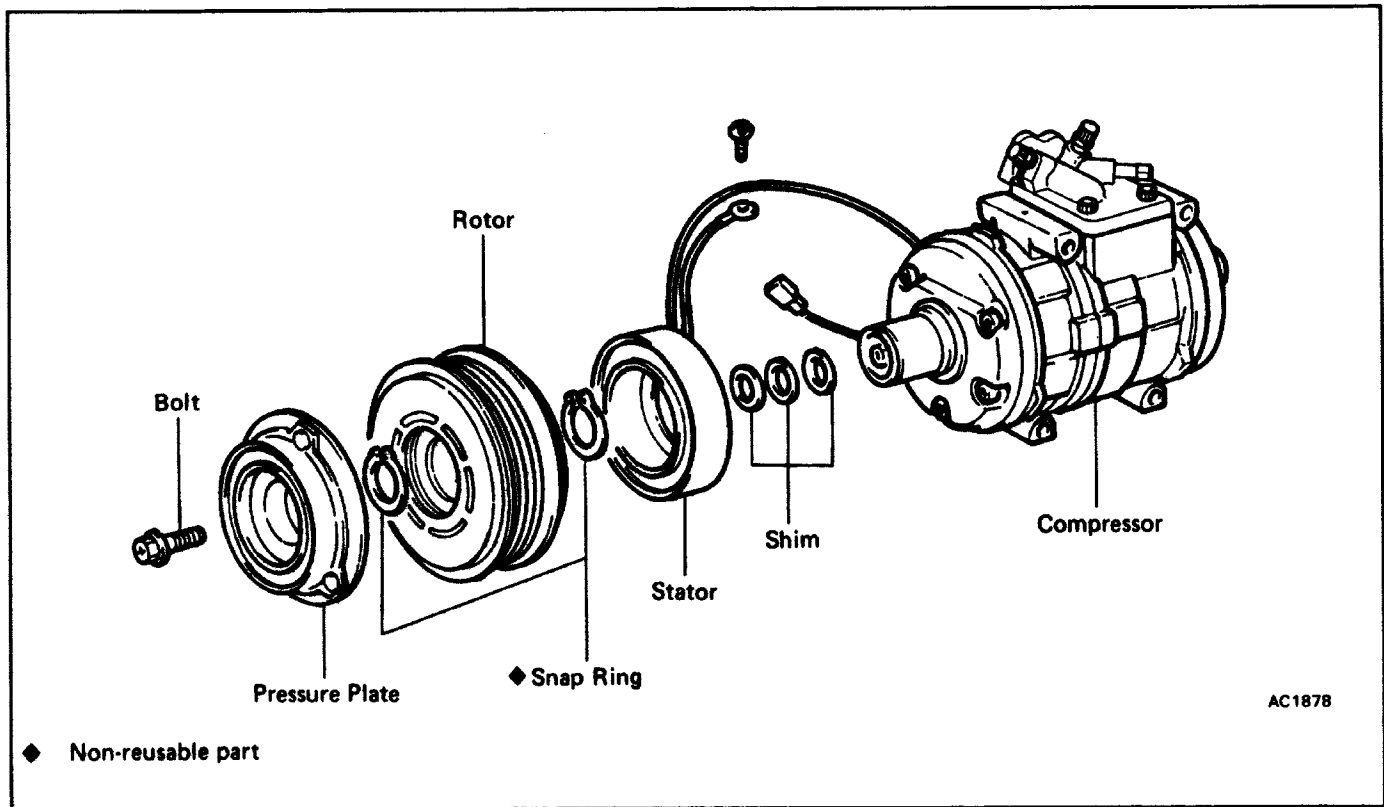


# COMPRESSOR REMOVAL



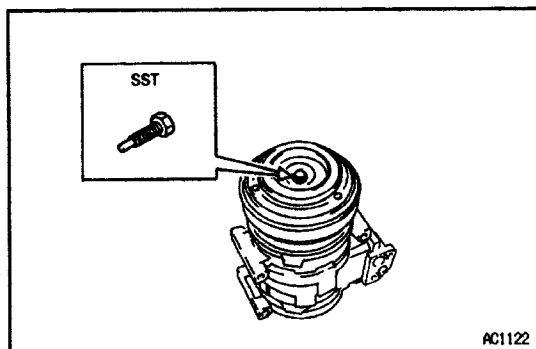
1. RUN ENGINE AT IDLE SPEED FOR 10 MINUTES WITH AIR CONDITIONING ON
2. STOP ENGINE
3. DISCONNECT NEGATIVE (-) TERMINAL CABLE FROM BATTERY
4. 3VZ-E Engine Models:  
REMOVE POWER STEERING PUMP
5. DISCONNECT CLUTCH LEAD WIRE FROM WIRING HARNESS
6. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM
7. DISCONNECT 2 HOSE FROM COMPRESSOR SERVICE VALVES  
HINT: Cap the open fitting immediately to keep moisture out of the system.
8. REMOVE COMPRESSOR
  - (a) Remove the fan shroud.
  - (b) Loosen the drive belt.
  - (c) Remove the compressor mounting bolts and the compressor.

## MAGNETIC CLUTCH DISASSEMBLY

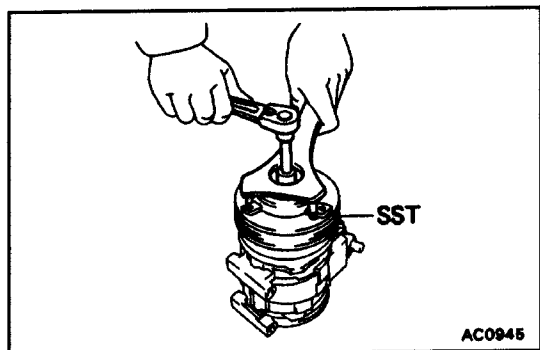


### 1. REMOVE PRESSURE PLATE

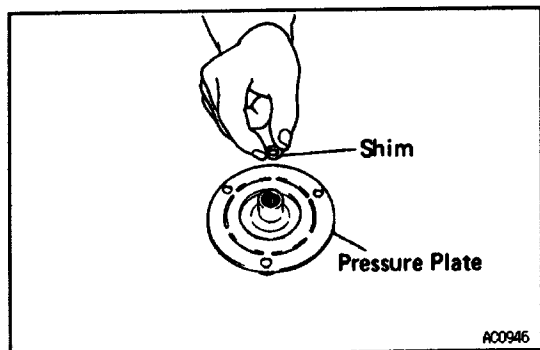
- (a) Using SST and socket wrench, remove the shaft bolt.  
SST 07112-76060



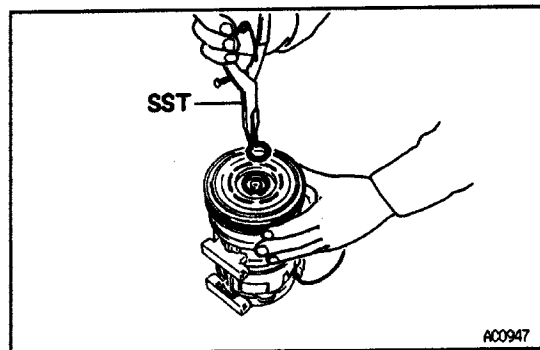
- (b) install a SST on the pressure plate.  
SST 07112-66040



- (c) Using SST and socket wrench, remove the pressure plate.  
SST 07112-76060

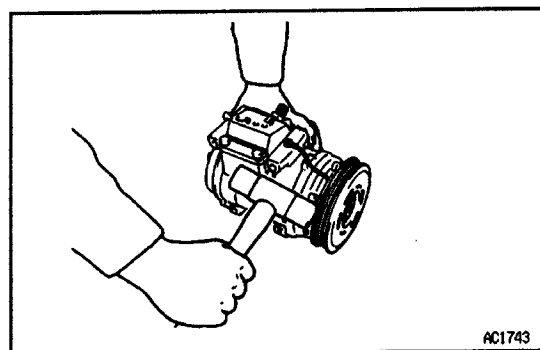


- (d) Remove the shims from the pressure plate.

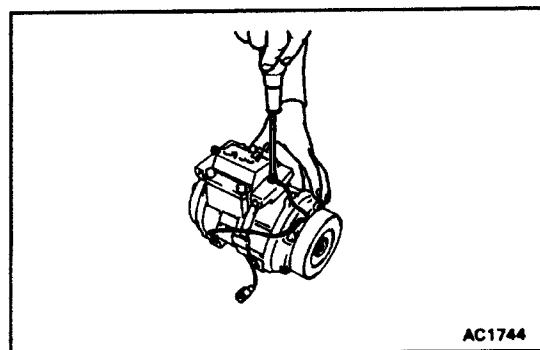


## 2. REMOVE ROTOR

- (a) Using SST, remove the snap ring.  
SST 07114- 84020

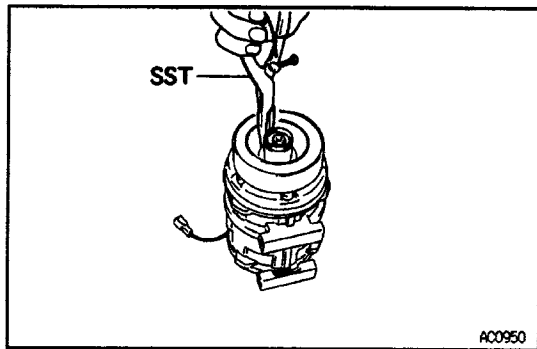


- (b) Using a plastic hammer, tap the rotor off the shaft.  
**NOTICE: Be careful not to damage the pulley when tapping on the rotor.**

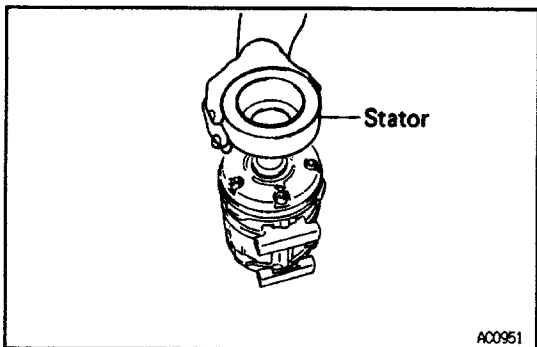


## 3. REMOVE STARTER

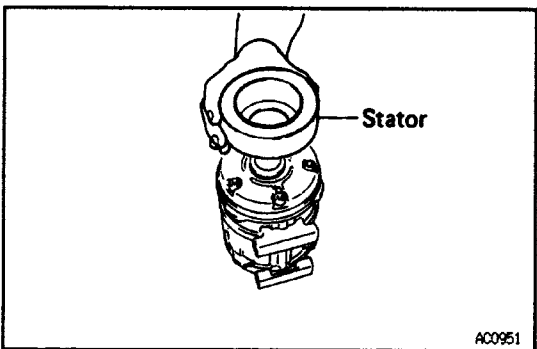
- (a) Disconnect the stator lead wire from the compressor housing.



- (b) Using SST, remove the snap ring.  
SST 07114 – 84020



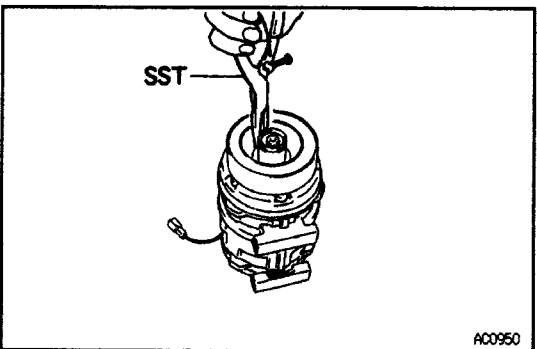
- (c) Remove the stator.



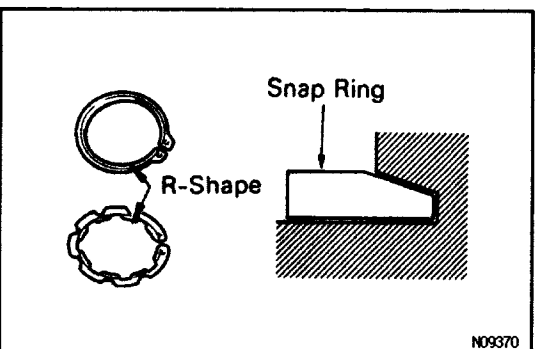
## MAGNETIC CLUTCH ASSEMBLY

### 1. INSTALL STATOR

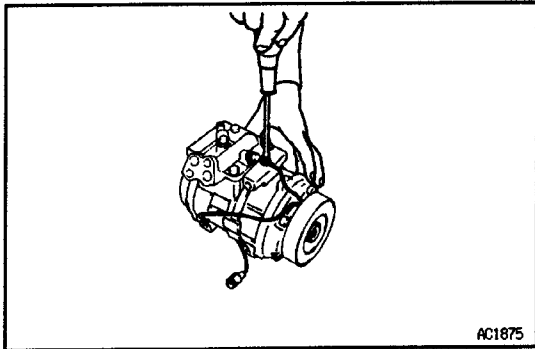
- (a) Install the stator on the compressor.



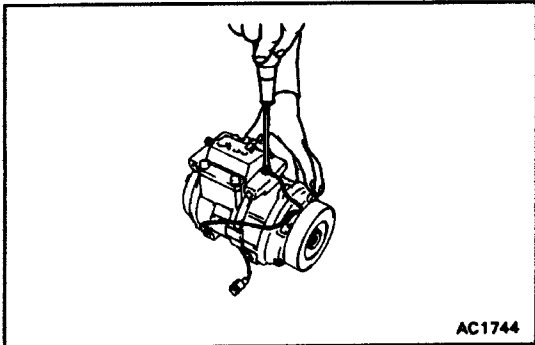
- (b) Using SST, install the new snap ring.  
SST 07114–84020



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



(c) Connect the stator lead wire to the compressor housing.



## 2. INSTALL ROTOR

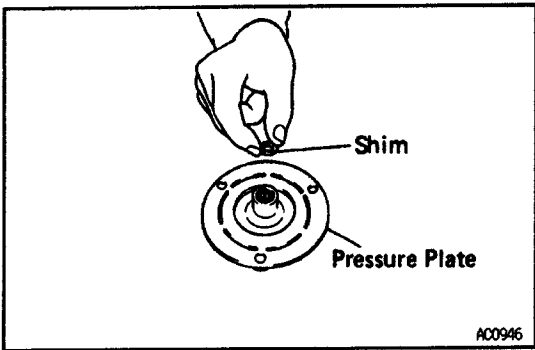
(a) Install the rotor on the compressor shaft.

(b) Using SST, install the new snap ring.

SST 07114-84020

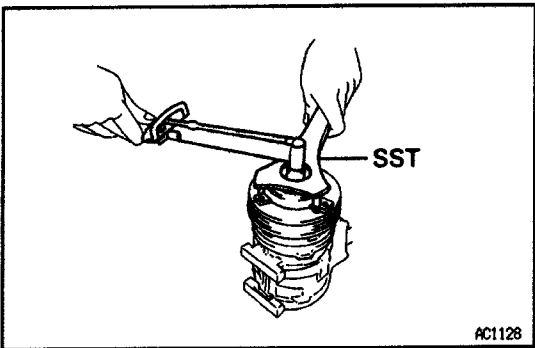
**NOTICE: Do not spread the point of SST widely.**

**Max width: 23.1 mm (0.909 in.)**



## 3. INSTALL PRESSURE PLATE

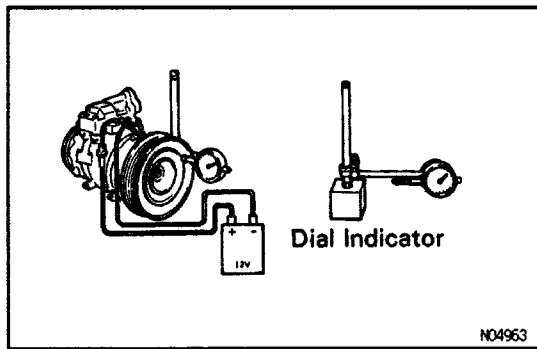
(a) Adjust the clearance between the pressure plate and rotor by putting shims on the compressor shaft.



(b) Using SST and torque wrench, install the shaft bolt.

SST 07112-76060

**Torque: 14 N-m (140 kgf-cm, 10 ft-lbf)**



#### 4. CHECK CLEARANCE OF MAGNETIC CLUTCH

- 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 connect the negative (–) terminal of the battery.

**Standard clearance:**

**$0.5 \pm 0.15$  mm ( $0.020 \pm 0.0059$  in.)**

If the clearance is not within 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.)**

## COMPRESSOR INSTALLATION

### 1. INSTALL COMPRESSOR WITH 3 MOUNTING BOLTS

Torque: 27 N–m (280 kgf–cm, 20 ft–lbf)

### 2. INSTALL DRIVE BELT

### 3. INSPECT DRIVE BELT TENSION

(See page [AC-23](#))

### 4. CONNECT 2 HOSES TO COMPRESSOR SERVICE VALVES

Torque: 25 N–m (250 kgf–cm, 18 ft–lbf)

### 5. CONNECT CLUTCH LEAD WIRE TO WIRING HARNESS

### 6. CONNECT NEGATIVE (–) TERMINAL CABLE TO BATTERY

### 7. EVACUATE AIR IN REFRIGERATION SYSTEM AND CHARGE WITH REFRIGERANT

**Specified amount:**

**$700 \pm 50$  g ( $24.69 \pm 1.76$  oz.)**