

AIR CONDITIONING SYSTEM

ON-VEHICLE INSPECTION

AC9B1-01

INSPECT IDLE-UP SPEED

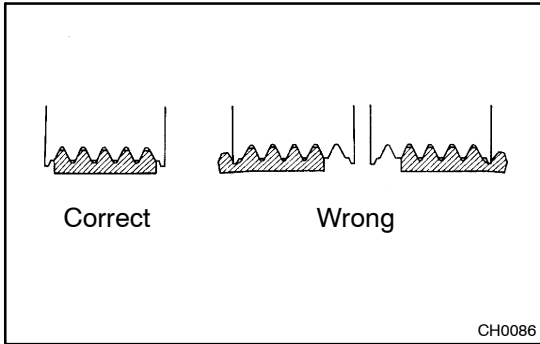
- (a) Warm up engine
- (b) Inspect idle-up speed when the these conditions are established.

Test conditions:

- Blower speed control switch at "HI" position
- Temperature control dial at "COOL" position
- A/C switch ON
- Put gear shift in neutral

GS430:

Magnetic clutch condition	Idle-up speed
Magnetic clutch not engaged	750 ± 50 rpm
Magnetic clutch engaged	800 ± 50 rpm

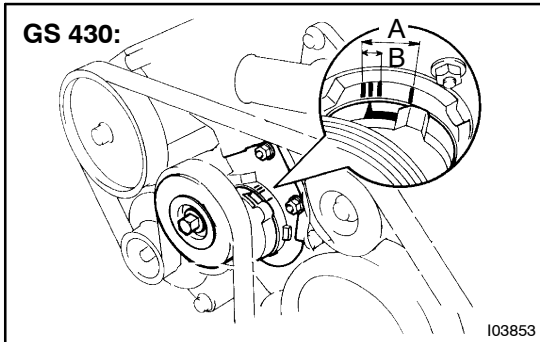


DRIVE BELT ON-VEHICLE INSPECTION

AC3B2-01

1. INSPECT DRIVE BELT'S INSTALLATION CONDITION

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



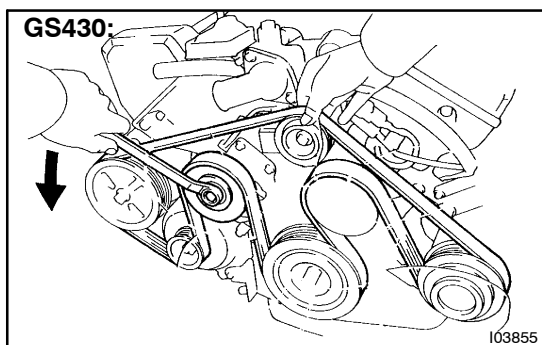
2. INSPECT DRIVE BELT TENSION

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

GS 430:

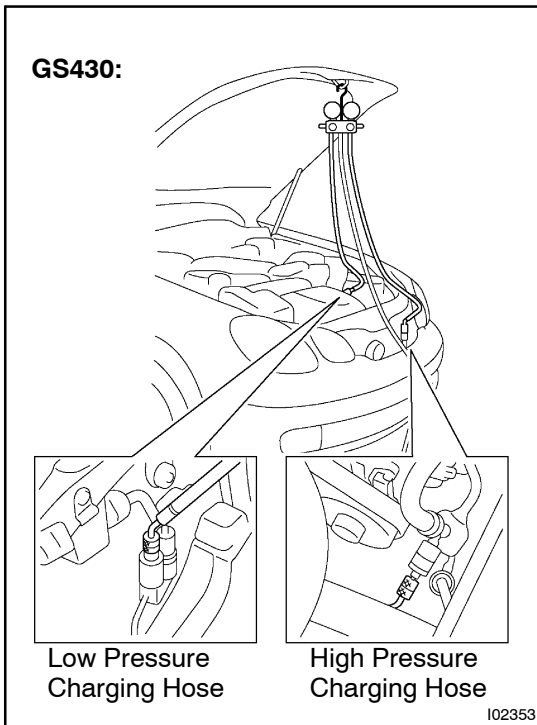
REMOVE DRIVE BELT

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

INSTALLATION

Installation is in the reverse order of removal. (See page AC-3)

AFTER INSTALLATION, CHECK DRIVE BELT'S INSTALLATION CONDITION



MANIFOLD GAUGE SET SET ON

AC3B4-01

1. **CONNECT CHARGING HOSES TO MANIFOLD GAUGE SET**

Tighten the nuts by hand.

CAUTION:

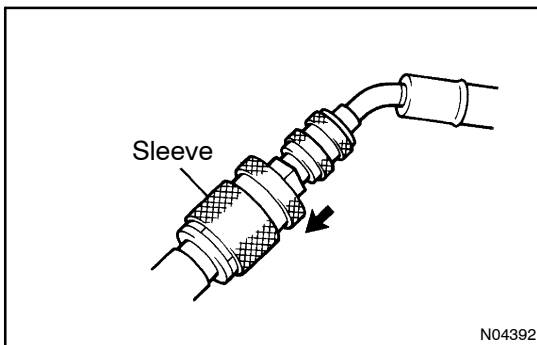
Do not connect the wrong hoses.

2. **CONNECT QUICK DISCONNECT ADAPTERS TO CHARGING HOSES**

Tighten the nuts by hand.

3. **CLOSE BOTH HAND VALVES OF MANIFOLD GAUGE SET**

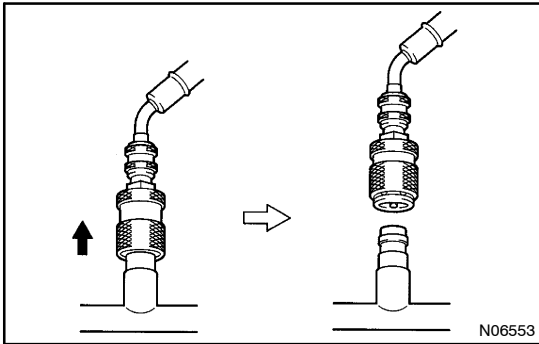
4. **REMOVE CAPS FROM SERVICE VALVE ON REFRIG-
ERANT LINES**



5. **CONNECT QUICK DISCONNECT ADAPTERS TO SER-
VICE VALVES**

HINT:

Push the quick disconnect adapter onto the service valve, then slide the sleeve of the quick disconnect adapter downward to lock it.



SET OFF

1. CLOSE BOTH HAND VALVES OF MANIFOLD GAUGE SET
2. DISCONNECT QUICK DISCONNECT ADAPTERS FROM SERVICE VALVES ON REFRIGERANT LINE

HINT:

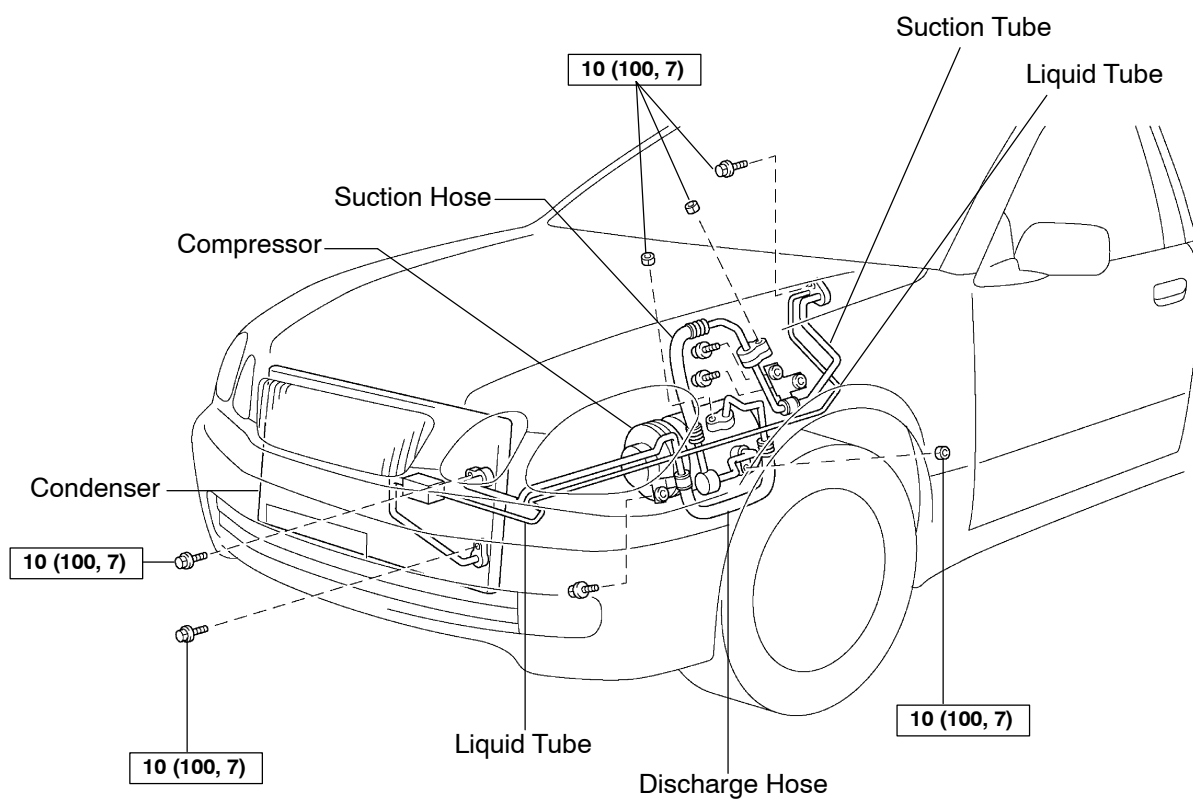
Slide the sleeve of the quick disconnect adapter upward to unlock the adapter and remove it from the service valve.

3. INSTALL CAPS TO SERVICE VALVES ON REFRIGERANT LINES

REFRIGERANT LINE COMPONENTS

AC0WH-02

GS430:



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

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COMPRESSOR AND MAGNETIC CLUTCH

AC3B5-01

ON-VEHICLE INSPECTION

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.

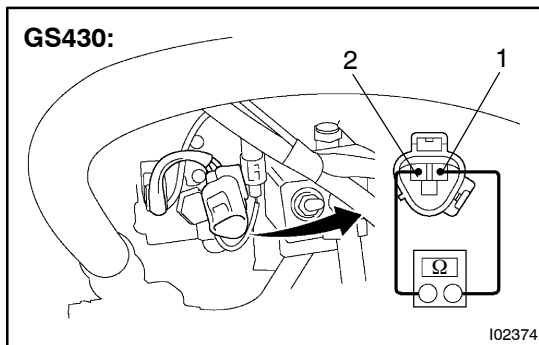
2. INSPECT REFRIGERANT PRESSURE

(See Pub. No. RM588E 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

- Disconnect the connector.
- Measure resistance between terminals 1 and 2.

Standard resistance:

570 – 1,050 Ω at 20°C (68 °F)

If resistance is not as specified, replace the compressor.

5. CHECK LEAKAGE OF GREASE FROM CLUTCH BEARING

6. CHECK SIGNS OF OIL ON PRESSURE PLATE OR ROTOR

7. INSPECT MAGNETIC CLUTCH BEARING FOR NOISE

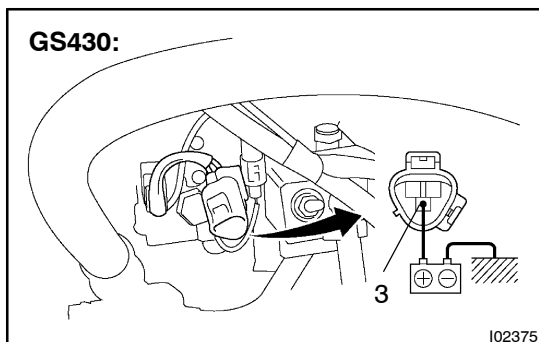
- Start engine.
- Check for abnormal noise from the compressor when the A/C switch is OFF.

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

8. INSPECT MAGNETIC CLUTCH OPERATION

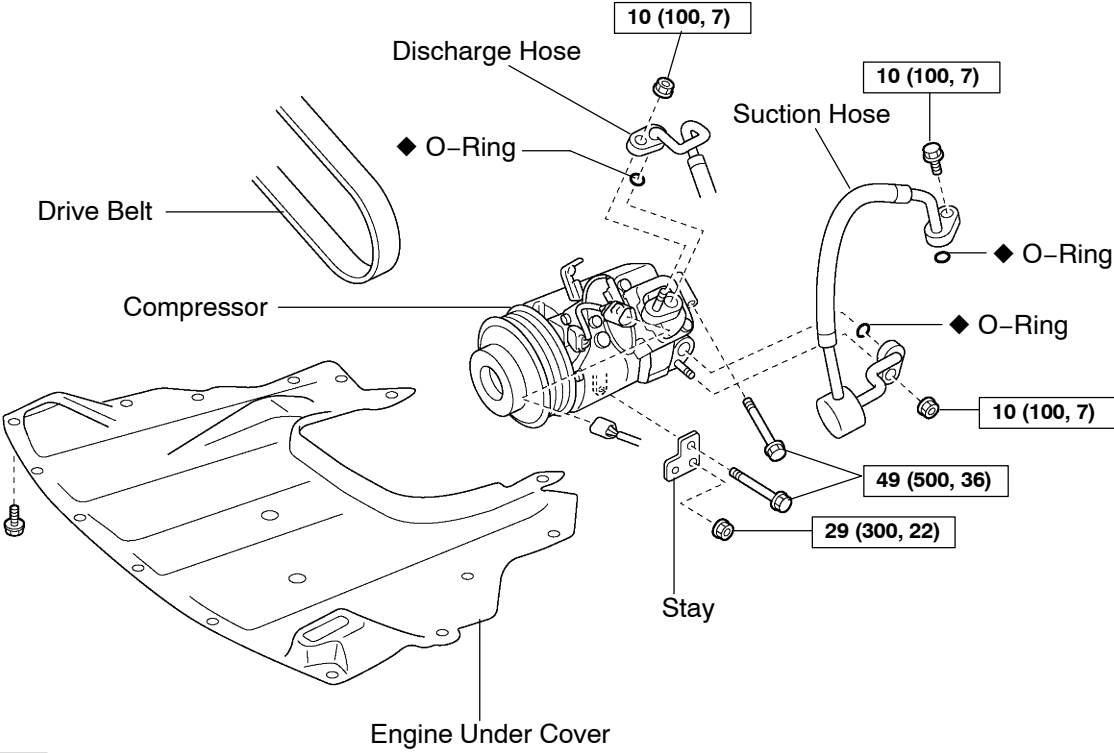
- Disconnect the connector.
- Connect the positive (+) lead from the battery to terminal 3 and the negative (–) lead to the body ground.
- Check that the magnetic clutch is energized.

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



COMPONENTS

GS430:



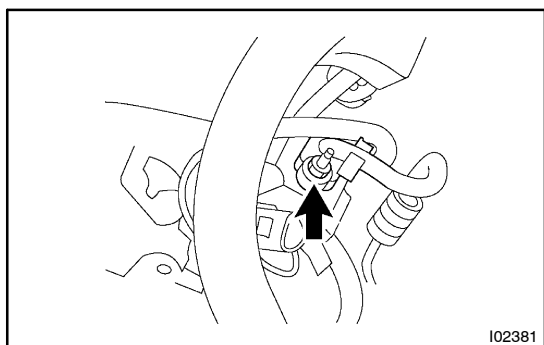
N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

I19382

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 ENGINE UNDER COVER
6. REMOVE DRIVE BELT
(See page AC-3)

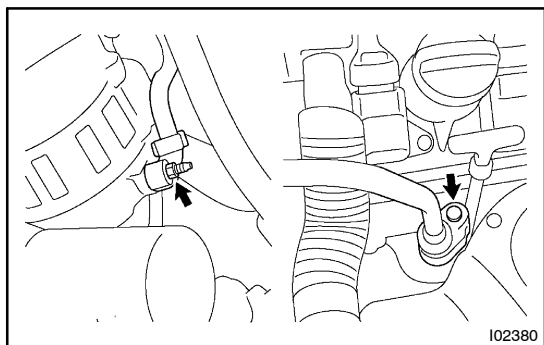


7. **GS430:**
DISCONNECT DISCHARGE HOSE

Remove the nut and disconnect the discharge hose.

NOTICE:

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

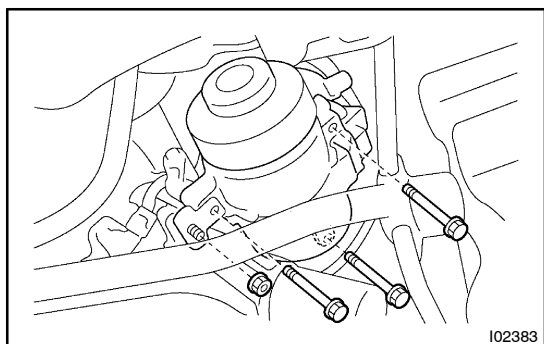


8. **GS430:**
REMOVE SUCTION HOSE

Remove the nut, bolt and suction hose.

NOTICE:

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



9. **GS430:**
REMOVE COMPRESSOR

- (a) Disconnect the connector.
- (b) Remove the nut, bolt and compressor stay.
- (c) Remove the 2 bolts and compressor.

INSTALLATION

1. GS430:

INSTALL COMPRESSOR

- (a) Install the compressor with the 2 bolts temporarily.
- (b) Install the compressor stay with the bolt and nut temporarily.
- (c) Tighten the nut and 3 bolts.

Torque:

Bolt: 49 N·m (500 kgf·cm, 36 ft·lbf)

Nut: 29 N·m (300 kgf·cm, 22 ft·lbf)

- (d) Connect the connector.

2. GS430:

CONNECT DISCHARGE HOSE

Connect the discharge hose with the nut.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

NOTICE:

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

HINT:

Lubricate a new O-ring with compressor oil and install them to the hose.

3. GS430:

INSTALL SUCTION HOSE

Install the suction hose with the bolt and 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 2 new O-rings with compressor oil and install them to the hose.

4. INSTALL DRIVE BELT

(See [page AC-4](#))

5. INSPECT DRIVE BELT TENSION

(See [page AC-2](#))

6. INSTALL ENGINE UNDER COVER

7. CONNECT NEGATIVE (–) TERMINAL CABLE TO BATTERY

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

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

9. 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.

10. INSPECT A/C OPERATION