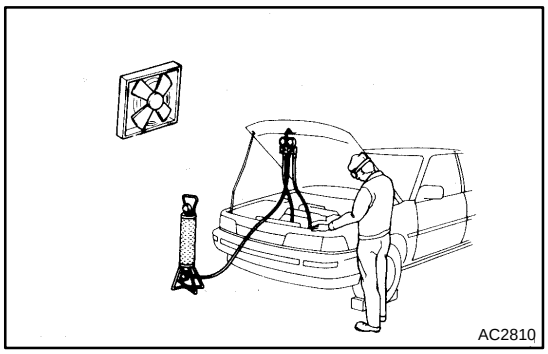

AC2810

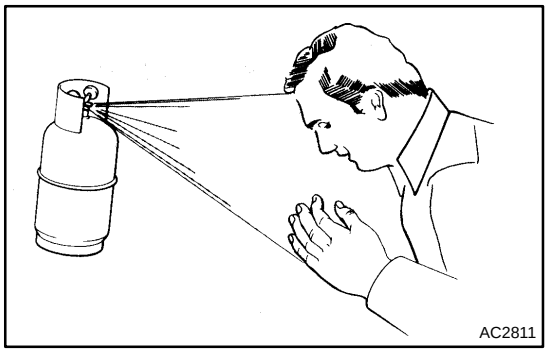
AIR CONDITIONING SYSTEM

AC0NQ–01

PRECAUTION

1. DO NOT HANDLE REFRIGERANT IN AN ENCLOSED AREA OR WEAR EYE PROTECTION

2. ALWAYS WEAR EYE PROTECTION


AC2811

3. BE CAREFUL NOT TO GET LIQUID REFRIGERANT IN YOUR EYES OR ON YOUR SKIN

If liquid refrigerant gets in your eyes or on your skin.

(a) Wash the area with lots of cool water.

CAUTION:

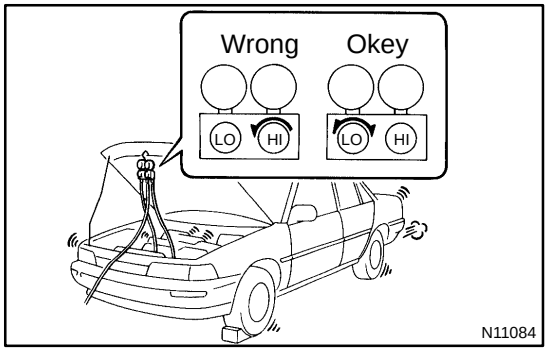
Do not rub your eyes or skin.

(b) Apply clean petroleum jelly to the skin.

(c) Go immediately to a physician or hospital for professional treatment.

4. NEVER HEAT CONTAINER OR EXPOSE IT TO NAKED FLAME

5. BE CAREFUL NOT TO DROP CONTAINER AND NOT TO APPLY PHYSICAL SHOCKS TO IT



N11084

6. DO NOT OPERATE COMPRESSOR WITHOUT ENOUGH REFRIGERANT IN REFRIGERATION SYSTEM

If there is not enough refrigerant in the refrigerant system oil lubrication will be insufficient and compressor burnout may occur, so that care to avoid this, necessary care should be taken.

7. DO NOT OPEN HIGH PRESSURE MANIFOLD VALVE WHILE COMPRESSOR IS OPERATING

If the high pressure valves opened, refrigerant flows in the reverse direction and could cause the charging cylinder to rupture, so open and close the only low pressure valve.

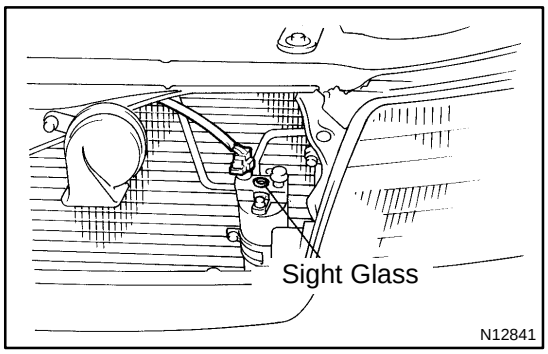
8. BE CAREFUL NOT TO OVERCHARGE SYSTEM WITH REFRIGERANT

If refrigerant is overcharged, it causes problems such as insufficient cooling, poor fuel economy, engine overheating etc.

9. SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

The Lexus LS400 is equipped with an SRS (Supplemental Restraint System) such as the driver and passenger air bag. Failure to carry out service operations the correct sequence could cause the SRS to unexpectedly deploy during servicing, possibly leading to a serious accident. Further,if a mistake is made in servicing the SRS, it is possible the SRS may fail to operate when required. Before servicing (including removal or installation of parts, inspection or replacement), be sure to read the following item carefully, then follow the correct procedure described in repair manual.

AC0NR–01



ON–VEHICLE INSPECTION

1. INSPECT REFRIGERANT VOLUME

Observe the sight glass on the liquid tube.

Test conditions:

- Running engine at 1,500 rpm
- Blower speed control switch at ”HI” position
- A/C switch ON
- Temperature control dial at ”COOL” position
- Fully open the doors

Item	Symptom	Amount of refrigerant	Remedy
1	Bubbles present in sight glass	Insufficient*	(1) Check for gas leakage with gas leak detector and repair if necessary (2) Add refrigerant until bubbles disappear
2	No bubbles present in sight glass	None, sufficient or too much	Refer item 3 and 4
3	No temperature difference between compressor inlet and outlet	Empty or nearly empty	(1) Check for gas leakage with gas leak detector and repair if necessary (2) Add refrigerant until bubbles disappear
4	Temperature between compressor inlet and outlet is noticeably different	Correct or too much	Refer to items 5 and 6
5	Immediately after air conditioning is turned off, refrigerant in sight glass stays clear	Too much	(1) Discharge refrigerant (2) Evacuate air and charge proper amount of purified refrigerant
6	When air conditioning is turned off, refrigerant foams and then stays clear	Correct	–

*: Bubbles in the sight glass with ambient temperatures higher than usual can be considered normal if cooling is sufficient.

2. INSPECT REFRIGERANT PRESSURE WITH MANIFOLD GAUGE SET

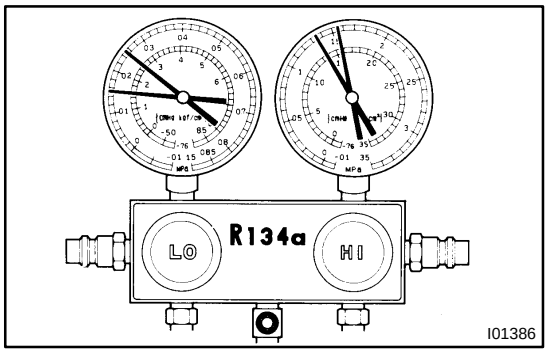
This is a method in which the trouble is located by using a manifold gauge set. Read the manifold gauge pressure when these conditions are established.

Test conditions:

- Temperature at the air inlet with the switch set at RECIRC is 30 – 35 ˚C (86 – 95 ˚F)
- Engine running at 2,000 rpm
- Blower speed control switch at ”HI” position
- Temperature control dial on ”COOL” position

HINT:

It should be noted that the gauge indications may vary slightly due to ambient temperature conditions.



(1) Normally functioning refrigeration system.

Gauge reading:

Low pressure side:

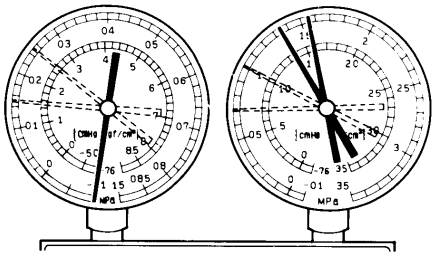
0.15 – 0.25 MPa (1.5 – 2.5 kgf/cm^2)

High pressure side:

1.37 – 1.55 MPa (14 – 15 kgf/cm$^{2)}$

(2) Moisture present in refrigeration system.

Condition: Periodically cools and then fails to cool

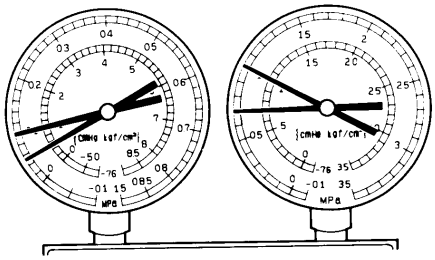


I01387

Symptom seen in refrigeration system	Probable cause	Diagnosis	Remedy
During operation, pressure on low pressure side sometimes become a vacuum and sometime normal	Moisture entered in refrigeration system freezes at expansion valve orifice and temporarily stops cycle, but normal state is restored after a time when the ice melts	• Drier in oversaturated state • Moisture in refrigeration system freezes at expansion valve orifice and blocks circulation of refrigerant	(1) Replace receiver (2) Remove moisture in cycle through repeatedly evacuating air (3) Charge proper amount of new refrigerant

(3) Insufficient cooling

Condition: Insufficient cooling

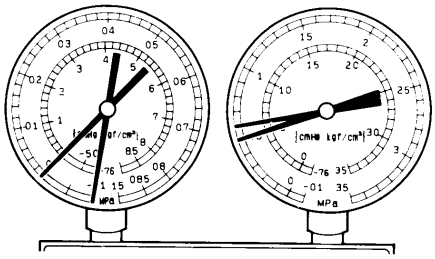


I01388

Symptom seen in refrigeration system	Probable cause	Diagnosis	Remedy
• Pressure low on both low and high pressure sides • Bubbles seen in sight glass continuously • Insufficient cooling performance	Gas leakage at some place in refrigeration system	• Insufficient refrigerant in system • Refrigerant leaking	(1) Check for gas leakage with gas leak detector and repair if necessary (2) Charge proper amount of refrigerant (3) If indicated pressure value is near 0 when connected to gauge, create the vacuum after inspecting and repairing the location of the leak

(4) Poor circulation of refrigerant

Condition: Insufficient cooling

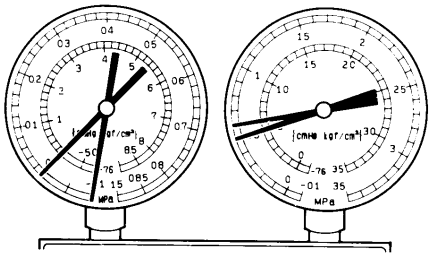


I01389

Symptom seen in refrigeration system	Probable cause	Diagnosis	Remedy
• Pressure low in both low and high pressure sides • Frost on tube from receiver to unit	Refrigerant flow obstructed by dirt in receiver	Receiver clogged	Replace receiver

(5) Refrigerant does not circulate

Condition: Does not cool (Cools from time to time in some cases)

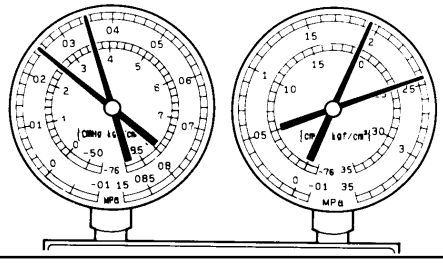


I01449

Symptom seen in refrigeration system	Probable cause	Diagnosis	Remedy
• Vacuum indicated on low pressure side, very low pressure indicated on high pressure side • Frost or dew seen on piping before and after receiver/ drier or expansion valve	• Refrigerant flow obstructed by moisture or dirt in refrigeration system • Refrigerant flow obstructed by gas leakage from expansion valve	Refrigerant does not circulate	(1) Check expansion valve (2) Clean out dirt in expansion valve by blowing with air (3) Replace receiver (4) Evacuate air and charge new refrigerant to proper amount (5) For gas leakage from expansion valve, replace expansion valve

(6) Refrigerant overcharged or insufficient cooling of condenser

Condition: Insufficient cooling

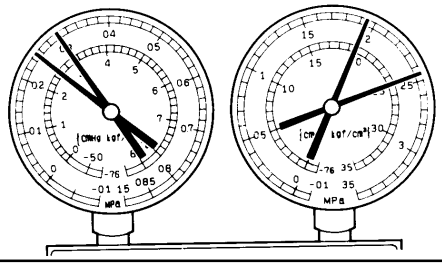


I01390

Symptom seen in refrigeration system	Probable cause	Diagnosis	Remedy
• Pressure too high on both low and high pressure sides • No air bubbles seen through the sight glass even when the engine rpm is lowered	• Unable to develop sufficient performance due to excessive refrigeration system • Insufficient cooling of condenser	• Excessive refrigerant in cycle → refrigerant over charged • Condenser cooling → condenser fins clogged of condenser fan faulty	(1) Clean condenser (2) Check condenser fan motor operation (3) If (1) and (2) are in normal state, check amount of refrigerant Charge proper amount of refrigerant

(7) Air present in refrigeration system

Condition: Insufficient cooling



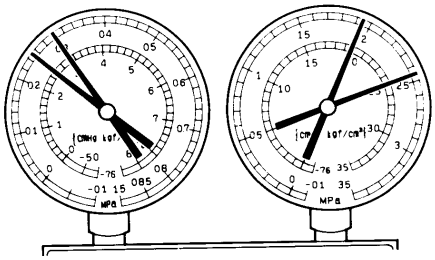
NOTE : These gauge indications are shown when the refrigeration system has been opened and the refrigerant charged without vacuum purging.

I01392

Symptom seen in refrigeration system	Probable cause	Diagnosis	Remedy
• Pressure too high on both low and high pressure sides • The low pressure piping hot to touch • Bubbles seen in sight glass	Air entered in refrigeration system	• Air present in refrigeration system • Insufficient vacuum purging	(1) Check compressor oil to see if it is dirty or insufficient (2) Evacuate air and charge new refrigerant

(8) Expansion valve improperly Mounted/ Heat sensing tube defective (Open too wide)

Condition: Insufficient cooling

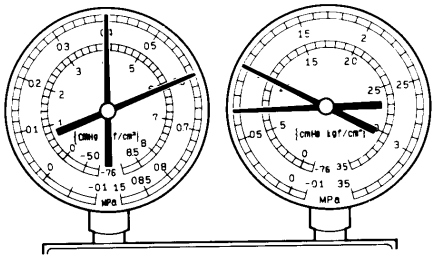


I01450

Symptom seen in refrigeration system	Probable cause	Diagnosis	Remedy
• Pressure too high on both low and high pressure sides • Frost or large amount of dew on piping on low pressure side	Trouble in expansion valve or heat sensing tube not installed correctly	• Excessive refrigerant in low pressure piping • Expansion valve opened too wide	(1) Check heat sensing tube installed condition (2) Check expansion valve Replace if defective

(9) Defective compression compressor

Condition : Does not cool



I01393

Symptom seen in refrigeration system	Probable cause	Diagnosis	Remedy
• Pressure too high on low and high pressure sides • Pressure too low on high pressure side	Internal leak in compressor	• Compression defective • Valve leaking or broken sliding parts	Repair or replace compressor

3. 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

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

If idle speed is not as specified, check the ISC valve and air intake system.

4. INSPECT FOR LEAKAGE OF REFRIGERANT

(a) Perform in these conditions.

- Stop engine.
- Secure good ventilation (If the gas leak detector may not react to volatile gases which are not refrigerant, such as evaporated gasoline and exhaust gas.)
- Repeat the test 2 or 3 times.
- Make sure that there is some refrigerant remaining in the refrigeration system.
  When compressor is OFF: approx. 392 – 588 kPa (4 – 6 kgf/ cm^2, 57 – 85 psi)

(b) Bring the gas leak detector close to the drain hose before performing the test.

HINT:

- After the blower motor has stopped, leave the cooling for more than 15 minutes.
- Expose the gas leak detector sensor under the drain hose.
- When bring the gas leak detector close to the drain hose, make sure that the gas leak detector does not react to the volatile gases.

If such reaction is unavoidable, the vehicle must be lifted up.

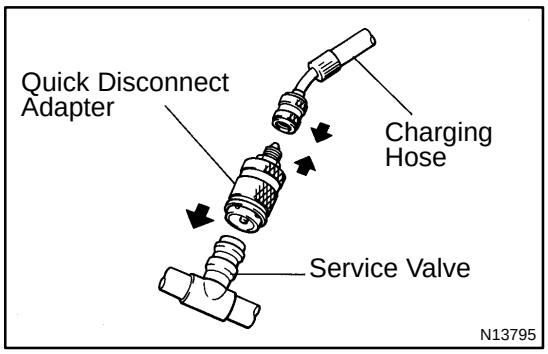
(c) If gas leak is not detected on the drain hose, remove the blower resistor from the cooling unit. Then insert the gas leak detector sensor into the unit and perform the test.

(d) Disconnect the connector and leave the pressure switch for approx. 20 minutes. Then bring the gas leak detector close to the pressure switch and perform the test.

(e) Bring the gas leak detector close to the refrigerant lines.

AC0NS–01

EVACUATING



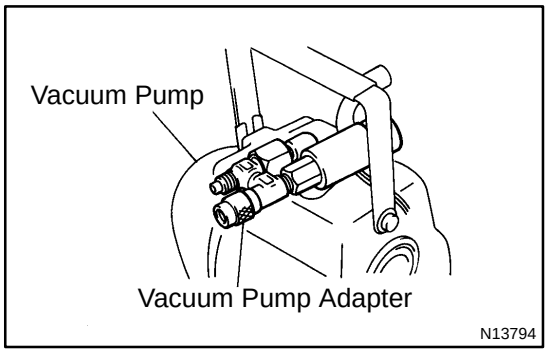
1. CONNECT QUICK DISCONNECT ADAPTER TO CHARGING HOSES

2. REMOVE CAPS FROM SERVICE VALVES ON REFRIGERANT LINES

3. SET ON MANIFOLD GAUGE SET

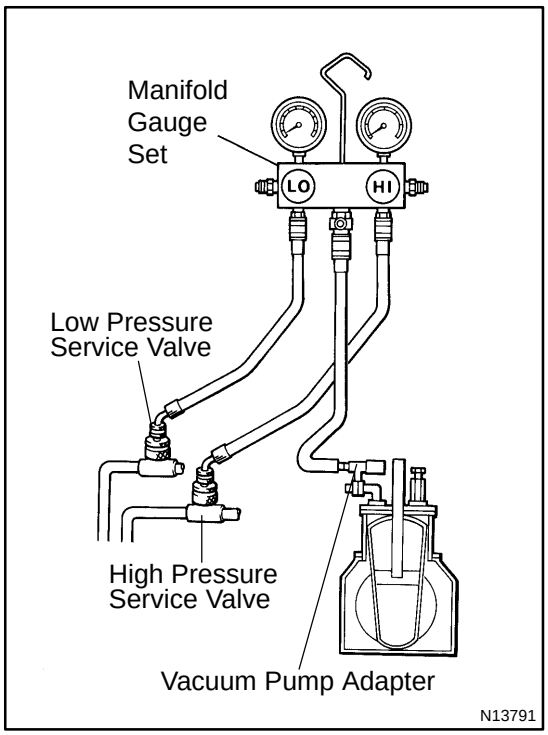
(a) Close both hand valves of manifold gauge set.

(b) Connect the quick disconnect adapters to the service valves.



4. EVACUATE AIR FROM REFRIGERATION SYSTEM

(a) Connect the vacuum pump adapter to the vacuum pump.



(b) Connect the center hose of the manifold gauge set to the vacuum pump adapter.

(c) Open both the high and low hand valves and run the vacuum pump.

(d) After 10 minutes or more, check that the low pressure gauge indicates 750 mmHg (30 in. Hg) or more.

HINT:

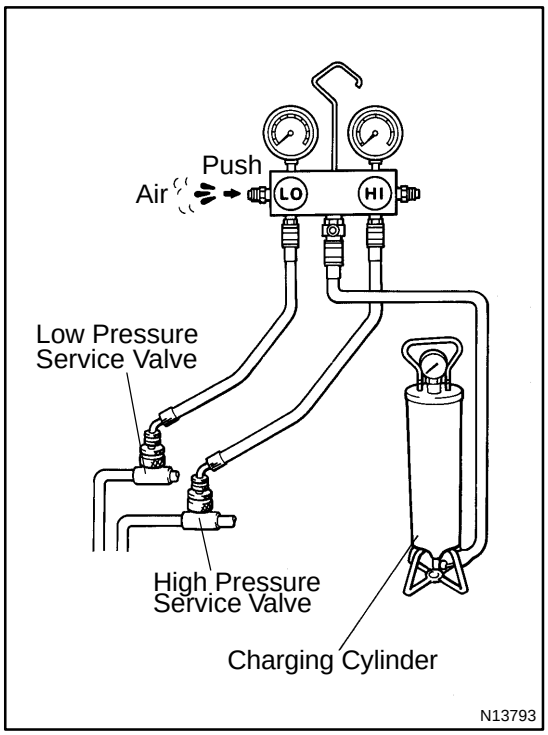
If the reading is 750 mmHg (30 in. Hg) or more, close both hand valves of manifold gauge set and stop the vacuum pump.

Check the system for leaks and repair if necessary.

(e) Close both the high and low hand valves and stop the vacuum pump.

(f) Leave the system in this condition for 5 minutes or more and check that there is no gauge indicator.

AC0NT–01



CHARGING

1. INSTALL CHARGING CYLINDER

HINT:

When handling the charging cylinder, always follow the directions given in the instruction manual.

(a) Charge the proper amount of refrigerant into the charging cylinder.

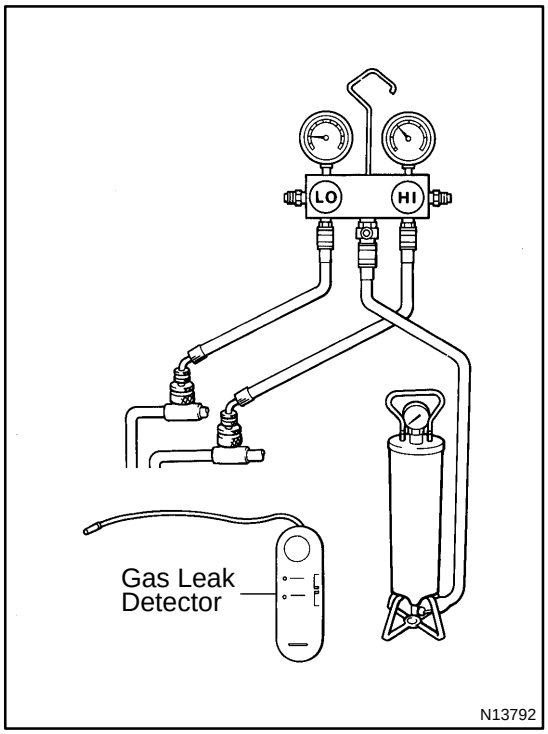
(b) Connect the center hose to the charging cylinder.

CAUTION:

Do not open both high and low hand valves of manifold gauge set.

(c) Open the valve of charging cylinder.

(d) Press the valve core on the side of manifold gauge and expel the air inside of the center hose.



2. INSPECT REFRIGERATION SYSTEM FOR LEAKS

(a) Open the high pressure hand valve and charge refrigerant.

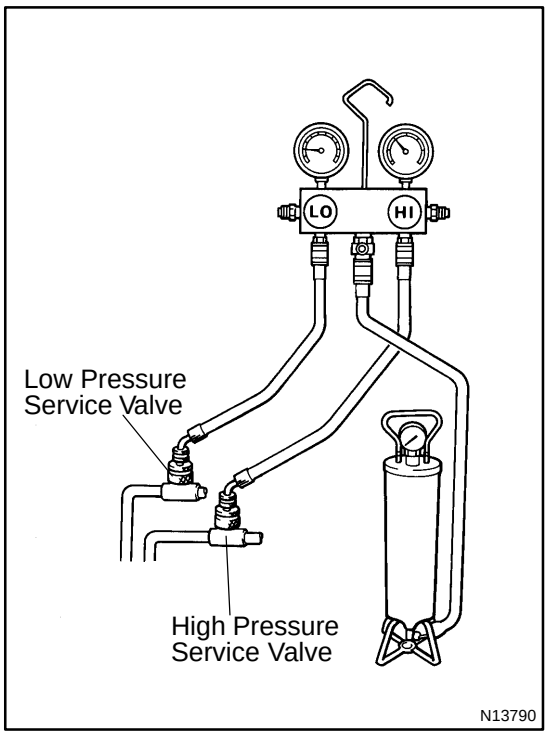
(b) When the low pressure gauge indicates 98 kPa (1 kgf/cm^2, 14 psi) close the high pressure hand valve.

(c) Using a gas leak detector, check the system for leakage.

If leak is found, repair the faulty component or connection.

CAUTION:

Use the refrigerant recovery/ recycling machine to recover the refrigerant whenever replacing parts.



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When handling the charging cylinder, always follow the directions given in the instruction manual.

(a) Charge the priper amount of refrigerant into the charging cylinder.

(b) Connect the center hose to the charging cylinder.

CAUTION:

Do not open both high and low hnd valves of manifold gauge set.

(c) Open the valve of charging cylinder.

(d) Press the valve core on the side of manifold gauge and expel the air inside of the center hose.

A fully charged system is indicated by the sight glass being free of any bubbles.

4. SET OFF MANIFOLD GAUGE SET

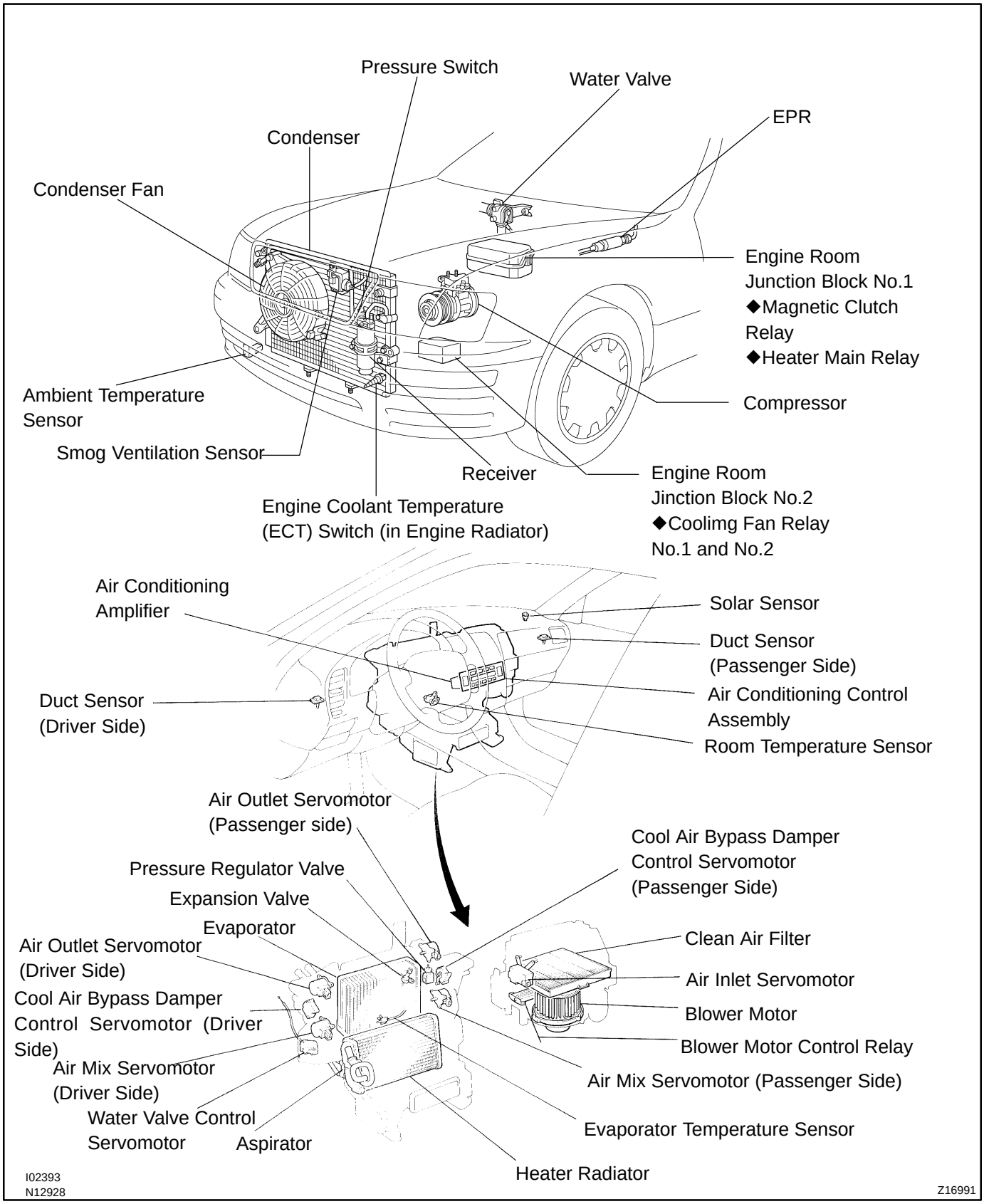
(a) Close both hand valves of manifold gauge set.

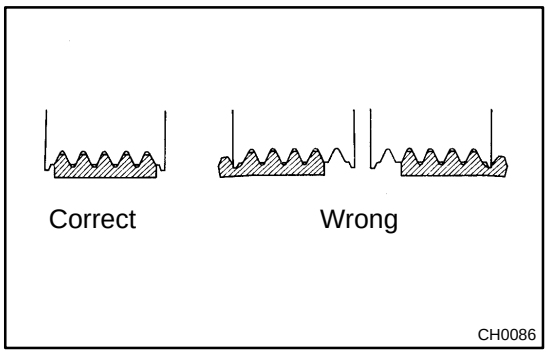
(b) Disconnect the quick disconnect adapters from the service valves.

5. INSTALL CAPS TO SERVICE VALVES ON REFRIGERANT LINES

AC0NU–01

LOCATION





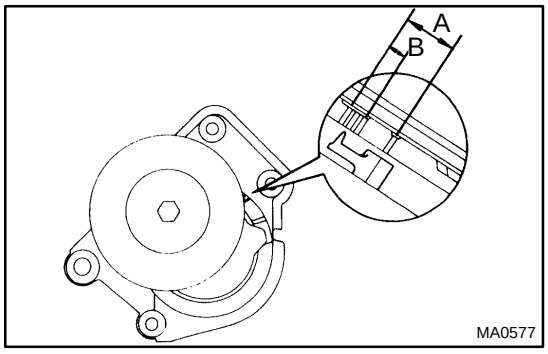
DRIVE BELT

AC0NV–01

ON–VEHICLE INSPECTION

1. INSPECT DRIVE BELT'S INSTALLATION CONDITION

Check that drive belt fits properly in the ribbed grooves.



2. INSPECT DRIVE BELT TENSION

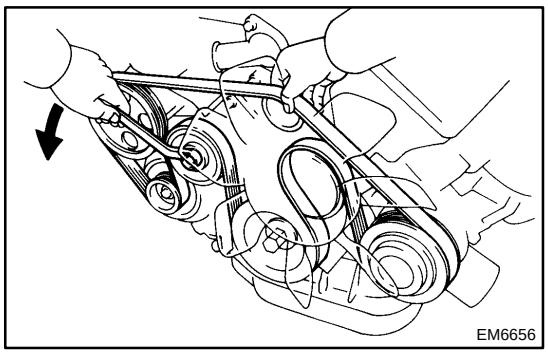
Check that the tension is within A range on the auto tensioner scale.

If the tension is not within the A range on the scale,replace the belt with a new one.

HINT:

When replacing the drive belt with a new one,the belt's tension should be within the B range on the belt tensioner scale.

AC0NW–01



REMOVAL

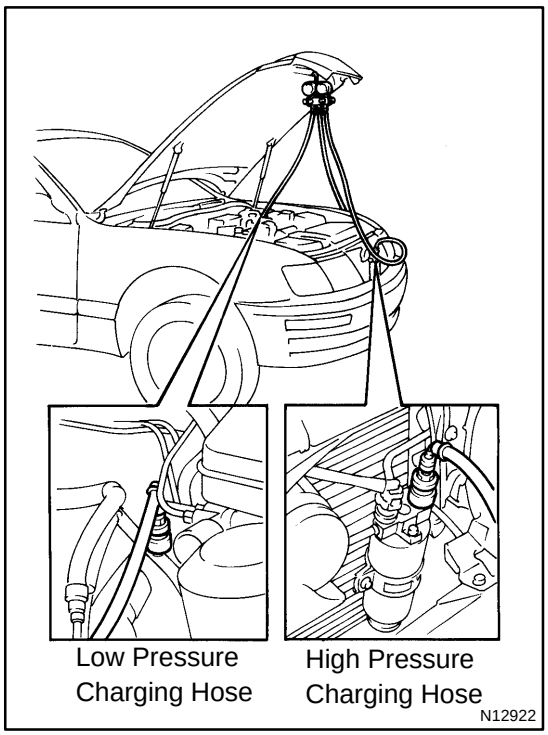
REMOVE DRIVE BELT

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

AC0NX–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–15).



MANIFOLD GAUGE SET

AC0NY–01

SET ON

1. CONNECT CHARGING HOSE TO MANIFOLD GAUGE SET

Tighten the nuts by hand.

CAUTION:

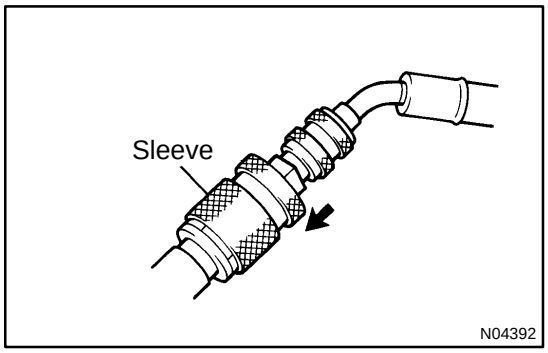
Do not connect the wrong hoses.

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 VALVES ON REFRIGERANT LINES

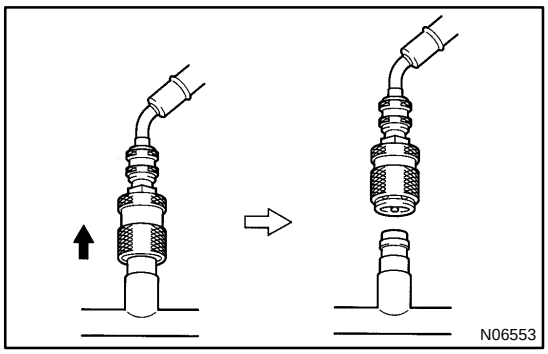


5. CONNECT QUICK DISCONNECT ADAPTERS TO SERVICE VALVES

HINT:

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

AC0NZ–01



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

AC0O0–01

ON–VEHICLE INSPECTION

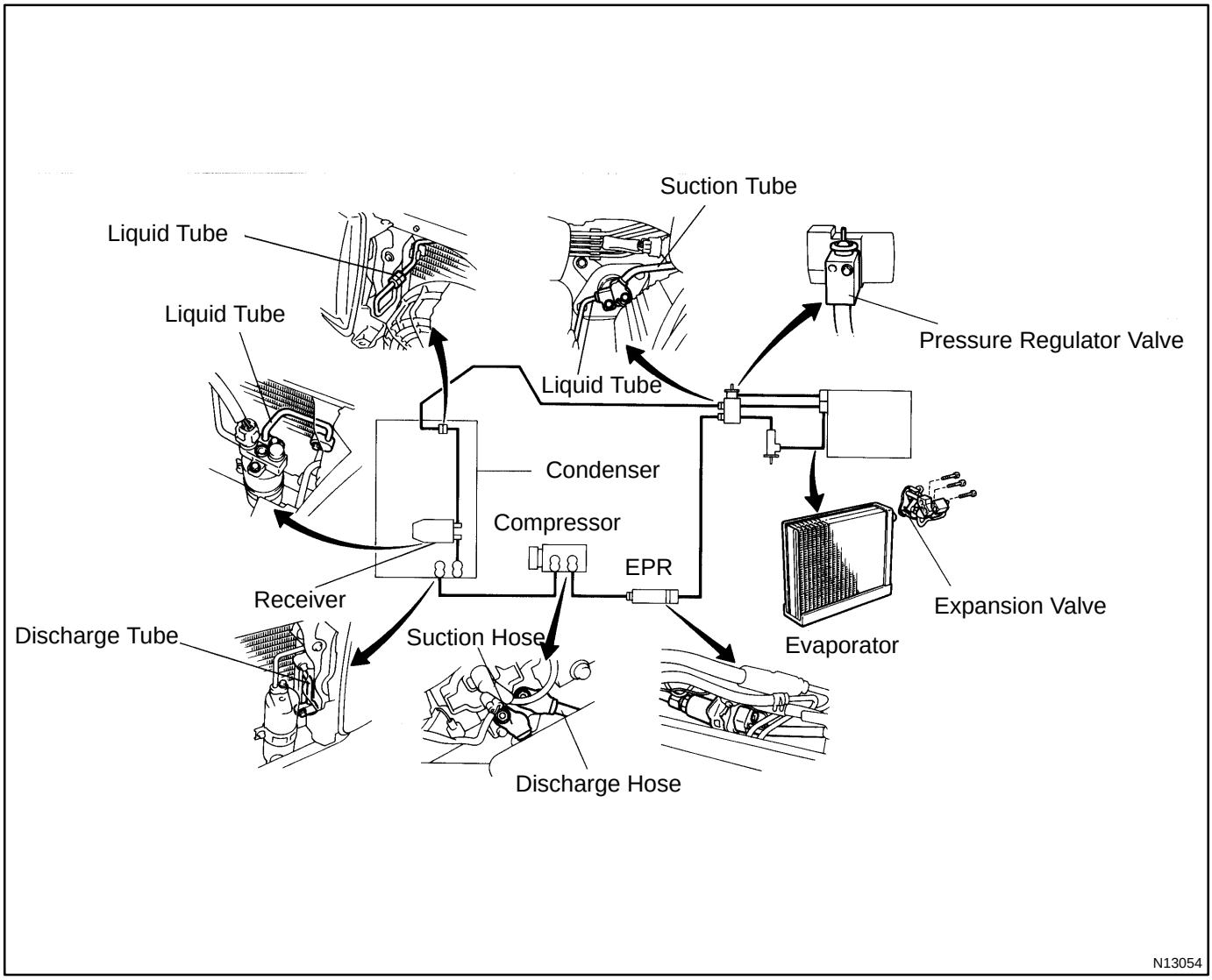
1. INSPECT HOSE AND TUBE CONNECTIONS FOR LOOSENESS

2. INSPECT HOSES AND TUBES FOR LEAKAGE

Using a gas leak detector, check for leakage of refrigerant.

AC0O1–01

LOCATION



AC0O2–01

REPLACEMENT

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

2. REPLACE FAULTY TUBE OR HOSE

NOTICE:

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

3. TIGHTEN JOINT OF BOLT OR NUT TO SPECIFIED TORQUE

NOTICE:

Connections should not be torqued tighter than the specified torqued.

Part tightened		N·m	kgf·cm	ft·lbf
Compressor x Suction hose		10	100	7
Compressor x Discharge hose		10	100	7
Receiver x Liquid tube		5.4	55	48 in.·lbf
Condenser x Liquid tube		10	100	7
Condenser x Discharge tube		10	100	7
Pressure regulator valve x Tube		5.4	55	48 in.·lbf
Expansion valve x Liquid tube	19 mm nut	14	140	10
	24 mm nut	23	230	17
A/C unit x Suction tube		10	100	7
A/C unit Liquid tube		10	100	7
EPR x Equalizer tube		10	100	7
Pressure switch x Liquid tube		10	100	7
Tube x Tube	8 mm (0.31 in.) tube	14	140	10
	13 mm (0.51 in.) tube	23	230	17
	16 mm (0.63 in.) tube	32	330	24

4. EVACUATE AIR IN REFRIGERATION SYSTEM AND CHARGE WITH REFRIGERANT

Specified amount: 700 ± 50 g (24.69 ± 1.76 oz.)

5. INSPECT FOR LEAKAGE OF REFRIGERANT

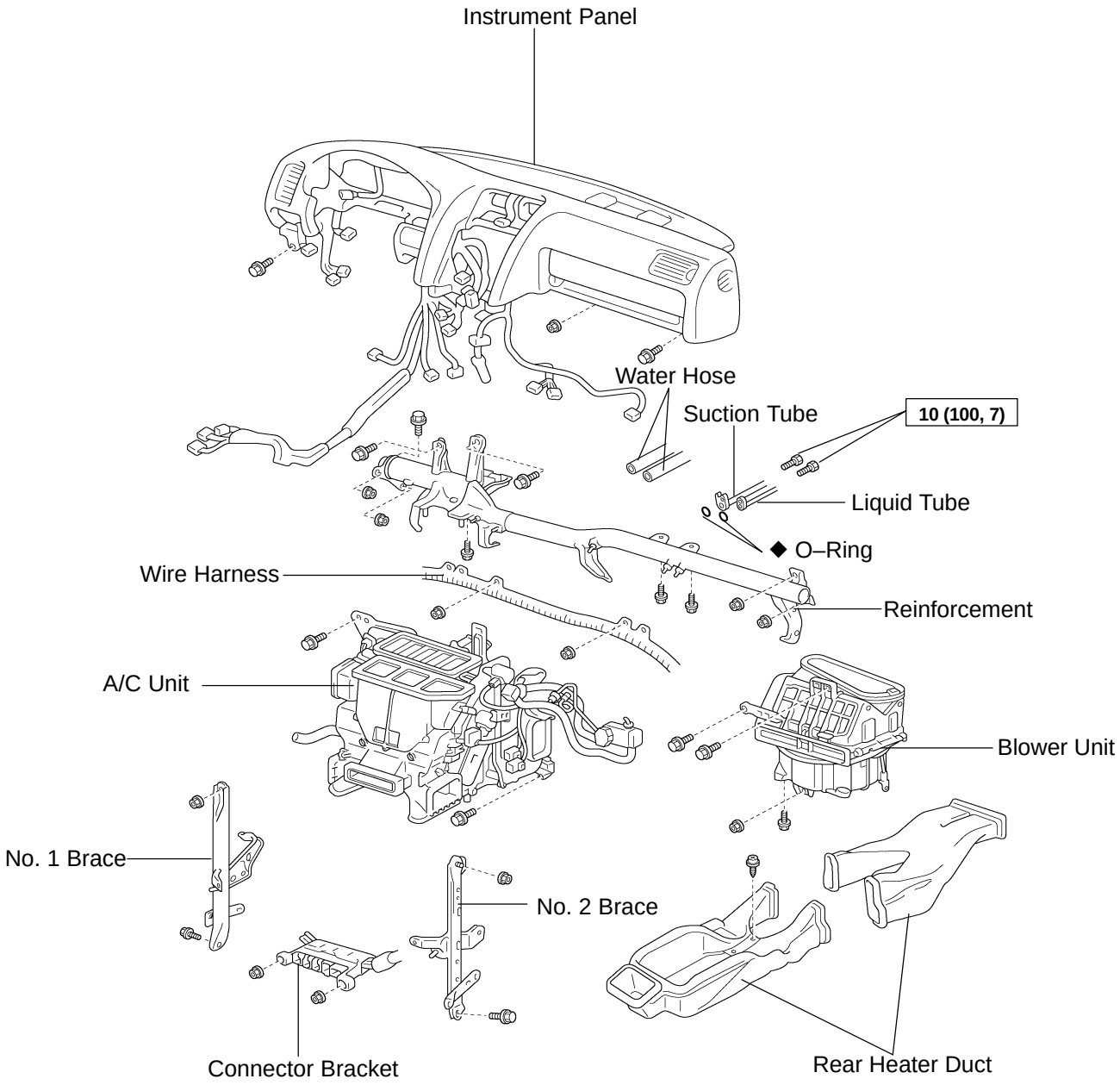
Using a gas leak detector, check for leakage of refrigerant.

6. INSPECT AIR CONDITIONING OPERATION

AIR CONDITIONING UNIT

AC0O3–01

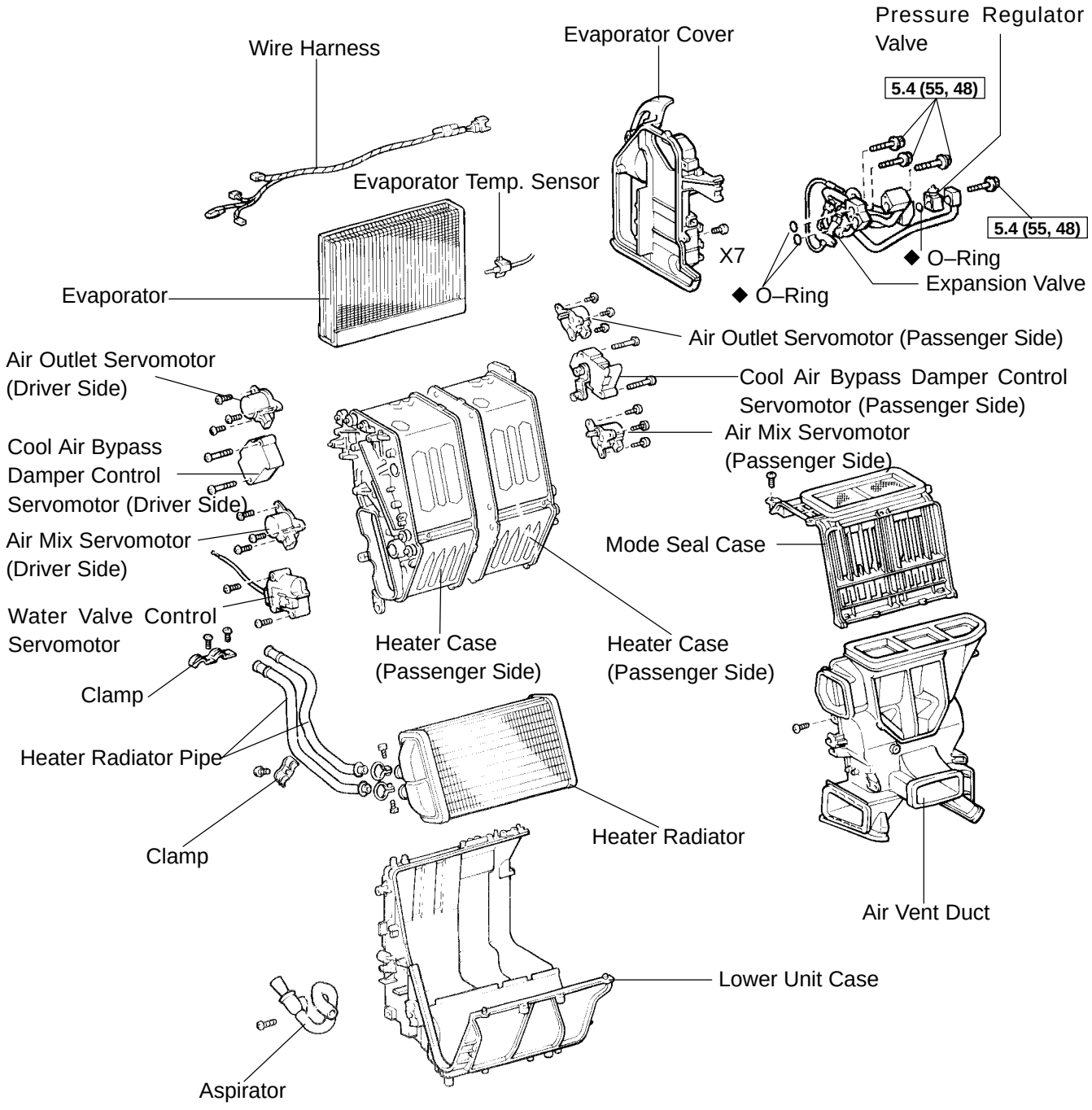
COMPONENTS



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

◆ Non–reusable part

I02389



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

◆ Non–reusable part

N13026

AC0O4–01

REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

HINT:

At the time of installation, please refer to the following item.

Evacuate air from refrigeration system.

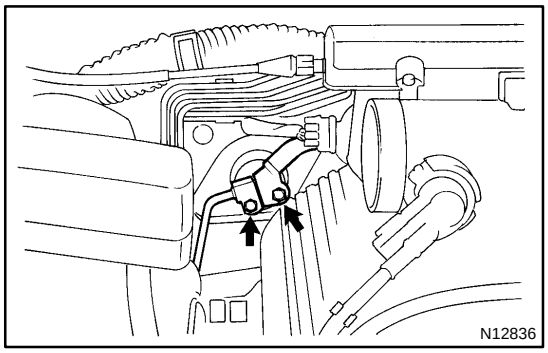
Charge system with refrigerant and inspect for leakage of refrigerant.

Specified amount : 700 ± 50 g (29.69 ± 1.76 oz.)

2. DRAIN ENGINE COOLANT FROM RADIATOR

HINT:

It is not necessary to drain out all coolant.



3. DISCONNECT LIQUID AND SUCTION TUBES

Remove the 2 bolts and disconnect the both tubes.

Torque: 10 N·m (100 kgf·cm, 7ft·lbf)

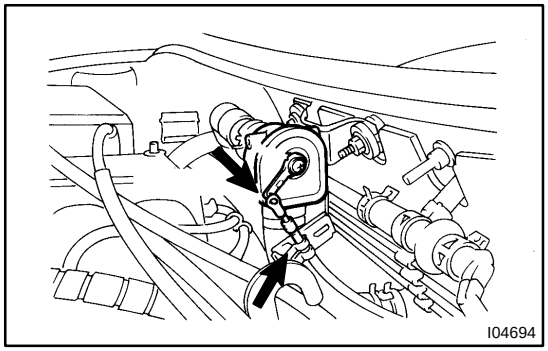
NOTICE:

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

HINT:

At the time of installation, please refer to the following item.

Lubricate 2 new O–rings with compressor oil and install the tubes.

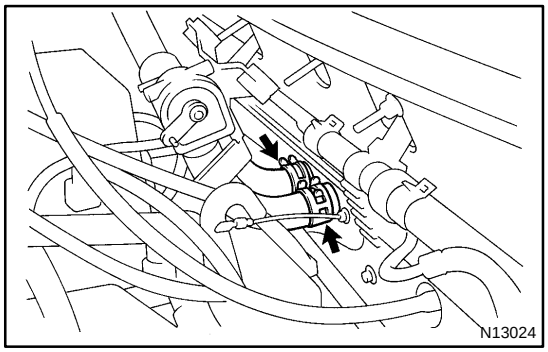


4. DISCONNECT WATER VALVE CONTROL CABLE

HINT:

At the time of installation, please refer to the following item.

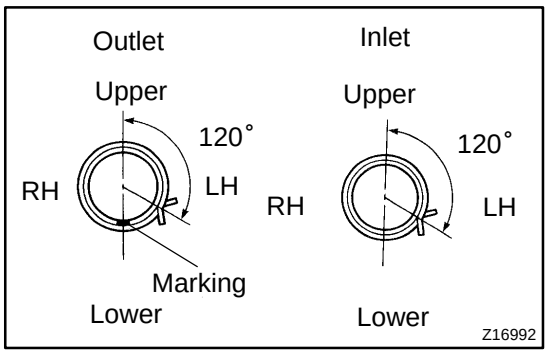
After connection, adjust the control cable (See page AC–63).

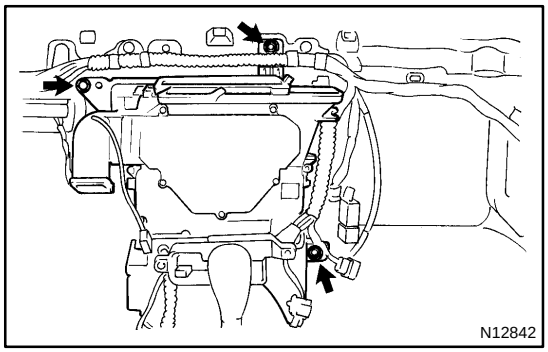


5. DISCONNECT WATER HOSES FROM HEATER RADIATOR PIPES

(a) Using pliers, grip the claw of the hose clip and slide the hose clip along the hose.

(b) Disconnect the water hoses.





HINT:

At the time of installation, please refer to the following items.

- Push the water hose onto the heater radiator pipe as far as second ridge on the pipe and install the hose clip.
- Install the hose clip in the position, as shown in the illustration.

6. REMOVE INSTRUMENT PANEL AND REINFORCEMENT (See page BO–83)

7. REMOVE BLOWER UNIT (See page AC–31)

8. REMOVE A/C UNIT

(a) Disconnect the connectors.

(b) Remove the rear heater ducts.

(c) Remove the wire harness set bolts.

(d) Remove the 2 nuts, bolt and A/C unit.

AC0O5–01

DISASSEMBLY

1. REMOVE THESE PARTS:

(a) Wire harness
(b) Air mix servomotors
(c) Water valve control servomotor
(d) Air outlet servomotors
(e) Aspirator
(f) Cool air bypass damper control servomotors

2. REMOVE HEATER RADIATOR

(a) Remove the 2 screws and 2 clamps.
(b) Pull out the heater radiator.
(c) Remove the 2 screws, 2 clamps and heater radiator pipes.
(d) REmove the 2 O–rings.

HINT:
At the time of reassembly, please refer to the following item.
Do not reuse the 2 O–rings.

3. REMOVE LIQUID AND SUCTION TUBE

Using a hexagon wrench, remove the 3 bolts and tube.

Torque: 5.4 N·m (55 kgf·cm, 48 in.·lbf)

HINT:
Lubricate 2 new O–rings with compressor oil and install the tube,

4. DISASSEMBLE LIQUID AND SUCTION TUBE

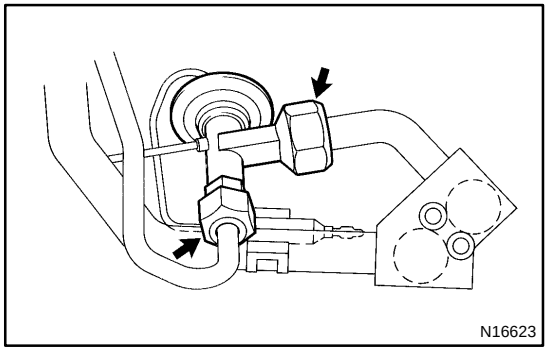
(a) Pry out the packing.

HINT:
At the time of reassembly, please refer to the following item.
Do not reuse the packing.

(b) Using a hexagon wrench, remove the bolt and valve.

Torque: 5.4 N·m (55 kgf·cm, 48 in.·lbf)

HINT:
At the time of reassembly, please refer to the following item.
Lubricate a new O–ring with compressor oil and install the valve.


N16623

(c) Remove the holder and disconnect the heat sensing tube of expansion valve.
(d) Loosen the 2 nuts and remove the expansion valve.

Torque:
19 mm nut : 14 N·m (140 kgf·cm, 10 ft·lbf)
24 mm nut : 23 N·m (230 kgf·cm, 17 ft·lbf)

HINT:
At the time of reassembly, please refer to the following item.
Lubricate 2 new O–rings with compressor oil and install the valve.

5. REMOVE EVAPORATOR

(a) Remove the 7 screws and evaporator cover.

(b) Pull out the evaporator.

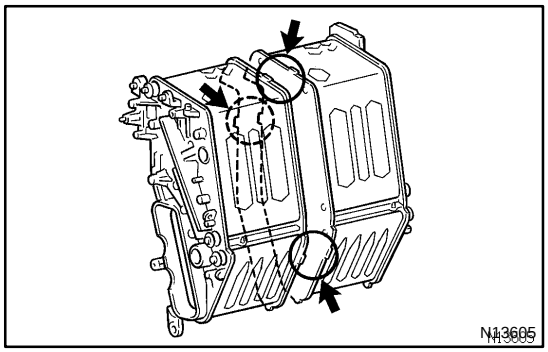
6. REMOVE EVAPORATOR TEMPERATURE SENSOR

7. REMOVE AIR VENT DUCT

8. REMOVE HEATER CASE.

(a) Remove the 7 screws and heater case.

(b) Remove 2 screws and made seal case.



(c) Using a screwdriver, release the 3 claws and separate the heater cases.

HINT:

Tape the screwdriver tip before use.

AC0O6–01

REASSEMBLY

Reassembly is in the reverse order of disassembly (See page AC–26).

AC0O7–01

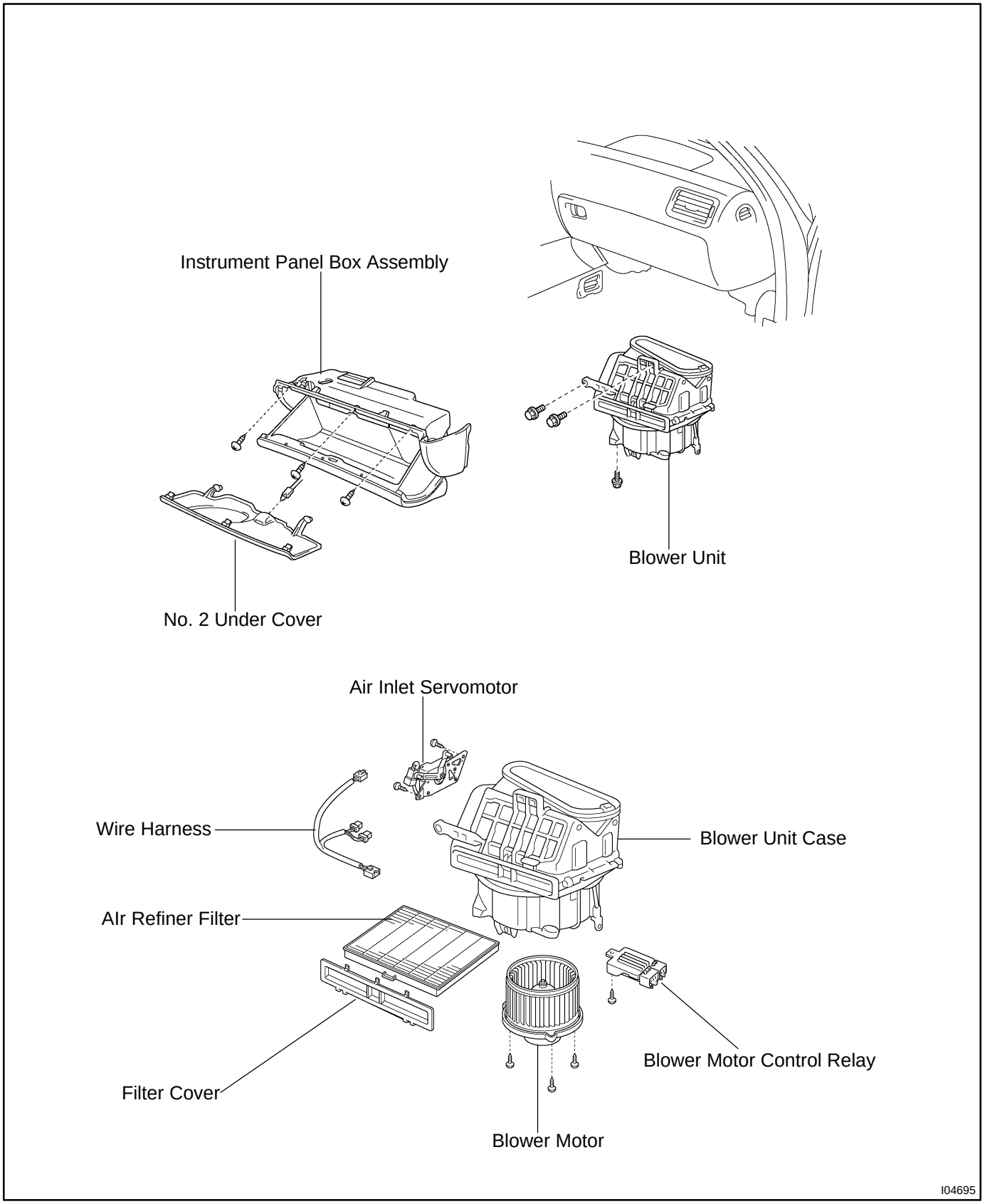
INSTALLATION

Installation is in the reverse order of removal (See page AC–24).

BLOWER UNIT

COMPONENTS

AC0O8–01



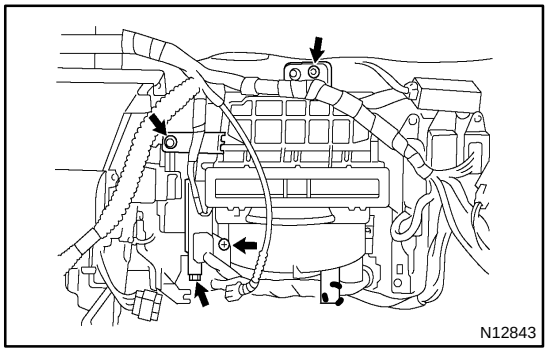
AC0O9–01

REMOVAL

1. REMOVE THESE PARTS:

(a) No. 2 under cover

(b) Instrument panel box assembly
(See page BO–83)



2. REMOVE BLOWER UNIT

(a) Disconnect the connectors.

(b) Remove the nut and disconnect the wire harness bracket.

(c) Remove the screw and connect bracket.

(d) Remove the 3 bolts, nut, and blower unit.

AC0OA–01

DISASSEMBLY

1. REMOVE WIRE HARNESS

2. REMOVE BLOWER MOTOR

Remove the 3 screws and blower motor.

3. REMOVE BLOWER MOTOR CONTROL RELAY

(a) Disconnect the connectors.
(b) Remove the screw and blower motor control relay.

4. REMOVE AIR INLET SERVOMOTOR

(a) Disconnect the connector.
(b) Remove the 2 screws and servomotor.

5. REMOVE CLEAN AIR FILTER

(a) Disconnect the 3 claw and remove the filter cover.
(b) Pull out the filter case.
(c) Remove the clean air filter from the case.

AC0OB–01

REASSEMBLY

Reassembly is in the reverse order of disassembly (See page AC–32).

AC0OC–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–31).

COMPRESSOR AND MAGNETIC CLUTCH

AC0OD–01

ON–VEHICLE INSPECTION

1. SET ON MANIFOLD GAUGE SET
(See page AC–17)

2. START ENGINE

3. INSPECT COMPRESSOR FOR METALLIC SOUND

Check if there is an abnormal metallic sound from the compressor when the A/C switch is on.

If abnormal metallic sound is heard, replace the compressor assembly.

4. INSPECT REFRIGERANT PRESSURE
(See page AC–3)

5. STOP ENGINE

6. INSPECT VISUALLY FOR LEAKAGE OF REFRIGERANT FROM SAFETY SEAL

Using a gas leak detector, check for leakage of refrigerant.

If there is any leakage, replace the compressor assembly.

7. SET OFF MANIFOLD GAUGE SET
(See page AC–18)

8. MAKE THESE VISUAL CHECK:

(a) Leakage of grease from the clutch bearing.

(b) Signs of oil on the pressure plate.

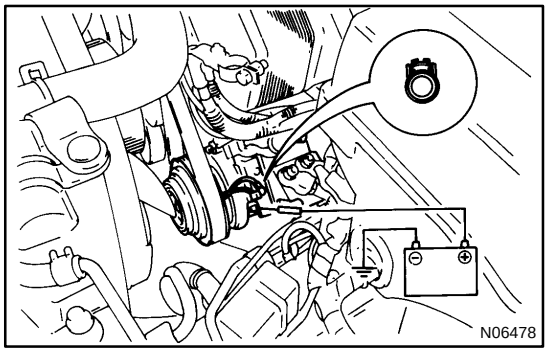
If necessary, repair or replace.

9. INSPECT MAGNETIC CLUTCH BEARING FOR NOISE

(a) Start engine.

(b) Check for abnormal noise near the compressor when the A/C switch is OFF.

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



10. INSPECT MAGNETIC CLUTCH OPERATION

(a) Disconnect the connector.

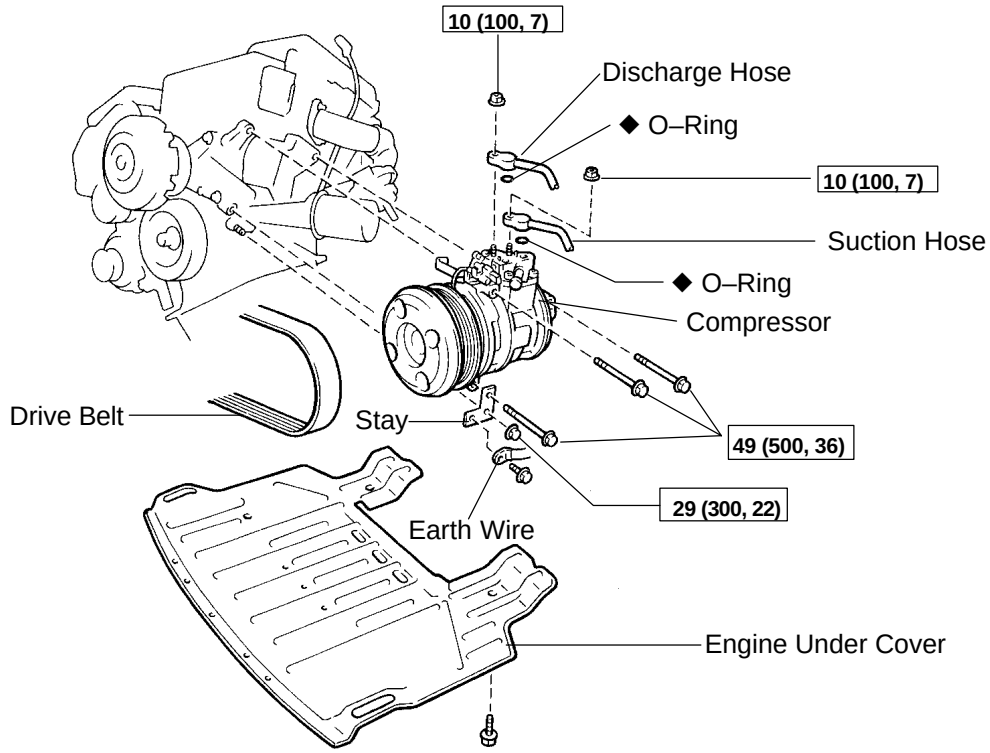
(b) Connect the positive (+) lead from the battery to terminal on the magnetic clutch connector and the negative (–) lead to the body ground.

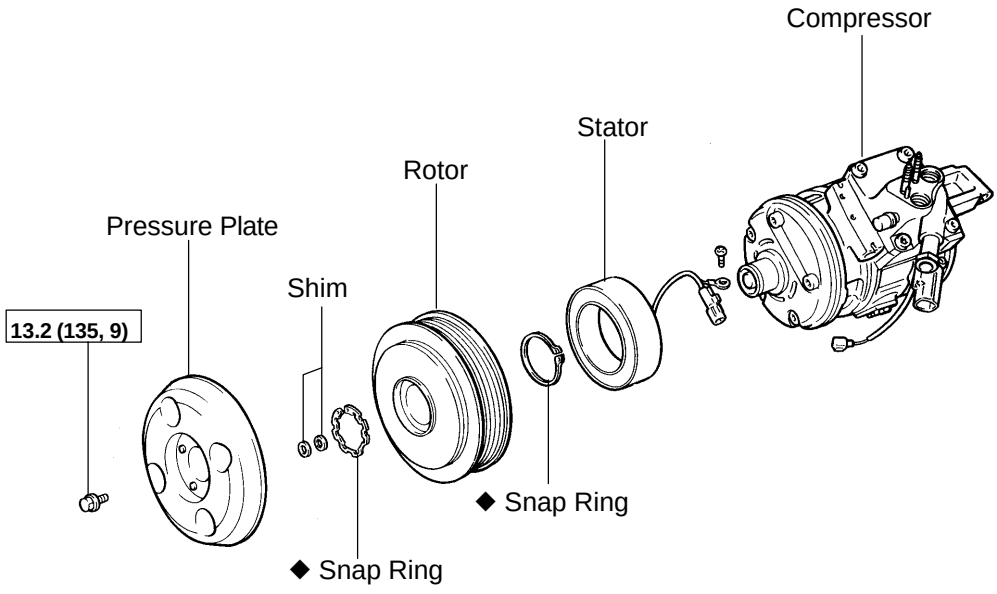
(c) Check that the magnetic clutch is energized.

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

AC0OE–01

COMPONENTS





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

◆ Non–reusable part

I04001

AC0OF–01

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. DISCONNECT DISCHARGE AND SUCTION HOSES

Remove the 2 nuts and disconnect the both hoses.

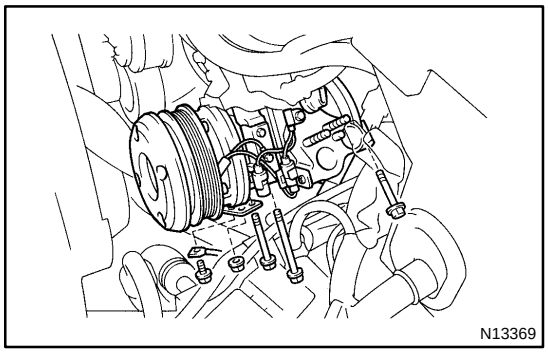
NOTICE:

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

6. REMOVE DRIVE BELT

(See page AC–15)

7. REMOVE ENGINE UNDER COVER



8. REMOVE COMPRESSOR

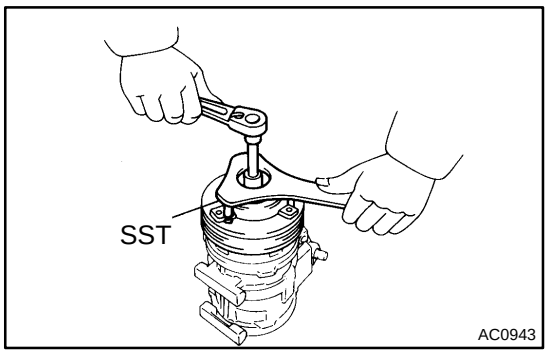
(a) Disconnect the connector.

(b) Remove the bolt and disconnect the earth wire.

(c) Remove the nut, the 3 bolts, compressor No.1 Stay and the compressor.

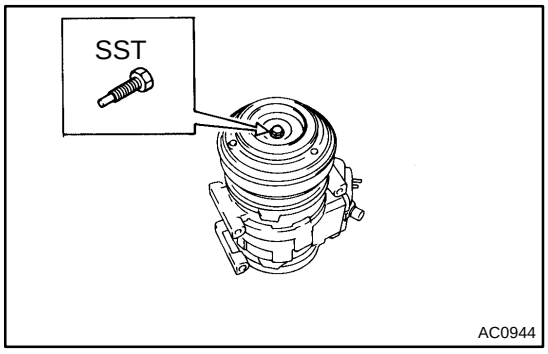
AC0OG–01

DISASSEMBLY

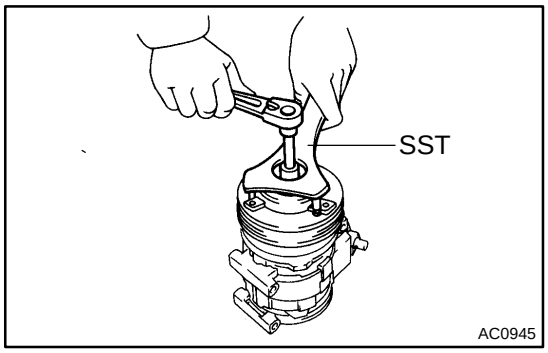


1. REMOVE PRESSURE PLATE

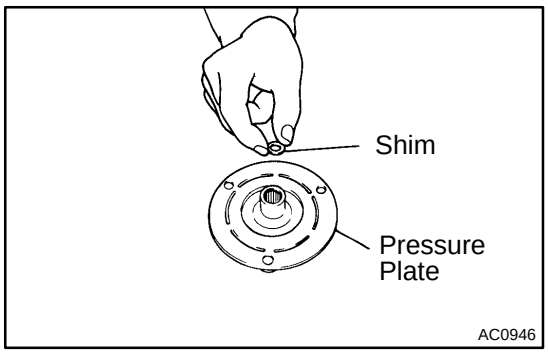
(a) Using SST and a socket wrench, remove the shaft bolt.
Torque: 13.2 N·m (135 kgf·cm, 9 ft·lbf)
SST 07112–76060



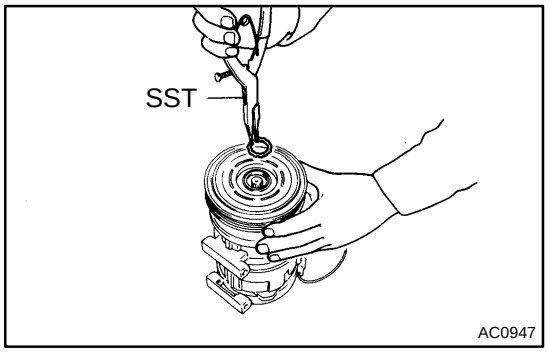
(b) Install SST on the pressure plate.
SST 07112–66040



(c) Using SST and socket wrench, remove the pressure plate.
SST 07112–66040, 07112–76060

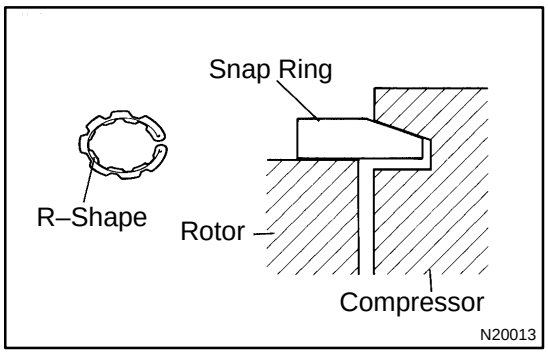


(d) Remove the shims from the pressure plate.

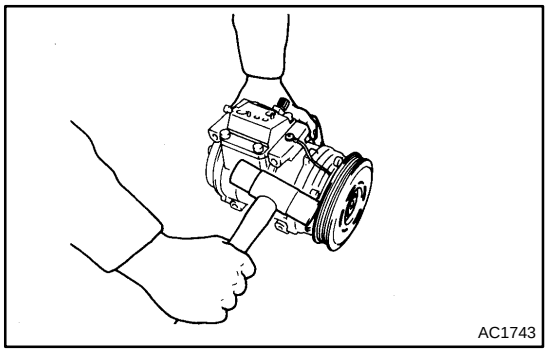


2. REMOVE ROTOR

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

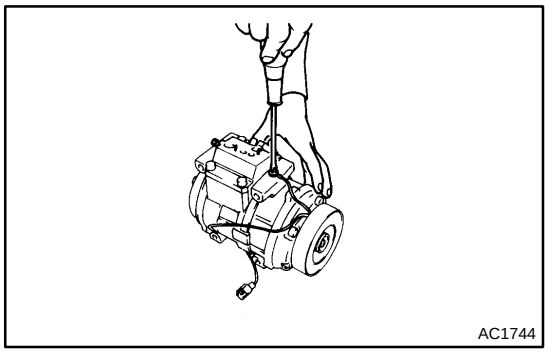


NOTICE:
At the time of reassembly, please refer to the following item.
The snap ring should be installed so that beveled side faces up.



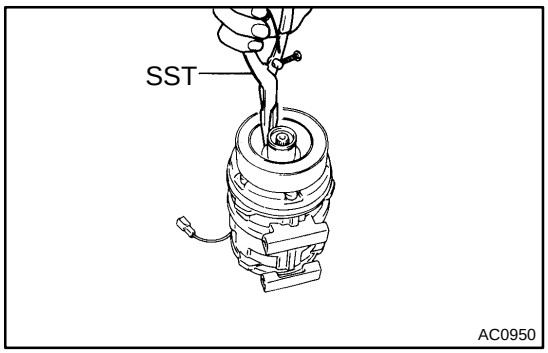
(b) Using a plastic hammer, tap the rotor off the shaft.

NOTICE:
Be careful not to damage the pulley when tapping on the rotor.

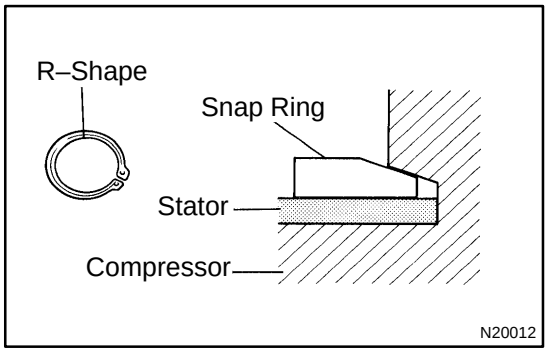


3. REMOVE STATOR

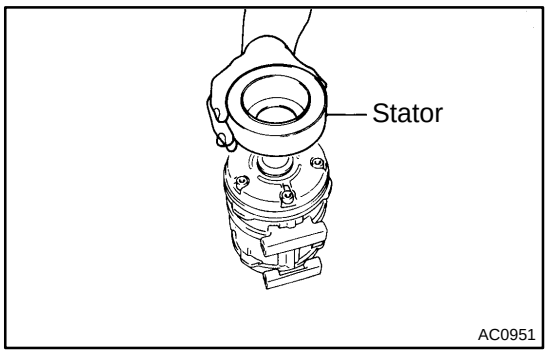
(a) Disconnect the stator lead wire from the compressor housing.



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



NOTICE:
At the time of reassembly, please refer to the following item.
The snap ring should be installed so that its beveled side faces up.

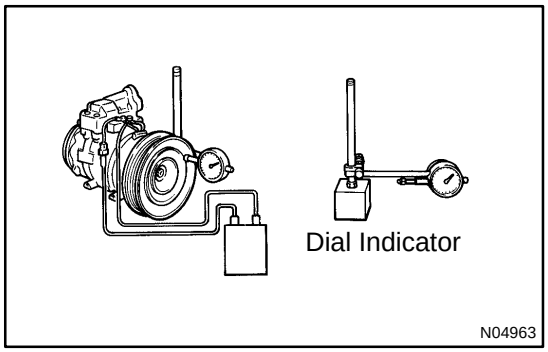


(c) Remove the stator.

AC0OH–01

REASSEMBLY

Reassembly is in the reverse order of disassembly (See page AC–38).



AFTER REASSEMBLY, CHECK MAGNETIC CLUTCH CLEARANCE

(a) Set the dial indicator to the pressure plate of the magnetic clutch.

(b) Connect the magnetic clutch lead wire to the positive (+) terminal of the battery.

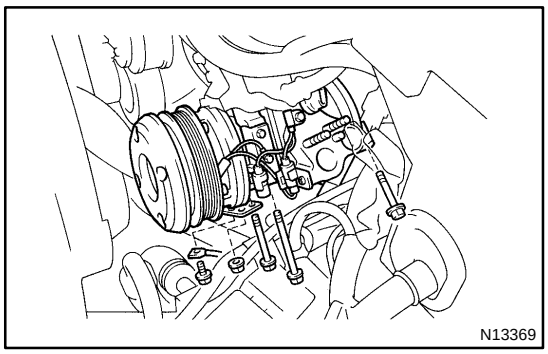
(c) Check the clearance between the pressure plate and rotor when connecting the negative (–) terminal to the battery.

Standard clearance:
0.5 ± 0.15 mm (0.020 ± 0.0059 in.)

If the clearance is not within the 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 (0.020in.)

AC0OI–01



INSTALLATION

1. INSTALL COMPRESSOR

(a) Install the compressor with the stay and 3 bolts..
Torque:
Bolts: 49 N·m (500 kgf·cm, 36 ft·lbf)
Nut: 29 N·m (300 kgf·cm, 22 ft·lbf)

(b) Connect the earth wire harness with the bolts.

(c) Connect the connector.

2. INSTALL ENGINE UNDER COVER

3. CONNECT DISCHARGE AND SUCTION HOSES TO COMPRESSOR

Connect the both hoses with the 2 nuts.
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 the hoses.

4. INSTALL AND CHECK DRIVE BELT
(See page AC–16, AC–14)

5. CONNECT NEGATIVE (–) TERMINAL CABLE TO BATTERY

6. EVACUATE AIR FROM REFRIGERATION SYSTEM AND CHARGE WITH REFRIGERANT
Specified amount: 700 ± 50 g (24.69 ± 6.76 oz.)

7. 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.

8. INSPECT A/C OPERATION

RECEIVER

AC0OJ–01

ON–VEHICLE INSPECTION

INSPECT FITTINGS FOR LEAKAGE

Using a gas leak detector, check for leakage of refrigerant.
If there is leakage, check the fitting torque at the joints.

AC0OK–01

REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

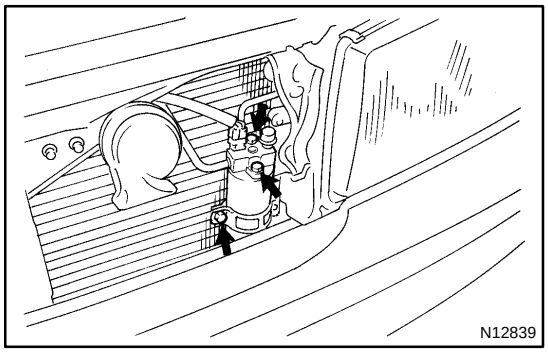
HINT:

At the time of installation, please refer to the following item.

Evacuate air from refrigeration system.

Charge system with refrigerant and inspect for leakage of refrigerant.

Specified amount : 700 ± 50 g (24.69 ± 1.76 oz.)



2. DISCONNECT 2 LIQUID TUBES

Remove the 2 bolts and disconnect the both tubes.

Torque: 5.4 N·m (55 kgf·cm, 48 in.·lbf)

NOTICE:

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

HINT:

At the time of installation, please refer to the following item.

Lubricate 2 new O–rings with compressor oil and install the tubes.

3. REMOVE RECEIVER

Remove the holder bolt and pull out the receiver.

HINT:

At the time of installation, please refer to the following item.

If receiver is replaced, add compressor oil to receiver.

Add 10 cc (0.34 fl.oz.)

Compressor oil: ND–OIL 8 or equivalent

AC0OL–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–44).

CONDENSER

AC0OM–01

ON–VEHICLE INSPECTION

1. INSPECT CONDENSER FINS FOR BLOCKAGE OR DAMAGE

◆ If fins are clogged, wash them with water and dry with compressed air.

NOTICE:

Be careful no to damage the fins.

◆ If fins are bent, straighten them with a screwdriver or pliers.

2. INSPECT CONDENSER AND FITTING FOR LEAKAGE

Using a gas leak detector, check for leakage.

If there is leakage, check the tightening torque at the joints.

AC0ON–01

REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

HINT:

At the time of installation, please refer to the following item.

Evacuate air from refrigeration system.

Charge system with refrigerant and inspect for leakage of refrigerant.

Specified amount : 700 ± 50 g (24.69 ± 1.76 oz.)

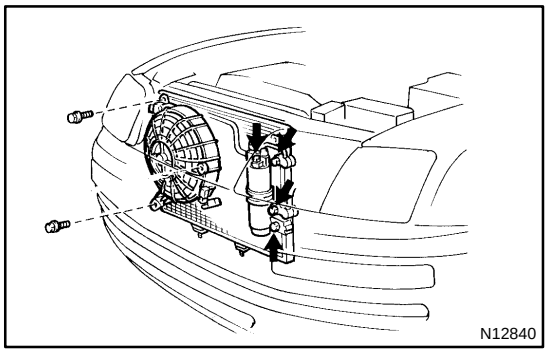
2. REMOVE THESE PARTS:

(a) Air cleaner hose

(b) Radiator upper mountings

(c) Hood lock support

(d) Hones



3. REMOVE RECEIVER WITH RECEIVER HOLDER

Remove the 3 bolts and disconnect the liquid tubes.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

NOTICE:

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

HINT:

At the time of installation, please refer to the following item.

Lubricate 3 new O–rings with compressor oil and install the tubes.

4. REMOVE CONDENSER FAN

(a) Disconnect the connector.

(b) Remove the 2 bolts and fan.

5. DISCONNECT DISCHARGE HOSE

Remove the bolt and disconnect hose.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

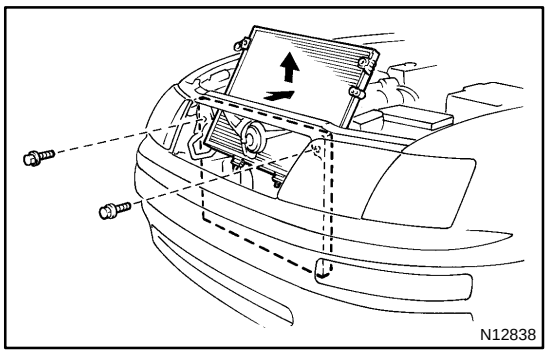
NOTICE:

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

HINT:

At the time of installation, please refer to the following item.

Lubricate a new O–ring with compressor oil and install the hose.



6. REMOVE CONDENSER

(a) Remove the 2 condenser upper mounting bolts.

(b) Push the radiator toward engine.

(c) Push the condenser toward radiator and pull it upward.

HINT:

At the time of installation, please refer to the following item.

If condenser is replaced, add compressor oil to condenser.

Add 40 cc (1.4 fl.oz.)

Compressor oil : ND–OIL 8 or equivalent

AC0OO–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–47).

EVAPORATOR

AC0OP–01

REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

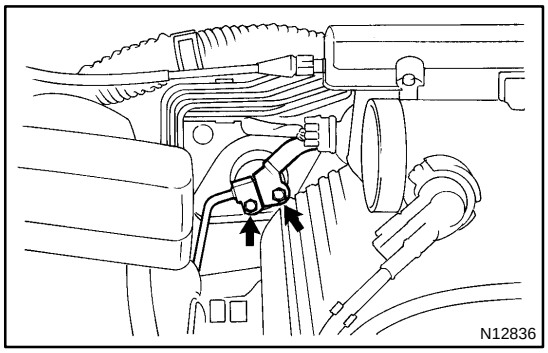
HINT:

At the time of installation, please refer to the following item.

Evacuate air from refrigeration system.

Charge system with refrigerant and inspect for leakage of refrigerant.

Specified amount : 700 ± 50 g (24.69 ± 1.76 oz.)



2. DISCONNECT LIQUID AND SUCTION TUBES FROM A/C UNIT

Remove the 2 bolts and disconnect the both tubes.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

NOTICE:

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

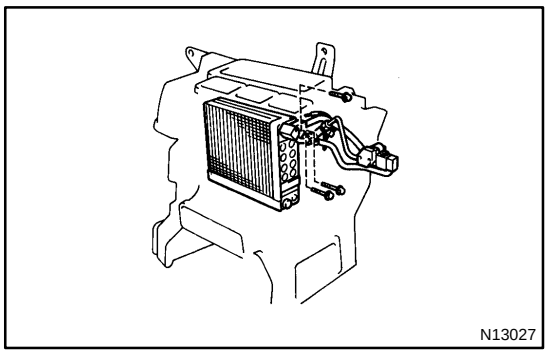
HINT:

At the time of installation, please refer to the following item.

Lubricate 2 new O–rings with compressor oil and install the tubes.

3. REMOVE BLOWER UNIT

(See page AC–31)


N13027

4. REMOVE LIQUID AND SUCTION TUBES FROM EVAPORATOR

(a) Pry out the packing.

HINT:

At the time of installation, please refer to the following item.

Do not refer to the packing.

(b) Using a hexagon wrench, remove the 3 bolts and separate the evaporator and tubes.

Torque: 5.4 N·m (55 kgf·cm, 48 in.·lbf)

NOTICE:

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

HINT:

At the time of installation, please refer to the following item.

Lubricate 2 new O–rings with compressor oil and install the tubes.

5. REMOVE EVAPORATOR

(a) Remove the 7 screws and evaporator cover.

(b) Pull out the evaporator

HINT:

At the time of installation, please refer to the following item.

If evaporator is replaced, add compressor oil to the evaporator.

Add 40 cc (1.4 fl.oz.)

Compressor oil: ND–OIL 8 or equivalent

AC0OQ–01

INSPECTION

1. INSPECT FINS FOR BLOCKAGE

If fins are clogged, clean them with compressed air.

NOTICE:

Never use water to clean the evaporator.

2. CHECK FITTING FOR CRACKS SCRATCHES

Repair as necessary.

AC0OR–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–50).

HEATER RADIATOR

AC0OS–01

REMOVAL

1. DRAIN ENGINE COOLANT FROM RADIATOR

HINT:

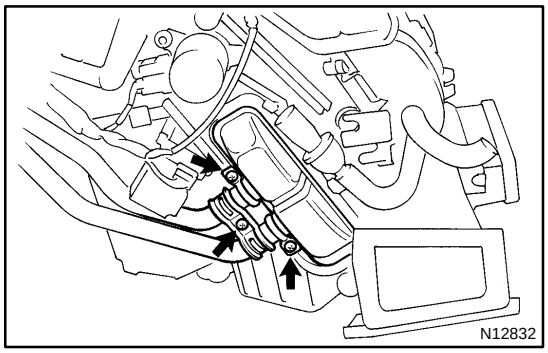
It is not necessary to drain out all coolant.

2. REMOVE THESE PARTS :

(a) No.1 safety pad

(b) No.1 under cover

(c) No.2 heater to register duct
(See page BO–83)



3. REMOVE HEATER RADIATOR

(a) Remove the screw and clamp.

(b) Remove the 2 screws, 2 clamps and disconnect the heater radiator pipes.

(c) Pull out the heater radiator.

(d) Remove the 2 O–rings.

HINT:

At the time of installation, please refer to the following item.

Do not reuse 2 O–rings.

AC0OT–01

INSPECTION

INSPECT FINS FOR BLOCKAGE

If the fins are clogged, clean them with compressed air.

AC0OU–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–54).

EXPANSION VALVE

AC0OV–02

ON–VEHICLE INSPECTION

1. CHECK QUANTITY OF GAS DURING REFRIGERATION CYCLE

2. SET ON MANIFOLD GAUGE SET

(See page AC–17)

3. RUN ENGINE

Run the engine at 1,500 rpm for at least 5 minutes.

Then check that the high pressure reading is 1.37 – 1.53 MPa (14 – 16 kgf/cm^2, 199 – 228 psi).

4. CHECK EXPANSION VALVE

If the expansion valve is faulty, the low pressure reading will drop to 0 kPa (0 kgf/cm^2, 0 psi),otherwise it is ok.

HINT:

When the low pressure drops to 0 kPa (0 kgf/cm^2, 0 psi), check the receiver's IN and OUT side for no temperature difference.

AC0OW–01

REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

HINT:

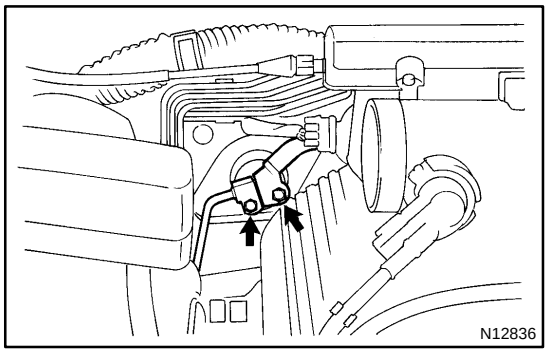
At the time of installation, please refer to the following item.

Evacuate air from refrigeration system.

Charge system with refrigerant and inspect for leakage of refrigerant.

Specified amount : 700 ± 50 g (24.69 ± 1.76 oz.)

2. REMOVE BLOWER UNIT (See page AC–31)



3. DISCONNECT LIQUID AND SUCTION TUBES FROM A/C UNIT OUTLET FITTINGS

Remove the 2 bolts and disconnect the both tubes.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

NOTICE:

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

HINT:

At the time of installation, please refer to the following item.

Lubricate 2 new O–rings with compressor oil and install the tubes.

4. DISCONNECT EQUALIZER TUBE FROM EPR

Remove the bolt and disconnect the tube.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

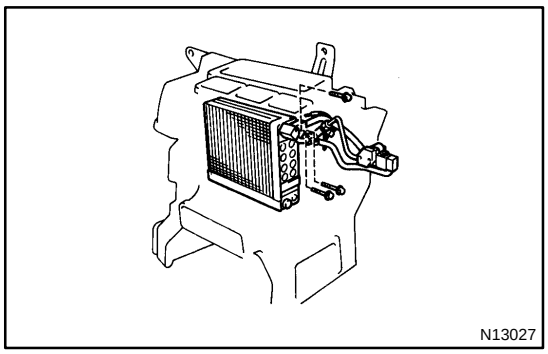
NOTICE:

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

HINT:

At the time of installation, please refer to the following item.

Lubricate 2 new O–rings with compressor oil and install the tubes.


N13027

5. REMOVE LIQUID TUBE AND SUCTION TUBES FROM EVAPORATOR

(a) Pry out the packing.

HINT:

At the time of installation, please refer to the following item.

Do not reuse the packing.

(b) Using a hexagon wrench, remove the 3 bolts and tubes.

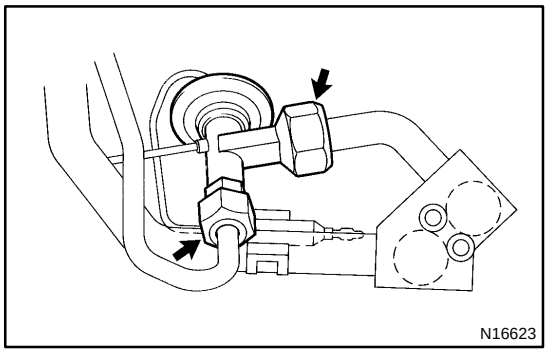
NOTICE:

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

HINT:

At the time of installation, please refer to the following item.

Lubricate 2 new O–rings with compressor oil and install the tubes.


N16623

6. REMOVE EXPANSION VALVE

(a) Pry out the packing.

HINT:

At the time of installation, please refer to the following item.

Do not reuse the packing.

(b) Remove the holder and disconnect the heat sensing tube.

(c) Loosen the 3 nuts and remove the expansion valve.

Torque:

14 mm nut : 10 N·m (100 kgf·cm, 7 ft·lbf)

19 mm nut : 14 N·m (140 kgf·cm, 10 ft·lbf)

24 mm nut : 22 N·m (225 kgf·cm, 16 ft·lbf)

HINT:

At the time of installation, please refer to the following item.

Lubricate 3 new O–rings with compressor oil and install the valve.

AC0OX–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–58).

WATER VALVE

AC0OY–01

ON–VEHICLE INSPECTION

1. WARM UP ENGINE

2. DISCONNECT WATER VALVE CONTROL CABLE

3. INSPECT WATER VALVE OPERATION

(a) Check that warm air is blown out of the vent when the water valve lever is moved to ”warm” position.

(b) Check that cool air is blown out of the vent when the water valve lever is moved to ”cool” position.

4. CONNECT WATER VALVE CONTROL CABLE

After connection, adjust the control cable (See page AC–63).

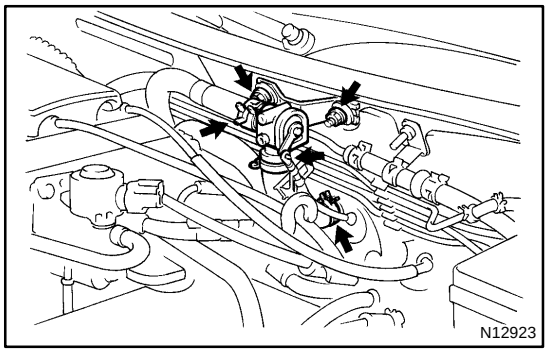
AC0OZ–01

REMOVAL

1. DRAIN ENGINE COOLANT FROM RADIATOR

HINT:

It is not necessary to drain out all the coolant.



2. DISCONNECT WATER VALVE CONTROL CABLE

HINT:

At the time of installation, please refer to the following item.
After connection, check water valve operation.

3. DISCONNECT WATER HOSES FROM HEATER RADIATOR PIPE AND WATER VALVE

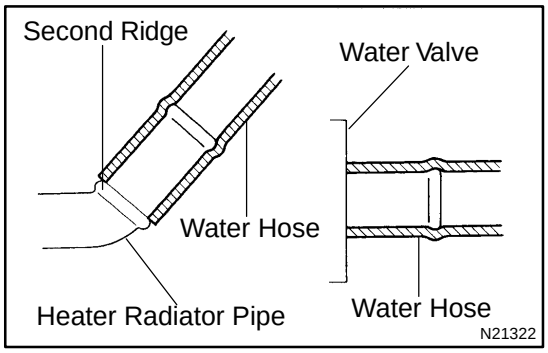
(a) Using a pliers, grip the claw of the hose clip and side the hose clip along the hose.

(b) Disconnect the water hoses.

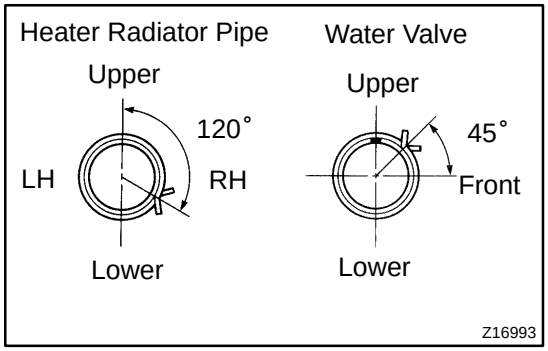
HINT:

At the time of installation, please refer to the following item.

- Push the water hose onto the heater radiator pipe as far as the second ridge on the pipe.
- Push the water hose onto the water valve as far as the water valve.



- Install the hose clip in a position, as shown in the illustration.



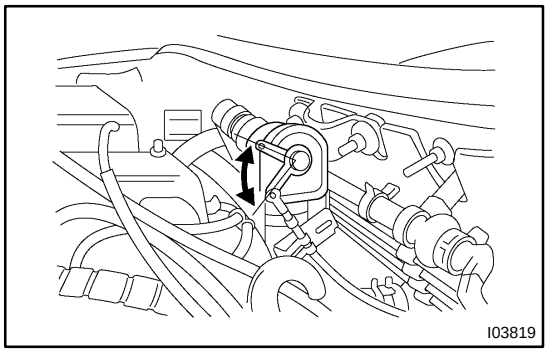
4. REMOVE WATER VALVE

Remove the 2 bolts and water valve.

AC0P0–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–62).



1. AFTER INSTALLATION, CHECK WATER VALVE OPERATION

(a) Turn ignition switch to ON.

(b) Operate temperature control switches to ”MAX. COOL” and ”MAX. WARM”, then check that water valve operation, as shown in the illustration.

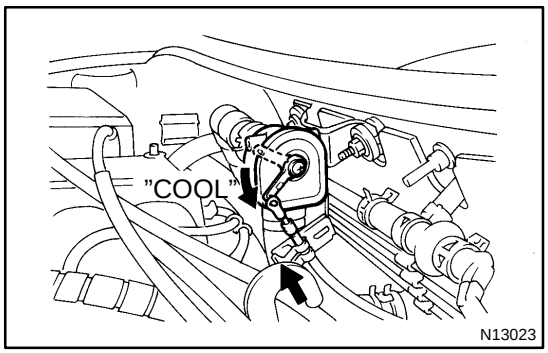
If operation is not as specified, next step.

2. ADJUST WATER VALVE CONTROL CABLE

(a) Turn ignition switch to ON.

(b) Disconnect the control cable.

(c) Set temperature control switches ”MAX. COOL”.



(d) Set the water valve lever on ”COOL” position, connect the control cable and lock the clamp.

HINT:

Lock the clamp while lightly pushing the outer cable in the direction, as shown in the illustration by an arrow.

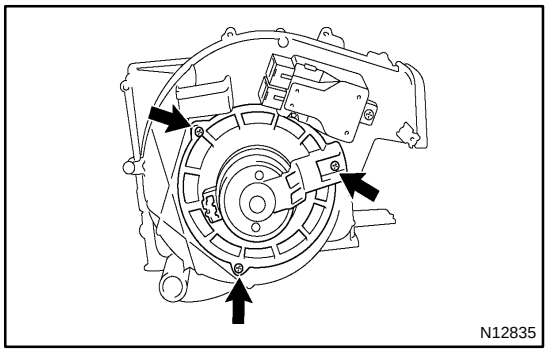
BLOWER MOTOR

AC0P1–01

REMOVAL

1. REMOVE THESE PARTS :

(a) Front door scuff plate RH
(b) Cowl side trim RH
(c) No.2 under cover
(See page BO–83)



2. REMOVE BLOWER MOTOR

(a) Disconnect the connector.
(b) Remove the 3 screws and blower motor.

AC0P2–01

INSPECTION

INSPECT BLOWER MOTOR CIRCUIT

(See page DI–1010)

AC0P3–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–64).

AC0P5–01

INSPECTION

INSPECT BLOWER MOTOR CONTROL RELAY CIRCUIT

(See page DI–1010)

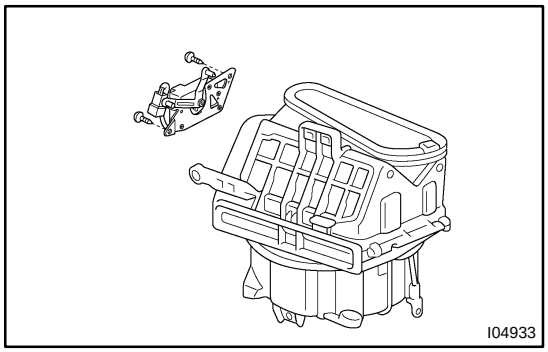
SERVOMOTOR

AC0PR–01

REMOVAL

1. REMOVE AIR INLET SERVOMOTOR

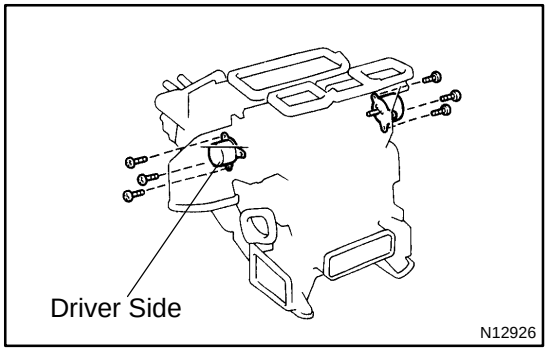
(a) Remove the blower unit.
(See page AC–31)



(b) Remove the air inlet servomotor.
(1) Disconnect the connector.
(2) Remove the screw and servomotor.

2. REMOVE AIR MIX SERVOMOTOR

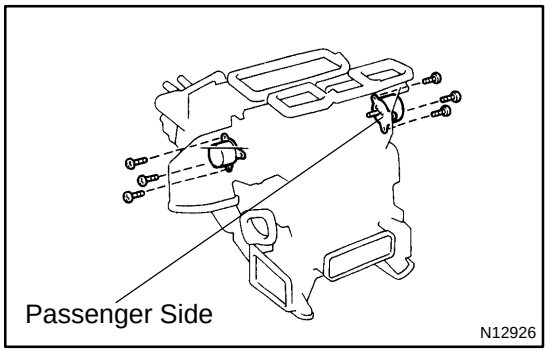
(a) Driver Side:
Remove the air mix servomotor.
(1) Remove these parts:
- No. 1 under cover
- No. 1 safety pad
- No. 2 heater to register duct



(2) Disconnect the connector.
(3) Remove the 3 screws and servomotor.

HINT:
Be careful not to pull out the pulley, when removing servomotor.

(b) Passenger Side:
Remove the air mix servomotor.
(1) Remove the blower unit.
(See page AC–31)

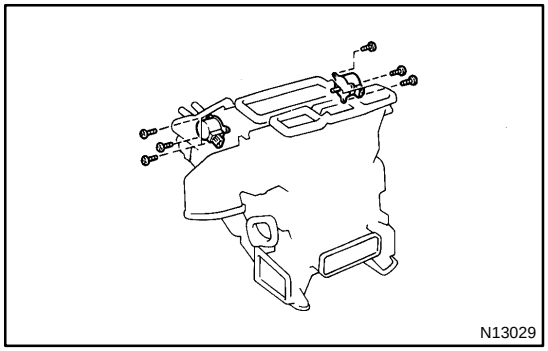


(2) Disconnect the connector.
(3) Remove the 3 screws and servomotor.

HINT:
Be careful not to pull out the pulley, when removing servomotor.

3. REMOVE AIR OUTLET SERVOMOTORS

(a) Remove the A/C unit.
(See page AC–24)



(b) Remove the air outlet servomotors
(1) Disconnect the connectors.
(2) Remove the 6 screws and both servomotors.

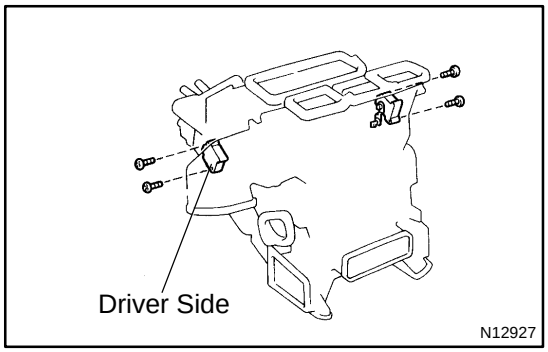
HINT:
Be careful not to pull out the pulley, when removing servomotor.

4. REMOVE COOL AIR BY–PASS DAMPER CONTROL SERVOMOTOR

(a) Dirver Side:

Remove the cool air by–pass damper control servomotor.

(1) Remove the instrument panel.
(See page BO–83)

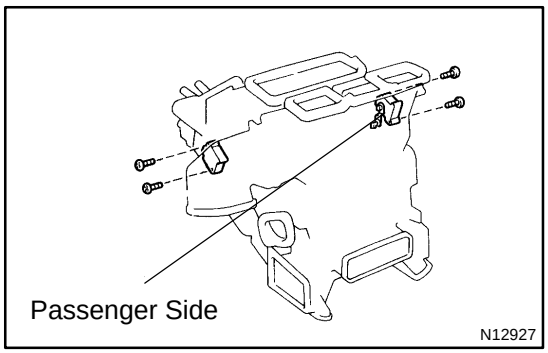


(2) Disconnect the connector.
(3) Disconnect the cool air by–pass damper control cable.
(4) Remove the 2 screws and servomotor.

(b) Passenger Side:

Remove cool air by–pass damper control servomotor.

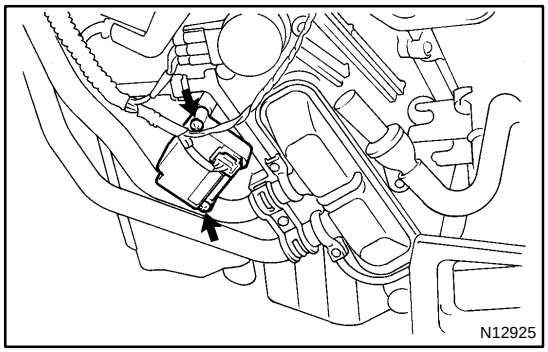
(1) Remove the blower unit.
(See page AC–31)



(2) Disconnect the connector.
(3) Disconnect the cool air by–pass damper control cable.
(4) Remove the 2 screws and servomotor.

5. REMOVE WATER VALVE CONTROL SERVOMOTOR

(a) Remove these parts:
(1) No. 1 under cover
(2) No. 1 safety pad
(3) No. 2 heater to register duct
(See page BO–83)



(b) Remove the servomotor.
(1) Disconnect the connector.
(2) Disconnect the control cable
(3) Remove the 2 screws and servomotor.

AC0PS–01

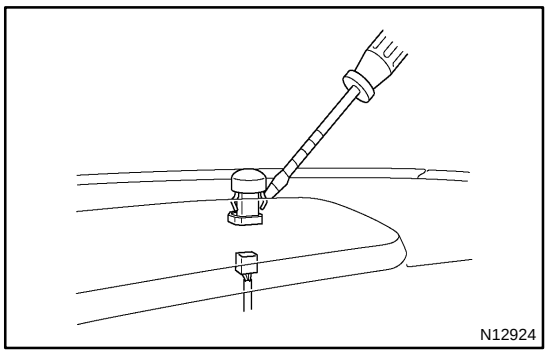
INSPECTION

1. INSPECT AIR INLET SERVOMOTOR CIRCUIT
   (See page DI–982)
2. INSPECT AIR INLET DAMPER POSITION SENSOR CIRCUIT
   (See page DI–982)
3. INSPECT AIR MIX SERVOMOTOR CIRCUIT
   (See page DI–997)
4. INSPECT AIR MIX DAMPER POSTION SENSOR CIRCUIT
   (See page DI–997)
5. COOL AIR BYPASS DAMPER CONTROL SERVOMOTOR CIRCUIT
   Driver Side: (See page DI–985)
   Passenger Side: (See page DI–988)
6. INSPECT AIR OUTLET SERVOMOTOR CIRCUIT
   (See page DI–991)
7. INSPECT AIR OUTLET DAMPER POSITION SENSOR CIRCUIT
   (See page DI–994)
8. INSPECT WATER VALVE CONTROL SERVOMOTOR CIRCUIT
   (See page DI–991)

AC0PT–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–70).



SENSOR

AC0PU–01

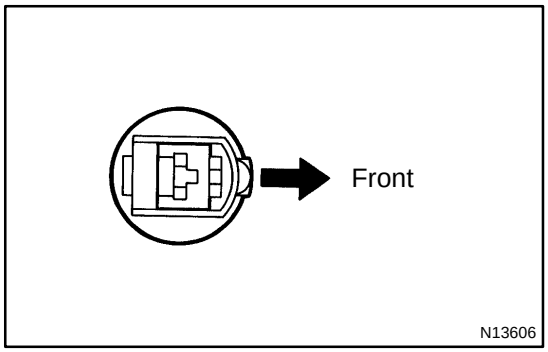
REMOVAL

1. REMOVE SOLAR SENSOR

Using a screwdriver, pull out the sensor then disconnect the connector.

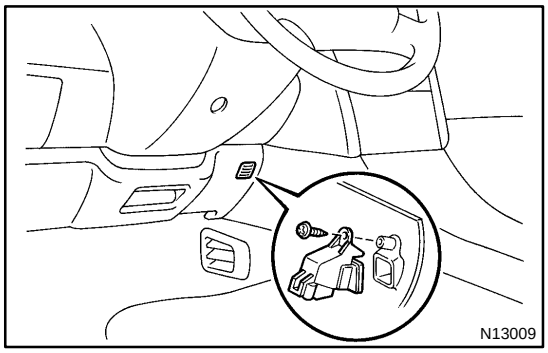
HINT:

- Tape the screwdriver tip before use.



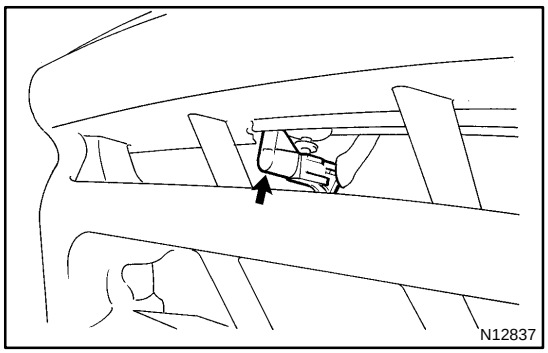
- At the time of installation, please refer to the following item.

  Install the sensor, as shown in the illustration.



2. REMOVE ROOM TEMPERATURE SENSOR

(a) Remove the No.1 safety pad set bolts.
(b) Disconnect No.1 safety pad.
(c) Disconnect the connector and aspirator hose.
(d) Remove the screw and sensor.

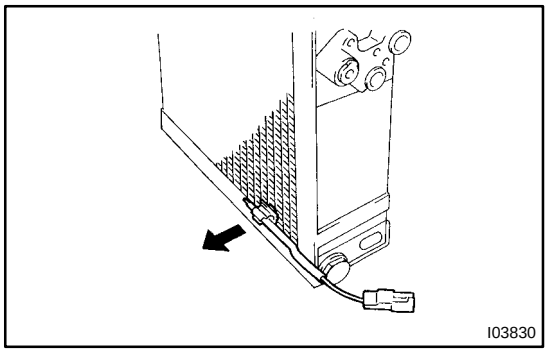


3. REMOVE AMBIENT TEMPERATURE SENSOR

(a) Disconnect the connector.
(b) Pull out the sensor.

4. REMOVE EVAPORATOR TEMPERATURE SENSOR

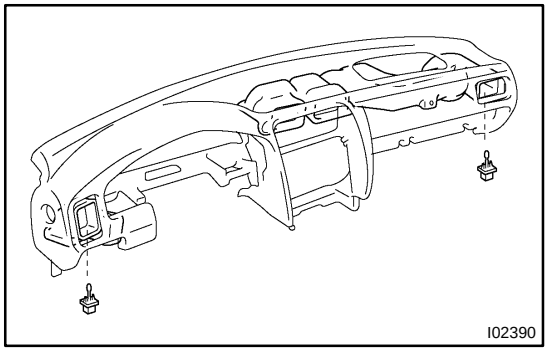
(a) Remove the evaporator
(See page AC–50)



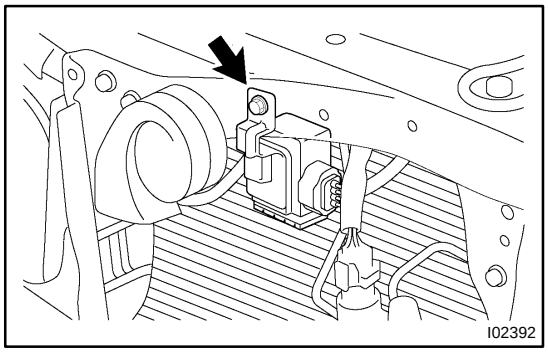
(b) Remove the sensor.
(c) Pull out the sensor from evaporator.

5. REMOVE DUCT SENSOR

(a) Remove the instrument panel
(See page BO–83)



(b) Remove the sensors.
(1) Disconnect the connector.
(2) Remove driver side sensor from the No.3 heater to resistor duct.
(3) Remove passenger side sensor from the No.1 heater to resister duct.



6. REMOVE SMOG VENTILATION SENSOR

(a) Disconnect the connector.
(b) Remove the bolt and sensor.

AC0PV–01

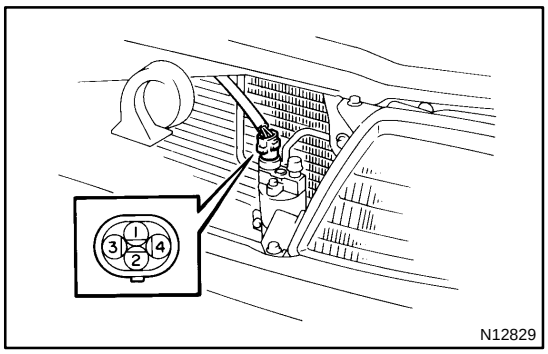
INSPECTION

1. INSPECT SOLAR SENSOR CIRCUIT
   Driver Side : (See page DI–970)
   Passenger Side : (See page DI–962)
2. INSPECT ROOM TEMP. SENSOR CIRCUIT
   (See page DI–944)
3. INSPECT AMBIENT TEMP. SENSOR CIRCUIT
   (See page DI–947)
4. INSPECT EVAPORATOR TEMPERATURE SENSOR CIRCUIT
   (See page DI–950)
5. INSPECT DUCT SENSOR CIRCUIT
   Driver Side : (See page DI–953)
   Passenger Side : (See page DI–956)
6. INSPECT SMOG VENTILATION SENSOR CIRCUIT
   (See page DI–959)

AC0PW–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–76)

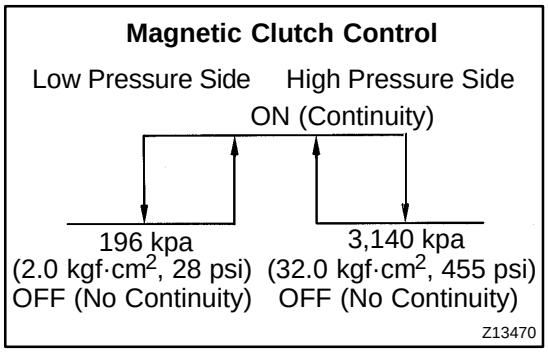


PRESSURE SWITCH

AC0P7–01

ON–VEHICLE INSPECTION

1. **SET ON MANIFOLD GAUGE SET**
   (See page AC–17)
2. **DISCONNECT CONNECTOR FROM PRESSURE SWITCH**
3. **RUN ENGINE AT APPROX. 2,000 RPM**

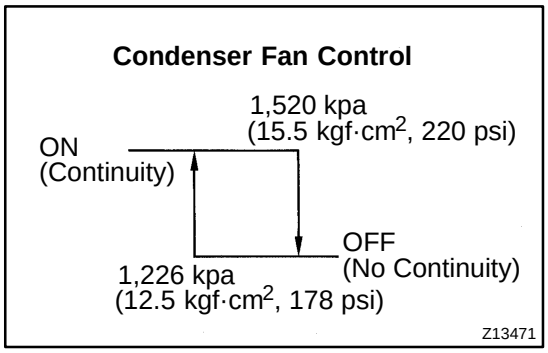


4. **Magnetic Clutch Control:**
   INSPECT PRESSURE SWITCH OPERATION

(a) Connect the positive (+) lead from the ohmmeter to terminal 4 and the negative (–) lead to terminal 1.

(b) Check continuity between terminals when refrigerant pressure is changed, as shown in the illustration.

If operation is not as specified, replace the pressure switch.



5. **Condenser Fan Control:**
   INSPECT PRESSURE SWITCH OPERATION

(a) Connect the positive (+) lead from the ohmmeter to terminal 2 and the negative (–) lead to terminal 3.

(b) Check continuity between terminals when refrigerant pressure is changed, as shown in the illustration.

If operation is not as specified, replace the pressure switch.

6. **STOP ENGINE AND SET OFF MANIFOLD GAUGE SET**
7. **CONNECT CONNECTOR TO PRESSURE SWITCH**

AC0P8–01

REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

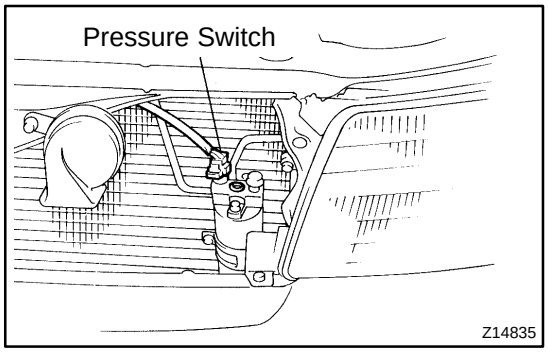
HINT:

At the time of installation, please refer to the following item.

Evacuate air from refrigeration system.

Charge system with refrigerant and inspect for leakage of refrigerant.

Specified amount: 700 ± 50 g (26.45 ± 1.76 oz.)



2. REMOVE PRESSURE SWITCH FROM LIQUID TUBE

Disconnect the connector and remove the pressure switch.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

HINT:

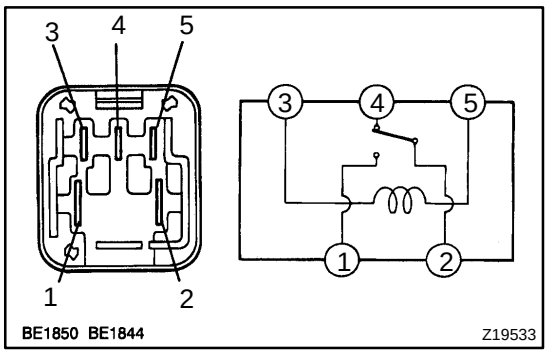
- Lock the switch mount on the tube with an open end wrench, being careful not to deform the tube, and remove the switch.
- At the time of installation, please refer to the following item.

  Lubricate a new O–ring with the compressor oil and install the switch.

AC0P9–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–81).



RELAY

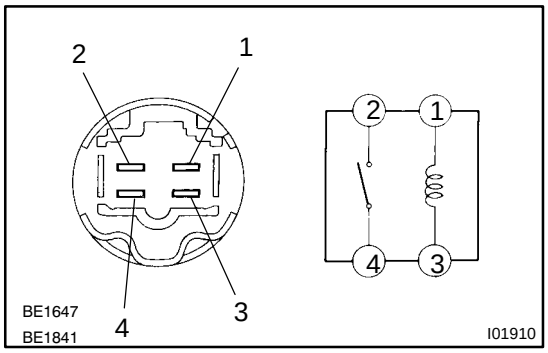
INSPECTION

AC0PA–01

1. INSPECT HEATER MAIN RELAY (Making: HTR RLY) CONTINUITY

Condition	Tester connection	Specified condition
Constant	2 – 4 3 – 5	Continuity
Apply B + between terminals 3 and 5.	1 – 2	Continuity

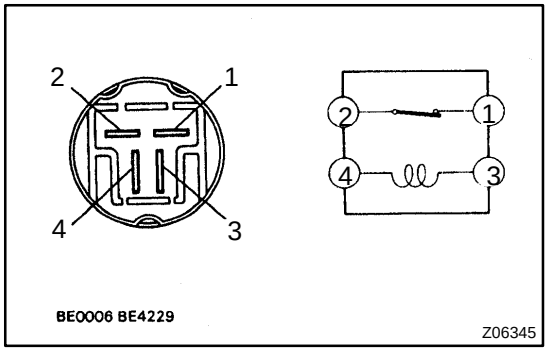
If continuity is not as specified, replace the relay.



2. INSPECT MAGNETIC CLUTCH RELAY (Marking: MG CLT RLY) CONTINUITY

Condition	Tester connection	Specified condition
Constant	1 – 3	Continuity
Apply B + between terminals 1 and 3.	2 – 4	Continuity

If continuity is not as specified, replace the relay.



3. INSPECT COOLING FAN RELAY No.1 AND No.2 CONTINUITY

Condition	Tester connection	Specified condition
Constant	1 – 2 3 – 4	Continuity
Apply B + between terminals 3 and 4.	1 – 2	No Continuity

If continuity is not as specified, replace the relays.

CONDENSER FAN

AC0PB–01

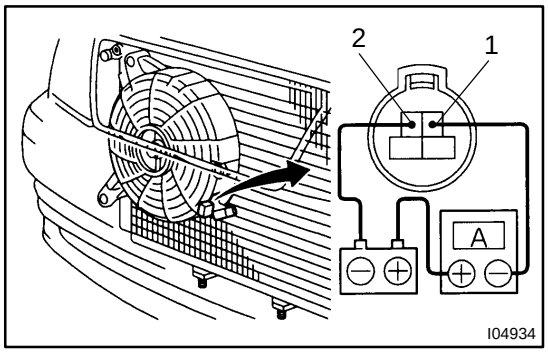
ON–VEHICLE INSPECTION

1. INSPECT CONDENSER FAN OPERATION

Check the fan operation at each temperature and refrigerant pressure, as shown in the chart below.

Engine coolant and refrigerant condition	A/C switch	Magnetic clutch	Fan motor speed
83 °C (181 °F) or below	OFF or ON	OFF	OFF
90 °C (194 °F) or above	OFF or ON	OFF or ON	High
83 °C (181 °F) or below and the refrigerant pressure is approx. 1,520 kPa (15.5 kg/cm^2, 220 psi) or above	ON	ON	Low

If operation is not as specified, proceed next inspection.



2. INSPECT FAN MOTOR OPERATION

(a) Disconnect the connector.

(b) Connect the battery and ammeter to fan motor connector, as shown in the illustration.

(c) Check the fan rotates smoothly and check the reading on ammeter.

Specified amperage: 4.2 – 4.4 A

If operation is not as specified, replace the fan motor.

If operation is as specified, check the fan relay, pressure switch and pressure switch.

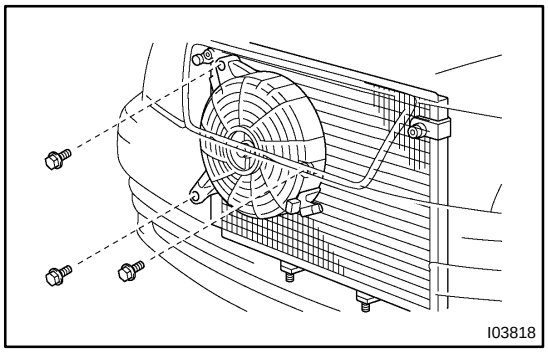
AC0PC–01

REMOVAL

1. REMOVE THESE PARTS :

(a) Hood lock support set bolts

(b) Center brace

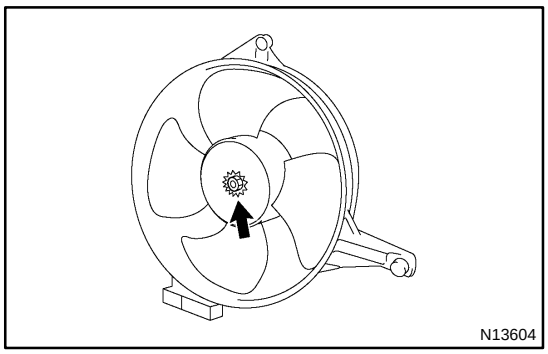


2. REMOVE CONDENSER FAN

(a) Disconnect the connector.

(b) Remove the 2 bolts and fan.

AC0PD–01

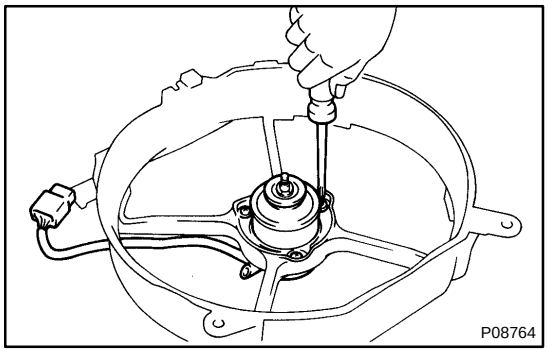


DISASSEMBLY

1. REMOVE FAN

Remove the nut and fan.

2. REMOVE FAN RESISTOR



3. REMOVE FAN MOTOR

(a) Disconnect the wire harness and connector from the fan shroud.

(b) Remove the 3 screws and fan motor.

AC0PE–01

REASSEMBLY

Reassembly is in the reverse order of disassembly (See page AC–86).

AC0PF–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–85).

AIR CONDITIONING CONTROL ASSEMBLY (Electrical Multi Vision)

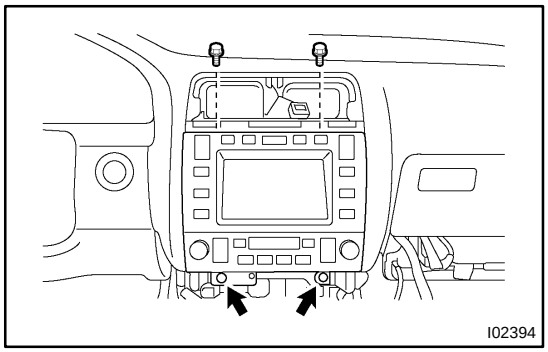
AC0PG–01

REMOVAL

1. REMOVE THESE PARTS :

(a) Cluster finish panel

(b) No.2 register
(See page BO–83)

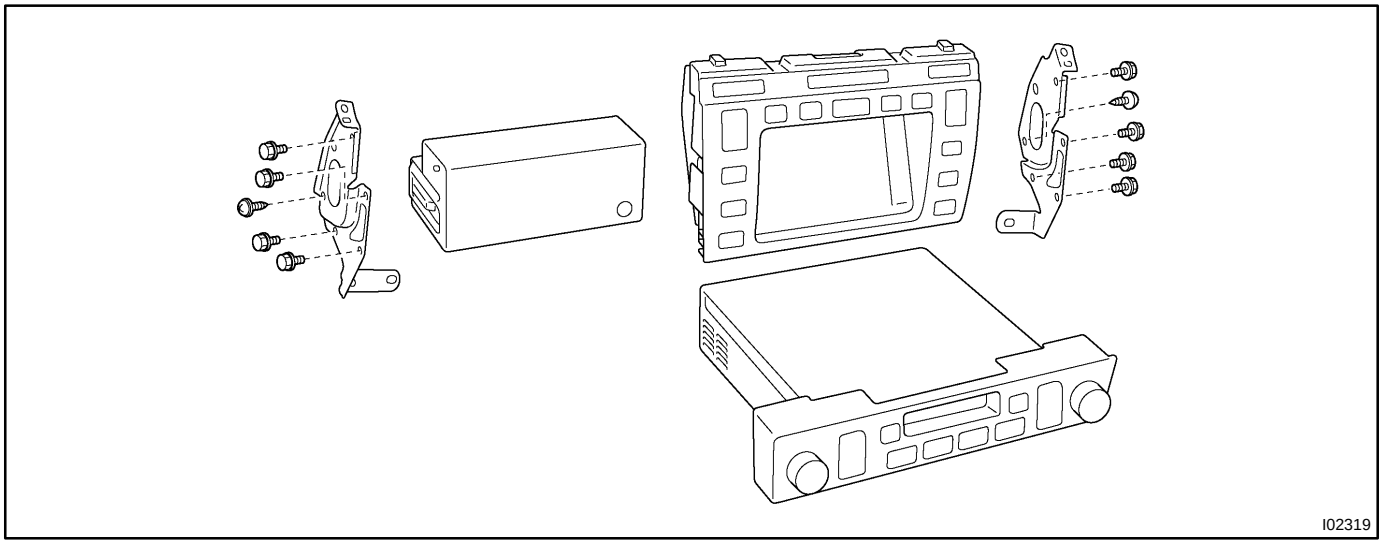


2. REMOVE A/C CONTROL ASSEMBLY

(a) Remove the 4 bolts and pull out the A/C control assembly, then disconnect the connectors.

(b) Remove the 8 bolts, 2 screws and 2 brackets.

(c) Separate the A/C control assembly, radio and A/C amplifier.



AC0PH–01

INSPECTION

INSPECT A/C CONTROL ASSEMBLY

(See page DI–939)

AC0PI–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–89).

AIR CONDITIONING CONTROL ASSEMBLY (Except Electrical Multi Vision)

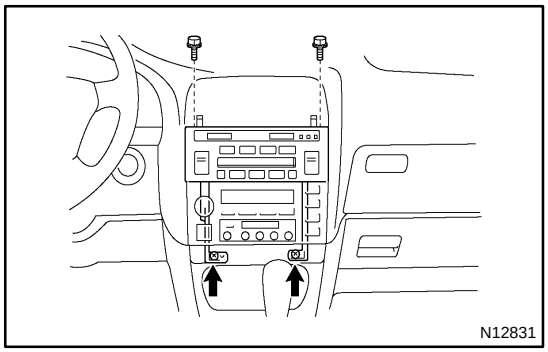
AC0PJ–01

REMOVAL

1. REMOVE THESE PARTS :

(a) Cluster finish panel

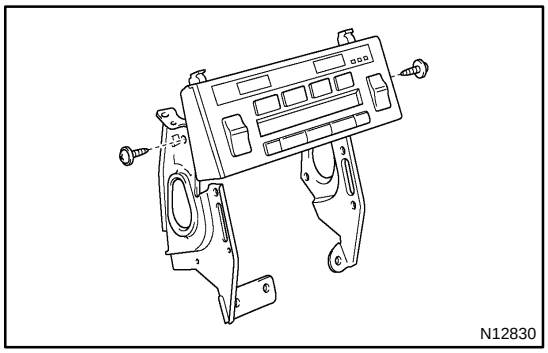
(b) No.2 register (See page BO–83)



N12831

2. REMOVE A/C CONTROL ASSEMBLY

(a) Remove the 4 bolts and pull out A/C control assembly, then disconnect the connectors.



N12830

(b) Remove the 2 screws and A/C control assembly from the radio.

AC0PK–01

INSPECTION

INSPECT A/C CONTROL ASSEMBLY CIRCUIT

(See page DI–939)

AC0PL–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–92).

AIR CONDITIONING AMPLIFIER (Electrical Multi Vision)

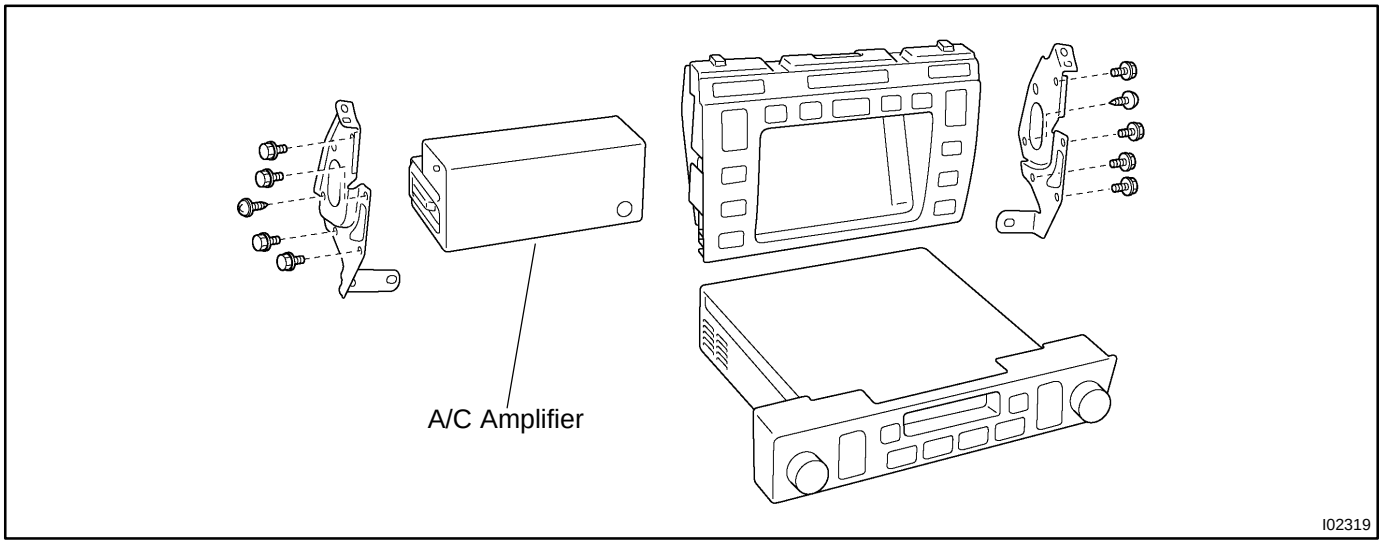
AC0PM–01

REMOVAL

1. REMOVE A/C CONTROL ASSEMBLY
(See page AC–95)

2. REMOVE A/C AMPLIFIER

Remove the 8 bolts 2 screws and 2 bracket, then remove the amplifier.



AC0PN–01

INSPECTION

INSPECT A/C AMPLIFIER CIRCUIT

(See page DI–939)

AC0PO–01

INSTALLATION

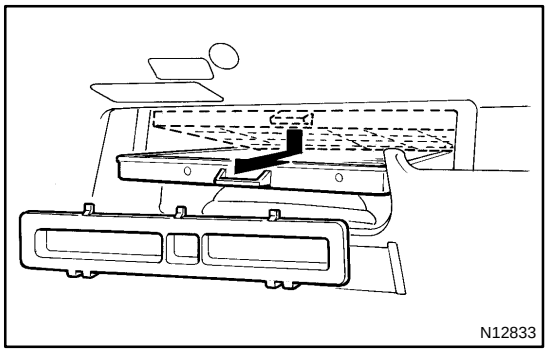
Installation is in the reverse order of removal (See page AC–95).

AIR REFINER FILTER

AC0PP–01

REMOVAL

1. OPEN INSTRUMENT PANEL BOX ASSEMBLY



2. REMOVE AIR REFINER FILTER

(a) Remove the glove box cover.
(b) Remove the filter cover.
(c) Pull out the filter assembly.
(d) Remove the filter from filter case.

CAUTION:
Confirm the blower switch is off, when removing the filter.

AC0PQ–01

INSTALLATION

Installation is in the reverse order of removal (See page AC–98)