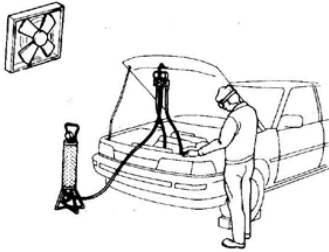


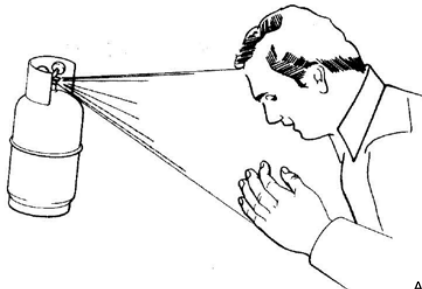
AIR CONDITIONING SYSTEM PRECAUTION

AC2QA-01



AC2810

1. **DO NOT HANDLE REFRIGERANT IN AN ENCLOSED AREA OR NEAR AN OPEN FLAME**
2. **ALWAYS WEAR EYE PROTECTION**



AC2811

3. **BE CAREFUL THAT LIQUID REFRIGERANT DOES NOT GET IN YOUR EYES OR ON YOUR SKIN**

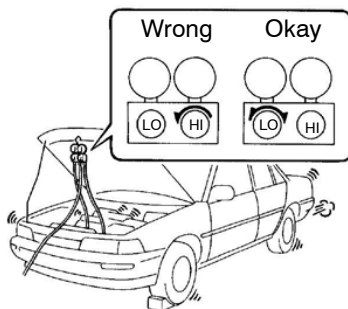
If liquid refrigerant gets in your eyes or on your skin:

- (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 REFRIGERANT SYSTEM**

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

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

If the high pressure valve is 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 LAND CRUISER is equipped with an SRS (Supplemental Restraint System) such as the driver airbag and passenger air bag. Failure to carry out service operations in the correct sequence could cause the SRS to unexpectedly deployed 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 the repair manual.

PROBLEM SYMPTOMS TABLE

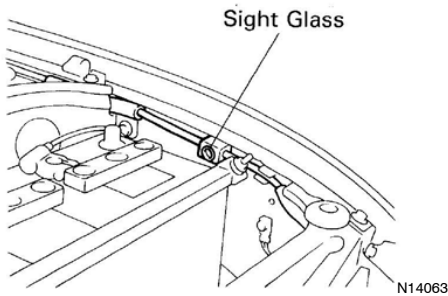
Use the table below to help you find the cause of the problem. The numbers indicate the priority of the likely cause of the problem. Check each part in order. If necessary, replace these parts.

Symptom	Suspect Area	See page
No blower operation	4. HTR Fuse 5. Heater main relay 6. Blower motor 7. Blower resistor 8. Blower speed control switch 9. Wire harness	– AC-64 AC-52 AC-57 AC-69 –
No air temperature control	1. Engine coolant volume 2. A/C control assembly 3. Water valve	– AC-69 AC-49
No compressor operation	1. Refrigerant volume 2. A/C Fuse 3. Magnetic clutch 4. Compressor 5. Pressure switch 6. Heater main relay 7. Blower speed control switch 8. A/C switch 9. A/C amplifier 10. Thermistor 11. Wire harness	AC-5 – AC-33 AC-33 AC-61 AC-64 AC-69 AC-69 AC-74 AC-60 –
Compressor operates intermittently	1. Refrigerant volume 2. Pressure switch 3. A/C amplifier 4. Thermistor 5. Wire harness	AC-5 AC-61 AC-74 AC-60 –
No cool air comes out	1. Refrigerant volume 2. Refrigerant pressure 3. Drive belt 4. Magnetic clutch 5. Compressor 6. Pressure switch 7. Thermistor 8. A/C switch 9. A/C amplifier 10. A/C control assembly 11. Wire harness	AC-5 AC-5 AC-15 AC-33 AC-33 AC-61 AC-60 AC-69 AC-74 AC-69 –
Cool air comes out only at high engine rpm	1. Refrigerant volume 2. Drive belt 3. Magnetic clutch 4. Compressor 5. Condenser 6. Receiver 7. Expansion valve 8. Evaporator 9. Thermistor 10. A/C amplifier 11. Wire harness	AC-5 AC-15 AC-33 AC-33 AC-42 AC-39 AC-47 AC-45 AC-60 AC-74 –

Insufficient cooling	1. Refrigerant volume	AC-5
	2. Drive belt	AC-15
	3. Magnetic clutch	AC-33
	4. Compressor	AC-33
	5. Condenser	AC-42
	6. Receiver	AC-39
	7. Expansion valve	AC-47
	8. Evaporator	AC-45
	9. Refrigerant line	AC-20
	10. Pressure switch	AC-61
	11. A/C amplifier	AC-74
	12. A/C control assembly	AC-69
No engine idle up when A/C switch ON	1. A/C amplifier	AC-74
	2. ECM	–
	3. Wire harness	–
No warm air comes out	1. Engine coolant volume	–
	2. A/C control assembly	AC-69
	3. Water valve	AC-49
	4. Heater radiator	AC-46
A/C indicator does not light up when mode lever at DEF. position	1. Defroster mode switch	AC-69
	2. A/C switch	AC-69
	3. Wire harness	–

Rear heater:

Symptom	Suspect Area	See page
No blower operation	1. RR HTR Fuse	–
	2. Rear heater relay	AC-65
	3. Rear heater switch	AC-77
	4. Rear blower motor	AC-55
	5. Rear blower resistor	AC-58
No warm air come out	1. Engine coolant volume	–
	2. Rear heater radiator	AC-46



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 set at "HI"
- A/C switch ON
- Temperature control set at "MAX. COOL"
- Fully open doors

Item	Symptom	Amount of refrigerant	Remedy
1	Bubbles present in sight glass	Insufficient*	1. Check for gas leakage with gas leak tester and repair if necessary 2. Add refrigerant until bubbles disappear
2	No bubbles present in sight glass	None, sufficient or too much	Refer to items 3 and 4
3	No temperature difference between compressor inlet and outlet	Empty or nearly empty	1. Check for gas leakage with gas leak tester 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 REFRIGERAT 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 the 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 1,500 rpm
- Blower speed control switch set at high
- Temperature control set at max. cool

HINT:

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

(1) Normally functioning refrigeration system.

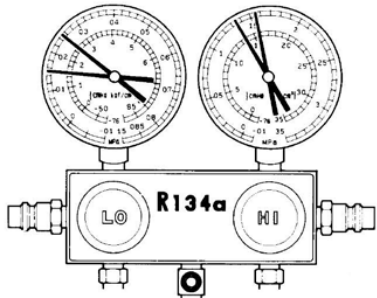
Gauge reading:

Low pressure side:

0.15 – 0.25 MPa (1.5 – 2.5 kgf/cm²)

High pressure side:

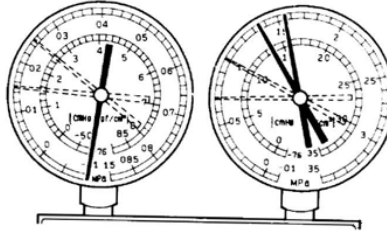
1.37 – 1.57 MPa (14 – 15 kgf/cm²)



I01386

(2) Moisture present in refrigeration system.

Condition: Periodically cools and then fails to cool

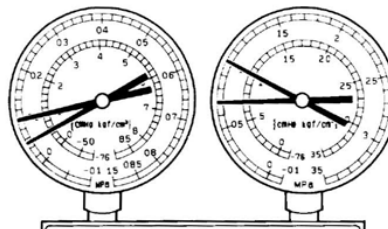


I01387

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 condenser (2) Remove moisture in cycle through repeatedly evacuating air (3) Charge proper amount of new refrigerant

(3) Insufficient cooling

Condition: Insufficient cooling



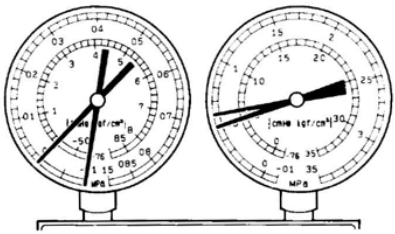
I01388

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

AIR CONDITIONING – AIR CONDITIONING SYSTEM

(4) Poor circulation of refrigerant

Condition: Insufficient cooling

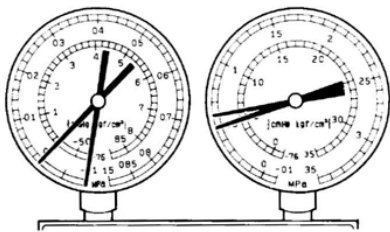


I01389

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

(5) Refrigerant does not circulate

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

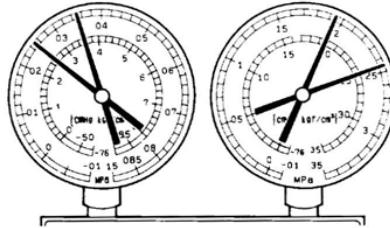


I01449

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 condenser/ 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 condenser (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

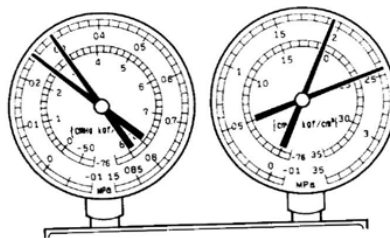


I01390

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 or cooling fan faulty	(1) Clean condenser (2) Check cooling fan with fluid coupling 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.

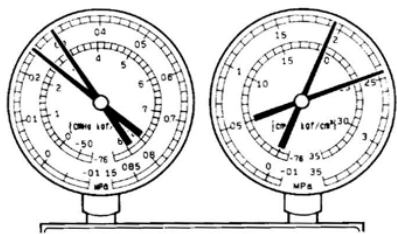
I01392

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

AIR CONDITIONING – AIR CONDITIONING SYSTEM

(8) Expansion valve improperly

Condition: Insufficient cooling

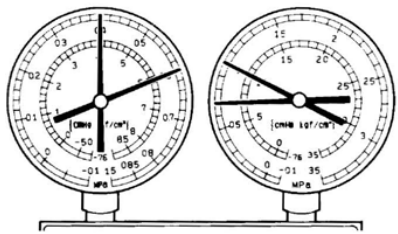


I01450

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	• Excessive refrigerant in low pressure piping • Expansion valve opened too wide	- 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:
 - Blower switch HI
 - Electrical load OFF
 - A/C switch ON
 - Put gear shift in neutral

Magnetic clutch condition	Idle speed
Magnetic clutch not engaged	650 ± 50 rpm
Magnetic clutch engaged	800 ± 50 rpm

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

4. INSPECT FOR LEAKAGE OF REFRIGERANT

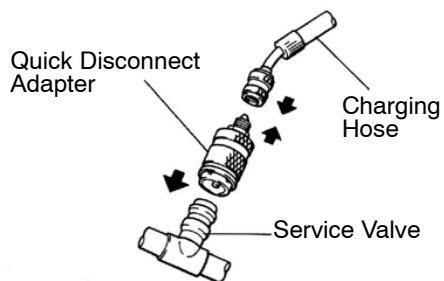
- (a) Perform in these conditions:
 - Stop engine.
 - Secure good ventilation (If not, the gas leak detector may react to volatile gases which are not refrigerant, such as evaporated gasoline and exhaust gas.)
 - Repeat the test 2 or 3 times.
 - Make sure that there is some refrigerant remaining in the refrigeration system.
When compressor is OFF: approximately 392 – 588 KPa (4 – 6 kgf/cm², 57 – 35 psi)
- (b) Bring the gas leak detector close to the drain hose before performing the test.

HINT:

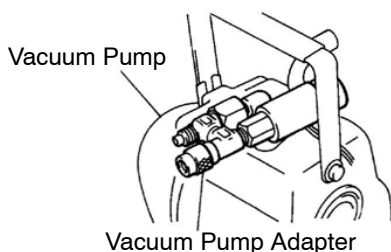
- After the blower motor is stopped, leave the cooling unit for more than 15 minutes.
- Expose the gas leak detector sensor the under the drain hose.
- When bring the gas leak detector close to the drain hose, make sure that the gas leak detector does not react to the volatile gases.

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

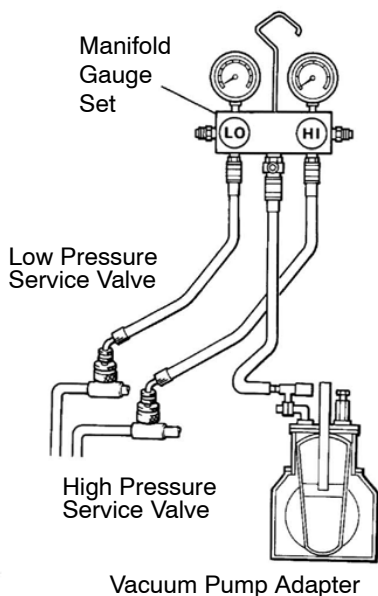
- (c) If gas leak is not detected on the drain hose, remove the power transistor from the cooling unit. Then insert the gas leak detector sensor into the unit and perform the test.
- (d) Disconnect the connector and leave the pressure switch for approximately 20 minutes. Then bring the gas leak detector close to the pressure switch and perform the test.
- (e) Bring the gas leak detector close to the refrigerant lines and perform the test.



N13795



N13794



N13791

EVACUATING

1. **CONNECT QUICK DISCONNECT ADAPTERS TO CHARGING HOSES**
2. **REMOVE CAPS FROM SERVICE VALVES ON REFRIGERANT LINES**
3. **INSTALL 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 not 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 as 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.

CHARGING

1. INSTALL CHARGING CYLINDER

HINT:

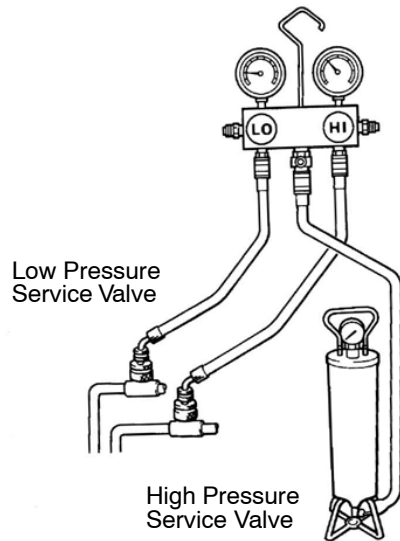
When handling the charging cylinder, always follow the direction given in the instruction manual.

- Charge the proper amount of refrigerant in charging cylinder.
- Connect the center hose to the charging cylinder.

CAUTION:

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

- Open the valve of charging cylinder.
- Press the valve core on the side of manifold gauge and expel the air inside of the center hose.



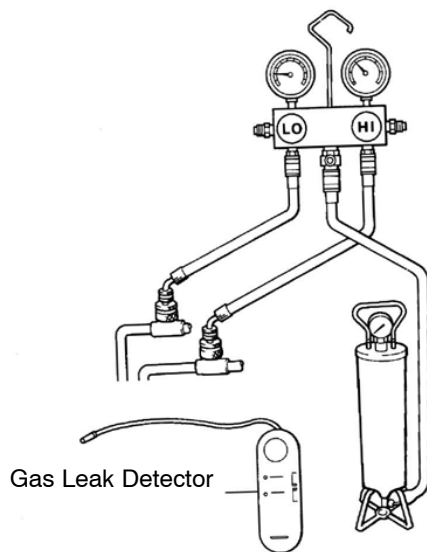
N13790

2. INSPECT REFRIGERATION SYSTEM FOR LEAKS

- Open the high pressure hand valve and charge refrigerant.
- When the low pressure gauge indicates 98 kPa (1 kgf/cm², 14 psi), close the high pressure hand valve.
- Using leak detector, check the system for leakage.
- If leak is found, repair the faulty component or connection. Add evacuate air from refrigeration system (Refer to 4).

CAUTION:

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



N13792

AUTOMATIC TRANSMISSION SYSTEM

PRECAUTION

AT05Y-01

If the vehicle is equipped with a mobile communication system, refer to the precautions in the IN section.

3. CHARGE REFRIGERANT INTO REFRIGERANT SYSTEM

If there is no leak after refrigerant leak check charge, the proper amount of refrigerant into refrigeration system.

CAUTION:

Never run the engine when charging the system through the high pressure side. Do not open the low pressure hand valve when the system is being charged with liquid refrigerant.

- (a) Open the high pressure hand valve fully.
- (b) Charge specified amount of refrigerant, then close the high pressure hand valve.

HINT:

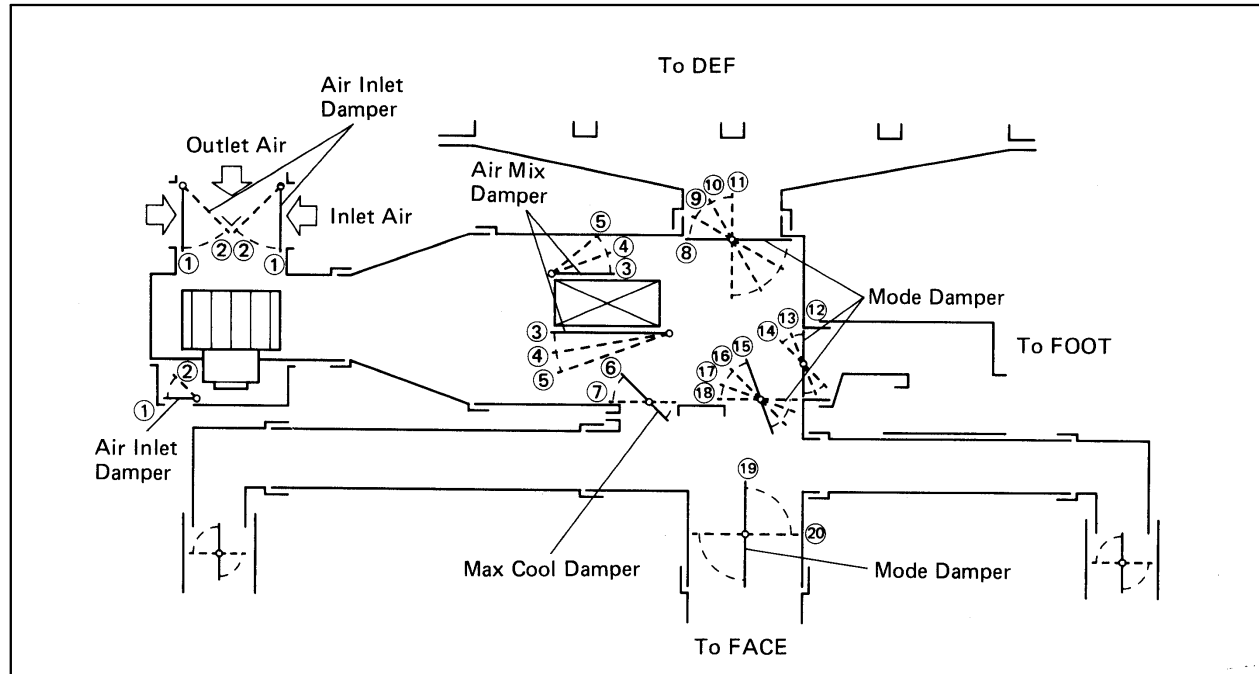
A fully charged system is indicated by the sight glass being free of any bubbles.

4. REMOVE 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

POSITIONING



A/C control lever	A/C control lever position	Dampers position	Air flow vents			
			FACE		FOOT	DEF
			Center	Side		
Air Inlet Control Lever	Fresh 	①	/	/	/	/
	Recirc 	②				
Temperature Control Lever	Warm 	⑤ ↕				
	Cool 	④ ⑦ ↕ ↕ ③ ⑥				
Mode Control Lever	Def. 	⑪ ⑫ ⑰ ⑳		○		○
	Foot/Def. 	⑩ ⑰ ⑳ ⑬		○	○	○
	Foot 	⑨ ⑭ ⑱ ⑳		○	○	○
	Bi-Level 	⑧ ⑬ ⑯ ⑱	○	○	○	
	Face 	⑧ ⑫ ⑮ ⑱	○	○		

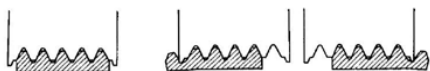
The size of circle (○) indicates the proportion of the air flow volume.

AC2662
0001BE

Z04523

DRIVE BELT ON-VEHICLE INSPECTION

AC2QG-01



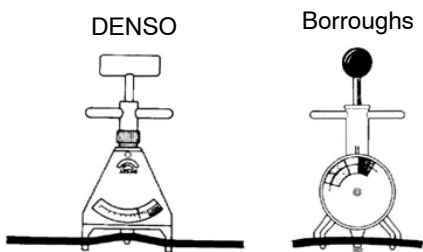
Correct

Wrong

CH0086

1. INSPECT DRIVE BELT'S INSTALLATION CONDITION

Check that drive belt fits properly in the ribbed grooves.



DENSO

Borroughs

N01881

2. INSPECT DRIVE BELT TENSION

Using a belt tension gauge, check the drive belt tension.

Belt tension gauge:

DENSO BTG-20 (95506-00020) or

Borroughs No. BT-33-73F

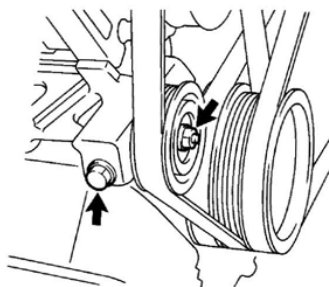
Drive belt tension:

New belt 100-150 lbf

Used belt 60-100 lbf

HINT:

- "New belt" refers to a belt which has been used less than 5 minutes on a running engine.
- "Used belt" refers to a belt which has been on a running engine for 5 minutes or more.
- After installing the drive belt, check that it fits properly in the ribbed grooves.



N16451

REMOVAL

1. LOOSEN IDLE PULLEY LOCK NUT

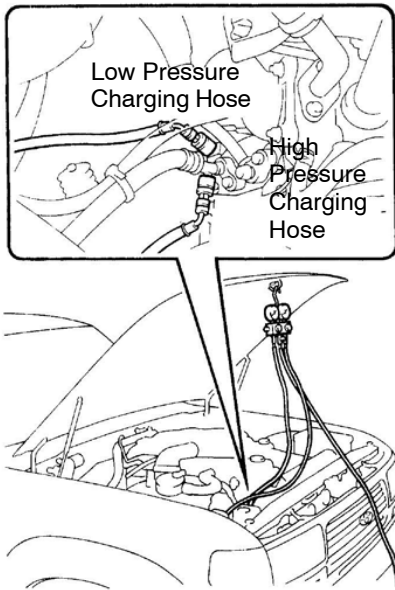
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

2. REMOVE COMPRESSOR DRIVE BELT

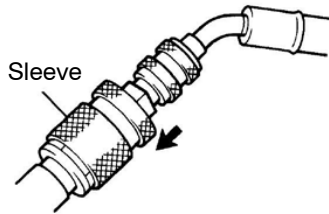
Loosen the adjusting bolt and remove the drive belt.

INSTALLATION

Installation is in the reverse order of removal (See page [AC-16](#)).



N14326



N04392

MANIFOLD GAUGE SET SET ON

AC2QJ-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.

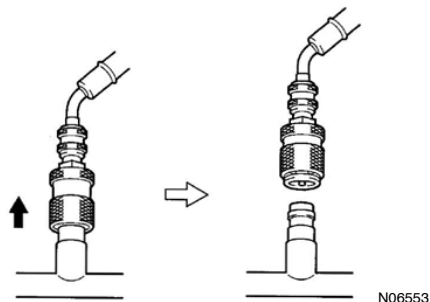
3. CLOSE BOTH HAND VALVES OF MANIFOLD GAUGE SET

4. REMOVE CAPS FROM SERVICE VALVES ON REFRIGERANT LINE

5. CONNECT QUICK DISCONNECT ADAPTERS TO SERVICE 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 LINE

REFRIGERANT LINE

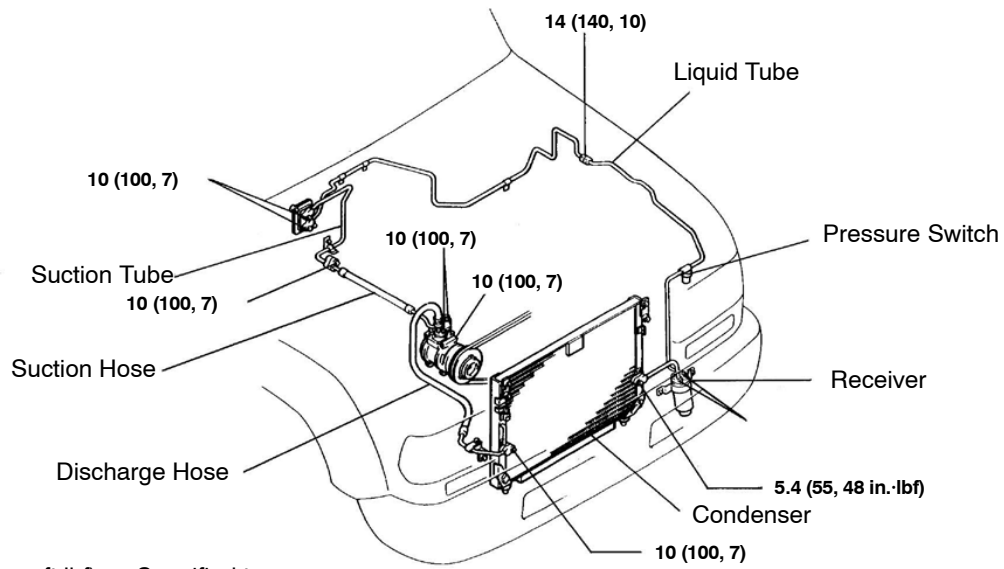
AC2QM-01

ON-VEHICLE INSPECTION

1. INSPECTION HOSE AND TUBE CONNECTIONS FOR LOOSENESS
2. INSPECT HOSES AND TUBES FOR LEAKAGE

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

LOCATION



N14066

Z17947

REPLACEMENT

1. DISCHARGE REFRIGERANT IN REFRIGERATION SYSTEM

2. REPLACE FAULTY TUBE OR HOSE

NOTICE:

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

3. TORQUE CONNECTIONS TO SPECIFIED TORQUE

NOTICE:

Connections should not be torqued tighter than the specified torque.

Part tightened	N·m	kgf·cm	ft·lbf
Compressor x Discharge hose	10	100	7
Compressor x Suction hose	10	100	7
Condenser x Discharge hose	10	100	7
Condenser x Liquid tube	10	100	7
Receiver x Liquid tube	5.4	55	48 in·lbf
Pressure switch x Liquid tube	10	100	7
Cooling unit x Liquid tube	10	100	7
Expansion valve x Evaporator	5.4	55	48 in·lbf
Cooling unit x Suction tube	10	100	7
Liquid tube (Piping joint)	14	140	10
Suction line (Block joint)	10	100	7

4. EVACUATE AIR IN REFRIGERATION SYSTEM AND CHARGE WITH REFRIGERANT

Specified amount: 850 ± 50 g (29.98 ± 1.76 oz.)

5. INSPECT FOR LEAKAGE OF REFRIGERANT

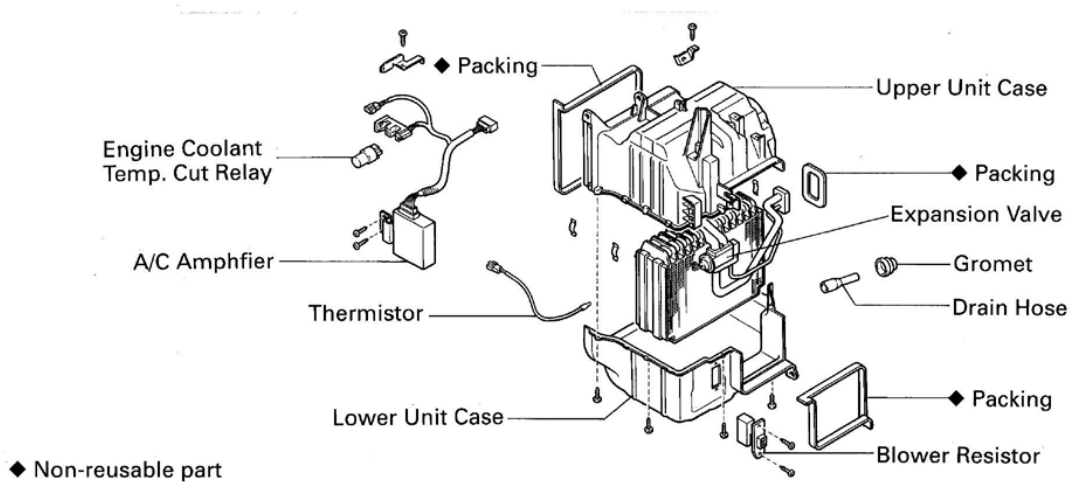
Using a gas leak detector, check for leakage of refrigerant.

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

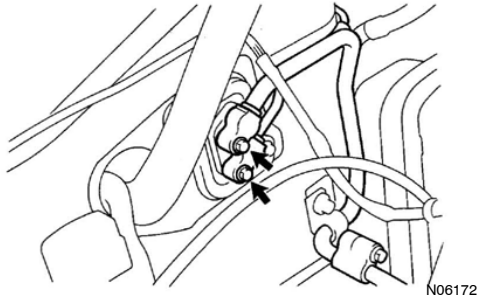
6. INSPECT AIR CONDITIONING OPERATION

COOLING UNIT
COMPONENTS

AC3JL-01



N14351



REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

HINT:

At the time of installation, refer to the following procedure.

- Evacuate air from refrigeration system.
- Charge system with refrigerant and inspect for leakage of refrigerant.

Specified amount:

$850 \pm 50 \text{ g}$ ($29.98 \pm 1.76 \text{ oz.}$)

2. DISCONNECT SUCTION TUBE AND LIQUID TUBE FROM COOLING UNIT FITTING

Remove the 2 bolts and both tubes.

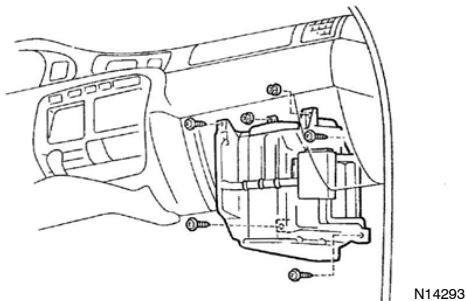
Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

NOTICE:

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

HINT:

At the time of installation, lubricate 2 new O-rings with compressor oil and install the tubes.



3. REMOVE THESE PARTS:

- Glove compartment door (See page [BO-76](#))
- Glove compartment door reinforcement (See page [BO-76](#))

4. REMOVE COOLING UNIT

- Disconnect the connectors.
- Remove the 4 screws, 2 nuts and cooling unit.

DISASSEMBLY

1. REMOVE A/C AMPLIFIER
2. REMOVE RELAY
3. REMOVE WIRE HARNESS
4. REMOVE BLOWER RESISTOR

Remove the 2 screws and blower resistor.

5. SEPARATE UPPER AND LOWER UNIT CASES

- (a) Using a knife, cut off the each packing.
- (b) Remove 3 clips and 4 screws.
- (c) Separate the upper and lower unit cases.

6. REMOVE EVAPORATOR FROM LOWER UNIT CASE

HINT:

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

Add 40 cc (1.4 fl.oz.)

Compressor oil:

ND-OIL 8 or equivalent

7. REMOVE THERMISTOR

Pull out the thermistor from the evaporator.

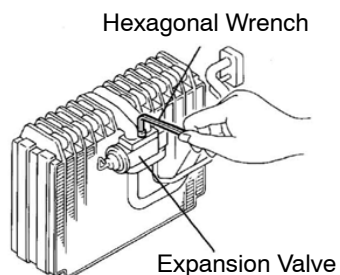
8. REMOVE EXPANSION VALVE

Using a hexagon wrench, remove the 2 bolts and separate the expansion valve and evaporator.

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

HINT:

At the time of reassembly, lubricate 4 new O-rings with compressor oil and install the tubes.



N06174

REASSEMBLY

Reassembly is in the reverse order of disassembly (See page [AC-25](#)).

INSTALLATION

Installation is in the reverse order of removal (See page [AC-24](#)).

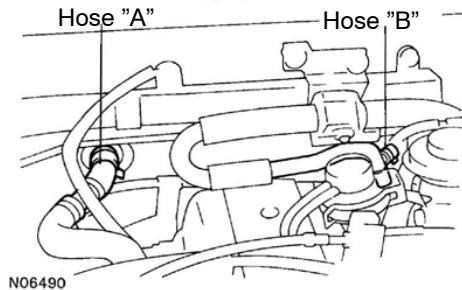
HEATER UNIT REMOVAL

AC2QS-01

1. REMOVE COOLING UNIT (See page [AC-24](#))
2. DRAIN ENGINE COOLANT FROM RADIATOR

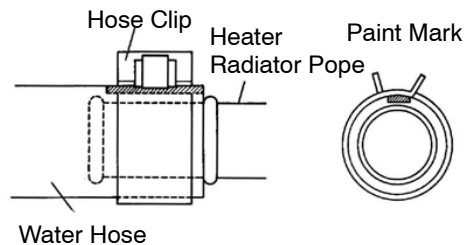
HINT:

It is not necessary to drain out all the coolant.



3. DISCONNECT WATER HOSES FROM HEATER RADIATOR PIPES

- (a) Grip the claws of the hose clip with pliers and slide the clip along the hose to a place where it does not clamp the hose to the pipe.
- (b) Disconnect the water hoses.



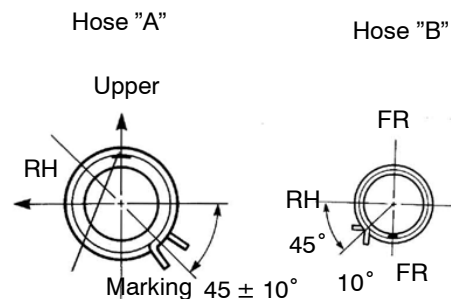
HINT:

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

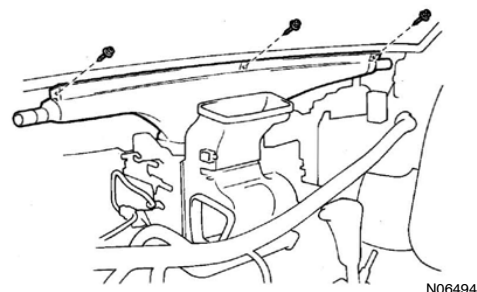
4. REMOVE PIPE GROMMETS

5. REMOVE INSTRUMENT PANEL SAFETY PAD (See page [BO-76](#))

6. REMOVE INSTRUMENT PANEL REINFORCEMENT (See page [BO-76](#))

N02485
N18179 N18181

Z17943

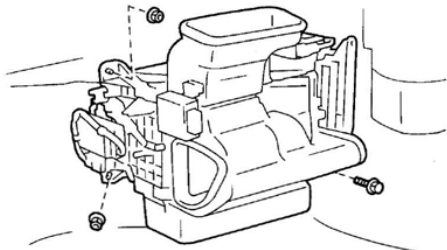


7. REMOVE HEATER UNIT

- (a) Remove the 3 screws and defroster nozzle.

AIR CONDITIONING - HEATER UNIT

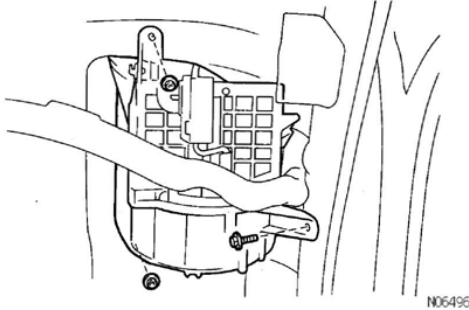
- (b) Remove the 2 nuts and a screw, then remove heater unit.



N06495

INSTALLATION

Installation is in the reverse order of removal (See page [AC-28](#)).



AC2R1-03

BLOWER UNIT REMOVAL

1. REMOVE INSTRUMENT PANEL AND REINFORCEMENT (See page [BO-76](#))
2. REMOVE COOLING UNIT (See page [AC-24](#))
3. REMOVE BLOWER UNIT
 - (a) Disconnect the connectors.
 - (b) Remove the bolt and 2 nuts, then remove the blower unit.

INSTALLATION

Installation is in the reverse order of removal (See page [AC-31](#)).

COMPRESSOR AND MAGNETIC CLUTCH

AC2R5-01

ON-VEHICLE INSPECTION

1. INSTALL MANIFOLD GAUGE SET (See page AC-18)

2. START ENGINE

Run the engine at 1,500 rpm.

3. INSPECT COMPRESSOR FOR METALLIC SOUND

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

If metallic sound is heard, replace the compressor assembly.

4. INSPECT REFRIGERANT PRESSURE (See page AC-5)

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. REMOVE MANIFOLD GAUGE SET (See page AC-19)

8. MAKE THESE VISUAL CHECKS:

- (a) Leakage of grease from the clutch bearing.
 - (b) Signs of oil on the pressure plate or rotor.
- Repair or replace, as necessary.

9. INSPECT MAGNETIC CLUTCH BEARING FOR NOISE

- (a) Start engine.
- (b) Check for abnormal noise from near the compressor when the A/C switch is OFF.

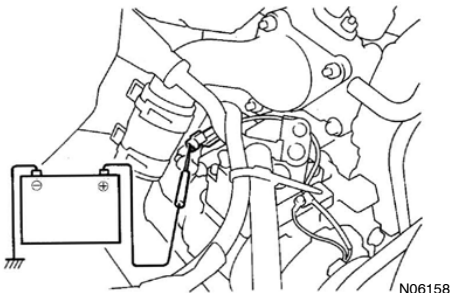
If abnormal noise is being emitted, replace the magnetic clutch.

10. INSPECT MAGNETIC CLUTCH

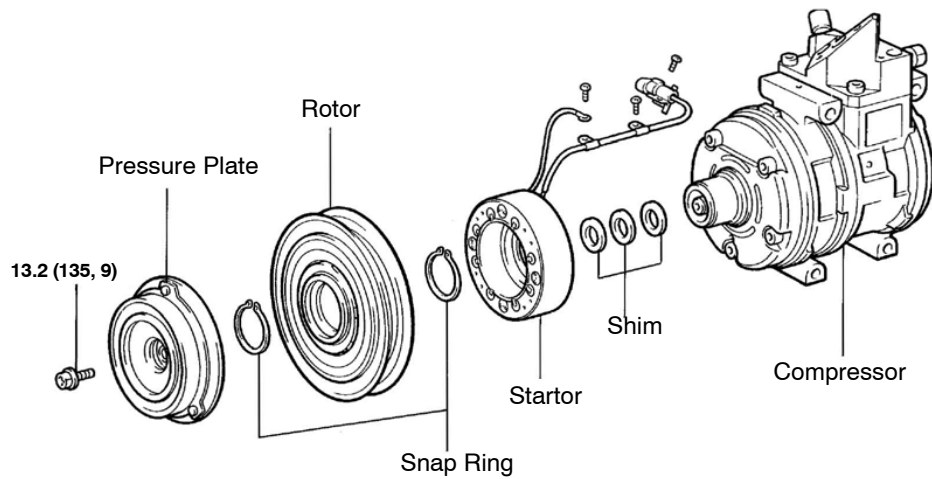
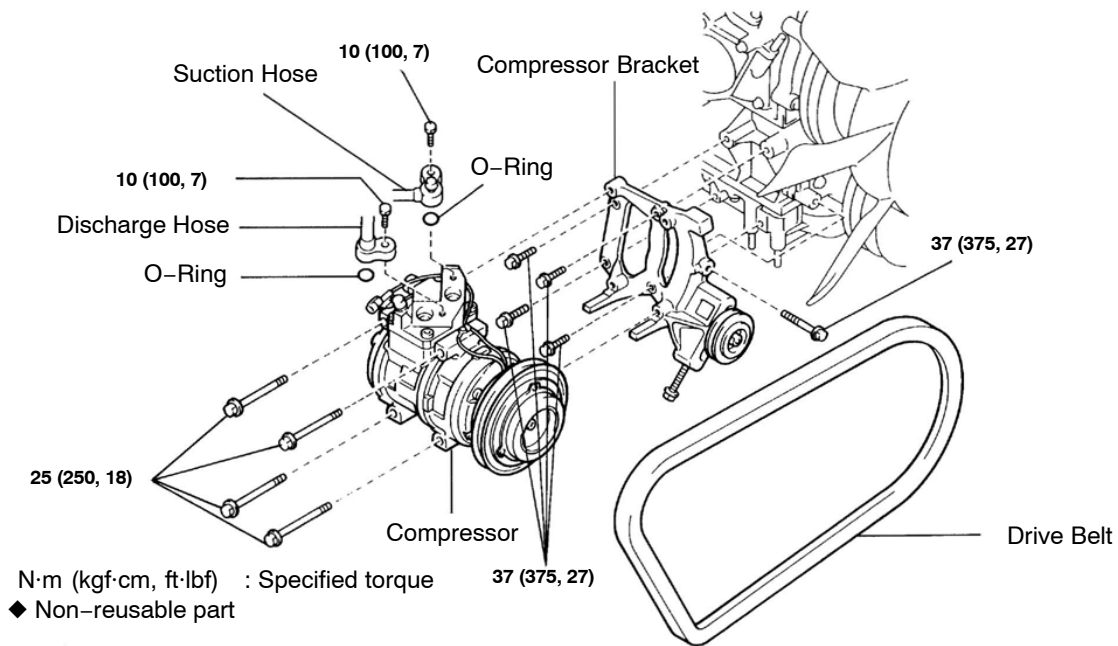
- (a) Disconnect the connector from the magnetic clutch.
- (b) Connect the positive (+) lead from the battery to the terminal on the magnetic clutch connector and the negative (-) lead to the body ground.

- (c) Check that the magnetic clutch is energized.

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



COMPONENTS



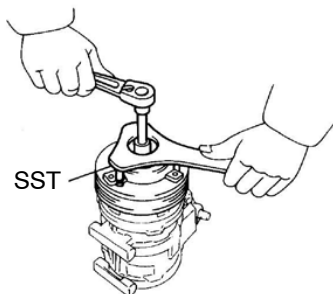
DISASSEMBLY

1. RUN ENGINE AT IDLE SPEED WITH A/C SWITCH ON FOR 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 bolts and disconnect the both hoses.

NOTICE:

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

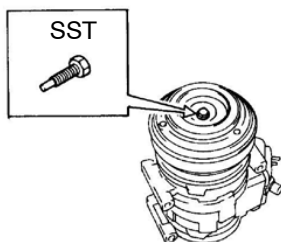
6. REMOVE ENGINE UNDER COVER
7. REMOVE DRIVE BELT (See page AC-16)
8. REMOVE COMPRESSOR
 - (a) Disconnect the connector.



AC0943

- (b) Remove the 4 bolts and pull the compressor upward.
9. REMOVE COMPRESSOR (See page AC-35)
10. 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



AC0944

- (b) Install a SST on the pressure plate.

SST 07112-66040

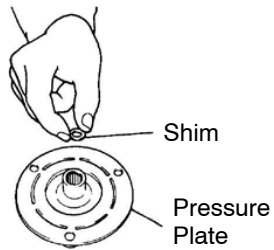


AC0945

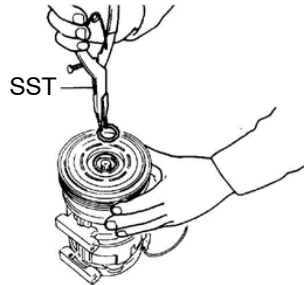
- (c) Using SST and a socket wrench, remove the pressure plate.

SST 07112-76060

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



AC0946



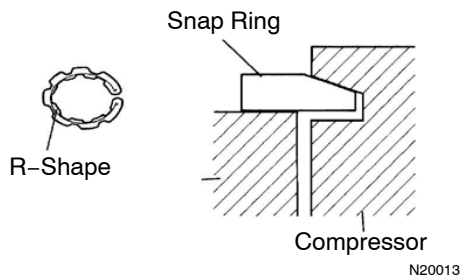
AC0947

11. REMOVE ROTOR

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

NOTICE:

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

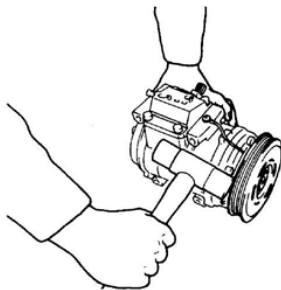


N20013

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

NOTICE:

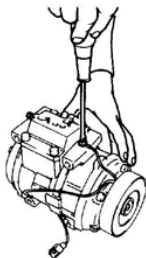
Be careful not to damage the pulley when tapping on the rotor.



AC1743

12. REMOVE STATOR

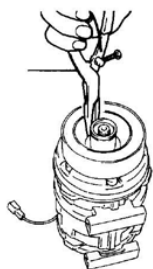
- (a) Disconnect the stator lead wire from the compressor housing.



AC1744

AIR CONDITIONING - COMPRESSOR AND MAGNETIC CLUTCH

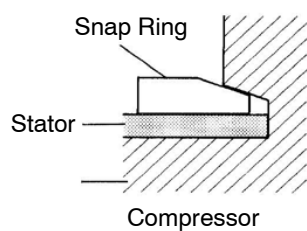
SST



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

AC0950

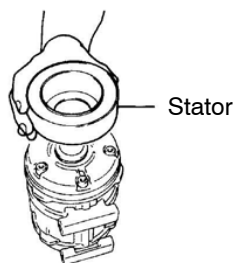
R-Shape



N20012

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

- (c) Remove the stator.



AC0951

REASSEMBLY

1. INSTALL COMPRESSOR

- (a) Install the compressor with the 4 bolts.
Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)

- (b) Connect the connector.

2. CONNECT DISCHARGE AND SUCTION HOSES

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

NOTICE:

Hoses should be connected immediately after the caps have been removed.

HINT:

Lubricate 2 new O-rings with compressor oil and install the hoses.

3. INSTALL AND INSPECT DRIVE BELT (See page AC-17)

4. INSTALL ENGINE UNDER COVER

5. CONNECT NEGATIVE (-) TERMINAL CABLE TO BATTERY

6. EVACUATE AIR FROM REFRIGERATION SYSTEM

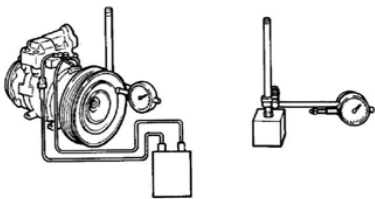
7. CHARGE SYSTEM WITH REFRIGERANT AND INSPECT FOR LEAKAGE OF REFRIGERANT

Specified amount:

850 ± 50 g (29.98 ± 1.76 oz.)

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

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



N04963

8. INSPECT A/C OPERATION

Reassembly is in the reverse order of disassembly (See page AC-35).

9. CHECK CLEARANCE OF MAGNETIC CLUTCH

- (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 (0.020 in.)

RECEIVER

ON-VEHICLE INSPECTION

AC2RB-01

INSPECT FITTINGS FOR LEAKAGE

Using a gas leak detector, check for leakage.

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

REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

HINT:

At the time of installation, refer to the following procedure.

- Evacuate air from refrigeration system.
- Charge system with refrigerant and inspect for leakage of refrigerant.

Specified amount:

850 ± 50 g (29.98 ± 1.76 oz.)

2. DISCONNECT 2 LIQUID TUBES FROM RECEIVER

Remove the 2 bolts and 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, lubricate 2 new O-rings with compressor oil and install the tubes.

3. REMOVE RECEIVER FROM RECEIVER HOLDER

Remove the holder bolt and pull the receiver down ward.

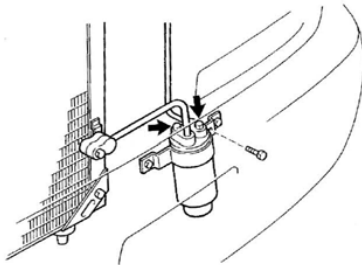
HINT:

If receiver was replaced, add compressor oil to compressor.

Add 10 cc (0.35 fl.oz.)

Compressor oil:

ND-OIL 8 or equivalent



N13975

INSTALLATION

Installation is in the reverse order of removal (See page [AC-40](#)).

CONDENSER

AC2RG-01

ON-VEHICLE INSPECTION

1. INSPECT CONDENSER FINS FOR BLOCKAGE OR DAMAGE

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

NOTICE:

Be careful not to damage the fins.

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

2. INSPECT CONDENSER AND FITTINGS FOR LEAKAGE

Repair as necessary.

REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

HINT:

At the time of installation, refer to the following procedure.

- Evacuate air from refrigeration system.
- Charge system with refrigerant and inspect for leakage of refrigerant.

Specified amount:

850 ± 50 g (29.98 ± 1.76 oz.)

2. REMOVE THESE PARTS:

- Hood lock brace
- Center brace

3. DISCONNECT DISCHARGE HOSE AND LIQUID TUBE

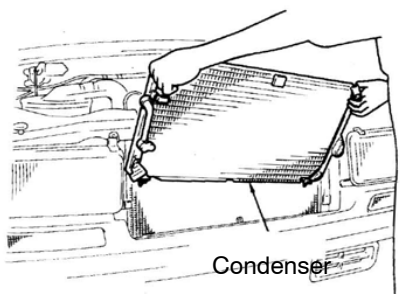
Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

NOTICE:

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

HINT:

At the time of installation, lubricate 2 new O-rings with compressor oil to compressor.



AC2674

4. REMOVE CONDENSER

- Remove 2 condenser mounting bolts.
- Pull out the condenser between the radiator and the body.

HINT:

If condenser was replaced, add compressor oil to compressor.

Add 40 cc (1.4 fl.oz.)

Compressor oil:

ND-OIL 8 or equivalent

INSTALLATION

Installation is in the reverse order of removal (See page [AC-43](#)).

EVAPORATOR

INSPECTION

AC2RJ-03

1. REMOVE EVAPORATOR (See page [AC-26](#))
2. CHECK EVAPORATOR FINS FOR BLOCKAGE

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

NOTICE:

Never use water to clean the evaporator.

3. CHECK FITTINGS FOR CRACKS OR SCRATCHES

Repair as necessary.

4. REINSTALL EVAPORATOR (See page [AC-26](#))

HEATER RADIATOR INSPECTION

1. REMOVE HEATER UNIT (See page [AC-28](#))

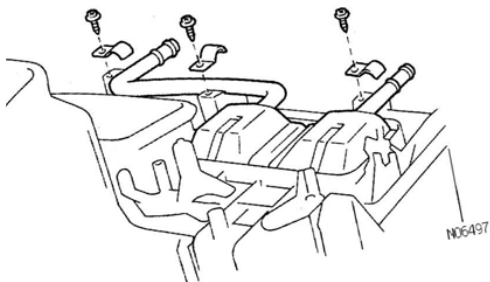
2. REMOVE HEATER RADIATOR

- (a) Remove the screws and plates.
- (b) Pull the heater radiator out.

3. INSPECT FINS FOR BLOCKAGE

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

4. INSTALL HEATER RADIATOR



EXPANSION VALVE

AC2RR-01

ON-VEHICLE INSPECTION

1. **CHECK QUANTITY OF GAS DURING REFRIGERATION CYCLE**
2. **INSTALL MANIFOLD GAUGE SET**
3. **RUN ENGINE**
 - (a) Run the engine at 1,500 rpm for at least 5 minutes.
 - (b) Then check that the high pressure reading is 1.37 – 1.57 MPa (14 – 16 kgf/cm², 199 – 228 psi).
4. **CHECK EXPANSION VALVE**

If the expansion valve is faulty, the low pressure reading will drop to 0 kPa (0 kgf/cm², 0 psi).

HINT:

When the low pressure drops to 0 kPa (0 kgf/cm², 0 psi), feel the receiver's IN and OUT sides for zero temperature difference.

WATER VALVE REMOVAL

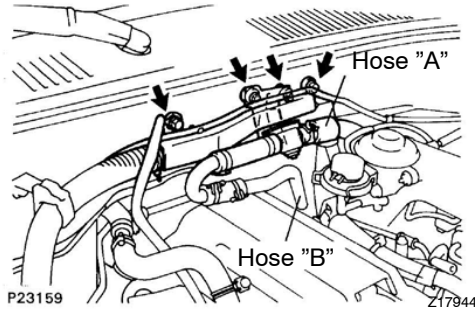
AC2RU-01

1. DRAIN ENGINE COOLANT FROM RADIATOR

HINT:

It is not necessary to drain out all the coolant.

2. DISCONNECT WATER VALVE CONTROL CABLE



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

- Grip the claws of the hose clip with pliers and slide the clip along the hose to a place where it does not clamp the hose to the pipe.
- Disconnect the water hoses.

HINT:

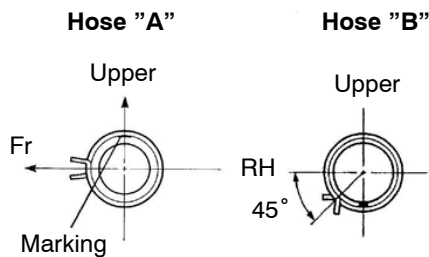
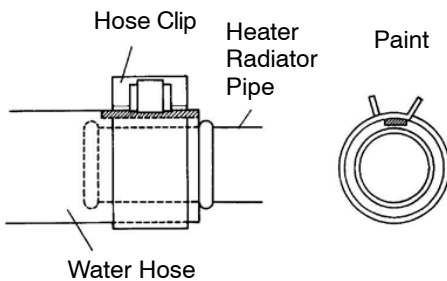
At the time of installation, refer to the following procedure.

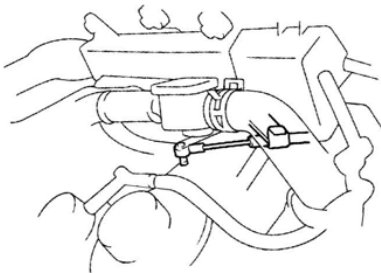
- Push the water hose onto the heater radiator pipe as far as ridge on the pipe.
- Install the hose clip in a position, as shown in the illustration.

4. REMOVE WIRE HARNESS PROTECTOR

5. REMOVE WATER VALVE

Remove the 2 bolts and water valve.





N14296

ADJUSTMENT

ADJUST WATER VALVE CONTROL CABLE

- (a) Set the vehicle in these conditions.
 - Ignition switch on.
 - Blower speed control switch on.
 - Temperature control switch to "COOL" position.
- (b) Set the water valve to "COOL" position, install the control cable and lock the clamp.

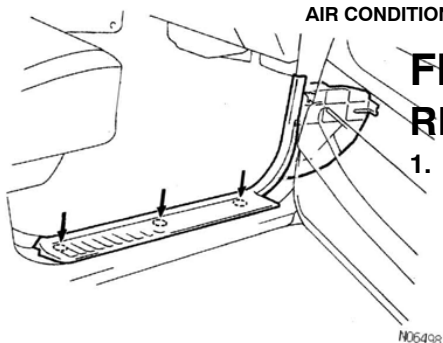
INSTALLATION

Installation is in the reverse order of removal (See page [AC-48](#)).

FRONT BLOWER MOTOR REMOVAL

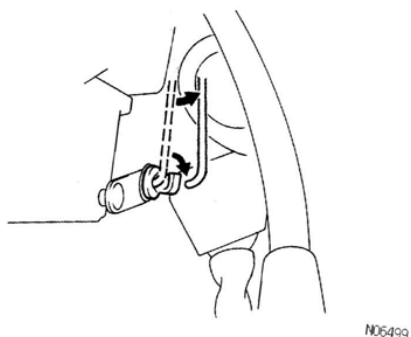
AC3JN-01

1. REMOVE RH SCUFF PLATE

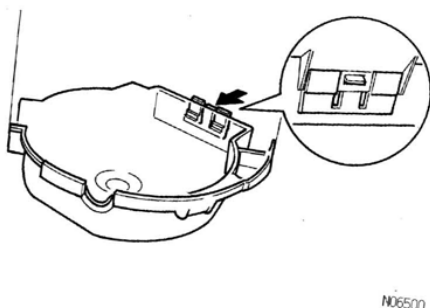


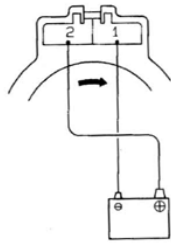
2. REMOVE BLOWER MOTOR

- (a) Disconnect the link from the lower cover.



- (b) Remove the 2 screws, then remove the lower cover while pushing the locking protrusion, as shown.
 (c) Disconnect the connector from the blower motor.
 (d) Remove the 3 screws and blower motor.





INSPECTION

INSPECT BLOWER MOTOR OPERATION

Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 1, then check that the motor operation is smooth.

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

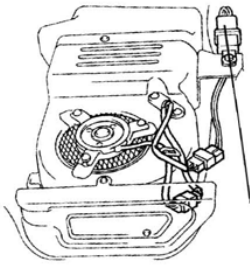
AC2227

INSTALLATION

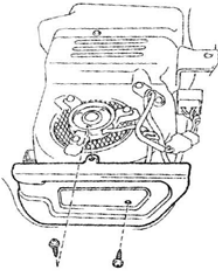
Installation is in the reverse order of removal (See page [AC-51](#)).

REAR BLOWER MOTOR REMOVAL

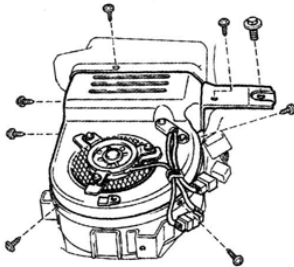
1. REMOVE FRONT RH SEAT
2. REMOVE BLOWER MOTOR
 - (a) Disconnect the connectors from the blower motor and rear heater relay.
 - (b) Remove the bolt and rear heater relay.
 - (c) Remove the 2 screws and side cover.



N14323

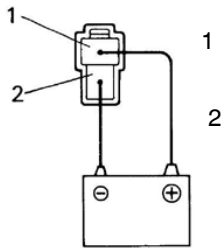


N14324



N06504

- (d) Remove the bolt and 7 screws, then remove the upper cover with the blower motor.
- (e) Remove the 3 screws and the blower motor.



BE2611

INSPECTION

INSPECT BLOWER MOTOR OPERATION

Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 2, then check that the motor operations smoothly.

If operation is not as specified, replace the motor.

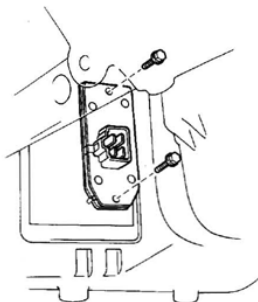
INSTALLATION

Installation is in the reverse order of removal (See page [AC-54](#)).

BLOWER RESISTOR INSPECTION

AC3J0-01

1. REMOVE GLOVE COMPARTMENT DOOR (See page [BO-76](#))



N06512

2. REMOVE BLOWER RESISTOR

Disconnect the connector and remove the 2 screws and blower resistor.

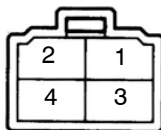
3. INSPECT BLOWER RESISTOR RESISTANCE

Measure resistance between terminals 1 and 4.

Standard resistance: 1.8 – 2.2 Ω

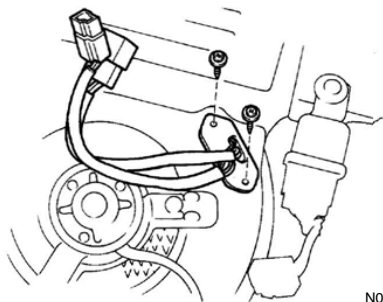
If resistance is not as specified, replace the blower resistor.

4. REINSTALL BLOWER RESISTOR



H-4-2

N09039



N06513

REAR BLOWER RESISTOR INSPECTION

AC3JP-01

- 1. REMOVE FRONT SEAT RH
- 2. REMOVE BLOWER RESISTOR
 - (a) Disconnect the connector.
 - (b) Remove the 2 screws and blower resistor.

3. INSPECT REAR BLOWER RESISTOR CONTINUITY

Connector "A"



H-3-2 H-2-2

Connector "B"

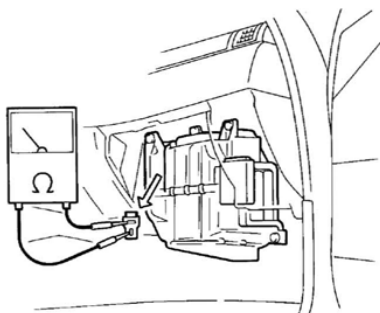


Z09802

Condition	Tester connection	Specified condition
Constant	A1 - B1	Continuity
	A2 - A3 - B2	

If continuity is not as specified, replace the blower resistor.

4. REINSTALL REAR BLOWER RESISTOR



N14295

THERMISTOR ON-VEHICLE INSPECTION

AC259-01

1. REMOVE GLOVE COMPARTMENT PARTS
(See page [BO-76](#))

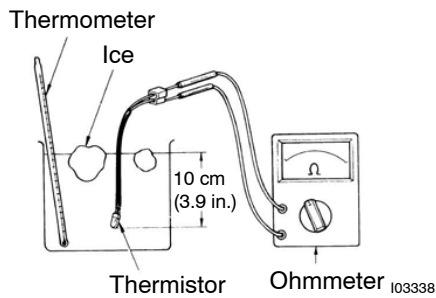
2. INSPECT THERMISTOR RESISTANCE

Measure the resistance between terminals.

Standard resistance:

1,500 Ω at 25 °C (77 °F)

If resistance is not as specified, replace the sensor.

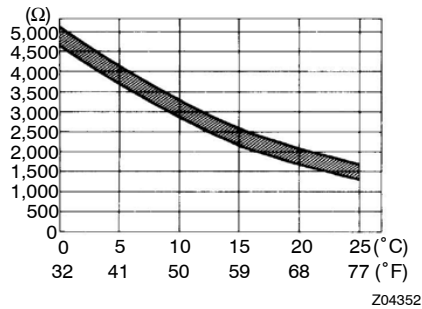


INSPECTION

1. REMOVE THERMISTOR

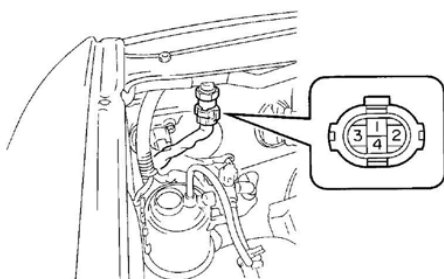
2. INSPECT THERMISTOR RESISTANCE

- (a) Place the thermistor in cold water, while varying temperature of the water, measure resistance at the connector and at the same time, measure temperature of the water with a thermometer.



- (b) Compare the 2 readings on the chart. If resistance is not as specified, replace the thermistor.

3. REINSTALL THERMISTOR

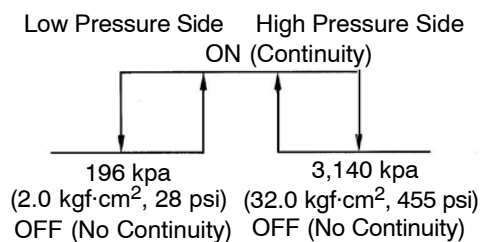


N16452

PRESSURE SWITCH ON-VEHICLE INSPECTION

AC2SB-01

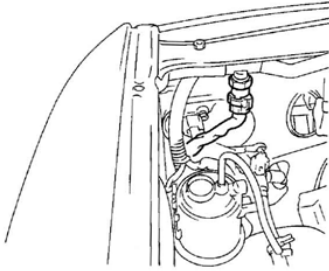
1. **INSTALL MANIFOLD GAUGE SET**
2. **DISCONNECT CONNECTOR FROM PRESSURE SWITCH**
3. **RUN ENGINE AT APPROX. 1,500 RPM**



Z13470

4. **INSPECT PRESSURE SWITCH OPERATION**
 - (a) Connect the positive (+) lead from the ohmmeter to terminal 2 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. **STOP ENGINE AND REMOVE MANIFOLD GAUGE SET**
6. **CONNECT CONNECTOR TO PRESSURE SWITCH**



REMOVAL

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

HINT:

Evacuate air from refrigeration system.

Charge system with refrigerant and inspect for leakage of refrigerant.

Specified amount:

850 ± 50 g (29.98 ± 1.76 oz.)

2. REMOVE PRESSURE SWITCH

- (a) Disconnect the connector.
- (b) Remove the pressure switch from the liquid tube.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

HINT:

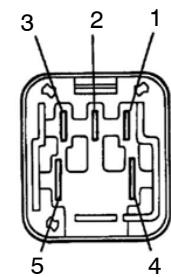
At the time of installation, lubricate a new O-ring with compressor oil and install the switch.

HINT:

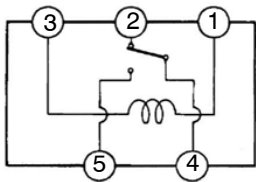
Lock the switch mount on the tube with an open end wrench, being careful not to deform the tube, and remove the switch.

INSTALLATION

Installation is in the reverse order of removal (See page [AC-62](#)).



BE1850 BE1844



Z19533

HEATER MAIN RELAY INSPECTION

AC2SE-03

INSPECT HEATER MAIN RELAY CONTINUITY

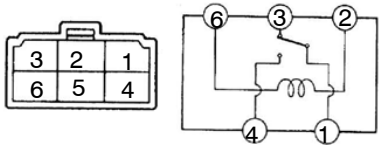
Condition	Tester connection	Specified condition
Constant	1 - 3	Continuity
	2 - 4	
Apply B+ between terminals 3 and 5.	4 - 5	Continuity

If continuity is not as specified, replace the relay.

REAR HEATER RELAY INSPECTION

AC2SF-01

INSPECT REAR HEATER RELAY CONTINUITY



H-6-2 BE1844

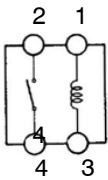
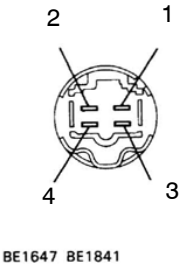
Z09804

Condition	Tester connection	Specified condition
Constant	2 - 6	Continuity
	1 - 3	
Apply B+ between terminals 2 and 6.	1 - 4	Continuity

If continuity is not as specified, replace the relay.

MAGNETIC CLUTCH RELAY INSPECTION

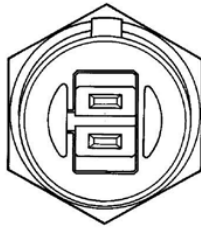
AC2SG-01



INSPECT MAGNETIC CLUTCH RELAY 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.



ENGINE COOLANT TEMPERATURE (ECT) CUT RELAY INSPECTION

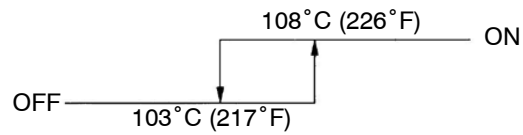
AC2SH-01

INSPECT SWITCH CONTINUITY

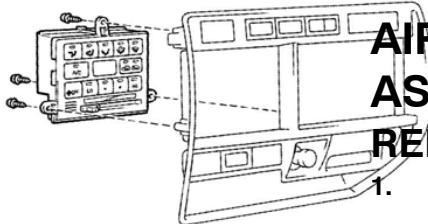
Check the continuity between terminals of the switch, as shown in the chart below.

If continuity is not as specified, replace the switch.

N06549



V02084



AIR CONDITIONING CONTROL ASSEMBLY REMOVAL

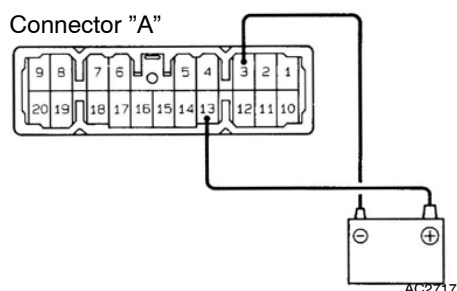
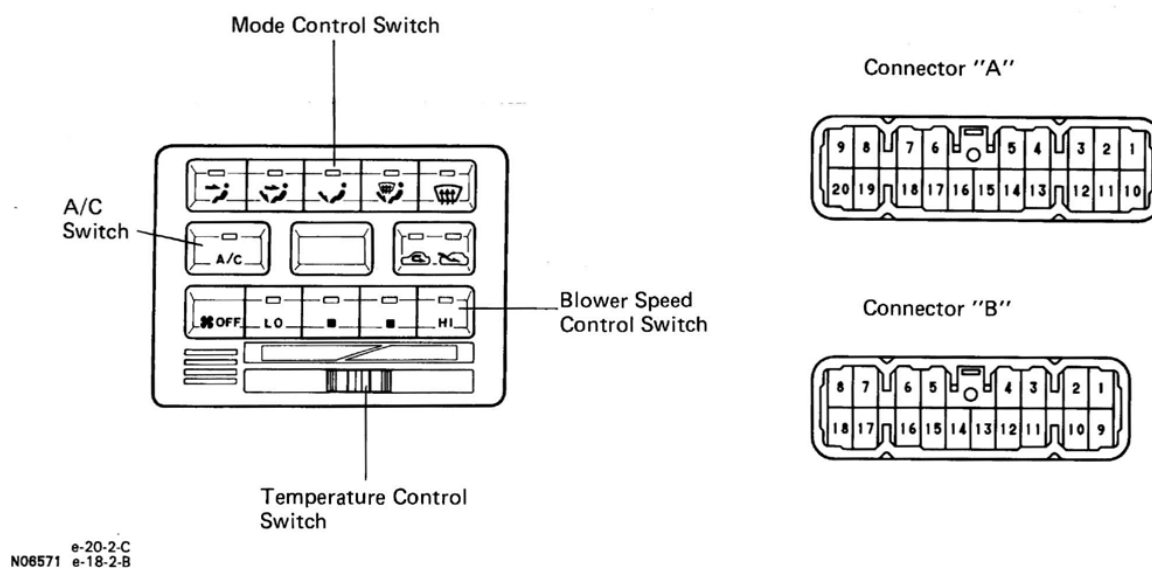
AC2SL-01

1. REMOVE INSTRUMENT CLUSTER FINISH CENTER PANEL WITH A/C CONTROL ASSEMBLY
2. REMOVE A/C CONTROL ASSEMBLY

N14164

Remove the 3 screws and A/C control assembly from center panel.

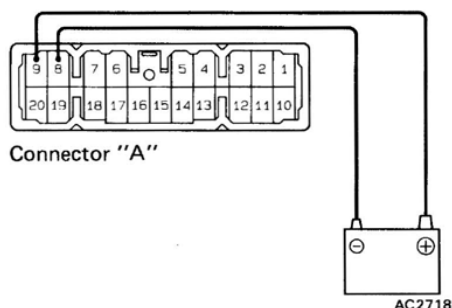
INSPECTION



1. INSPECT ILLUMINATION OPERATION

Connect the positive (+) lead from the battery to terminal A-13 and the negative (-) lead to terminal A-3, then check that the illuminations light up.

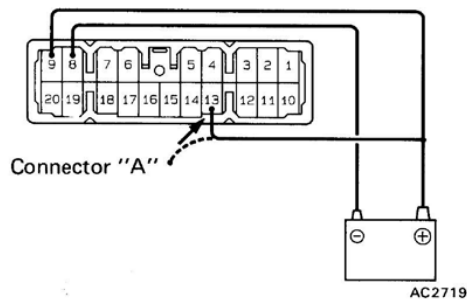
If illuminations do not light up, test the bulb.



2. Air Inlet Control Switch:

INSPECT INDICATOR LIGHT OPERATION

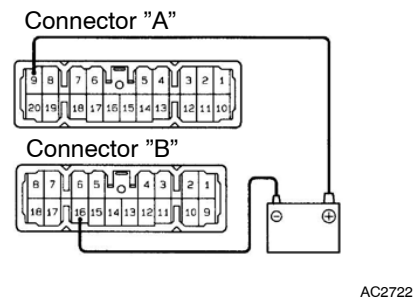
- Connect the positive (+) lead from the battery to terminal A-9 and the negative (-) lead to terminal A-8.
- With the air inlet control button pushed in, check that the FRESH or RECIRC indicator light lights up.
- Next, push in the button again, and check that the indicator light goes off and the other indicator light lights up.



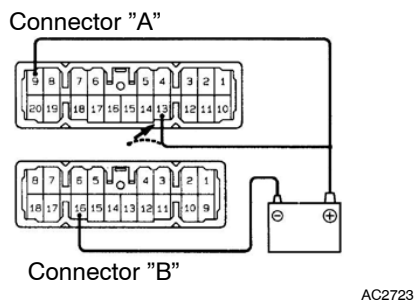
- (d) Then connect the positive (+) lead from the battery to terminal A-13 and check that the indicator dims.
If operation is not as specified, replace the A/C control assembly.

3. Mode Control Switch: INSPECT INDICATOR LIGHT OPERATION

- (a) Connect the positive (+) lead from the battery to terminal A-9 and the negative (-) lead to terminal B-16.
(b) Push each of the mode buttons in and check that their indicator light lights up.

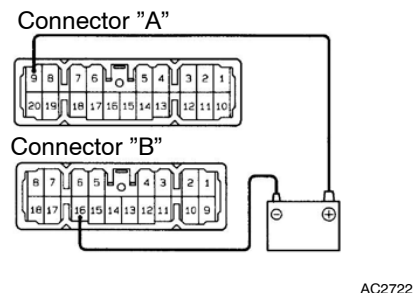


- (c) Then connect the positive (+) lead from the battery to terminal A-13 and check that the indicator dims.
If operation is not as specified, replace the A/C control assembly.

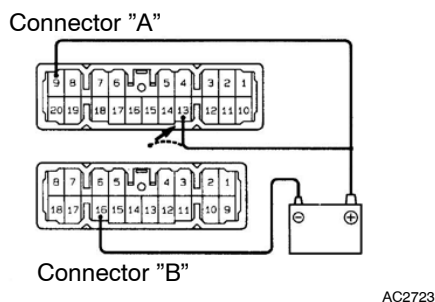


4. Blower Speed Control Switch: INSPECT INDICATOR LIGHT OPERATION

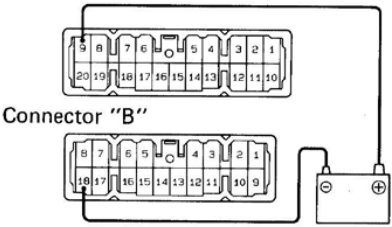
- (a) Connect the positive (+) lead from the battery to terminal A-9 and the negative (-) lead to terminal B-16.
(b) Push each of the blower speed control buttons in and check that their indicator light lights up.



- (c) Then connect the positive (+) lead from the battery to terminal A-13 and check that the indicator dims.
If operation is not as specified, replace the A/C control assembly.

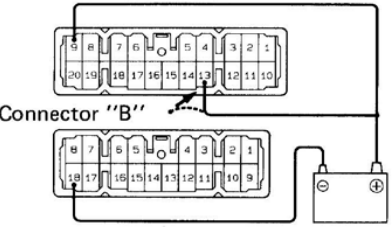


Connector "A"



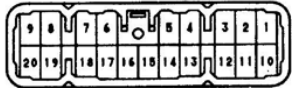
AC2726

Connector "A"



AC2727

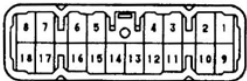
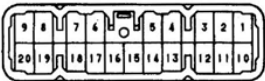
Connector "A"



e-20-2-C

Z19129

Connector "A"



Connector "B"

e-20-2-C
e-18-2-B

Z09805

5. A/C or DEF Switch:

INSPECT INDICATOR LIGHT OPERATION

- (a) Connect the positive (+) lead from the battery to terminal A-9 and the negative (-) lead to terminal B-18.
- (b) Push the A/C or DEF switch button in and check that the indicator light lights up.

- (c) Then, connect the positive (+) lead from the battery to terminal A-13 and check that the indicator dims.

If operation is not as specified, replace the A/C control assembly.

6. INSPECT AIR INLET CONTROL SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
FRESH	A8 – A19	Continuity
RECIRC	A8 – A18	Continuity

If continuity is not as specified, replace the A/C control assembly.

7. INSPECT MODE CONTROL SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
FACE	A14 – B16	Continuity
BI-LEVEL	A12 – B16	Continuity
FOOT	A7 – B16	Continuity
FOOT-DEF	B11 – B16	Continuity
DEF	B4 – B16	Continuity

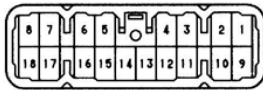
If continuity is not as specified, replace the A/C control assembly.

8. INSPECT BLOWER SPEED CONTROL SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
OFF	A10 – B16	Continuity
LO	A1 – B16	Continuity
M1	B9 – B16	Continuity
M2	B10 – B16	Continuity
HI	B13 – B16	Continuity

If continuity is not as specified, replace the A/C control assembly.

Connector "B"



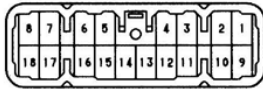
e-18-2-B

N06435

9. INSPECT A/C OR DEF SWITCH CONTINUITY

Check that there is continuity between terminals B-6 and B-17 intermittently each time the A/C or DEF switch button pressed. If continuity is not as specified, replace the A/C control assembly.

Connector "B"



e-18-2-B

N06435

10. INSPECT TEMPERATURE CONTROL SWITCH RESISTANCE

- (a) Measure resistance between terminals B-1 and B-2.

Standard resistance:

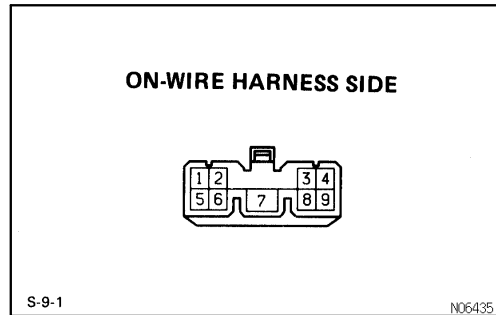
Approx. 3.0 kΩ

- (b) Check that the resistance between terminals B-1 and B-3 increases from 0 to approx. 3.0 kΩ when the switch knob is turned from COOL to HOT.

If operation is not as specified, replace the A/C control assembly.

INSTALLATION

Installation is the reverse order of removal (See page [AC-68](#)).



AIR CONDITIONING AMPLIFIER ON-VEHICLE INSPECTION

AC2SI-01

INSPECT AMPLIFIER CIRCUIT

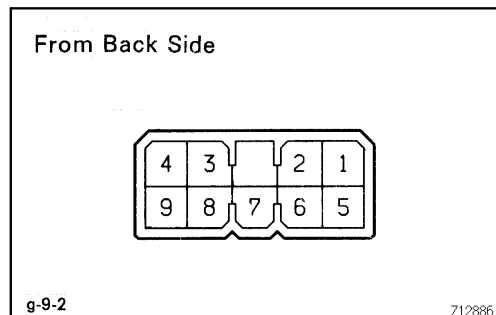
- (a) Disconnect the amplifier and inspect the connector on the wire harness side, as shown in the chart below.

Test conditions:

- Ignition switch ON
- A/C switch ON
- Temperature control lever MAX COOL
- Blower control switch HI

Tester connection	Condition	Specifeid condition
6 – Ground	Constant	Continuity
8 – 9	Constant	Continuity
9 – 6	Constant	Approx. 1.5 kΩ at 25 °C (77 °F)
2 – Ground	A/C switch ON	Battery positive voltage
2 – Ground	A/C switch OFF	No voltage
5 – Ground	Start engine	Approx. 10 to 14 v
5 – Ground	Stop engine	No voltage

If circuit is as specified, try replacing the amplifier with a new one. If the circuit is not as specified, inspect the circuits connected to other parts.



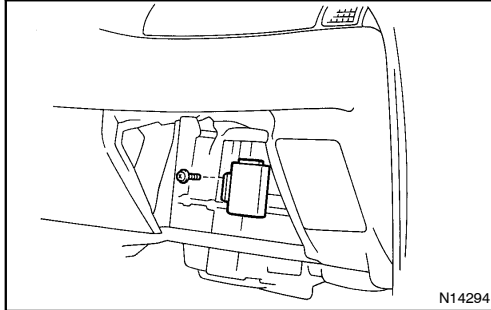
- (b) Connect the connector to A/C amplifier and inspect wire harness side connector from the back side, as shown in the chart below.

Test conditions:

- Ignition switch ON
- A/C switch ON
- Temperature control lever MAX COOL
- Blower control switch HI

Tester connection	Condition	Specified Condition
3 – Ground	Refrigeration pressure 2.0 – 32 kgf/cm ³	Battery positive voltage
3 – Ground	Refrigeration pressure less than 2.0 – 32 kgf/cm ³ or more	No voltage

If circuit is not as specified, replace the amplifier.

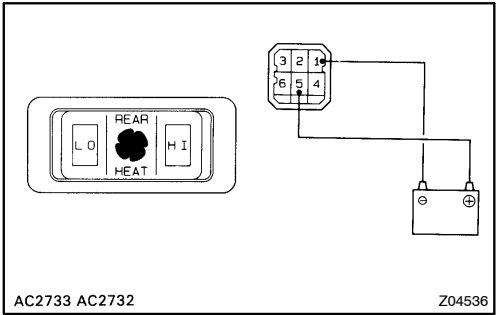


REMOVAL

1. **REMOVE GLOVE COMPARTMENT DOOR**
(See page [BO-76](#))
2. **REMOVE A/C AMPLIFIER**
 - (a) Disconnect the connector from the amplifier.
 - (b) Remove the screw and the amplifier.

INSTALLATION

Installation is in the reverse order of removal See page [AC-75](#)).

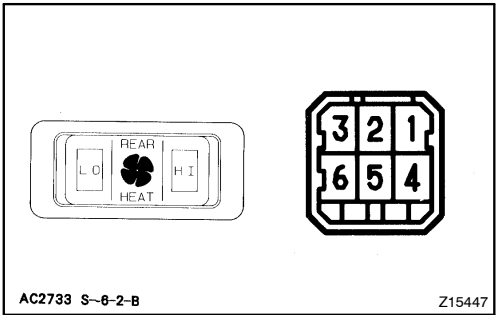


REAR HEATER SWITCH INSPECTION

AC280-04

1. REMOVE INSTRUMENT CLUSTER FINISH CENTER PANEL WITH A/C CONTROL ASSEMBLY
2. REMOVE REAR HEATER SWITCH
3. INSPECT INDICATOR OPERATION
 - (a) Connect the positive (+) lead from the battery to terminal 5 and the negative (-) lead to terminal 1.
 - (b) Push each of the rear heater switch knob in and check that their indicators lights up.

If operation is not as specified, replace the switch.



4. INSPECT SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
HI	1 – 4	Continuity
OFF	–	No Continuity
LO	1 – 2	Continuity
Illumination circuit	3 – 6	Continuity

If continuity is not as specified, replace the switch.