

TROUBLESHOOTING

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AC00E-04

You will find the troubles easier using the table well shown. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

See page	AC-24	AC-22	AC-26	AC-8	AC-8	AC-8	AC-62	AC-61	AC-64	AC-60	AC-59	AC-59	AC-57
Pa its Name	Inspect volume of refrigerant	Inspect refrigeration system with manifold gauge set	Inspect drive belt tension	Fusible link	Circuit breaker	Fuse	Pressure switch	Thermistor	Engine Coolant Temp. Cut Switch	Blower speed control relay	Heater relay	Magnetic clutch relay	Blower resistor
Trouble													
No blower operation				1	2					6	3		7
No blower control										2			3
No air flow mode control													
No air inlet control													
Insufficient flow of cool air											1		3
Insufficient flow of warm air											1		3
No cool air comes out	3	4	5			1	6	13				2	
Cool air comes out intermittently	1	2	3					5					
Cool air comes out only at high engine speed	2	3	1										
Insufficient cooling	1	2	3					12	6				
No warm air comes out													
Air temp. control not functioning													

V01949

REFRIGERANT SYSTEM INSPECTION WITH MANIFOLD GAUGE SET

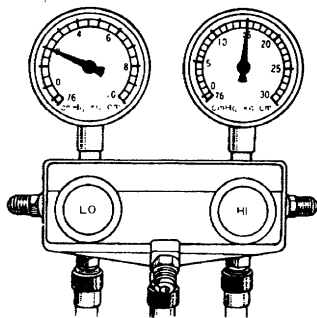
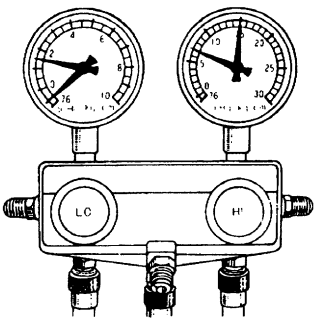
This is a method in which the trouble is located by using a manifold gauge set. (See "MANIFOLD GAUGE SET INSTALLATION" on page AC-14) Read the manifold gauge pressure when the following conditions are established:

- (a) Temperature at the air inlet with the switch set at RECIRC is 30 – 35°C (86 – 95°F)
- (b) Engine running at 2,000 rpm
- (c) Blower fan speed control switch set at high speed
- (d) Temperature control switch set at max. cool side

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

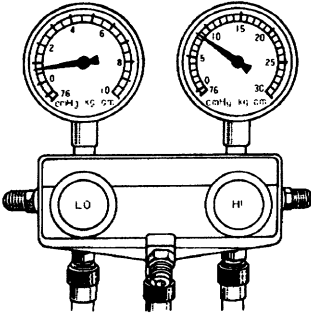
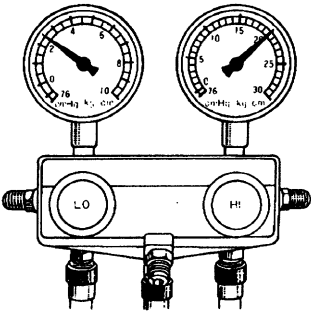
NOTICE:

- Always recover refrigerant before removing the parts in the refrigerant line and evacuating air.
- Evacuate air and charge proper amount of purified refrigerant after installing the parts in the refrigerant line.

No.	Gauge reading kPa (kgf/cm ² , psi)	Condition	Probable cause	Remedy
1	LO: 147 – 196 (1.5 – 2.0, 21 – 28) HI: 1,422 – 1,471 (14.5 – 15.0, 206 – 213) 	Normal cooling	Normally functioning system	
2	During operation, pressure on low pressure side sometimes becomes a vacuum and sometimes normal 	Periodically cools and then fails to cool	Moisture present in refrigeration system	(1) Replace receiver (2) Remove moisture in system through repeatedly evacuating air

NOTICE:

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- Evacuate air and charge proper amount of purified refrigerant after installing the parts in the refrigerant line.

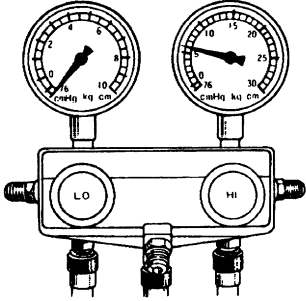
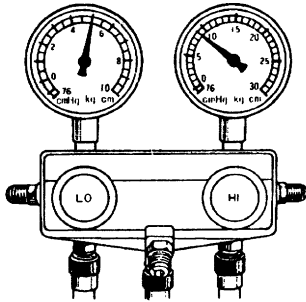
No.	Gauge reading kPa (kgf/cm ² , psi)	Condition	Probable cause	Remedy
3	Pressure low on both low and high pressure sides 	• Insufficient cooling • Bubbles seen insight glass	Insufficient refrigerant	(1) Check for gas leakage with gas leak tester and repair if necessary (2) Add refrigerant until bubbles disappear
		• Insufficient cooling • Frost on tubes from receiver to unit	Refrigerant flow obstructed by dirt in receiver	Replace receiver
4	Pressure too high on both low and high pressure sides 	Insufficient cooling	Insufficient cooling of condenser	(1) Clean condenser (2) Check fan motor operation
5			Refrigerant overcharged	(1) Check amount of refrigerant If refrigerant is overcharged (2) Recover refrigerant (3) Evacuate air and charge proper amount of purified refrigerant
6			Air present in system	(1) Replace receiver (2) Check compressor oil to see if dirty (3) Remove air in system through repeatedly evacuating air
7			• Insufficient cooling • Frost or Large amount of dew on piping at low pressure side	Expansion valve improperly mounted, heat sensing tube defective (Opens too wide) (1) Check heat sensing tube installation condition If (1) is normal (2) Check expansion valve and replace if defective

HINT at 6:

These gauge indications are for when the refrigeration system has been opened and the refrigerant charged without evacuating air.

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No.	Gauge reading kPa (kgf/cm ² , psi)	Condition	Probable cause	Remedy
8	Vacuum indicated on low pressure side, very low pressure indicated on high pressure side  AC0156	• Does not cool (Cools from time to time in some cases) • Frost or dew seen on piping before and after receiver or expansion valve	Refrigerant does not circulate	(1) Check heat sensing tube for gas leakage and replace expansion valve if defective If (1) is normal (2) Clean out dirt in expansion valve by blowing with air If not able to remove dirt, replace expansion valve (3) Replace receiver
9	Pressure too high on low pressure side, pressure too low on high pressure side  AC0157	Does not cool	Insufficient compression	Repair or replace compressor