

Refrigerant Pressure with Manifold Gauge Set

HVAC SYSTEM (HEATER, VENTILATOR AND A/C)

2. Refrigerant Pressure with Manifold Gauge Set

A: PROCEDURE

- 1) Place the vehicle in the shade and windless condition.
- 2) Open the front hood.
- 3) Connect the manifold gauge set.
- 4) Open all windows and close all doors.
- 5) Increase the engine to 1,500 rpm.
- 6) Turn on the A/C switch.
- 7) Turn the temperature control switch to MAX COOL.
- 8) Put in RECIRC position.
- 9) Turn the blower control switch to HI.
- 10) Read the gauge.

Standard:

Low pressure:

127 — 196 kPa (1.3 — 2.0 kg/cm², 18 — 28 psi)

High pressure:

1,471 — 1,667 kPa (15 — 17 kg/cm², 213 — 242 psi)

Ambient temperature:

30 — 35°C (86 — 95°F)

B: INSPECTION

Symptom	Probable cause	Repair order
High-pressure side is unusually high.	<ul style="list-style-type: none">• Defective condenser fin motor• Clogged condenser fin• Too much refrigerant• Air inside the system• Defective receiver dryer	<ul style="list-style-type: none">• Replace the fan motor.• Clean the condenser fin.• Discharge refrigerant.• Replace the receiver dryer.• After evacuating again, charge an appropriate amount of refrigerant.
High-pressure side is unusually low.	<ul style="list-style-type: none">• Defective compressor• Not enough refrigerant• Clogged expansion valve• Expansion valve frozen temporarily by moisture.	<ul style="list-style-type: none">• Replace the compressor.• Check for leaks.• Replace the expansion valve.• Fully evacuate the expansion valve.
Low-pressure side is unusually high.	<ul style="list-style-type: none">• Defective compressor• Defective expansion valve• Too much refrigerant	<ul style="list-style-type: none">• Replace the compressor.• Replace the expansion valve.• Discharge refrigerant.
Low-pressure side is unusually low.	<ul style="list-style-type: none">• Not enough refrigerant• Clogged expansion valve• Expansion valve frozen temporarily by moisture.• Saturated receiver dryer	<ul style="list-style-type: none">• Check for leaks.• Replace the expansion valve.• Replace the receiver dryer.