

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 the front windows and close all doors.
- 5) Increase the engine to 1,500 rpm.
- 6) Turn the A/C switch to ON.
- 7) Turn the temperature control dial to MAX COOL position.
- 8) Turn the FRESH/RECIRC switch to RECIRC position.
- 9) Turn the fan speed control dial to HI.
- 10) Read the gauge.

Specification:

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

Symptoms	Probable cause	Repair order
High-pressure side is unusually high.	<ul style="list-style-type: none">• Defective condenser fan 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.