

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

#### **Standard:**

**Low pressure: 127 — 196 kPa (1.3 — 2.0 kg/cm<sup>2</sup>, 18 — 28 psi)**

**High pressure: 1,471 — 1,667 kPa (15 — 17 kg/cm<sup>2</sup>, 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"><li>• Defective condenser fan motor</li><li>• Clogged condenser fin</li><li>• Too much refrigerant</li><li>• Air inside the system</li><li>• Defective receiver dryer (condenser)</li></ul>	<ul style="list-style-type: none"><li>• Replace the fan motor.</li><li>• Clean the condenser fin.</li><li>• Discharge refrigerant.</li><li>• Replace the condenser.</li><li>• After evacuating again, charge an appropriate amount of refrigerant.</li></ul>
High-pressure side is unusually low.	<ul style="list-style-type: none"><li>• Defective compressor</li><li>• Not enough refrigerant</li><li>• Clogged expansion valve</li><li>• Expansion valve frozen temporarily by moisture.</li></ul>	<ul style="list-style-type: none"><li>• Replace the compressor.</li><li>• Check for leaks.</li><li>• Replace the expansion valve.</li><li>• Fully evacuate the expansion valve.</li></ul>
Low-pressure side is unusually high.	<ul style="list-style-type: none"><li>• Defective compressor</li><li>• Defective expansion valve</li><li>• Too much refrigerant</li></ul>	<ul style="list-style-type: none"><li>• Replace the compressor.</li><li>• Replace the expansion valve.</li><li>• Discharge refrigerant.</li></ul>
Low-pressure side is unusually low.	<ul style="list-style-type: none"><li>• Not enough refrigerant</li><li>• Clogged expansion valve</li><li>• Expansion valve frozen temporarily by moisture.</li><li>• Saturated receiver dryer (condenser)</li></ul>	<ul style="list-style-type: none"><li>• Check for leaks.</li><li>• Replace the expansion valve.</li><li>• Replace the condenser.</li></ul>