

## REFRIGERANT PRESSURE WITH MANIFOLD GAUGE SET

HVAC SYSTEM (HEATER, VENTILATOR AND A/C)

### 2. Refrigerant Pressure with Manifold Gauge Set

#### A: OPERATION

- 1) Place the vehicle in the shade and draftless condition.
- 2) Connect the manifold gauge set.
- 3) Open the front windows and close all doors.
- 4) Open the hood.
- 5) Increase engine speed 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/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

Symptom	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 fan</li> <li>• Too much refrigerant</li> <li>• Air inside the system</li> <li>• Defective receiver dryer</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 receiver dryer.</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> </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</li> </ul>	<ul style="list-style-type: none"> <li>• Check for leaks.</li> <li>• Replace the expansion valve</li> <li>• Replace the receiver dryer.</li> </ul>

AC-17