# 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/cm$^2$, 18 — 28 psi)***
***High pressure:***
***1,471 — 1,667 kPa***
***(15 — 17 kg/cm$^2$, 213 — 242 psi)***
***Ambient temperature:***
***30 — 35°C (86 — 95°F)***

## B: INSPECTION

| Symptom | Probable cause | Repair order |
|---|---|---|
| High-pressure side is unusually high. | • Defective condenser fin motor<br>• Clogged condenser fin<br>• Too much refrigerant<br>• Air inside the system<br>• Defective receiver dryer | • Replace the fan motor.<br>• Clean the condenser fin.<br>• Discharge refrigerant.<br>• Replace the receiver dryer.<br>• After evacuating again, charge an appropriate amount of refrigerant. |
| High-pressure side is unusually low. | • Defective compressor<br>• Not enough refrigerant<br>• Clogged expansion valve<br>• Expansion valve frozen temporarily by moisture. | • Replace the compressor.<br>• Check for leaks.<br>• Replace the expansion valve.<br>• Fully evacuate the expansion valve. |
| Low-pressure side is unusually high. | • Defective compressor<br>• Defective expansion valve<br>• Too much refrigerant | • Replace the compressor.<br>• Replace the expansion valve.<br>• Discharge refrigerant. |
| Low-pressure side is unusually low. | • Not enough refrigerant<br>• Clogged expansion valve<br>• Expansion valve frozen temporarily by moisture.<br>• Saturated receiver dryer | • Check for leaks.<br>• Replace the expansion valve.<br>• Replace the receiver dryer. |