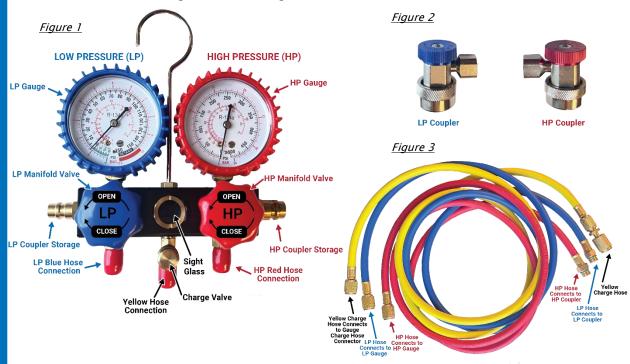
# A/C Manifold Gauge Set Use & Safety Guide

This A/C Manifold Gauge Set Use and Safety Guide is intended as a reference to be used as general guidance by those with the automotive knowledge, experience, tools, and facilities necessary to conduct this work in accordance with mandated safety protocols. This guide is not appropriate for those without adequate automotive knowledge and repair qualifications. \*Refrigerant recovery and recycling procedures must comply with section 609 of the Clean Air Act [epa.gov]

### A/C MANIFOLD GAUGE SAFETY PRECAUTIONS

[\*] indicates EPA regulations per section 609 of the Clean Air Act

- Only use specified refrigerant type with equipment to prevent refrigerant crosscontamination. [\*]
  - o A/C manifold gauge set 5811258 is specified for R134a systems and should only be used with R134a
  - A/C manifold gauge set 5811672 is specified for R1234yf systems and should only be used with R1234yf
- Follow standard safety procedures and wear appropriate protective equipment safety goggles, gloves, etc. [\*]
- Keep equipment in operating condition. Do not modify equipment outside of its intended use. [\*] Periodically inspect equipment for excessive wear and/or damage.
- Refrigerants should only be handled with care and by certified professionals. [\*]
  - Refrigerant can cause severe frostbite if in direct contact with skin.
  - Pressurized refrigerant in a container OR in the A/C system can cause severe injury.
  - Do not disconnect pressurized A/C lines.
  - Refrigerant in a container can become over-pressurized and rupture if it is exposed to excessive heat.
  - Do not discharge refrigerant directly into the environment. Recover and recycle according to mandated regulations. [\*]



#220

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## A. USING THE A/C MANIFOLD GAUGE SET - SYSTEM DIAGNOSIS

- 1. Turn off vehicle and A/C system
- 2. Review A/C manifold gauge set components. Refer to figure 1.
- 3. Close the high pressure (HP) and low pressure (LP) manifold valves.
- 4. Connect HP and LP couplers. Refer to figure 1, 2, and 3.
- 5. Connect red, HP side hose to the HP side red hose connection. Connect the blue, LP side hose to the LP blue hose connection.
- 6. Connect one end of yellow charge hose to middle manifold gauge connector and the other end to the charge valve.
- 7. Attach the LP coupler (connected to end of blue, LP hose) to the LP suction port on the A/C system. Attached the HP coupler (connected to end of red, HP hose) to the HP discharge port on the A/C system. LP and HP couplers should be turned to closed position.
- 8. Turn on vehicle, then A/C system.
- 9. Open both the LP and HP couplers.
- 10. Take note of pressure gauge readings for diagnostic indicators. Refer to gpd Tech Tip #150 for 'Compressor Diagnosis Using Pressure Gauges'
- 11. After system diagnosis, close both the LP and HP couplers, turn off the vehicle and A/C system, then carefully disconnect and store using the LP and HP coupler storage ports.

#### B. USING THE A/C MANIFOLD GAUGE SET - REFRIGERANT RECOVERY

- 1. Follow steps 1 through 5 of 'A. System Diagnosis' above
- 2. Connect the yellow charge hose to the middle manifold gauge connector and the other end to refrigerant vacuum pump/recover equipment.
- 3. Attach the LP coupler (connected to end of blue, LP hose) to the LP suction port on the A/C system. Attached the HP coupler (connected to end of red, HP hose) to the HP discharge port on the A/C system. LP and HP couplers should be turned to closed position.
- 4. Turn on the vacuum pump/recovery equipment.
- 5. Open both the LP and HP couplers.
- 6. Use the LP gauge readings to monitor refrigerant recovery process per specifications.
- 7. After refrigerant recovery, turn off the vacuum pump/recovery equipment, close both the LP and HP couplers, then carefully disconnect and store using the LP and HP coupler storage ports.

### C. USING THE A/C MANIFOLD GAUGE SET - CHARGING THE SYSTEM

- 1. Follow steps 1 through 5 of 'A. System Diagnosis' above
- 2. Connect the yellow charge hose to the middle manifold gauge connector and the other end to refrigerant supply. Position the refrigerant supply to stay in an upright position.
- 3. Attach the LP coupler (connected to end of blue, LP hose) to the LP suction port on the A/C system. Attached the HP coupler (connected to end of red, HP hose) to the HP discharge port on the A/C system. LP and HP couplers should be turned to closed position.
- 4. Turn on vehicle, then A/C system.
- 5. Open the LP coupler and the LP manifold valve on the gauge set.
- 6. Take note of pressure gauge readings to charge system per specified charge amount.
- 7. After charging the system, turn off the vehicle and A/C system, close both the LP and HP couplers, then carefully disconnect and store using the LP and HP coupler storage ports.

\*Hoses may contain residual refrigerant after charging.

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