

Connect Then Purge

To avoid contaminating a system you must always ensure there is no air (or other contaminants) in your gauge lines before opening them up to the system:

1. Wear the correct PPE – suitable gloves and safety glasses;
2. Connect gauge lines:
 - The blue low pressure hose to the low side of the system, e.g. at compressor suction or at the evaporator
 - The red hose to the high side of the system, e.g. at compressor discharge or the liquid outlet of the receiver;
3. **Purge those hoses that need it** (see below for more details);
4. Open the hoses and gauge manifold to the system as necessary.

Purging can be hazardous and lead to refrigerant loss, so whenever possible purge using low pressure gas to minimise the hazard and loss.

The guidance below applies to a two port manifold, as shown in the photo.

When connecting to a charged system via service (shut off) valves:

1. Remove the valve stem caps and ensure the service valves are back seated before removing the service port caps;
2. Connect the hoses (ensure any unused gauge lines are connected tightly to the manifold);
3. Purge using low pressure gas, at as few points as possible:
 - a. Take the low side service valve off the back seat (clockwise one turn);
 - b. Open the low side manifold valve;
 - c. Purge the low pressure hose and the common hose at the connection of the common hose to the manifold (i.e. purge both hoses at just one point to minimise loss);
 - d. Leaving the low side manifold valve open, open the high side manifold valve;
 - e. Purge the high pressure hose at the connection to the system;
 - f. Close both manifold valves;
4. Take the high side service off the back seat (clockwise one turn).



Before charging an evacuated system:

1. Ensure both manifold valves are closed and remove the common hose from the vacuum pump and connect it to the cylinder (connect to the liquid side of the cylinder for blends);
2. Open then close the cylinder valve and purge the common hose at its connection to the manifold. Be aware that liquid light be present during this purging.
3. When charging into the low side of the system throttle the liquid through the manifold and do not charge liquid into the suction unless the compressor is running.

When connecting to a charged system via Schrader valves:

1. Remove Schrader valve caps;
2. Ensure both manifold valves are closed;
3. Connect the hoses to the Schrader valves quickly to minimise refrigerant loss;
4. Purge the high pressure hose at the manifold – be aware of liquid;
5. Open the low side manifold valve and purge the low pressure hose and the common hose at the connection of the common hose to the manifold.

When connecting to a charged system via Schrader valves using quick connect couplers:

1. Remove Schrader valve caps;
2. Ensure both manifold valves are closed;
3. Connect the low side quick coupler to the low side Schrader;
4. Open low side of the manifold and purge the low pressure hose and the common hose at the connection of the common hose to the manifold (i.e. purge both hoses at just one point to minimise loss);
5. Leaving the low side manifold valve open, open the high side manifold valve;
6. Purge the high pressure hose by depressing the quick coupler onto a hard surface;
7. Close both manifold valves;
8. Connect the high side quick coupler to the Schrader.

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