

2. DISASSEMBLY INSTRUCTIONS

— Before the following disassembly, POWER SWITCH is set to OFF and disconnected the power cord.

2.1 MECHANICAL PARTS

2.1.1 FRONT GRILLE

1. Open the inlet grille upward or downward.
2. Remove the screw which fastens the front grille.
3. Pull the front grille from the right side.
4. Remove the front grille. (See Fig. 16)
5. Re-install the component by referring to the removal procedure.

NOTICE Mark ☒ of inlet grille means opening direction.

2.1.2 CABINET

1. After disassembling the front grille, remove the screws which fasten the cabinet at both sides. Keep these for later use.
2. Remove the two screws which fasten the cabinet at back. (See Fig. 17)
3. Pull the base pan forward.

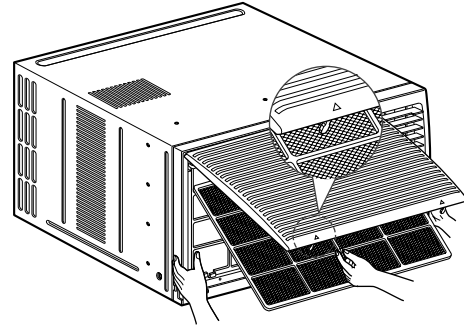


Figure 16

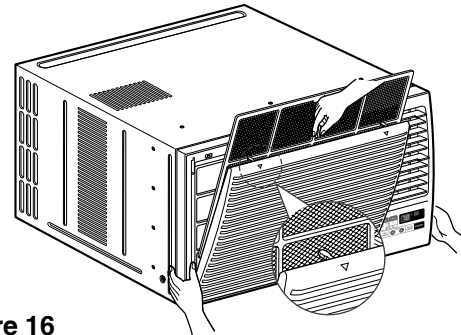


Figure 17

2.1.3 CONTROL BOX

1. Remove the front grille. (Refer to section 1)
2. Pull the base pan forward so that you can remove the 2 screws which fasten the cover control at the right side. (See Fig. 18)
3. Remove the 3 screws which fasten the controlbox. (See Fig. 18)
4. Discharge the capacitor by placing a 20,000 ohm resistor across the capacitor terminals.
5. Disconnect two wire housings in the control box.
6. Pull the control box forward completely.
7. Re-install the components by referring to the removal procedure. (See Fig. 18)

(Refer to the wiring diagram found on page 29~30 in this manual and on the control box.)

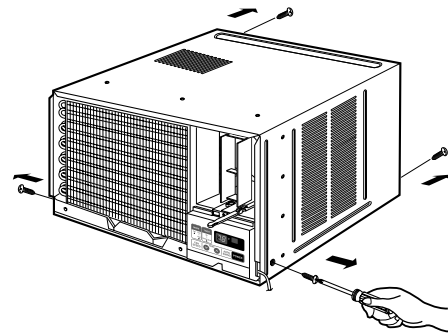
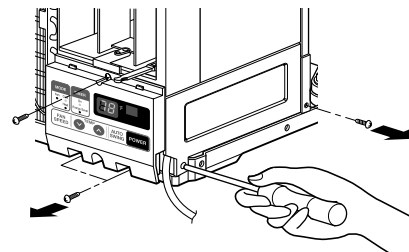


Figure 18



2.2 AIR HANDLING PARTS

2.2.1 Cover (at the top)

1. Remove the front grille. (Refer to section 1)
2. Remove the cabinet. (Refer to section 2)
3. Remove 11 screws which fasten the brace and covers.
4. Remove the covers and the brace. (See Fig. 19)
5. Re-install the components by referring to the removal procedure, above.

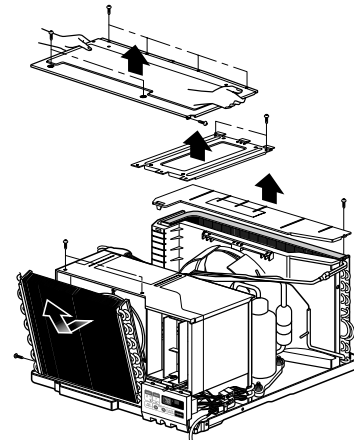


Figure 19

2.2.2 AIR GUIDE AND BLOWER

1. Remove the front grille.
2. Remove the cabinet.
3. Remove the control box.
4. Remove the 3 screws which fasten the brace.
5. Remove the brace.
6. Remove the 2 screws which fasten the evaporator.
7. Move the evaporator forward and pulling it upward slightly. (See Figure 20)
8. Move the evaporator to the left carefully.
9. Pull out the hook of orifice by pushing the tabs and remove it. (See Figure 21)
10. Remove the clamp with a hand plier which secures the blower.
11. Remove the blower.
12. Remove the 4 screws which fasten the air guide from the barrier.
13. Move the air guide backward, pulling out from the base pan.
14. Re-install the components by referring to the removal procedure, above.

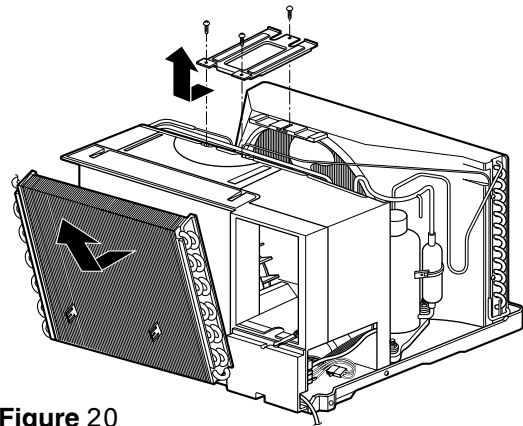


Figure 20

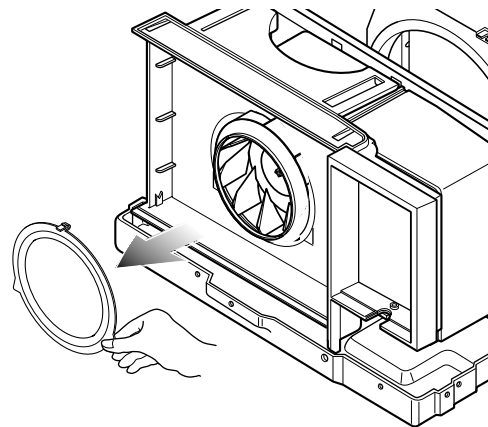


Figure 21

Figure 22

2.2.3 Fan

1. Remove the cabinet. (Refer to section 2)
2. Remove the brace and shroud cover. (Refer to section 4)
3. Remove the side cover with 2 screws. (See Fig. 23)
4. Remove the 5 or 6 screws which fasten the condenser.
5. Move the condenser sideways carefully.
6. Remove the clamp which secures the fan.
7. Remove the fan. (See Fig. 23)
8. Re-install the components by referring to the removal procedure, above.

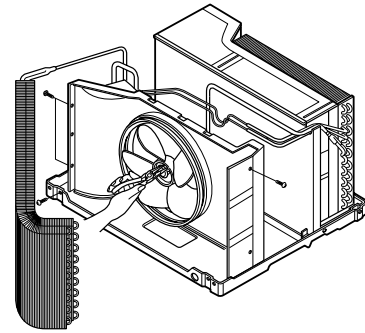


Figure 23

2.2.4 Shroud

1. Remove the fan. (Refer to section 6)
2. Remove the 2 screws which fasten the shroud.
3. Remove the shroud. (See Fig. 24)
4. Re-install the component by referring to the removal procedure, above.

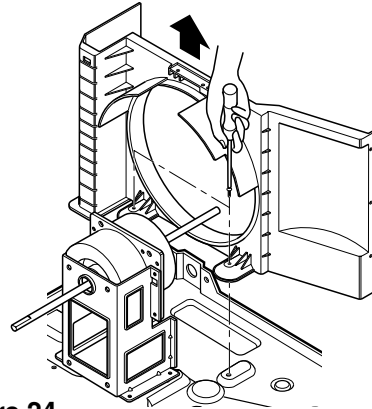


Figure 24

2.3 ELECTRICAL PARTS

2.3.1 Motor

1. Remove the cabinet. (Refer to section 2)
2. Remove the cover control and disconnect a wire housing in control box. (Refer to section 3)
3. Remove the blower. (Refer to section 5)
4. Remove the fan. (Refer to section 6)
5. Remove the 4 screws which fasten the motor. (See Fig. 25)
6. Remove the motor.
7. Re-install the components by referring to the removal procedure, above.

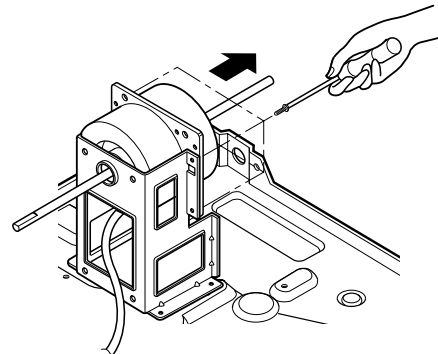


Figure 25

2.3.2 Compressor

1. Remove the cabinet. (Refer to section 2)
2. Discharge the refrigerant system using Freon™ Recovery System.
If there is no valve to attach the recovery system, install one (such as a watco a-1) before venting the Freon™. Leave the valve in place after servicing the system.
3. Disconnect the 3 leads from the compressor.
4. After purging the unit completely, unbraid the suction and discharge tubes at the compressor connections.
5. Remove the 3 nuts and the 3 washers which fasten the compressor. (See Fig. 26)
6. Remove the compressor.
7. Re-instill the components by referring to the removal procedure, above.

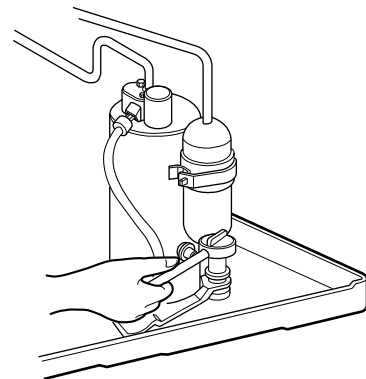


Figure 26

2.3.3 CAPACITOR

1. Remove the control box. (Refer to section 3)
2. Remove the screw and knobs which fasten the display panel.
3. Disconnect the 2 leads from the rocker switch and remove the panel.
4. Remove a screw and unfold the control box. (See Fig. 27)
5. Remove the screw and the clamp which fastens the capacitor. (See Fig. 27)
6. Disconnect all the leads of capacitor terminals.
7. Re-install the components by referring to the removal procedure, above.

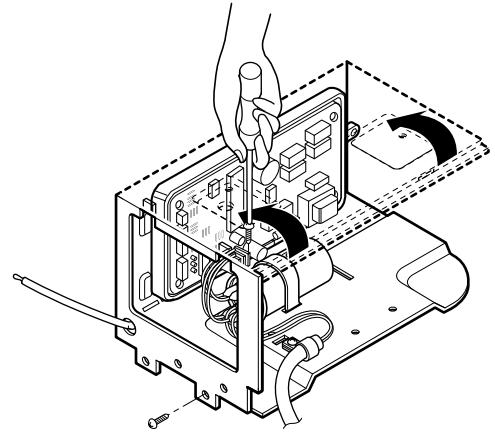


Figure 27

2.3.4 POWER CORD

1. Remove the control box. (Refer to section 3)
2. Unfold the control box. (Refer to section 10)
3. Disconnect the grounding screw from the control box.
4. Disconnect 2 receptacles.
5. Remove a screw which fastens the clip cord.
6. Pull the power cord. (See Fig. 28)
7. Re-install the component by referring to the removal procedure, above.
(Use only one ground-marked hole for ground connection.)
8. If the supply cord of this appliance is damaged, it must be replaced by the special cord.
(The special cord means the cord which has the same specification marked on the supply cord fitted to the unit.)

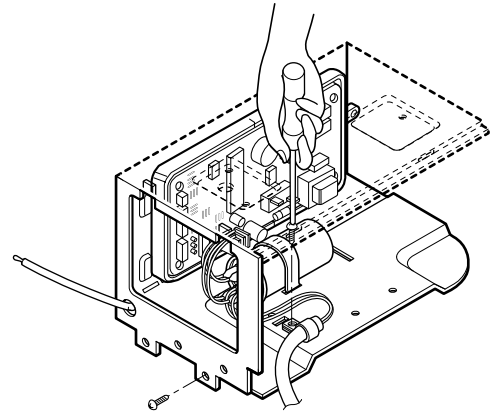


Figure 28

2.3.5 THERMISTOR

1. Remove the control box. (Refer to section 3)
2. Unfold the control box. (Refer to section 10)
3. Disconnect the thermistor terminals from main P.W.B assembly.
4. Remove the thermistor.
5. Re-install the components by referring to the removal procedure above. (See Figure 30)

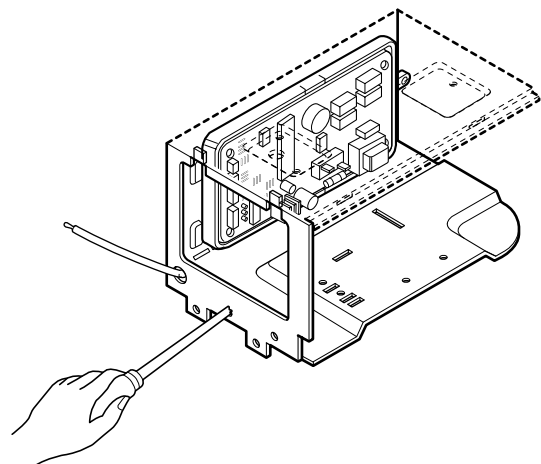


Figure 29

2.3.6 SYNCHRONOUS MOTOR

1. Remove the control box. (Refer to section 3)
2. Unfold the control box. (Refer to section 10)
3. Remove the crankshaft.
4. Disconnect all the leads of the synchronous motor.
5. Remove the 2 screws which fasten the synchronous motor. (See Fig. 30)
6. Re-install the components by referring to the removal procedure, above.

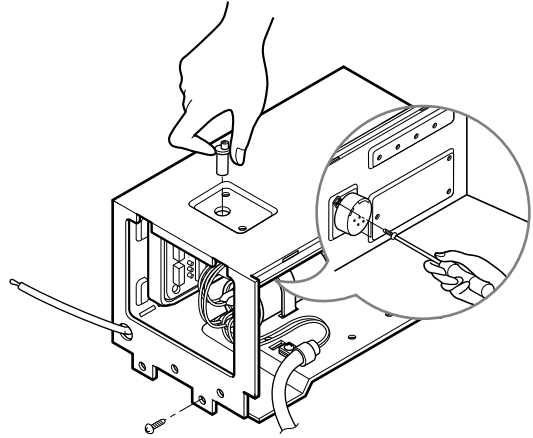


Figure 30

2.4 REFRIGERATION CYCLE



CAUTION: Discharge the refrigerant system using Freon™ Recovery System. If there is no valve to attach the recovery system, install one (such as a WATCO A-1) before venting the Freon™. Leave the valve in place after servicing the system.

2.4.1 CONDENSER

1. Remove the cabinet. (Refer to section 2)
2. Remove the brace and the shroud cover. (Refer to section 4)
3. Remove 2 screws which fasten the side cover. (See Fig. 31)
4. Remove the 5 or 6 screws which fasten the condenser.
5. After discharging the refrigerant completely, unbrazed the interconnecting tube at the condenser connections.
6. Remove the condenser.
7. Re-install the components by referring to notes. (See Fig. 31)

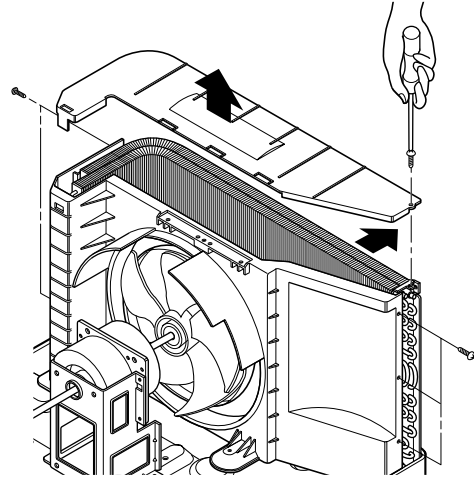


Figure 31

2.4.2 EVAPORATOR

1. Remove the cabinet. (Refer to section 2)
2. Remove the top cover and the brace. (Refer to section 4)
3. Discharge the refrigerant completely.
4. Remove the 3 screws which fasten the evaporator at the left side and the top side.
5. Move the evaporator sideward carefully and then unbrazed the interconnecting tube at the evaporator connectors.
6. Remove the evaporator.
7. Re-install the components by referring to notes. (See Fig. 32)

2.4.3 CAPILLARY TUBE

1. Remove the cabinet. (Refer to section 2)
2. Remove the brace. (Refer to section 4)
3. After discharging the refrigerant completely, unbrazed the interconnecting tube at the capillary tube.
4. Remove the capillary tube.
5. Re-install the components by referring to notes.

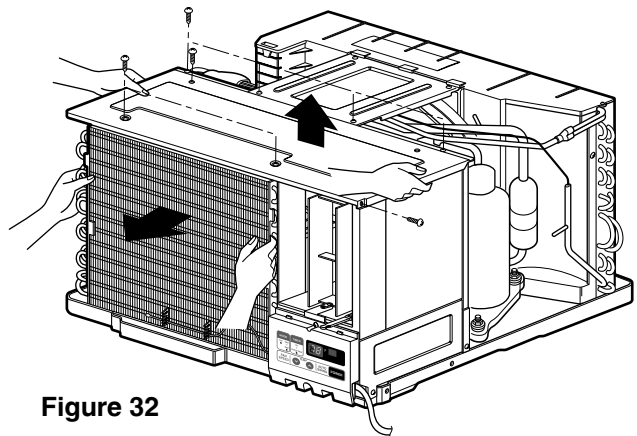


Figure 32

NOTICE

- Replacement of the refrigeration cycle.

1. When replacing the refrigeration cycle, be sure to discharge the refrigerant system using a Freon™ recovery System.
If there is no valve to attach the recovery system, install one (such as a WATCO A-1) before venting the Freon™. Leave the valve in place after servicing the system.
2. After discharging the unit completely, remove the desired component, and unbrace the pinch-off tubes.
3. Solder service valves into the pinch-off tube ports, leaving the valves open.
4. Solder the pinch-off tubes with Service valves.
5. Evacuate as follows.
 - 1) Connect the vacuum pump, as illustrated Fig. 35A.
 - 2) Start the vacuum pump, slowly open manifold valves A and B with two full turns counterclockwise and leave the valves closed.The vacuum pump is now pulling through valves A and B up to valve C by means of the manifold and entire system.



CAUTION: If high vacuum equipment is used, just crack valves A and B for a few minutes, then open slowly with the two full turns counterclockwise. This will keep oil from foaming and being drawn into the vacuum pump.

- 3) Operate the vacuum pump for 20 to 30 minutes, until 600 microns of vacuum is obtained. Close valves A and B, and observe vacuum gauge for a few minutes. A rise in pressure would indicate a possible leak or moisture remaining in the system. With valves A and B closed, stop the vacuum pump.
 - 4) Remove the hose from the vacuum pump and place it on the charging cylinder. See Fig. 35B. Open valve C.
Discharge the line at the manifold connection.
 - 5) The system is now ready for final charging.
6. Recharge as follows :
 - 1) Refrigeration cycle systems are charged from the High-side. If the total charge cannot be put in the High-side, the balance will be put in the suction line through the access valve which you installed as the system was opened.
 - 2) Connect the charging cylinder as shown in Fig. 35B.
With valve C open, discharge the hose at the manifold connection.
 - 3) Open valve A and allow the proper charge to enter the system. Valve B is still closed.
 - 4) If more charge is required, the high-side will not take it. Close valve A.
 - 5) With the unit running, open valve B and add the balance of the charge.
 - a. Do not add the liquid refrigerant to the Low-side.
 - b. Watch the Low-side gauge; allow pressure to rise to 30 lbs.
 - c. Turn off valve B and allow pressure to drop.
 - d. Repeat steps B and C until the balance of the charge is in the system.
 - 6) When satisfied the unit is operating correctly, use the pinch-off tool with the unit still running and clamp on to the pinch-off tube. Using a tube cutter, cut the pinch-off tube about 2 inches from the pinch-off tool. Use sil-fos solder and solder pinch-off tube closed. Turn off the unit, allow it to set for a while, and then test the leakage of the pinch-off connection.

Equipment needed: Vacuum pump, Charging cylinder, Manifold gauge, Brazing equipment. Pin-off tool capable of making a leak-proof seal, Leak detector, Tubing cutter, Hand Tools to remove components, Service valve.

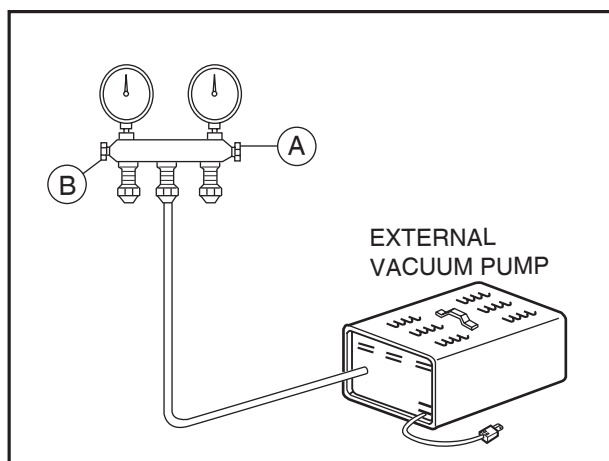
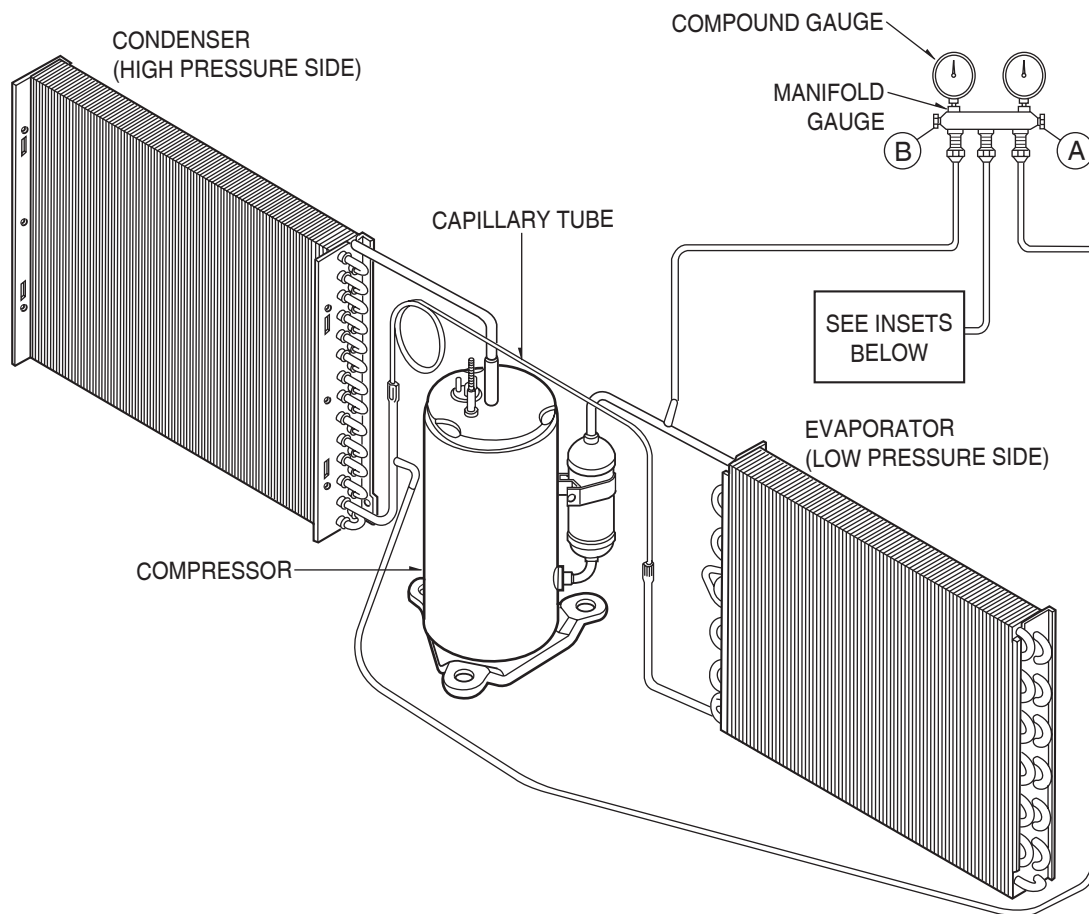


Figure 31A-Pulling Vacuum

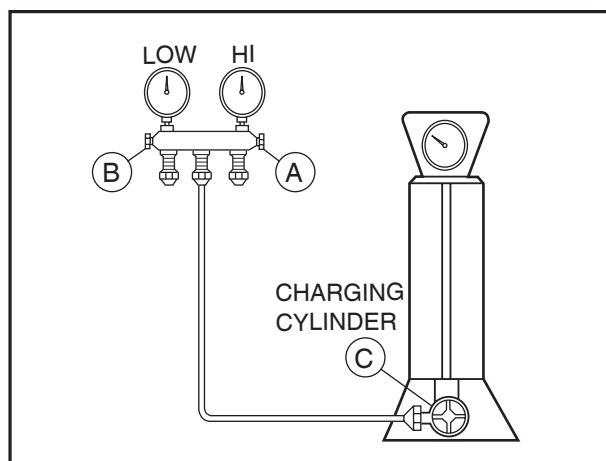


Figure 31B-Charging