

Installation Instructions


NOTE: Read the entire instruction manual before starting installation.

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause death, personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to individual instructions packaged with kits or accessories when installing.

Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Use quenching cloth for brazing operations. Have a fire extinguisher available. Read these instructions thoroughly and follow all warning or cautions included in literature and attached to the unit. Consult local building codes and the current editions of the National Electrical Code (NEC) NFPA 70.

In Canada, refer to the current editions of Canadian Electrical Code CSA C22.1.

Recognize safety information. This is the safety alert symbol . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand the signal words **DANGER**, **WARNING**, and **CAUTION**. These words are used with the safety alert symbol. **DANGER** identifies the most serious hazards which **will** result in severe personal injury or death. **WARNING** signifies hazards which **could** result in personal injury or death. **CAUTION** is used to identify unsafe practices, which **may** result in minor personal injury or product and property damage. **NOTE** is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

WARNING

ELECTRICAL OPERATION HAZARD

Failure to follow this warning could result in personal injury or death.

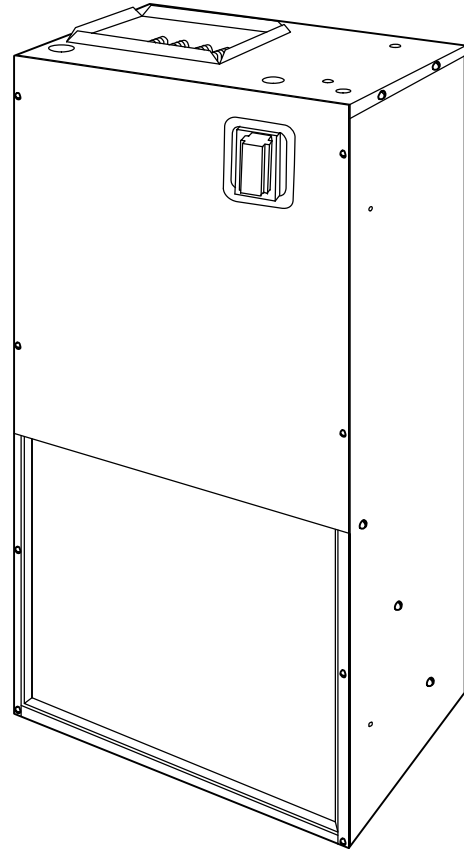
Before installing or servicing unit, always turn off all power to unit. There may be more than one disconnect switch. Turn off accessory heater power if applicable. Lock out and tag switch with a suitable warning label.

CAUTION

CUT HAZARD

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing and gloves when handling parts.



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Fig. 1 – Typical Fan Coil

WARNING



EXPLOSION HAZARD

Failure to follow this warning could result in death, serious personal injury, and/or property damage.

Never use air or gases containing oxygen for leak testing or operating refrigerant compressors. Pressurized mixtures of air or gases containing oxygen can lead to an explosion.

INTRODUCTION

This instruction covers installation of replacement coil kits into fan coils. (See Fig. 1.) The kit is designed to allow easy replacement of existing coils.

DESCRIPTION AND USAGE

The replacement coil kit is designed for use when replacement of an existing slope coil is required.

NOTE: Replacement of an indoor coil must include recovery and recycling of refrigerant currently in the system. Provided the refrigerant has not been contaminated with moisture, acid, solid particulate, or non-condensables, it may be recovered by following the procedures listed below. However, if the refrigerant is contaminated, recycling or reclaiming methods are required. If leaks are present in the system, meaning the refrigerant may be contaminated, recycling or reclaiming methods **MUST** be used. Installation of new filter drier(s) is required. The filter drier-type will depend upon the contaminants in the system. See Split-System Residential Air Conditioners and Heat Pumps Service Manuals for further information.

⚠ CAUTION

PERSONAL INJURY HAZARD

Failure to follow this caution may result in personal injury.

Relieve pressure and recover all refrigerant before system repair or final unit disposal to avoid personal injury or death. Use all service ports and open all flow-control devices, including solenoid valves.

COILS WITH PISTON

Before installation of replacement coil, verify the piston is the correct orifice size. The correct size should be on the outdoor unit rating plate. If in doubt, reuse the piston from the old indoor coil.

Use two wrenches to separate the 13/16" Chatleff nut from the distributor body. The threads will contain Loctite anti-seize, do not remove this from the threads.

Install the piston and reattach nut to finger tight plus 1/2 turn.

The distributor used on the all-aluminum replacement coil is also made of aluminum. The distributor threads are coated with Loctite Heavy Duty Anti-Seize which is a graphite/calcium fluoride formulation, for applications that is free from copper, lead and sulfur. This product is typically used in applications with an operating range of -20°F to +2400°F. (See Fig. 2.) When replacing a TXV it is recommended to reapply with the same thread sealer. Extra care should be taken during brazing of copper equalizer on the aluminum coils to prevent the braze material from splattering on the aluminum. Also, route the copper equalizer so that it doesn't touch the aluminum components.

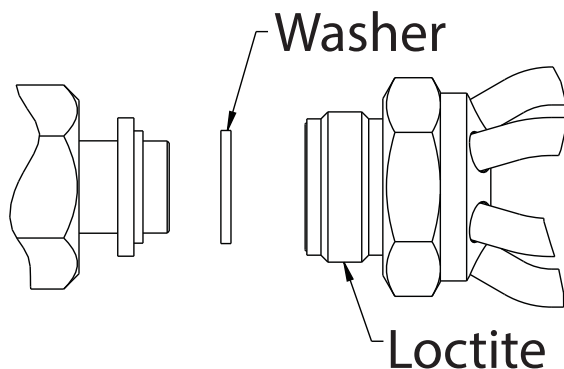


Fig. 2 – TXV Thread (Sealer) Location

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COILS WITH TXV

The all-aluminum replacement coil with piston will also be used for TXV style coils by reusing the original TXV. An adapter is provided to connect the replacement coil distributor to the original TXV. (See Fig. 3.) Insulation is also provided to wrap the copper adapter tube and brass nuts to prevent any copper or brass particles from coming in contact with the aluminum coil. Even if the adapter tube is not in contact with the aluminum coil dripping condensation from the adapter tube can be a mechanism of particulate transport.



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Fig. 3 – Replacement Coil Distributor Adapter

If it is preferred to install the old TXV external to the cabinet due to access, follow the steps below:

- Field fabricate a piece of 3/8" OD copper tubing with flare and nut to attach to the TXV outlet.
- The piston in the replacement coil must be removed. Use two wrenches to separate the 13/16" Chatleff nut from the distributor body. The threads will contain Loctite anti-seize, do not remove this from the threads.
- Remove the piston
- Reattach the inlet tube and tighten the nut finger tight plus 1/2 turn.
- Remove the old coil and install replacement coil per instructions below. Reinstall the fitting door to the cabinet.
- Field fabricate a 3/8" OD copper tubing with flare and nut.

⚠ CAUTION

PERSONAL INJURY HAZARD

Failure to follow this caution may result in personal injury.

Use of torch may cause oil to catch fire, resulting in personal injury or death. To remove components use tubing cutter only.

- Braze this tubing and nut onto the liquid stub out.
- Attach flare and nut to TXV outlet by tightening to finger tight plus 1/2 turn with two wrenches.
- Drill equalizer hole into suction line and braze the equalizer into the hole.
- Attach the TXV bulb onto the suction line and insulate.
- Insulate the entire TXV body and outlet tubing to prevent sweating.

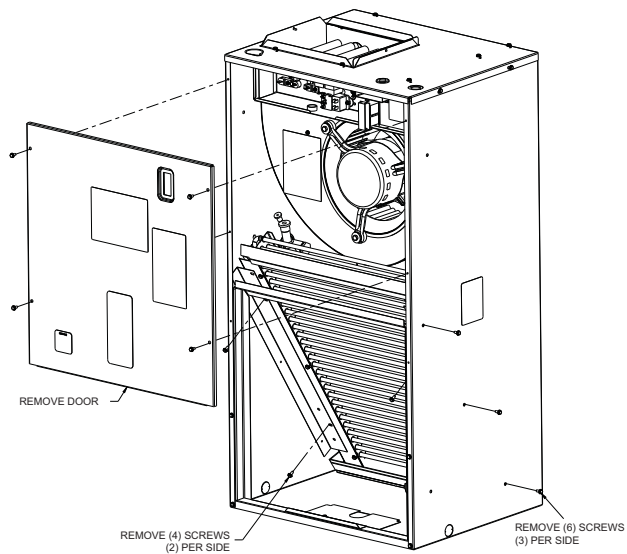


Fig. 4 – Remove Screws – Door & Coil Assembly

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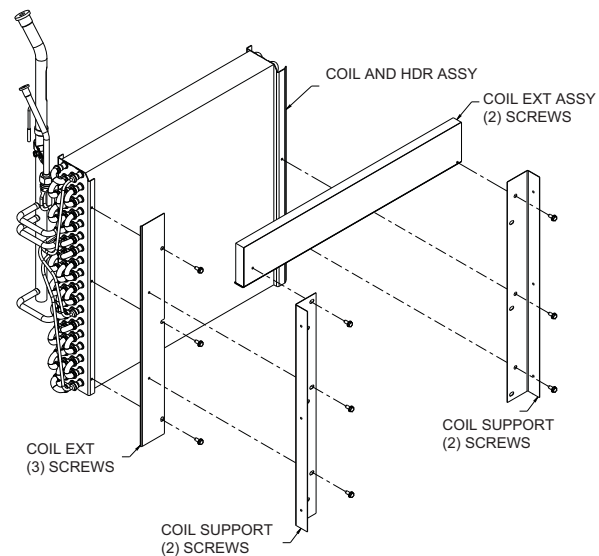


Fig. 6 – New Coil with Extension Assembly

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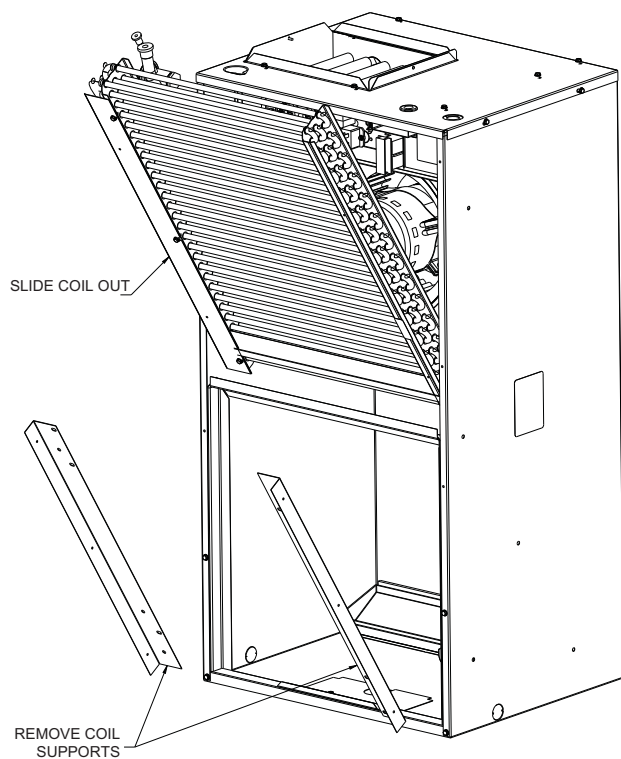


Fig. 5 – Remove Coil Assembly

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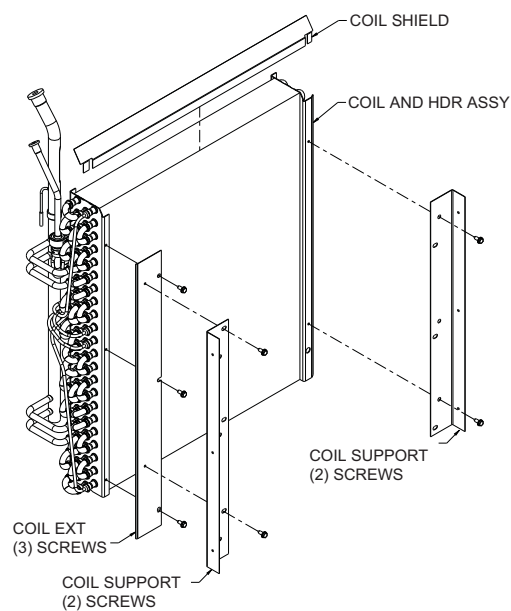


Fig. 7 – New Coil Assembly

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COIL INSTALLATION

1. Recover system refrigerant.
 - a. Attach gage/manifold set to service valves.
 - b. Start unit in cooling mode.
 - c. Front seat (close) liquid line service valve.
 - d. Operate unit until vapor pressure reaches 5 psig (35kPa), or until suction line LPS opens.
 - e. Turn off electrical supply to outdoor unit.
 - f. Front seat (close) vapor service valve.
 - g. Recover any remaining refrigerant.

NOTE: All condenser coils hold only a factory-supplied amount of refrigerant. Excess refrigerant, such as in long-line applications, may cause compressor internal pressure relief valve to open (indicated by sudden rise in vapor pressure) before refrigerant is recovered. If this occurs, turn off electrical supply to outdoor unit immediately, front seat (close) vapor service valve, and recover any remaining refrigerant.

2. Turn off electrical supply to indoor unit.
3. Disconnect condensate drain line.
4. Disconnect liquid and vapor lines from indoor coil. Use a tubing cutter to cut the lines.
5. Remove coil access and fitting panels.
6. Remove four (4) screws securing coil to coil supports. (See Fig. 4)
7. Remove coil assembly from unit. (See Fig. 5)
8. Remove six (6) screws securing coil supports to casing. Remove old coil support and discard. (See Fig. 5)
9. Remove coil supports from new coil and install in casing. (See Fig. 6 & 7)

NOTE: Smaller coils will be shipped with coil extension (Fig. 6) and will be used if applicable

10. Install new coil assembly into unit and secure with four (4) screws previously removed from unit coil supports. (See Fig. 4)
11. Reinstall access panel.
12. Reconnect liquid and vapor refrigerant lines and condensate drain line. Install new filter drier(s).

CAUTION

PERSONAL INJURY HAZARD

Failure to follow this caution may result in personal injury.

Use of torch may cause oil to catch fire, resulting in personal injury or death. To remove components use tubing cutter only.

NOTE: If a torch is used to unbraid the line set, protect the fitting panel with a wet cloth or braze shield as necessary.

13. Evacuate line set and indoor coil to 500 microns, back seat (open) liquid and vapor service valves.
14. Turn on electrical supplies to indoor and outdoor units.
15. Check system refrigerant charge and operation. See Split-System Residential Air Conditioners and Heat Pump Service Manuals for further information.