

# Installation Instructions

## Direct Expansion Coil For Manufactured Housing A024 A036 A048


CF5A

**NOTE:** Read the entire instruction manual before starting the installation.

### SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause 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 the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloth for brazing operations. Have fire extinguisher available. Read these instructions thoroughly and follow all warning or cautions attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements.

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 word DANGER, WARNING, or 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 a hazard which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **would** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions that **will** result in enhanced installation, reliability, or operation.

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 **WARNING:** Before installing or servicing system, always turn off main power to system. There may be more than 1 disconnect switch. Turn off accessory heater power if applicable. Electrical shock can cause personal injury or death.

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### INTRODUCTION

Use this instruction manual to install CF5A indoor coils on furnaces. The CF5A is an uncased coil, requiring a field-fabricated or accessory enclosure.

### INSTALLATION

The CF5A coils are shipped as they appear in Fig.1.

#### PROCEDURE 1—INSPECT EQUIPMENT

File claim with shipper if shipment is damaged.

#### PROCEDURE 2—INSTALL COIL

1. Disconnect power to furnace.
2. Remove furnace front access doors.
3. Remove furnace inner sheet metal shield.
4. Remove knockouts from furnace wrapper bottom flange and inner shield.
5. Assemble the 2 halves of coil header plate, using supplied screws. (See Fig. 3.)
6. Insert CF5A coil into furnace.
7. Replace furnace inner sheet metal shield so tube extends through knockout.
8. Align and fasten furnace inner sheet metal shield to coil header plate at each corner of the knockout using supplied screws.
9. Align coil liquid and suction connections with interconnecting tubing.
10. Attach 90° elbow, drain tube and P-trap to coil condensate drain.
11. Replace furnace front access doors.

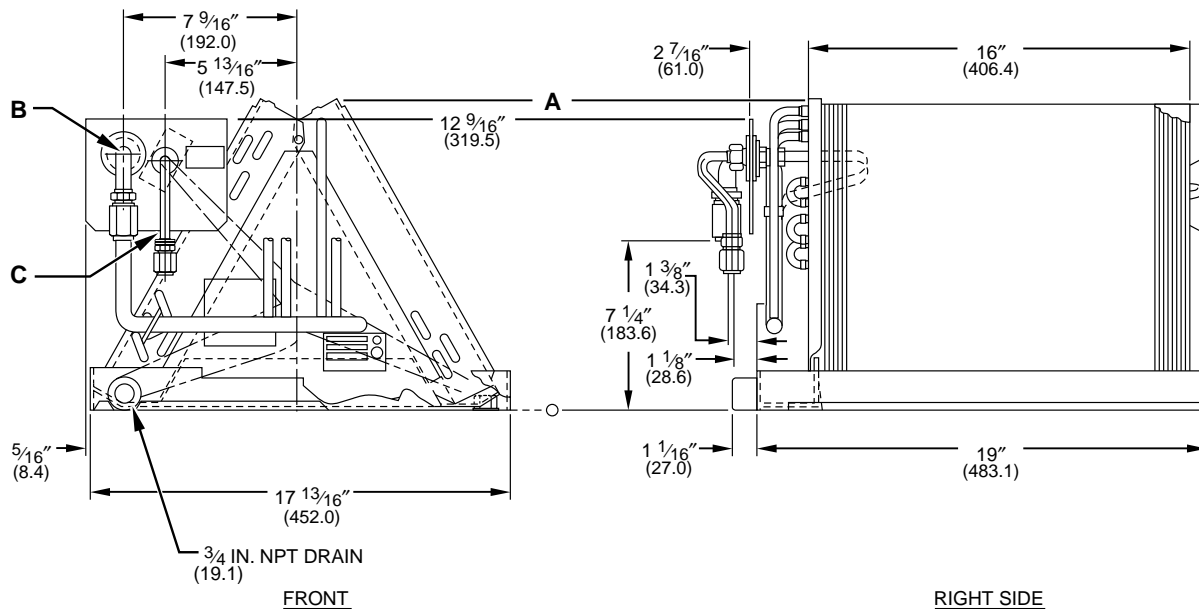


Fig. 1—CF5A Coil

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Table 1—Coil Physical Data

UNITS	A		B		C		SHIPPING WEIGHT		PISTON NUMBER
	In.	mm	In.	mm	In.	mm	Lb	Kg	
CF5A024	13-1/2	342.6	5/8	15.9	3/8	9.5	19	8.6	59
CF5A036	17-1/16	433.2	3/4	19.1	3/8	9.5	22	10	70
CF5A048	17-1/16	433.2	3/4	19.1	3/8	9.5	26	11.8	84

**PROCEDURE 3—CONNECT REFRIGERANT TUBING**

See Fig. 1 and Table 1 for coil connection sizes and location. Outdoor units may be connected to indoor sections using the field-supplied tubing of refrigerant grade, correct size, and condition.

**⚠ CAUTION: If undersized, damaged, or elliptically shaped tubing is used when making connections, leaks may result.**

When tubing package is used and mechanical connections are made within 60 sec, coils do not require evacuation. Entire suction tube must be insulated to prevent condensate damage within furnace cabinet.

Connect refrigerant liquid and suction tubes to compatible fittings on coil, using backup wrenches. Make suction tube connection first, then liquid tube connection.

For a mix-match system, use suction tube sizes recommended in outdoor unit Installation Instructions.

**A. Mechanical Connection**

1. Loosen lock nut on compatible fitting 1 turn. Do not remove. (See Fig. 4.)
2. Remove plug and be sure O-ring is in the groove inside compatible fitting.
3. Cut tubing to correct length. Insert tube into compatible fitting until it bottoms.
4. Keep compatible fitting bottomed. Tighten lock nut using backup wrench until it contacts back of coupling flange.

**⚠ CAUTION: If unit is to be installed on system with a thermostatic expansion valve, removal of indoor coil piston is required.**

**B. System Refrigerant Control**

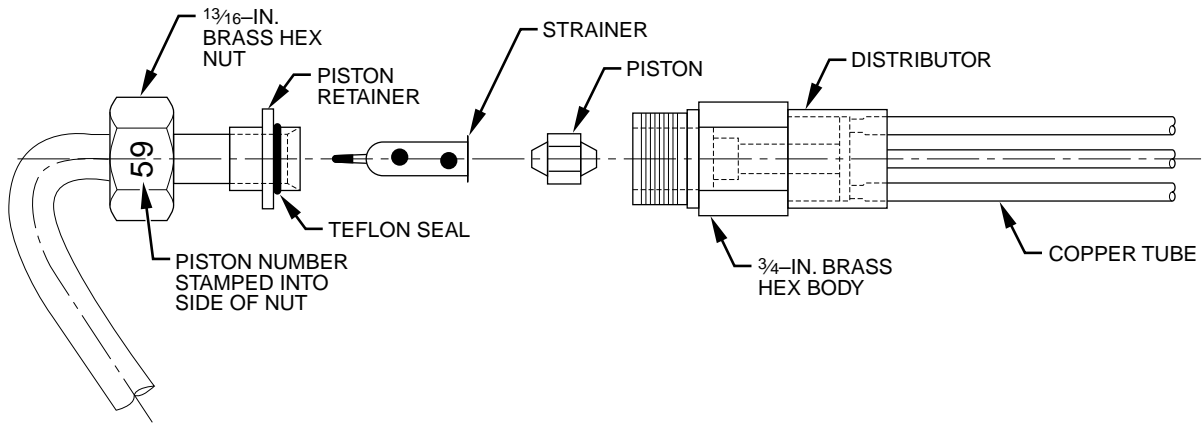
A refrigerant control device (bypass type) is factory supplied with coil. (See Table 1.) The piston has a refrigerant metering hole through it, and is field replaceable.

Replace piston if required. Check piston size stamped into side of brass hex nut. (See Fig. 2.) If piston number does not match required piston shown on outdoor unit rating plate, replace indoor piston with piston shipped with outdoor unit.

When piston is replaced finger tighten plus 1/4 turn.

**PROCEDURE 4—INSTALL CONDENSATE DRAIN**

The coil is designed to dispose accumulated water through condensate drain tubing. Install condensate trap provided. Trap must not be higher than the bottom of condensate drain opening. (See Fig. 5.)



**Fig. 2 —Refrigerant Control Device Components**

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**⚠ CAUTION:** Failure to install trap can result in condensate flowing out of coil pan and into furnace. Install trap in furnace or outside under floor.

**START-UP**

Refer to outdoor unit Installation Instructions for system start-up and refrigerant charging details.

**SERVICE**

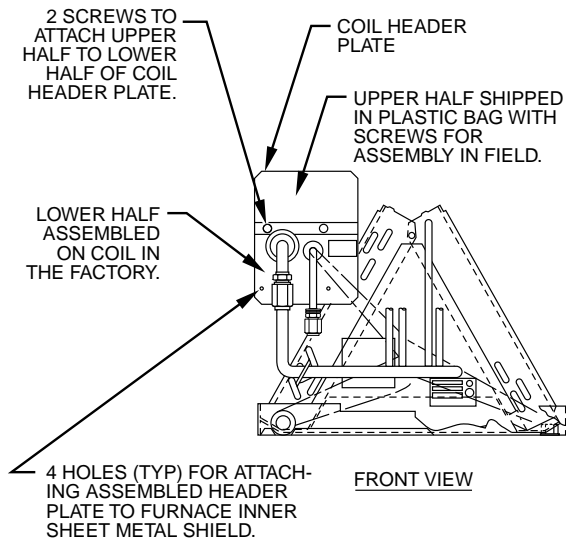
Clean and inspect coil, condensate pan, and drain before each cooling season.

**PROCEDURE 1—CLEANING COIL AND CONDENSATE PAN**

1. Disconnect power to furnace.
2. Remove front access panels from furnace plenum.
3. Remove coil front air seal by removing 5 screws securing air seal to coil. (See Fig. 6.)
4. Use vacuum cleaner nozzle to clean coil face. Be careful not to damage fins.
5. Disconnect condensate drain tube at pan drain connection.
6. Clean condensate pan with small utility brush.
7. Hold pail under condensate pan drain connection and flush pan by slowly pouring water on coil. Do not overflow pan.
8. Reconnect condensate drain tube.
9. Reinstall coil front air seal using 5 screws removed earlier.
10. Replace front access panels.

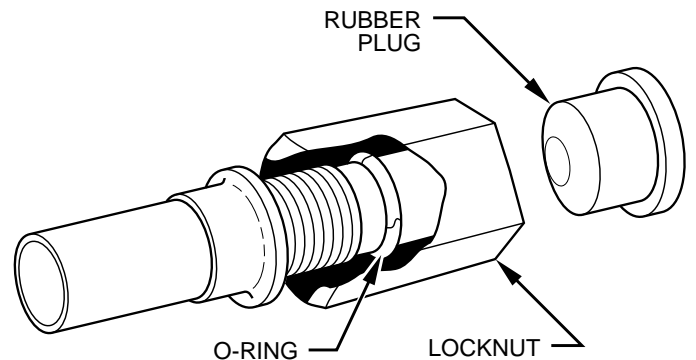
**PROCEDURE 2—REMOVING COIL**

1. Pump down unit and close service valves at outdoor unit.
2. Recover refrigerant gas from low side through gage port on suction service valve.
3. Cut refrigerant tubes within 4 in. of compatible fittings on coil.



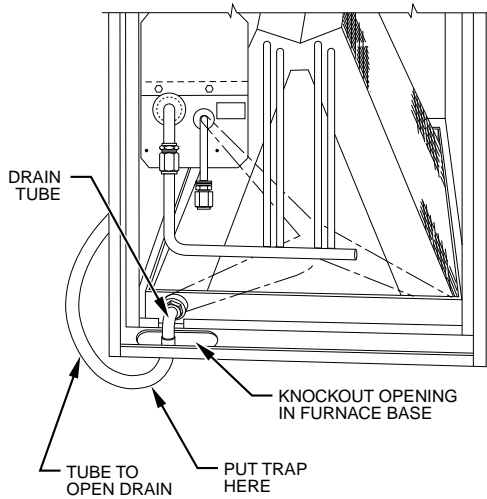
**Fig. 3—Coil Header Plate**

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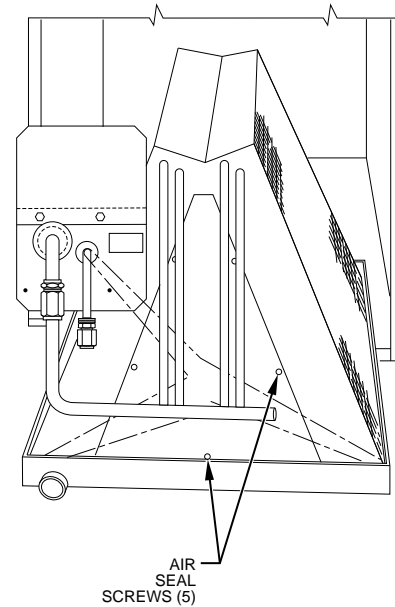
**Fig. 4.—Compatible Fitting**

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**Fig. 5—Condensate Trap**

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**Fig. 6—Removing Coil**

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4. Disconnect drain connection.
5. Remove furnace inner sheet metal shield.
6. Remove coil.
7. When replacing coil, ensure coil rear sits against rear panel.

**PROCEDURE 3—MECHANICAL CONNECTION REPAIR**

1. Pump down unit and front-seat condensing unit service valves.
2. Back lock nut off compatible fitting onto tube at indoor evaporator coil. (See Fig. 7.)
3. Cut fitting with hacksaw between threads and O-ring.
4. Remove tubing section remaining in threaded portion of fitting. Discard lock nut.

**PROCEDURE 4—RECONNECTING REFRIGERANT TUBING**

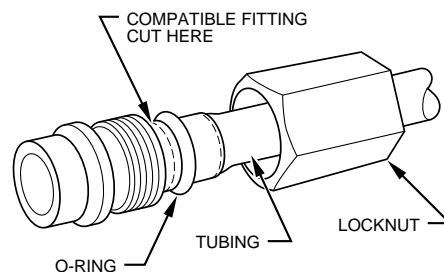
1. Remove all burrs and fittings from remaining portion of compatible fitting.
2. Insert tube end into remaining portion of compatible fitting.
3. Solder with low-temperature (430°F) silver alloy solder.

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**⚠ CAUTION: Wrap a wet cloth around rear of fitting to prevent damaging factory-made joints.**

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4. Evacuate evaporator coil and tubing at condensing unit service valves reclaiming refrigerant.
5. Operate system for 10 minutes.
6. Adjust charge to required superheat.



**Fig. 7—Repair of Mechanical Connection**

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