Installation Instructions

For Cased Coils
Upflow-Downflow
Heating-Cooling

CK5A,CK5B
CK5P

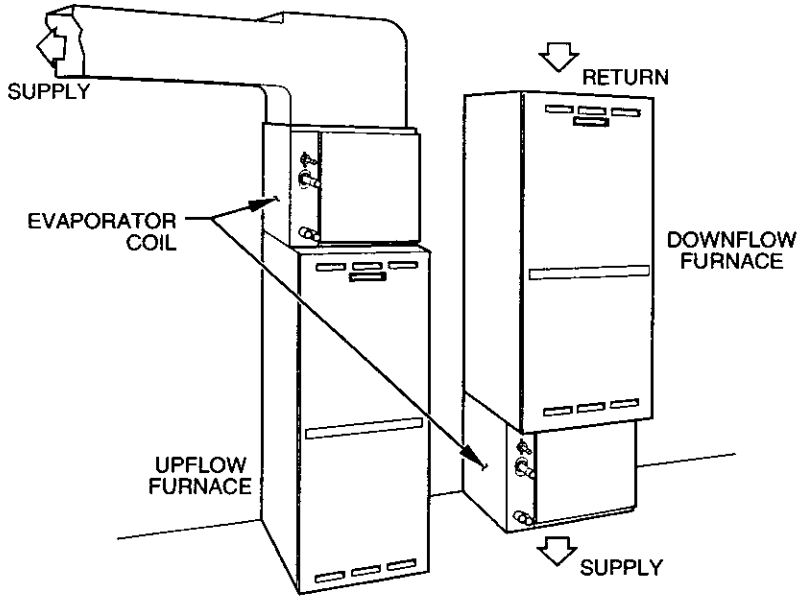

Fig. 1—Typical Coil Installation

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

This symbol → indicates a change since the last issue.

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.

It is important to 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 **would** 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: 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.**

⚠ **CAUTION: This coil contains Nitrogen precharge of 15 PSI. Release of this pressure through the center of the rubber plugs is required before removing the plugs.**

IMPORTANT: Nitrogen can leak out through the hole that the needle pierced in the plugs. This does not indicate a leaking coil nor warrant return of the coil.

Form: IM-CK5A-05 Cancels: IM-CK5A-04 Printed in U.S.A. 12-01 Catalog No. 63CK-5A4

Table 1—CK5A/CK5B/CK5P Dimensions

MODEL NUMBER	TONNAGE	METERING DEVICE		FLUSH FIT TO FURNACE WIDTH (IN.)	SHELF WIDTH (SEE FIG. 3, DIM A)	FITS NEXT SMALLER FURNACE		
		CK5A/B Piston NUMBER	CK5P TXV NUMBER			Equal Overhang	Overhang with Transition	Offset Left
*CK5(A,B,P)XA018014	1-1/2	52	EA36YD124	14-3/16	12-7/8	—	—	—
*CK5(A,B,P)XA024014	2	59	EA36YD124	14-3/16		—	—	—
*CK5(A,B,P)XA030014	2-1/2	67	EA36YD134	14-3/16		—	—	—
*CK5(A,B,P)XT036017	3	70	EA36YD144	17-1/2	16-3/16	X	—	—
CK5(A,B,P)XW024017	2	59	EA36YD124	17-1/2		—	X	X
CK5(A,B,P)XW030017	2-1/2	67	EA36YD134	17-1/2		—	X	X
*CK5(A,B,P)XA036017	3	70	EA36YD144	17-1/2		—	X	X
CK5(A,B,P)XE042017	3-1/2	78	EA36YD144	17-1/2		—	X	X
*CK5(A,B,P)XT042021	3-1/2	78	EA36YD144	21	19-5/8	X	—	—
*CK5(A,B,P)XT048021	4	84	EA36YD154	21		X	—	—
CK5(A,B,P)XW036021	3	70	EA36YD144	21		—	X	X
*CK5(A,B,P)XA042021	3-1/2	78	EA36YD144	21		—	X	X
*CK5(A,B,P)XA048021	4	84	EA36YD154	21		—	X	X
*CK5(A,B,P)XT060024	5	90	EA36YD154	24-1/2	23-1/8	X	—	—
CK5(A,B,P)XW048024	4	84	EA36YD154	24-1/2		—	X	X
*CK5(A,B,P)XA060024	5	90	EA36YD154	24-1/2		—	X	X
CK5(A,B,P)XX060024	5	90	EA36YD154	24-1/2		—	X	X

INTRODUCTION

Use this instruction manual to install indoor coils on upflow or downflow furnaces. (See Fig. 1.) Do not install coil in horizontal position. Model CK5A is enclosed in a painted casing while CK5B is available in an embossed casing; both of these coils come with pistons and both may be used with R-22 systems or Puron®. The CK5P coil is enclosed in a painted casing, however, it has a Puron TXV so it is only compatible with Puron systems.

INSTALLATION

PROCEDURE 1—INSPECT EQUIPMENT

File claim with shipper if equipment is damaged.

PROCEDURE 2—SELECT INSTALLATION PROCEDURE

NOTE: Installing coils rotated 90 degrees from the front of the furnace, in upflow or downflow applications, can cause water blow-off or coil freeze-up due to the concentration of air on one slab of the coil or lack of air to a slab in the coil. It is recommended that on this type of application, a field-supplied adapter be placed between the coil and furnace to allow air to distribute properly between all slabs of the coil.

For cased coils in upflow applications, follow **A**. See Table 1 for dimensions and overhang options. Note instructions for placement of coil casing on furnace.

For cased coils in downflow applications, follow **B**.

For uncased coils in upflow applications, follow **C**.

PROCEDURE 3—INSTALLATION OF FURNACE COILS

A. Upflow Cased Coil Installation

1. Set coil in place on upflow furnace discharge air opening. (See Fig. 1.)
2. When coil front width matches furnace front width, the coil can be placed directly on furnace.

NOTE: When model T036, T042, T048, or T060 is applied to same width furnace, remove block-off plates at casing base by removing 2 screws per plate from side of casing. (See Fig. 8.)

3. Ensure coil is level for proper condensate drainage. Do not tip coil toward condensate drain. Coil enclosure need not be fastened or screwed to furnace.
4. Following are instructions for alternative ways of overhanging coil on furnace: (See Fig. 7A, B, C.)

T MODEL (6TH DIGIT) COILS APPLIED CENTERED OVER NARROW FURNACE

1. There is no transition required for this application.
2. Remove coil from packaging and place on top of furnace with 1-5/8 in. overhang on both sides. (See Fig. 7A.)
3. Continue with normal installation practices. (See Procedure 4.)

A, W, OR X MODEL (6TH DIGIT) COIL APPLIED CENTERED OVER NARROW FURNACE WITH 2-1/4-IN. MINIMUM TRANSITION

1. Prepare transition, following recommended transition drawing. (See Fig. 5.) Fabricate a 2-1/4-in. tall (minimum) transition.
2. Place transition on top of gas furnace. (See Fig. 7B.) Secure with sheet metal screws. Place coil on top of transition. Make sure coil rests evenly on top of transition and gas furnace.
3. Secure coil to transition using sheet metal screws.

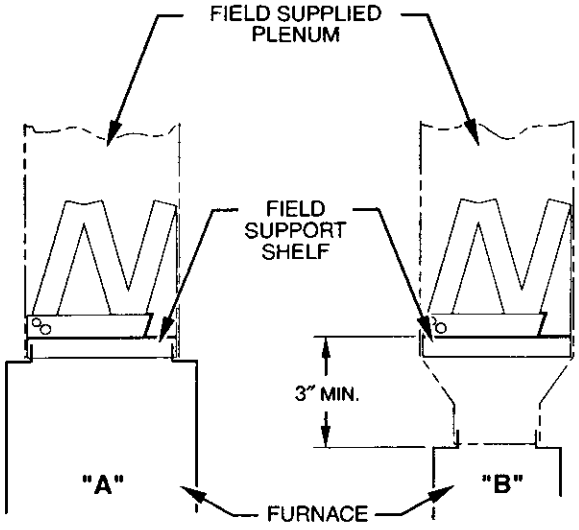

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Fig. 2—Transition Required for Overhang Except for "T" Coils (See Fig. 7)

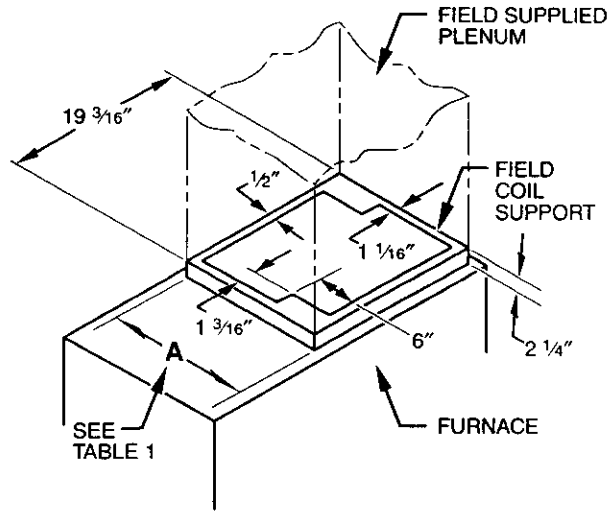

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Fig. 3—Correct Orientation of Coil Support on Furnace

⚠ CAUTION

AIR CONDITIONING COIL BEHIND THIS PANEL. DO NOT DRILL OR CUT PANEL UNTIL COIL LOCATION HAS BEEN VERIFIED BY REMOVING ACCESS COVER.

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Fig. 4—Plenum Caution Label

4. Continue with normal installation practices. (See Procedure 4.)

NOTE: If coil (cased or uncased) is not being installed in the standard orientation (front of coil matching front of furnace) then coil must be raised 2-1/4 in. above furnace.

A, W, OR X MODEL (6TH DIGIT) COIL APPLIED DIRECTLY ON TOP AND OFFSET TO THE LEFT ON NARROW FURNACE

1. Notch support rail on underside of coil cabinet to provide clearances for gas furnace flange. This rail is not visible from front of coil. To locate position of notch, place coil directly on top of gas furnace with overhanging portion entirely on left side as in Fig. 7C. Mark location of gas furnace flange on coil casing. Remove coil from top of furnace. Using tin snips, make a notch in rail large enough to allow clearance for gas flow furnace flange.
2. Place coil on top of gas furnace. Make sure coil is shifted completely to left side, and notch is sufficient so coil rests on top of furnace cabinet.
3. Prepare and install block-off plate. (See Fig. 7C.) Using field-supplied sheet metal, cut a block-off plate to be attached to bottom left side of coil casing. This plate prevents air leakage from overhanging portion of coil. Attach plate using sheet metal screws.
4. Continue with normal installation practices. (See Procedure 4.)

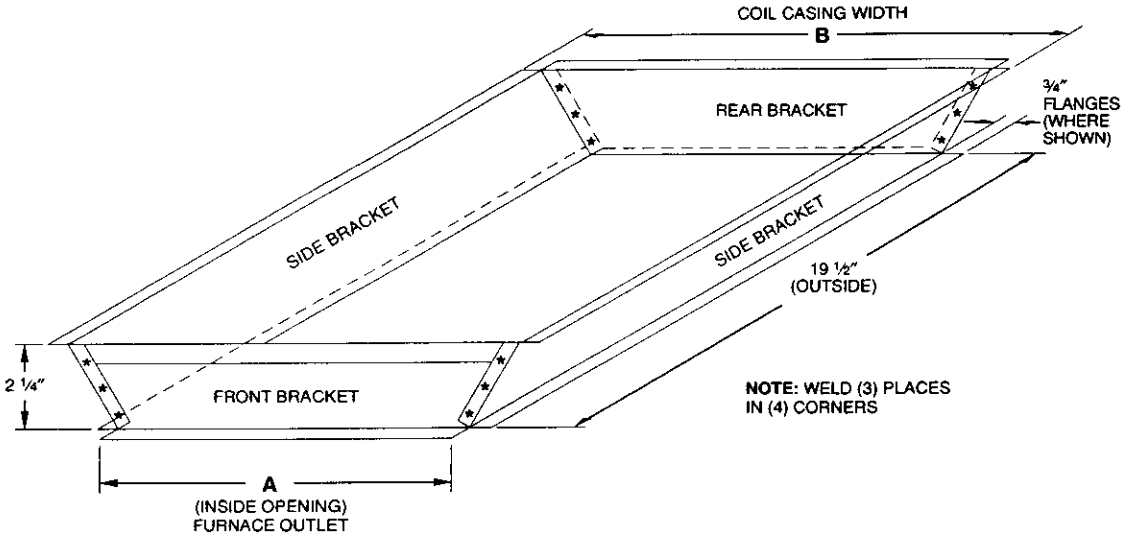
B. Downflow Cased Coil Installation

1. Place N-coil on supply duct opening.
2. When coil width matches furnace width, furnace can be placed directly on the cased coil.

NOTE: In downflow installation with a 4-way multipoise furnace, break off perforated duct flanges on furnace. (See Furnace Installation Instructions.)

3. Coils that underhang (narrower than furnace) must have a 2-1/4-in. long (minimum) field-fabricated transition between furnace and N-coil casing.
4. Coils that overhang (wider than furnace) do not require a transition in downflow application. However, a field-supplied furnace shelf should be constructed to fit furnace to coil opening.
5. Place furnace on top of N-coil casing, or field-supplied furnace shelf.

NOTE: When removing a coil from its casing in the downflow position, support the coil enclosure with field supplied bracing. (See Fig. 6.)



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Dimensions (In.)

A	B
12-3/4	17-1/2
16-1/16	21
19-9/16	24-1/2

Fig. 5—Recommended Transition

C. Upflow Uncased Coil Installation

Only the coils marked with an asterisk (*) on Table 1 can be used as an uncased application. In these models the coil can be removed from the casing and installed as an uncased coil without need to field-fabricate a coil enclosure to prevent air bypass.

1. Field fabricate coil support shelf using dimensions given in Fig. 3. The coil support shelf is required to complete the uncased installation.
2. Locate and install the coil support shelf above furnace duct flanges. the coil support shelf is designed to accommodate upflow furnace opening flanges.
3. Set coil in place.
4. Place plenum enclosure on furnace.
5. Insulate plenum enclosure.
6. Affix caution label to the right side of plenum enclosure. (See Fig. 4.) The caution label is stapled to the Installation Instructions.
7. Continue with normal installation practices. (See Procedure 4.)

PROCEDURE 4—CONNECT REFRIGERANT PIPING

Use accessory tubing package or field-supplied tubing of refrigerant grade. Suction tube must be insulated. Do not use damaged, dirty, or contaminated tubing because it may plug refrigerant flow-control device. ALWAYS evacuate the coil and field-supplied tubing before opening outdoor unit service valves.

PROCEDURE 5—CONNECT REFRIGERANT LIQUID AND SUCTION LINES

For matched and mismatched systems, use line sizes recommended in outdoor unit Installation Instructions.

The coil can be connected to outdoor units using accessory tubing packages or field-supplied tubing of refrigerant grade. Always evacuate tubing and reclaim refrigerant when making connections or flaring tubing. Leak check connections before insulating entire suction line.

SUCTION LINE

Suction line is designed for field sweat connection. Line is plugged to keep out moisture and dirt. Remove these plugs only when ready to make connection.

LIQUID LINE

⚠ CAUTION: To avoid damage to the refrigerant control device while brazing, wrap tubing or fittings with a heat-sinking material such as a wet cloth.

A. The following section applies to only CK5A and CK5B coils:

SYSTEM REFRIGERANT CONTROL

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

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

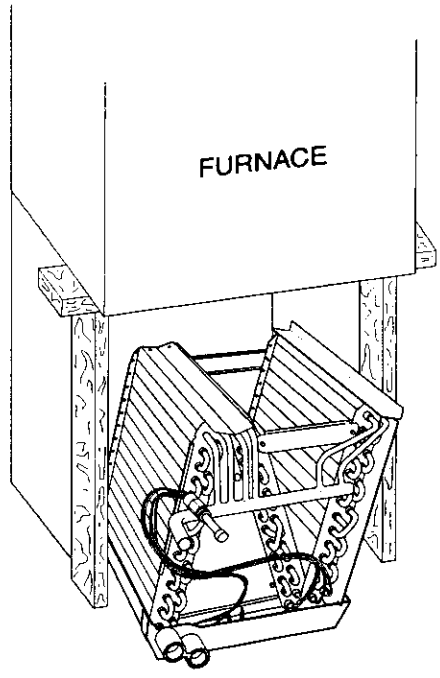

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Fig. 6—Field Supplied Bracing

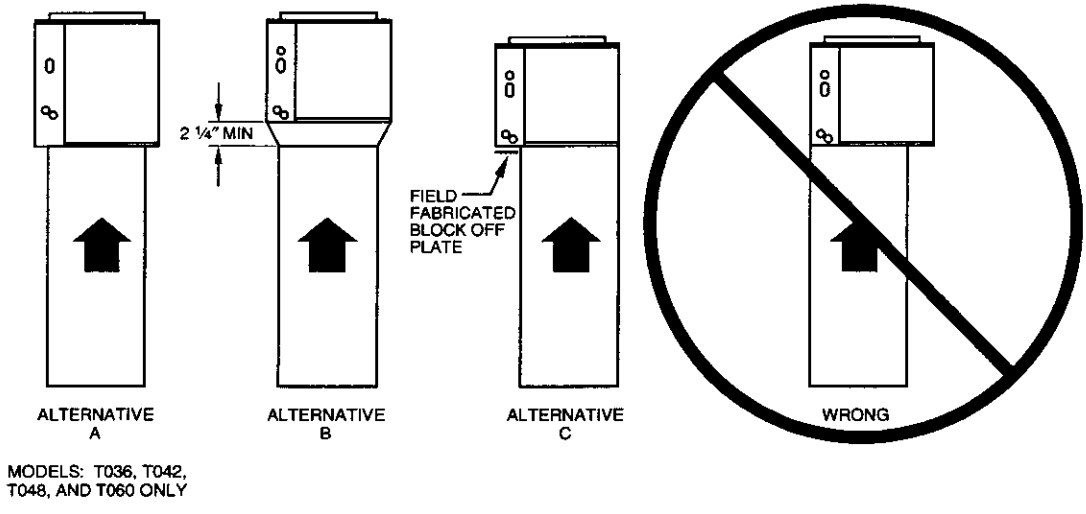

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Fig. 7—Alternative Coil Mounting Positions

The piston shipped with the indoor coil may be different from the piston shipped with the outdoor condensing unit. If this is the case, you must replace the indoor piston. Always use the piston shipped with the outdoor condensing unit.

If piston replacement is required:

1. Check the piston size stamped into side of brass hex nut. (See Fig. 9.) If this piston number does not match required piston shown on outdoor unit rating plate, replace indoor piston with piston shipped with outdoor unit.
2. When the piston is replaced, hand tighten the brass hex nut, then tighten with wrench 1/2 turn.
3. Remove rubber plug.
4. Liquid line is designed for sweat connection.

⚠ **CAUTION: Remove Teflon seal during brazing. Replace when fitting has cooled.**

PROCEDURE 6—CONDENSATE DRAIN LINE CONNECTION

The coil is designed to dispose of accumulated water through built-in condensate drain fittings. Two 3/4-in. female threaded pipe connections are provided in each coil condensate pan.

Install a trap in condensate line for coil as close to coil as possible. Make trap at least 3 in. deep and no higher then the bottom of unit condensate drain opening. (See Fig. 11.) Pitch condensate line 1 in. for every 10 ft of length to an open drain or sump.

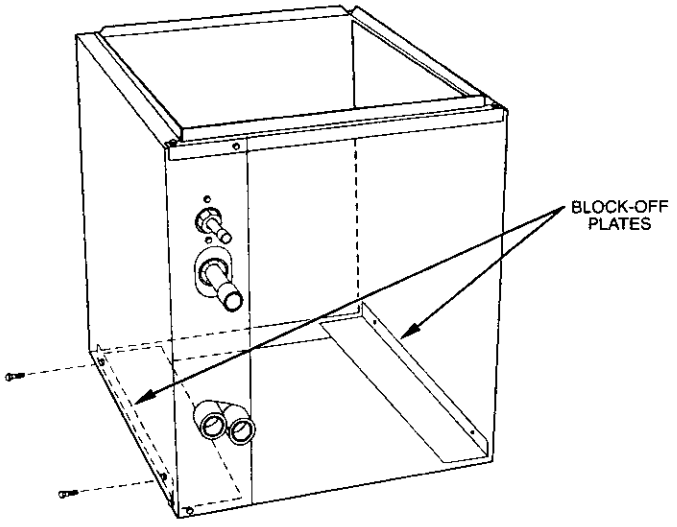

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Fig. 8—Block-Off Plate Removal

NOTE: If unit is located in or above a living space, where damage may result from condensate overflow, a field-supplied, external condensate pan should be installed underneath entire unit, and a secondary condensate line (with appropriate trap) should be run from the unit into the pan. Any condensate in this external condensate pan should be drained to a noticeable place. As an alternative to using an external condensate pan, some localities may allow the running of a separate 3/4-in. condensate line (with appropriate trap) per local code to a place where the condensate will be noticeable. The owner of the structure must be informed that when condensate flows from secondary drain or external condensate pan, the unit requires servicing or water damage will occur.

NOTE: To avoid drainage problems, test the primary drain line by slowly pouring water into the pan. Check piping for leaks and proper condensate drainage. Using the secondary drain as explained in the above note provides future protection against overflow due to a clogged primary drain.

PROCEDURE 7—HUMIDIFIER APPLICATION

When installing a humidifier in a system which contains an N-Coil, consideration must be given to location of coil slabs. (See Fig. 12.)

1. Care must be taken to prevent damage of N-coil when attaching humidifier to coil casing or plenum.
2. The models makred with an * in Table 1 are shipped with a label to be applied to plenum to indicate slab location. This is needed only in cases where the humidifier is not installed with original equipment. Label will alert future service and installation technicians about coil slab location.
3. Ensure that humidifier has adequate airflow.

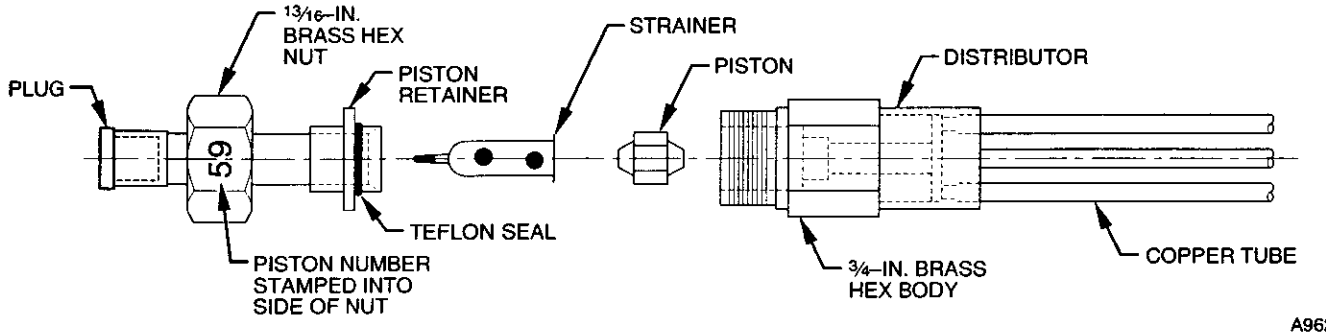

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Fig. 9—Refrigerant Control Device Components for CK5A and CK5B

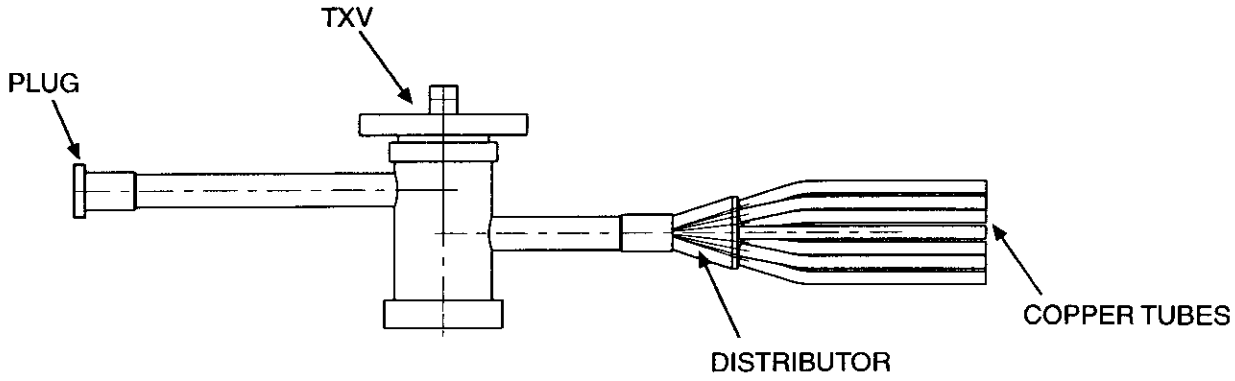

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Fig. 10—Refrigerant Control Device Components for CK5P

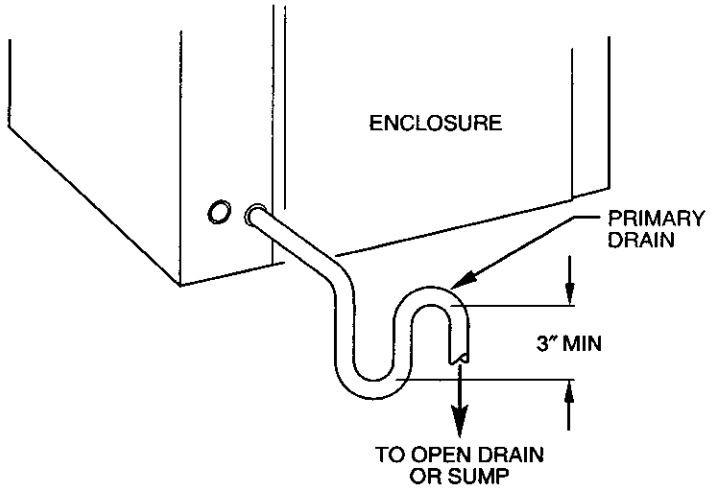

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Fig. 11—Condensate Trap

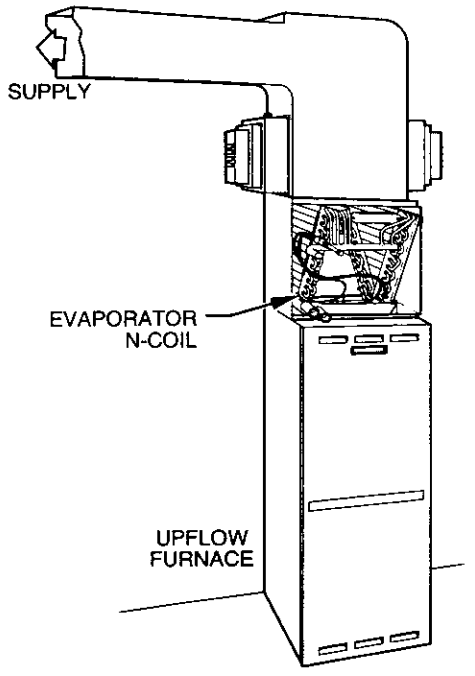

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Fig. 12—Installation of Humidifier in System with N-Coil