Warren Electric Heaters Model W4Y Series

INSTALLATION INSTRUCTIONS

Date: 8-29-07

Air Handler Model

FY4A, FE4A, FA4A, FA4B, FA4C, FC4B, FC4C, FC4D, FB4A, FB4B, FB5A 018-070 40YA/YR 018-060 / 617A, 618A 018-060 FH4A 001-004 / FK4A, FK4B, FK4C 001-006 PF1MNA 018-071

GENERAL

This Warren Technology Electric heater is engineered, designed, and approved to be installed in the Carrier FY4A, FE4A, FA4A, FA4B, FA4C, FC4B, FC4C, FC4D, FB4A, FB4B, FB5A 018-070 / 40YA/YR 018-070 /617A, 618A 018-060/ FH4A 001-004 / FK4A, FK4B, FK4C 001-006, Bryant 617A/618A 018-060; and Payne PF1MNA 018-071 series Air Handlers. Before proceeding, check the heater label for correct voltage and KW requirements.

Installation and servicing should be performed by trained service personnel. Before installing the heater, inspect thoroughly for shipping damage. *Notify the shipper immediately if any damage is found.* Check all porcelain insulators and element wire to see that none have been deformed or broken. Clean all dirt, dust, an moisture from equipment. Check for proper clearance of live parts, between phases and to ground. Make sure that all required barriers are in place. Check that conductors run in multiple to insure that they are properly phased.

WARNING 🛝

Before performing service or maintenance operations on system, turn off all main power switches. There may be more than one disconnect. Turn off accessory heater power switch if applicable. Electrical shock can cause personal injury. TAG DISCONNECT SWITCH(ES) WITH A SUITABLE WARNING LABEL.

HEATER INSTALLATION

A. INSTALL ELECTRIC HEATER ASSEMBLY

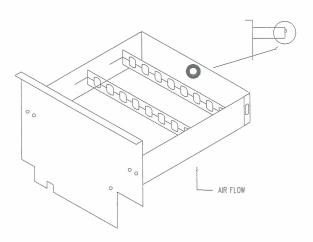
Refer to base unit instructions as required.

Make sure power to unit is off.

Remove access panel of fan-coil unit.

Disconnect two power wires (black and yellow pigtail leads) from terminals L1 and L2 on printed circuit board. Remove cooling control cover plate from fan coil. Save sheet metal screws. (NOTE: on larger size heater, full adapter plate must be removed.)

Install heater assembly into blower access opening of unit so that the mounting plate of the heater is flush with the base unit and the element support dimples engage the matching dimple in the AHU heat shield. (see drawing) Secure with sheet metal screws.



B. ATTACH FUSE BOX OR CIRCUIT BREAKER BOX

For 15 and 20KW fuse models, a separate fuse box is provided. Attach fuse box to side of fan coil unit by inserting fuse box tab between insulation and left side of unit and fan deck. Mount front of assembly to side flange with two screws provided.

For heaters with circuit breaker option, mount circuit breaker assembly to unit with screws provided. Circuit breaker models require the installation of a separate cover plate in the unit door. Mount this cover plate on the inside of door opening with screws provided.

C. FOR DOWNFLOW INSTALLATIONS WITH CIRCUIT BREAKERS

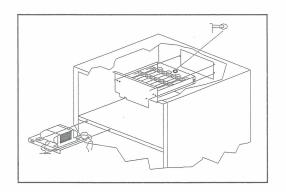
Downflow installations require that the circuit breaker(s) be rotated 180° so that the "on" position is up. Remove the circuit breaker(s) from the housing by loosening the screws on the breaker support plate, rotate the breaker 180° and reinstall the support plate.

C. ATTACH SINGLE POINT AUTOFORMER IF PROVIDED BY WARREN TECHNOLOGY (ONLY ON 480 VOLT HEATERS BEING WIRED INTO 208/240 VOLT, SINGLE PHASE AIR HANDLER.)

Attach autoformer plate to shelf of fan coil unit as shown with screws provided.

Refer to schematic provided for wiring information and electrical connection section of these instructions.

Autoformer wiring is color coded. Color coding illustrated on schematic.



WARNING A

Before performing service or maintenance operations on system, turn off all main power switches. There may be more than one disconnect. Turn off accessory heater power switch if applicable. Electrical shock can cause personal injury. TAG DISCONNECT SWITCH(ES) WITH A SUITABLE WARNING LABEL.

ELECTRICAL CONNECTIONS

All electrical connections, wire sizes, types, and conduit sizes shall meet the National Electrical Code and State and/or Local Codes.

Refer to Air Handler Unit instructions for recommended wiring procedures and applicable fan speed settings.

Connect all power and control leads, including quick-connect plugs as shown in heater schematic diagram. All connections should be made inside the air handler and comply with the National Electric Code, and/or State/Local Codes. Heaters with factory installed fuses or circuit breakers may be installed on a branch circuit protected by either a fuse or circuit breaker. For all other heaters, the branch circuit must be protected by a fuse or circuit breaker supplied by others.

Be sure that ALL electrical terminal connections, clamps, screws, etc. are tight before proceeding. Check operation as described in the Start-up section.

DUCT CONNECTIONS

To assure maximum fan efficiencies and to avoid limit switch cycling, duct connections should conform to ASHRAE and/or SMACNA recommendations.

START-UP AND CHECK-OUT

- 1. Refer to base unit installations instructions as required.
- 2. Check for loose terminal connections.
- 3. Check that all fuse and circuit breaker circuit interrupting ratings are adequate.
- 4. Turn on unit and heater power.
- 5. Set thermostat to call for heat.
- 6. Check operation of heater, comparing rated amperage against actual amperage for conformance.
- 7. Check that air flow across heater is at or above recommended. Adjust as required.
- 8. Verify amp draws of all sequence of controls.
- 9. Any modifications or repairs to this equipment without written permission from the factory will be done at the installers own risk and expense.

SERVICE

<u>Fuses/Circuit Breakers</u> - malfunction will interrupt power to the unit. *Check for cause of failure, correct and replace fuses or reset circuit breaker.*

<u>Limit Switch/Fusible Link</u> - malfunction prevents heating element(s) from being energized. *Check for cause of malfunction, (i.e. air flow, fan failure, etc.) correct an replace fusible link if open.*

Sequencer - malfunction will cause heater to not come on or run continuously. Replace faulty sequencer.