WARREN TECHNOLOGY
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Model WYS/WYM 1 - 30 KW	208/240/60/1 277/60/1 208/240/60/3 460/480/60/3	Installation Instructions Date: 9-10-93	York N2AHD, N4AHD, N1FAD N3FAD, N1VSD Luxaire NAMB, NABF, NCMB, NCBF, NACS

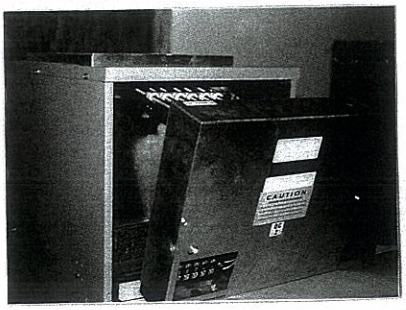
GENERAL

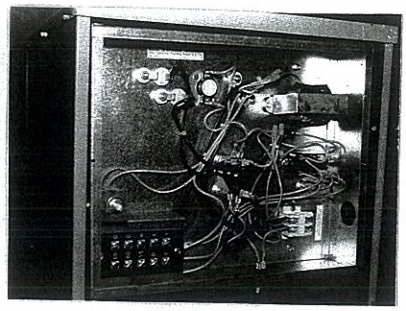
This Warren Manufacturing Company electric heater is engineered and designed to be installed in the York N2AHD, N4AHD, N1FAD, N3FAD and N1VSD series and the Luxaire NAMB, NABF, NCMB, NCBF and NACS series air handler.

Before installing the heater, inspect thoroughly for shipping damage. Notify carrier immediately if any damage is found. Check all porcelain insulators for breakage and inspect heater element wire to see that none have been deformed. Clean all dirt, dust, and moisture from equipment. Check for proper clearances of live parts, between phases, and to ground and make sure that all required barriers are in place. Check conductors run in multiple to insure that they are properly phased.

HEATER INSTALLATION

This electric resistance heater is designed for field installation in the discharge air compartment of the N2AHD series air handler unit.





1. Refer to base unit installation instructions as required.

2. Remove the heater/fan motor access panel of air handler.

3. Remove internal cover plate. Save sheet metal screws. Discard cover plate.

4. Install heater assembly into access opening located in the front vestibule of the air handler. Be sure the heater mounting plate is flush with base unit and heating element are not in contact with any object. Secure with sheet metal screws from cover plate.

5. Locate fan motor leads from air handler unit and plug into receptical on the bottom of the electric heater control box.

ELECTRICAL CONNECTIONS

CAUTION: DISCONNECT ALL ELECTRICAL POWER BEFORE PROCEEDING. FAILURE TO DO SO MAY RESULT IN ELECTRICAL SHOCK.

1. All electrical connections, wire sizes and type and conduit sizes shall meet the National Electric Code, State and Local Codes. Main power supply, minimum wire sizes, circuits, fusing, etc., is shown on schematic wiring diagrams.

2. Refer to air handler unit instructions for recommended wiring procedures.

3. Connect low voltage control wires as shown in schematic diagram.

4. Connect power wiring as shown in schematic diagram. All connections should be made inside the heater control box and comply with National Electric Codes, State and Local Codes. Heater with factory installed fuses or circuit breakers may be installed on a branch circuit protected by either a fuse or a circuit breaker. For all other heaters, the branch circuit must be protected by a fuse or a circuit breaker supplied by others.

5. Make all power wire spliced connections inside heater control box. Separate all wires from incoming power leads.

6. Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding.

7. Check operation as described in start-up section.

ADDITIONAL ELECTRICAL CONNECTIONS FOR INSTALLATION IN THE N1VSD / NACS SERIES VARIABLE SPEED AIR HANDLERS

5-20 KW (240 volt) Single Phase Only

1. Refer to the base unit installation instructions and the corresponding Warren heater schematic.

2. Connect the W1VSD plug assembly / wiring harness supplied to the Warren heater control terminal block as shown on schematic and plug into the N1VSD / NACS connector board. See base unit installation instructions for T-stat connections to N1VSD / NACS connector board terminals.

3. **WITH THE POWER OFF** reverse the shielded black lead on the fan relay and the shielded red lead on the fan plug.

START-UP and CHECK-OUT

CAUTION: Before proceeding, verify that all wiring is correct per factory approved schematic. Notify factory immediately of any discrepancies.

1. Refer to base unit installation instructions as required.

2. Check for loose terminal connections.

3. Check that all fuse and circuit breaker short circuit interrupting ratings are adequate.

4. Turn on unit and heater power.

5. Set thermostat to call for heat.

6. Check operation of heater.

7. Check that air flow across heater is at or above minimum recommended fan speed. Adjust as required.

8. Any modification or repairs to this equipment without written permission from the factory will be done at the installers own risk and expense.

SERVICE

Fuses / Circuit Breaker - Malfunction will interrupt power to unit. *Check for cause of failure, correct, and replace fuses or reset circuit breaker.*

Limit Switch / Fusible Link - Malfunction prevents heating element(s) from being energized. *Replace switch if malfunction occurs.*

Sequencer - Malfunction will cause heater to not come on or not shut off. *Replace faulty sequencer. Do not attempt to replace coil or dress contacts.* **NOTE** the sequencer is a time delay type and may require up to 90 seconds to energize.

Fan Relay - Malfunction will cause fan to not come on or not shut off. *Replace faulty relay. Do not attempt to replace coil or dress contacts.*

Transformer - Malfunction will not provide 24 volts on secondary side of transformer. *If proper line voltage is applied to primary leads and no secondary voltage is present, replace transformer.*