Electric Heater Model WTM-X series	INSTALLATION INSTRUCTIONS Date: 08/25/2020	PIONEER DR Size 24 - 60 Air Handlers

GENERAL

This electric heater series is engineered, designed, and approved to be installed in the Pioneer DR series air handlers. Before proceeding, check the heater label for the correct voltage and KW requirements.

Installation and servicing of this equipment should only be performed by trained and qualified personnel and NOT accesible to the general public. Before proceeding with the heater installation, inspect thoroughly for shipping damage. Notify the shipper 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.** Make sure that all required barriers are in place. Check conductors run in multiple to insure that they are properly wired. Refer to base installation instructions for complete unit installation details. **Verify that all elements are properly secure in their ceramic holders.**

SAFETY WARNING ⚠

This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
Note: appliance not for use exceeding 2000 m.

HEATER INSTALLATION

1. Refer to the base unit installation instructions as required. Affix Warren Heater installer label to the equipment access panel.
2. Remove blower access panel of the air handler unit.
3. Remove cover plate from back panel of air handler control and wiring compartment.
4. Before inserting the heater into the blower section, bend the heater alignment tabs 90 degrees out. These tabs are located on the endcap section of the heater and will slide into the upper alignment holes in the back of the air handler box (see fig. 1 & 2).
5. Position and slide heater assembly into blower section (see fig. 3) through the access opening (mounting position is important, check the label "AIR FLOW" on the heater for correct position). Secure heater into place with screws removed from cover plate.
6. Carefully separate wires from bottom section of the breaker bracket. Secure the bracket to the cabinet mounting rail with screws provided. Use wire ties to fasten loose wires around the bracket area. All excess wire needs to be routed away from sharp edges).
7. Remove the conduit knockout in unit cabinet for electrical connections. Install the appropriate size conduit connector.
8. Remove circuit breaker knockout(s) in unit access panel as required and cut insulation from the breaker knockout area.
9. Apply wiring diagram to the cabinet for future reference.

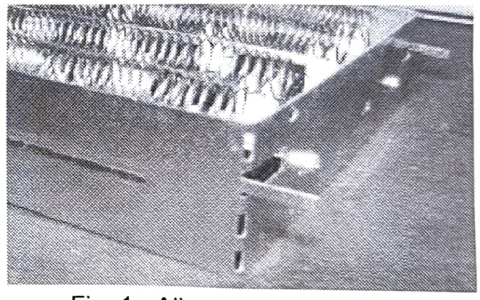

Fig. 1 - Alignment tabs.

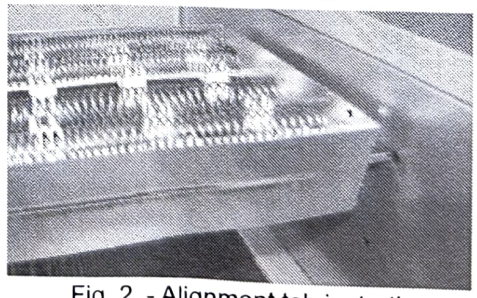

Fig. 2 - Alignment tab instertion.

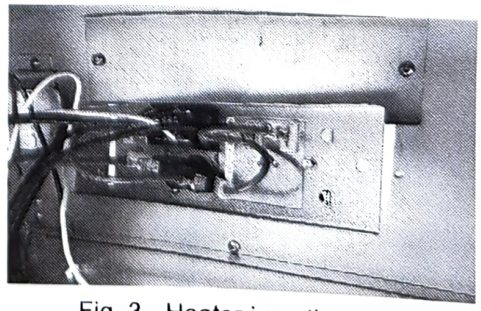

Fig. 3 - Heater insertion.

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.*** When installed in a garage, heater elements should have a clearance of 18" from the floor, insure that the area is ventilated.

ELECTRICAL CONNECTIONS

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. Use copper wire only.
2. Power may be brought into the unit through the top when unit is vertical position or through the left or right side panel.
3. Refer to base unit instructions for recommended wiring procedures.
4. For electric heat installations connect the supply power to the circuit breaker supplied with the heater .
5. Connect the 4-pin plug to the control circuit board of the air handler (see fig. 4). Use wire nuts provided to connect the Black and Red wire leads from the adaptor harness to the AHU incoming power leads.
6. Separate all wires from incoming power leads.
7. **Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding. Verify that there are no possible shorts to ground.**
8. Check wiring diagram supplied with heater for specific connections and information.
9. Check operation as described in start-up section.

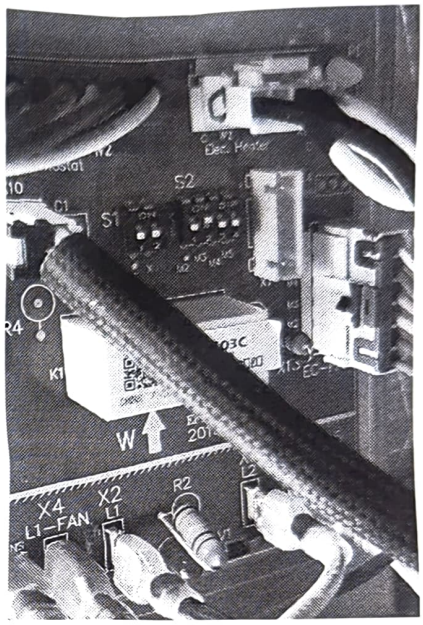

Fig. 4 - Installed 4-pin plug

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.

Note: The electric heater in this system contains a manually resettable over-temperature safety limit. In the event of a "NO HEAT" limit trip, check for possible issues with dirty filters, blocked outlets, or possible fan failure prior to resetting. To reset the limit circuit, simply turn the system off at the thermostat (or at the unit power circuit breaker) and then immediately turn the system back on. If a limit reset is required more than 2 times in a short period of time, consult a service technician before reenergizing the system.

7. **Check that air flow across heater is at or above minimum recommended fan speed. Refer to base instructions for Air Flow Data Tables and adjustment of Fan motor speed.**

CAUTION: When commissioning any AHU with electric heat, **ALWAYS** check to see if the heater is cycling on its automatic reset high temperature limit when the system is producing the highest temperature leaving the AHU coil. If the heater is cycling increase the air flow by increasing the fan speed or lowering the ductwork static pressure

HEATER KIT CONTENTS

1. Heater assembly
2. Installation Instructions
3. Installer label
4. Wiring diagram
5. (1) wire tie

USER CAUTION: The use of improperly selected air filters/ and or operation with dirty filters may result in insufficient airflow which may result in abnormal operation of electric heaters and tripping of temperature safety limits. Also, insufficient airflow will degrade the efficiency of the system (SEER rating) and excessive wear and premature failure of the system compressor may result. Other conditions, such as undersized or obstructed ductwork, may also cause insufficient airflow. It is recommended that a qualified technician be consulted to ensure proper airflow and air filtration selection and application. See (**www.lowairflow.com**) for more information.