


<p><b>Warren Electric Heater Model WJA Series</b></p>	<p align="center"><b>INSTALLATION AND OPERATING INSTRUCTIONS</b></p> <p align="center">   <b>WARREN TECHNOLOGY</b>          DATE: 3-1-06       </p>	<p><b>JANITROL/GOODMAN</b>          PC / PCK 024-060 PACKAGED          AIR CONDITIONER (10 SEER)</p> <p>PCJ / PCKJ 024-060 PACKAGED          AIR CONDITIONER (12 SEER)</p> <p>PH / PHK 024-060 PACKAGED          HEAT PUMP (10 SEER)</p> <p>PCH / PHKJ 024-060 PACKAGED          HEAT PUMP (12 SEER)</p>
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## GENERAL

This Warren Technology electric heater is engineered, designed, and approved to be installed in the Janitrol PC, PCK, PCJ, PCKJ, PH, PHK, PCH, PHKJ 024-060 package units. 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 carrier immediately if any damage is found. Check all porcelain insulators for breakage and inspect heater element wire. Clean all dirt, dust and moisture from equipment. Check for proper clearances of live parts (between phases and ground connection) and verify that all required barriers are in place. Check 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**

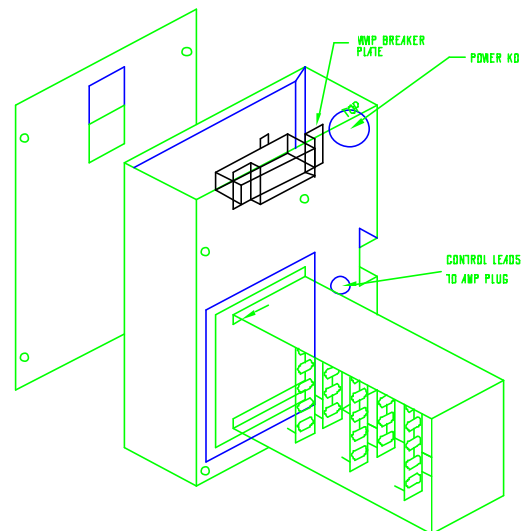
## HEATER INSTALLATION

### **INSTALL HEATER AS FOLLOWS:**

1. Refer to the base unit installation instructions as required. Affix Warren installer label to equipment access door.
2. Remove control and blower access panels (save screws).
3. Remove blower block off panel (save screws).
4. Install heater inside the transition duct.
5. Secure heater to transition duct using the screws saved from step 3.
6. Replace access panels.

### **FOR THE SMALL CHASSIS PC/PH PACKAGE UNITS:**

1. Remove heater control box cover (save screws).
2. Remove heater element plate screws and slide heater element section half way out of the enclosure.
3. Install the heater in the transition duct.
4. Replace the heater element plate.
5. Secure heater to transition duct using the screws saved.
6. Replace access panels.



**Note:** Heat resistant duct connector (UL 181 listed flex duct) must maintain a 1" minimum clearance to any adjacent material for the first 30" of supply duct.

## ELECTRICAL CONNECTIONS

**CAUTION:** Disconnect all electrical power before proceeding. Failure to do so may result in electrical shock. The unit must have an uninterrupted or unbroken electrical ground to minimize personal injury if an electrical fault should occur. Ground may consist of an electrical wire or approved conduit when installed in accordance with local codes and ordinances.

## **USE COPPER WIRE BETWEEN DISCONNECT SWITCH(ES) AND UNIT.**

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., are shown on schematic wiring diagrams.
2. Factory branch circuit wiring and fusing are in accordance with National Electrical Code limit of maximum (48) amps per circuit to provide protection from excessive current draw.
3. Plug male connector into the female connector on the bottom side of the control box.
4. For the PC model line, install a Janitrol CHT 18-60 heat/cool thermostat and run the wiring to the unit's low voltage bushing. For the PH model line, install a Janitrol HPT 18-60 heat pump thermostat and run the wiring to the unit's low voltage bushing.
5. Connect the thermostat wires to the wires in the low voltage barrier by color code. Red to red (24V), green to green (blower motor), yellow to yellow (compressor), white to white (optional heat), (brown to brown if using OT 18-60 thermostat for staging optional heat).

Connect the thermostat wires to the terminal block in the low voltage barrier as follows: red wire to R terminal (24V), green wire to G terminal (blower motor), orange wire to O terminal (1st stage heat), white wire to W1 terminal (2nd stage heat), brown wire to W2 terminal (if using OT 18-60 thermostat for staging optional heat), yellow wire to Y terminal (cool), blue wire to C terminal (common).

6. Remove the knockout on the front corner of the unit.
7. Run wire through the knockout and connect to the heater box.
8. Connect properly sized wire to the lugs on the breakers(s) (or contactor if three phase).
9. All connections should be made inside the air handler and comply with National Electric Codes, State and Local Codes. Heaters with factory installed fuses or circuit breakers may be installed on a branch circuit protection 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.
10. Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding.
11. Check operation as described in start-up section.

## **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 installer's 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.*

**Contactor/Sequencer** - Malfunction will cause heater to not come on or not shut off. Replace faulty contactor. *Do not attempt to replace coil or dress contacts.*

**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.*