

INSTALLER'S GUIDE

HDPC-IN-8A
18-AH06D10-02

Library	Service Literature
Product Section	Unitary
Product	Unitary Accessories
Model	Heat Pressure Control
Literature Type	Installer's Guide
Sequence	8A
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IMPORTANT -- This is customer property and is to remain with this unit. Please return to service information pack upon completion of work.

Models:
BAYLOAM323A
(208/230V/460V)

Used With:
TCC - F YCC - F WCC - F
TCX - F YCX - F WCX - F
TCY - F YCY - F WCY - F

Head Pressure Control

NOTE: As the head pressure control is applied to units operating at low ambient conditions, it is necessary that these units have compressor crankcase heat. If the unit does not have a factory provided crankcase heater, than field installation of the crankcase heater kit BAYCCHTOO3A is required.

INSTALLATION for TC*/YC*/WC*048-060F units

NOTE: The controller is factory calibrated for operation on the TC*/YC*/WC*048F and -060F units. No additional calibration is required.

⚠ WARNING: TO PREVENT INJURY OR DEATH DUE TO ELECTRICAL SHOCK OR CONTACT WITH MOVING PARTS. LOCK UNIT DISCONNECT SWITCH IN OPEN POSITION BEFORE SERVICING UNIT.

1. Remove the control box access panel.
2. Remove the heater section access panel.
3. See figures 1 or 2 for mounting the head pressure control inside of the heater/furnace compartment.
4. Feed the high and low voltage electrical wires through the top opening in the side of the electrical control box. See Figures 1 or 2. Connect the electrical wires to the controller and also make the electrical connections in the unit control box per the wiring diagram in Figure 4. The black motor lead must be moved from the CC-2 contactor and connected with the line connector to the BLACK wire (from kit with ferrite inductor) to the load (#1) terminal on the controller. Attach the BLUE wire (from kit) to the same CC-2 contactor (where the black motor lead was attached) and to the line (#2) terminal on the controller. Attach the RD and the BL (18 ga) low voltage leads to the 24V source (YC* use R and B on the ignitor board) (TC*/WC* use RD and BL thermostat leads).
5. Feed the sensor wires through the top opening on the condenser side into the condenser section. See Figures 1 or 2. Connect the sensor wires to the controller per the wiring diagram in Figure 4.
6. Mount the sensor to the liquid line as close to the condenser coil as possible (see Figure 3). Use all of the special tape provided to secure the sensor to the liquid line. Stretch the tape slightly, and

lap it over the sensor, as you wrap to insure a firm contact between the metal tab on the sensor and the liquid line.

7. After the controller is wired and **BEFORE** applying power, with an ohmmeter measure the resistance value between load (#1) terminal on the controller and the CC-1 side of the contactor(RED wire). Five ohms or greater should be observed. **DO NOT** apply power until you review the wiring diagram, and correct the wiring errors.

NOTE: If installed on WC*-F heat pump units, the relay (BAYRLAY005A) **MUST** be disconnected in order to get a proper reading.

INSTALLATION for TC*/YC*/WC*018-042F UNITS

NOTE: The 1/5 H.P. 230 V outdoor fan motor in the the following units must be replaced with the **BAYMOTR307A** 1/2 H.P. 230 V outdoor fan motor.

T/Y/WC*018F1	T/Y/WC*036F1	T/Y/WC*042F1
T/Y/WC*024F1	T/Y/WC*036F3	T/Y/WC*042F3
T/Y/WC*030F1		YCC048F1M
		YCC046F3M

T/Y/WC*036F4 (BAYMOTR406A) 460V

Follow steps 1-7 on page 1.

CONTROL OPERATING CHARACTERISTICS

If the liquid line temperature is:

1. Below 50°F, condenser fan will not start.
2. At 53°F, motor will start at full speed and full voltage for 5 seconds and reduce to minimum speed.
3. Between 53°F and 78°F liquid line temperature the condenser fan motor will start at full speed and full voltage for 5 seconds and then reduce down to a speed proportional to the liquid line temperature.
4. Between 78 °F and 80 °F liquid line temperature, the motor speed changes from approx. 90% of full rpm to full synchronous rpm.
5. Above 80°F liquid line temperature, the condenser fan motor remains at full synchronous rpm and the controller switches directly to line voltage.

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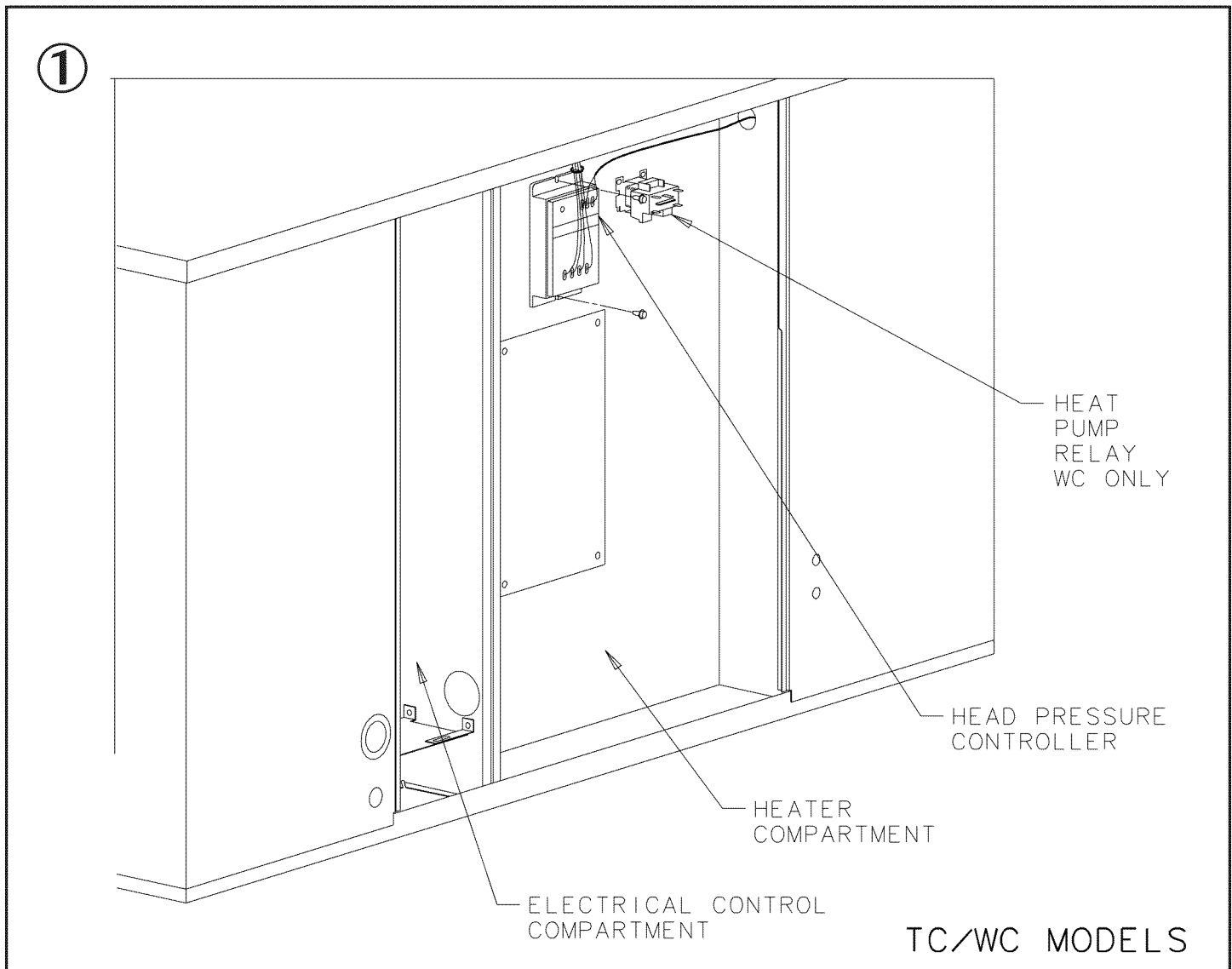
CONTROLLER CHECKOUT--

- a. With the unit operating, check that the fan motor is running, remove power to the unit and remove one of the sensor leads--repower the unit and the fan motor should not run. If the motor starts the controller is bad
- b. Remove power to the unit and remove the second sensor lead and jumper (short) the sensor terminals, repower the unit and the motor should start and operate at max rpm.
- c. Remove power and replace the sensor leads to the correct terminals.
- d. Measure the voltage across the line and load terminals, place the sensor in ice water-- the motor should stop.
- e. Remove the sensor and warm in your hands for about 10 seconds--at 50°F the motor will start at full voltage for 5 seconds than reduce voltage (and fan speed) to 50% of nominal voltage, as the sensor warms to 80°F the voltage will increase to 100% of nominal voltage.

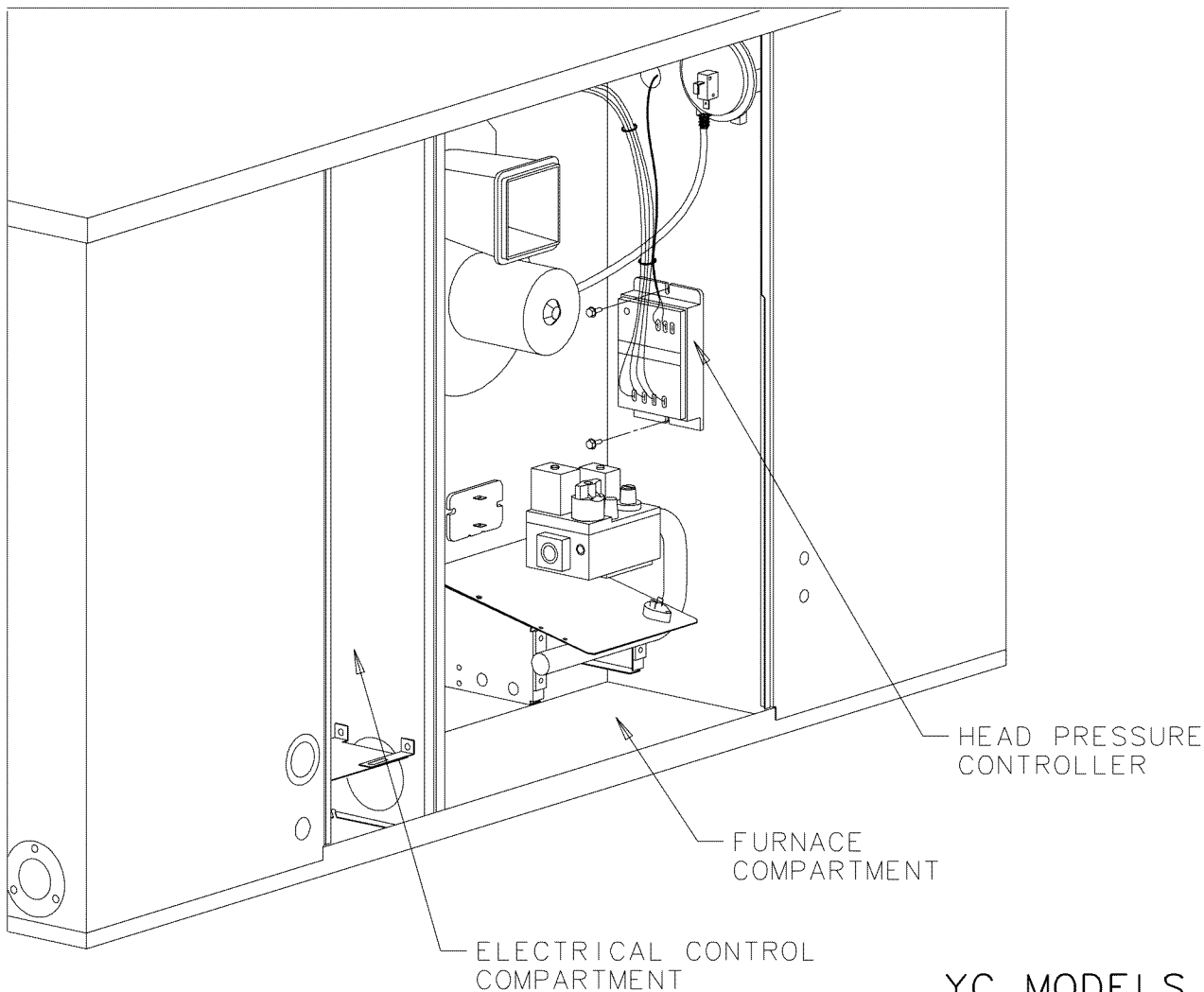
SENSOR CHECKOUT--

If the fan motor does not change speed below an outdoor ambient of 80°F, and the controller has been checked out per the procedures in sections A and B, check the sensor contact with the liquid line. If proper sensor contact is made, check the resistance value of the sensor per the values in the Sensor Resistance Table.

Temperature (° F)	Resistor (K Ohm)
50	19.9
60	15.3
70	11.9
80	9.3

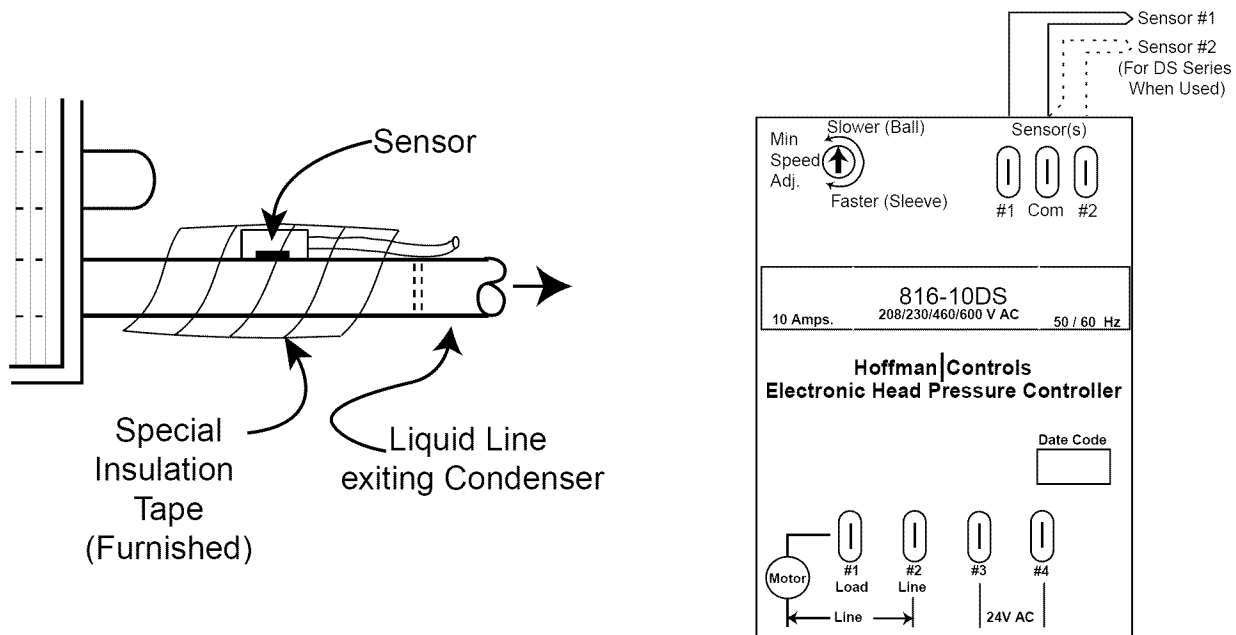


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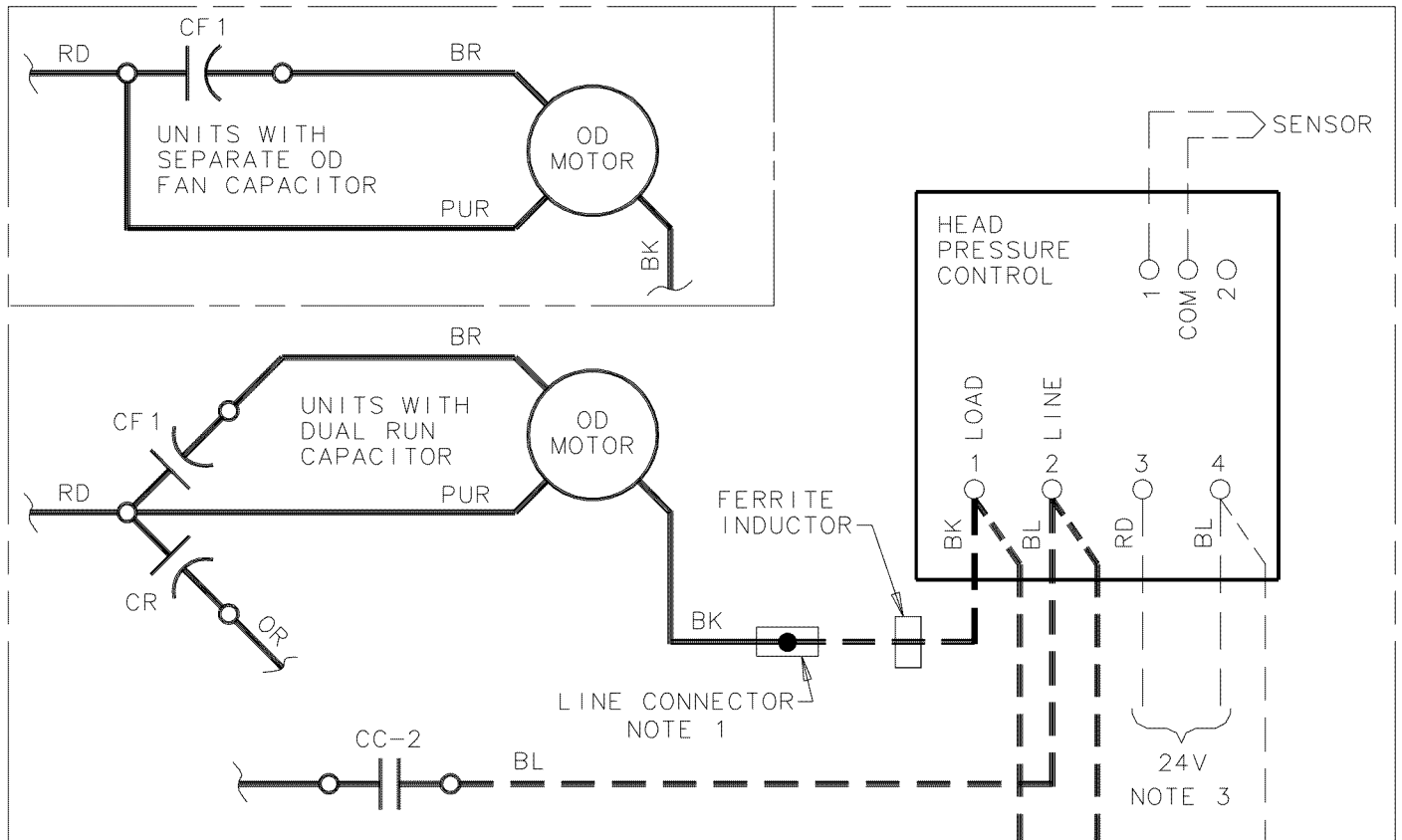
YC MODELS

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④

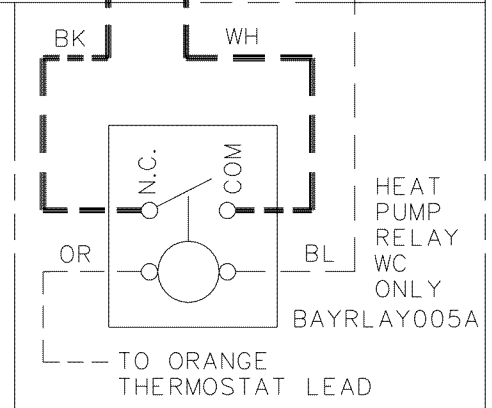
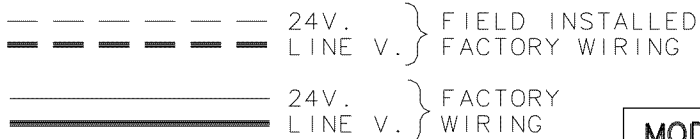
HEAD PRESSURE CONTROL WIRING DIAGRAM



NOTES:

1. THE BLACK MOTOR LEAD MUST BE MOVED FROM THE CC-2 CONTACTOR AND CONNECTED WITH THE LINE CONNECTOR TO THE BLACK WIRE WITH FERRITE INDUCTOR FROM THE LOAD (#1) TERMINAL ON THE HEAD PRESSURE CONTROL.
2. ATTACH BL 14 GA LEAD TO CONTACTOR AND LINE (#2) TERMINAL OF CONTROLLER.
3. ATTACH RD AND BL 18 GA LEADS TO 24V SOURCE (YC - USE R & B TERMINALS ON IGNITOR BOARD, TC/WC - USE RD & BL THERMOSTAT LEADS).

INTER-COMPONENT WIRING



MODELS
BAYLOAM323A

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Since American-Standard has a policy of continuous product improvement, it reserves the right to change the specifications and design without notice.

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