# SUPPLEMENTAL INSTRUCTIONS

## CMH-17 Low Ambient 230V Fan Cycle Control

The CMH-17 is a field-installable low ambient fan cycling control kit for 230V motors.

The CMH-17 kit consists of:

- 7960-556B Installation Instructions
- 8612-071 Head Pressure Control 230V
- 3000-1734 Plug and Wire Assembly
- 113-353 Pressure Switch Mounting Bracket
- 910-1674 Relay Assembly
- 1804-0362 CH3 Extension Tube
- 1804-0361 CH4 and CH5 Extension Tube
- 1012-085 Hex Head Screw (3)
- 1012-065 Phillips Head Screw (2)
- 7961-312-0211 CMH-17 Unit I.D. Label

Field-supplied tools needed:

- Personal protection equipment, including gloves and safety glasses
- 5/16" nut driver
- Phillips head screwdriver
- Small flat-head screwdriver for securing wire in terminal block

**⚠ WARNING**

***Electrical shock hazard.***

***Disconnect the remote electric power supply or supplies before servicing.***

***Failure to do so can result in serious injury or death.***

**⚠ WARNING**

***Exposed moving parts.***

***Disconnect all electrical power before servicing.***

***Failure to do so can result in severe injury or amputation.***

**⚠ CAUTION**

***Sharp metallic edges.***

***Take care and wear appropriate protective devices to avoid accidental contact with sharp edges.***

***Failure to do so can result in personal injury.***

Bard® SINCE 1914
*Climate Control Solutions*

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## Installation for 230V CH Series

Disconnect all power to the unit. Remove control panel inner and outer covers and right-side condenser inlet grille. Circled numbers in the figures in this manual correspond to installation instructions below. Dash lines indicate that a wire has been disconnected from this terminal and reconnected to another terminal.

1. Mount pressure switch mounting bracket to fan shroud using two (2) hex head screws, as shown in Figure 3 on page 5. Remove service port cap from liquid line and attach the tee adapter with the correct extension tube (per application) and screw down to pressure switch bracket. Attach the head pressure control plug/wires to the head pressure control, then screw on the head pressure control to the extension tube. Replace service port cap on the flare tee service port and tighten. Check for leaks.
2. Mount relay assembly into the control panel as shown in Figure 2, Note 1.
3. Disconnect black high voltage outdoor motor lead from defrost board relay and reconnect to terminal 4 as shown in Figure 2, Note 2. Attach black/white wire from relay assembly to the defrost board relay—where the fan motor lead was removed—as shown in Figure 2, Note 3.
4. Attach blue wire from relay assembly to the B terminal on defrost control board (Figure 2, Note 4). Attach black wire from relay assembly to the C terminal on the defrost control board (Figure 2, Note 5). Run paired wires from the head pressure control up through wire holder and attach to terminals 2 and 5 on the relay assembly as shown in Figure 2, Note 6.
5. Check wiring (see Figure 2).
6. Apply “This unit equipped with CMH-17 control module” label to the inside of the control panel cover above the wiring diagrams.
7. Replace all panels and cover. This completes the installation.
8. Check proper operation of the unit by energizing in cooling mode. The condenser fan motor should start and ramp up speed as system pressure increases.

## Sequence of Operation

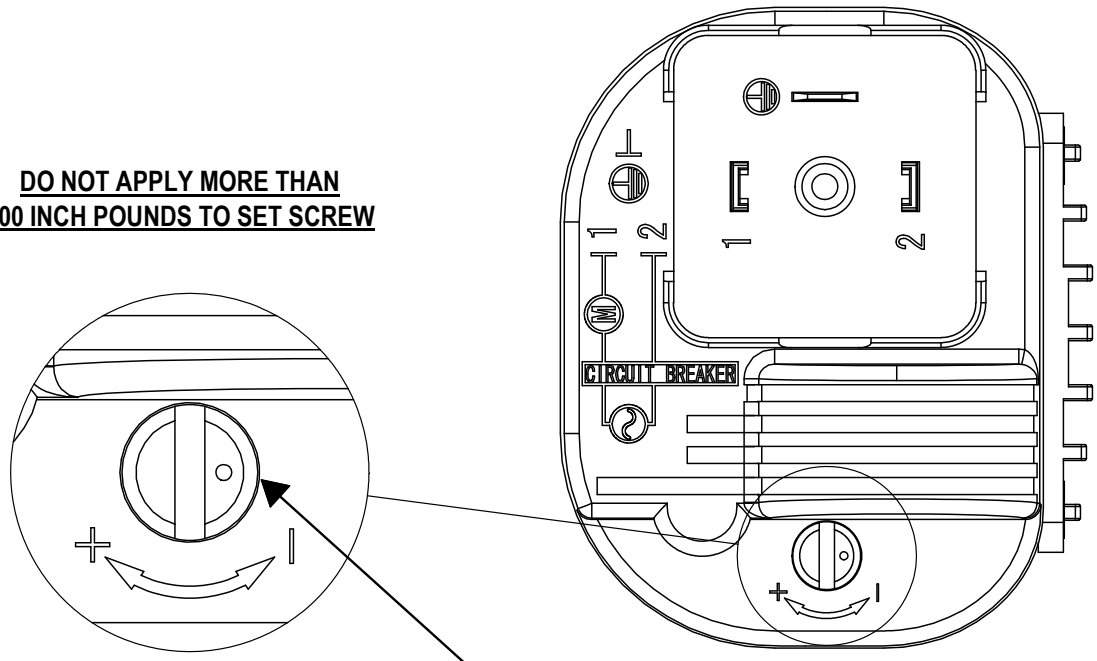
The CMH-17 head pressure control helps maintain the correct condensing temperature/pressure, which results in a constant head pressure by adjusting the condenser fan speed, therefore controlling the airflow through the condenser. This head pressure controller has a cut-off mode at low condensing temperature/pressures.

From the factory, this head pressure controller is set to have the condenser fan running at full speed at roughly 325 psi. If desired setpoint differs from factory setting, follow the procedure below.

To adjust the pressure setting, use a flat-head screwdriver to turn the setting screw (see Figure 1). The set screw is a brass screw with a dimple located on the side of the LAC switch. The dimple is on the set screw to help track turns.

To make the adjustment to increase the pressures, start by inserting the screwdriver into the set screw turning it clockwise (+). To decrease the pressure, turn the set screw counterclockwise (-). Be careful not to over-tighten or loosen the screw. The maximum range of the switch is broad, so stick to the common practice of one (1) turn clockwise (+1) or two (2) turns counterclockwise (-2). Going beyond that may damage the device or affect its performance.

**FIGURE 1**




NOTE: THE DIMPLE IN THE ADJUSTMENT KNOB WILL HAVE A RANDOM ORIENTATION. PLEASE DO NOT USE AS INDICATION FOR EQUIVALENT ADJUSTMENT.

**SETTING READJUSTMENT ONLY WHEN NECESSARY**

1. TURN COUNTER-CLOCKWISE UNTIL IT STOPS
2. TURN CLOCKWISE 6.5 FULL TURNS TO SET THE VALUE TO THE FULL VOLTAGE SET POINT OF 325PSI (2.24MPa)

NOTE: FAN WILL TURN AT LOW RPMS IF THE REGRIGERANT PRESSURE IS 224 ± 15PSI

MIS-4482

**FIGURE 2**

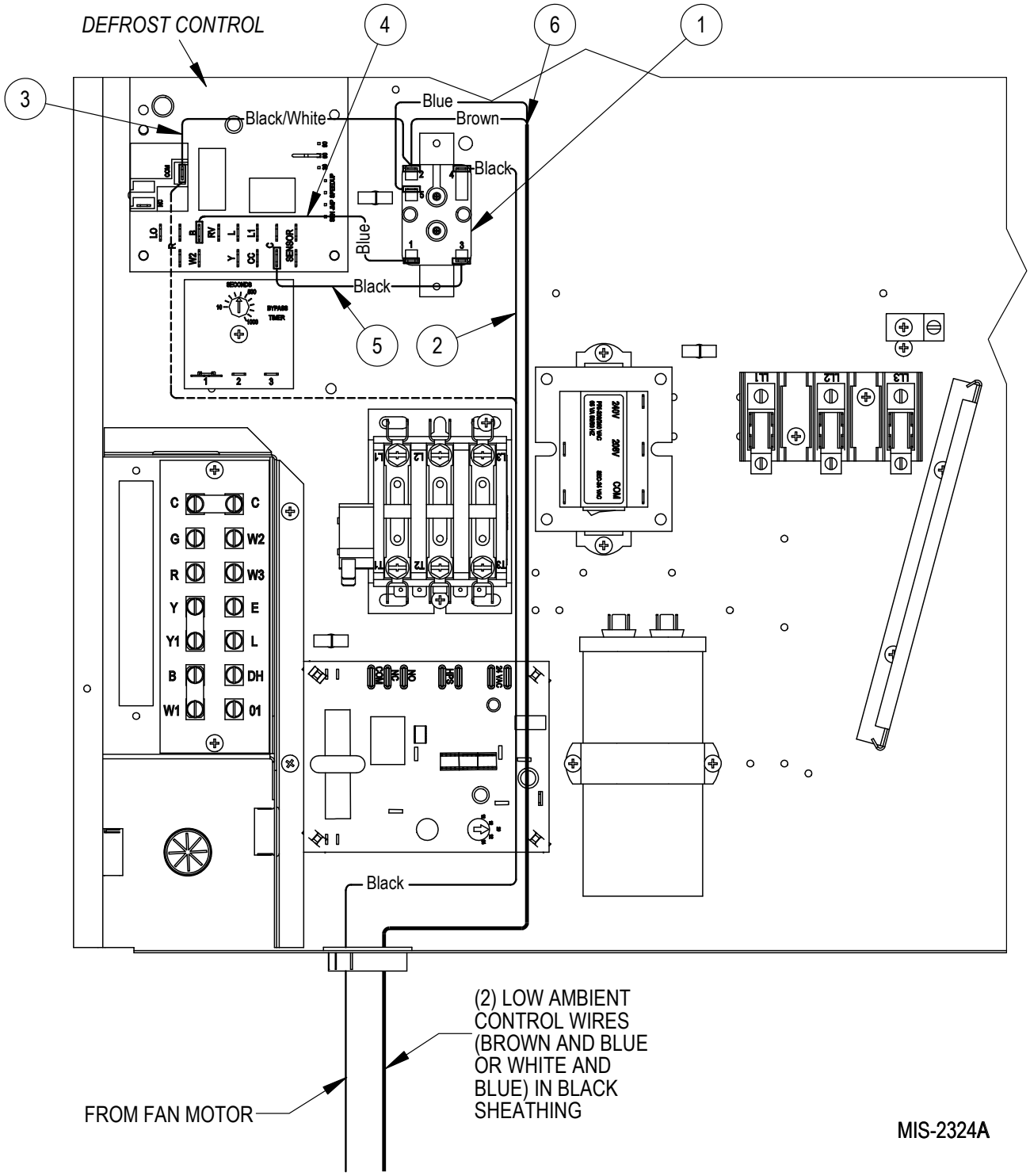
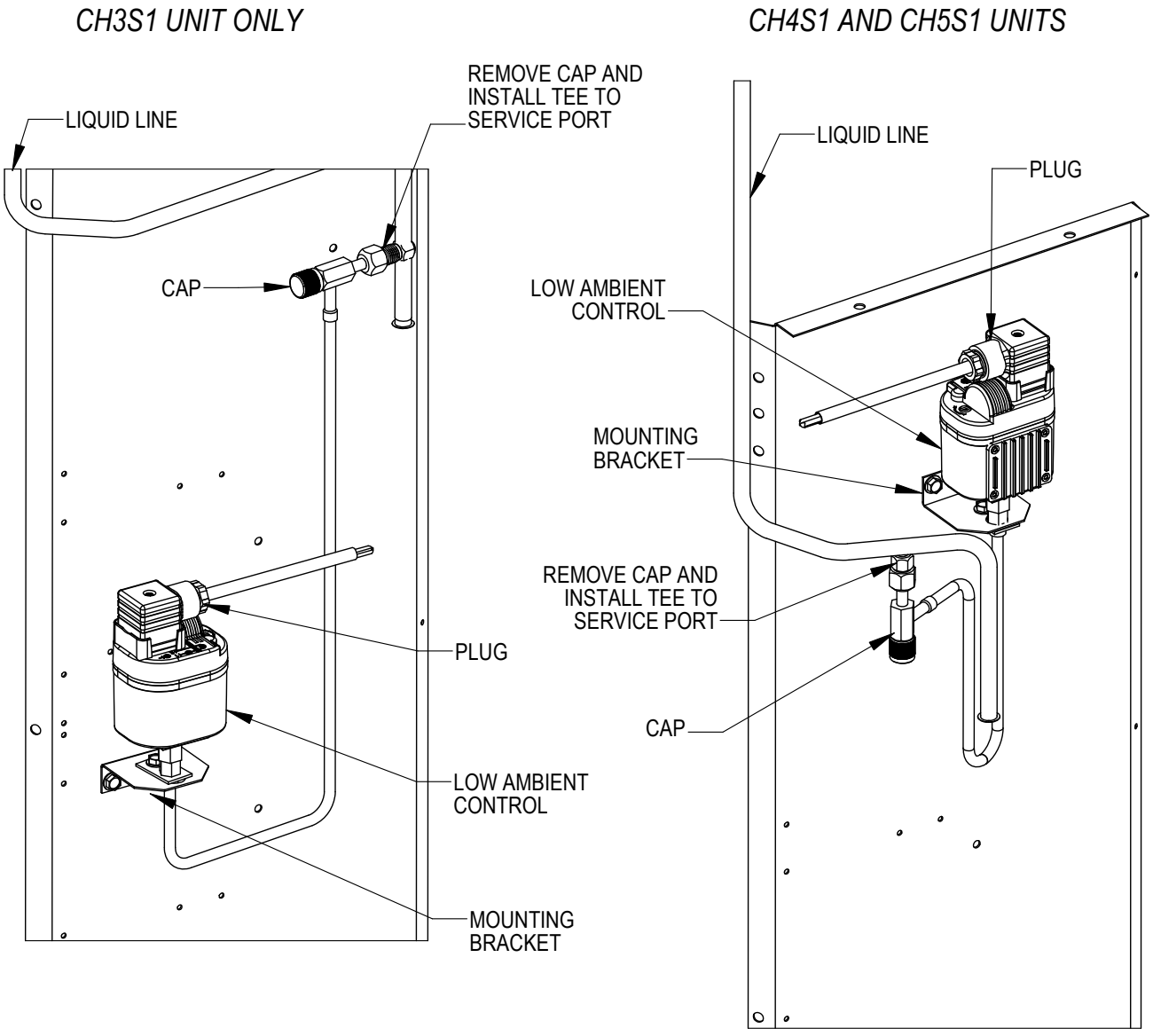

DEFROST CONTROL
4
6
1
3
Black/White
Blue
Brown
Black
Blue
Black
5
2
C
G
R
Y
Y1
B
W1
C
W2
W3
E
L
DH
01
Black
(2) LOW AMBIENT CONTROL WIRES (BROWN AND BLUE OR WHITE AND BLUE) IN BLACK SHEATHING
FROM FAN MOTOR
MIS-2324A

**FIGURE 3**

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