# SUPPLEMENTAL INSTRUCTIONS

## CMA-32 Low Ambient Fan Cycling Control

The CMA-32 is a field-installable low ambient fan cycling control kit. **This fan cycling low ambient control is only for use on R-410A refrigerant systems.**

The CMA-32 kit consists of:

- 7960-778C Supplemental Instructions
- 8607-017 Terminal Block
- 1012-066 Screw (1)
- 8612-071 230V Head Pressure Control
- 1804-0538 Extension Tube Assembly (W36A2D)
- 1804-0520 Extension Tube Assembly
- 3000-1734 Plug for Head Pressure Control
- 113-353 Mounting Bracket
- 1012-065 Screw (2)

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

The CMA-32 kit is for use with Bard models W36A2D, W42A2D, W48A2D and W60A2D wall-mount air conditioners.

**⚠ 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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Manual: 7960-778C
Supersedes: 7960-778B
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## Installation

Disconnect all power to wall-mount unit. Remove outer and inner control panel covers and right side condenser inlet grille. Circled numbers provided in Figure 2 on page 4 correspond to the following installation steps. Dashed lines indicate where a wire has been disconnected from the terminal.

1. Mount 8607-017 terminal block to unit control panel with 1012-066 screw as shown in Figure 2.
2. Disconnect black high voltage outdoor motor lead from compressor contactor and reconnect to terminal block.
3. Remove the upper service port cap from the liquid line. Install the low ambient control on the liquid line by screwing it onto the service port as shown in Figure 3 on page 5. Use wrenches to make the connection snug and check for leaks.
4. Route low ambient control wires up through the bushing in the bottom of the control panel. Replace sealing compound after routing wires through the bushing. Route the wires through the wire holders in the control panel as shown in Figure 2.
5. Connect the low ambient control wires between the terminal block and T2 of the compressor contactor (see Figure 2).
6. Recheck wiring by referring to Figure 2. Turn on power to unit. Check for proper operation of the unit by energizing in cooling mode (first or second stage). The compressor should start—except when equipped with economizer and enthalpy control is energizing “free cooling” mode. Energizing “Y2” with an economizer will override the enthalpy control allowing the mechanical cooling to operate. Run the unit for at least 5 minutes. The condenser fan motor should not run at full speed until the liquid pressure exceeds the pressure setting of the low ambient control which is factory set at 325 PSI.
7. Apply “This unit is equipped with CMA-32 control module” label to the inside of the inner control panel cover above the unit wiring diagram.
8. Replace the right side condenser inlet grille and inner and outer control panel covers. This completes the installation.

## Sequence of Operation

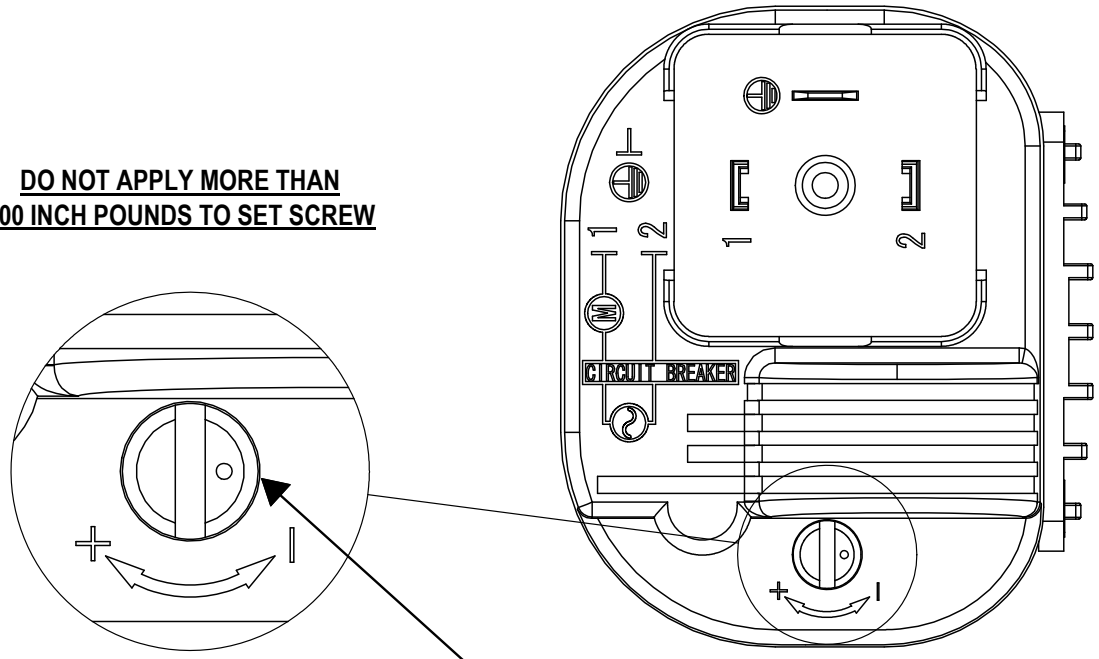
Energize in cooling mode (first or second stage). The compressor should start—except when equipped with economizer and enthalpy control is energizing "free cooling" mode. Energizing Y2 with an economizer will override the enthalpy control allowing the mechanical cooling to operate. Run the unit for at least 5 minutes. The condenser fan motor should not run at full speed until the liquid pressure exceeds the pressure setting of the low ambient control which is factory set at 325 psi.

Adjusting the setting is not recommended. However, to adjust the pressure setting, use a flat-head screwdriver to turn the setting screw. The set screw is a brass screw with a dimple located on the side of the LAC switch (see Figure 1). 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.

In heating mode, the condenser fan motor should run any time the compressor is running regardless of the discharge pressure. Run the unit through a defrost cycle. The condenser fan motor should de-energize during the defrost cycle.

**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

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**FIGURE 2**

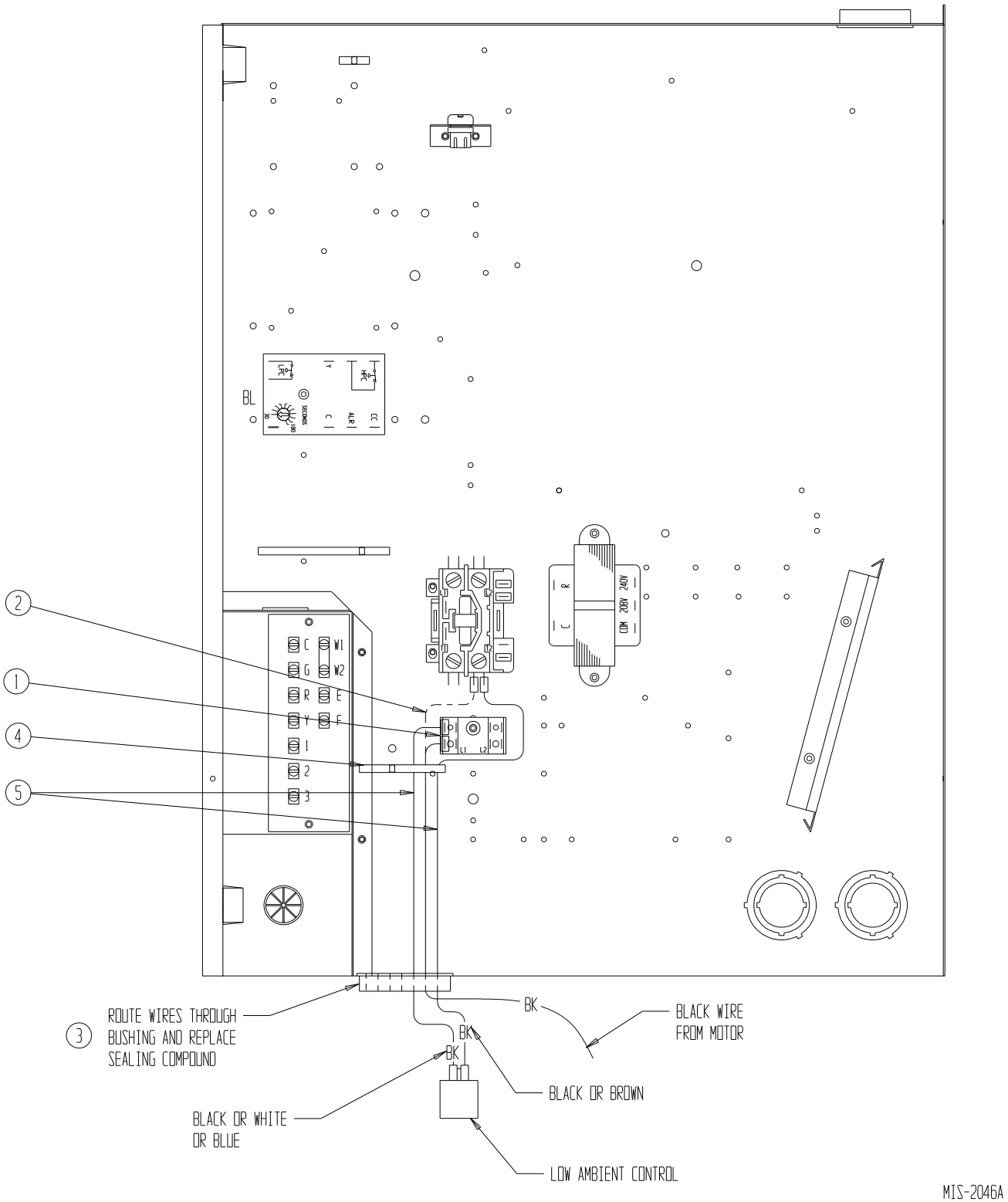

BL
C
G
R
Y
1
2
3
W1
W2
E
F
L1
L2
R
C
COM 208V 240V
2
1
4
5
3
ROUTE WIRES THROUGH
BUSHING AND REPLACE
SEALING COMPOUND
BK
BK
BK
BLACK WIRE
FROM MOTOR
BLACK OR BROWN
BLACK OR WHITE
OR BLUE
LOW AMBIENT CONTROL
MIS-2046A

**FIGURE 3**

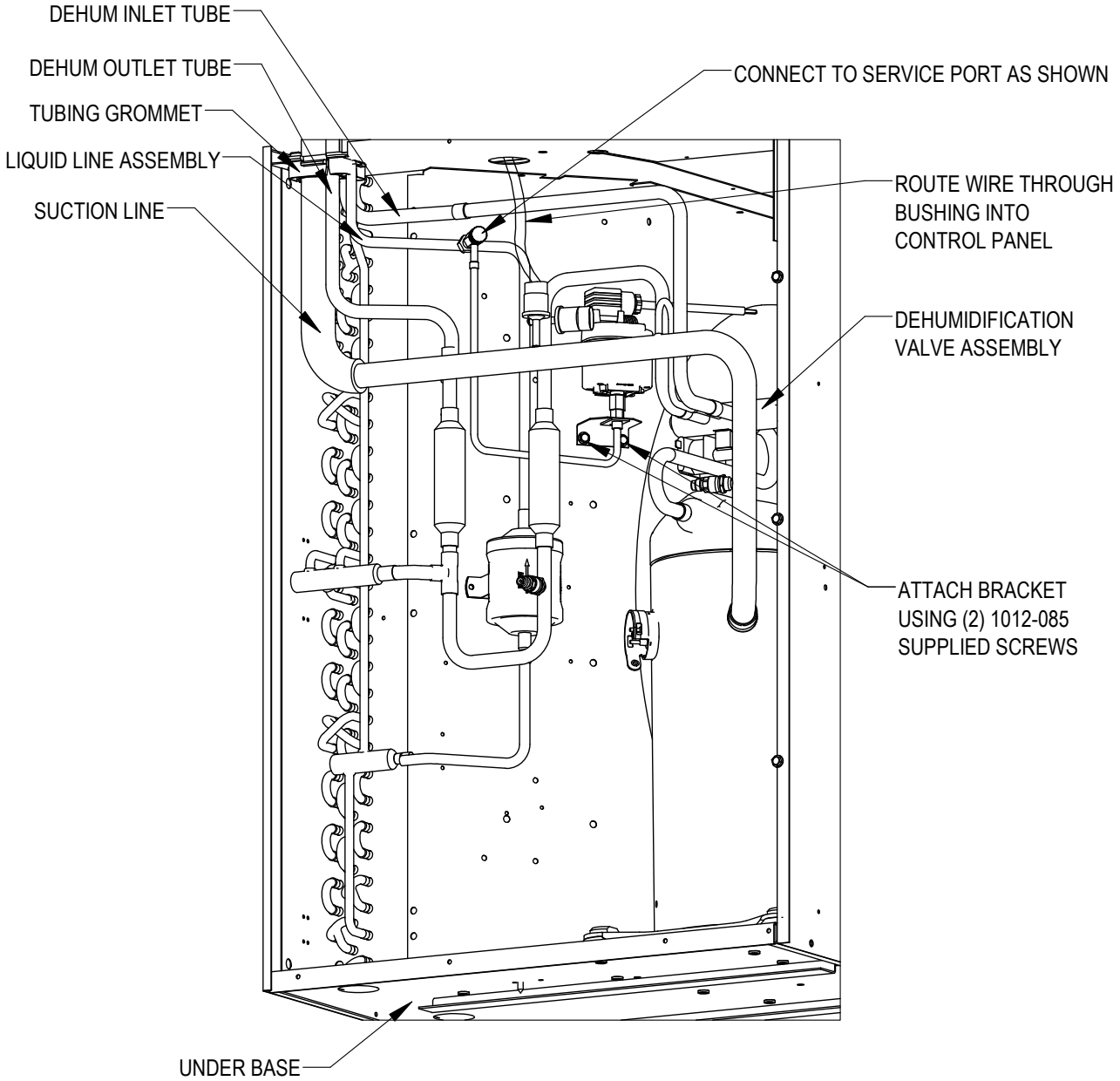
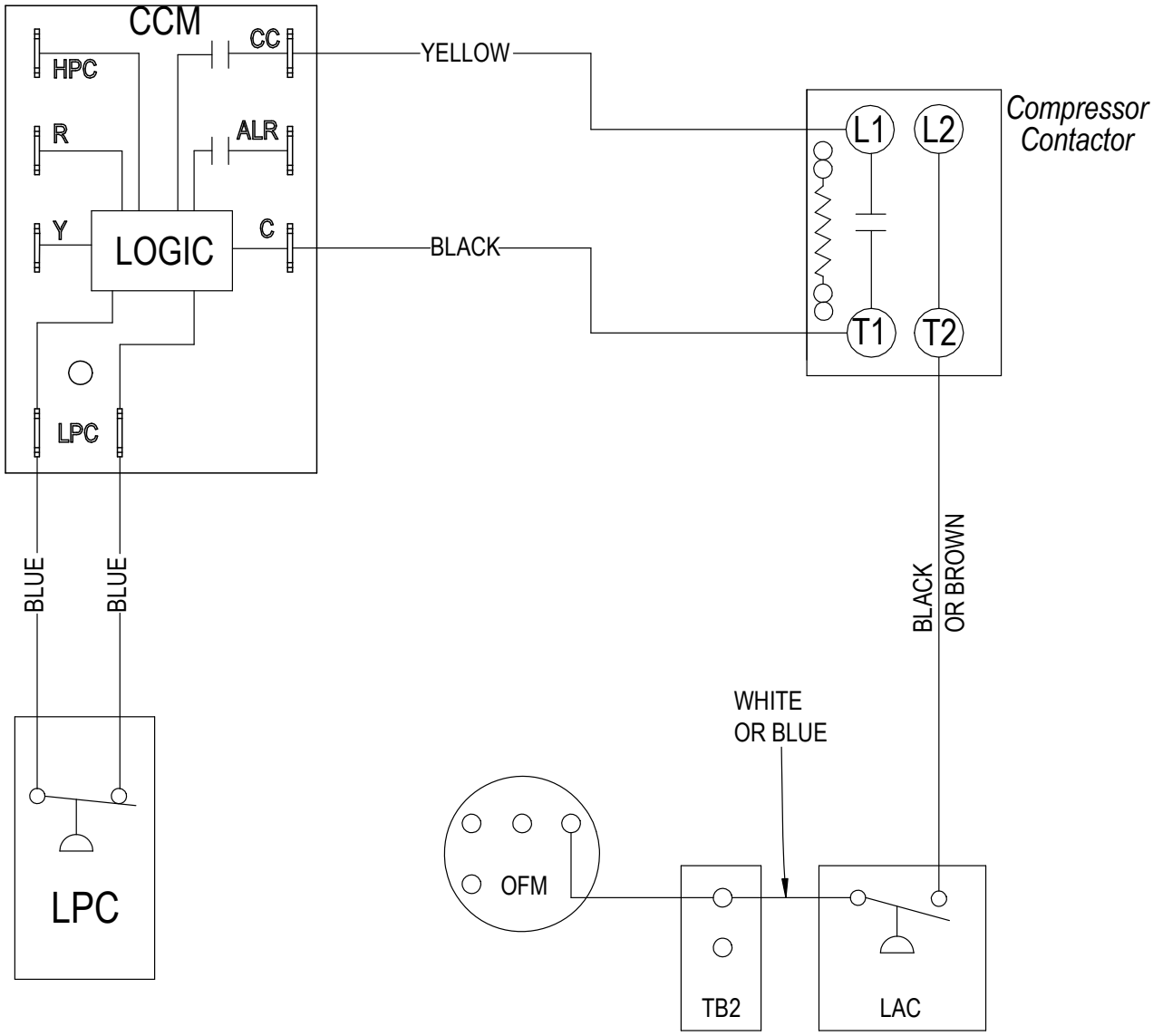

DEHUM INLET TUBE
DEHUM OUTLET TUBE
TUBING GROMMET
LIQUID LINE ASSEMBLY
SUCTION LINE
CONNECT TO SERVICE PORT AS SHOWN
ROUTE WIRE THROUGH BUSHING INTO CONTROL PANEL
DEHUMIDIFICATION VALVE ASSEMBLY
ATTACH BRACKET USING (2) 1012-085 SUPPLIED SCREWS
UNDER BASE
MIS-3842 A

**FIGURE 4**

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