Diagram Selection
Diagrams are provided for both single- and three-phase circuits, and are readily identified in the Selection Table on the following page. The Selection Table enables easy selection of the correct wiring diagram after the electrical components of the unit heater have been determined. The control codes are listed to aid in locating the correct diagram.

Diagram Interchangeability
The following gas-fired unit heater wiring diagrams are for either 115-volt, 60-Hertz, single-phase power, or for 230-volt, 60 Hertz, three-phase electrical service.

The 115v/60Hz/1φ diagrams may also be utilized for 230v/60Hz/1φ by substituting 230-volt components for the 115-volt shown.

The 230v/60 Hz/3φ diagrams may be modified to 460v/60 Hz/3φ by adding a 460v to 230v step down transformer and wiring the unit as shown in the wiring “inset” on all 3-phase wiring diagrams.

The 460v/60Hz/3φ diagrams may also be utilized for 575v/60Hz/3φ by substituting 575-volt components for the 460-volt shown.

NOTE: As indicated in every diagram, all wiring must comply with the National Electrical Code and all local codes. All components must agree with their respective power source.

CAUTION
Turn off all power and gas to unit before wiring. Failure to wire this unit according to this wiring diagram may result in injury to the installer or user. For deviations, contact factory.

Abbreviations and Symbols
To facilitate interpretation and enable simplification the abbreviations and symbols have been selected as recommended by ANSI (American National Standards Institute) and NEMA (National Electrical Manufacturers Association) standards.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>XFMR or TR</td>
<td>Transformer</td>
</tr>
<tr>
<td>V</td>
<td>Volts</td>
</tr>
<tr>
<td>Hz</td>
<td>Cycle or Hertz</td>
</tr>
<tr>
<td>ϕ</td>
<td>Phase</td>
</tr>
<tr>
<td>LC</td>
<td>Limit Control</td>
</tr>
<tr>
<td>THERM or TH</td>
<td>Thermostat</td>
</tr>
<tr>
<td>MV</td>
<td>Main Valve</td>
</tr>
<tr>
<td>PV</td>
<td>Pilot Valve</td>
</tr>
<tr>
<td>SO</td>
<td>Shut Off</td>
</tr>
<tr>
<td>RC</td>
<td>Relay Contact or Coil</td>
</tr>
<tr>
<td>G</td>
<td>Ground</td>
</tr>
<tr>
<td>H</td>
<td>Hot</td>
</tr>
<tr>
<td>SW</td>
<td>Switch</td>
</tr>
<tr>
<td>EPS</td>
<td>Electric Pilot Switch</td>
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<tr>
<td>Hi</td>
<td>High</td>
</tr>
<tr>
<td>Lo</td>
<td>Low</td>
</tr>
<tr>
<td>C</td>
<td>Common</td>
</tr>
<tr>
<td>&quot;J&quot; Box</td>
<td>Junction Box</td>
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<tr>
<td>H1, H2, etc.</td>
<td>Transformer Primary Terminals</td>
</tr>
<tr>
<td>SUM</td>
<td>Summer Contact (Summer/Winter Switch)</td>
</tr>
<tr>
<td>WIN</td>
<td>Winter Contact (Summer/Winter Switch)</td>
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<tr>
<td>S-W</td>
<td>Summer/Winter Switch</td>
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<tr>
<td>O.L.C.</td>
<td>Overload Contact</td>
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<td>C.S.</td>
<td>Power Venter Centrifugal Switch</td>
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<tr>
<td>FTc</td>
<td>Fan Timer Contact</td>
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<tr>
<td>SPDT</td>
<td>Single-Pole Double-Throw Switch</td>
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<tr>
<td>VA</td>
<td>Volt-Ampere</td>
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<tr>
<td>W</td>
<td>Watts</td>
</tr>
<tr>
<td>BK</td>
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<td>Blue</td>
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<tr>
<td>X1, X2, etc.</td>
<td>Transformer Secondary Terminals</td>
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<tr>
<td>L1, L2, etc.</td>
<td>Electric Load Terminals</td>
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<tr>
<td>T1, T2, etc.</td>
<td>Starter or Motor Terminals</td>
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## Unit Power Requirements (AMPS) – PD Models

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<tr>
<th>Power Supply</th>
<th>PD 30</th>
<th>PD 75</th>
<th>PD 125</th>
<th>PD 175</th>
<th>PD 250</th>
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<tr>
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<td>230/1</td>
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<td>1.2</td>
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## Unit Power Requirements (AMPS) – BD Models

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</tr>
</tbody>
</table>

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**i**

6-445.2 — MODELS PD/BD
Wiring Diagram Selection

A. Field and Submittal Wiring Diagram Selection

Wiring in the field changes little when the brand of the controls furnished on the unit heater changes. Select correct wiring diagrams as follows:

1. Determine unit heater model and size.
2. Select control code number from Table 1.
3. Reference unit heater model in the Page Location Index with control code number and determine correct page number for single-phase or three-phase control. Single-phase wiring diagram page numbers are in the upper left of box and three-phase diagrams are in the lower right of box.
4. Wiring diagrams for unit heater accessories are listed in Table 2. Use the accessory diagrams along with the unit wiring diagrams for complete wiring instructions.

B. Service and Troubleshooting

Because internal or factory wiring may vary depending on controls manufacturer, the wiring diagrams must be selected with the series identity number when servicing or troubleshooting a unit heater control system. Wiring diagrams in this bulletin are for unit heaters manufactured after January 1997 and the series identity number is the 5th thru the 7th digits of the unit heater serial number.

EXAMPLE: Serial No. – 01121010697 has a series identity number of 101.

To select the correct wiring diagram:

1. Determine unit heater model and size from serial plate located on the side of the unit.
2. Determine the control code numbers from box marked Control Code, also on the serial plate.
3. Determine the series identity number of the unit heater, then proceed with Step 3 of Field and Submittal Wiring Diagram Selection.

Example Selection


Locate the Page Location Index which shows the page numbers for PD and BD units with series identity number 101 (see page iii). Select the page number where the column for the PD 175 intersects with the line for control code 11. The correct single phase wiring diagram for this unit is found on page 1 in the upper left portion of box. If the unit also had a summer/winter switch the accessory wiring diagram found on page C-2 as per Table 2, would also be required for complete wiring information.

Two-in-One Diagrams

Two wiring diagrams are furnished for each circuit configuration in this manual. Included are a connection diagram at the left for field installation and circuit schematic at the right to aid in continuity and trouble shooting.

The heavier lines in the connection diagram indicate line voltage; the lighter lines indicate low voltage. Solid lines show pre-wiring performed at the factory; dotted lines inform the installer of connections required to put the heater in operation.

---

Table 1

<table>
<thead>
<tr>
<th>Control Code Number</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>11,12,13,14</td>
<td>Single-Stage, Standing Pilot, 100% Shut-Off, Natural Gas</td>
</tr>
<tr>
<td>81,82,91,92</td>
<td>Single-Stage, Standing Pilot, 100% Shut-Off, Propane Gas</td>
</tr>
<tr>
<td>25,26</td>
<td>Two-Stage, Standing Pilot, 100% Shut-Off, Natural Gas</td>
</tr>
<tr>
<td>83,84</td>
<td>Two-Stage, Standing Pilot, 100% Shut-Off, Propane Gas</td>
</tr>
<tr>
<td>30,31,32,33</td>
<td>Single-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Natural Gas</td>
</tr>
<tr>
<td>85,86,93,94</td>
<td>Single-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Propane Gas</td>
</tr>
<tr>
<td>59,60</td>
<td>Mechanical Modulation with Automatic Pilot Ignition, Non-100% Shut-Off, Natural Gas, BD Only</td>
</tr>
<tr>
<td>89,90</td>
<td>Mechanical Modulation with Automatic Pilot Ignition, Non-100% Shut-Off, Propane Gas, BD Only</td>
</tr>
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<td>63,64</td>
<td>Two-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Natural Gas</td>
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<tr>
<td>87,88</td>
<td>Two-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Propane Gas</td>
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Table 2

Accessory Wiring Diagram Page Location Index

<table>
<thead>
<tr>
<th>Page</th>
<th>Accessory</th>
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<tbody>
<tr>
<td>C-1</td>
<td>Energy-Saver Kit</td>
</tr>
<tr>
<td>C-2</td>
<td>Summer/Winter Switch</td>
</tr>
<tr>
<td>C-3</td>
<td>Power Exhauster</td>
</tr>
<tr>
<td>C-4</td>
<td>Combination Summer/Winter Switch and Power Exhauster Wiring</td>
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</tbody>
</table>

① See paragraph A, step 4 under "Wiring Diagram Selection".
### Models PD or BD Page Location Index

<table>
<thead>
<tr>
<th>Control Code</th>
<th>Model Size (series identity 101)</th>
<th>Model Size (series identity 102)</th>
<th>Model Size (series identity 103)</th>
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<tr>
<td></td>
<td>30</td>
<td>50</td>
<td>75</td>
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<tr>
<td>11 or 12</td>
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<td>13 or 14</td>
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<td>30 or 31</td>
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<td>63 or 64</td>
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<td>81 or 82</td>
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<tr>
<td>93 or 94</td>
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</tr>
</tbody>
</table>

*Cell format represents single phase or three phase power as shown in the following example.*

1Ph 3-Ph

---

iii
5H73095C2 REV E  Single-Stage, Standing Pilot, 100% Shut-Off, Single-Phase.
Single-Stage, Standing Pilot, 100% Shut-Off, Three-Phase.

5H73095C2 REV E

Note to installer:
Attach this diagram near heater.
All wiring must comply with national and local codes.
All components must agree with this diagram.
Use 105°C wire for replacements.

Caution
Failure to wire this unit according to this wiring diagram may result in injury to the installer or user.
For deviations contact the factory.

Caution
In case of power failure or power outage, the heater may not shut off immediately.

Wiring Legend

- Line 24V
- Factory Field
- Wire Nut
- BK
- R
- BL
- Limit
- Control
- C
- F
- G
- BL
- Terminal Board
- Board
UNIT HEATER WIRING DIAGRAM

Caution: Follow the wiring diagram exactly. Power Shown is Factory Wire Nut. All components must agree with the specified power source. Use only Cords for replacement parts.

5H73095C3 REV E Single-Stage, Standing Pilot, 100% Shut-Off, Single-Phase.

Failure to wire this unit according to this wiring diagram may result in injury to the installer or user. For deviations contact the factory. Note to installer: Attach this diagram near heater. All wiring must comply with national electric code and all local codes. Use 105°C wire for replacements.
Single-Stage, Standing Pilot, 100% Shut-Off, Three-Phase.

Note to installer:
Attach this diagram near heater.
All wiring must comply with national electric code and all local codes.
All components must agree with their respective power source.
Use 105˚C wire for replacements.

Caution
Failure to wire this unit according to this wiring diagram may result in injury to the installer or user.
For deviations contact the factory.

Use NEC catalog requirements.
UNIT HEATER WIRING DIAGRAM

Caution
Failure to wire this unit according to this wiring diagram may result in injury to the installer or user.
For deviations contact the factory.

Note to installer:
Attach this diagram near heater.
All wiring must comply with national electric codes and all local codes.
All components must agree with their respective power source.
Use 105°C wire for replacements.

* Alternate Xfmr.
Primary Xfmr. Wires:
230V: L1(BK) & Y (OR O)
200V: L1(BK) & R
Wire nut the wire not used.

Indicates Terminal Board Connection
Two-Stage, Standing Pilot, 100% Shut-Off, Three-Phase.

Wiring Legend

- Line 24V.Factory Wire Nut
- Field Wire Nut
- BK R BL
- Limit Control
- 1 3 H H TD Relay
- C F G nd BL BK BK R O
- Terminal Board
- BL
- Terminal
- Board
- T1 T2
- Fan Motor
- 3 Ø Stark
- (By Others)
- Blocked Vent
- Safety Switch
- TD Relay
- Heater HH
- Low C W BL
- Combination Gas Control
- Circuit Breaker (By Others)
- L1 L2 L3 30 V 60 Hz/3 Ø Power Show
- Low-Stage Operator
- BA High-Stage Operator
- Combination Gas Control

Note to installer:
Attach this diagram near heater.
All wiring must comply with national electric code and all local codes.
All components must agree with their respective power source.
Use 105˚C wire for replacements.

Caution
Failure to wire this unit according to this wiring diagram may result in injury to the installer or user.
For deviations contact the factory.

*24V Xfmr.
Two-Stage, Standing Pilot, 100% Shut-Off, Single-Phase.

Caution
Failure to wire this unit according to this wiring diagram may result in injury to the installer or user.
For deviations contact the factory.

Note to installer:
Attach this diagram near heater.
All wiring must comply with national electric code and all local codes.
All components must agree with their respective power source.
Use 105˚C wire for replacements.
6-445.2 — WIRING DIAGRAMS MODELS PD/BD

Two-Stage, Standing Pilot, 100% Shut-Off, Three-Phase.
UNIT HEATER WIRING DIAGRAM

5H73095C6 REV D

Single-Stage, Intermittent Pilot, Non-100% Shut-Off, or 100% Shut-Off with Lockout, or 100% Shut-Off with Continuous Retry, Single-Phase.
Single-Stage, Intermittent Pilot, Non-100% Shut-Off, or 100% Shut-Off with Lockout, or 100% Shut-Off with Continuous Retry, Three-Phase.
Single-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Single-Phase.
5H73095C13 REV A  Single-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Three-Phase.
6-445.2 — WIRING DIAGRAMS MODELS PD/BD

UNIT HEATER WIRING DIAGRAM

5H73095C14 REV A Mechanical Modulation, Automatic Electronic Pilot Ignition, 100% Shut-Off with Continuous Retry, Single-Phase.
Note to installer:
Attach this diagram near heater.
All wiring must comply with national electric code and all local codes.
All components must agree with their respective power source.
Use 105°C wire for replacements.

Caution
Failure to wire this unit according to this wiring diagram may result in injury to the installer or user. For deviations contact the factory.

For deviations contact the factory.

5H73095C14 REV A Mechanical Modulation, Automatic Electronic Pilot Ignition, 100% Shut-Off with Continuous Retry, Three-Phase.
Mechanical Modulation, Automatic Electronic Pilot Ignition, 100% Shut-Off with Continuous Retry, Single-Phase.
Mechanical Modulation, Automatic Electronic Pilot Ignition, 100% Shut-Off with Continuous Retry, Three-Phase.
UNIT HEATER WIRING DIAGRAM

Two-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Single-Phase.

Ignitor

24V

115V

Xfmr

GT1

Two-Stage

Low Volt

Therm

(By Others)

C

Low

High

Factory

Field

Wire Nut

24V Line

Wiring Legend

 climates

Low Volt

Power

S

how

n

Second Circuit Breaker Provided For 230V/208V/18

24V Xfmr

Terminal Board

Unit Control

Combination Gas Control

Ignition Control

Robertshaw SP 845NL TH

Caution

Failure to wire this unit according to this wiring diagram may result in injury to the installer or user.

Note to installer:

Attach this diagram near heater.

All wiring must comply with national electric code and all local codes.

All components must agree with their respective power source.

Use 105˚C wire for replacements.

* Alternate Xfmr.

Primary Xfmr Wires

230V/208V/18 BK & Y (PH G)

200V/208V/18 BK & Y

Wire nut the wire not used.

Indicates Terminal Board Connection
Two-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Three-Phase.
Note to installer:
Attach this diagram near heater. All wiring must comply with national electric code and all local codes. All components must agree with their respective power source. Use 105˚C wire for replacements.

Caution
Failure to wire this unit according to this wiring diagram may result in injury to the installer or user. For deviations contact the factory.
Single-Stage, Standing Pilot, 100% Shut-Off, Three-Phase.

Factory Field Wire Nut

24V Line

Wiring Legend

24V / 460V Xfmr

GT1

Indicated Terminal Board Connection

ECO Combination Gas Control

TH TR TD Relay

Starter Coil (10VA Max)

Overload 31

TDC

Indicated Terminal Board Connection

Limit Control

F

C

Blocked Vent

Safety Switch

t˚Therm

HH TD Relay

Heater

Caution

Failure to wire this unit according to this wiring diagram may result in injury to the installer or user.

For deviations contact the factory.

Note to installer:

Attach this diagram near heater.

All wiring must comply with national electric code and all local codes.

All components must agree with their respective power source.

Use 105˚C wire for replacements.

ECO Connections

Low Volt Therm (By Others)

Terminal Board "G"

ECO Alternate Combination Gas Control

T2 T1 BL BR BK G

Terminal Board Connection

ECO

Connections

Alternate Combination Gas Control

Terminal Board "G"

ECO

Connections

Note to installer:

Attach this diagram near heater.

All wiring must comply with national electric code and all local codes.

All components must agree with their respective power source.

Use 105˚C wire for replacements.
Single-Stage, Intermittent Pilot Ignition, Non-100% Shut-Off, or 100% Shut-Off with Lockout, or 100% Shut-Off with Continuous Retry, Three-Phase.
Single-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Three-Phase.
Two-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Single-Phase.
Two-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry, Three-Phase.
Installation

All wiring for this control must comply with the National Electric Code and all local codes and ordinances.

Do not locate control on an outside wall or where it will be affected by drafts or radiant heat. It does not require level mounting.

1. Remove front cover and one wiring access knockout from control.
2. Attach control to mounting surface with three screws through back of case. Use a wooden shim for insulation if surface is metal or masonry.
3. Thread two wires through knockout and connect to R and W control terminals. Leads must be long enough to extend to unit heater junction box.
4. Disconnect power to unit heater and open junction box on unit heater. Select correct wiring diagram for unit heater model (and size if applicable) and complete wiring of control to unit.

Operational Check

1. Set room thermostat to its lowest setting and restore power supply to unit heater.
2. Familiarize yourself with the adjustment knob of the energy-saver control. In step 5 you will want to set it at 3-6 degrees (approximately) above the thermostat, but for now, turning the dial clockwise to a lower setting simulates a rise in temperature and only the unit heater fan should come on. If the wiring is correct, the controlled equipment will switch on and off as the temperature dial indicates the approximate space temperature.
3. If the controlled equipment does not start and stop as the thermostat dial is turned, disconnect the power supply and check the wiring and terminal connections.
4. If the controlled equipment operates opposite to the sequence desired, shut off the power and check for reversed leads on the switch.
5. After checkout, reset room thermostat to desired comfort level. Set energy-saver control 3 to 6 degrees above room thermostat (depending on mounting height, room conditions, etc.) for ceiling air circulation.

Gravity Vented, Propeller and Blower Models – (Single and Three Phase)

WIRING INSTRUCTIONS:

1. Turn off power to unit heater.
2. Connect “R” of Energy Saver to terminal 1 of time delay relay.
3. Connect “W” of Energy Saver to terminal 3 of time delay relay.
4. Follow operational check sequences on prior page.

Power Exhausted, Propeller and Blower Models – (Single and Three Phase)

WIRING INSTRUCTIONS:

1. Turn off power to unit heater.
2. Connect “R” of Energy Saver to terminal 2 of time delay relay.
4. Follow operational check sequences on prior page.
1. Remove the factory installed buss bar (jumper) from between terminals “T2” and “F” of terminal board.
2. Connect common of summer/winter switch to terminal “F” on terminal board.
3. Connect normally open switch of summer/switch to terminal “T1” on terminal board.
4. Connect normally closed switch of summer/winter switch to terminal “T2” on terminal board.
5. Connect thermostat between terminals “T1” and “T2” on terminal board.

Check-Out Procedure

With the power and gas supply turned off, set the thermostat to its lowest setting and place the summer/winter switch to the winter position. After making these adjustments proceed as follows.

1. If the unit has a standing pilot, turn on the gas supply only, and light the pilot according to the instructions on the unit’s serial plate, then proceed with Step 2. If the unit is equipped with an intermittent pilot ignition system, turn on gas supply to unit and proceed with Step 2.
2. Turn on power supply to the unit. Nothing should happen.
3. Place the summer/winter switch in the summer position. After a delay of approximately 30 seconds the fan motor should start.
4. While the summer/winter switch is still in the summer position, and with the fan motor running, turn the thermostat up to call for heat. The main burner should now fire.
5. Turn the thermostat down again. The main burner should shut off and the fan motor should continue to run. During this step, allow the fan to run at least 1¼ minutes to make sure it will continue to run. Modine units are equipped with a time delay relay and the motor will run approximately 1 to 1¼ minutes after the time delay relay has been de-energized.
6. After insuring that the fan motor will continue to run in the summer position, and with the thermostat set to its lowest setting, place the summer/winter switch in the winter position and wait for the time delay relay to turn the fan motor off.
7. After the fan motor has stopped, and with the summer/winter switch in the winter position, turn the thermostat up to call for heat. The main burner should fire and after a delay of approximately 30 seconds, the fan motor should run.

If the above sequence of operation does not occur, recheck all wiring until the necessary correction to the wiring is found and corrected. Set the thermostat to the desired set point and place summer/winter switch in desired position. Unit is now ready for use.
Before proceeding with wiring the accessories described, make sure the unit has been installed, vented piped and wired according to the Installation/Service Manual and Standard Wiring Diagram furnished with the unit heater.

### Check-Out Procedure

With the power and gas supply turned off, set the thermostat to its lowest setting.

1. If the unit has a standing pilot, turn on the gas supply only and light the pilot according to the instructions on the unit’s serial plate, then proceed with Step 2. If the unit is equipped with an intermittent pilot ignition system, turn on the gas supply to unit and proceed with Step 2.

2. Turn on power supply to unit. Nothing should happen.

3. Turn up the thermostat to call for heat. The power exhauster motor should start, the centrifugal switch of the power exhauster should close, and the main burner should light. After a delay of approximately 30 seconds, the fan motor should start.

4. Turn the thermostat down again. The main burner and power exhauster motor should shut off. The fan motor should continue to run for approximately 1 to 1¼ minutes. Modine units are equipped with a time delay relay, and the fan motor is delayed for approximately 30 seconds on start-up, and 1 to 1¼ minutes on shut-down.

5. Check the power exhauster centrifugal switch for proper function. To do this, remove the centrifugal switch lead from terminal “V” of the terminal board. Turn up the thermostat to call for heat. The power exhauster motor should run, but the main burner should not light. After a 30 second delay, the fan motor should operate. The main burner should still not light.

6. Turn down the thermostat and allow the power exhauster motor and fan motor to stop running. Reconnect the centrifugal switch lead to terminal “V” of the terminal board. Recycle the unit as described in Steps 3 and 4.

If the unit does not operate in the sequence described above, recheck all wiring until the necessary correction to the wiring is found and corrected. Set the thermostat to the desired set point. The unit is now ready for use.
Before proceeding with wiring the accessories described, make sure the unit has been installed, vented piped and wired according to the Installation/Service Manual and Standard Wiring Diagram furnished with the unit heater.

CAUTION

Turn off all power and gas to unit before wiring. Failure to wire this unit according to this wiring diagram may result in injury to the installer or user. For deviations, contact factory.

1. Remove the factory installed bus bars (jumpers) between terminals “T2” and “F”, and between terminals “C” and “V”.
2. Connect common of summer/winter switch to terminal “F” of terminal board.
3. Connect normally closed switch of summer/winter switch to terminal “T2” of terminal board.
4. Connect normally open switch of summer/winter switch to terminal “T1” of terminal board.
5. Connect one red lead from centrifugal switch (CS) of power exhauster to terminal “C” of terminal board and connect the other red lead from centrifugal switch (CS) to terminal “V” of terminal board.
6. Connect terminal (3) of power exhauster relay to terminal “T2” of terminal board.
7. Connect terminal (1) of power exhauster relay to terminal “G” of terminal board.
8. Connect terminal (2) of power exhauster relay to L1 of power supply in unit junction box.
9. Connect L2 lead from power exhauster motor to L2 lead of power supply in unit junction box.
10. Connect thermostat between terminals “T1” and “T2” of terminal board.

Check-Out Procedure

With the power and gas supply turned off, set the thermostat to its lowest setting and place the summer/winter switch in the winter position. After making these adjustments, proceed as follows.

1. If the unit has a standing pilot, turn on the gas supply only, and light the pilot according to the instructions on the unit’s serial plate, then proceed with Step 2. If the unit is equipped with an intermittent pilot ignition system, turn on gas supply to the unit and proceed with Step 2.
2. Turn on power supply to the unit. Nothing should happen.
3. Place the summer/winter switch in the summer position. After a delay of approximately 30 seconds only the fan motor should start.
4. While the summer/winter switch is still in the summer position, and with the fan motor running, turn the thermostat up to call for heat. The power exhauster motor should come on, the centrifugal switch should close, and the main burner should light.
5. Turn the thermostat down again. The main burner and power exhauster motor should shut off, but the fan motor should continue to run. During this step, allow the fan to run at least 1 1/4 minutes to make sure it will continue running. Modine units are equipped with a time delay relay and the motor will run approximately 1 to 1 1/4 minutes after the time delay relay has been de-energized.

6. After insuring that the fan will continue to run in the summer position, and with the thermostat set at its lowest setting, place the summer/winter switch in the winter position and wait for the time delay relay to turn the fan motor off.
7. After the fan motor has stopped, and with the summer/winter switch in the winter position, turn the thermostat up to call for heat. The power exhauster should start, the centrifugal switch should close and the main burner should light. After a delay of approximately 30 seconds the fan motor should run.
8. Turn the thermostat down again. The main burner and power exhauster motor should shut off. The fan motor should continue to run for approximately 1 to 1 1/4 minutes and then shut off.
9. Check the power exhauster centrifugal switch for proper function. To do this, remove the centrifugal switch lead from terminal “V” of the terminal board. Turn up the thermostat to call for heat. The power exhauster motor should run, but the main burner should not light. After a 30 second delay, the fan motor should operate. The main burner should still not light.
10. Turn down the thermostat and allow the power exhauster motor and fan motor to stop running. Reconnect the centrifugal switch lead to terminal “V” of the terminal board. Recycle the unit as described in Steps 7 and 8.

If the unit does not operate in the sequence describe above, recheck all of the wiring until the necessary correction to the wiring is found and corrected. Set the thermostat to the desired set point and switch the summer/winter switch to the desired position. The unit is now ready for use.

For SERVICE contact your local qualified installation and service contractor or appropriate utility company.

As Modine Manufacturing Company has a continuous product improvement program, it reserves the right to change design and specifications without notice.

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