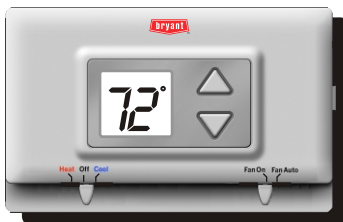




**MODEL TSTATBBNQ001
NON-PROGRAMMABLE DIGITAL
THERMOSTAT**

**SINGLE STAGE HEAT & COOL
THERMOSTAT**



• Heat Cool Thermostat

NOTE TO INSTALLER:

This manual must be left with the equipment user.

- Battery Operated
- 4-Wire Operation
- Millivolt Compatible
- Digital Display
- DC Voltage Compatible
- Stage: 1-Heat, 1-Cool
- Easy Slide Switch Operation

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Safety Warnings

TSTATBBNQ001

CAUTION


Follow *Installation Instructions* carefully. DISCONNECT POWER TO THE HEATER - AIR CONDITIONER BEFORE REMOVING THE OLD THERMOSTAT AND INSTALLING THE NEW THERMOSTAT.

**WARNING**

**CAUTION**

The 2 Alkaline “AA” batteries must be replaced at least every 12 months to assure proper operation. The thermostat will display the Low Battery code (fig. 1) on the display of the thermostat when it is time to replace the batteries.

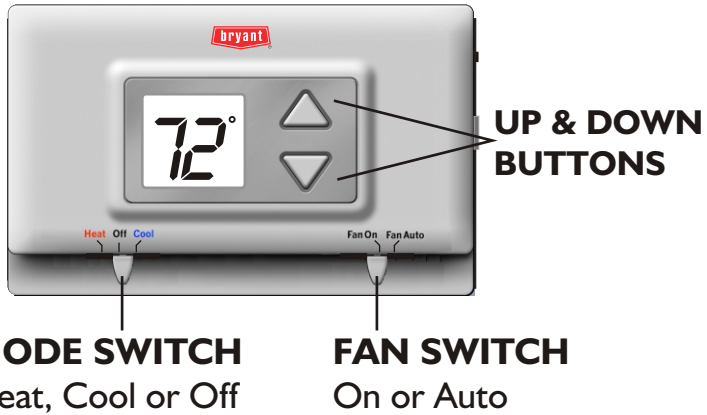
**FIG. 1**

When  is displayed the batteries must be replaced immediately. The manufacturer cannot be liable for improper operation of the thermostat if the batteries are not immediately replaced.

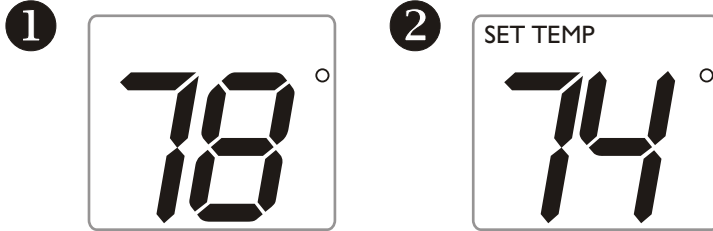
The annual battery replacement is especially critical in locations subject to freezing temperatures. The thermostat will be unable to turn on the Heat if the batteries are exhausted.

This device complies with Part 15 of the FCC rules. Operation is subject to the following 2 conditions:
(1) This device may not cause harmful interference, and (2)
This device must accept any interference received, including interference that may cause undesired operation.

Location of Controls

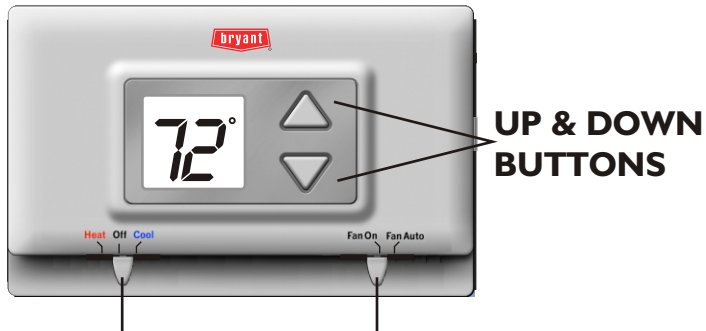


Display



- 1 Current room temperature.
- 2 If the Up or Down arrow buttons are pressed the thermostat will show the desired Set Temp temperature indicator. Once this screen is reached you may use the Up or Down arrow buttons to adjust the desired room temperature.
- 3 After five seconds with no button presses the thermostat will revert back to show the current room temperature.

Normal Operation



MODE SWITCH

Heat, Cool or Off

FAN SWITCH

On or Auto

Manual Operation

- 1 Select heat or cool with the mode switch.
- 2 Normally leave the fan switched to auto.
In fan auto, the fan will turn on only with a heat or cool demand. When Fan On is selected, the fan will run continuously, even when the mode switch is set to Off.
- 3 Adjust the desired set temperature with the Up or Down buttons.



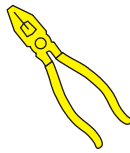
Proper installation of the thermostat will be accomplished by following these step by step instructions. If you are unsure about any of these steps, call a qualified technician for assistance.



These tools will be required:



*Flat Blade
Screwdriver*



*Wire cutter
& Stripper*



Make sure your Heater/Air Conditioner is working properly before beginning installation of the thermostat.



Carefully unpack the thermostat. Save the screws and instructions.



Turn off the power to the Heating/Air Conditioning system at the main fuse panel. Most residential systems have a separate breaker for disconnecting power to the furnace.

Step #2

Remove & Replace Old Thermostat



Remove the cover of the old thermostat. If it does not come off easily check for screws.



Loosen the screws holding the thermostat base or subbase to the wall, and lift away.



Disconnect the wires from the old thermostat. Tape the ends of the wires as you disconnect them, and mark them with the letter of the terminal for easy reconnection to the new thermostat.



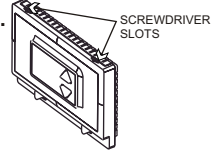
Keep the old thermostat for reference purposes, until your new thermostat is functioning properly.

Step #3

Installation and Battery Replacement

To Open The Thermostat

- 1 The top of the thermostat housing has two (2) screw-driver slots to assist when separating.



- 2 To pull the housing apart, insert a small blade screw-driver into the slot and rotate 90°. This will release the top housing snaps.



- 3 Repeat the procedure in the other screw driver slot.

- 4 Separate the housing halves by pulling the top forward until the pins release, and then lift the bottom out.




The batteries must be replaced immediately when the thermostat displays the Low Battery code (fig.1).

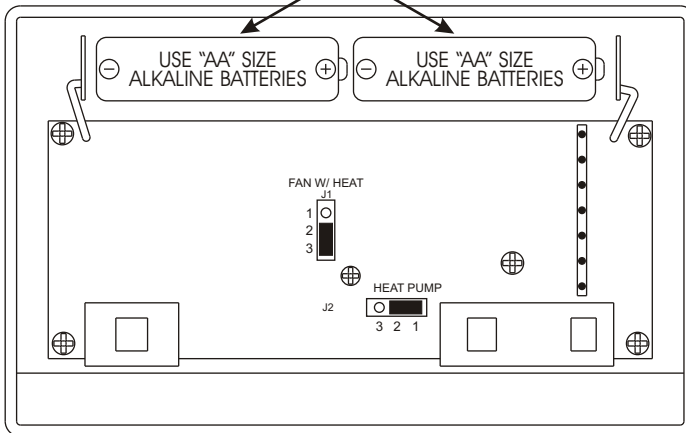


FIG. 1

Battery Replacement

- 5** REPLACE WITH ALKALINE BATTERIES AT LEAST ONCE EVERY YEAR, OR WHEN THE “LOW BATTERY”  ICON APPEARS (pages 2,8).

POSITION BATTERIES AS SHOWN



Step #4

Wire Connections



If the terminal designations on your old thermostat do not match those on the new thermostat, **refer to the chart below, or the wiring diagrams that follow.**

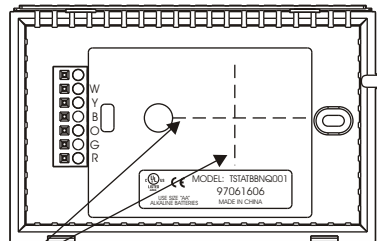
| Wire from the old thermostat terminal marked | Function | Install on the new thermostat connector marked |
|--|----------------------------------|--|
| W1, W or H | Heating | W |
| Y1 or Y | Cooling | Y |
| B | Rev. Valve (Energize to Heat) | B |
| O | Rev. Valve (Energize to Cool) | O |
| G or F | Fan | G |
| Rh, R, M, Vr, A | Power | R |

Thermal Insulating Sheet

A label is provided on the backplate that prevents drafts, originating inside the wall, from entering the thermostat.

These drafts, left unchecked, may cause incorrect room temperature readings.

Please do not remove this label from the thermostat. Insert the wires through the slots provided in the label as shown in Fig. 1



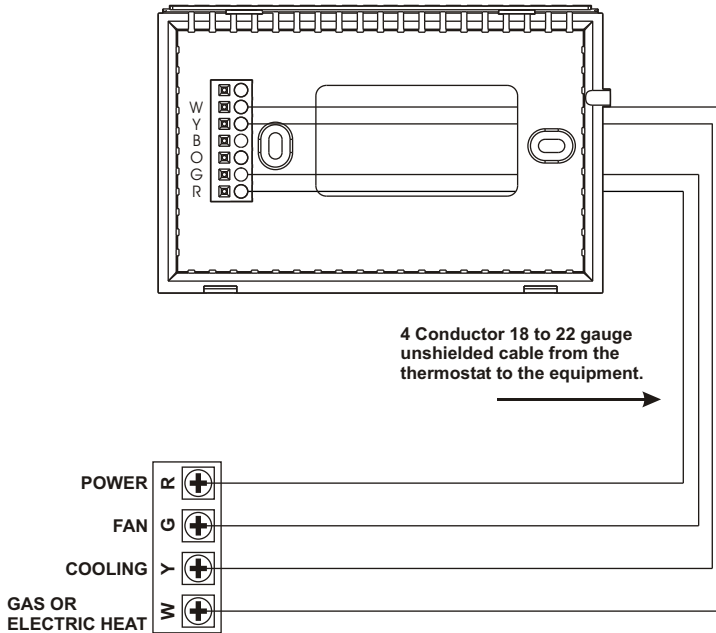
Wire Slots

Fig. 1

Sample Wiring Diagrams

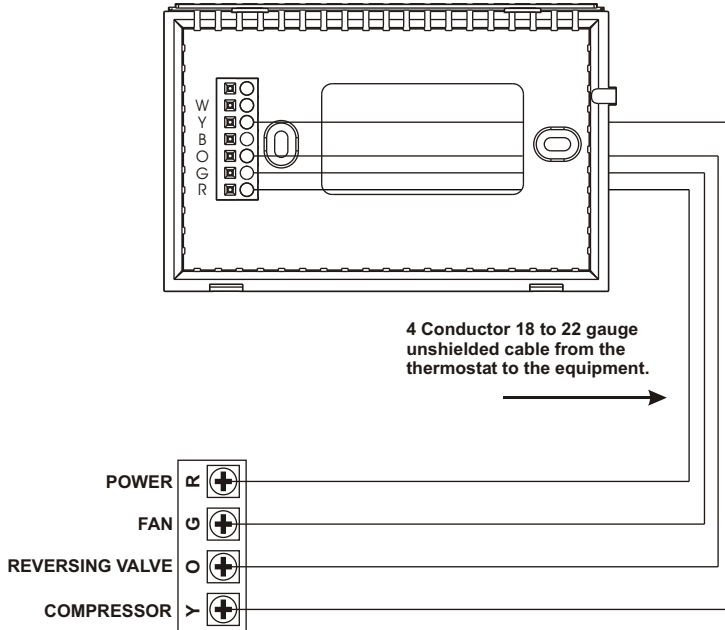
4 Wire, 1 Stage Cooling, 1 Stage Gas Heat

Residential Gas or Electric Heat *,
Electric Cool, split systems & package
units



Sample Wiring Diagrams

4 Wire, 1 Stage Cooling, 1 Stage Heat-Heat Pump with O reversing valve*.
Residential Heat Pumps, split systems & package units, with no auxiliary heat.

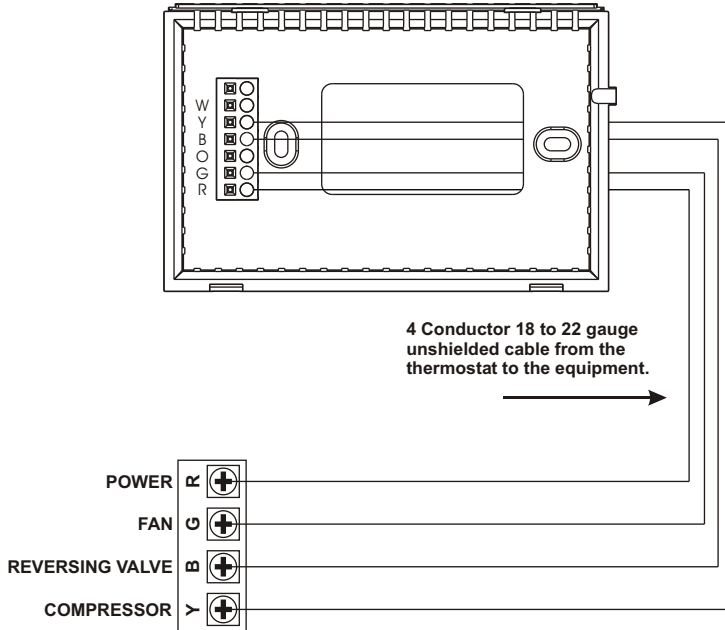


*For Heat Pump or Electric Heat applications see page 17 or 18 for Jumper configuration.

Sample Wiring Diagrams

4 Wire, 1 Stage Cooling, 1 Stage Heat-Heat Pump with B reversing valve*.

Residential Heat Pumps, split systems & package units, with no auxiliary heat.

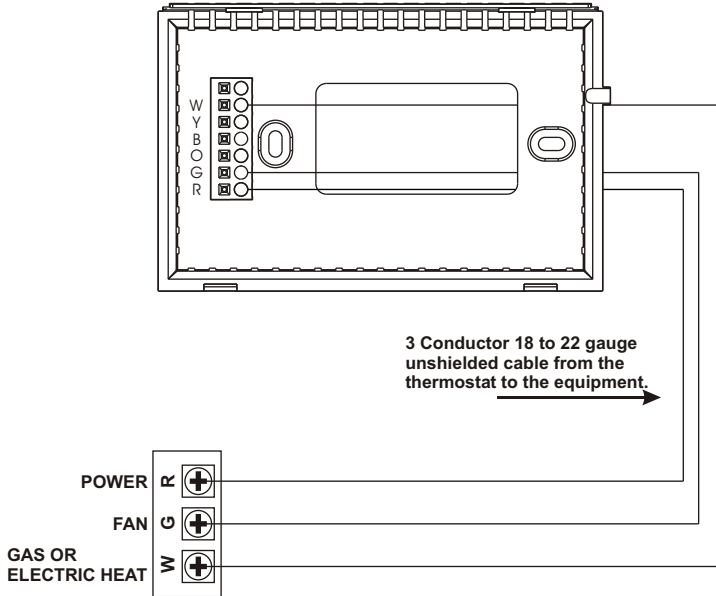


*For Heat Pump or Electric Heat applications see page 17 or 18 for Jumper configuration.

Sample Wiring Diagrams

3 Wire, 1 Stage Heat

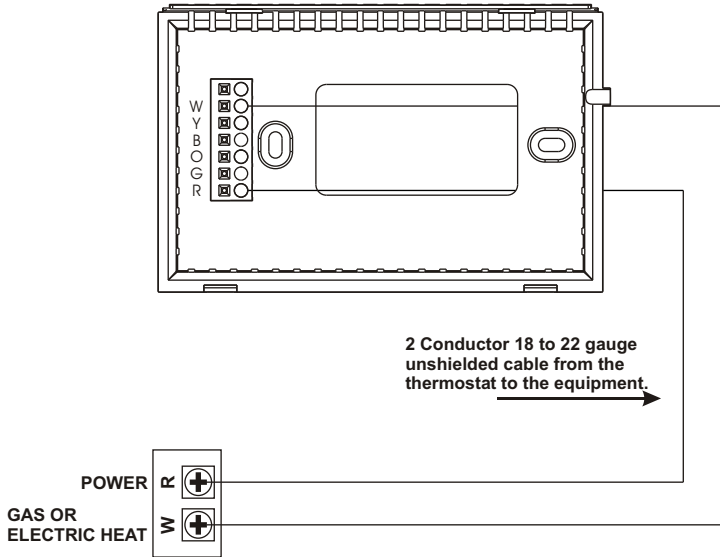
Residential Gas or Electric Heat units with a separately controlled fan.



Sample Wiring Diagrams

2 Wire, 1 Stage Gas Heat

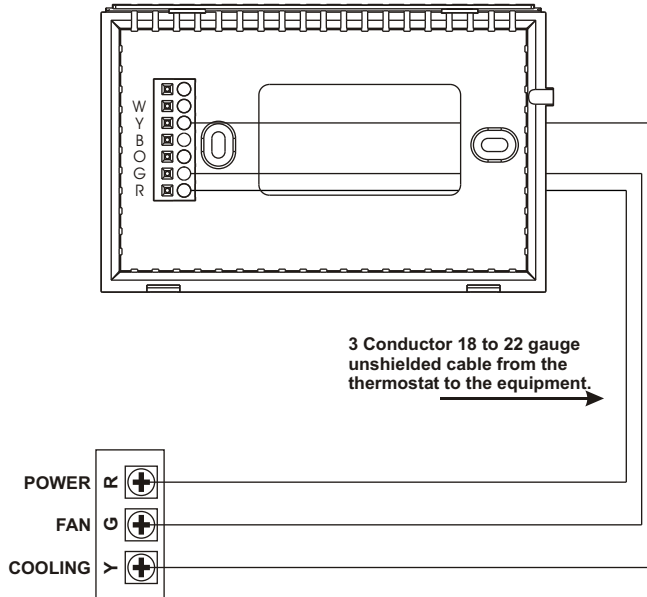
Residential Gas or Millivolt units.



Sample Wiring Diagrams

3 Wire, 1 Stage Cooling

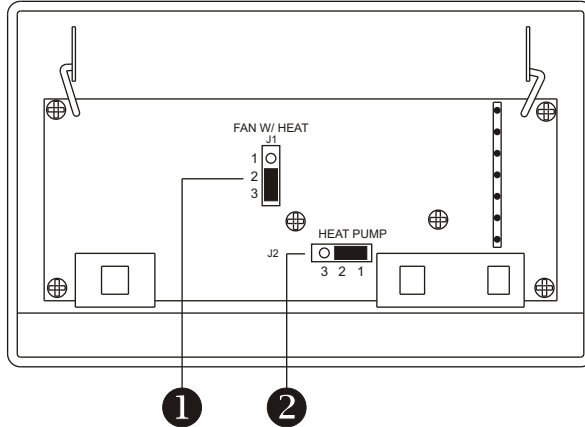
Residential Electric Cool units



Step #5

Jumper Configuration

Figure-A)



Jumper ① and Jumper ② are shown in the factory default positions for typical gas furnace heating with electric cooling.

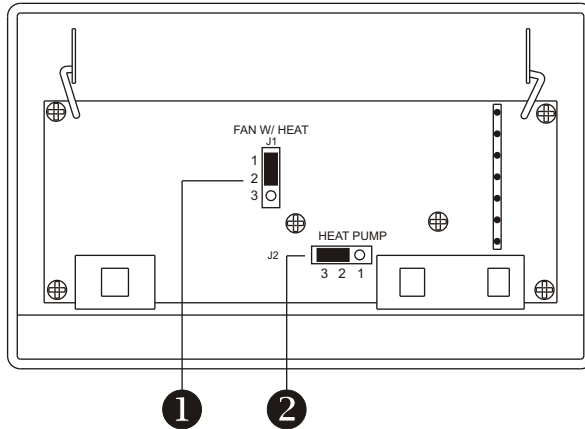
| | OUTPUTS | |
|--------------|-----------|-------------|
| | No Demand | With Demand |
| Cooling Mode | O* | Y, G, O* |
| Heating Mode | B* | W |

*Outputs active - For normal operation do not connect to equipment

Step #5

Jumper Configuration

Figure-B)



Jumper ① is used to select Fan On (G) with Heat (W). Jumper ② shown in the factory default position.

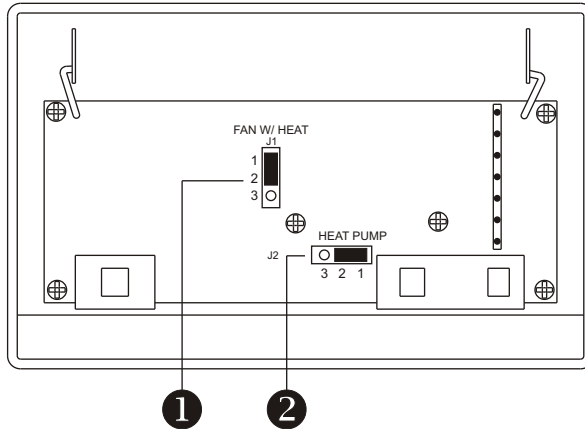
| | OUTPUTS | |
|--------------|-----------|-------------|
| | No Demand | With Demand |
| Cooling Mode | O* | Y, G, O* |
| Heating Mode | B* | W, G |

*Outputs active - For normal operation do not connect to equipment

Step #5

Jumper Configuration

Figure-C)



Jumper ① and Jumper ② are used to select heat pump operation. **Note:** Thermostat Does Not Have Auxiliary Heat / Emergency Heat Capability. Leave jumpers in original factory default positions (figure-A) for non heat pump applications.

| | OUTPUTS | |
|--------------|-----------|-------------|
| | No Demand | With Demand |
| Cooling Mode | O* | Y, G, O* |
| Heating Mode | B** | Y†, G, B** |

* Output active in Cooling

** Output active in Heating

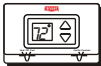
† Y active in Heating



Turn on the power to the Heating/Air Conditioning system.



Adjust the Slide Switch until it is located under the word **HEAT** on the thermostat. Press the Up or Down buttons until the set temperature is 10 degrees above room temperature. The HVAC unit should energize in the heating mode (pages 4-5).



Adjust the Slide Switch until it is located under the word **COOL** on the thermostat. Press the Up or Down buttons until the set temperature is 10 degrees below room temperature. The HVAC unit should energize in the cooling mode (pages 4-5).



Adjust the Slide Switch until it is located under the word **OFF**. Adjust the other slide switch until it is located under the word **Fan On**. The fan should turn on and run continuously (pages 4-5).

Troubleshooting



SYMPTOM: The slide switches on the thermostat are very difficult to move.

CAUSE: The backplate of the thermostat is deformed by being screwed tightly into a wall that is not perfectly flat.

REMEDY: Loosen the screws holding the thermostat into the wall.



SYMPTOM: The air conditioning does not attempt to turn on.

CAUSE: The cooling setpoint is set too high or the Mode Switch is not set for Cool, or the batteries are too weak.

REMEDY: Consult the Normal Operation section of this manual to lower the cooling setpoint and to correct the Mode Switch position, or replace the batteries (page 9).

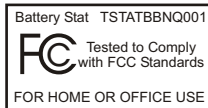
Troubleshooting



SYMPTOM: The heating does not attempt to turn on.

CAUSE: The heating setpoint is set too low or the Mode Switch is not set for Heat, or the batteries are too weak.

REMEDY: Consult the Normal Operation section in this manual to raise the heating setpoint and to correct the Mode Switch position, or replace the batteries (Page 9).



Warranty

5-Year Warranty - This Product is warranted to be free from defects in material and workmanship. If it appears within five years from the date of original installation, whether or not actual use begins on that date, that the product does meet this warranty, a new or remanufactured part, at the manufacturer's sole option, to replace any defective part will be provided without charge for the part itself; PROVIDED the defective part is returned to the distributor through a qualified servicing dealer.

THIS WARRANTY DOES NOT INCLUDE LABOR OR OTHER COSTS incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the installer.

THIS WARRANTY APPLIES ONLY TO PRODUCTS IN THEIR ORIGINAL INSTALLATION LOCATION AND BECOMES VOID UPON REINSTALLATION.

LIMITATIONS OF WARRANTIES – ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MANY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER. ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or owners manual including filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environments or other conditions beyond the control of the Manufacturer.
5. Parts not supplied or designated by the Manufacturer, or damages resulting from their use.
6. Manufacturer products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs or increases in electricity or fuel costs from any reason whatsoever including additional or unusual use of supplemental electric heat.
8. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

P/N 88-400
Rev. 2

Form No. OM17-55
Catalog No. 13TS-TA63