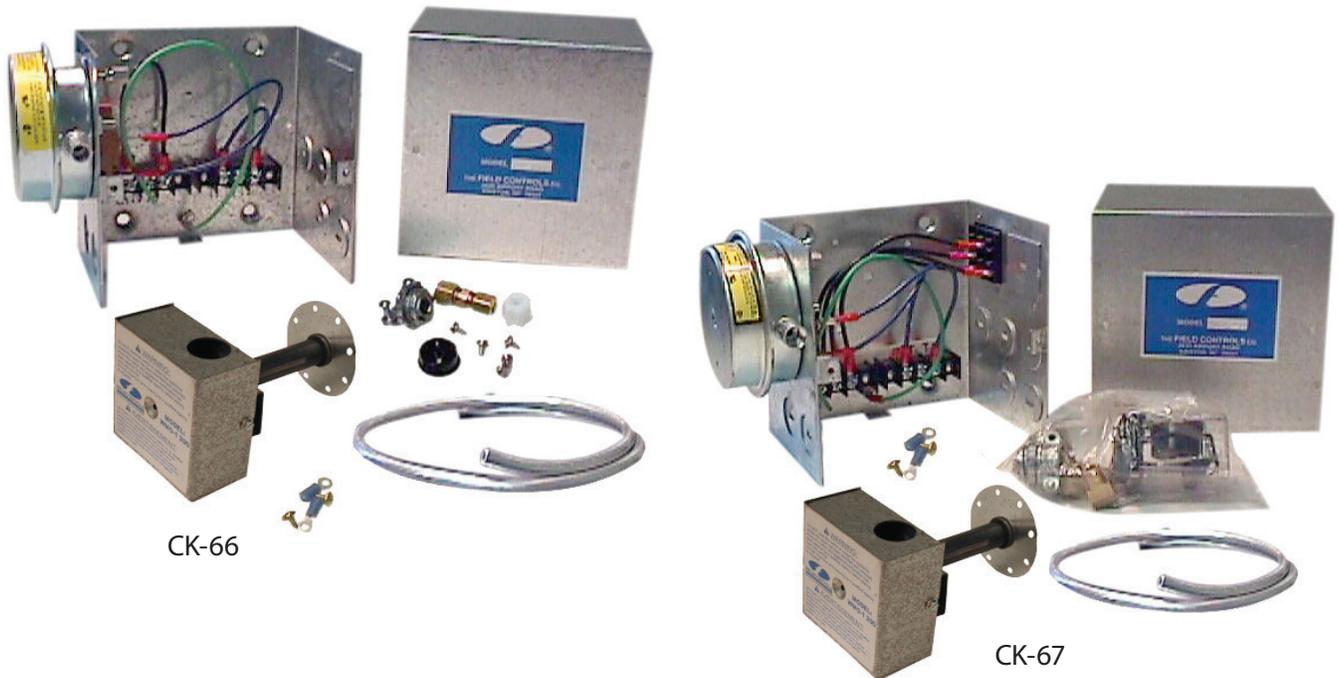


# 120 VAC SYSTEM CONTROL KIT

Model: CK-66 & 67



Designed for use on SWG Series Power Vent Hoods for controlling oil fired heating appliances with Honeywell R8184P primary control. CK-66 is for single appliance systems. CK-67 is for operating one or more appliance systems.

NOTE: The system requires a Honeywell R8184P primary control and an oil delay or solenoid valve supplied with equipment or installer supplied

## ITEMS INCLUDED IN KIT

- 1- Junction box with mounted pressure switch control
- 1- 2 Ft. Length of 1/4" aluminum tubing
- 1- 1/4" tubing connector
- 1- Flexible conduit connector
- 1- WMO-1 Secondary Safety Switch
- 1- 120 VAC Relay (CK-67 only)

READ THESE INSTRUCTIONS CAREFULLY AND COMPLETELY BEFORE PROCEEDING WITH THE INSTALLATION.

This device **MUST** be installed by a qualified agency in accordance with the manufacturer's installation instructions. The definition of a qualified agency is: any individual, firm, corporation or company which either in person or through a representative is engaged in, and is responsible for, the installation and operation of HVAC appliances, who is experienced in such work, familiar with all the precautions required, and has complied with all the requirements of the authority having jurisdiction.

Please retain these instructions after installation.

Installed By: \_\_\_\_\_ Phone: \_\_\_\_\_ Installation Date: \_\_\_\_\_



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## MOUNTING JUNCTION BOX

The junction box can be mounted at the venter or remotely mounted away from the venter. (See Figure 1 & 2)

1. Remove one of the knockouts from the side of the junction box where the pressure switch is mounted. Install the flexible conduit connector onto the CK-66 & 67 Junction Box and secure with fastening nut. If remote mounting the CK-66 or 67 Junction Box, mount the flexible conduit connector onto a 2" x 4" installer supplied junction box.
2. Fasten the flexible conduit from the SWG Venter into the conduit connector. Mount the CK-66 & 67 Junction box or installer supplied junction box onto the wall or floor joist without straining the flexible conduit. Fasten the CK-66 or 67 Junction Box through the four dimpled locations on the base of the box. (See Figure 3)

## OIL FIRED SECONDARY SAFETY SWITCH (CK-67 ONLY)

Installation of a SECONDARY SAFETY SWITCH is recommended for detecting flue gas spillage from a blocked flue system and/or inadequate draft.

SEE THE APPLIANCE MANUFACTURER'S INSTRUCTIONS FOR THE SPECIFIC LOCATION. IF THE APPLIANCE MANUFACTURER DOES NOT SPECIFY A LOCATION, REFER TO FIGURE 5.

1. Drill or pierce a clean hole (about  $\frac{3}{4}$ " diameter) in the vent pipe near the appliance outlet. (See Figure 5)
2. The heat transfer tube must have the fiber gasket installed against the mounting plate before attaching the unit to the vent pipe.
3. Insert the heat transfer tube with gasket into the  $\frac{3}{4}$ " diameter hole placed in the vent pipe during step 1.
4. Secure the assembly to the vent pipe with a minimum of 4 sheet metal screws. The channel must be mounted horizontally, unless specified differently by the appliance manufacturer. (See Figure 5)



**WARNING:** Switch connection channel must be mounted horizontally, unless specified differently by the appliance manufacturer.

**CAUTION:** Disconnect electrical power supply to the appliance when wiring the blocked vent switch.

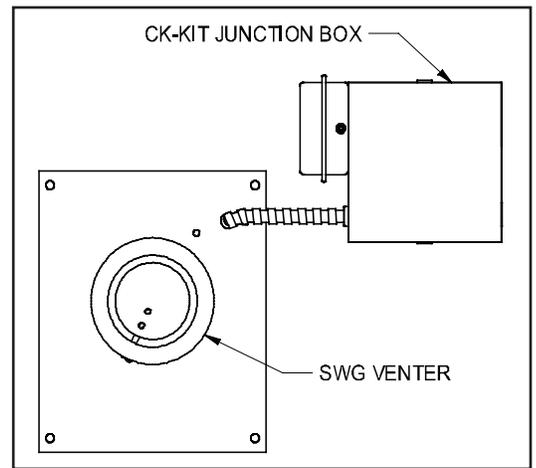


Figure 1

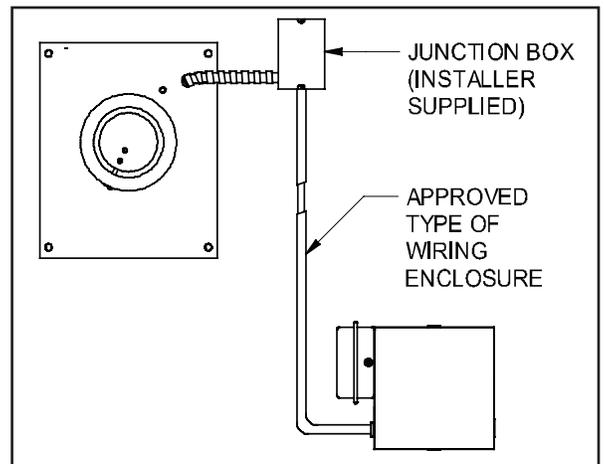


Figure 2

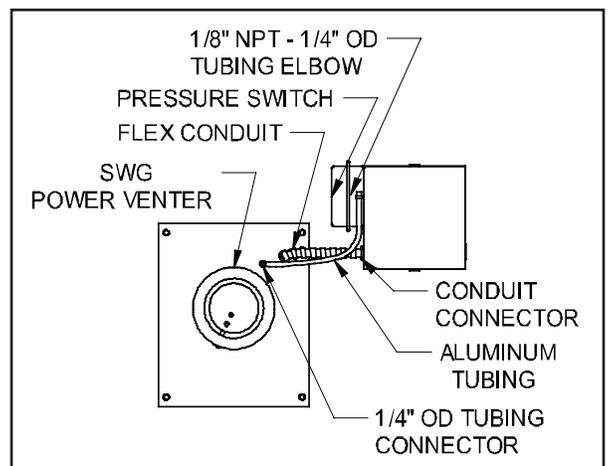


Figure 3

## WIRING

1. Wire the venter motor and controls in accordance with the National Electrical Code, manufacturer's recommendations and/or applicable local codes. UNIT MUST BE GROUNDED. Check ground circuit to make certain that the unit has been properly grounded. The wiring should be protected by an over current circuit device rated at 15 amperes. CAUTION must be taken to ensure that the wiring does not come into contact with any heat source. All line voltage and safety control circuits, between the venter and the appliance, MUST be wired in accordance with the National Electrical Code for Class I wiring or equivalent methods.
2. Route the venter motor and control wiring with an appropriate wiring method. Refer to the Wiring Diagrams A and B.

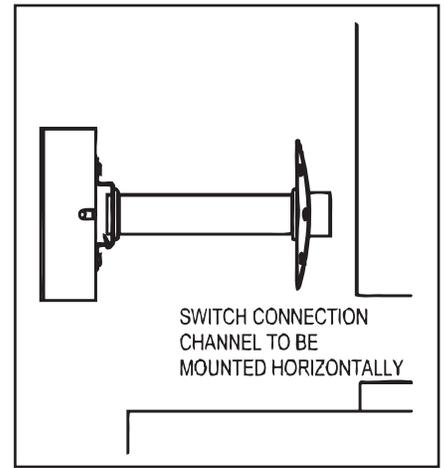


Figure 4

## PRESSURE SWITCH SENSING TUBE INSTALLATION

1. Attach the 1/4" tubing connector to the pressure tube on the SWG Venter. (See Figure 3)
2. Connect the supplied 1/4" aluminum tubing to the tubing connector. Route the tubing to the CK-66 or 67 Junction Box and connect the tubing to the pressure switch. When routing the tubing avoid kinking the tubing by bending the tubing too sharply.

For remote mounted CK-66 or 67 Junction Box, use a 1/4" OD copper, aluminum or plastic tubing and route the tubing to avoid contact with any heat source.

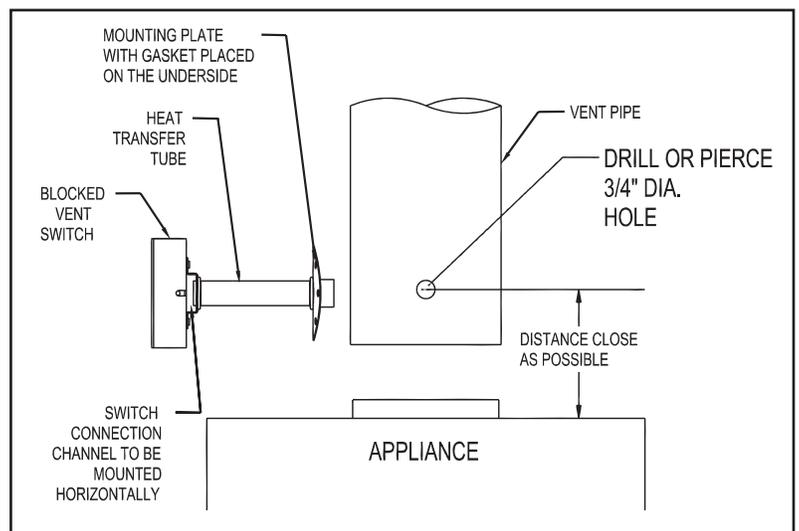


Figure 5

Refer to the SWG Venter installation instructions for setting system airflow.

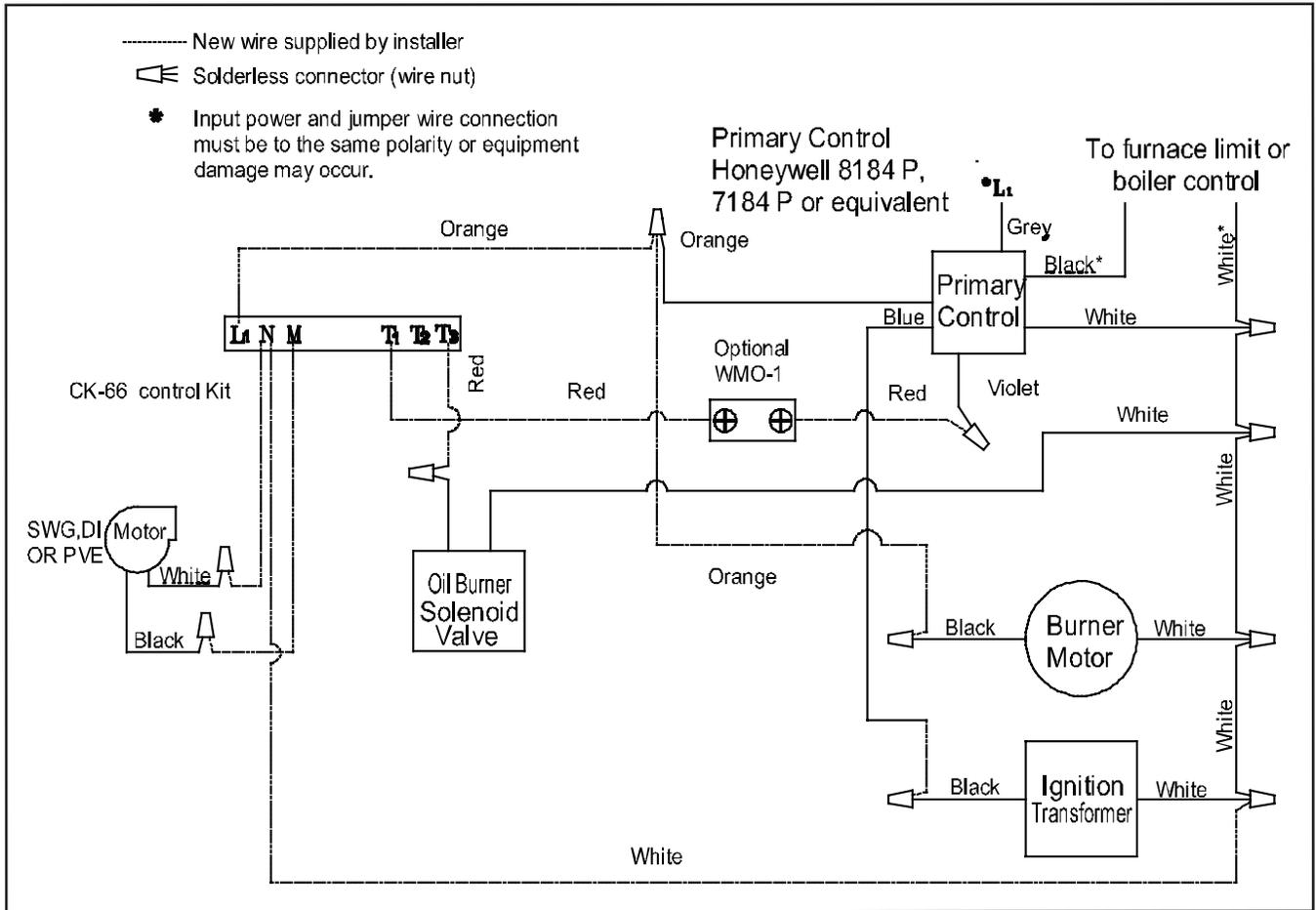


Diagram A  
CK-66 Single Appliance Wiring

- New wire supplied by installer
- ⏏ Solderless connector (wire nut)
- \* Input power and jumper wire connection must be to the same polarity or equipment damage may occur.

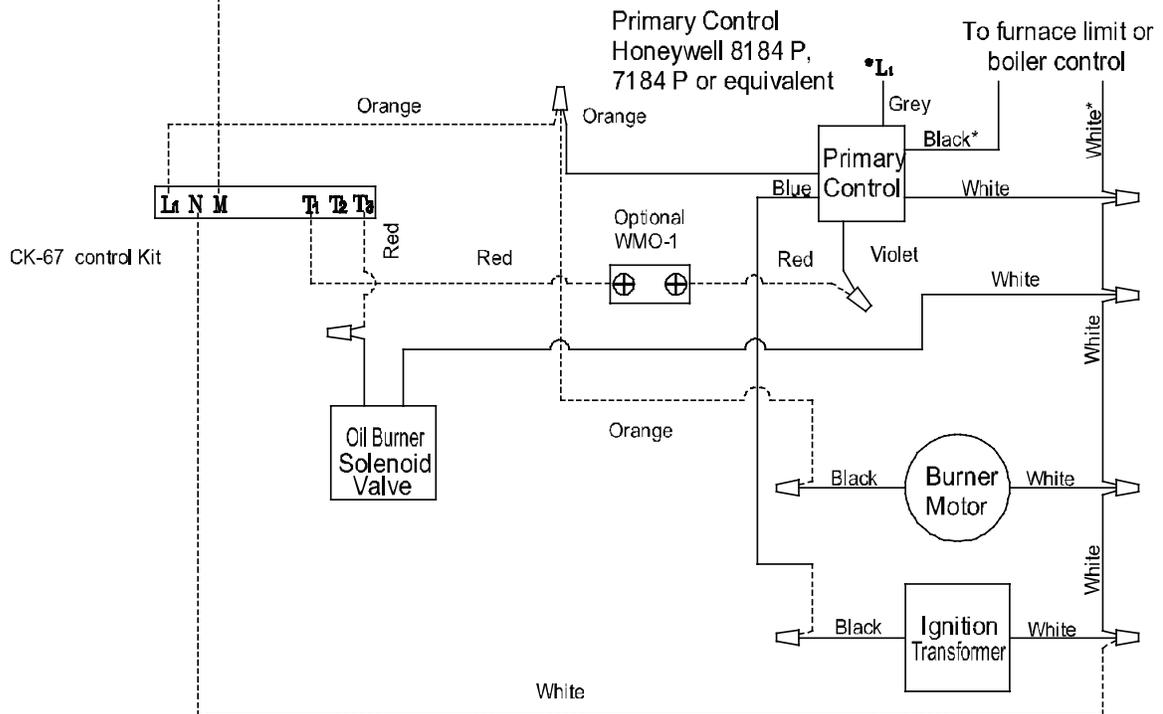
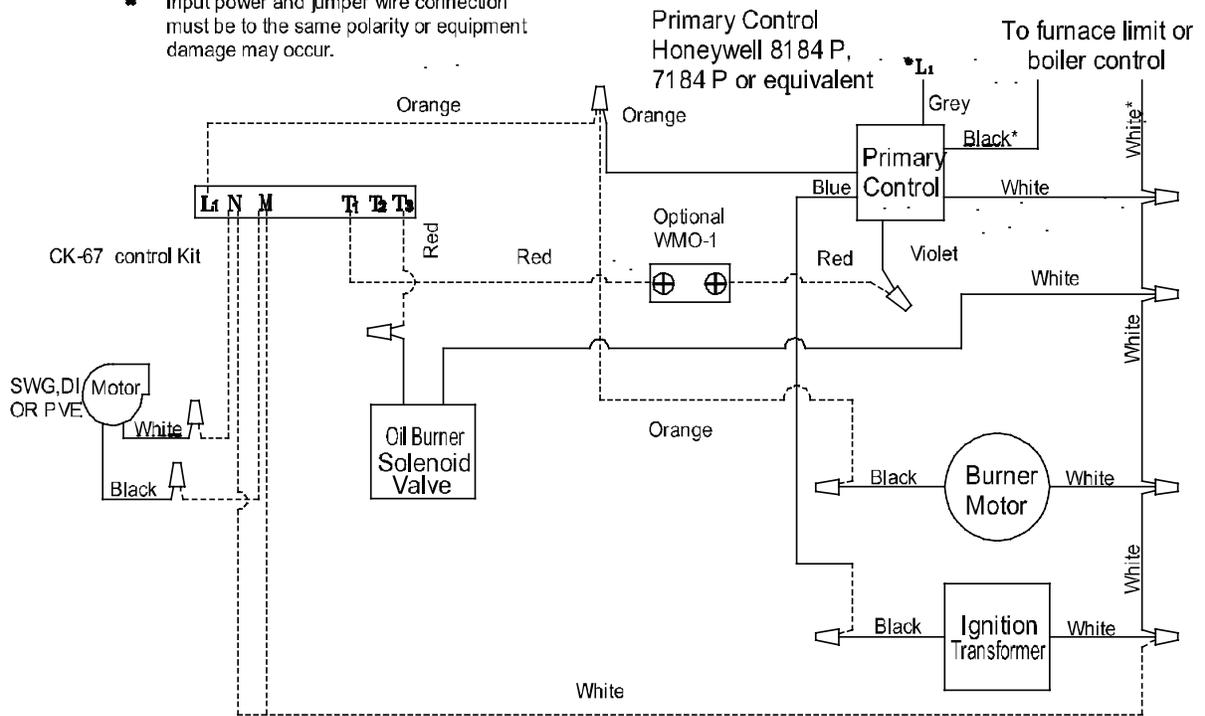


Diagram B  
CK-67 Multiple Appliance Wiring

## PRESSURE SWITCH ADJUSTMENTS

With the venter air flow set and the appliance operating at the best operating efficiency, adjust the pressure switch by rotating the adjustment screw clockwise until the burner shuts off, then rotate the adjustment screw counterclockwise until the burner fires. Rotate the adjustment screw an additional  $\frac{1}{4}$  turn counterclockwise to ensure proper switch setting. (See Figure 6)

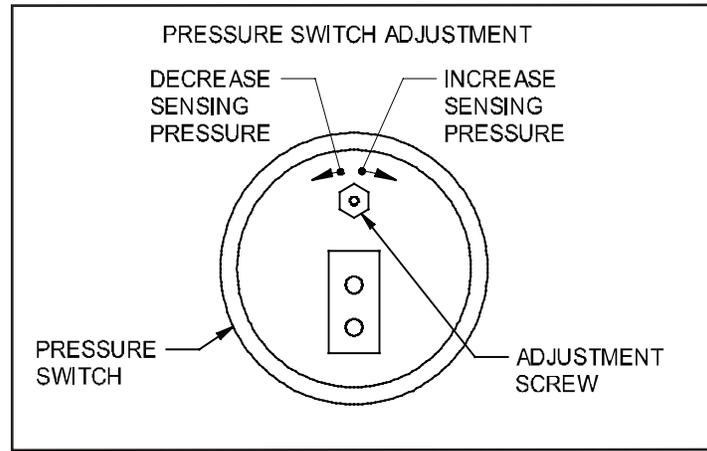


Figure 6

## SYSTEM CONTROL CHECK OUT PROCEDURES

1. Adjust the thermostat to call for heat and observe the power venting system for proper operation sequence (Repeat if necessary).
  - a. Thermostat calls for heat.
  - b. Relay is energized and venter motor starts.
  - c. Pressure switch closes and burner starts.
  - d. Thermostat is satisfied, burner stops and venter motor should operate for approximately 3 to 5 minutes.
2. While system is operating, disconnect power to the venter motor. This should open the pressure switch contacts and stop burner operation.
3. (If WMO-1 switch is installed) Allow vent system to cool. Disconnect the vent pipe between the venter inlet and the appliance outlet. Block the vent pipe with a noncombustible material. Activate the heating system with the main burner operating. Allow approximately 2 minutes or less for the secondary safety switch to deactivate the burner. Reset safety switch and repeat.

## TROUBLE SHOOTING HINTS

1. Main burner does not fire when thermostat calls for heat with venter operating.
  - a. Check pressure switch adjustment.
  - b. Check fuel flow.
  - c. Check wiring connections between pressure switch and burner.
  - d. Check pressure switch for continuity across terminals, during venter operation.
2. Venter does not activate when thermostat calls for heat.
  - a. Jump wire the terminals L1 and M to ensure motor operation.
  - b. Check wiring.
3. Flue gas odor.
  - a. Check system draft.
  - b. Check post purge venting time.
  - c. Check for negative pressure in building.

## MAINTENANCE

1. Motor: Inspect motor once a year; the motor should rotate freely.
2. Wheel: Inspect venter wheel annually, for oil fired heating systems, clear any soot, ash or coating, which inhibits either rotation or air flow. Remove all foreign material before operating.
3. Vent System: Inspect all vent pipe connections annually for looseness and for evidence of flue gas leakage. Seal or tighten pipe connections if necessary.

## WARRANTY

For warranty about this or any Field Controls product, visit:  
[www.fieldcontrols.com/warranty](http://www.fieldcontrols.com/warranty)



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