

THE FIELD CONTROLS COMPANY

MODEL HWK-6: HOT WATER HEATER KIT:

This device **MUST** be installed by a qualified installer in accordance with the manufacturer's installation instructions. Wiring **MUST** be in accordance with the National Electrical Code and applicable local codes.

NOTE: ALL WATER HEATERS MUST HAVE SAFETY SPILLAGE SWITCHES INSTALLED.

Installation of a SAFETY SWITCH is **REQUIRED** for water heaters, for the purpose of detecting spillage from a blocked flue system and/or inadequate draft.

ITEMS SUPPLIED WITH THIS KIT:

- 1- Fan control gas pressure switch
- 2- Spillage switch assembly
- 1- 2 ft. length of aluminum tubing
- 1- 1/8 inch NPT. x 3 inch pipe nipple
- 1- 1/8 inch NPT. x 2 inch pipe nipple
- 1- 1/8 inch NPT. pipe tee
- 1- Thermocouple junction block

INSTALLATION PROCEDURES FOR HOT WATER HEATER KIT:

CAUTION: DISCONNECT ELECTRICAL POWER SUPPLY WHEN WIRING WATER HEATER KIT

INSTALLATION OF FAN CONTROL SWITCH:

CAUTION: Check gas control valve pressure. Pressure **MUST NOT** exceed 14" WC pressure.

1. Disconnect gas supply to the gas control valve. Remove pressure tap plug (See Figure 1).

NOTE: Seal all pipe connections with pipe thread sealant.

2. Replace pressure tap plug with the 1/8 inch x 3 inch pipe nipple and 1/8 inch pipe tee. Install pressure tap plug at the bottom of the 1/8 inch pipe tee (See Figure 2).

3. Install the pressure switch into side of the 1/8 inch pipe tee with the 1/8 inch x 2 inch pipe nipple. The 1/4 inch Aluminum bleed tube **MUST** be connected to the negative side of the pressure switch, with the other end terminating near burner (See Figure 3).

Figure 1

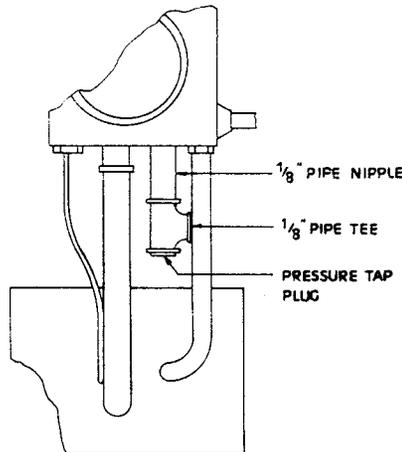
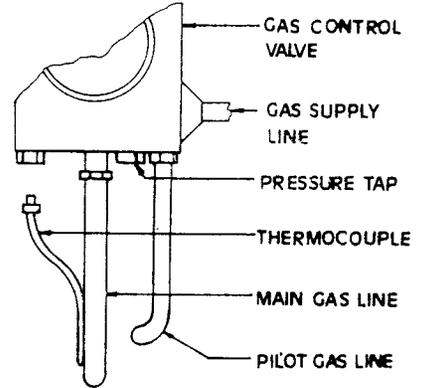
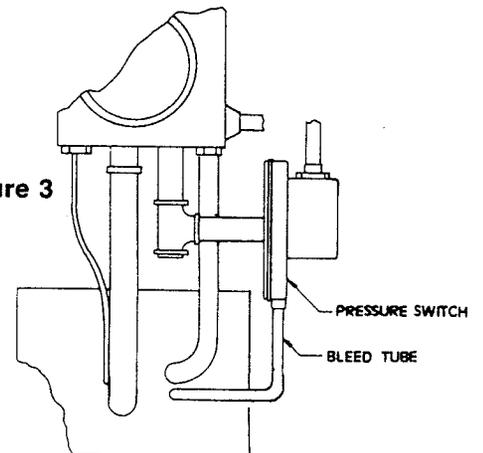


Figure 2

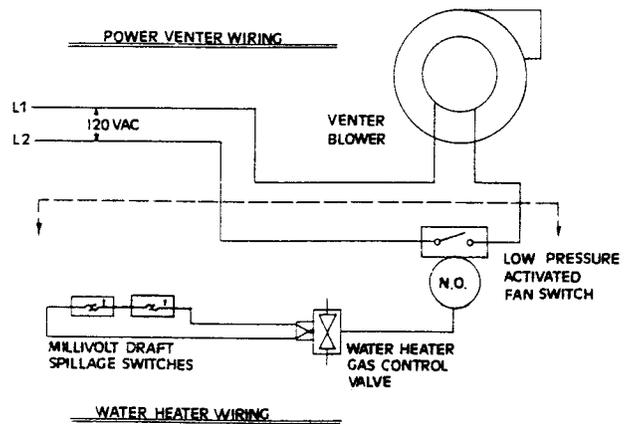
Figure 3



CAUTION: Bleed tube **MUST** be installed with it's termination near main burner.

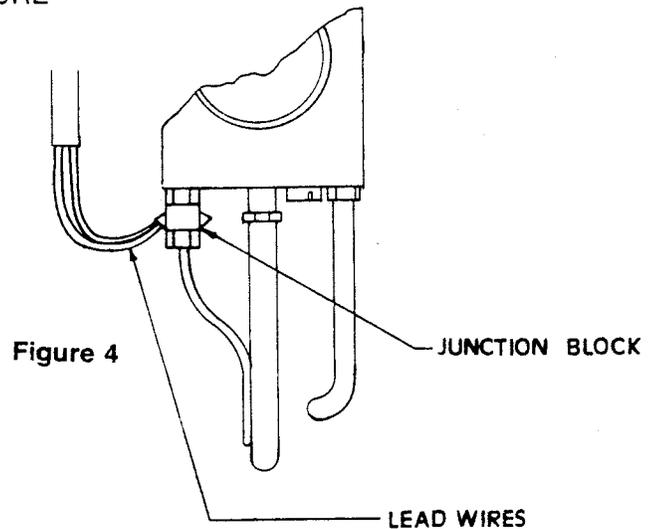
4. Wire the fan control switch into power venter circuit in accordance with the National Electrical Code and applicable local codes (Refer to Diagram A for wiring diagram).

Diagram A



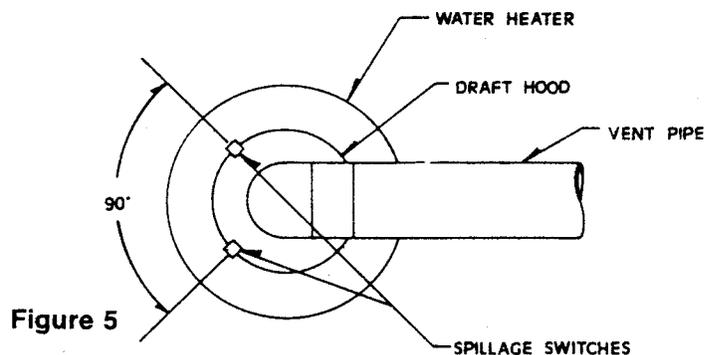
DRAFT HOOD SAFETY SWITCH INSTALLATION PROCEDURE

1. Remove thermocouple from gas control valve (See Figure 1).
2. Thread junction block into thermocouple port and thread thermocouple into bottom of junction block. Connect lead wire from junction block to jacketed lead wires or wires enclosed in an accepted wiring enclosure (See Figure 4).



NOTE: Draft spillage switches must be mounted 90 degrees apart, and mounted opposite from the vent outlet direction (See Figure 5).

3. Mount the 2 spillage switches on to draft hood and connect inside terminals of switch with jumper wire. Connect outside terminals to lead wires which are connected to thermocouple junction block. (See Diagram A).
4. Route jacketed lead wires or accepted wiring enclosure on the outside of the water heater enclosure. Securing them to the enclosure with acceptable hold down tabs, keeping the wires away from any HOT surface area.



CAUTION; Refer to system check-out procedures below before operating.

SYSTEM CHECK-OUT PROCEDURE FOR HOT WATER HEATER CONTROLS:

WATER HEATER FAN CONTROL SWITCH:

1. Following water heater manufacturer's instructions to light the pilot. Turn the gas control valve to the **ON** position, which should energize the venter motor.
2. Turn gas control valve to the **PILOT** position, which should de-energize the venter motor.
3. Repeat step 1 and 2 to assure proper operation.

WATER HEATER SPILLAGE SWITCH:

1. Allow water heater to heat up to temperature, then disconnect the power supply to the fan control switch.
2. Adjust the thermostat to call for heat with the venter inoperative. Allow approximately 2 minutes of flue gas spillage for the spillage switches to sense the spillage and disrupt the thermocouple circuit, halting the gas flow to the pilot and burner.
3. Wait 2 to 3 minutes and light pilot, then perform a second safety spillage test (Steps 1 and 2). Refer to Appendix G "Trouble Shooting" in **THE OWNER'S MANUAL** if any problems are apparent.

CAUTION: If for any reason the system has shut down during operation, the cause of the system failure should be investigated and corrected before resetting the safety switches and relighting the pilot.

Please refer to **THE OWNER'S MANUAL** for complete system installation and safety instructions, multiple venting systems, trouble shooting hints and maintenance instructions.

**THE FIELD CONTROLS CO.
2308 Airport Rd.
Kinston, NC 28501**