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Rev. D   10/2014

INSTALLATION INSTRUCTIONS FOR POWER VENT KIT MODEL LPVK-110 (CAT. NO. H7387) FOR USE WITH ELECTRONIC, DIRECT-VENT GAS FIREPLACES LISTED IN TABLE 2

PFS
C   US

Report No. 14-108

NATIONAL FIREPLACE INSTITUTE NFI CERTIFIED
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We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

NOTICE

- **READ ALL STEPS BEFORE STARTING INSTALLATION.**
- **LEAVE THESE INSTRUCTIONS WITH THE APPLIANCE.**
- All warnings, precautions, and instructions in the *Installation Instructions* and *Care and Operation Instructions* provided with the appliance also apply to these instructions.
- If you encounter any problems, need clarification of these instructions, or are not qualified to properly install this kit, contact your local distributor or dealer.

TABLE OF CONTENTS

REQUIRED PARTS (not provided)

- 14-gauge AWG Grounded Romex Cable
- Wire nuts
- Wiring Junction Box (optional)

GENERAL INFORMATION

Power Vent Kit Model LPVK-110 *(illustrated in Figure 1)* is only for use with certain INNOVATIVE HEARTH PRODUCTS electronic, direct-vent, gas fireplaces.

- Compatible fireplaces and adapter requirements are listed in *Table 2* on **Page 2**.

⚠ CAUTION

This kit is NOT for use on millivolt appliances.

Each compatible fireplace model requires the use of a specific **Power Vent Adapter Kit** (sold separately).

- **Adapter Kit** contents are illustrated in *Table 2* on **Page 2**.

Installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, latest edition (in Canada, the current CAN/CSA-B149.1 installation code).
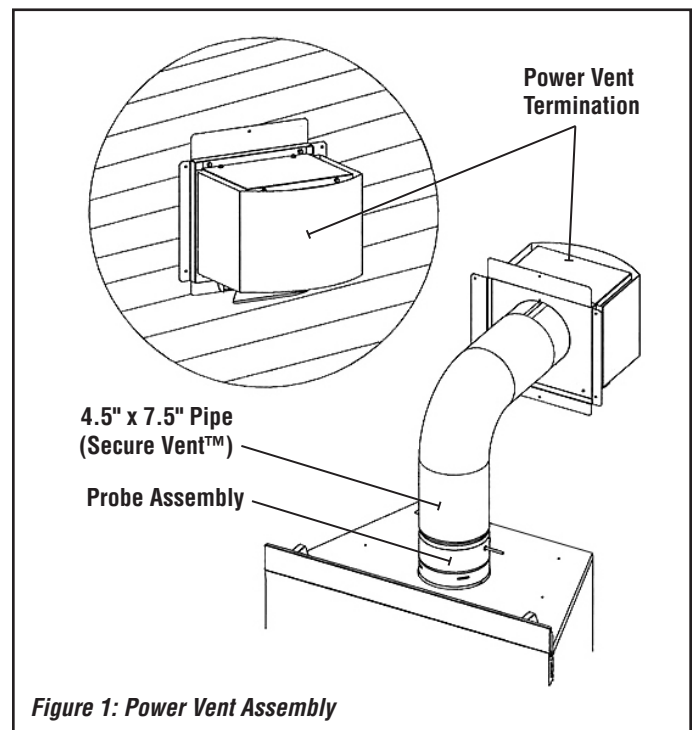

Power Vent Termination

4.5" x 7.5" Pipe (Secure Vent™)

Probe Assembly

Figure 1: Power Vent Assembly

KIT CONTENTS
Power Vent Kit LPVK-110 (Cat. No. H7387)

| Item No.	Part No.	Description	Qty.
1	601970-01	Vacuum Hose	1
2	102019-03	Wiring Harness	1
3a -or- 3b	102005-01 -or- 608409-01	Pressure Switch Assembly (Part No. 608409-01 includes adapter wires)	1
4	102009-01	Control Module	1
5	102010-01	Strain Relief - 3/8"	1
6	102021-01	Ring Terminal - #10	2
7	H7384	Insulated 1/4" Male Terminal	4
8	102022-01	Hose Clamp - 11/32"	2
9	P-8-7102	Snap Bushing	2
10	601957-01	Power Vent Termination	1
11	601978-01	Probe Assembly	1
12	74L61	SV Termination Adapter (SV4.5RCH)	1
13	H2246	Firestop Assembly (Horizontal)	1
14	67L6501	Velcro Strips (2" Lengths)	3
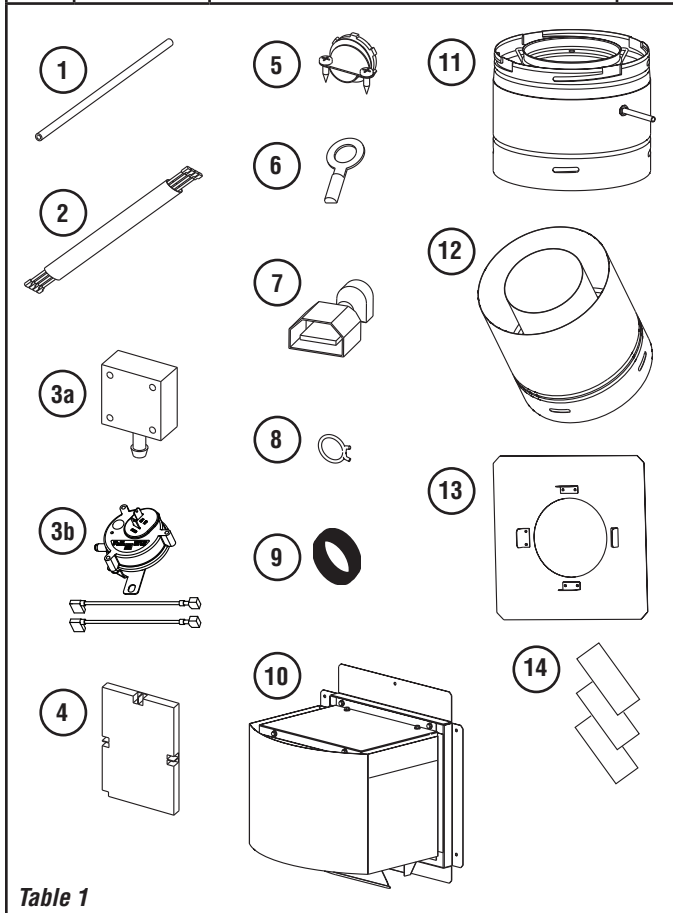
Table 1

COMPATIBLE FIREPLACES & ADAPTER KIT REQUIREMENTS
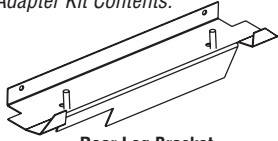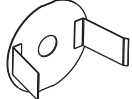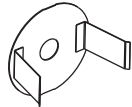**Power Vent Kit LPVK-110 (Cat. No. H7387)**
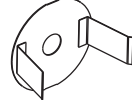
Fireplace Model Series	Fireplace Cat. No. (Description)	Required Power Vent Adapter Kit Cat. No. (Model No.)
ELDV	H3950 (35" Electronic) H3953 (40" Electronic) H3956 (45" Electronic)	H7407 (ELDV-PVAK) *Adapter Kit Contents:* Rear Log Bracket / 5/8" Restrictor / 1" Restrictor
MPLDV	H6076 (30" Electronic)	H7664 (MPLDV-PVAK) *Adapter Kit Contents:* 1/2" Restrictor
Rhapsody DRL65 Models	H8410 (54" Electronic)	H8574 (PVK-RAP54) *Adapter Kit Contents:* 3/4" Restrictor / 1" Restrictor

Table 2

TYPICAL INSTALLATION SEQUENCE

1. [Page 3]: Install the fireplace according to the fireplace *Installation Instructions*. Compatible fireplaces are listed in *Table 2*.

2. [Page 3]: Plan the vent run.

3. [Page 3]: Install the appropriate Power Vent Adapter Kit (as listed in *Table 2* on **Page 2**).

    NOTE: This power vent system can only be terminated horizontally.

4. [Page 4]: Attach the probe assembly [#11] to the fireplace collar.

    NOTE: Attach probe assembly FIRST, before connecting any other vent components to the fireplace.

5. [Page 4]: Complete the vent run.

6. [Page 6]: Install snap bushing [#9], strain relief [#5], and vacuum hose [#1].

7. [Page 6]: Route Romex wiring and connect to termination.

8. [Page 8]: Install the power vent termination [#10].

9. [Page 9]: Field wiring the power vent system to the fireplace control system.

    9A. [Pages 9–11]: Field wiring a Dexen electronic control system.

    9B. [Pages 12–15]: Field wiring a SIT Proflame electronic control system.

DETAILED INSTALLATION INSTRUCTIONS

1. Install the fireplace.

Install the fireplace according to the fireplace *Installation Instructions*. Compatible fireplaces are listed in *Table 2* on **Page 2**.

⚠ CAUTION

Do NOT install this Power Vent system on an incompatible fireplace.

NOTE: Igniter will continuously spark and possibly light the burner if unit is left in Continuous Pilot Mode (CPI). To switch to Intermittent Pilot Mode (IPI), carefully follow Step 9D on Page 15.

2. Plan the vent run.

Various horizontal venting configurations are possible with this Power Vent Kit. Analyze the vent routing, and determine the required number of vent sections and elbows.

Note: The power vent chimney may be run vertically through a roof (see *Figure 2a*) **or horizontally through an outside wall; however, THE POWER VENT TERMINATION MUST BE INSTALLED HORIZONTALLY. Building codes limit or prohibit horizontal termination in specific areas. For location guidelines, refer to local codes.** Also see *Figure 5* on **Page 5**.

Secure Vent™ venting components are used in these applications. Vent sections are available in net lengths of 4-1/2" (114 mm), 10-1/2" (267 mm), 22-1/2" (572 mm), 34-1/2" (876 mm), and 46-1/2" (1181 mm).

Refer to *Figures 2* and *3* for maximum/minimum vertical and horizontal vent lengths.
- Maximum vent run is 110 feet, plus six 90° (or twelve 45°) elbows.
- Minimum horizontal vent length is 8 feet.
- Maximum vertical rise above the fireplace is 66 feet.
- Venting can be installed with any combination of rise and run between the appliance and the termination, including up to 3 feet below the unit *(see Figure 2)*.

Note:
- Plan vent lengths to prevent joints at intersections of ceiling or roof joists.
- Ensure vent pipe is properly supported (for details, see the fireplace *Installation Instructions*).
- Make allowances for elbows, as indicated in the fireplace *Installation instructions*. Elbows are available in 90° and 45° configurations.
- To select vent length combinations and view a list of straight vent effective lengths, see the fireplace *Installation Instructions*.
- For approved venting components and catalog numbers, see "Listed Vent Components" in this manual, as well as the fireplace *Installation Instructions*.
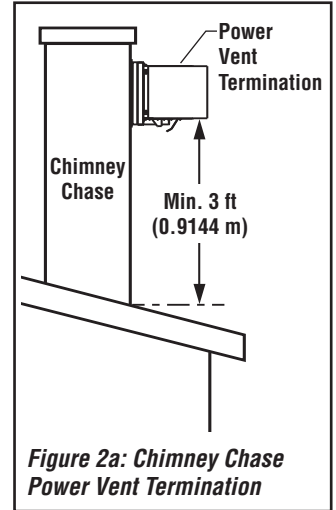- For additional details on venting installation, see the fireplace *Installation Instructions*.

Figure 2a: Chimney Chase Power Vent Termination

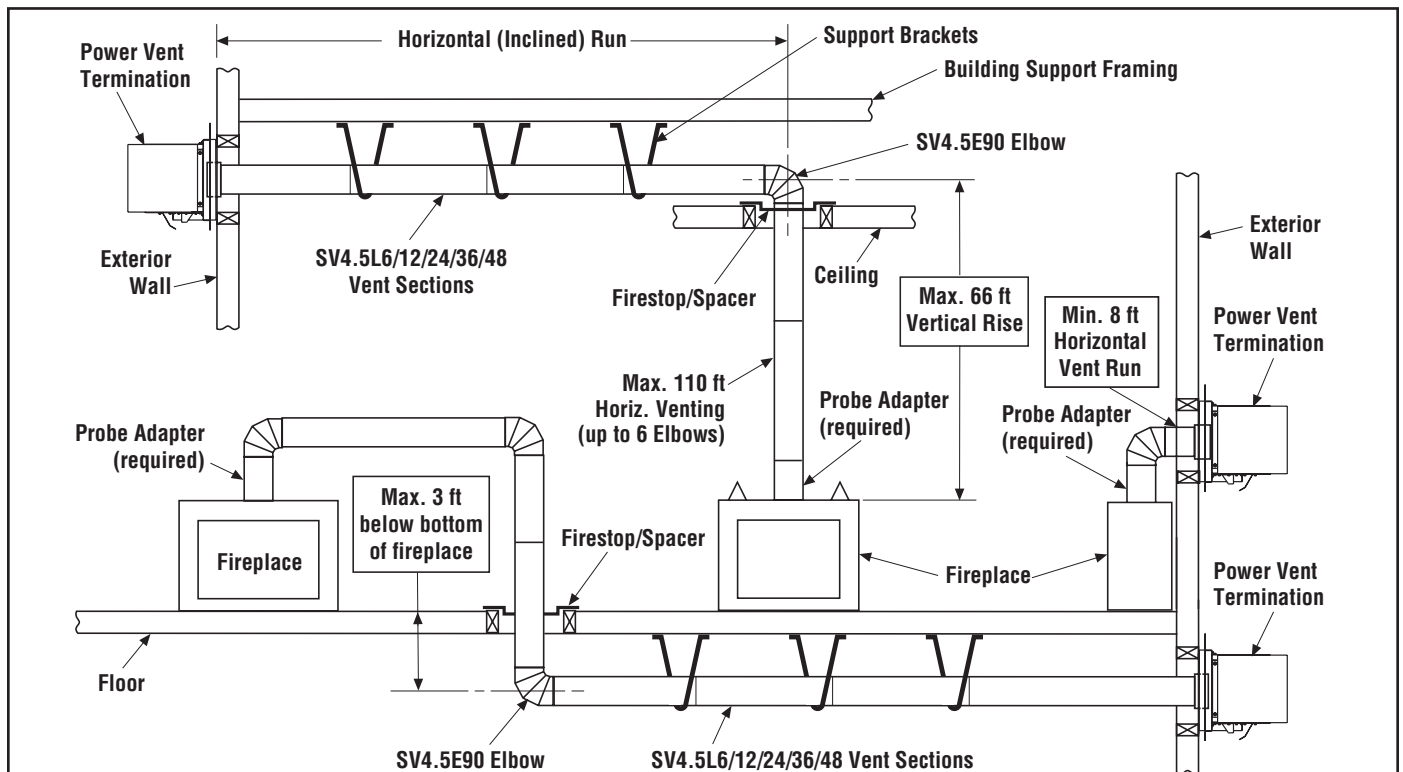**Remember to maintain minimum clearances to combustibles! See *Figure 3* on Page 4.**

Figure 2: Typical Power Vent Routing

VENTING CHART
Power Vent Kit LPVK-110 (Cat. No. H7387)

Maximmum Number of 90° Elbows	6
Maximum Vent Run (A + B)	110 ft
Minimum Horizontal Run (B)	8 ft
Minimum Vertical Run (A)	Probe Assembly and Elbows
Maximum Vertical Rise (A)	66 ft

B (see Chart)

Probe Assembly (required)

A (see Chart)
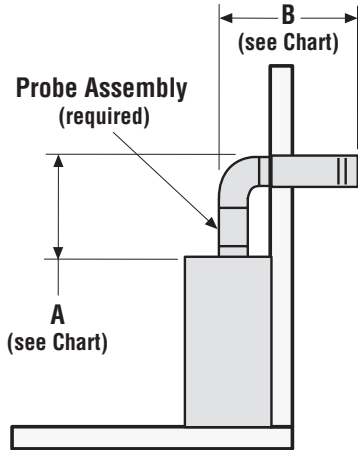
MINIMUM CLEARANCES TO COMBUSTIBLES

Vertical Vent Pipe	1 in. (25.4 mm)
Horizontal Vent Pipe	Top: 3 in. (76.2 mm) Sides: 1 in. (25.4 mm) Bottom: 1 in. (25.4 mm)

All other clearances are as listed in the appliance *Installation Instructions.*

Figure 3

3. Install applicable Power Vent Adapter Kit.

Before attaching any vent components, install the applicable Power Vent Adapter Kit. Compatible fireplaces and adapter kit requirements are listed in *Table 2* on **Page 2**.

Follow the instructions provided with the adapter kit.

4. Attach the probe assembly [#11] to the fireplace collar.

Note:

- **If not already done, install the applicable Power Vent Adapter Kit first** (see previous page).
- **Attach the Probe Assembly before connecting any other vent components to the fireplace.**
- **Attach the Probe Assembly directly to the appliance collar.**

The Probe Assembly (Item #11 in *Table 1*) is compatible with other Secure Vent™ direct-vent system components.

Attach the Probe Assembly directly to the fireplace collar in the manner shown in "Connecting Secure Vent™ Components" in Figure 4, below.

All fireplace models compatible with this Power Vent Kit are fitted with collars that have locking inclined channels. Compatible fireplaces are listed in *Table 2* on **Page 2**.

5. Complete the vent run.

After attaching the Probe Assembly, add additional Secure Vent™ vent system components in accordance with the requirements and vent charts in the specific fireplace *Installation Instructions*.

Attach vent system components in the manner shown in *Figure 4*, "**Connecting Secure Vent™ Components.**"

Connecting Secure Vent™ Components

Secure Vent™ direct-vent system components are unitized concentric pipe components featuring positive twist-lock connections.

To connect Secure Vent™ venting components:

1. Attach the dimpled end of one section to the incline-channel end of the other section, making sure to align the four dimples with the inlets of the four incline channels.

2. Push the section being attached against the adjoining section until fully engaged.

3. Twist the section being attached CLOCKWISE, running the dimples down and along the channels until seated at the ends of the channels. **The sections are properly seated when the arrow on one section aligns with the dimple on the other section** (see illustration).

The unitized design of **Secure Vent™** components will engage and seal both the inner and outer pipe without the need for sealant or screws. If desired, however, a #6 x 1/2" screw may be used at each joint (not required).
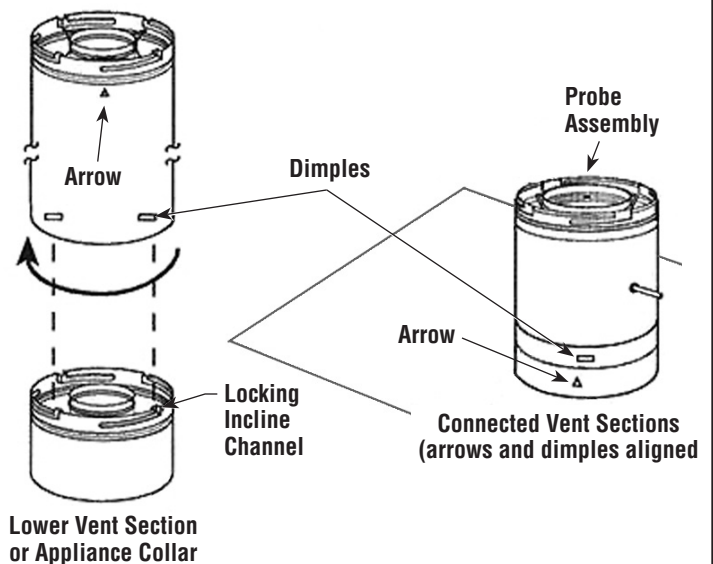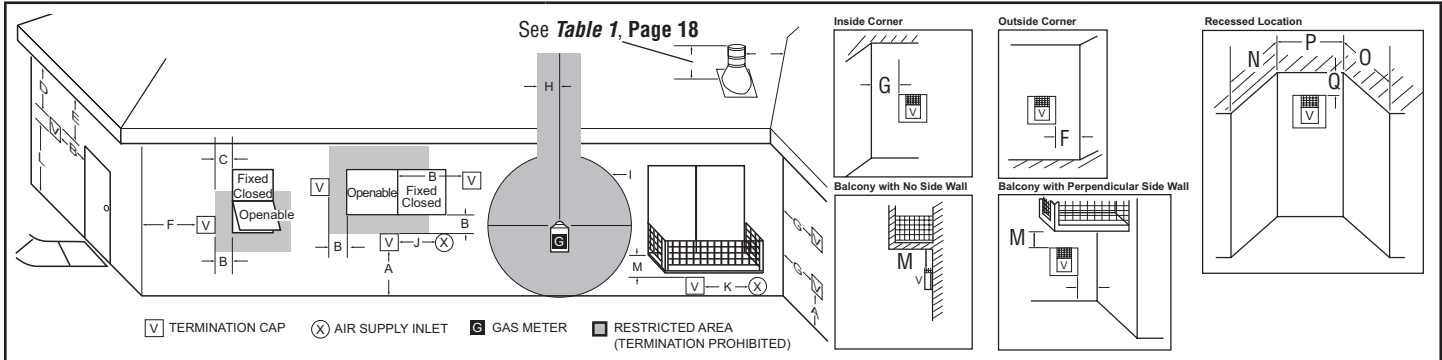
Arrow

Dimples

Probe Assembly

Arrow

Locking Incline Channel

Connected Vent Sections (arrows and dimples aligned

Lower Vent Section or Appliance Collar

Figure 4

4

EXTERIOR HORIZONTAL VENT TERMINATION CLEARANCE REQUIREMENTS (ANSI/CSA)

		U.S. Installation **	Canadian Installation *
A	Clearance above grade, veranda, porch, desk, or balcony	12" (300 mm) **	12" (300 mm) *
B	Clearance to window or door that may be opened	6" (150 mm) for fireplaces < 10,000 Btu/h (3 kW), 9" (230 mm) for fireplaces > 10,000 Btu/h (3 kW), and < 50,000 Btu/h (15 kW), 12" (300 mm) for fireplaces > 50,000 Btu/h (15 kW) **	6" (150 mm) for fireplaces < 10,000 Btu/h (3 kW), 12" (300 mm) for fireplaces > 10,000 Btu/h (3 kW)
C	Clearance to permanently closed window	9" (229 mm) recommended to prevent window condensation	12" (305 mm) recommended to prevent window condensation
D	Vertical clearance to ventilated soffit located above the termination within a horizontal distance of 18" (458 mm)	18" (458 mm)	18" (458 mm)
E	Clearance to unventilated soffit	12" (305 mm) 30" (760 mm) to vinyl soffit	12" (305 mm) 30" (760 mm) to vinyl soffit
F	Clearance to outside corner	5" (127 mm) minimum	5" (127 mm) minimum
G	Clearance to inside corner	2" (50.8 mm) minimum—SV4.5HT-2 • 6" (152 mm) minimum—SV4.5HTSS	2" (50.8 mm) minimum—SV4.5HT-2 • 6" (152 mm) minimum—SV4.5HTSS
H	Clearance to each inside of center line extended above meter / regulator assembly	36" (910 mm) within a height of 15 ft above the meter / regulator assembly **	36" (910 mm) within a height of 15 ft above the meter / regulator assembly *
I	Clearance to service regulator vent outlet	36" (910 mm)**	36" (910 mm)*
J	Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other fireplace	6" (150 mm) for fireplaces < 10,000 Btu/h (3 kW), 9" (230 mm) for fireplaces > 10,000 Btu/h (3 kW) and < 50,000 Btu/h (15 kW), 12" (300 mm) for fireplaces > 50,000 Btu/h (15 kW)**	6" (150 mm) for fireplaces < 10,000 Btu/h (3 kW), 12" (300 mm) for fireplaces > 10,000 Btu/h (3 kW)
K	Clearance to a mechanical air supply inlet	36" (910 mm) above if within 10 ft (3 m) horizontally **	72" (1830 mm) *
L	Clearance above paved sidewalk or paved diveway located on public property	84" (2130 mm) ‡	84" (2130 mm) ‡
M	Clearance under veranda, porch, deck or balcony	12" (300 mm) *‡	12" (300 mm) *‡
N	Depth of alcove (maximum)	72" (1830 mm) **	72" (1830 mm) *
O	Clearance to termination (alcove)	6" (15.2 mm) **	6" (15.2 mm)*
P	Width of alcove (minimum)	36" (910 mm) **	36" (910 mm) *
Q	Clearance to combustible above (alcove)	18" (457 mm) **	18" (457 mm) *

* In accordance with the current CSA-B149.1 National Gas And Propane Installation Code

** In accordance with the curent ANSI Z223.1/NFPA 54 National Fuel Gas Codes

‡ A vent shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings

*‡ Only permitted if veranda, porch, deck, or balcony is fully-open on a minimum two sides beneath the floor

• 2" clearance to non-combustibles for SV4.5HT-2 only

Figure 5

Note:
- *Typical fireplace shown in illustrations. Location of components on actual fireplace may vary.*
- *Numbers in brackets correspond to items in **Table 1** (Page 2).*

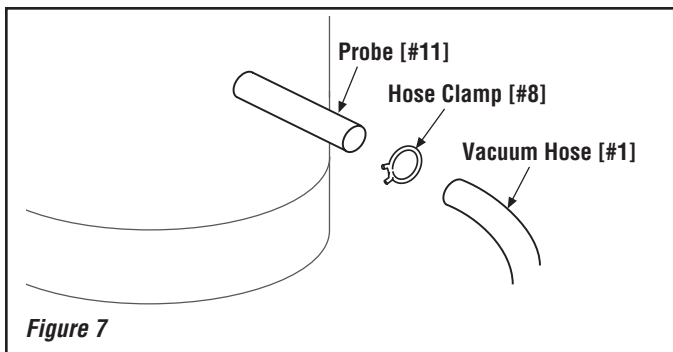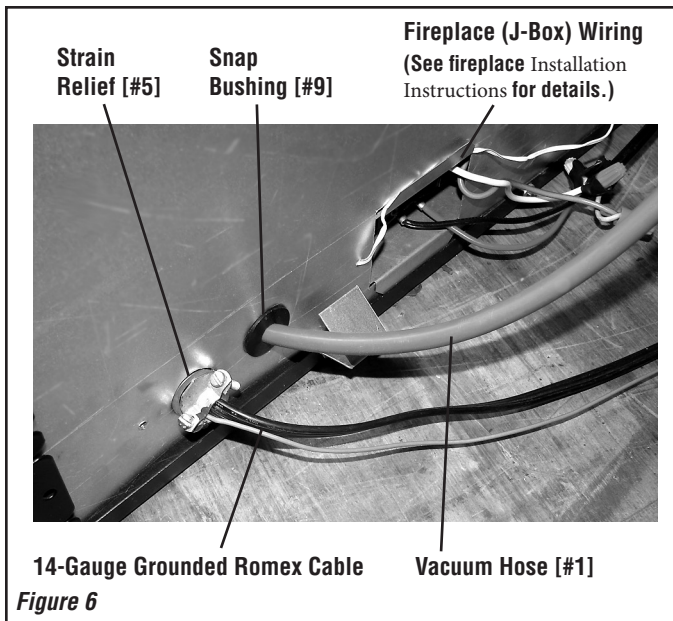## 6. Install snap bushing [#9], strain relief [#5], and vacuum hose [#1].

6.1. Remove the knockouts provided on the fireplace for the vacuum hose and eletrical wiring. *See **Figure 6** for typical location.*

6.2. Install the **snap bushing** [#9] in the hole for the vacuum hose.

6.3. Install the **strain relief** [#5] in the hole for the electrical wiring.

6.4. Route the **vacuum hose** [#1] from the location of the **probe assembly** [#11] on the fireplace, through the **snap bushing**, and into the fireplace control compartment.

Note:
- **Take care not to kink or damage the hose.**
- **Allow enough hose at both ends for hookup.**
- **The entire run of vacuum hose must be safety plated, to prevent damage from framing nails and finish screws.**

6.5. Secure the **vacuum hose** to the probe on the **probe assembly** with one of the provided **hose clamps [#8]** *(Figure 7).*

Secure the pressure switch to the unit with the supplied Velcro.

Strain Relief [#5]   **Snap Bushing [#9]**   **Fireplace (J-Box) Wiring (See fireplace** Installation Instructions **for details.)**

14-Gauge Grounded Romex Cable   **Vacuum Hose [#1]**

Figure 6

Probe [#11]

Hose Clamp [#8]

Vacuum Hose [#1]

Figure 7

7. Route Romex wiring and connect to termination.

Note: Electrical wiring must be performed by a qualified electrician.

7A. Typical Wiring Instructions

*For use when access to the termination is easy. (If access to the termination is difficult because of height or other reasons, see "**Alternate Wiring Instructions**," at right.)*

ADDITIONAL REQUIRED PARTS (not provided)
- 14-gauge AWG Grounded Romex Cable
- (2) Wire Nuts

7A.1. Remove the **termination junction box cover** by removing one screw (Figure 8). Set aside for later reinstallation.

7A.2. Loosen the **termination strain relief** *(Figures 8 and 10).*

Pull in the **termination wiring pigtail**, and shorten it to fit inside the junction box cover.

7A.3. Route one end of a 14-gauge AWG grounded Romex cable (not provided) to the **termination junction box**.

Route the other end of the Romex cable into the fireplace control compartment (through the strain relief installed in **Step 6**). Cut to length before installing the terminals.

Note: The wiring must be safety plated, to prevent damage from framing nails and finish screws.

(Continued on next page)
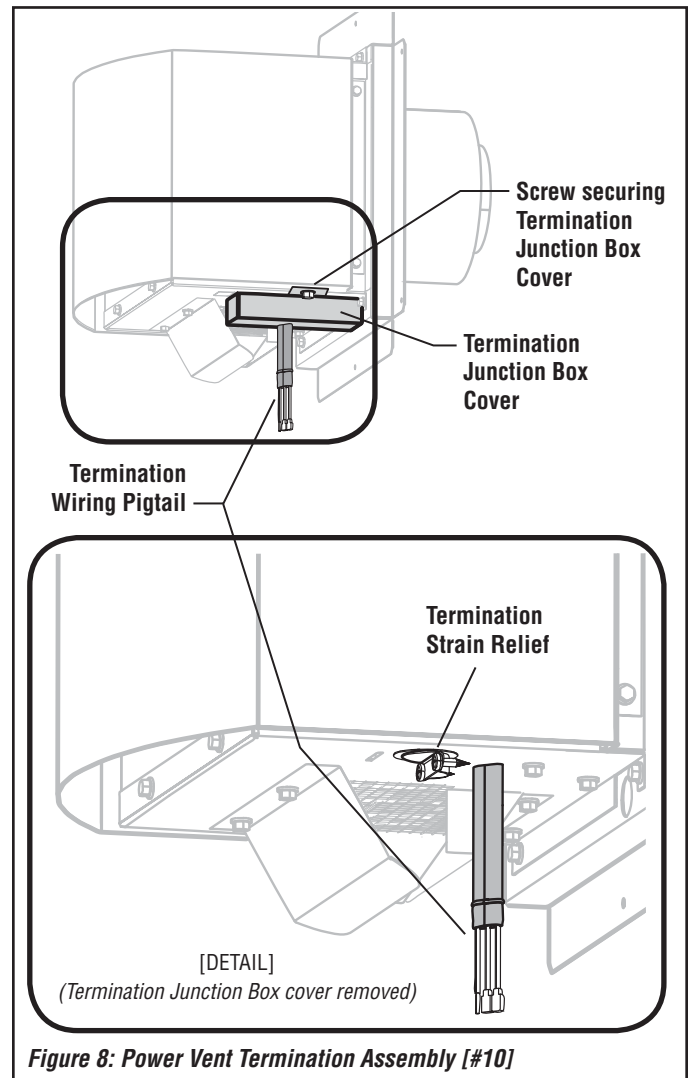
Screw securing Termination Junction Box Cover

Termination Junction Box Cover

Termination Wiring Pigtail

Termination Strain Relief

[DETAIL]
(Termination Junction Box cover removed)

Figure 8: Power Vent Termination Assembly [#10]

NOTE: DIAGRAMS AND ILLUSTRATIONS ARE REPRESENTATIVE AND ARE NOT DRAWN TO SCALE.
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Note:
- *Typical fireplace shown in illustrations. Location of components on actual fireplace may vary.*
- *Numbers in brackets correspond to items in **Table 1** (**Page 2**).*

7A.4. *See **Figure 9**.* Install **ring terminals** [#6] on *both ends* of the Romex GROUND wire.

Install **insulated male terminals** [#7] on the *fireplace end* of the Romex BLACK and WHITE wires.

7A.5. Connect the Romex BLACK and WHITE wires to the **termination wiring pigtail** BLACK and WHITE wires (respectively), and then cap with wire nuts (not provided).

Attach a **ring terminal** [#6] to the Romex GROUND wire, and then connect it to the **termination** *under an existing structural screw* (**Figure 11**).

7A.6. Reattach the **junction box cover** to the **termination** using the previously removed screw *(**Figure 8**).*

The *fireplace end* of the Romex cable will be addressed in **Step 10**, "**Connect power vent system to fireplace control system**."

7B. Alternate Wiring Instructions

For use when access to the termination is difficult because of height or other reasons. A second junction box is required (not provided).

ADDITIONAL REQUIRED PARTS (not provided)
- Electrical Junction Box
- 14-gauge AWG Grounded Romex Cable

7B.1. Install an electrical junction box (not provided) within reach of the **termination wiring pigtail** *(see **Figure 8**)*.

7B.2. As the **termination** is being installed, route the **termination wiring pigtail** to the new junction box.

7B.3. Route one end of a 14-gauge AWG grounded Romex cable (not provided) to the new junction box, close to the termination.

Route the other end of the Romex cable into the fireplace control compartment (through the strain relief installed in **Step 6**). Cut to length before installing the terminals.

Note: The wiring must be safety plated, to prevent damage from framing nails and finish screws.

7B.4. *See* Figure 9. Install **ring terminals** [#6] on *both ends* of the Romex GROUND wire.

Install **insulated male terminals** [#7] on *both ends* of the Romex BLACK and WHITE wires.

Using standard electrical practices, connect the three wires of the Romex cable to the **termination wiring pigtail** inside the new junction box. Ensure ground.

The *fireplace end* of the Romex cable will be addressed in **Step 10**, "**Connect power vent system to fireplace control system**".

BLACK & WHITE Wires **Insulated Male Terminals [#7]**
GROUND Wire **Ring Terminal [#6]**
Romex Cable (not provided)
Figure 9

(BACK OF TERMINATION)
Strain Relief [#5] **Romex Cable**
Figure 10

(JUNCTION BOX COVER REMOVED)
Pigtail wires cut off and shortened **Romex GROUND wire attached to termination**
Strain Relief [#5] holding Romex Cable **Wire Nuts (not provided)**
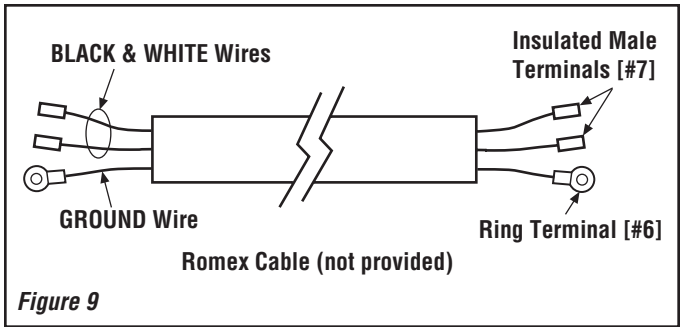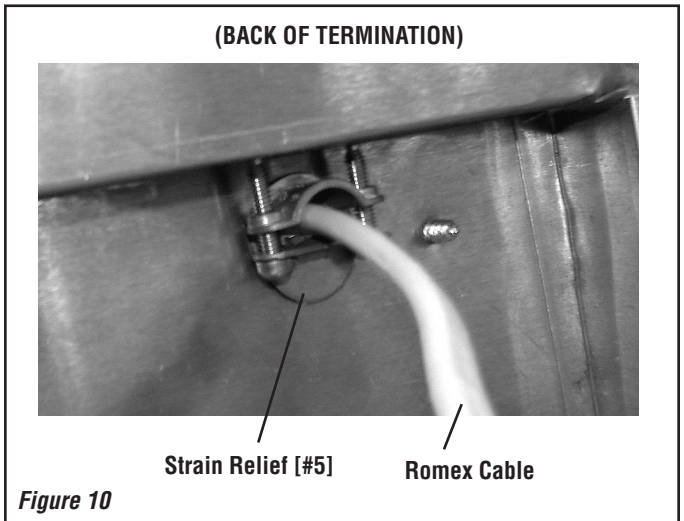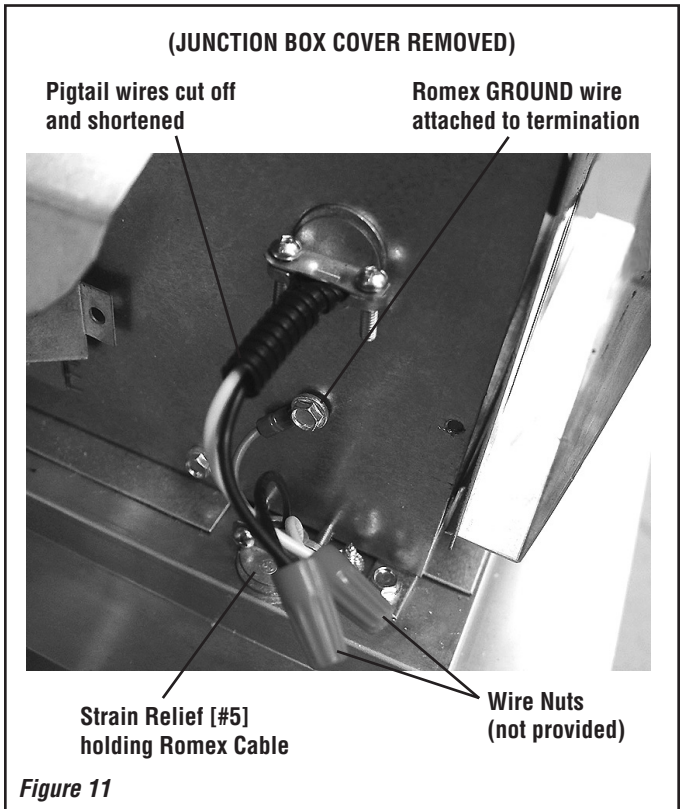*Figure 11*

8. Install the power vent termination [#10].

8.1. Assemble the vent run to the exterior wall:

   a) If not previously measured, locate the center of the vent at the exterior wall, and prepare an opening as described in the fireplace *Installation Instructions*.

   b) Assemble the vent system to the point where the end of the last section is within 8 inches of the outside wall surface where the **power vent termination** is to be mounted *(Figure 12)*.

   c) If the end of the last section is not within this distance, use the **Telescopic Vent Section (SV4.5LA)** as the last vent section.

Note: For wall thicknesses greater than shown in Figure 12, refer to the fireplace *Installation Instructions* for other venting components that may be required (in addition to the **power vent termination** [#11] and **termination adapter** (SV4.5RCH) [#12]).

8.2. *See Figure 13*. Attach the **termination adapter (SV4.5RCH)** [#12] to the last vent section. Attach the termination adapter in the manner shown in *Figure 4*, "**Connecting Secure Vent™ Components.**"

8.3. *See* Figure 13. Install the **firestop/spacer (SV4.5HF)** [#13]:

   a) Install the **firestop/spacer** over the opening on the exterior side of the framing, long side up, with 3-inch spacer clearance at the top.

   b) Nail into place.

8.4. Install the **power vent termination** [#10]:

   a) From outside the exterior wall, slide the collars of the **termination** onto the **termination adapter** (the outer inside the outer and the inner outside the inner) until the **termination** seats against the exterior wall surface to which it will be attached.

   b) Orient the **termination** housing with the arrow pointing UP.

   c) Secure the **termination** to the exterior wall.

Note: Do not recess the termination into the exterior wall or siding by more than 1-1/4" (32 mm), as shown in *Figure 12*.

Venting Connection and Exterior Wall Recessing of the Power Vent Horizontal Termination
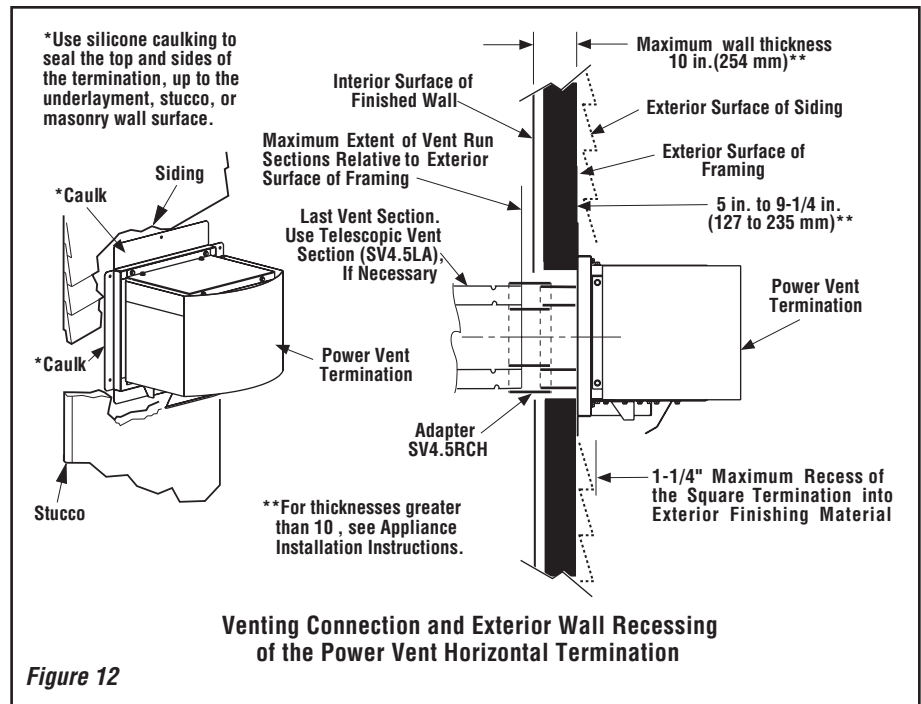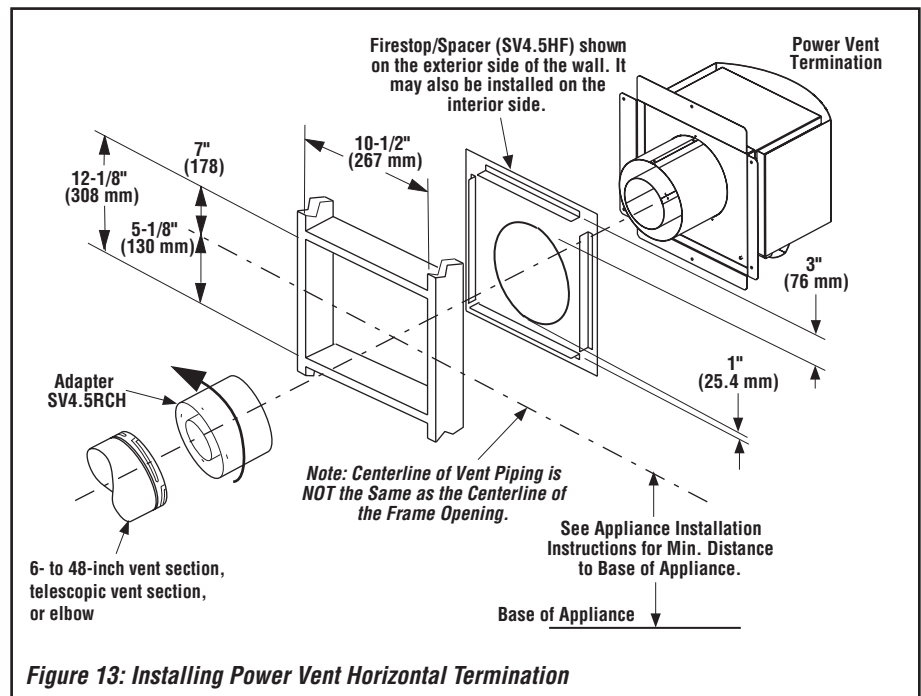
Figure 12

Figure 13: Installing Power Vent Horizontal Termination

NOTICE

Our horizontal terminations are designed to perform in a wide range of weather conditions and meet or exceed industry standards.

NEVER place a horizontal termination where water from eaves or rooflines may create a heavy flow of cascading water onto the termination cap. If the cap must be placed where the possibility of cascading water exists, it is the responsibility of the builder to direct the water away from the termination cap using gutters or other means.

Carefully follow the installation instructions for the termination, including the use of silicone caulking where required.

⚠ CAUTION

This kit is NOT for use on millivolt appliances.

CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.

ATTENTION : Au moment de l'entretien des commandes, étiquetez tous les fils avant de les débrancher. Des erreurs de câblage peuvent entraîner un fonctionnement inadéquat et dangereux.

Verify proper operation after servicing.

S'assurer que l'appareil fonctionne adéquatement une fois l'entretien terminé.

CAUTION: Ground supply lead must be connected to the wire attached to the green ground screw located on the outlet box. Failure to do so will result in a potential safety hazard. The appliance must be electrically grounded in accordance with local codes or, in the absence of local codes, the National Electrical Code, ANSI/NFPA 70-latest edition (In Canada, the current CSA C22-1 Canadian Electrical Code).

9. Field wiring the power vent system to the fireplace control system.

Power Vent Kit LPVK-110 is listed for use with Dexen and SIT Proflame I and II ELECTRONIC control systems.

• Dexen control system wiring is described on Pages 9–11.

• SIT Proflame control systems wiring is described on **Pages 12–15**.

9A. Field wiring a Dexen electronic control system.

Refer to the general system layout shown in Figure 14.

9A.1. Turn OFF power to the fireplace.

9A.2. Remove any control compartment cover or access plates, and set aside for later reinstallation.

9A.3. Disconnect and remove the battery pack (***Figures 15*** and ***16***).

9A.4. Disconnect the system power transformer (3V) from the power outlet (***Figure 14***).

9A.5. Disconnect the two brown wires from the ON/OFF switch, and reconnect them to the **control module** [#4] (***Figure 17***).

Control Module System Power Cord • ON/OFF Switch • Pressure Switch [#3] • Power Outlets • Control Module Power Cord

System Power Transformer (3V) • Vacuum Hose [#1] • 4 Wire Harness [#2] • Control Module [#4]
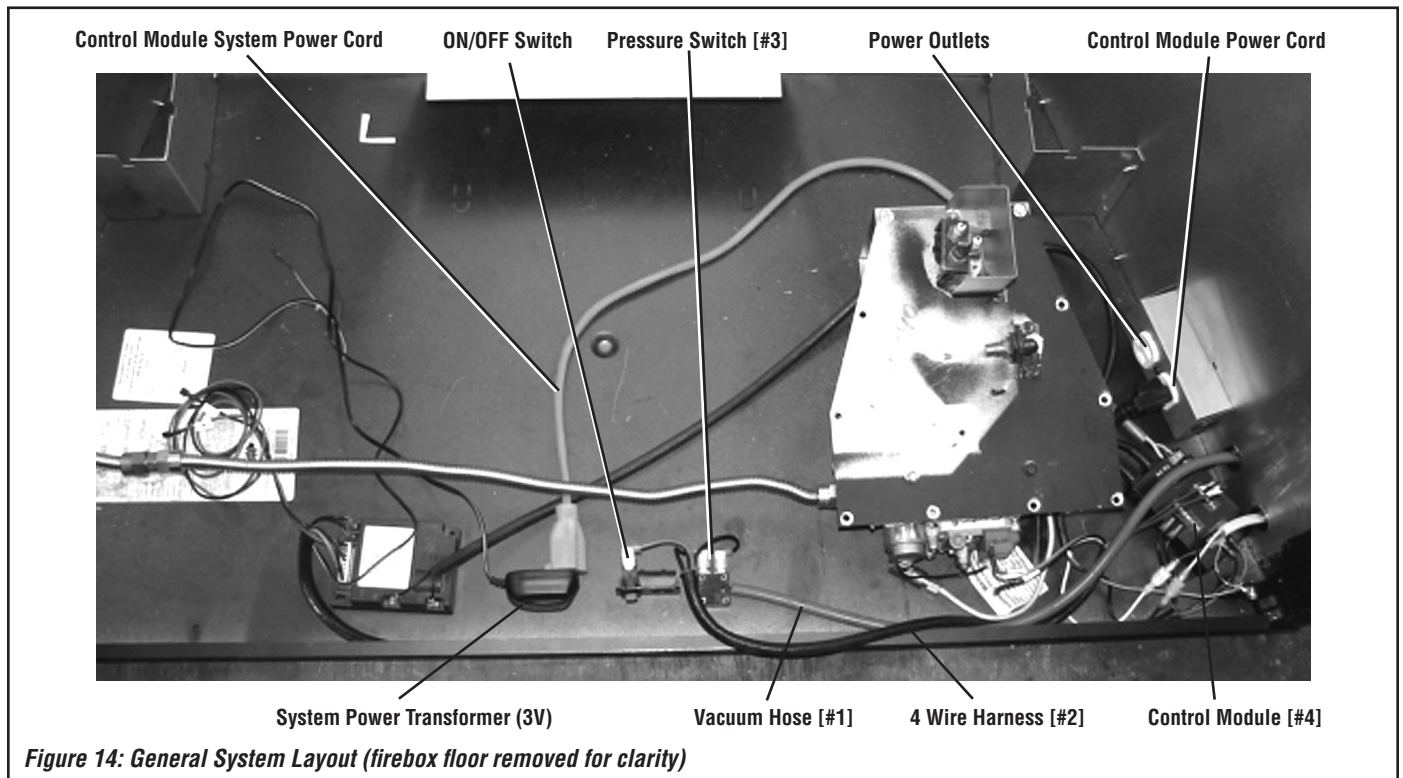
Figure 14: General System Layout (firebox floor removed for clarity)

Remove the battery pack.   *Disconnect here.*

Figure 15

Bundle the disconnected wire. (Do NOT re-use wire.)

Disconnected Battery Pack

Figure 16

9A. Field wiring a Dexen electronic control system (continued).

9A.6. Position the **pressure switch** [#3] on the fireplace cabinet bottom, and secure using provided **Velcro strips** [#4] *(refer to **Figures 14** and **18**)*.

Attach the **vacuum hose** [#1] to the **pressure switch**, and secure with a **hose clamp** [#8].

Two Brown Wires from ON/OFF Switch   **Wires To DV Termnation**   **Termination Ground**

Figure 17   **Control Module Ground**

9A.7. Connect one end of the **four-wire harness** [#2] to the **power vent control module** [#4] *(**Figure 17**)* — RED to T-STAT; BLACK to V-SWITCH.

Connect the other end of the **four-wire harness** — RED to the unit/wall ON/OFF switch; BLACK to the **pressure switch** [#3] *(see **Figure 18**)*.

9A.8. Connect the 3V transformer to the **power vent control module** system power cord *(**Figure 18**)*.

Control Module [#4] System Power Cord   **Two 1/4" Wires (Red)**   **Two 3/16" Wires (Black)**
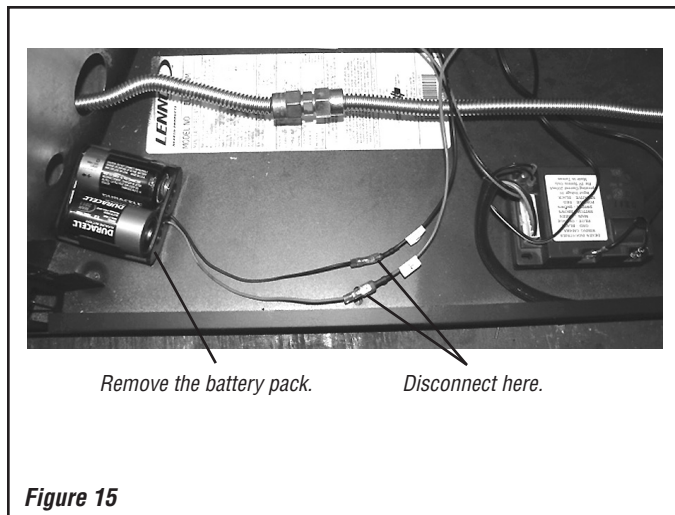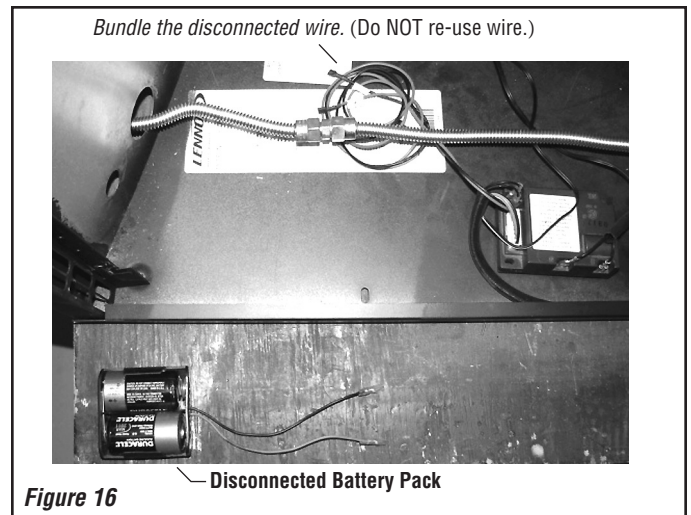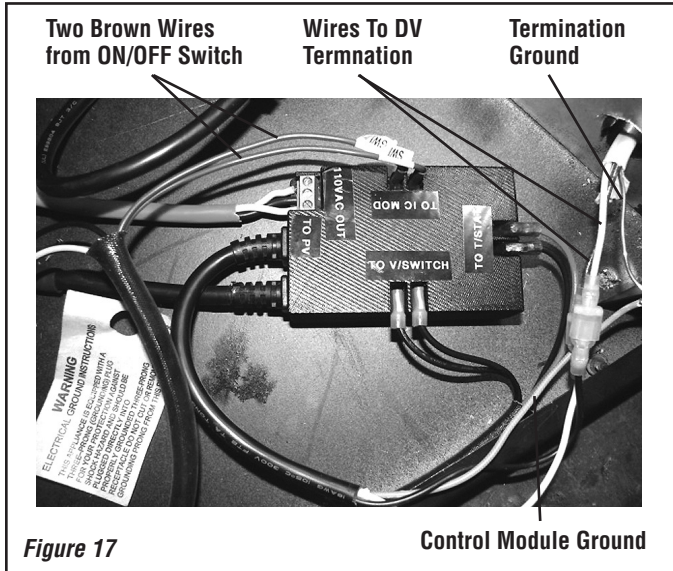
Power Supply Transformer   **ON/OFF Switch (Wall)**   **Four-Wire Harness [#2]**   **Pressure Switch [#3]**
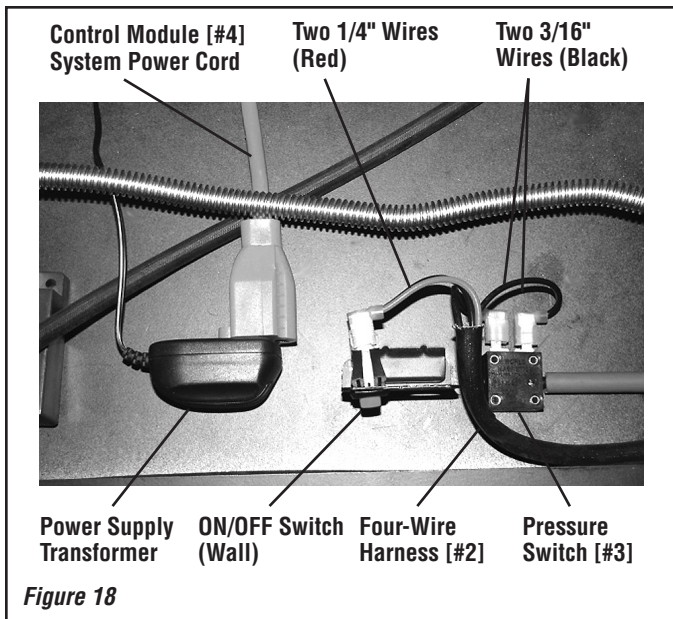
Figure 18

9A.9. Connect the **termination** power wire to the **power vent control module** [#4].

Remove the paint plug from the fireplace corner post to expose the bare metal at the grounding point.

Connect the **termination** Romex GROUND wire **and control module** GROUND wire to the ground point with the provided screw *(see **Figure 19**)*.

9A.10. Connect the **control module** power plug to the power socket *(**Figure 19**)*.

9A.11. Ensure all components are properly placed *(see **Figure 14**)*.

Ensure the ON/OFF switch is secure and the **pressure switch** is in place.

If used, ensure the fireplace blower (optional accessory) is installed and connected to the power socket.

9A.12. Place the **control module** [#4] into position and secure using provided **Velcro strips** [#14] *(see **Figures 20** and **14**)*.

Control Module Power Plug

Termination Romex GROUND Wire

Ground Point
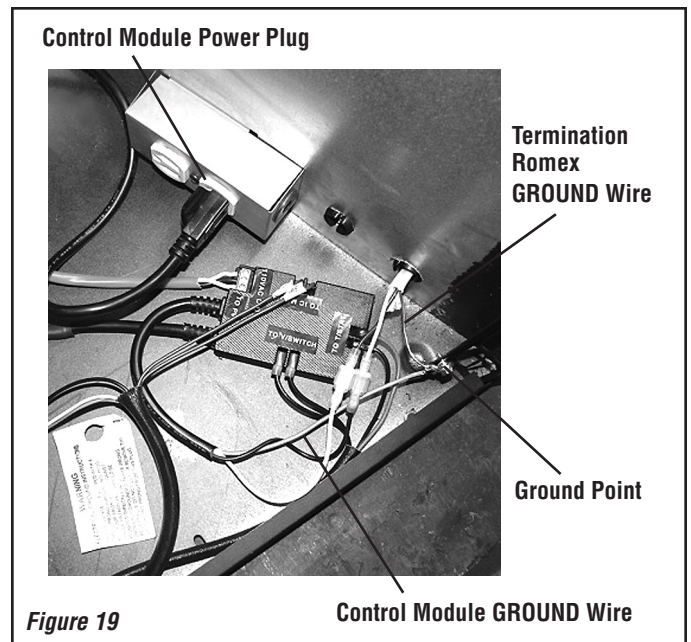
Figure 19   **Control Module GROUND Wire**

Control Module [#4]

Figure 20

NOTE: DIAGRAMS AND ILLUSTRATIONS ARE REPRESENTATIVE AND ARE NOT DRAWN TO SCALE.
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POWER VENT WIRING DIAGRAM – DEXEN GAS VALVE

9B. Field wiring a SIT Proflame I electronic control system.

Note: *These electronic appliances must be connected to the main power supply. The gas valve is installed and pre-wired at the factory.*

1. Route a 3-wire 120Vac 60Hz 1ph power supply to the fireplace junction box.
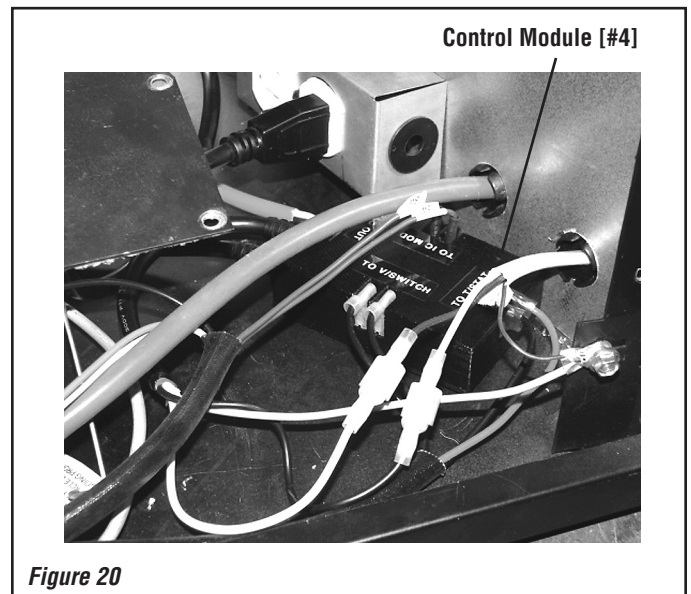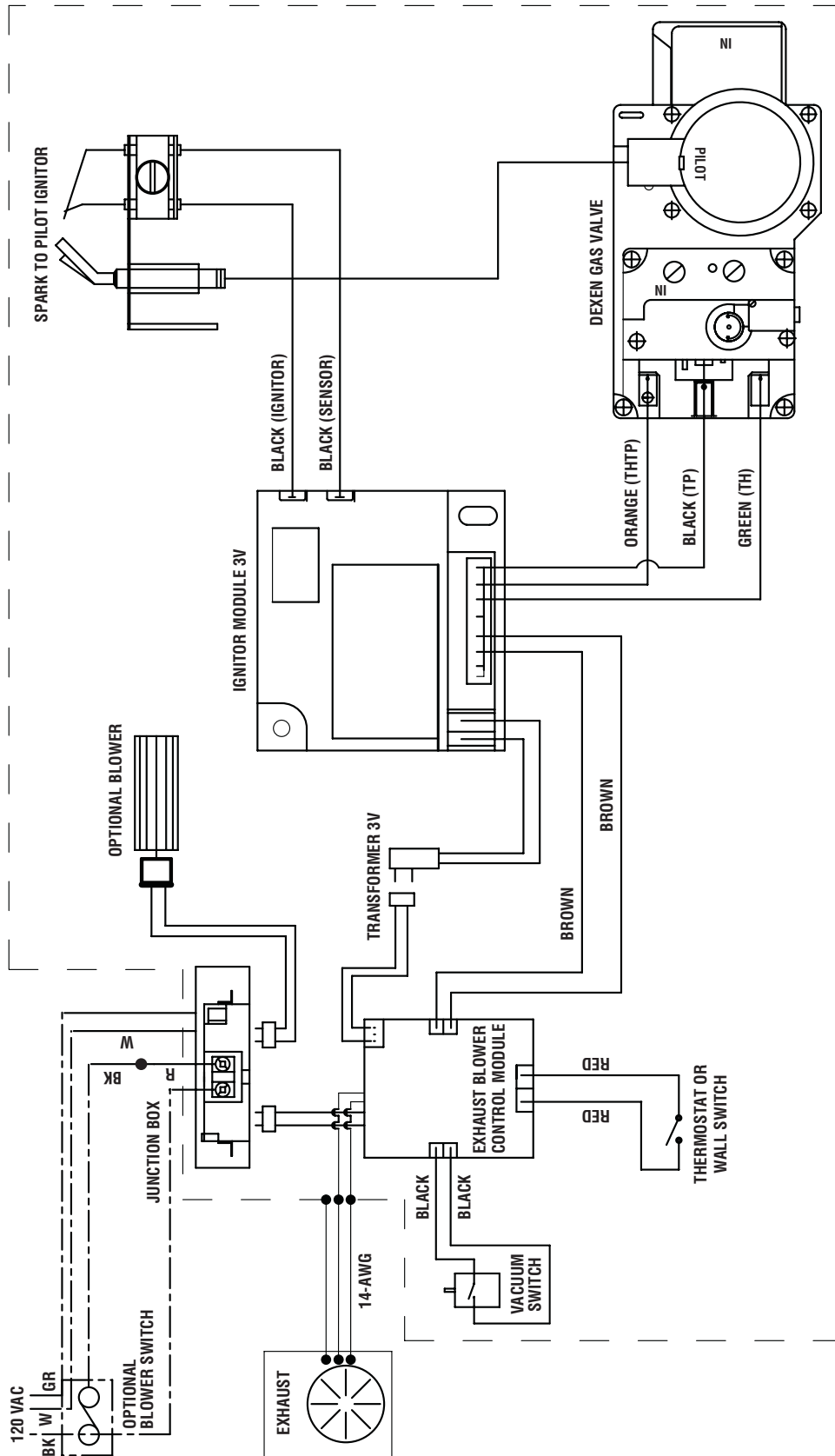
2. Remove the electrical inlet cover plate from the side of the unit by removing the plate's securing screws *(see fireplace Installation Instructions for location)*.

3. Remove the cover plate knockout, and then feed the power supply wire through the knockout opening and into the fireplace junction box.

4. Connect the black power supply wire to the **power outlet's** red pigtail lead and the white power supply wire to the **common** terminal of the outlet as shown in *Figures 23* and *22*.

5. **Connect the ground supply wire to the pigtail lead attached to the outlet's green ground screw.**

6. Install the power vent control module in the control compartment.

7. Disconnect the GREEN and WHITE wires from the DFC harness and cable harness.

8. Connect the GREEN and WHITE wires from the cable harness to the terminals on the side of the control module.

9. Connect the GREEN and WHITE wires from the DFC harness to the terminals at the bottom of the control module.

10. Connect the pressure switch to the terminals on the side of the control module.

11. After wiring is complete, replace the cover plate.

Vacuum Hose

**Pressure Switch
No. 102005-01**

Vacuum Hose

**Pressure Switch Assembly
(with adapter wires)
No. H8329**
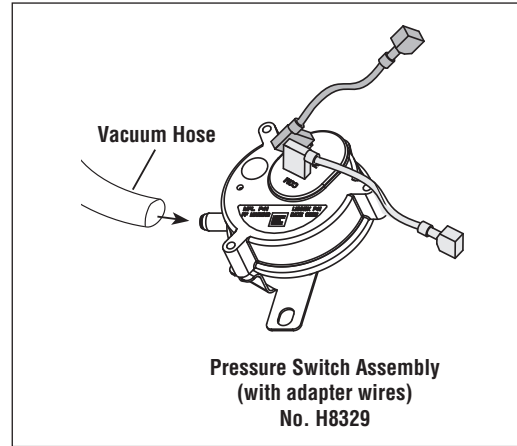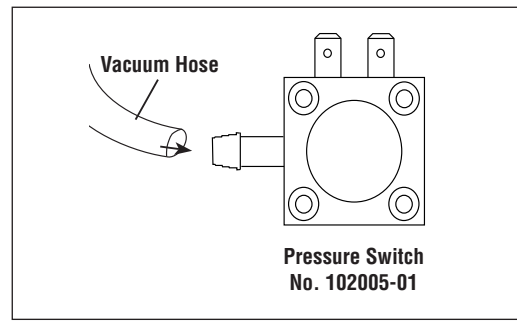
Pressure switch is located behind the panel on the right side of firebox

Vacuum Hose

Pressure Switch
102005-01

Figure 21 Connecting Vacuum Hose to Pressure Switch

ELECTRONIC WIRING DIAGRAM FOR POWER VENT FIREPLACES

Figure 22: Electronic Wiring Diagram - SIT Proflame I

Figure 23: Junction Box Wiring

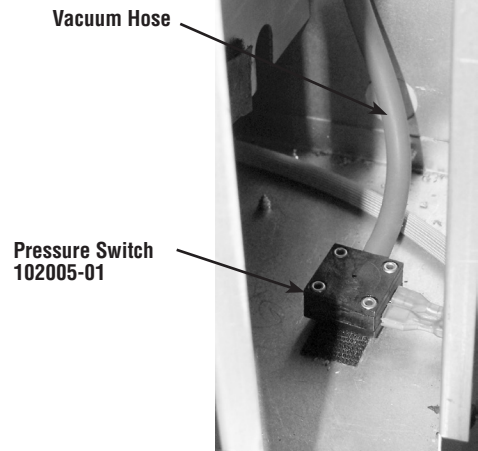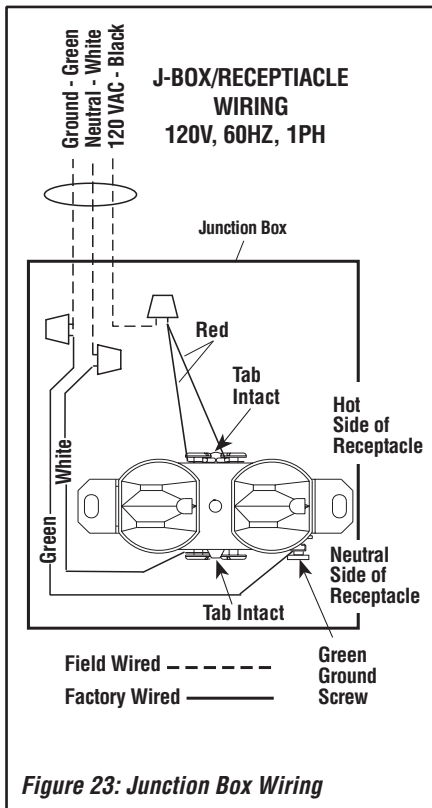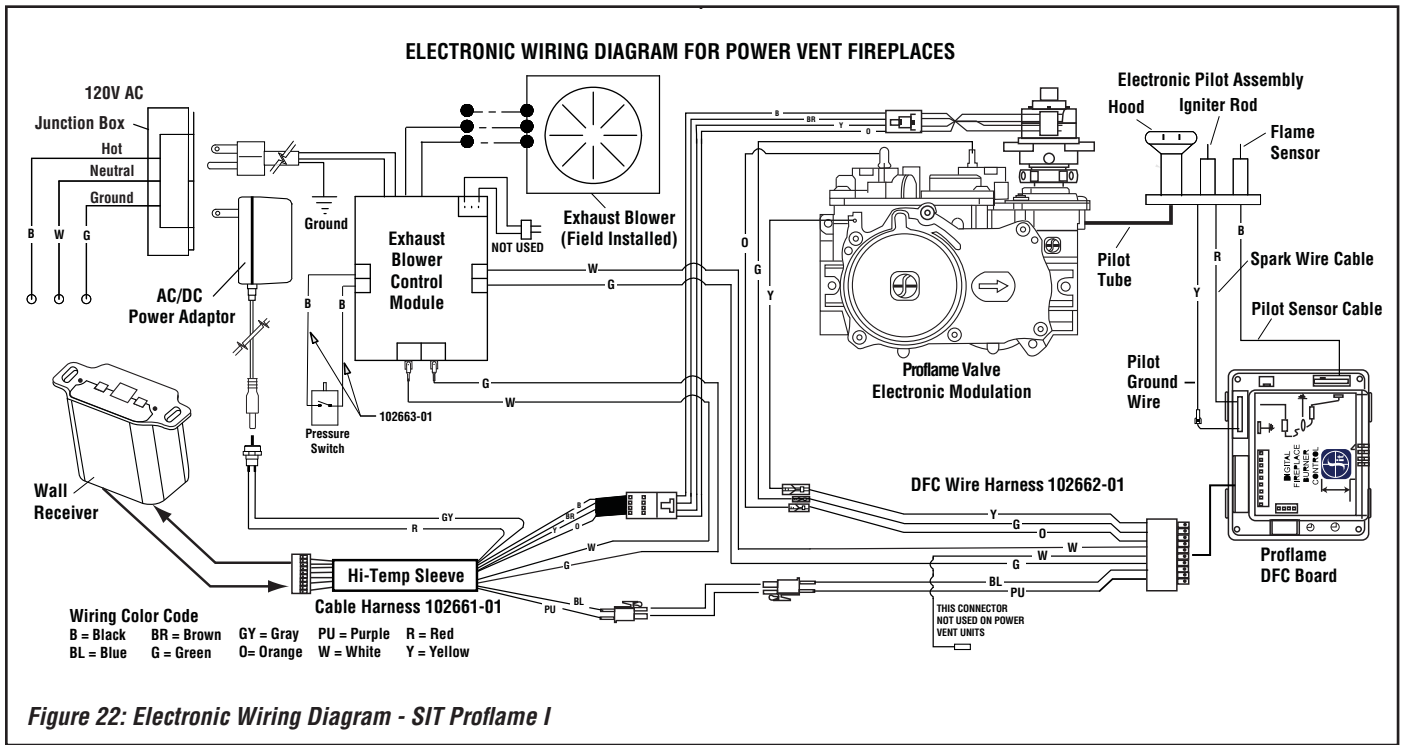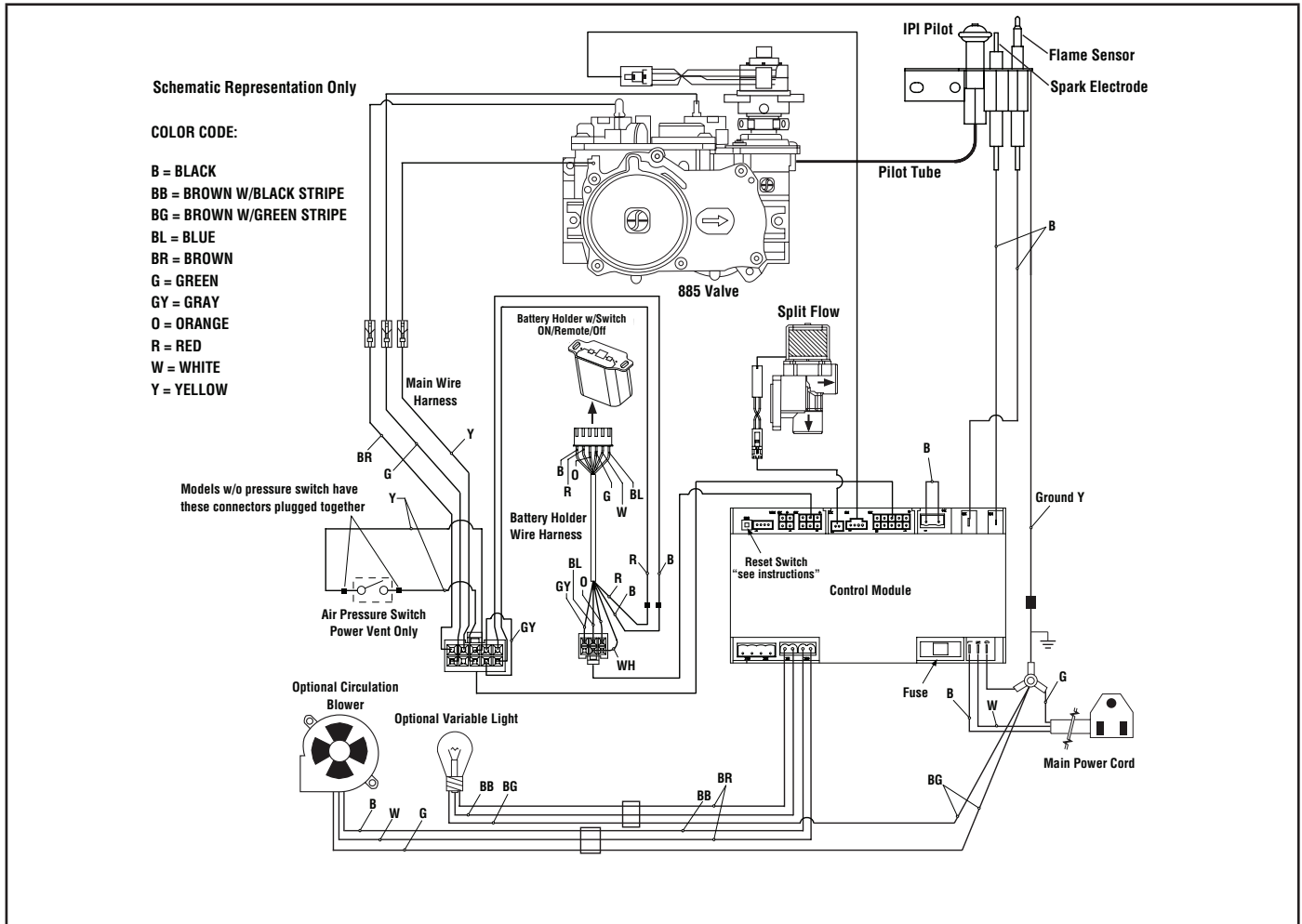**Figure 24: Electronic Wiring Diagram - SIT Proflame II**

9C. Field wiring SIT PROFLAME II electronic control system

Note: These electronic appliances must be connected to the main power supply. The gas valve is installed and pre-wired at the factory.

1. Route a 3-wire 120Vac 60Hz 1ph power supply to the fireplace junction box.

2. Remove the electrical inlet cover plate from the side of the unit by removing the plate's securing screws (see fireplace Installation Instructions for location).

3. Remove the cover plate knockout, and then feed the power supply wire through the knockout opening and into the fireplace junction box.

4. Connect the black power supply wire to the power outlet's red and black pigtail lead and the white power supply wire to the common terminal of the outlet as shown in **Figures 23** and **22**.

5. Connect the ground supply wire to the pigtail lead attached to the outlet's green ground screw.

6. Use provided Velcro strips to position the pressure switch on the lower valve compartment floor and attach pressure switch hose to pressure switch and probe assembly (*see* **Figure 21** on **Page 12**).

7. At the control module Disconnect the 2 joined yellow DFC harness wires (male and female connector). Connect the yellow wire with the female connector to the provided pressure switch. Join the yellow wire with the male terminal to the provided Black wire (this wire will have female connectors at each end) and connect to the pressure switch (*see* **Figure 27** *for visual*).

8. Power up the Exhaust Blower, Plug Power Cord Green 2 pin Connector to location X12 on the control module (*see* **Figure 26**). Finish by plugging the opposite end to the fireplace outlet.

> **NOTE: Ensure end of plug power cord is connected to Romex powering the power vent termination. refer to step 7A.4 earlier in this document.**

9D. Converting Control from Natural Draft to Power Vent

1. With power ON, (A) press "O" on the remote handheld. "IPI" will be on the remote screen. (B) Press UP arrow to move "IPI" to "CPI" and (C) Press DOWN to move "CPI" back to "IPI" (must be completed within 10 seconds). *See **Figure 25** and **26***.

2. Disconnect POWER from the PF2 module and all other wiring. Remove Module box cover. Remove Jumper from "JP1" location. Reinstall Module box cover and connect all wiring (*see **Figure 26***).

Figure 25: Remote Control Operation from CPI to IPI Modes

Figure 26: Completing Rewiring on the Control Module

JP1 Jumper remove and install box cover and wires

Plug **Exhaust Blower** into **X12 Connector**

Yellow Wires

Figure 27: Pressure Switch Installed
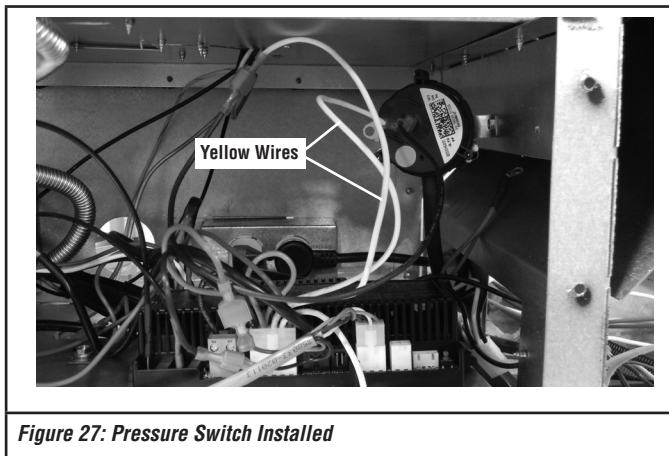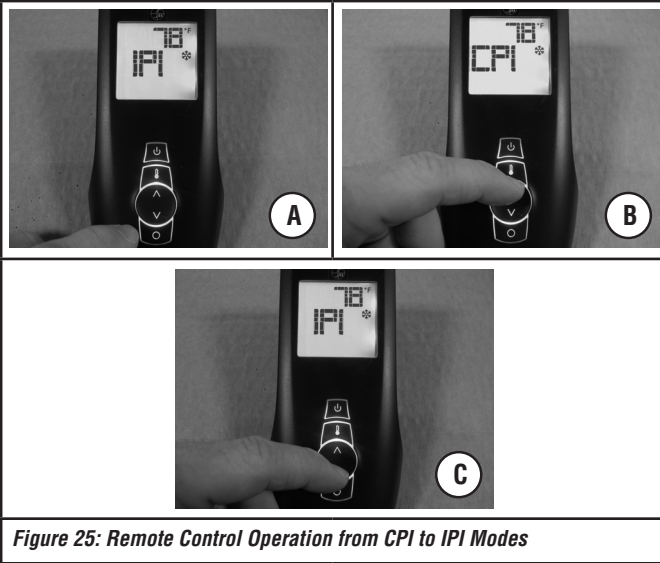
NOTE: If JP1 is not removed the control will remain in natural draft mode and the appliance will not operate. Power vent termination is controlled by contacts between the two (2) terminals in X-12 plug. This contact will remain open at all times unless control is in power vent mode.

Sequence of Operation

After the fireplace it turned on by the remote or wall switch the control will;

1. Check to see pressure switch is open

2. Close contact at X-12

3. Wait for power vent to close pressure switch

4. Timed pre purge to clear the firebox

5. Control will start pilot and main burner ignition.

If pressure switch is shorted or jumped the control will not turn on the power vent terminal until the pressure switch circuit is opened. After the termination is powered the control must see the switch close before starting ignition sequence.

NOTE: DIAGRAMS AND ILLUSTRATIONS ARE REPRESENTATIVE AND ARE NOT DRAWN TO SCALE.
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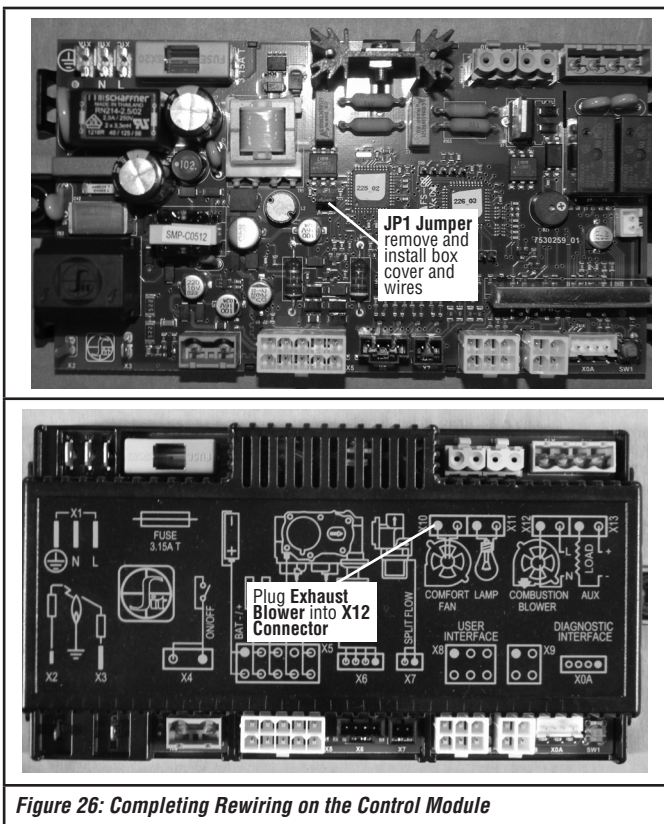
POWER VENT TERMINATION DIMENSIONS

16.17"
(411 mm)

15.92"
(404 mm)

11.19"
(284 mm)

10.00"
(254 mm)

13.50"
(343 mm)

Top View

Front View
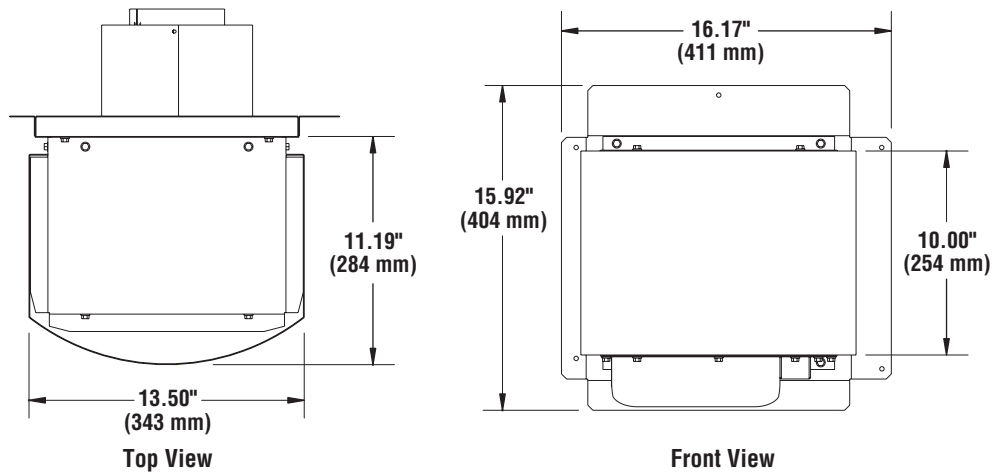
Figure 28

POWER VENT OPERATING INSTRUCTIONS

Appliance Operation

Familiarize yourself with the gas control valve that your appliance uses. Refer to your fireplace *Installation Instructions* for the location of the gas control valve on your specific fireplace.

To light the appliance, refer to the detailed lighting instructions in the fireplace *Care and Operation Instructions* or on the pull-out lighting instruction labels attached to the gas control valve.

Purge Cycle

The Power Vent Termination has an exhaust blower that expels the exhaust gases from the venting system. Read "NOTICE REGARDING PURGE CYCLE," **below**.

NOTICE REGARDING PURGE CYCLE

This is a power-vented fireplace that requires household electrical power to operate. When the fireplace is turned OFF, the exhaust blower will continue to operate for up to two minutes, to purge exhaust gases from the venting system. This system will NOT operate during a power outage.

Power Vent Control Sequences

Turn ON

1. Turn ON the Thermostat or ON/OFF Switch.

2. The blower should start immediately.

3. The ignitor will start sparking, and the pilot will light.

4. The burner should light after a few seconds.

5. The fireplace should run continuously until the Thermostat or ON/OFF Switch is turned OFF.

Turn OFF

1. Turn OFF the Thermostat or ON/OFF Switch.

2. The burner and pilot light should be off immediately.

3. The blower will continue to run for about 90 seconds, and then the blower will stop.

For additional operating instructions, please refer to the manuals provided with your fireplace.
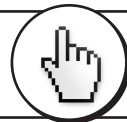
Product manuals are available for download at **SuperiorFireplaces.us.com** or **Astria.us.com** (**Technical Support** tab)

TROUBLESHOOTING THE POWER VENT SYSTEM

Important: *Service must be performed by a qualified installer, service agency or your gas supplier.*

BEFORE COMMENCING TO TROUBLESHOOT THE UNIT:
1. Check if there is power to the unit (fireplace).
2. Check if there is gas to the unit (fireplace).
3. The igniter module in the fireplace is equipped with a lockout device, which will put the unit into a lockout condition. Follow the steps in the chart below to reset the control: Turn the On/Off switch to the Off position, or turn the thermostat to the Off position.
4. If this is the first time that the unit has been fired, check the wiring of the unit against the wiring diagram before commencing troubleshooting.

START

Power Vent Motor Is Working? — No → **On/Off Switch Or Wall Thermostat "On"? Is There 120V Power To The Fireplace? Are All Wiring Connections Tight? (Turn Off Power Before Checking)** — Yes → **Is There 120V Power To The Motor?** — Yes → **Replace Blower** / No → **Replace Control Module**
- Yes ↓

Does The Pilot Spark? — No → **Is The Pressure Switch Closed?** — No → **Is There Blockage In The Vent? Is There Water/Dirt In The Hose From The Blower To The Pressure Switch? Are the Hose Connections Loose? Is The Hose Cracked?** — No → **Replace Pressure Switch**
- Yes → **Is The Lead To The Spark Electrode Attached Or Arcing To Ground? Is The Electrode Cracked?** — No → **Replace Ignition Module**
- **Is The Pressure Switch Closed?** — Yes → **Replace Control Module**
- Yes ↓

WARNING: Never jump the pressure switch out of this system. Property damage, injury, or death may result.

Pilot Burner Lights? — No → **Is Pilot Gas Line Blocked? Is Pilot Orifice Blocked?** — Yes → **Replace Pilot** / No → **Replace Ignition Module**
- Yes ↓

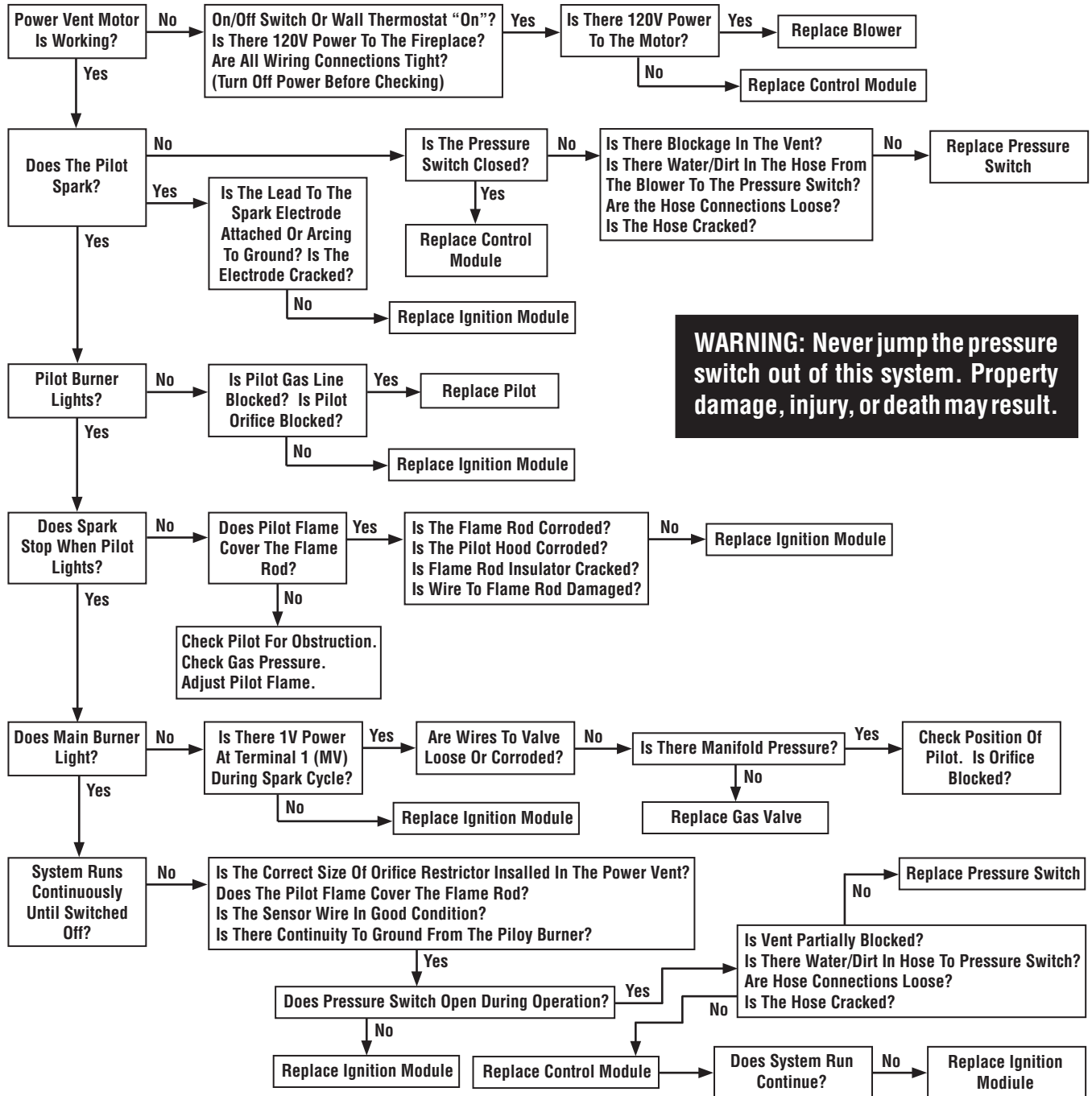**Does Spark Stop When Pilot Lights?** — No → **Does Pilot Flame Cover The Flame Rod?** — Yes → **Is The Flame Rod Corroded? Is The Pilot Hood Corroded? Is Flame Rod Insulator Cracked? Is Wire To Flame Rod Damaged?** — No → **Replace Ignition Module**
- **Does Pilot Flame Cover The Flame Rod?** — No → **Check Pilot For Obstruction. Check Gas Pressure. Adjust Pilot Flame.**
- Yes ↓

Does Main Burner Light? — No → **Is There 1V Power At Terminal 1 (MV) During Spark Cycle?** — Yes → **Are Wires To Valve Loose Or Corroded?** — No → **Is There Manifold Pressure?** — Yes → **Check Position Of Pilot. Is Orifice Blocked?** / No → **Replace Gas Valve**
- **Is There 1V Power At Terminal 1 (MV) During Spark Cycle?** — No → **Replace Ignition Module**
- Yes ↓

System Runs Continuously Until Switched Off? — No → **Is The Correct Size Of Orifice Restrictor Installed In The Power Vent? Does The Pilot Flame Cover The Flame Rod? Is The Sensor Wire In Good Condition? Is There Continuity To Ground From The Piloy Burner?** — Yes → **Does Pressure Switch Open During Operation?** — Yes → **Is Vent Partially Blocked? Is There Water/Dirt In Hose To Pressure Switch? Are Hose Connections Loose? Is The Hose Cracked?** — No → **Replace Pressure Switch**
- **Does Pressure Switch Open During Operation?** — No → **Replace Ignition Module**
- **Is Vent Partially Blocked?...** — Yes → **Replace Control Module** → **Does System Run Continue?** — No → **Replace Ignition Modiule**

POWER VENT REPLACEMENT PARTS

Item	Cat./Part No.	Description	Qty.
1	H7383	Vacuum Hose	1
2	H7369	Wire Harness	1
3a -or- 3b	102005-01 -or- H8329	Pressure Switch Assembly (No. H8329 includes adapter wires)	1
4	H7367	Control Module	1
5	H7368	Strain Relief - 3/8"	2
6	H7370	Ring Terminal - #10	2
7	H7384	Insulated 1/4" Male Terminal	4
8	H7371	Hose Clamp - 11/32"	2
9	P-8-7102	Snap Bushing	1
15	H7372	Base Assembly (Power Vent)	1

Item	Cat./Part No.	Description	Qty.
16	H7378	Kicker Assembly	1
17	H7382	Blower Gasket	1
18	H7365	Blower Assembly	1
19	H7375	Wrapper - Top	1
20	H7373	Wrapper	1
21	H7374	Wrapper - Bottom	1
22	H7377	J-Box	1
23	H7379	Diverter - Front	1
24	H7380	Diverter - Back	1
25	H7376	Wrapper Cover	1
26	H7381	Wire Mesh	1
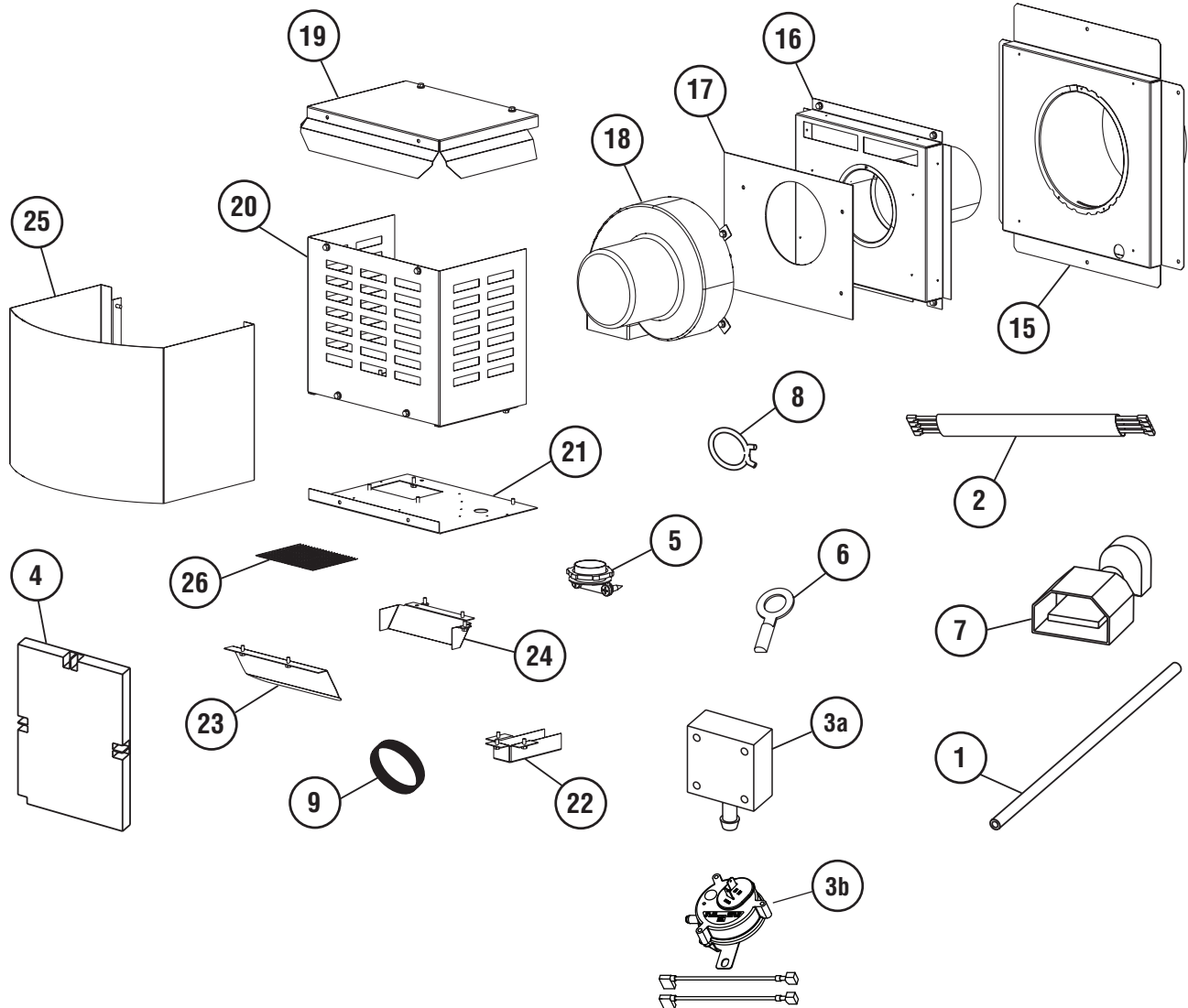
LISTED VENT COMPONENTS

Power Vent Kit LPVK-110 is designed and listed for use with Security Chimneys® SV4.5 Secure Vent™ direct-vent systems.

Several **SV4.5** components listed for use when developing vent runs for this Power Vent system are listed below. For a complete list of SV4.5 components listed for use in venting this product, refer to the individual fireplace *Installation Instructions.*

LISTED SECURE VENT™ COMPONENTS		
Cat. No.	Model	Description
77L70	**SV4.5L6**	6" Pipe Length
77L71	**SV4.5L12**	12" Pipe Length
77L72	**SV4.5L24**	24" Pipe Length
77L73	**SV4.5L36**	36" Pipe Length
77L74	**SV4.5L48**	48" Pipe Length
77L75	**SV4.5LA**	6" Pipe, Adjustable
77L76	**SV4.5E45**	Swivel 45° Elbow
77L77	**SV4.5E90**	Swivel 90° Elbow
96K92	**SV4.5SP**	Support Plate
96K93	**SV4.5SU**	Universal Support
H5816	**SV4.5TWSK10**	Through-Wall Shield Kit
H3907	**SV4.5RSA**	Attic Insulation Shield
H2247	**SV4.5VF**	Firestop, Vertical (10-Pack)
H2246	**SV4.5HF**	Firestop, Horizontal (10-Pack)

Table 1: Termination Heights for Vents above Flat or Sloped Roofs (NFPA 54 / ANSI Z223.1)—Gas Vent Rule

	Flat to 6/12	1.0 ft (0.3 m)
	6/12 to 7/12	1.25 ft (0.38 m)
	7/12 to 8/12	1.5 ft (0.46 m)
	8/12 to 9/12	2.0 ft (0.61 m)
	9/12 to 10/12	2.5 ft (0.76 m)
	10/12 to 11/12	3.25 ft (0.99 m)
	11/12 to 12/12	4.0 ft (1.22 m)
	12/12 to 14/12	5.0 ft (1.52 m)
	14/12 to 16/12	6.0 ft (1.83 m)
	16/12 to 18/12	7.0 ft (2.13 m)
	18/12 to 20/12	7.5 ft (2.29 m)
	20/12 to 21/12	8.0 ft (2.44 m)

Horizontal overhang

Vertical wall

2 ft minimum

2 ft minimum

Lowest discharge opening

Vent termination

Storm collar

Flashing

H*

X

12

Roof pitch is X/12

1" (25.4 mm) minimum clearance to combustibles

Concentric vent pipe

*H = minimum height from roof to lowest discharge opening of vent

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