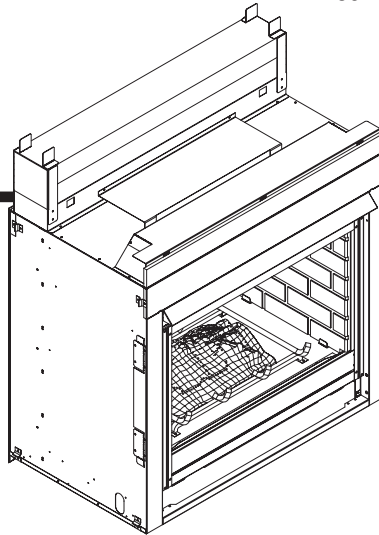




Owner's Manual Installation and Operation

Model:
Twilight-II-B



GAS-FIRED



NOTICE



DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.

**DO NOT
DISCARD**

⚠ WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury, or death.

- **DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **What to do if you smell gas**
 - **DO NOT** try to light any appliance.
 - **DO NOT** touch any electrical switch. **DO NOT** use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

This appliance may be installed as an OEM installation in manufactured home (USA only) or mobile home and must be installed in accordance with the manufacturer's instructions and the manufactured home construction and safety standard, *Title 24 CFR, Part 3280 or Standard for Installation in Mobile Homes, CAN/CSA Z240MH, in Canada.*

This appliance is only for use with the type(s) of gas indicated on the rating plate.

⚠ WARNING



HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down.

Hot glass will cause burns.

- **DO NOT** touch glass until it is cooled
 - NEVER allow children to touch glass
 - Keep children away
 - CAREFULLY SUPERVISE children in same room as fireplace.
 - Alert children and adults to hazards of high temperatures.
- High temperatures may ignite clothing or other flammable materials.**
- Keep clothing, furniture, draperies and other flammable materials away.

This appliance has been supplied with an integral barrier to prevent direct contact with the fixed glass panel. DO NOT operate the appliance with the barrier removed.

Contact your dealer or Hearth & Home Technologies if the barrier is not present or help is needed to properly install one.

In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter.

See Table of Contents for location of additional Commonwealth of Massachusetts requirements.



Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies suggests NFI certified or factory trained professionals, or technicians supervised by an NFI certified professional.

Read this manual before installing or operating this appliance.
Please retain this owner's manual for future reference.

A. Congratulations

Congratulations on selecting an Outdoor LifeStyles gas fireplace, an elegant and clean alternative to wood burning fireplaces. The Outdoor LifeStyles gas fireplace you have selected is designed to provide the utmost in safety, reliability, and efficiency.

As the owner of a new fireplace, you'll want to read and carefully follow all of the instructions contained in this owner's manual. Pay special attention to all cautions and warnings.

This owner's manual should be retained for future reference. We suggest that you keep it with your other important documents and product manuals.

The information contained in this owner's manual, unless noted otherwise, applies to all models and gas control systems.

Your new Outdoor LifeStyles gas fireplace will give you years of durable use and trouble-free enjoyment. Welcome to the Hearth & Home Technologies family of fireplace products!

Homeowner Reference Information

We recommend that you record the following pertinent information about your fireplace.

Model Name: _____ Date purchased/installed: _____

Serial Number: _____ Location on fireplace: _____

Dealership purchased from: _____ Dealer Phone: _____

Notes: _____

Listing Label Information/Location

The model information regarding your specific fireplace can be found on the rating plate usually located in the control area of the fireplace.

This product may be covered by one or more of the following patents: (Nos produits sont couverts par un ou plusieurs des brevets suivants): (United States) 4593510, 4688907, 4766876, 4793322, 4811534, 5000162, 5016609, 5076254, 5113843, 5191877, 5218953, 5263471, 5328356, 5341794, 5347983, 5429495, 5452708, 5542407, 5601073, 5613487, 5647340, 5688568, 5762062, 5775408, 5890485, 5931661, 5941237, 5947112, 5996575, 6006743, 6019099, 6048195, 6053165, 6145502, 6170481, 6237588, 6296474, 6374822, 6413079, 6439226, 6484712, 6543698, 6550687, 6601579, 6672860, 6688302B2, 6715724B2, 6729551, 6736133, 6748940, 6748942, D320652, D445174, D462436; (Canada) 1297749, 2195264, 2225408; or other U.S. and foreign patents pending (ou autres brevets américains et étrangers en attente).

outdoor lifestyles
by hearth & home technologies

Heat & Glo, a brand of Hearth & Home Technologies, Inc.
7571 215th Street West, Lakeville, MN 55044

GAS-FIRED
UL
LISTED

Not for use with solid fuel.
(Ne doit pas être utilisé avec un combustible solide).

Type of Gas (Sorte De Gaz): **NATURAL GAS** This appliance must be installed in accordance with local codes, if any; if not, follow ANSI Z223.1 in the USA or CAN/CGA B149 installation codes. (Installer l'appareil selon les codes ou règlements locaux ou, en l'absence de tels règlements, selon les codes d'installation CAN/CGA B149.)

ANSI Z21XX-XXXX · CSA 2.XX-MXX · UL307B

Minimum Permissible Gas Supply for Purposes of Input Adjustment.

Approved Minimum (De Gaz) Acceptable	0.0 in w.c.	(Po. Col. d'eau)
Maximum Pressure (Pression)	0.0 in w.c.	(Po. Col. d'eau)
Maximum Manifold Pressure (Pression)	0.0 in w.c.	(Po. Col. d'eau)
Minimum Manifold Pressure (Pression)	0.0 in w.c.	(Po. Col. d'eau)

Total Electrical Requirements: 000Vac, 00Hz., less than 00 Amperes

MADE IN USA

ALTITUDE: 0-0000 FT. 0000-0000FT.
MAX. INPUT BTUH: 00,000 00,000
MIN. INPUT BTUH: 00,000 00,000
ORIFICE SIZE: #XXXXX #XXXXX

IN CANADA
0000-0000FT.
00,000
00,000
#XXXXX

Model: XXXXXXXX
(Modele):
Serial: XXXXXXXX
(Serie):

Type of Gas

Gas and Electric Information

Model Number

Serial Number

▲ Safety Alert Key:

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Used to address practices not related to personal injury.

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➔ = Contains updated information.

→ B. Limited Lifetime Warranty

Outdoor Lifestyles by Hearth & Home Technologies, Inc.™ Limited Warranty

Hearth & Home Technologies, Inc. ("HHT") extends the following warranty for all Outdoor Lifestyles by HHT™ brand products ("Products") that are purchased from an HHT authorized dealer.

WARRANTY COVERAGE:

HHT warrants to the original owner of the Product at the site of installation, and to any transferee taking ownership of the Product at the site of installation within one year following the date of original purchase, that the Product will be free from defects in materials and workmanship at the time of manufacture. After installation, if covered components manufactured by HHT are found to be defective in materials or workmanship during the applicable warranty period, HHT will, at its option, repair or replace the covered components. This warranty is subject to conditions, exclusions and limitations as described below.

WARRANTY PERIOD:

The warranty period runs for one year, beginning on the earlier of: (i) the date of invoice for the Product; (ii) in the case of new home construction, the date of first occupancy of the residence or six months after the date of sale of the Product by an HHT authorized dealer, whichever occurs first; or (iii) the date 24 months following the date of Product shipment from HHT, regardless of the invoice or occupancy date.

WARRANTY CONDITIONS:

- This warranty only covers Products that are purchased through an HHT authorized dealer or distributor. A list of HHT authorized dealers is available on the HHT branded websites.
- This warranty is only valid while the Product remains at the site of original installation.
- Contact your installing dealer for warranty service. If the installing dealer is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking warranty service from a dealer other than the dealer from whom you originally purchased the Product.
- Check with your dealer in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this warranty.

WARRANTY EXCLUSIONS:

This warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur; this is not a flaw and not covered under warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items, or other external sources and residues left on surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the warranty period. These parts include: paint, firebricks, grates, flame guides and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this warranty.

B. Limited Lifetime Warranty (*continued*)

- Damages resulting from: (1) failure to install, operate, or maintain the Product in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the Product; (2) failure to install the Product in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or incorrectly performed repairs; (5) inadequate ventilation, negative pressure or environmental conditions, including, without limitation: hail, snow, ice, fallen branches, flooding, water damage and fading of color; (6) use of fuels other than those specified in the operating instructions; (7) installation or use of components not supplied with the Product or any other components not expressly authorized and approved by HHT; (8) modification of the Product not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the Product.
- Non-HHT venting components, hearth components or other accessories used in conjunction with the Product.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas appliance is installed.
- The Product's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper appliance for the application. Consideration must be given to the Product's location and configuration and environmental conditions.

This warranty is void if:

- The Product has been over-fired or operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes and cracking or spalling of refractory or cementitious materials.
- The Product is subjected to prolonged periods of dampness, condensation, ice or snow.
- There is any damage to the Product or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

LIMITATIONS OF LIABILITY:

Repair or replacement in accordance with the provisions of this warranty will be the owner's exclusive remedy for and will constitute HHT's sole obligation under this warranty, under any other warranty (express or implied), or in contract, tort or otherwise; provided, however, that if HHT is unable to provide repair or replacement in an expedient and cost effective manner, HHT may discharge all such obligations by refunding the purchase price of the Product. No employee, agent, dealer, or other person is authorized to give any warranty on behalf of HHT. TO THE EXTENT ALLOWED BY LAW, HHT MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HHT WILL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING OUT OF DEFECTS IN OR USE OF THE PRODUCTS. Some states do not allow exclusions or limitation of incidental or consequential damages, so these limitations may not apply to you. This warranty gives you specific rights; you also may have other rights, which vary from state to state. The duration of any implied warranty is limited to the duration of the warranty period specified herein.

1 Listing and Code Approvals

A. Appliance Certification

MODEL: Twilight-II-B
LABORATORY: Underwriters Laboratories, Inc. (UL)
TYPE: Direct Vent Gas Appliance
STANDARD: ANSI Z21.50-2003 • CSA2.22-M03 • UL307B

This product is listed to ANSI standards for “Vented Gas Appliance Heaters” and applicable sections of “Gas Burning Heating Appliances for Manufactured Homes and Recreational Vehicles”, and “Gas Fired Appliances for Use at High Altitudes”.

NOTICE: *This installation must conform with local codes. In the absence of local codes you must comply with the National Fuel Gas Code, ANSI Z223.1-latest edition in the U.S.A. and the CAN/CGA B149 Installation Codes in Canada.*

NOT INTENDED FOR USE AS A PRIMARY HEAT SOURCE.
This appliance is tested and approved as either supplemental room heat or as a decorative appliance. It should not be factored as primary heat in residential heating calculations.

B. Tempered Glass Specifications

Hearth & Home Technologies appliances manufactured with tempered glass may be installed in hazardous locations such as bathtub enclosures as defined by the Consumer Product Safety Commission (CPSC). The tempered glass has been tested and certified to the requirements of **ANSI Z97.1** and **CPSC 16 CFR 1202** (Safety Glazing Certification Council **SGCC# 1595** and **1597**. Architectural Testing, Inc. Reports **02-31919.01** and **02-31917.01**).

This statement is in compliance with **CPSC 16 CFR Section 1201.5** “Certification and labeling requirements” which refers to **15 U.S. Code (USC) 2063** stating “...Such certificate shall accompany the product or shall otherwise be furnished to any distributor or retailer to whom the product is delivered.”

Some local building codes require the use of tempered glass with permanent marking in such locations. Glass meeting this requirement is available from the factory. Please contact your dealer or distributor to order.

C. Thermal Performance Data

Model: Twilight-II-B		
Sound Transmission Class (STC)	Thermal Resistance (R Value)	Thermal Conductivity (K Value)
27	0.8hr-sq ft-°F/BTU	1.25 BTU-in/hr-sq ft-°F

D. Air Infiltration, Water Resistance and Structural Tests

The Hearth & Home Technologies Twilight-II-B Indoor/Outdoor Appliance unit was tested to the following ASTM standards at the Stork Twin City Testing laboratory.

Air infiltration test **ASTM:E283-(04)**. The sample was tested at 1.57 psf (equivalent to a 25-mph windload). Water resistance test **ASTM:E331-00**. The test specimen was tested at the requested test pressures of 8.0 & 25.0 psf.

Structural test **ASTM:E330-02**. The unit was tested to a design pressure of 50-psf, a test pressure of 75-psf.

Test Results

Model	Air Infiltration (ASTM E283)	Water Resistance (ASTM E331)	Structural Load (ASTM E330)
Twilight-II-B Indoor/Outdoor	0.07CFM/ft2	No leakage @ 8psf & 25psf	No Blowout @ 75psf

E. BTU Specifications

Model U.S. (0-2000 FT) or Canada (2000-4500 FT)		Input BTU/h	Orifice Size (DMS)
Twilight-II-B (NG)	US	38,000	32
	CAN	34,200	33
Twilight-II-B (LP)	US	37,000	50
	CAN	33,300	51

F. High Altitude Installations

NOTICE: *If the heating value of the gas has been reduced, these rules do not apply. Check with your local gas utility or authorities having jurisdiction.*

When installing above 2000 feet elevation:

- In the USA: Reduce input rate 4% for each 1000 feet above 2000 feet.
- In CANADA: Reduce input rate 10% for elevations between 2000 feet and 4500 feet. Above 4500 feet, consult local gas utility.

Check with your local gas utility to determine proper orifice size.

G. Non-Combustible Materials Specification

Material which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters, or any combination thereof.

Materials that are reported as passing **ASTM E 136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 °C** and **UL763** shall be considered non-combustible materials.

H. Combustible Materials Specification

Materials made of or surfaced with wood, compressed paper, plant fibers, plastics, or other material that can ignite and burn, whether flame proofed or not, or plastered or unplastered shall be considered combustible materials.

I. Electrical Codes

NOTICE: *This appliance must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with **National Electric Code ANSI/NFPA 70-latest edition** or the **Canadian Electric Code CSA C22.1**.*

- A 110-120 VAC circuit for this product must be protected with ground-fault circuit-interrupter protection, in compliance with the applicable electrical codes, when it is installed in locations such as in bathrooms or near sinks.

Note: The following requirements reference various Massachusetts and national codes not contained in this document.

J. Requirements for the Commonwealth of Massachusetts

For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

Installation of Carbon Monoxide Detectors

At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gas fitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gas fitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors.

In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.

In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

Approved Carbon Monoxide Detectors

Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.

Signage

A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) in. in size, **“GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS”**.

Inspection

The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.

Exemptions

The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

- The equipment listed in Chapter 10 entitled “Equipment Not Required To Be Vented” in the most current edition of NFPA 54 as adopted by the Board; and
- Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

MANUFACTURER REQUIREMENTS

Gas Equipment Venting System Provided

When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:

- Detailed instructions for the installation of the venting system design or the venting system components; and
- A complete parts list for the venting system design or venting system.

Gas Equipment Venting System NOT Provided

When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies “special venting systems”, the following requirements shall be satisfied by the manufacturer:

- The referenced “special venting system” instructions shall be included with the appliance or equipment installation instructions; and
- The “special venting systems” shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

See Gas Connection section for additional Commonwealth of Massachusetts requirements.

A. Gas Fireplace Safety

⚠ WARNING



HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down.

Hot glass will cause burns.

- **DO NOT** touch glass until it is cooled
- NEVER allow children to touch glass
- Keep children away

- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures.

High temperatures may ignite clothing or other flammable materials.

- Keep clothing, furniture, draperies and other flammable materials away.

This appliance has been supplied with an integral barrier to prevent direct contact with the fixed glass panel. DO NOT operate the appliance with the barrier removed.

Contact your dealer or Hearth & Home Technologies if the barrier is not present or help is needed to properly install one.

If you expect that small children or vulnerable adults may come into contact with this fireplace, the following precautions are recommended:

- Install a physical barrier such as:
 - A decorative firescreen.
 - Adjustable safety gate.
- Install a switch lock or a wall/remote control with child protection lockout feature.

- Keep remote controls out of reach of children.
- Never leave children alone near a hot fireplace, whether operating or cooling down.
- Teach children to NEVER touch the fireplace.
- Consider not using the fireplace when children will be present.

Contact your dealer for more information, or visit: www.hpba.org/staysafe.

To prevent unintended operation when not using your fireplace for an extended period of time (summer months, vacations, trips, etc):

- Remove batteries from remote controls.
- Turn off wall controls.
- Unplug 3 volt adapter plug and remove batteries on IPI models.

B. Your Fireplace

WARNING! DO NOT operate fireplace before reading and understanding operating instructions. Failure to operate fireplace according to operating instructions could cause fire or injury.

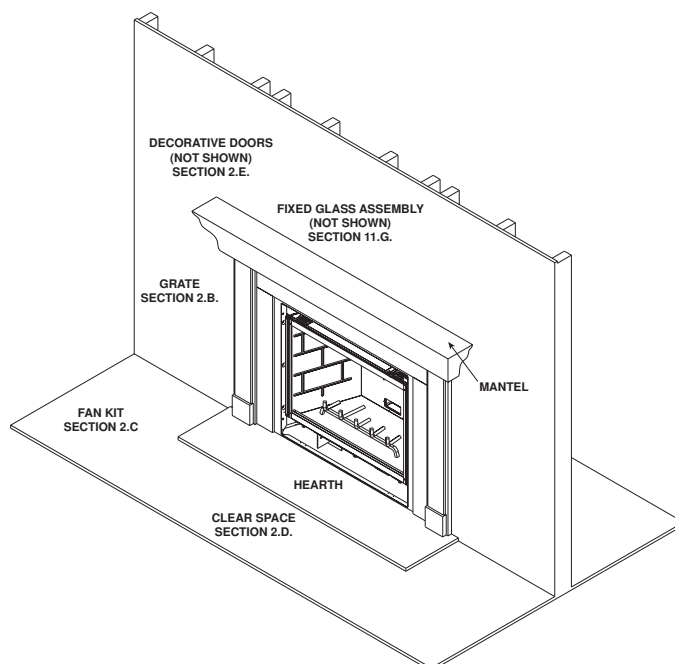


Figure 2.1 Generic Operating Parts

C. Fan Kit (optional)

If desired, a fan kit may be added. Contact your dealer to order the correct fan kit.

D. Clear Space

WARNING! DO NOT place combustible objects in front of the fireplace or block louvers. High temperatures may start a fire. See Figure 2.2.

Avoid placing candles and other heat-sensitive objects on mantel or hearth. Heat may damage these objects.

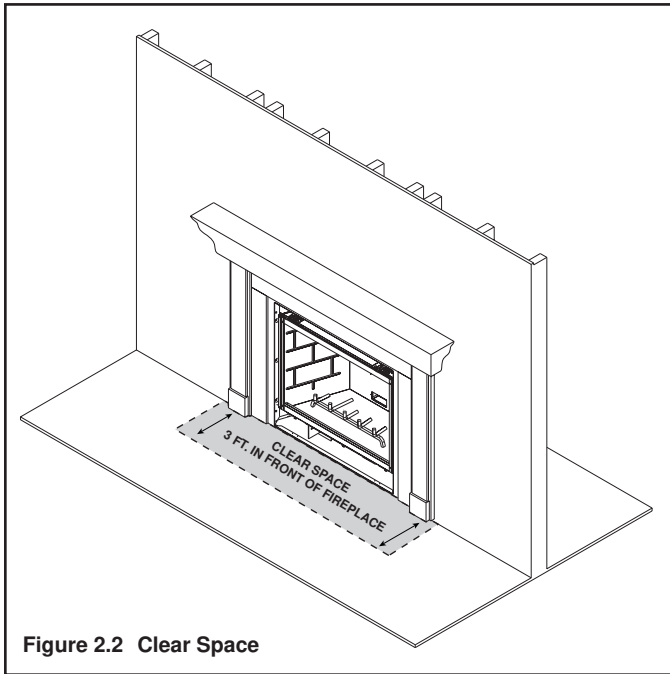


Figure 2.2 Clear Space

E. Decorative Doors and Fronts

WARNING! Risk of Fire! Install **ONLY** doors or fronts approved by Hearth & Home Technologies. Unapproved doors or fronts may cause fireplace to overheat.

This fireplace has been supplied with an integral barrier to prevent direct contact with the fixed glass panel. DO NOT operate the fireplace with the barrier removed.

Contact your dealer or Hearth & Home Technologies if the barrier is not present or help is needed to properly install one.

For more information refer to the instructions supplied with your decorative door or front.

F. Fixed Glass Assembly

See Section 11.G.

G. Remote Controls, Wall Controls and Wall Switches

Follow the instructions supplied with the control installed to operate your fireplace:

For safety:

- Install a switch lock or a wall/remote control with child protection lockout feature.
- Keep remote controls out of reach of children.

See your dealer if you have questions.

H. Before Lighting Fireplace

Before operating this fireplace for the first time, **have a qualified service technician:**

- Verify all shipping materials have been removed from inside and/or underneath the firebox.
- Review proper placement of logs, ember material and/or other decorative materials.
- Check the wiring.
- Check the air shutter adjustment.
- Ensure that there are no gas leaks.
- Ensure that the glass is sealed and in the proper position and that the integral barrier is in place.

WARNING! Risk of Fire or Asphyxiation! DO NOT operate fireplace with fixed glass assembly removed.

→ I. Lighting Instructions (IPI)

The IPI system may be operated with two D-cell batteries. When using batteries, unplug the transformer. To prolong battery life, remove them when using the transformer.

FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A.** This appliance is equipped with an intermittent pilot ignition (IPI) device which automatically lights the burner. **DO NOT** try to light the burner by hand.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.

B. BEFORE LIGHTING, smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

- **DO NOT** try to light any appliance.
- **DO NOT** touch any electric switch; do not use any phone in your building.

WARNING:

DO NOT CONNECT LINE VOLTAGE (110/120 VAC OR 220/240 VAC) TO THE CONTROL VALVE.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to the owner's information manual provided with this appliance.

This appliance needs fresh air for safe operation and must be installed so there are provisions for adequate combustion and ventilation air.

If not installed, operated, and maintained in accordance with the manufacturer's instructions, this product could expose you to substances in fuel or fuel combustion which are known to the State of California to cause cancer, birth defects, or other reproductive harm.

Keep burner and control compartment clean. See installation and operating instructions accompanying appliance.

For additional information on operating your
Hearth & Home Technologies fireplace, please refer to www.fireplaces.com.

CAUTION:

Hot while in operation. **DO NOT** touch. Keep children, clothing, furniture, gasoline and other liquids having flammable vapors away.

DO NOT operate the appliance with fixed glass assembly removed, cracked or broken. Replacement of the fixed glass assembly should be done by a licensed or qualified service person.

NOT FOR USE WITH SOLID FUEL

For use with natural gas and propane. A conversion kit, as supplied by the manufacturer, shall be used to convert this appliance to the alternate fuel.

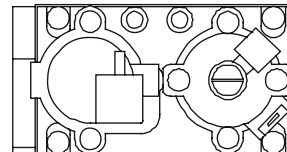
Also Certified for Installation in a Bedroom or a Bedsitting Room.

For assistance or additional information, consult a qualified installer, service agency or the gas supplier.

LIGHTING INSTRUCTIONS (IPI)

1. This appliance is equipped with an ignition device which automatically lights the burner. **DO NOT** try to light the burner by hand.

GAS
VALVE



2. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the Safety Information located on the left side of this label. If you do not smell gas, go to next step.

3. To light the burner:

Equipped with wall switch: Turn ON/OFF switch to ON.

Equipped with remote or wall control: Press ON or FLAME button.

Equipped with thermostat: Set temperature to desired setting.

4. If the appliance does not light after three tries, call your service technician or gas supplier.

TO TURN OFF GAS TO APPLIANCE

1. Equipped with wall switch: Turn ON/OFF switch to OFF.

Equipped with remote or wall control: Press OFF button.

Equipped with thermostat: Set temperature to lowest setting.

2. Service technician should turn off electric power to the control when performing service.

593-913G

Final inspection by _____

J. After Fireplace is Lit

Initial Break-in Procedure

- The fireplace should be run three to four hours continuously on high.
- Turn the fireplace off and allow it to completely cool.
- Remove fixed glass assembly. See Section 11.G.
- Clean fixed glass assembly. See Section 3.
- Replace the fixed glass assembly and run continuously on high an additional 12 hours.

This cures the materials used to manufacture the fireplace.

NOTICE! Open windows for air circulation during fireplace break-in.

- Some people may be sensitive to smoke and odors.
- Smoke detectors may activate.

K. Frequently Asked Questions

ISSUE	SOLUTIONS
Condensation on the glass	This is a result of gas combustion and temperature variations. As the fireplace warms, this condensation will disappear.
Blue flames	This is a result of normal operation and the flames will begin to yellow as the fireplace is allowed to burn for 20 to 40 minutes.
Odor from fireplace	When first operated, this fireplace may release an odor for the first several hours. This is caused by the curing of materials from manufacturing. Odor may also be released from finishing materials and adhesives used near the fireplace. These circumstances may require additional curing related to the installation environment.
Film on the glass	This is a normal result of the curing process of the paint and logs. Glass should be cleaned within 3 to 4 hours of initial burning. A non-abrasive cleaner such as gas appliance glass cleaner may be necessary. See your dealer.
Metallic noise	Noise is caused by metal expanding and contracting as it heats up and cools down, similar to the sound produced by a furnace or heating duct. This noise does not affect the operation or longevity of the fireplace.
Is it normal to see the pilot flame burn continually?	In an intermittent pilot ignition system (IPI), the pilot flame should turn off when appliance is turned off. Some optional control systems available with IPI models may allow pilot flame to remain lit.

3 Maintenance and Service

Any safety screen or guard removed for servicing must be replaced prior to operating the fireplace.

When properly maintained, your fireplace will give you many years of trouble-free service. We recommend annual service by a qualified service technician.

A. Maintenance Tasks-Homeowner

Installation and repair should be done by a qualified service technician only. The fireplace should be inspected before use and at least annually by a professional service person.

The following tasks may be performed annually by the homeowner. If you are uncomfortable performing any of the listed tasks, please call your dealer for a service appointment.

More frequent cleaning may be required due to lint from carpeting or other factors. Control compartment, burner and circulating air passageway of the fireplace must be kept clean.

CAUTION! Risk of Burns! *The fireplace should be turned off and cooled before servicing.*

Glass Cleaning

Frequency: Seasonally

By: Homeowner

Tools Needed: Protective gloves, glass cleaner, drop cloth and a stable work surface.

CAUTION! Handle fixed glass assembly with care. *Glass is breakable.*

- *Avoid striking, scratching or slamming glass*
- *Avoid abrasive cleaners*
- **DO NOT** clean glass while it is hot
- Prepare a work area large enough to accommodate fixed glass assembly and door frame by placing a drop cloth on a flat, stable surface.

Note: Fixed glass assembly and gasketing may have residue that can stain carpeting or floor surfaces.

- Remove door or decorative front from fireplace and set aside on work surface.
- See Section 11.G for instructions to remove fixed glass assembly.
- Clean glass with a non-abrasive commercially available cleaner.
 - Light deposits: Use a soft cloth with soap and water
 - Heavy deposits: Use commercial fireplace glass cleaner (consult with your dealer)
- Carefully set fixed glass assembly in place on fireplace. Hold glass in place with one hand and secure glass latches with the other hand.
- Reinstall door or decorative front.

Doors, Surrounds, Fronts

Frequency: Annually

By: Homeowner

Tools needed: Protective gloves, stable work surface

- Assess condition of screen and replace as necessary.
- Inspect for scratches, dents or other damage and repair as necessary.
- Check that louvers are not blocked.
- Vacuum and dust surfaces.

Remote Control

Frequency: Seasonally

By: Homeowner

Tools needed: Replacement batteries and remote control instructions.

- Locate remote control transmitter and receiver.
- Verify operation of remote. Refer to remote control operation instructions for proper calibration and setup procedure.
- Place batteries as needed in remote transmitters and battery-powered receivers.
- Place remote control out of reach of children.

If not using your fireplace for an extended period of time (summer months, vacations/trips, etc), to prevent unintended operation:

- Remove batteries from remote controls.
- Unplug 3 volt adapter plug on IPI models.

Exhaust Termination

Frequency: Seasonally

By: Homeowner

Tools needed: Protective gloves and safety glasses.

- Inspect exhaust termination for blockage or obstruction such plants, bird nests, leaves, snow, debris, etc.
- Verify exhaust termination clearance to subsequent construction (building additions, decks, fences, or sheds). See Section 6.

B. Maintenance Tasks-Qualified Service Technician

The following tasks must be performed by a qualified service technician.

Gasket Seal and Glass Assembly Inspection

Frequency: Annually

By: Qualified Service Technician

Tools needed: Protective gloves, drop cloth and a stable work surface.

- Inspect gasket seal and its condition.
- Inspect fixed glass assembly for scratches and nicks that can lead to breakage when exposed to heat.
- Confirm there is no damage to glass or glass frame. Replace as necessary.
- Verify that fixed glass assembly is properly retained and attachment components are intact and not damaged. Replace as necessary.

Logs

Frequency: Annually

By: Qualified Service Technician

Tools needed: Protective gloves.

- Inspect for damaged or missing logs. Replace as necessary. Refer to Section 11 for log placement instructions.
- Verify correct log placement and no flame impingement causing sooting. Correct as necessary.

Firebox

Frequency: Annually

By: Qualified Service Technician

Tools needed: Protective gloves, sandpaper, steel wool, cloths, mineral spirits, primer and touch-up paint.

- Inspect for paint condition, warped surfaces, corrosion or perforation. Sand and repaint as necessary.
- Replace fireplace if firebox has been perforated.

Control Compartment and Firebox Top

Frequency: Annually

By: Qualified Service Technician

Tools needed: Protective gloves, vacuum cleaner, dust cloths

- Vacuum and wipe out dust, cobwebs, debris or pet hair. Use caution when cleaning these areas. Screw tips that have penetrated the sheet metal are sharp and should be avoided.
- Remove all foreign objects.
- Verify unobstructed air circulation.

Burner Ignition and Operation

Frequency: Annually

By: Qualified Service Technician

Tools needed: Protective gloves, vacuum cleaner, whisk broom, flashlight, voltmeter, indexed drill bit set, and a manometer.

- Verify burner is properly secured and aligned with pilot or igniter.
- Clean off burner top, inspect for plugged ports, corrosion or deterioration. Replace burner if necessary.
- Replace Glowing embers with new dime-size pieces. **DO NOT** block ports or obstruct lighting paths. Refer to Section 11 for proper ember placement.
- Verify batteries have been removed from battery back-up IPI systems to prevent premature battery failure or leaking.
- Check for smooth lighting and ignition carryover to all ports. Verify that there is no ignition delay.
- Inspect for lifting or other flame problems.
- Verify air shutter setting is correct. See Section 11 for required air shutter setting. Verify air shutter is clear of dust and debris.
- Inspect orifice for soot, dirt and corrosion. Verify orifice size is correct. See Service Parts List for proper orifice sizing.
- Verify manifold and inlet pressures. Adjust regulator as required.
- Inspect pilot flame pattern and strength. See Figure 3.1 for proper pilot flame pattern. Clean or replace orifice spud as necessary.
- Inspect IPI flame sensing rod for soot, corrosion and deterioration. Clean with emery cloth or replace as required.
- Verify that there is not a short in flame sense circuit by checking continuity between pilot hood and flame sense rod. Replace pilot as necessary. (IPI only)



Figure 3.1 IPI Pilot Flame Pattern

4 Getting Started

Installer Guide

A. Design and Installation Considerations

Hearth & Home Technologies direct vent gas appliances are designed to operate with all combustion air siphoned from outside of the building and all exhaust gases expelled to the outside. No additional outside air source is required.

The Twilight-II-B has been carefully engineered to provide a unique fireplace experience. Since it is different than any other product on the market, care must be taken when installing this appliance so that our customer does not experience undesirable performance or conditions.

1. Install the appliance according to this Owner's Guide paying particular attention to flashing and sealing instructions.
2. In the cold northern climates pay attention to exposures and prevailing wind conditions when locating the appliance, the same as you would for locating exterior windows and doors.

The Twilight-II-B has the thermal characteristics of a high quality window system. Temperatures near the appliance will be cooler than what is realized with a fully insulated wall.

Operation of the appliance will eliminate any cool drafts and will provide the room with a comfortable ambiance.

Installation **MUST** comply with local, regional, state and national codes and regulations. Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.

Before installing, determine the following:

- Where the appliance is to be installed.
- Gas supply piping requirements.
- Electrical wiring requirements.
- Framing and finishing details.
- Whether optional accessories—devices such as a fan, wall switch, or remote control—are desired.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. For assistance or additional information, consult a qualified service technician, service agency or your dealer.

B. Tools and Supplies Needed

Before beginning the installation be sure that the following tools and building supplies are available.

Tape measure	Framing material
Pliers	High temperature caulking material
Hammer	Phillips screwdriver
Gloves	Framing square
Voltmeter	Electric drill and bits (1/4 in.)
Plumb line	Safety glasses
Level	Reciprocating saw
Manometer	Flat blade screwdriver
Non-corrosive leak check solution	
1/2 - 3/4 in. length, #6 or #8 Self-drilling screws	
One 1/4 in. female connection (for optional fan).	

C. Inspect Appliance and Components

- Carefully remove the appliance and components from the packaging.
- The vent system components and decorative doors and fronts may be shipped in separate packages.
- If packaged separately, the log set and appliance grate must be installed.
- Report to your dealer any parts damaged in shipment, particularly the condition of the glass.
- **Read all of the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.**

WARNING! Risk of Fire or Explosion! Damaged parts could impair safe operation. DO NOT install damaged, incomplete or substitute components. Keep appliance dry.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance or vent system component.
- Modification of the appliance or vent system.
- Installation other than as instructed by Hearth & Home Technologies.
- Improper positioning of the gas logs or the glass door.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.

Any such action may cause a fire hazard.

WARNING! Risk of Fire, Explosion or Electric Shock! DO NOT use this appliance if any part has been under water. Call a qualified service technician to inspect the appliance and to replace any part of the control system and/or gas control which has been under water.

5 Framing and Clearances

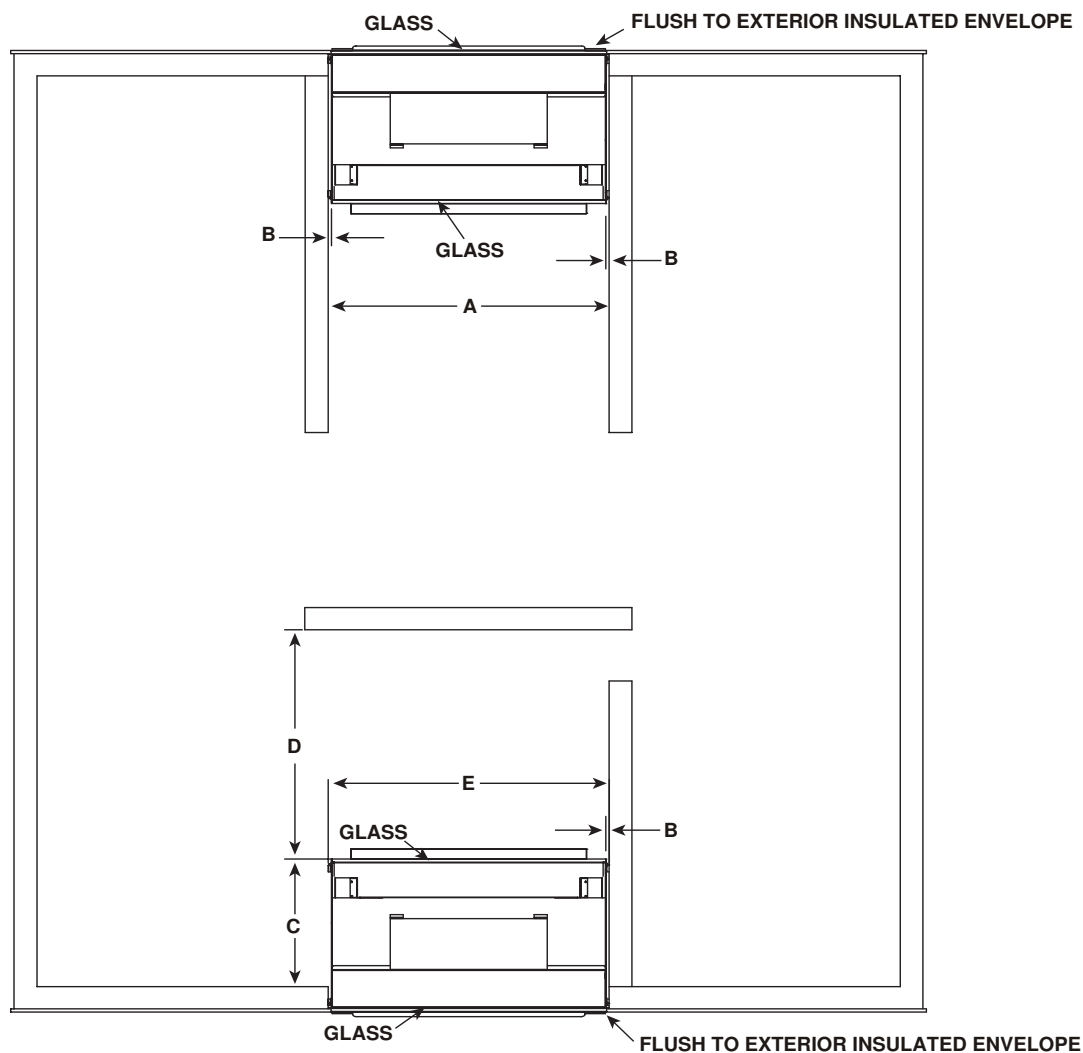
A. Selecting Appliance Location

When selecting a location for the appliance it is important to consider the required clearances to walls (see Figure 5.1).

WARNING! Risk of Fire or Burns! Provide adequate clearance around air openings and for service access. Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.

NOTICE: Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY. Illustrations/diagrams are not drawn to scale. Actual installation may vary due to individual design preference.

WARNING! Risk of Fire! The exterior side of the TWI-LIGHT-II-B **CANNOT** be recessed into the framing.



	A	B	C	D	E
	Minimum	Minimum	-	Minimum	-
Inches	43	1/2	24	36	43
Millimeters	1092.2	12.7	609.6	914.4	1092.2

Figure 5.1 Appliance Locations

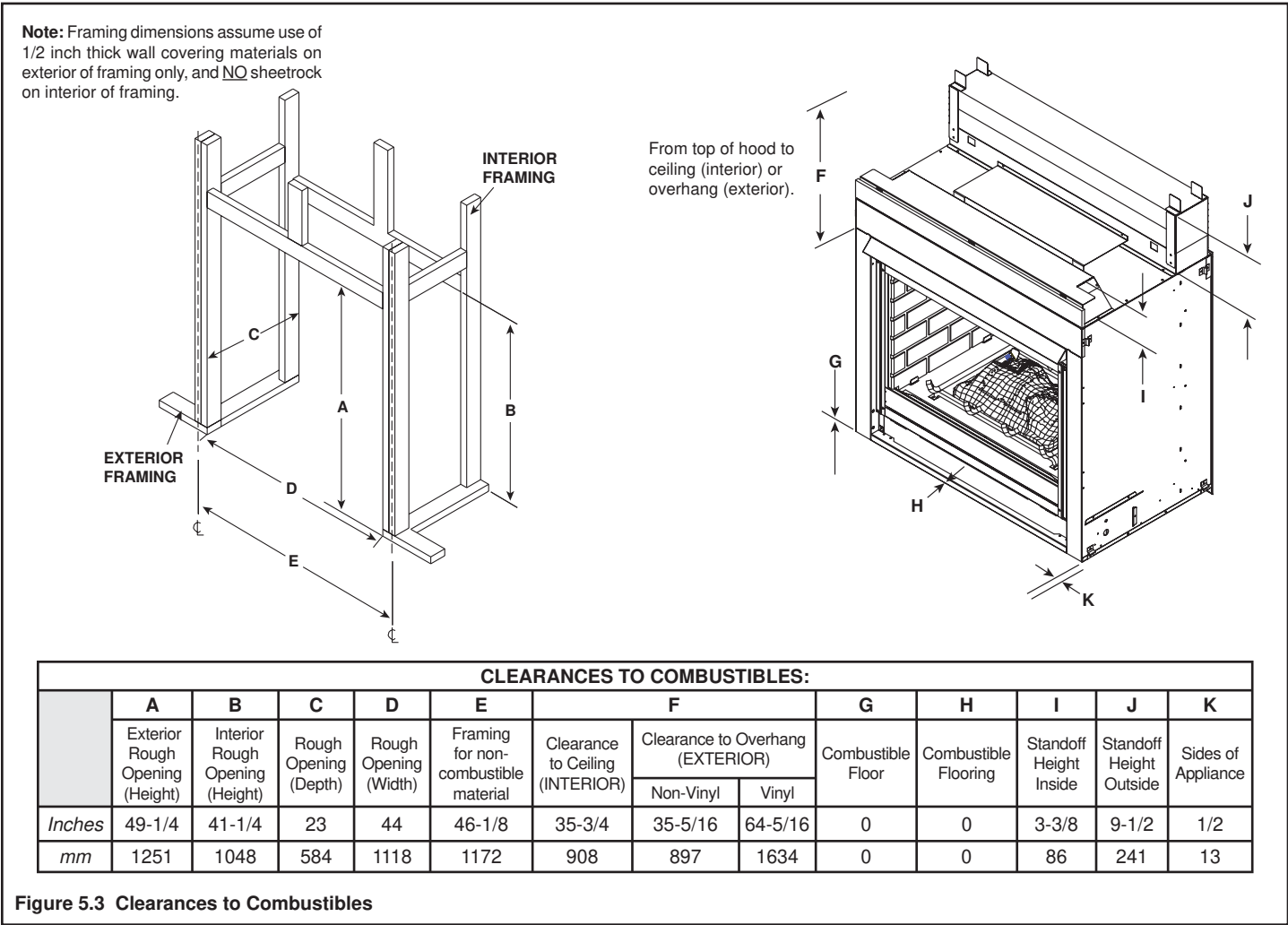
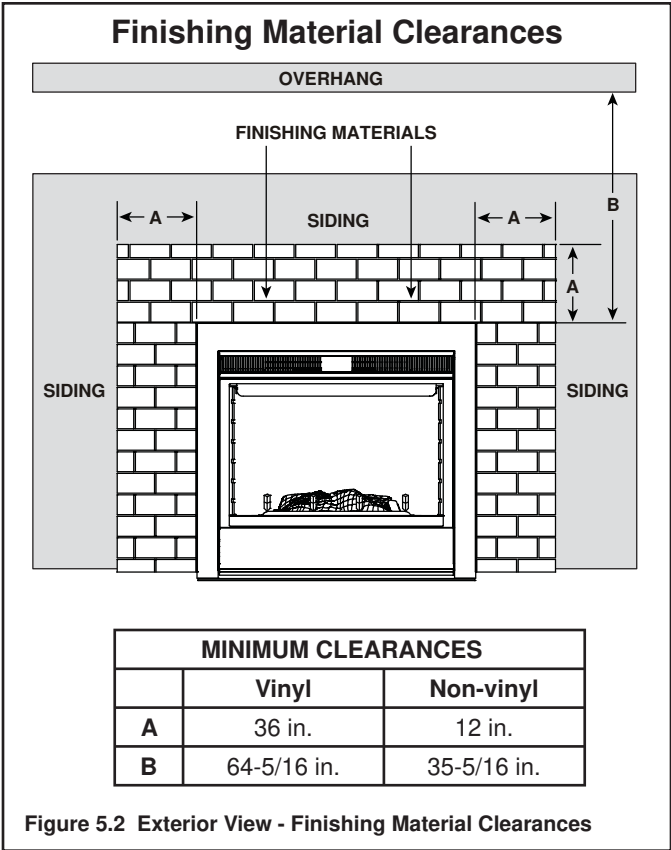
B. Clearances

NOTICE: Install appliance on hard metal or wood surfaces extending full width and depth. **DO NOT** install directly on carpeting, vinyl, tile or any combustible material other than wood.

WARNING! Risk of Fire! Do not install appliance against vapor barriers or exposed insulation. Prevent contact with sagging or loose insulation.

- Locate and install appliance to all clearance specifications in manual.
- The chase must be properly blocked to prevent blown insulation or other combustibles from entering and making contact with fireplace.
- Failure to maintain airspace may cause overheating and a fire.

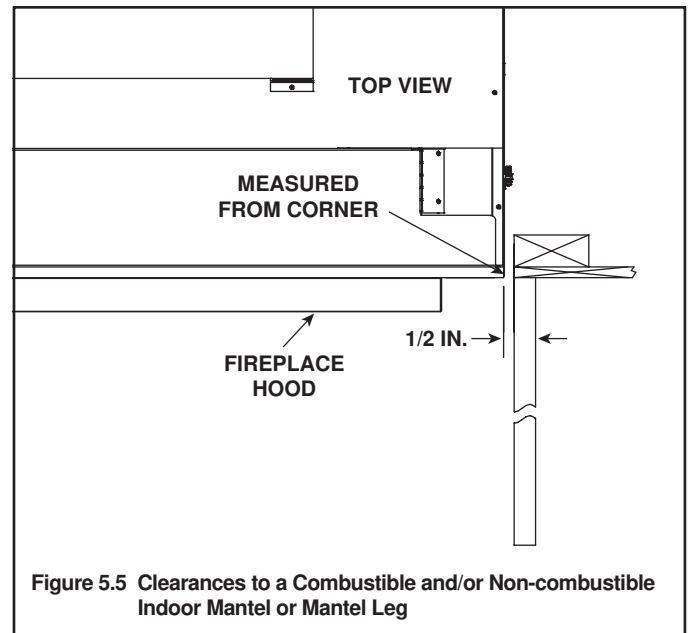
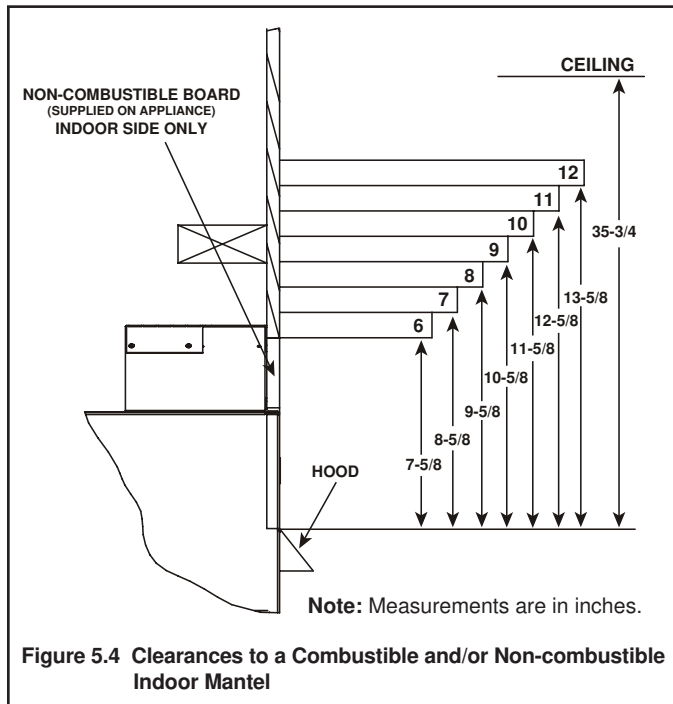
Note: Verify that tabs on insulation bracket are in an upright position.



C. Mantel and Wall Projections

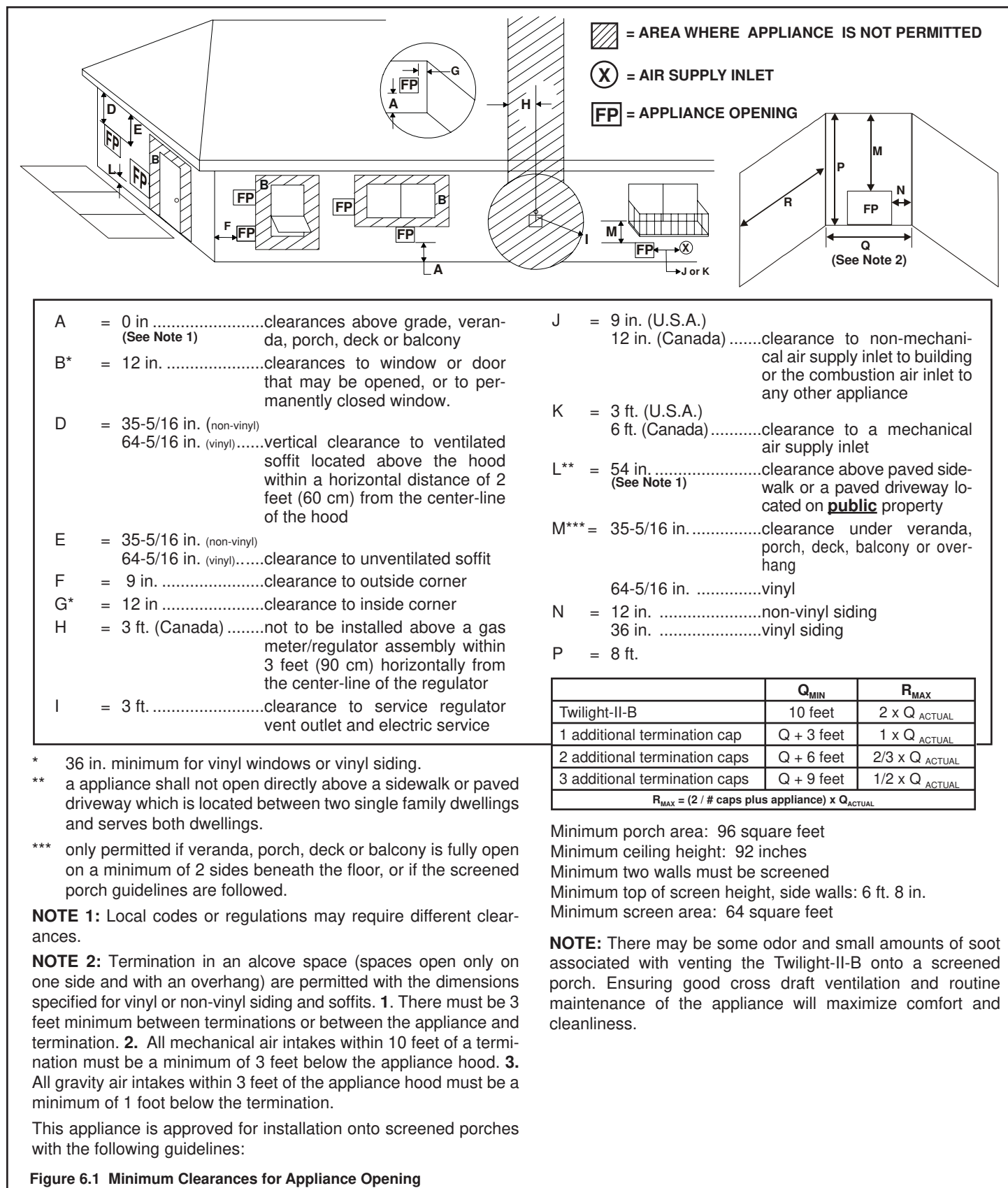
WARNING! Risk of Fire! *Comply with all minimum clearances as specified. Framing or finishing material closer than the minimums listed must be constructed entirely of noncombustible materials (i.e., steel studs, concrete board, etc).*

Combustible and Non-combustible Mantels- Indoor only



6 Termination Locations

A. Appliance Opening Minimum Clearances



Minimum porch area: 96 square feet
 Minimum ceiling height: 92 inches
 Minimum two walls must be screened
 Minimum top of screen height, side walls: 6 ft. 8 in.
 Minimum screen area: 64 square feet

NOTE: There may be some odor and small amounts of soot associated with venting the Twilight-II-B onto a screened porch. Ensuring good cross draft ventilation and routine maintenance of the appliance will maximize comfort and cleanliness.

7 Appliance Preparation

A. Removing Non-combustible Facing Material Assembly

The non-combustible assembly is located on right-hand side of appliance (when looking from outdoor side of appliance).

CAUTION

Handle with care.

- Non-combustible material may be damaged if dropped.

- Hold non-combustible pieces in place.
- Remove and save two screws from upper bracket.
- Remove non-combustible pieces.
- Remove and save three screws from lower bracket.
- Discard brackets.
- Replace screws in holes where brackets were attached to appliance.

CAUTION

Handle with care.

- Avoid damaging protruding edges on outdoor side of appliance.

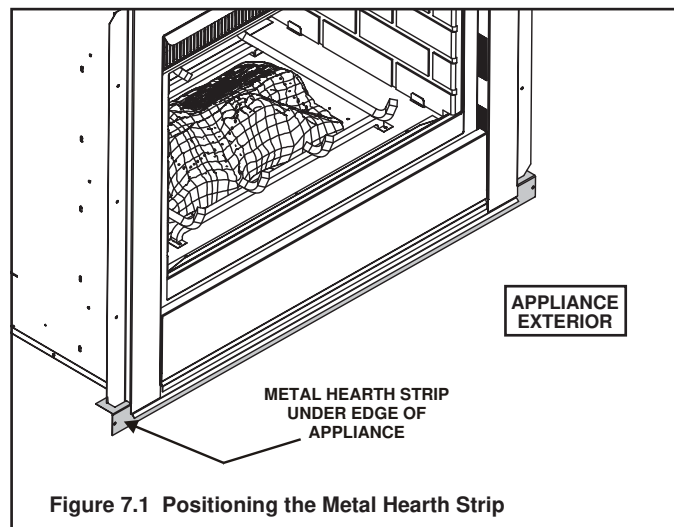


Figure 7.1 Positioning the Metal Hearth Strip

B. Securing and Leveling the Appliance

⚠ WARNING



Fire Risk.

- Prevent contact with sagging, loose insulation.
- Do NOT install against vapor barriers or exposed insulation.

Placing Metal Hearth Strip

The metal hearth strip (approximately 46 inches x 4 inches) is used to provide added protection where appliance and outer structure meet.

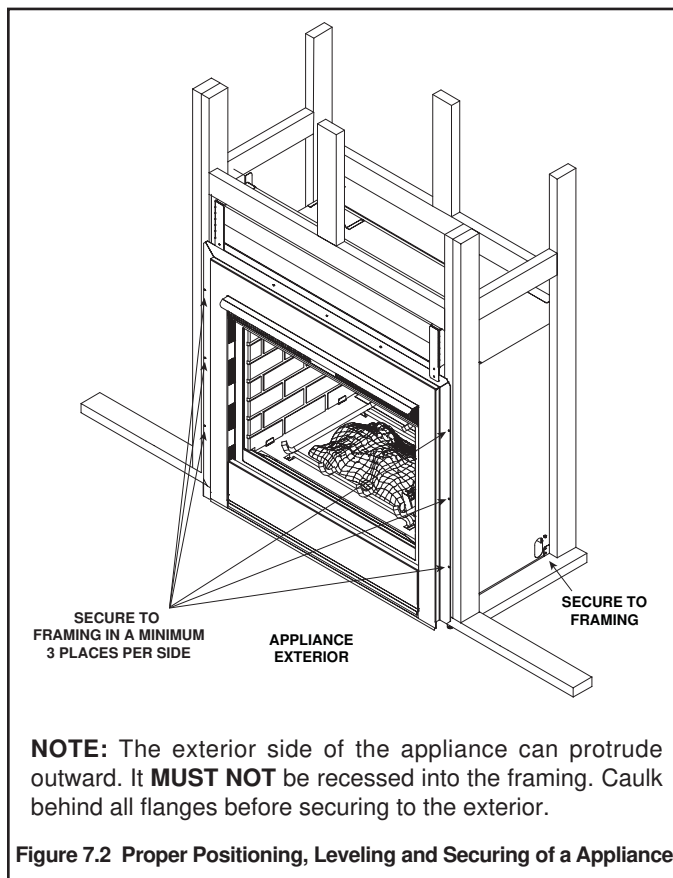
- Place a generous bead of silicone caulk into the corner of the protective hearth strip.
- Place the metal strip onto the structure where the outer edge of the appliance will sit (see Figure 7.1). It should overlap building paper to prevent water infiltration.

Placing and Securing Appliance

Place the appliance into position. Make sure flashing edges on the outdoor surround fit up tight to the framing.

The diagram shows how to properly position, level, and secure the appliance (see Figure 7.2). Nailing tabs are provided to secure the appliance to the framing members.

- Caulk behind flanges before securing to framing.
- Place the appliance into position.
- Level the appliance from side to side and front to back.
- Shim the appliance as necessary. It is acceptable to use wood shims.
- Keep nailing tabs flush with the framing.
- Secure the appliance to the framing by using nails or screws through the nailing tabs.

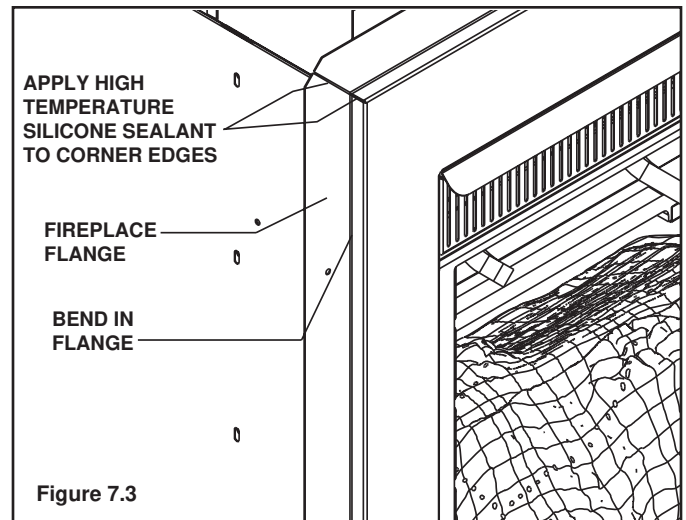


CAUTION

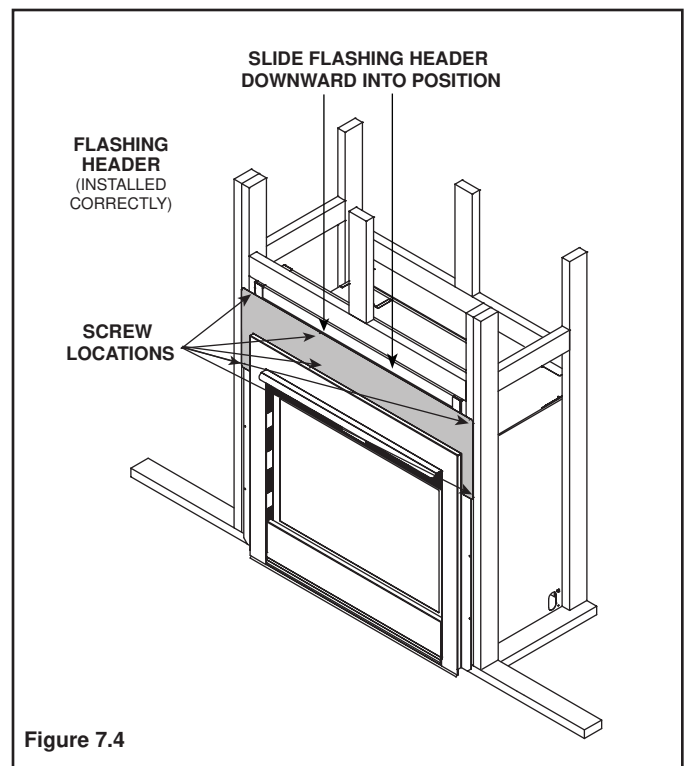
Do NOT notch into the framing around the appliance spacers.

Placing Flashing and Sheathing

Apply high temperature silicone sealant to corner edges of fireplace flange (see Figure 7.3).



Install outdoor flashing header (sheetmetal piece removed from shipping pallet). Place over upper portion of shroud flange. Line up holes on shroud sides (see Figure 7.4).

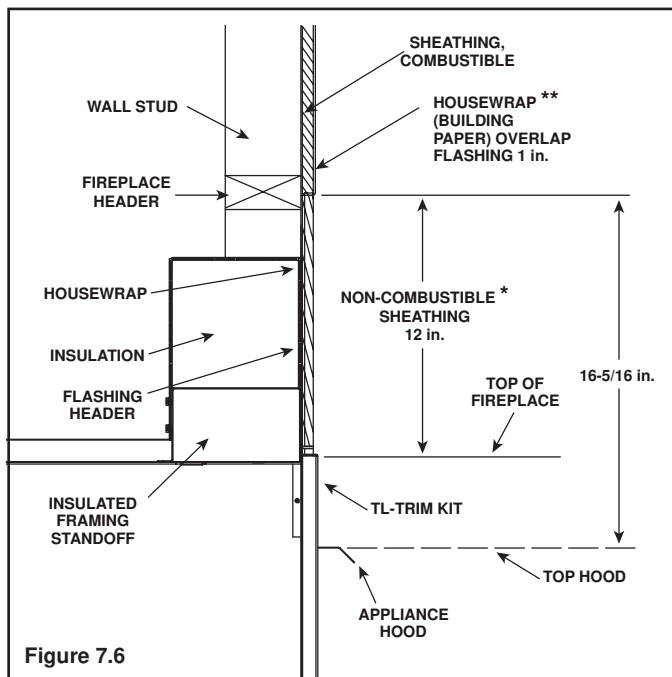
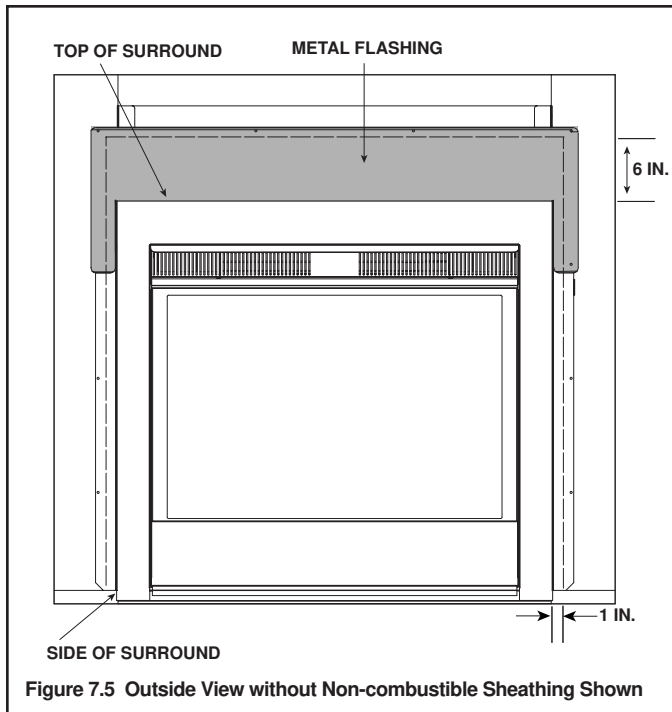


Seal flashing to exterior of building using high temperature caulk. Attach to building using holes provided on the top of the left and right sides of outdoor flashing (see Figure 7.4).

Apply housewrap or building paper

For placement of combustible housewrap or building paper and non-combustible sheathing for the outside wall see Figures 7.5 and 7.6.

Special care should be taken when choosing building materials for weather proofing (i.e. building wraps, sealant tapes, liquid sealants, rubberized flashings, etc.). All sealant materials or building wraps installed within 6 inches of the top and 1 inch on the sides of the fireplace surround must be approved to a minimum temperature of 225° F continuous exposure. Consult the material's manufacturer to ensure product compliance.

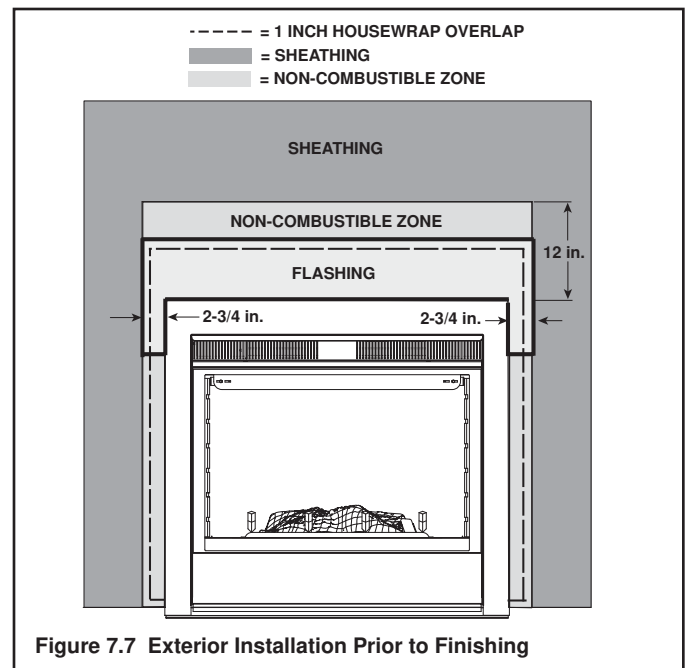



* **NOTE:** All finishing materials on top of exterior sheathing must be non-combustible for a minimum of 12 inches above and 2-3/4 inches on both sides of the exterior face of the appliance. This non-combustible finishing material can be up to a maximum of 6 inches thick (6 inches maximum horizontal overhang) to allow for brick and stone alcoves (see Figure 10.5).

** **NOTE:** Combustible house wrap or building paper **MUST NOT** extend over the outside of non-combustible sheathing, and **MAY** extend over the flashing behind non-combustible sheathing a maximum of 1 inch. Use high temp silicone or sealant recommended by the manufacturer of the housewrap to seal between combustible sheathing house wrap and non-combustible sheathing. The sealant material used within 6 inches of the top and 1 inch on the sides of the fireplace surround must be approved to a minimum temperature of 225° F continuous exposure.

Once the appliance is in place use enough high temperature silicone sealant or manufacturer specified sealant (approved to a minimum of 225° F) to make a water tight seal between outdoor surround and exterior sheathing.

Face the perimeter of the appliance with non-combustible sheathing over shroud flanges and flashing. See Figure 7.7 for non-combustible zone.





WARNING

Risk of Fire

- Non-combustible clearances must be maintained.
- Sheetrock, wood or other combustibles must NOT be used as sheathing or facing in the non-combustible zone.
- See **Sections 5 and 10** for proper clearances.
- See **Section 1** for combustible /non-combustible definitions.

C. Installing Non-combustible Facing Material (Outdoor Side)

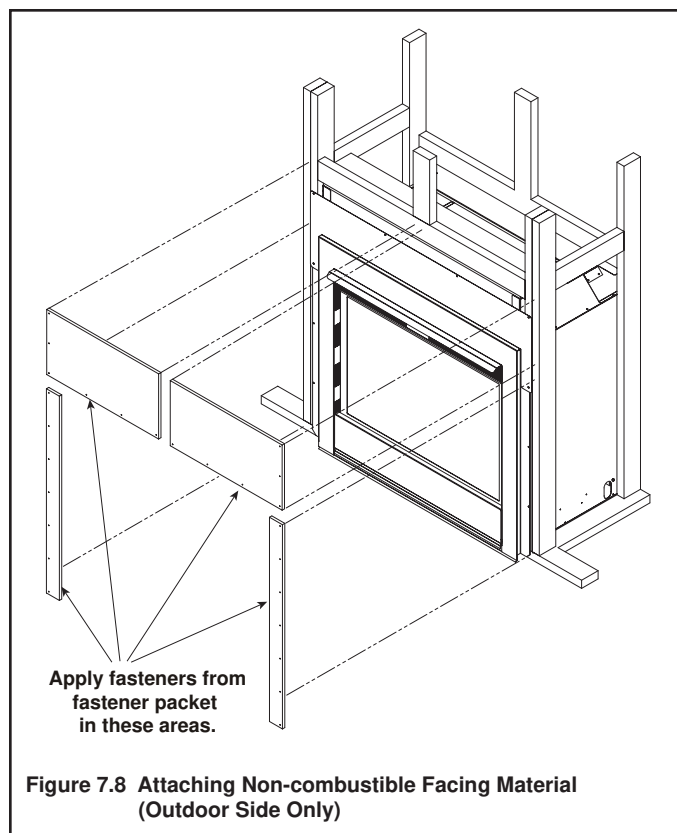
WARNING



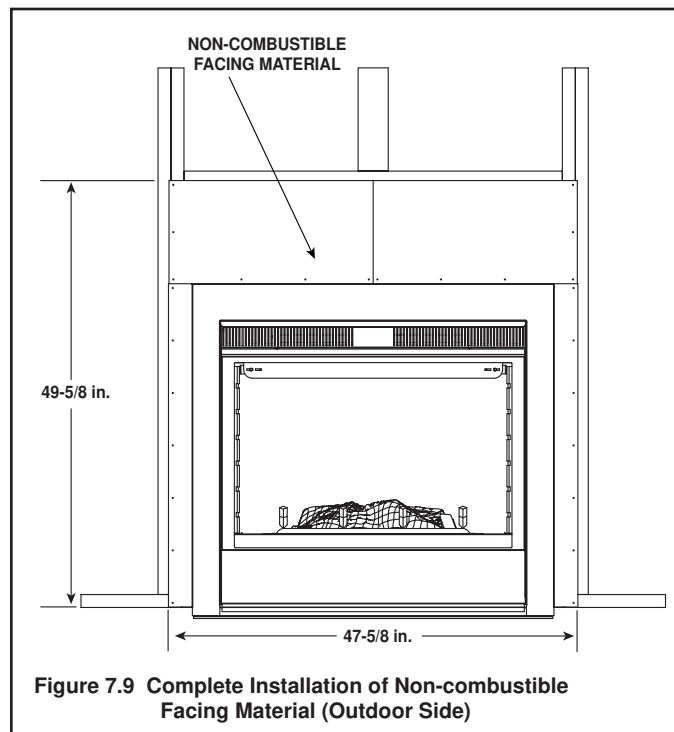
Fire Risk.

- Follow these instructions exactly.
- Facing materials must be installed properly to prevent fire.
- No materials may be substituted without authorization by Hearth & Home Technologies.

- Center and attach two top boards (the two shorter pieces) to the framing members. See Figure 7.8.
- Use fasteners from fastener packet (in manual bag) in shaded areas (see Figure 7.8).
- Use regular sheetrock screws in non-shaded areas.



- Attach the left and right side pieces to the framing members. (See Figure 7.9).



- Use a wet or dry towel or soft brush to remove dust or dirt from facing material.
- Apply a non-combustible adhesive to attach tile, stone or other non-combustible finishing materials per manufacturer's instructions.

8 Gas Information

A. Fuel Conversion

- Make sure the appliance is compatible with available gas types.
- Conversions must be made by a qualified service technician using Hearth & Home Technologies specified and approved parts.


B. Gas Pressure

- Optimum appliance performance requires proper input pressures.
- Gas line sizing requirements will be determined in ANSI Z223.1 National Fuel Gas Code in the USA and CAN/CGA B149 in Canada.
- Pressure requirements are:

Gas Pressure	Natural Gas	Propane
Minimum inlet pressure	5.0 in. w.c.	11.0 in. w.c.
Maximum inlet pressure	14.0 in. w.c.	14.0 in. w.c.
Manifold pressure	3.5 in. w.c.	10.0 in. w.c.

WARNING! Risk of Fire or Explosion! High pressure will damage valve. Low pressure may cause explosion.

- Verify inlet pressures. Verify minimum pressures when other household gas appliances are operating.
- Install regulator upstream of valve if line pressure is greater than 1/2 psig.



⚠ WARNING

Fire Risk.
Explosion Hazard.
High pressure will damage valve.

- Disconnect gas supply piping **BEFORE** pressure testing gas line at test pressures above 1/2 psig.
- Close the manual shutoff valve **BEFORE** pressure testing gas line at test pressures equal to or less than 1/2 psig.

Note: Have the gas supply line installed in accordance with local codes, if any. If not, follow ANSI 223.1. Installation should be done by a qualified installer approved and/or licensed as required by the locality. (In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter).

Note: A listed (and Commonwealth of Massachusetts approved) 1/2 in. (13 mm) T-handle manual shut-off valve and flexible gas connector are connected to the 1/2 in. (13 mm) control valve inlet.

- **If substituting for these components, please consult local codes for compliance.**

C. Gas Connection

- Refer to Reference Section 13 for location of gas line access in appliance.
- Gas line may be run through knockout(s) provided.
- The gap between supply piping and gas access hole may be caulked with high temperature caulk or stuffed with non-combustible, unfaced insulation to prevent cold air infiltration.
- Ensure that gas line does not come in contact with outer wrap of the appliance. Follow local codes.
- Pipe incoming gas line into valve compartment.
- Connect incoming gas line to the 1/2 in. (13 mm) connection on manual shutoff valve.

WARNING! Risk of Fire or Explosion! Support control when attaching pipe to prevent bending gas line.

- A small amount of air will be in the gas supply lines.

WARNING! Risk of Fire or Explosion! Gas build-up during line purge could ignite.

- Purge should be performed by qualified service technician.
- Ensure adequate ventilation.
- Ensure there are no ignition sources such as sparks or open flames.

Light the appliance. It will take a short time for air to purge from lines. When purging is complete the appliance will light and operate normally.

WARNING! Risk of Fire, Explosion or Asphyxiation! Check all fittings and connections with a non-corrosive commercially available leak-check solution. **DO NOT** use open flame. Fittings and connections could have loosened during shipping and handling.

WARNING! Risk of Fire! DO NOT change valve settings. This valve has been preset at the factory.

D. High Altitude Installations

NOTICE: If the heating value of the gas has been reduced, these rules do not apply. Check with your local gas utility or authorities having jurisdiction.

When installing above 2000 feet elevation:

- In the USA: Reduce burner orifice 4% for each 1000 feet above 2000 feet.
- In CANADA: Reduce burner orifice 10% for elevations between 2000 feet and 4500 feet. Above 4500 feet, consult local gas utility.

9 Electrical Information

A. Wiring Requirements


NOTICE: This appliance must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with **National Electric Code ANSI/NFPA 70-latest edition** or the **Canadian Electric Code CSA C22.1**.

- Wire the appliance junction box to 110-120 VAC. This is required for proper operation of the appliance.
- A 110-120 VAC circuit for this product must be protected with ground-fault circuit-interrupter protection, in compliance with the applicable electrical codes, when it is installed in locations such as in bathrooms or near sinks.
- Low voltage and 110 VAC voltage cannot be shared within the same wall box.

WARNING! Risk of Shock or Explosion! DO NOT wire 110V to the valve or to the appliance wall switch. Incorrect wiring will damage controls.

NOTICE: Waterproof insulated wire should be used when wiring the junction box.

B. Connecting to the Appliance

	<p>⚠ WARNING</p> <p>Wire 110V to electrical junction box. Do NOT wire 110V to valve. Do NOT wire 110V to wall switch.</p> <ul style="list-style-type: none">• Incorrect wiring will damage millivolt valves.• Incorrect wiring will override IPI safety lockout and may cause explosion.
---	--

- This appliance may be used with a wall switch, wall mounted thermostat and/or a remote control.
- If using thermostat use one compatible with a millivolt gas valve system.
- Follow parameters for locating thermostat (see individual thermostat instructions) to ensure proper operation of appliance.
- Keep wire lengths short as possible by removing any excess wire length.
- Low voltage and 110 VAC voltage cannot be shared within the same wall box.

C. Intellifire Ignition System Wiring

- Wire the appliance junction box to 110 VAC for proper operation of the appliance.

WARNING! Risk of Shock or Explosion! DO NOT wire IPI controlled appliance junction box to a switched circuit. Incorrect wiring will override IPI safety lockout.

- Refer to Figure 9.1, Intellifire Pilot Ignition (IPI) Wiring Diagram.
- This appliance is equipped with an Intellifire control valve which operates on a 3 volt system.
- Plug the 3-volt AC transformer into the appliance junction box to supply power to the unit OR install two D cell batteries (not included) into the battery pack before use.

NOTICE: Batteries should not be placed in the battery pack while using the transformer. Remove batteries before using the transformer, and unplug the transformer before installing the batteries. Battery polarity must be correct or module damage will occur.

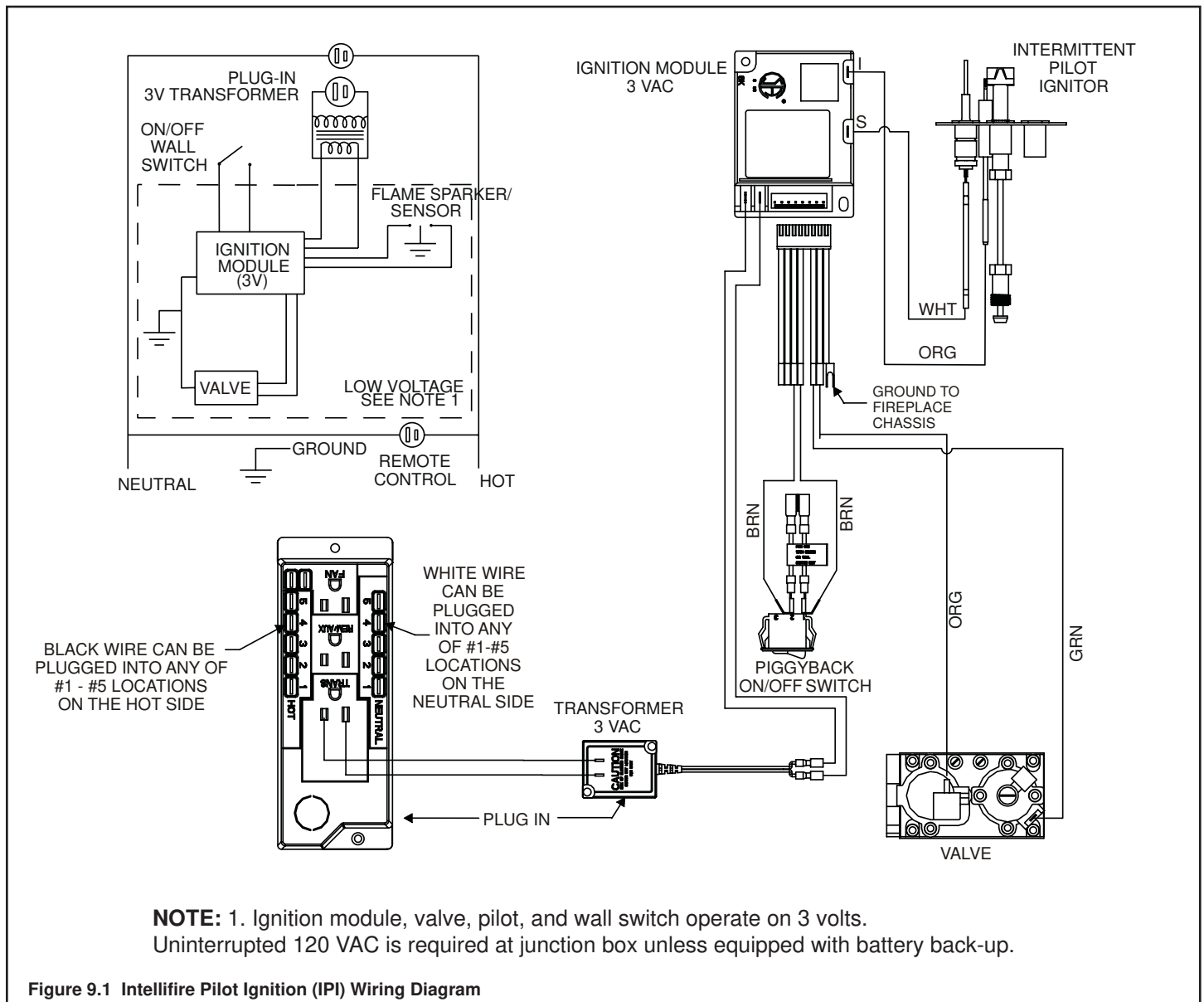


Figure 9.1 Intellifire Pilot Ignition (IPI) Wiring Diagram

D. Optional Accessories

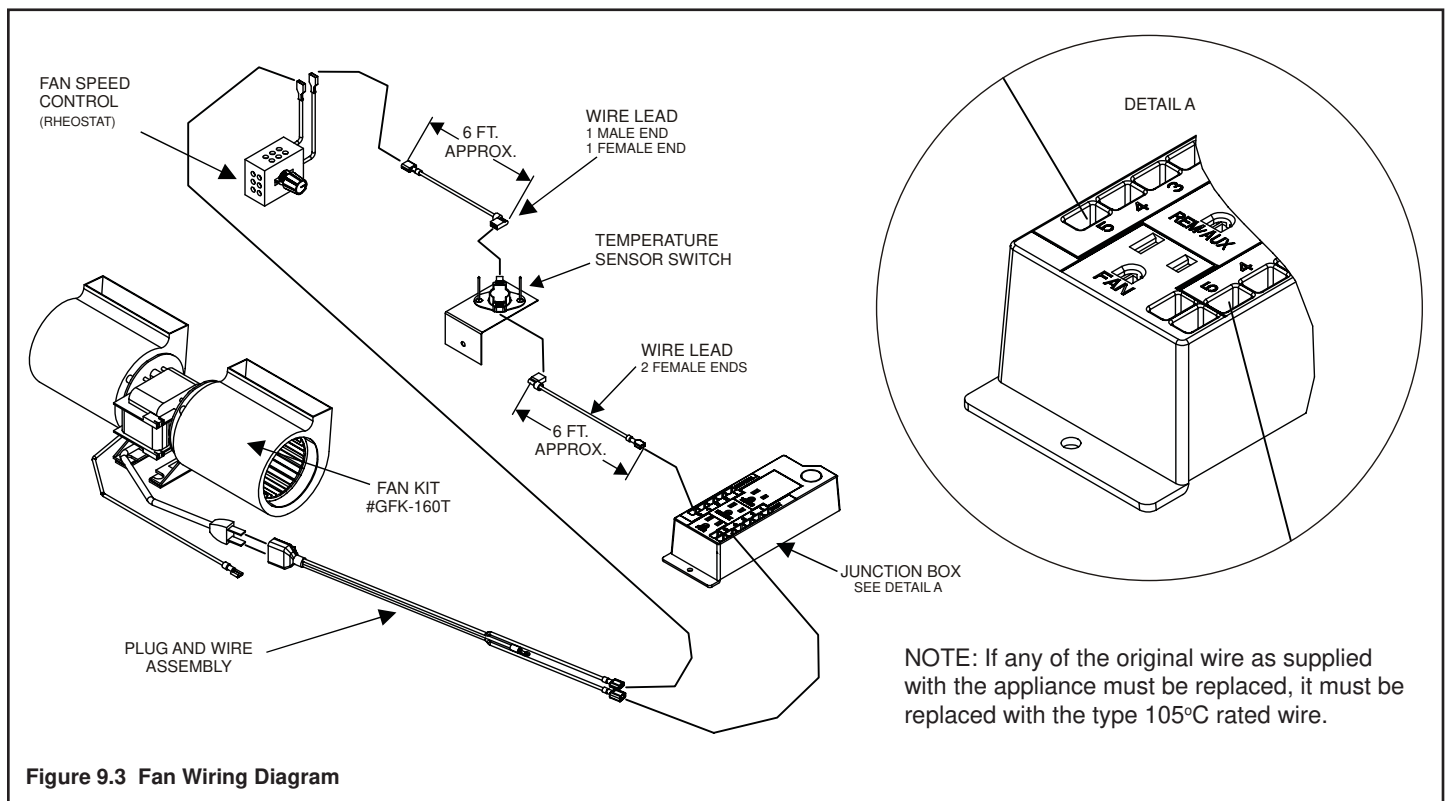
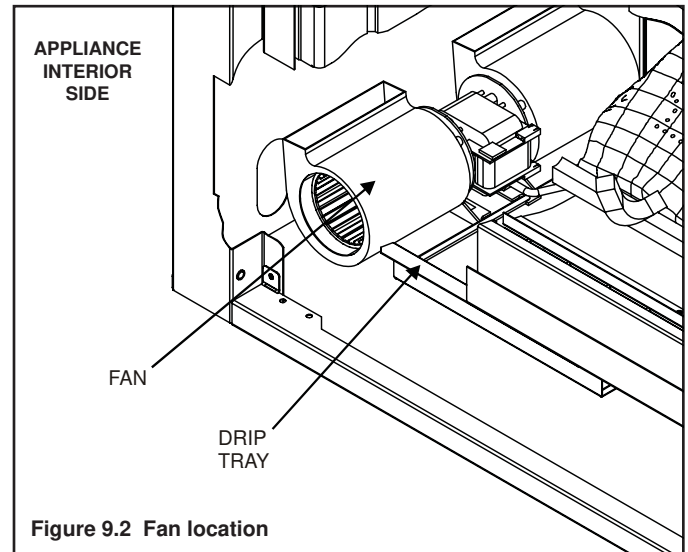
Optional fan and remote control kits require that 110-120 VAC be wired to the factory installed junction box before the appliance is permanently installed (see Figure 9.3).

Fan Installation

To provide best airflow, we recommend positioning fan on the left side (as viewed from appliance interior side) (see Figure 9.2). **NOTE:** It is recommended fan be installed prior to gas line installation.

Wall Switch

Position the wall switch in the desired position on a wall. Run a maximum of 25 feet (7.8 m) or less length of 18 A.W.G. minimum wire and connect it to the appliance ON/OFF switch pigtails.



E. Junction Box Installation

If the box is being wired from the **OUTSIDE** of the appliance:

- Install the Romex™ connector (not included with appliance) in the side wrap.
- Loosen two screws on the Romex connector, feed the necessary length of wire through the connector and tighten the screws.
- Make all necessary wire connections.

If the box is being wired from the **INSIDE** of the appliance:

- Remove the screw attaching the junction box to the outer shell, rotate the junction box inward to disengage it from the outer shell (see Figure 9.4).
- Pull the electrical wires from outside the appliance through this opening into the valve compartment.

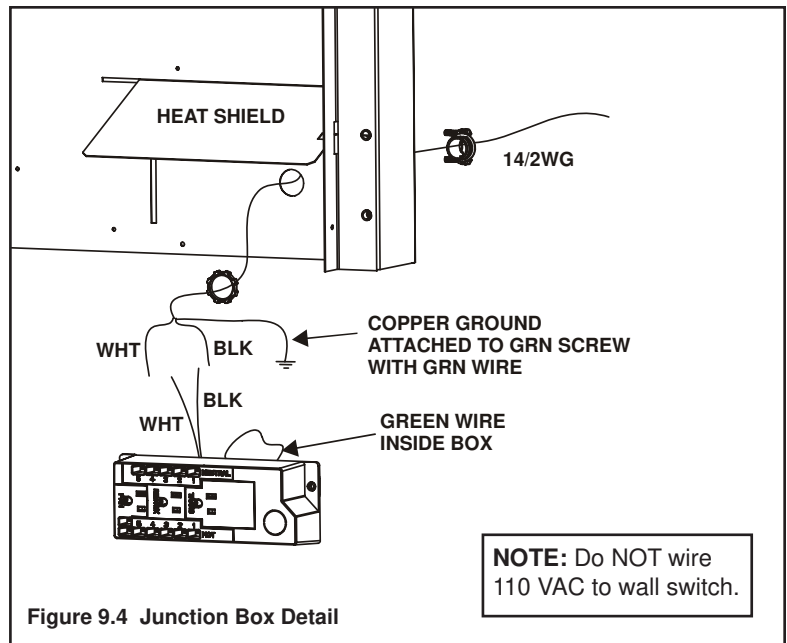


Figure 9.4 Junction Box Detail

- Loosen the two screws on the Romex connector, feed the necessary length of wire through the connector and tighten the screws.
- Make all necessary wire connections to the receptacle and assemble the receptacle and cover to the junction box.

F. Wall Switch Installation for Fan (Optional)

If the box is being wired to a wall mounted switch for use with a fan (See Figure 9.5):

- The power supply for the appliance must be brought into a switch box.
- The power can then be supplied from the switch box to the appliance using a minimum of 14-3 with ground wire.
- At the switch box connect the black (hot) wire and red (switch leg) wire to the wall switch as shown.
- At the appliance connect the black (hot), white (neutral) and green (ground) wires to the junction box as shown.
- Add a 1/4 in. insulated female connector to the red (switch leg) wire, route it through the knockout in the face of the junction box, and connect to the top fan switch connector (1/4 in. male) as shown.

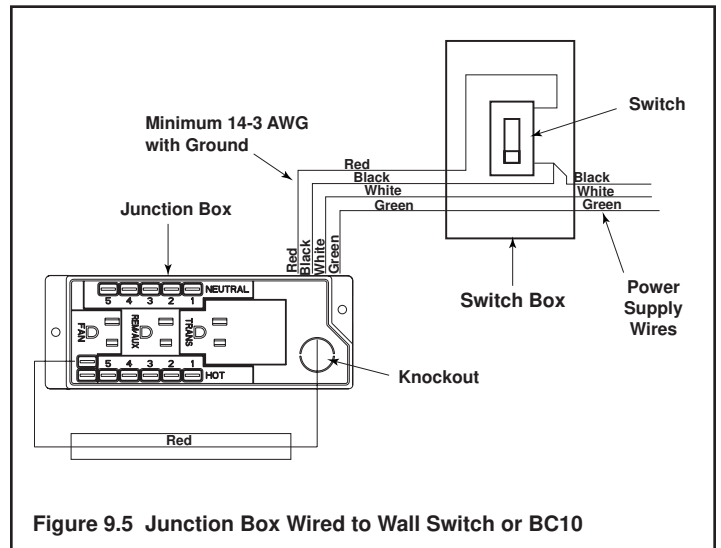
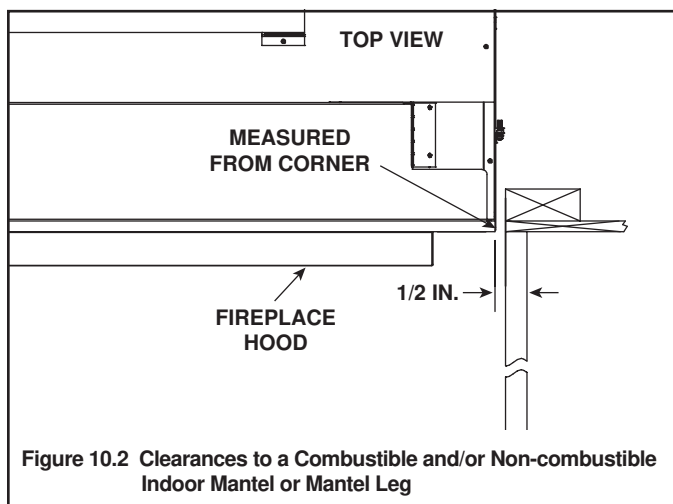
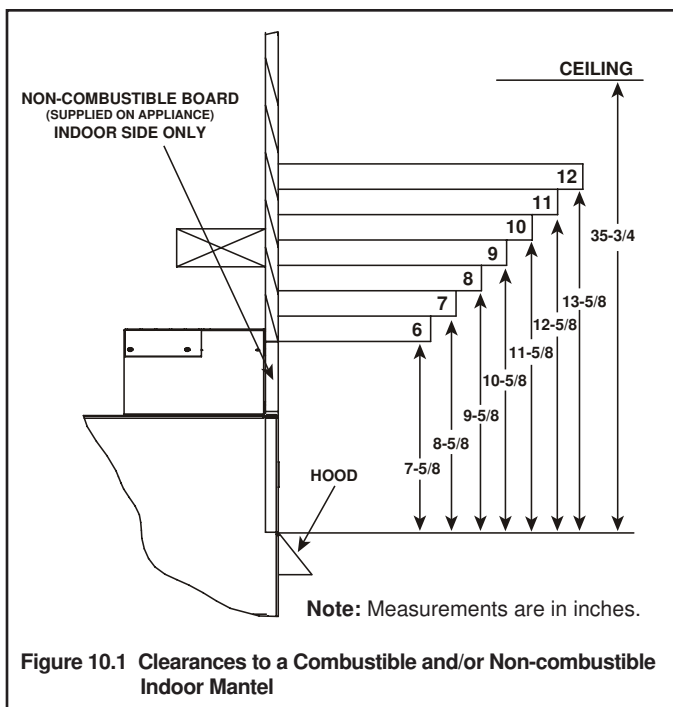


Figure 9.5 Junction Box Wired to Wall Switch or BC10

10 Finishing

A. Mantel and Wall Projections

WARNING! Risk of Fire! Comply with all minimum clearances as specified. Framing closer than the minimums listed must be constructed entirely of noncombustible materials (i.e., steel studs, concrete board, etc.) Failure to comply could cause fire.

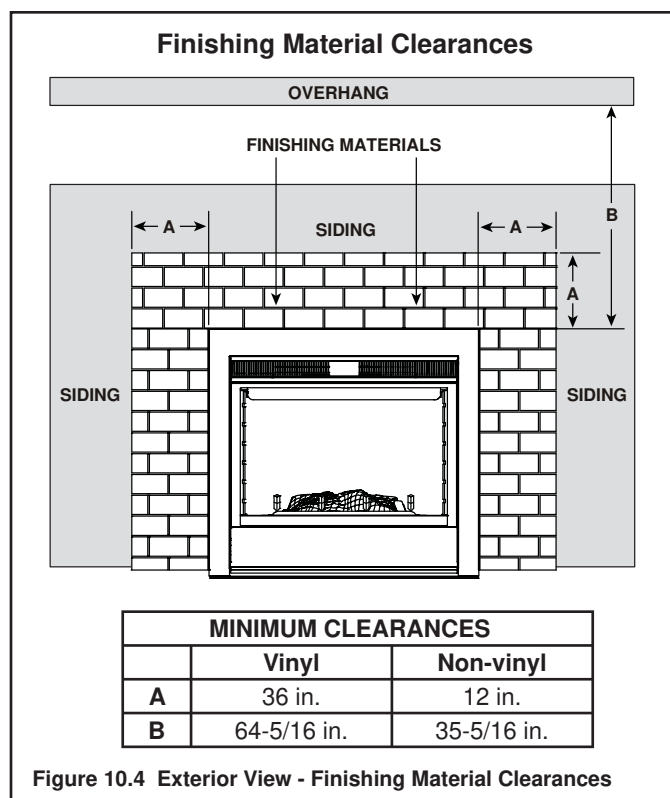
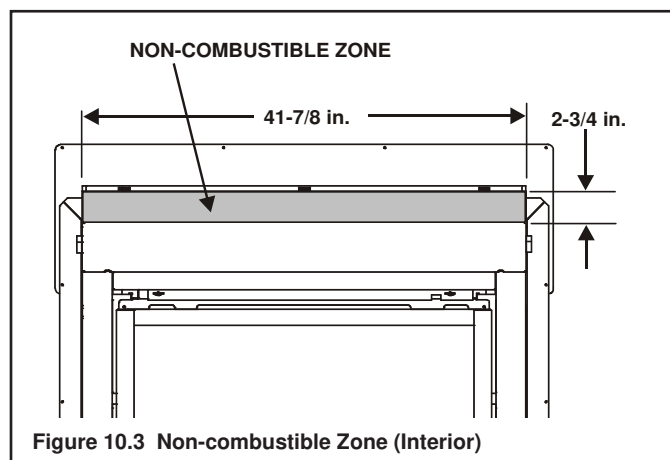



B. Facing Material


Inside Facing Material

- May install combustible materials up to specified clearances on top, front and sides of appliance.
- Seal joints between finished wall and appliance top and sides with 300° F (140° C) minimum sealant.
- Leave space so bottom grille can be lowered for trim door removal.

WARNING! Risk of Fire! DO NOT apply combustible materials beyond the minimum clearances. Comply with all minimum clearances to combustibles as specified in this manual. Overlapping materials could ignite and will interfere with proper operation of doors and louvers.









WARNING

Risk of Fire

- Non-combustible clearances must be maintained.
- Sheetrock, wood or other combustibles must NOT be used as sheathing or facing in the non-combustible zone.
- See **Sections 5 & 10** for proper clearances.
- See **Section 1** for combustible/non-combustible definitions.







WARNING


Fire Risk.


Finish all edges and fronts to clearances and specifications listed in manual.

- Black metal columns may be covered with non-combustible material only.
- Do NOT overlap combustible materials onto appliance front.
- Install combustible materials only up to specified clearances on top, front and side edges.
- Seal joints between the finished wall and appliance top and sides using only a 300° F minimum sealant.

May install non-combustible materials to cover gap between facing material and appliance (see Figure 10.5).




WARNING



Fire Risk.

Water Intrusion Risk.

Hood is required.

- Flashing and non-combustible sheathing must be installed before facing materials.
- Facing must be non-combustible and seal tight to fireplace front.

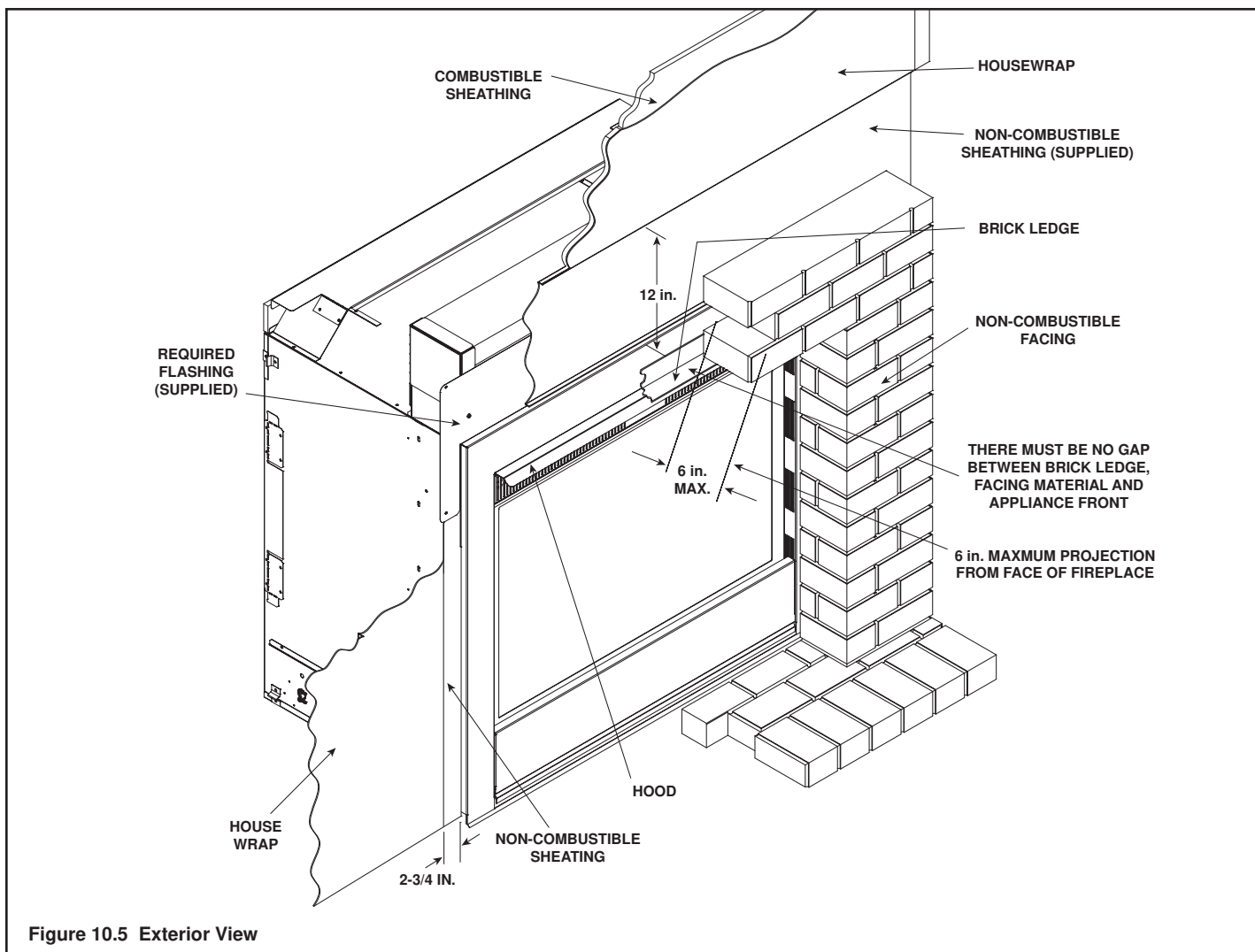


Figure 10.5 Exterior View

NOTE: All finishing materials on top of exterior sheathing must be non-combustible for a minimum of 12 inches above and on both sides of the exterior face of the appliance. This non-combustible finishing material can be up to a maximum of 6 inches thick (6 inches maximum horizontal overhang) to allow for brick and stone alcoves (see Figure 8.5).

NOTE: Combustible housewrap or building paper **MUST NOT** extend over the outside of non-combustible sheathing, and **MAY** extend over the flashing header behind non-combustible sheathing. Use high temp caulk to seal between combustible sheathing housewrap and non-combustible sheathing.

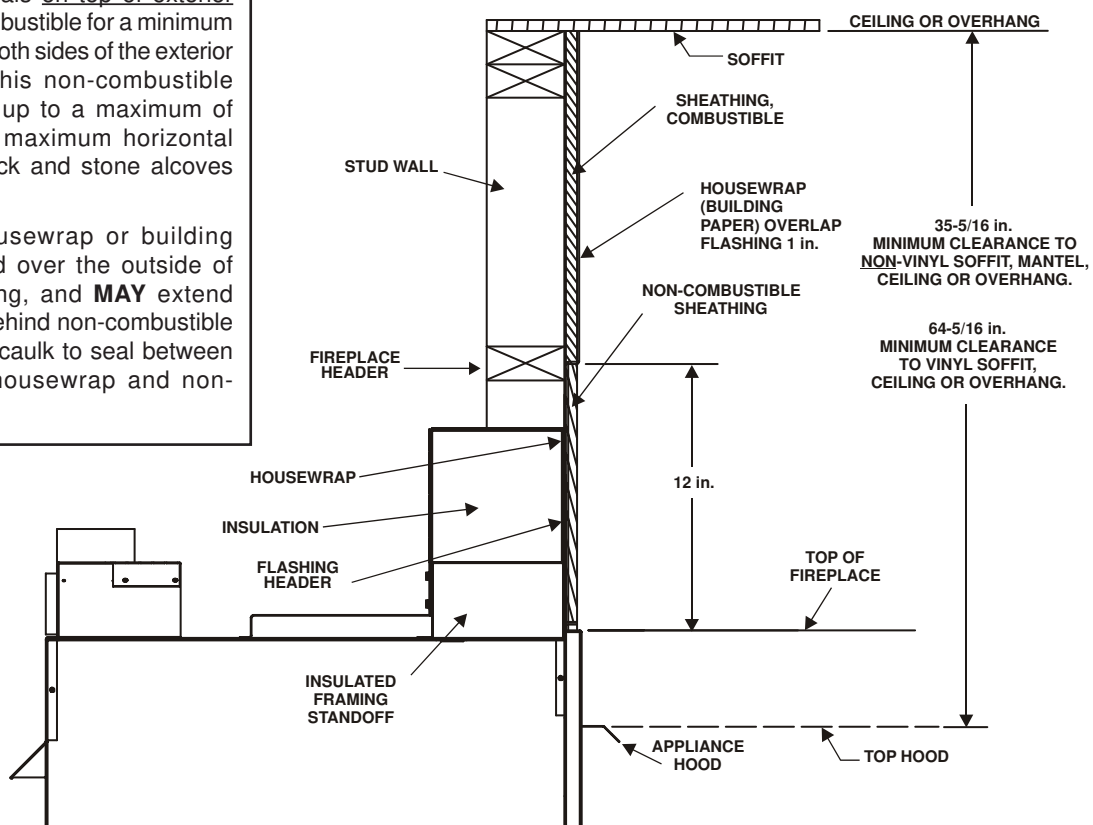


Figure 10.6 Exterior View

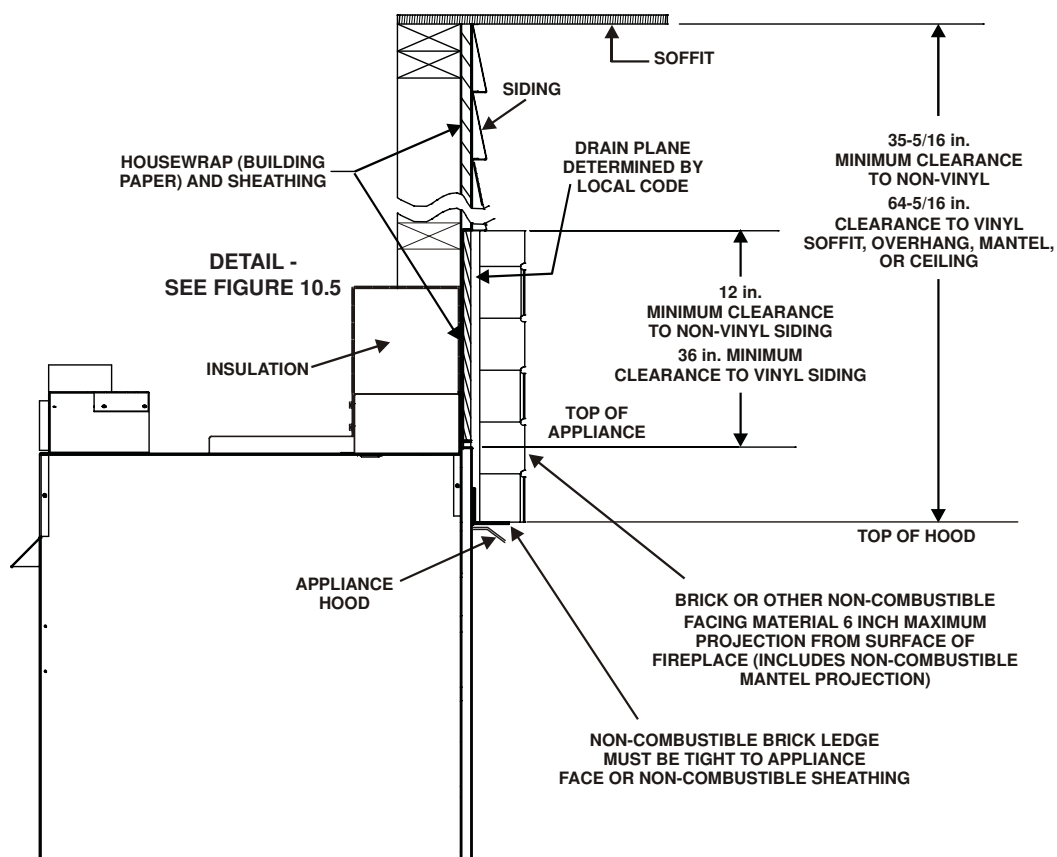


Figure 10.7 Exterior View with Non-combustible Facing Material

11 Appliance Setup

A. Remove Fixed Glass Assembly

See Section 11.G.

B. Remove the Shipping Materials

Remove shipping materials from inside or underneath the firebox.

C. Clean the Appliance

Clean/vacuum any sawdust that may have accumulated inside the firebox or underneath in the control cavity.

D. Accessories

Install approved accessories per instructions included with accessories. Contact your dealer for a list of approved accessories.

WARNING! Risk of Fire and Electric Shock! Use **ONLY** Hearth & Home Technologies-approved optional accessories with this appliance. Using non-listed accessories could result in a safety hazard and will void the warranty.

E. Lava Rock and Ember Placement

WARNING! Risk of Explosion! Follow ember placement instructions in manual. **DO NOT** place embers directly over burner ports. Replace ember material annually. Improperly placed embers interfere with proper burner operation.

Placing Lava Rock

Place lava rock on refractory support pan. Cover entire support pan surface (see Figure 11.1).



Figure 11.1 Placement of Lava Rock

Placing the Ember Material

Ember material is shipped with this gas appliance. To place the ember material:

- Embers **CANNOT** be placed directly over ports.
- When placing Glowing Embers® onto the burner care should be taken so that the ports are not covered. Place the dime-size ember pieces just in front of the port trail, but not on or in between the ports (see Figure 11.2). Failure to follow this procedure will likely cause lighting and sooting problems.



Figure 11.2 Placement of Ember Materials

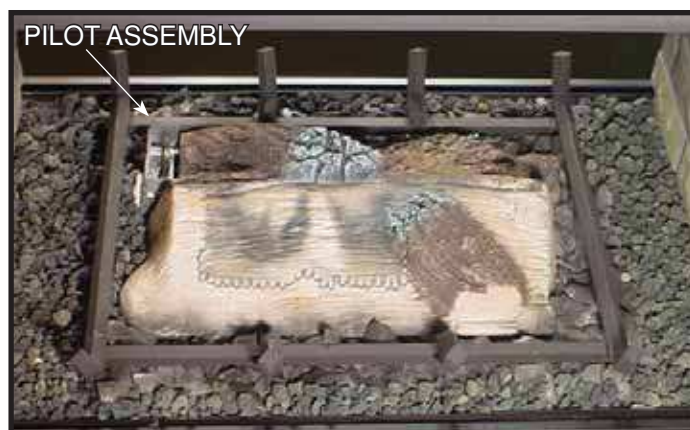
- Save the remaining ember materials for use during appliance servicing. The embers provided should be enough for 3 to 5 applications.

F. Install the Log Assembly

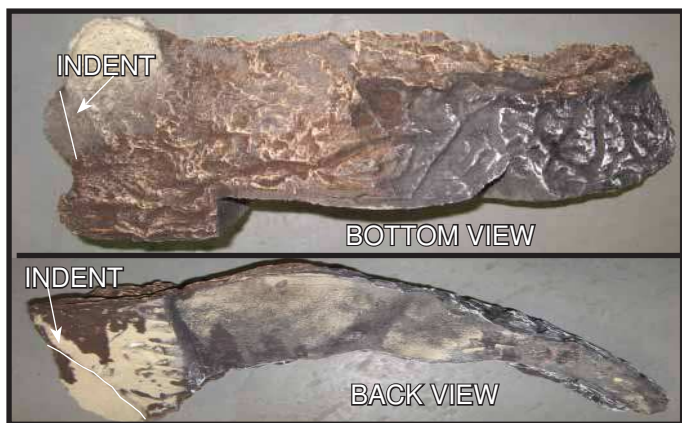
Log Set Assembly: LOGS-MSR



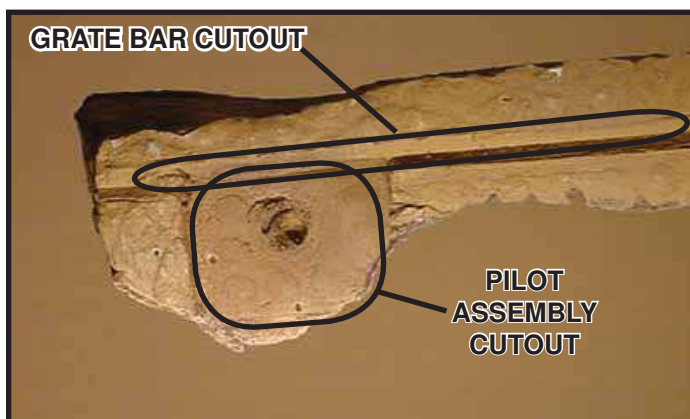
CAUTION: Logs are fragile! Carefully remove the logs from the packaging. Remove the cardboard support from inside of fireplace.



STEP 1. Before positioning the logs, refer to the installation manual for electric ember set-up and ember placement.



STEP 2. LOG #1 (SRV2005-701): Use the indent on the bottom side of the log to position the large end of the log onto the grate bar as shown. Slide the log back until the indent engages the grate tine as shown above. Position the thin end of log #1 one inch from port pattern as shown.

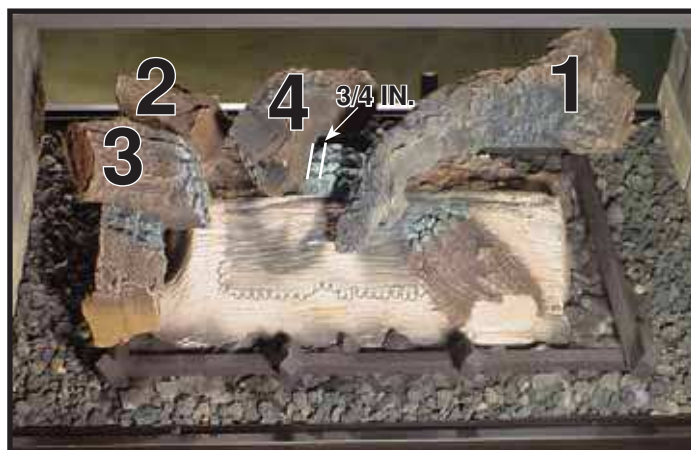
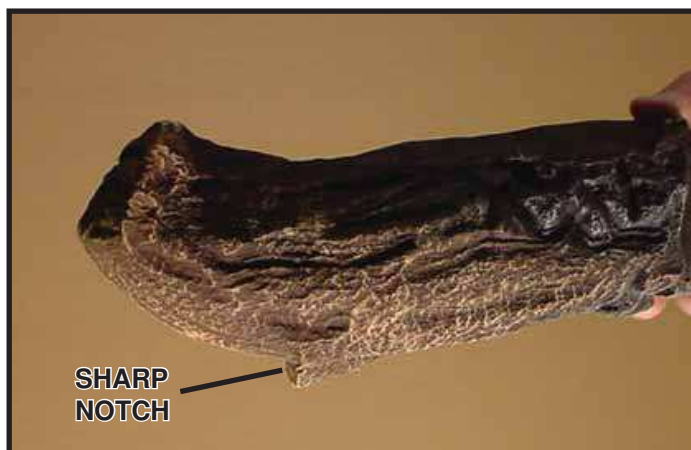


STEP 3. LOG #2 (SRV2005-700): Position log #2 on the left grate bar and the pilot assembly. Use the cut out notches on the log to position it as shown.

2005-937F



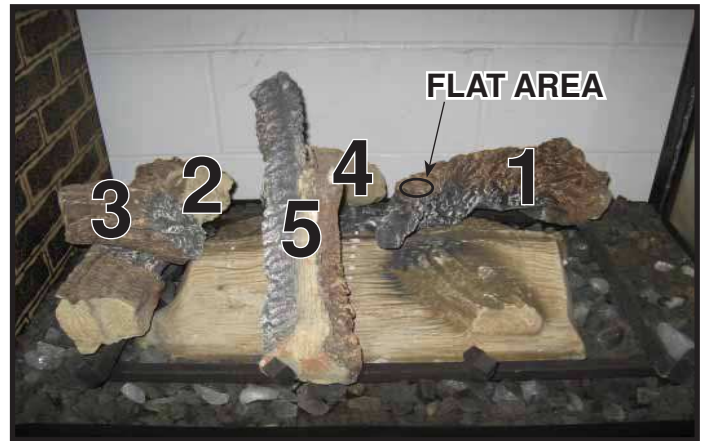
STEP 4. LOG #3 (SRV2005-702): Position log #3 as shown by leaning it against log #2 and resting the other end on the peak of the burner. **DO NOT** cover any port holes.



STEP 5. LOG #4 (SRV2005-703): Locate the sharp notch on log #4 against the grate tine as shown. The smooth cutout on the bottom of log #4 should rest on the burner surface. The side of Log #4 must be 3/4 inch from the nearest port hole on the right side of log #4. **DO NOT** cover any port holes.



STEP 6. LOG #5 (SRV2005-704): Using the sharp notch on the heavy end of log #5, align it on the grate tine and set it on the flat area of log #4 as shown.



STEP 7. LOG #6 (SRV2005-705): Locate the notch on log #6 and place it against the front right grate tine. Set the other end of the log so it rests on the flat area of log #1. The orientation of log #6 in relation to the grate tine is shown below.



Log Assembly Installed.

G. Fixed Glass Assembly

WARNING! Risk of Asphyxiation! Handle fixed glass assembly with care. Inspect the gasket to ensure it is undamaged and inspect the glass for cracks, chips or scratches.

- **DO NOT** strike, slam or scratch glass.
- **DO NOT** operate fireplace with glass removed, cracked, broken or scratched.
- Replace as a complete assembly.

Removing Fixed Glass Assembly

- Remove wing nuts and glass clips around glass door. Remove glass door from the appliance.

Replacing Fixed Glass Assembly

- Replace the glass door on the appliance.

H. Install Trim and/or Surround

- Install optional trim kits and/or surrounds using the instructions included with the accessory.
- Use non-combustible materials to cover the gap between the sheet rock and the appliance (when applicable to the model).

I. Air Shutter Setting

Air shutter settings should be adjusted by a qualified service technician at the time of installation. The air shutter is set at the factory for minimum vertical vent run. Adjust air shutter for longer vertical runs.

NOTICE: If sooting occurs, provide more air by opening the air shutter.

Air Shutter Settings

	NG	LP
Twilight-II-B	3/8 in.	Full Open

12 Troubleshooting

With proper installation, operation, and maintenance your gas appliance will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service technician in the diagnosis of a problem and the corrective action to be taken. This troubleshooting guide can only be used by a qualified service technician. Contact your dealer to arrange a service call by a qualified service technician.

A. Intellifire Ignition System

Symptom	Possible Cause	Corrective Action
1. Pilot won't light. The ignitor/module makes noise, but no spark.	A. Incorrect wiring.	Verify "S" wire (white) for sensor and "I" wire (orange) for ignitor are connected to correct terminals on module and pilot assembly.
	B. Loose connections or electrical shorts in the wiring.	Verify no loose connections or electrical shorts in wiring from module to pilot assembly. Verify connections underneath pilot assembly are tight; also verify connections are not grounding out to metal chassis, pilot burner, pilot enclosure, mesh screen if present, or any other metal object.
	C. Ignitor gap is too large.	Verify gap of igniter to right side of pilot hood. The gap should be approximately .17 in. or 1/8 in. (3 mm).
	D. Module.	Turn ON/OFF rocker switch or wall switch to OFF position. Remove ignitor wire "I" from module. Place a grounded wire about 3/16 in. (5 mm) away from "I" terminal on module. Place ON/OFF rocker switch or wall switch in ON position. If there is no spark at "I" terminal module must be replaced. If there is a spark at "I" terminal, module is fine. Inspect pilot assembly for shorted sparker wire or cracked insulator around electrode. Replace pilot if necessary.
2. Pilot won't light, there is no noise or spark.	A. No power or transformer installed incorrectly.	Verify that transformer is installed and plugged into module. Check voltage of transformer under load at spade connection on module with ON/OFF switch in ON position. Acceptable readings of a good transformer are between 3.2 and 2.8 volts AC.
	B. A shorted or loose connection in wiring configuration or wiring harness.	Remove and reinstall the wiring harness that plugs into module. Verify there is a tight fit. Verify pilot assembly wiring to module. Remove and verify continuity of each wire in wiring harness. Replace any damaged components.
	C. Improper wall switch wiring.	Verify that 110/VAC power is "ON" to junction box.
	D. Module not grounded.	Verify black ground wire from module wire harness is grounded to metal chassis of appliance.
	E. Module.	Turn ON/OFF rocker switch or wall switch to OFF position. Remove ignitor wire "I" from module. Place ON/OFF rocker switch or wall switch in ON position. If there is no spark at "I" terminal module must be replaced. If there is a spark at "I" terminal, module is fine. Inspect pilot assembly for shorted sparker wire or cracked insulator around electrode.
3. Pilot sparks, but Pilot will not light.	A. Gas supply.	Verify that incoming gas line ball valve is "open". Verify that inlet pressure reading is within acceptable limits.
	B. Ignitor gap is too large.	Verify gap of igniter to right side of pilot hood. The gap should be approximately .17 in. or 1/8 in. (3 mm).
	C. Module is not grounded.	Verify module is securely grounded to metal chassis of appliance.
	D. Module voltage output / Valve/Pilot solenoid ohms readings.	Verify battery voltage is at least 2.7 volts. Replace batteries if voltage is below 2.7.

Intellifire Ignition System - (continued)

Symptom	Possible Cause	Corrective Action
4. Pilot lights but continues to spark, and main burner will not ignite. (If the pilot continues to spark after the pilot flame has been lit, flame rectification has not occurred.)	A. A shorted or loose connection in flame sensing rod.	Verify all connections to wiring diagram in manual. Verify connections underneath pilot assembly are tight. Verify connections are not grounding out to metal chassis, pilot burner, pilot enclosure or screen if present, or any other metal object.
	B. Poor flame rectification or contaminated flame sensing rod.	With fixed glass assembly in place, verify that flame is engulfing flame sensing rod on left side of pilot hood. Flame sensing rod should glow shortly after ignition. Verify correct pilot orifice is installed and gas inlet is set to pressure specifications. Clean flame sensing rod with emery cloth to remove any contaminants that may have accumulated on flame sensing rod.
	C. Module is not grounded.	Verify module is securely grounded to metal chassis of appliance. Verify that wire harness is firmly connected to the module.
	D. Damaged pilot assembly or contaminated flame sensing rod.	Verify that ceramic insulator around the flame sensing rod is not cracked, damaged, or loose. Verify connection from flame sensing rod to white sensor wire. Clean flame sensing rod with emery cloth to remove any contaminants that may have accumulated on flame sensing rod. Verify continuity with a multimeter with ohms set at lowest range. Replace pilot if any damage is detected.
	E. Module.	Turn ON/OFF rocker switch or wall switch to OFF position. Remove ignitor wire "I" from module. Place ON/OFF rocker switch or wall switch in ON position. If there is no spark at "I" terminal module must be replaced. If there is a spark at "I" terminal, module is fine.

13 Reference Materials

A. Appliance Dimension Diagram

Dimensions are actual appliance dimensions. Use for reference only. For framing dimensions and clearances refer to Section 5.

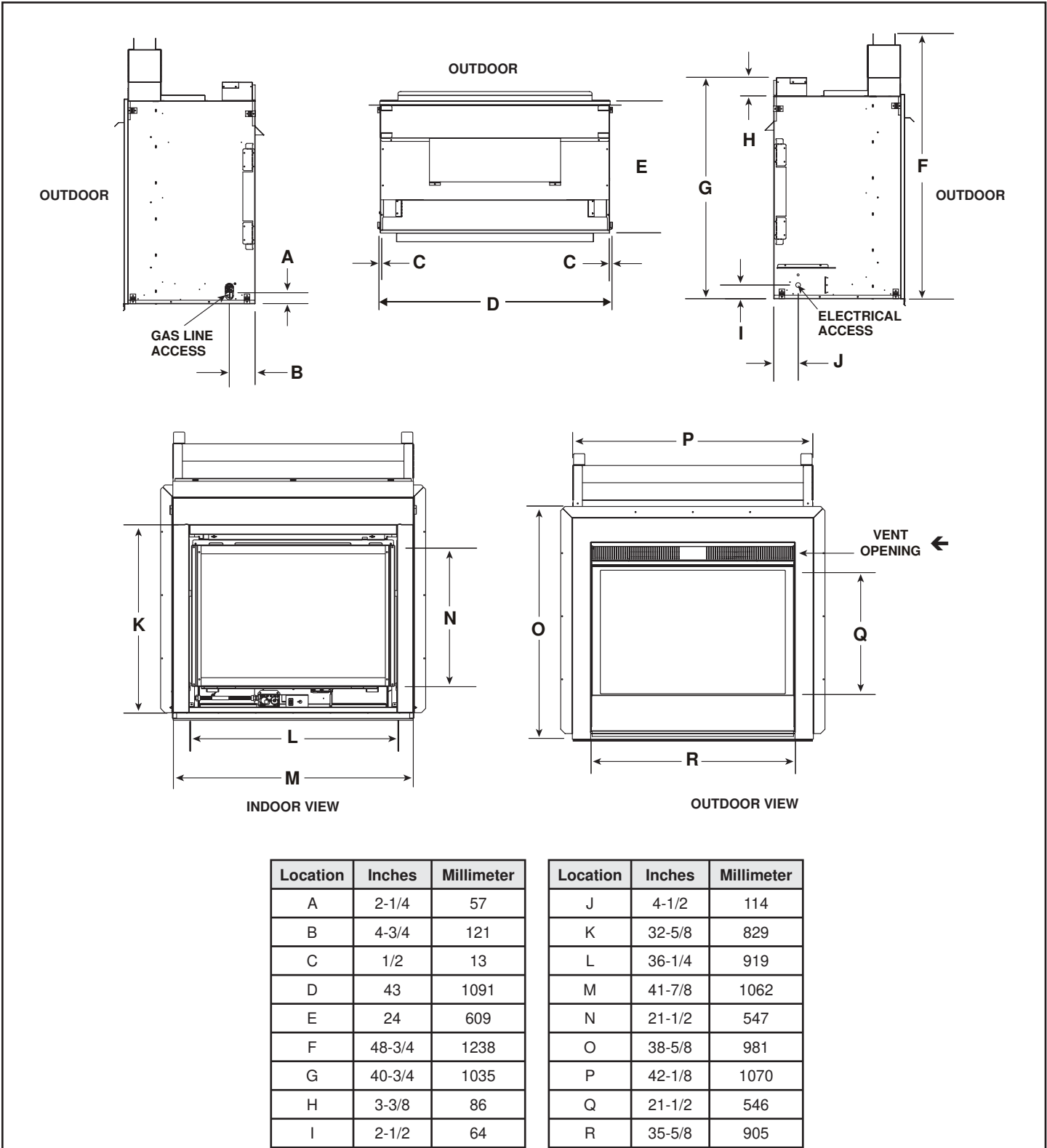
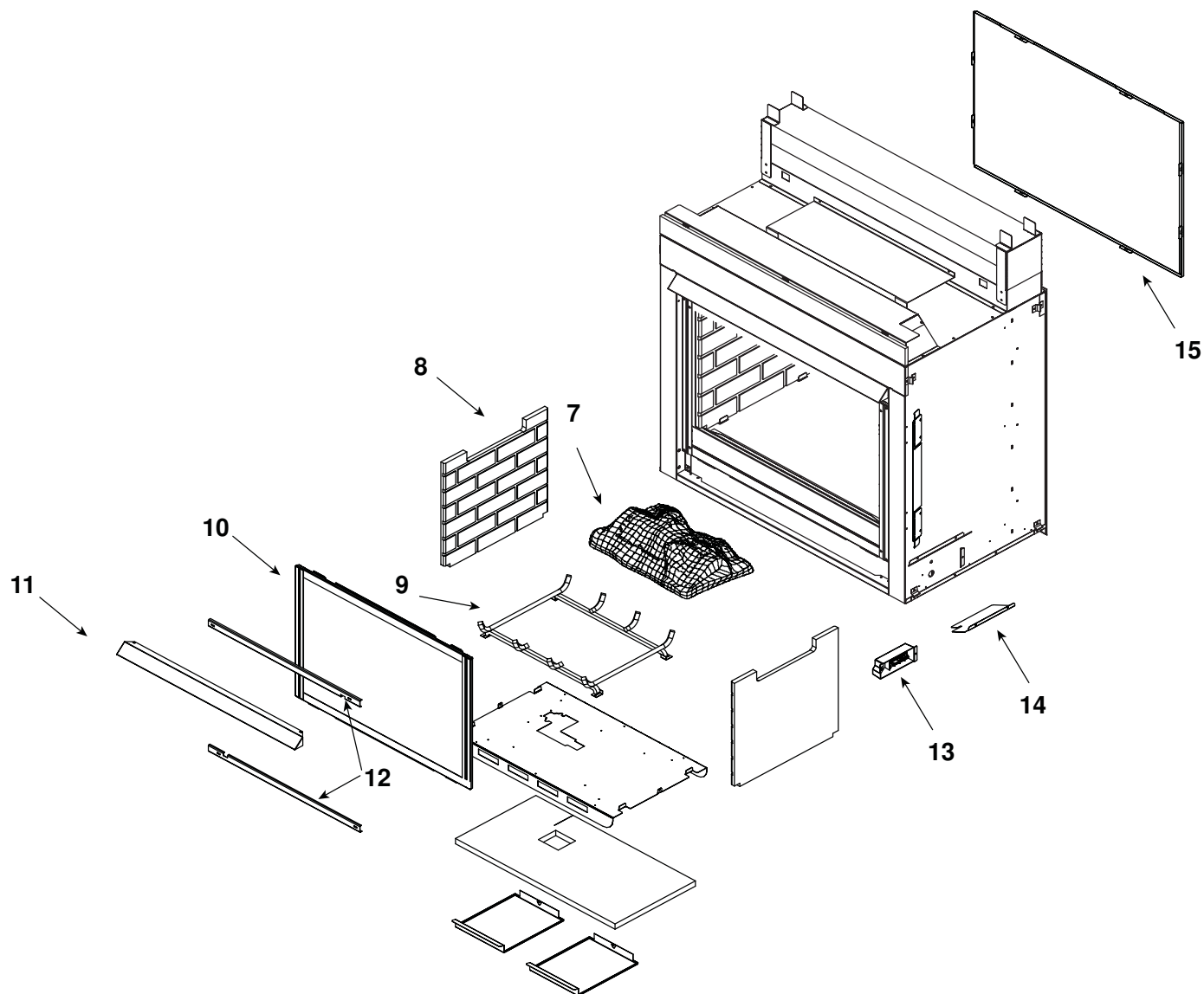
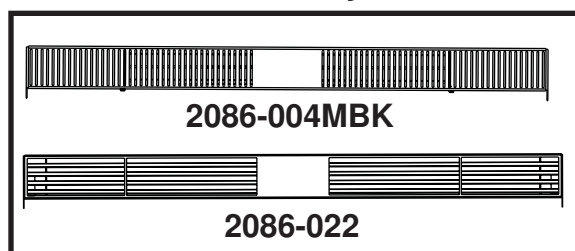


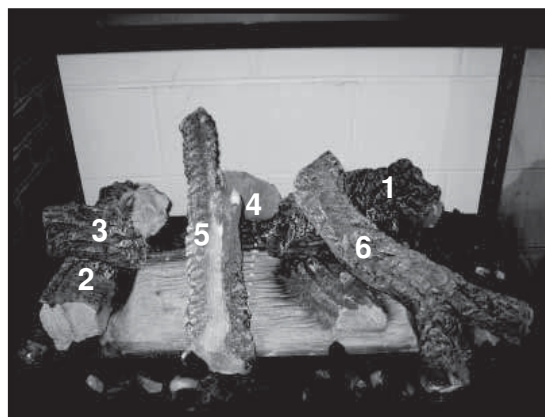
Figure 13.1 Appliance Dimensions



Wind Screen Assembly



Log Set Assembly



Part number list on following page.

Service Parts

Twilight-II-B

IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.

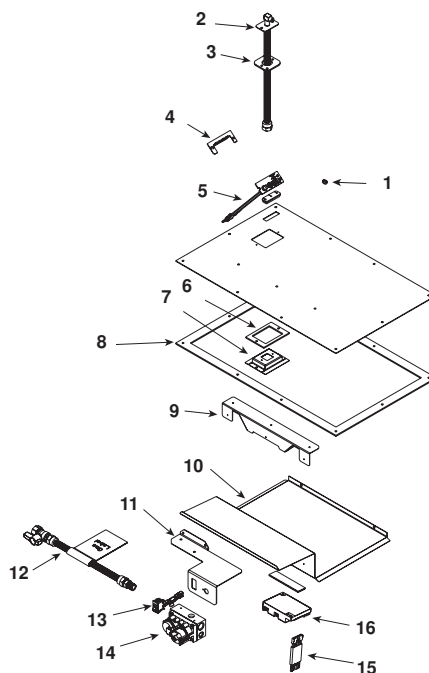


**Stocked
in Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	Log Set Assembly /Burner Assembly	Pre SN #0021355692	SRV2087-004	Y
	Log Set Assembly	Post SN # 0021355692	LOGS-MSR	Y
1	Log 1		SRV2005-701	
2	Log 2		SRV2005-700	
3	Log 3		SRV2005-702	
4	Log 4		SRV2005-703	
5	Log 5		SRV2005-704	
6	Log 6		SRV2077-701	
7	Log Set Assembly /Burner Assembly	Pre SN #0021355692	SRV2087-004	Y
	Burner Assembly	Post SN # 0021355692	2087-004	Y
8	Refractory, Side		SRV2005-730	
9	Grate Assembly		2005-012	
10	Indoor Glass Assembly		GLA-6TROC	Y
11	Hood - Interior Side		SRV60-143-BK	
12	Glass Clip		2087-121	
13	Junction Box		4021-013	
14	Junction Box Shield		2087-149	
15	Outdoor Glass Assembly	All Others	GLA-OUTDOOR2	Y
		UPGRADE2-TWI	2086-024	Y
	Glass Latch Assembly		386-122A	Y
	Lava Rock Bag		2005-790	
	Mineral Wool		050-721	
	Non-Combustible Boards (set only)		2108-030	
	Pilot Tube		446-301	Y
	Touch Up Paint	Exterior	SRV2087-999-A12	
		Interior	TUP-GBK-12	
	Trim Kit, Black		TL-TRIM-BK	
	Cover Panel	UPGRADE2-TWII	2086-149	
		All Others	2086-114MBK	
	Deflector Panel		2086-136MBK	
	Flashing		2087-159	
	Hood-Exterior Side		2086-113MBK	
	Outdoor Surround		2086-130MBK	
	Wind Screen Assembly	See service parts diagram		
	Conversion Kit NG		NGK-TWI	Y
	Conversion Kit LP		LPK-TWI	Y
	Pilot Orifice NG		593-528	Y
	Pilot Orifice LP		593-527	Y
	Regulator NG		NGK-DXF	Y
	Regulator LP		LPK-DXF	Y

Additional service part numbers appear on following page.

IPI Valve Assembly



IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.



Stocked
in Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Burner Orifice (NG) (#32C)		582-832	Y
	Burner Orifice (LP) (#50C)		582-850	Y
2	Flexible Gas Connector		383-302A	Y
3	Burner Neck Gasket		438-407	
4	Bracket, Pilot Support Assembly		385-120	
5	Pilot Assembly NG		2090-012	Y
	Pilot Assembly LP		2090-013	Y
6	Orifice Bracket Gasket		2087-110	
8	Valve Plate Gasket		2087-112	
7	Orifice Bracket		2087-109	
9	Valve L Bracket		674-168	
10	Valve Bracket		2087-117	
11	Valve Bracket		2087-116	
12	Flex Ball Valve Assembly		302-320A	Y
13	ON/OFF Rocker Switch		060-521A	Y
14	Valve NG		593-500	Y
	Valve LP		593-501	Y
15	Wire Assembly		593-590A	Y
16	Control Module		593-592	Y
	Battery Pack		593-594A	Y
	3V Adaptor		593-593A	Y

C. Contact Information



Please contact your Hearth & Home Technologies dealer with any questions or concerns.
For the location of your nearest Hearth & Home Technologies dealer, please visit www.hearthnhome.com.

Hearth & Home Technologies Inc.
7571 215th St, Lakeville, MN 55044

- NOTES -

NOTICE



DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.



This product may be covered by one or more of the following patents: (United States) 4593510, 4686807, 4766876, 4793322, 4811534, 5000162, 5016609, 5076254, 5113843, 5191877, 5218953, 5263471, 5328356, 5341794, 5347983, 5429495, 5452708, 5542407, 5601073, 5613487, 5647340, 5688568, 5762062, 5775408, 5890485, 5931661, 5941237, 5947112, 5996575, 6006743, 6019099, 6048195, 6053165, 6145502, 6170481, 6237588, 6296474, 6374822, 6413079, 6439226, 6484712, 6543698, 6550687, 6601579, 6672860, 6688302B2, 6715724B2, 6729551, 6736133, 6748940, 6748942, 6769426, 6774802, 6796302, 6840261, 6848441, 6863064, 6866205, 6869278, 6875012, 6880275, 6908039, 6919884, D320652, D445174, D462436; (Canada) 1297749, 2195264, 2225408, 2313972; (Australia) 780250, 780403, 1418504 or other U.S. and foreign patents pending.

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