



# GREENBRIAR

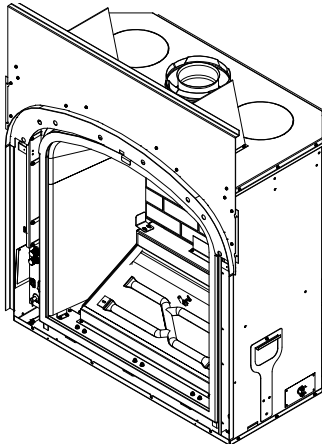
OPEN HEARTH ARCHED GAS DIRECT VENT FIREPLACE

Model M-50

## INSTALLATION & OPERATING INSTRUCTIONS MANUAL

**NATIONAL FIREPLACE INSTITUTE**  
**NFI**  
**CERTIFIED**  
[www.nficertified.org](http://www.nficertified.org)

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.



DOCUMENT NO. M50-0715

**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**

- Open windows.
- Do not touch electrical switches.
- Do not try to light any appliance.
- Extinguish any open flame.
- Do not use the 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.

In the Commonwealth of Massachusetts:

- Installation must be performed by a licensed plumber or gas fitter;
- A CO detector shall be installed in the room where the appliance is installed.

**WARNING**

**If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.**

**WARNING**

Do NOT use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control, which has been under water.

**WARNING:** Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult a qualified installer, service agency or the gas supplier.

**FOR YOUR SAFETY**

A qualified installer, service agency, or the gas supplier must perform installation and service.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

**WARNING**

Do not operate this appliance with the glass removed, cracked or broken. A licensed or qualified person should do replacement of glass.

**WARNING**

Mendota gas fireplaces are heat producing appliances. Do not burn wood, paper or other materials in this fireplace. This fireplace is designed as a supplement heat source. It is advisable to have an alternative primary heat supply.

The installation must conform with local codes or, in the absence of local codes, with the current National Fuel Gas Code, ANSI Z223.1, or the current Natural Gas and Propane Installation Code, CSA B149.1

**CAUTION**

THESE INSTRUCTIONS ARE TO REMAIN WITH THE HOMEOWNER.

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## **SAFETY AND WARNING INFORMATION**

**READ and UNDERSTAND** all instructions carefully before starting the appliance. **FAILURE TO FOLLOW** these instructions may result in a possible fire hazard and will void the warranty.

Any safety screen or guard removed for servicing must be replaced before operating this appliance.

**DO NOT USE** this appliance if any part has been under water. Immediately **CALL** a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control, which has been underwater.

**THIS UNIT IS NOT FOR USE WITH SOLID FUEL.**

Installation and repair should be **PERFORMED** by a qualified service person. The appliance and venting system should be **INSPECTED** before initial use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding, material, etc. It is **IMPERATIVE** that the unit's control compartment, burners, and circulating air passageways **ARE KEPT CLEAN** to provide for adequate combustion and ventilation air.

Always **KEEP** the appliance clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

**NEVER OBSTRUCT** the flow of combustion and ventilation air. Keep the front of the appliance **CLEAR** of all obstacles and materials for servicing and proper operation.

Due to high temperature, the appliance should be **LOCATED** out of traffic areas and away from furniture and draperies. Clothing or flammable material **SHOULD NOT BE PLACED** on or near the appliance.

Children and adults should be **ALERTED** to the hazards of high surface temperature and should **STAY AWAY** to avoid burns or clothing ignition. Young children should be **CAREFULLY SUPERVISED** when they are in the same room as the appliance.

These units **MUST** use one of the vent systems described in the Installing Your Fireplace section of the Installers Guide. **NO OTHER** vent systems or components **MAY BE USED**.

This gas fireplace and vent assembly **MUST** be vented directly to the outside and **MUST NEVER** be attached to a chimney serving a separate solid fuel-burning appliance. Each gas appliance **MUST USE** a separate vent system. Common vent systems are **PROHIBITED**.

If the vent-air intake system is disassembled for any reason, reinstall per the instructions provided for the initial installation.

The vent system assembly for this fireplace must be periodically examined by a qualified service agency.

**INSPECT** the external vent cap on regular basis to make sure that no debris is interfering with the airflow. The flow of combustion and ventilation air not to be obstructed

**DO NOT** abuse the glass door by striking the glass, slamming the door shut, etc.

Use only authorized parts and materials obtained from Johnson Gas Appliance Company when replacing defective or damaged glass.

**DO NOT USE** abrasive cleaners on the glass door assembly. **DO NOT ATTEMPT** to clean the glass door when it is hot.

Turn off the gas before servicing this appliance. It is recommended that a qualified service technician perform an appliance check-up at the beginning of each heating season.

**DO NOT** place furniture or any other combustible household objects within 36 inches of the fireplace front.

## **Specific Requirements for the Common Wealth of Massachusetts**

The information in this section applies to all installations performed in the Common Wealth of Massachusetts only.

- a) 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 and where the side wall exhaust vent termination is less than seven (7) feet above grade, the following requirements shall be satisfied:
1. If there is no carbon monoxide detector with an alarm already installed in compliance with the most current edition of NFPA 720, NFPA 70 and the Massachusetts State Building code in the residential unit served by the side wall horizontally vented gas fueled equipment, a battery operated carbon monoxide detector with an alarm shall be installed in compliance with the most current edition of NFPA 720, NFPA 70 and the Massachusetts State Building Code.
  2. In addition to the above requirements, if there is not one already present, a carbon monoxide detector with an alarm and a battery backup shall be installed and located in accordance with the installation requirements supplied with the detector on the floor level where the gas equipment is installed. The carbon monoxide detector with an alarm shall comply with 527 CMR, ANSI/UL 2034 Standards or CSA 6.19 and the most current edition of NFPA 720. In the event that the requirements of this subdivision cannot be met at the time of the completion of the installation of the equipment, the installer shall have a period of thirty (30) days to comply with this requirement; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed in compliance with the most current edition of NFPA 720, NFPA 70 and the Massachusetts State Building Code. In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the carbon monoxide detector may be installed on the next adjacent habitable floor level. Such detector may be a battery operated carbon monoxide detector with an alarm and shall be installed in compliance with the most current edition of NFPA 720, NFPA 70 and the Massachusetts State Building Code.
  3. 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) inch in size, "GAS VENT DIRECTLY BELOW, KEEP CLEAR OF ALL OBSTRUCTIONS"
  4. A final inspection by the state or local gas inspector of the side wall horizontally vented equipment shall not be performed until proof is provided that the state or local electrical inspector having jurisdiction has granted a permit for installation of carbon monoxide detectors and alarms as required above.
- (b) EXEMPTIONS: The following equipment is exempt from 248 CMR 5.08(2) (a) 1 through 4:
1. 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
  2. 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.
- (c) 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 for installation of the equipment and the venting system shall include:
1. A complete parts list for the venting system design or venting system; and
  2. Detailed instructions for the installation of the venting system design or the venting system components.
- (d) 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 shall be satisfied:
1. The referenced "special venting system" instructions shall be included with the appliance or equipment installation instructions; and
  2. 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.
- (e) 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.

## SPECIFICATIONS

### MODEL M-50

**High Fire    - Adjustable to -    Low Fire**

BTUH. (MODEL M-50)	NAT. GAS	50,000	15,800
BTUH. (MODEL M-50)	LP GAS	50,000	16,200



**NOTE: LPG CONVERSION KIT, #HA-52-00145, MUST BE PURCHASED SEPARATELY TO CONVERT TO BURN LPG IN THIS FIREPLACE.**

MAIN ORIFICE [0-2000ft (610 m)]: REAR BURNER: #43 NAT. GAS [#54 L.P. GAS] – FRONT BURNER: #35 NAT. [#51 LP]  
OVERALL EFFICIENCY: ..... EXCEEDS D.O.E. EFFICIENCY REQUIREMENTS (A.F.U.E.) FOR DIRECT VENT WALL HEATERS.

CO-AXIAL DIRECT VENT FLUE: ..... 5" INNER, 8" OUTER

TOTAL WEIGHT: ..... 275 POUNDS

SAFETY: ..... AGA CERTIFIED PILOT GENERATOR, MILLIVOLT SYSTEM  
ACTIVATED WITH SWITCH, THERMOSTAT OR REMOTE CONTROL.

#### **APPLIANCE CERTIFICATION AND TESTING AGENCY**

INTERTEK TESTING SERVICES, ICBO#AA647-4

Certified under ANSI Z21.88 (2002) • CSA 2-33 (2002) "Vented Gas Fireplace Heaters" not for use with solid fuel. Approved for bedroom installations and mobile homes. UL307B approved for "mobile homes, after first sale of home, not for recreational vehicles."

**GAS REQUIREMENTS** ..... **SUPPLY PRESSURE:**      GAS INLET: 1/2" N.P.T.  
NAT. GAS:      **7" W.C.** (5" W.C. MIN., 11" W.C. MAX.)  
L.P. GAS:      **11.0" W.C.** (11" W.C. MIN., 13" W.C. MAX.)

**ELECTRICAL REQUIREMENTS** ..... 115 VOLT, LESS THAN 1.5 amps (for blower operation only)

**APPROVED VENT SYSTEMS** ..... DURAVENT

#### MINIMUM CLEARANCES TO COMBUSTIBLE CONSTRUCTION

UNIT TO FLOOR	0in. (0mm)	GLASS EDGE TO ADJACENT SIDEWALL	18in. (457 mm)
UNIT TO ENCLOSURE SIDEWALL	0in. (0mm)	VENT PIPE TOP TO COMBUSTIBLES	2in. (51mm)
UNIT TO ENCLOSURE BACK WALL	1in. (25mm)	VENT PIPE SIDES TO COMBUSTIBLES	1in. (25mm)
UNIT BOTTOM TO ENCLOSURE CEILING	47-9/16in. (121cm)	VENT PIPE BOTTOM TO COMBUSTIBLES	1in. (25mm)
UNIT BOTTOM TO ROOM CEILING	72 in. (1829 mm)		
8" MANTLE ABOVE DISCHARGE AIR OPENING	15in. (368 mm)		

THIS FIREPLACE INCLUDES A SEALED COMBUSTION SYSTEM, 7-PIECE CERAMIC FIBER LOG SET & COALS, FIREBRICK LINED FIREBOX, NEO-CERAM GLASS, PIEZO IGNITER, DUAL BLOWERS, AGA CERTIFIED SAFETY SYSTEM, and WALL THERMOSTAT.

OPTIONS: BLACK, VINTAGE IRON, SWEDISH NICKEL, ANTIQUE GOLD, ANTIQUE COPPER SURROUND, FILIGREE, STEEL DOORS AND CAST IRON DECORATIVE FRONT.

**CAUTION**  
**THESE INSTRUCTIONS ARE TO REMAIN WITH THE HOMEOWNER.**

**NOTE:** This installation must conform to 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 Natural Gas and Propane Installation Code, **CSA B149 Installation Codes** in Canada.

This appliance may be installed in an aftermarket, permanently located, manufactured home (USA only) or mobile home, where not prohibited by local codes.

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

**WARNING:** Do not operate this appliance with the glass removed, cracked or broken. A licensed or qualified person should do replacement of glass.

**HIGH ALTITUDE INSTALLATION INFORMATION:** Prior to installing at altitudes higher than 7500, please contact the Mendota technical service department for specific venting requirements and venting restrictions.

## **CONGRATULATIONS**

You are the owner of a world-class heat producing gas direct vent sealed combustion fireplace.

This elegant, highly efficient Fireplace will be a constant source of comfort and fascination. It will be the focal point of beauty and interest in your home.

The Mendota Gas Fireplace is a true heating appliance incorporating the traditional aesthetics of fireplace fire viewing with the controllability and fuel efficiency of a home gas furnace. Of particular interest is the low fuel consumption and brilliant fire viewing afforded by the realistic HearthGlo wood fire-like combustion system.

Carefully read the following instructions prior to actual installation. Proper Mendota Gas Fireplace installation and operation will give you years of safe, trouble free comfort and enjoyment.

If you have any questions regarding installation or operation of your Mendota Fireplace please contact your local dealer.

### **...CAUTION...**

Due to high temperatures, the Fireplace should be located out of traffic and away from furniture and draperies. Children and adults should be alerted to the hazards of high surface temperature and should stay away to avoid burns or clothing ignition. Young children should be carefully supervised when they are in the same room as the Mendota Gas Fireplace.

Clothing or other flammable material should not be placed on or near the Fireplace.

Any safety screen or guard removed for servicing an appliance must be replaced prior to operating this appliance.

The Mendota Gas Fireplace is a powerful and efficient heating unit. It has been designed as a major source of supplemental heat. As with any mechanical appliance there can be component shut downs. It is advisable to have an alternate heat supply.

Installation, repair and any adjustments to logs or burner must be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, carbon build-up, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean. The burner and pilot flames and logs should be visually checked periodically.

DO NOT use this appliance if any part has been under water or exposed to moisture corrosion. Immediately call a qualified service technician to inspect the Fireplace and replace any part of the control system and any gas control, which has been under water. DO NOT use this fireplace if the burner does not light immediately. Turn unit off and call Mendota approved service person if there is any delay in burner light off.

It is Johnson Gas Appliance Company's policy that no responsibility is assumed by the Company or by any of its employees or representatives for any damages caused by an inoperable, inadequate, or unsafe condition which is the result, either directly or indirectly, of any improper operation, installation or servicing procedures.

### **Building Permit and Installation Inspection Approval Requirements**

All installations of Mendota Fireplaces and Inserts must comply with all the requirements stated in this Installation and Operating Instructions Manual. The Dealer and/or installer must also obtain all required Building Permits and Inspection Approval from the local building inspection department or the local body having jurisdiction. In order to validate warranty coverage, Mendota may require facsimile copies of the Building Permit and Inspection Approval forms. Failure to provide adequate proof that the installation conforms to all local requirements and the requirements stated in the Installation and Operating Instructions Manual will void all applicable warranty.

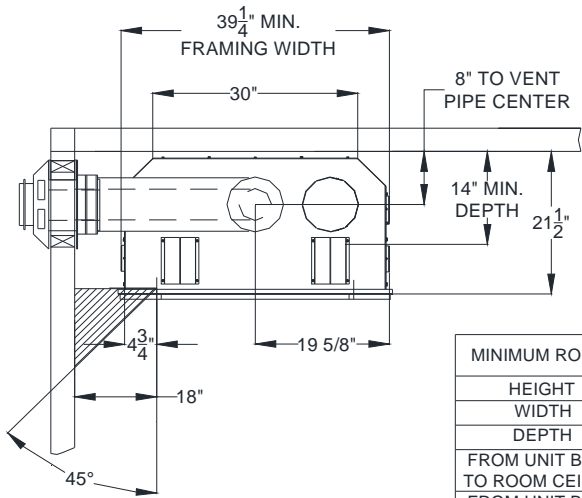
**INSTALLER: THESE INSTRUCTIONS ARE TO REMAIN WITH HOMEOWNER.**

**HIGH ALTITUDE INSTALLATION INFORMATION:** Prior to installing at altitudes higher than 7500, please contact the Mendota technical service department for specific venting requirements and venting restrictions.

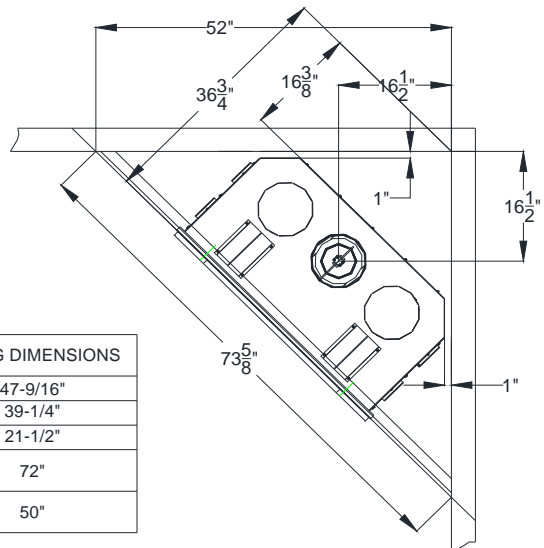
# M-50 GAS DIRECT VENT FIREPLACE GENERAL APPLIANCE SPECIFICATIONS

Figure 1: General Appliance Specifications

**HIGH ALTITUDE INSTALLATION INFORMATION:** Prior to installing at altitudes higher than 7500, please contact the Mendota technical service department for specific venting requirements and venting restrictions.

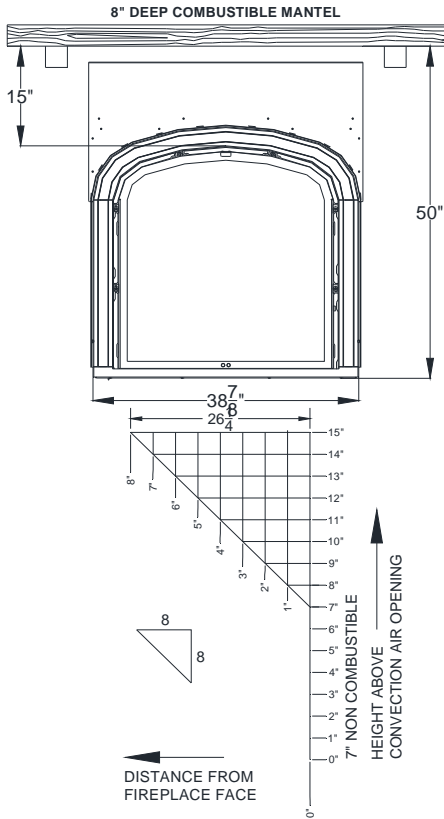


MINIMUM ROUGH FRAMING DIMENSIONS	
HEIGHT	47-9/16"
WIDTH	39-1/4"
DEPTH	21-1/2"
FROM UNIT BASE TO ROOM CEILING	72"
FROM UNIT BASE TO 8" MANTEL	50"

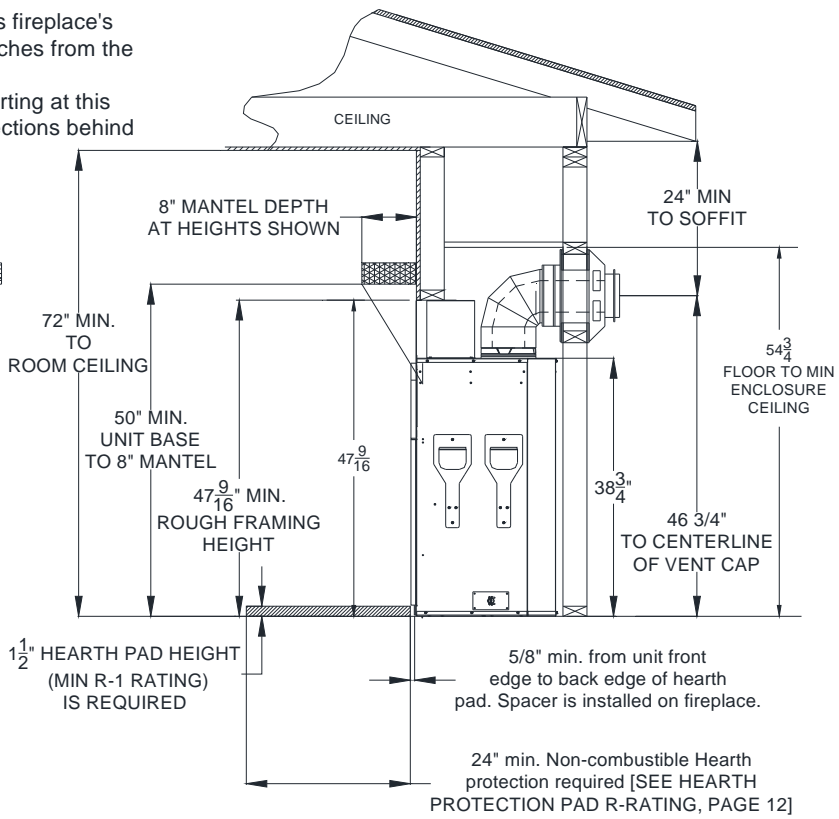


**ADJACENT WALLS:**

A wall perpendicular to and in front of this fireplace's glass door surface must be at least 18 inches from the side edges of the visible glass.  
 A wall at 45° to the glass surface and starting at this fireplace's outer edge is permitted. Projections behind this wall (in shaded area) are permitted.



APPROVED MANTEL PROFILE



**NOTE:** For every 1" this fireplace is raised off the floor, the non-combustible hearth protection pad may be reduced by 2". If this fireplace is raised off the floor more than 12", No hearth protection pad is required.

## MANTEL CLEARANCES

**Mantel Clearances for this fireplace may be measured from** the top of the convection air opening **or** the floor level of this fireplace.

The location that is referenced normally to measure mantel clearances is the **Top of the Convection Air Opening**. For ease, however, measure up from the floor level of this fireplace. The chart and diagram, in this page, provide all the reference dimensional information necessary in determining the distance a combustible mantel may protrude out from the face surface of this fireplace. The Chart, at left, shows the Distance from Fireplace Face the combustible mantel may protrude outward at a Distance up From Floor Level of this Fireplace.

If you prefer to take measurements from the Top of the Convection Air Opening, note that the Top of the convection air opening is 35 inches up from the floor level of this fireplace.

**WARNING:** Make proper use of this chart. Do not compromise the specifications contained in this chart.

Failure to adhere to proper clearances required to combustibles may cause spontaneous combustion of the mantel and may result in property damage, personal injury or loss of life.

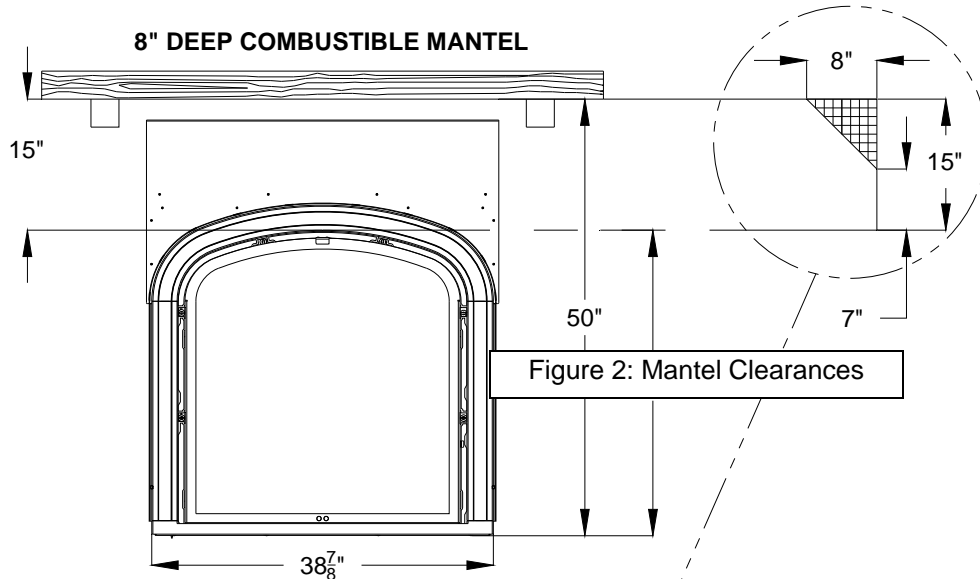
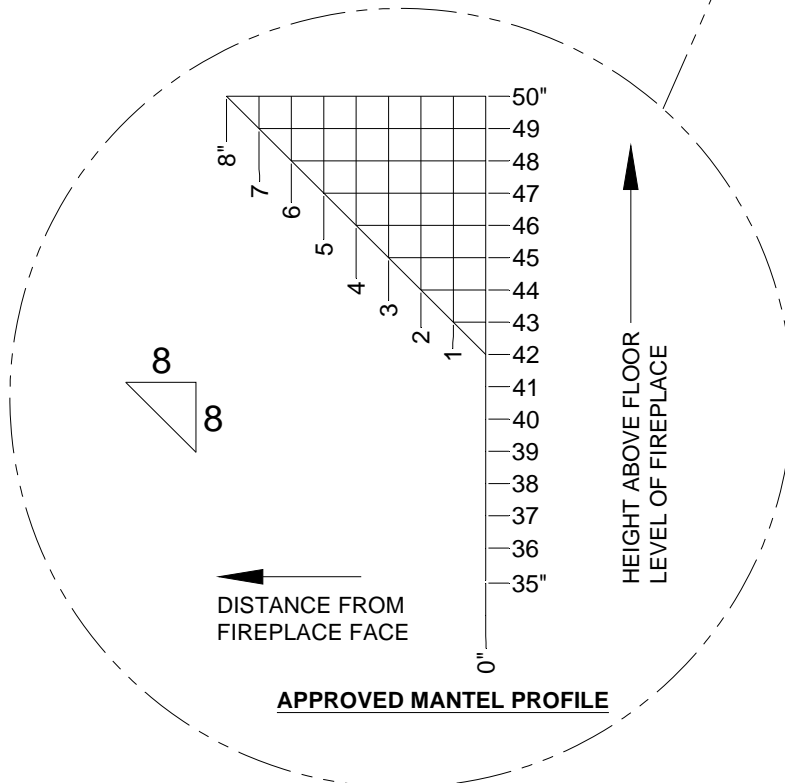


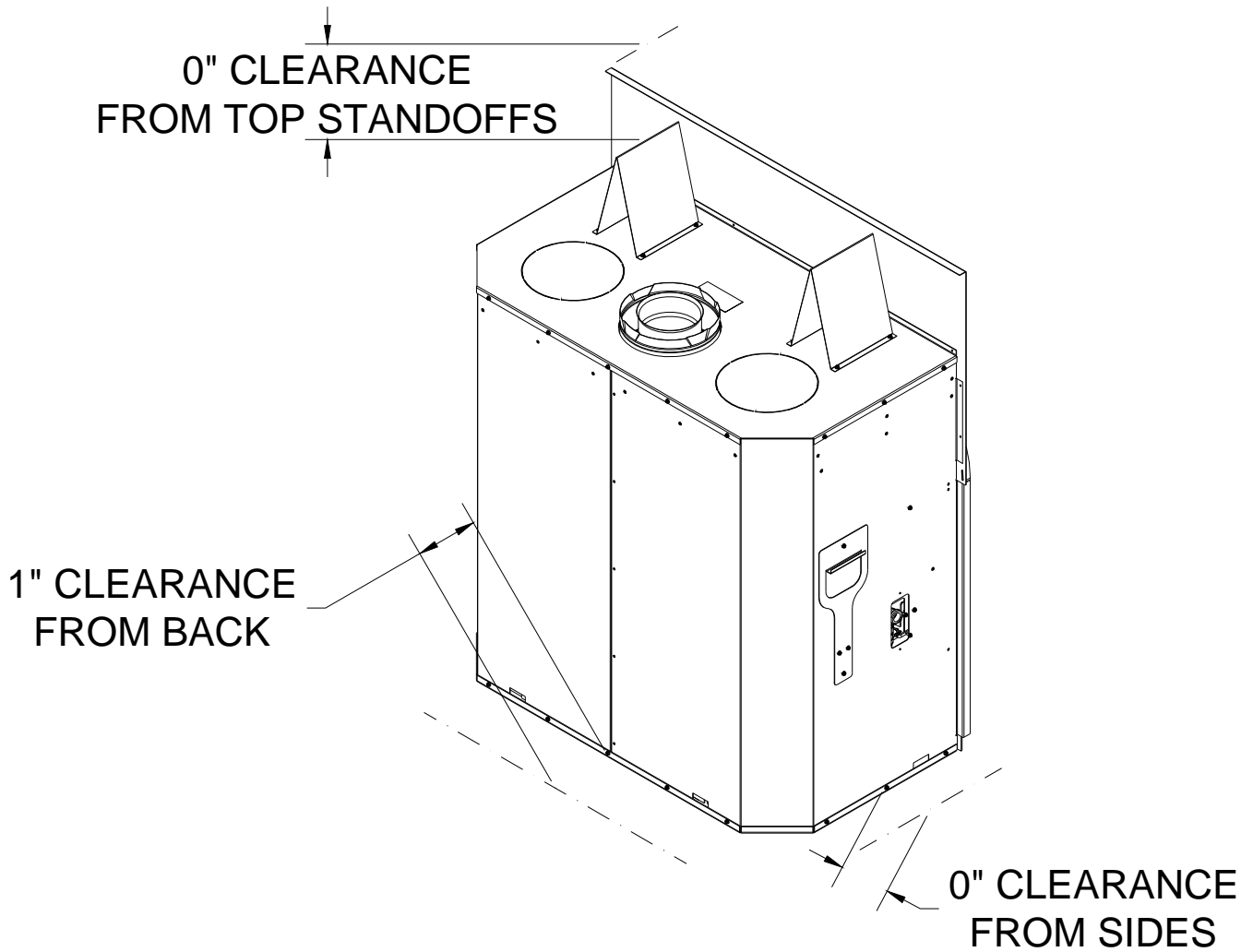
Figure 2: Mantel Clearances





**CLEARANCES TO COMBUSTIBLES FROM APPLIANCE SURFACES**

Figure 3: Clearances to Combustibles



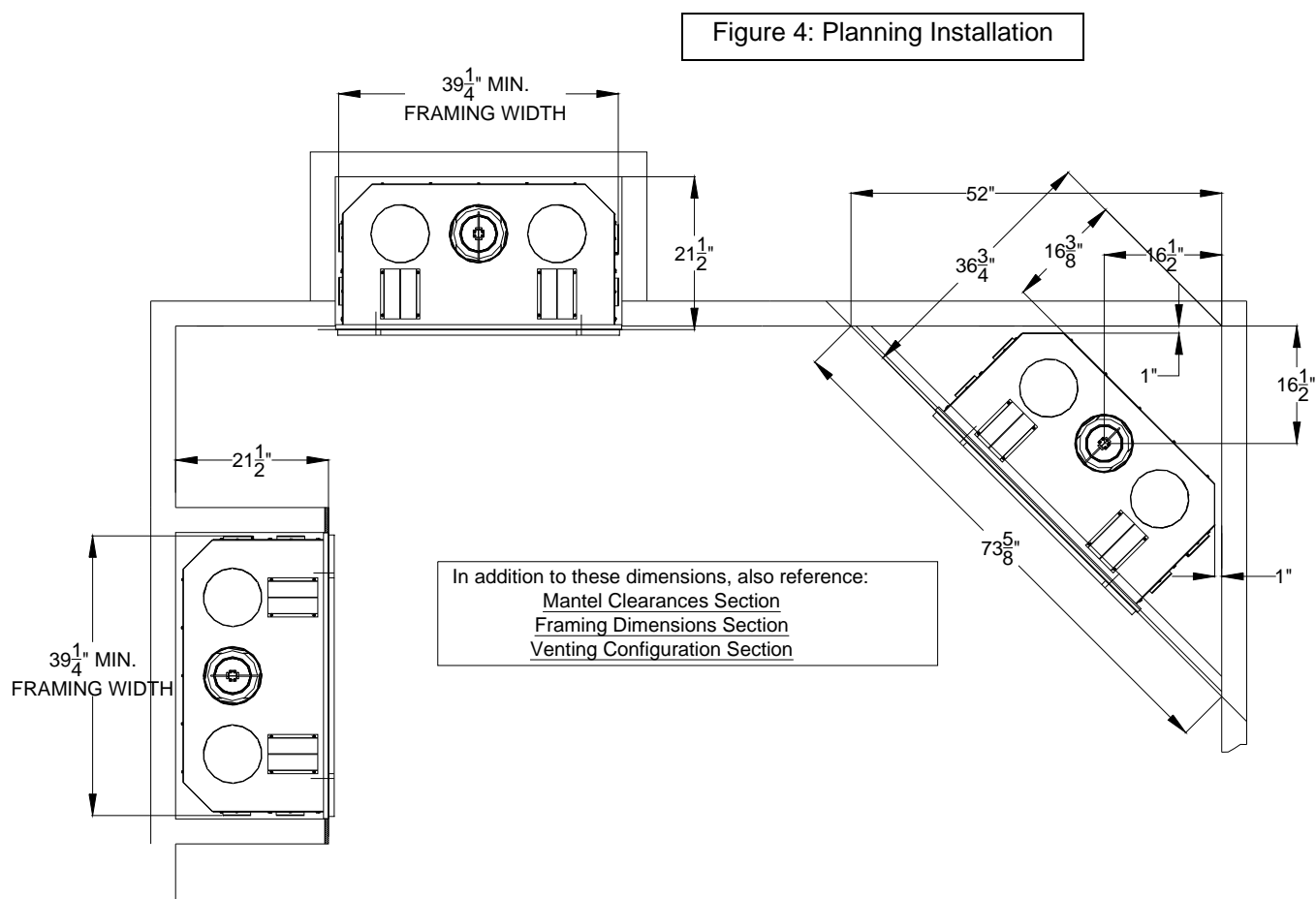
## PLANNING THE INSTALLATION

When planning on appliance installation, it is necessary to determine the following information before installing:

- Where the appliance is to be installed.
- The vent system configuration to be used.
- Gas supply piping.
- Electrical Wiring.
- Framing and finishing details.
- Hearth Protection Pad Requirements.
- Whether accessories such as a wall switch, remote control, and ceiling fan are desired.

### Selecting Appliance Location

When selecting a location for your appliance, it is important to consider the required clearances to walls. See Figure 1: General Appliance Specifications and Figure 3: Clearances to Combustibles.



### **WARNING**

#### **FIRE RISK- ODOR RISK**

- Install appliance on hard metal or wood surfaces extending full width and depth of this fireplace.
- An R-1 Rated Hearth Protection Pad is required unless this fireplace is elevated 12" or higher.
- Do NOT install this fireplace directly on carpeting, vinyl or any combustible material other than wood. Construct chase to all clearance specifications in manual.
- Locate and install appliance to all clearance specifications in manual.

## FRAMING DIMENSIONS

Minimum Rough Framing Dimensions		
	DESCRIPTION	DIMENSION (INCHES)
A	Width	39-1/4"
B	Height	47-9/16"
C	Depth	21-1/2"
D	Vent opening height	10-3/4"
E	Vent opening width	10-3/4"

### Rough Framing Dimensions

The Rough Framing Dimensions must be maintained to allow this fireplace to slide into the framing cavity and to provide the required clearances to the combustible framing structure.

### Constructing the Appliance Chase

A chase is a vertical box-like structure built to enclose this fireplace and its vent system. Vertical vents that run on the outside of a building may be, but are not required to be, installed inside a chase.

Construction of the chase may vary with the type of building. These instructions are not substitutes for the requirements of local building codes. Local building codes **MUST** be adhered to.

Chases should be constructed in the manner of all outside walls of the home to prevent cold air drafting problems. The chase should not break the outside building envelope in any manner.

Wall, ceiling, base plate and cantilever floor of the chase should be insulated. Vapor and air infiltration barriers should be installed in the chase as per regional codes for the rest of the home. Additionally, in regions where cold air infiltration may be an issue, the inside surfaces of the chase may be sheet rocked and taped for maximum air tightness.

To further prevent drafts, the fire stops should be caulked with high temperature caulk to seal the gaps. Gas line holes and other openings should be caulked with high temp caulk or stuffed with unfaced insulation. If the appliance is being installed on a cement slab, a layer of plywood may be placed underneath this fireplace to prevent conducting cold up into the room.

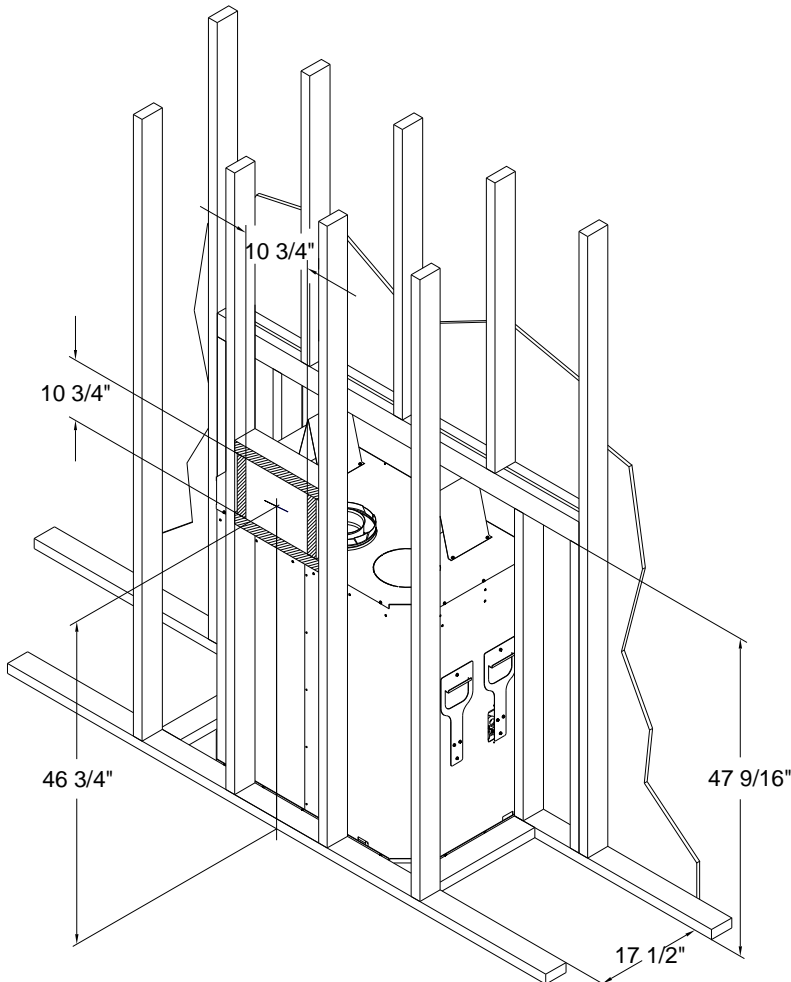


Figure 5: Framing

## Framing Depth & Finishing Material

The framing depth for this fireplace is 21-1/2 inches. This is a fixed depth required for all installations except a corner installation. For corner installations, see figures 1 and 4.

All finishing materials that surround this fireplace's arch profile must extend out from the face surface of this fireplace. In the area defined as "NONCOMBUSTIBLE ZONE" [FIGURE 7], only NONCOMBUSTIBLE MATERIALS ARE ALLOWED.

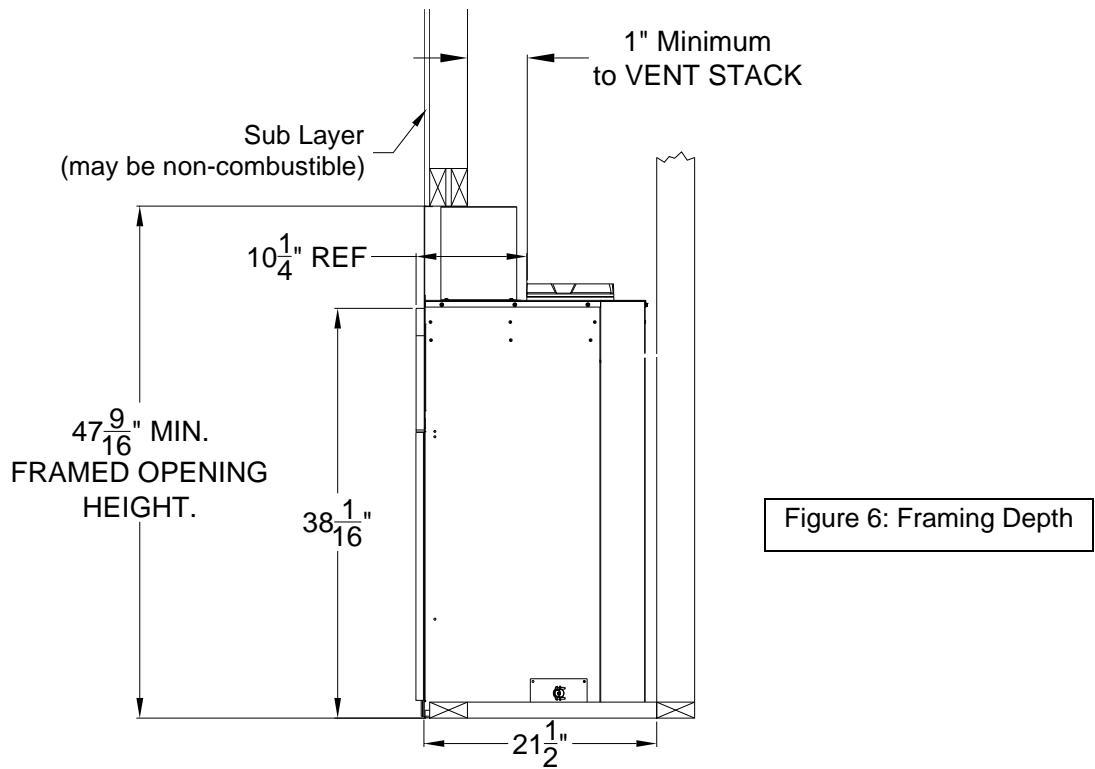
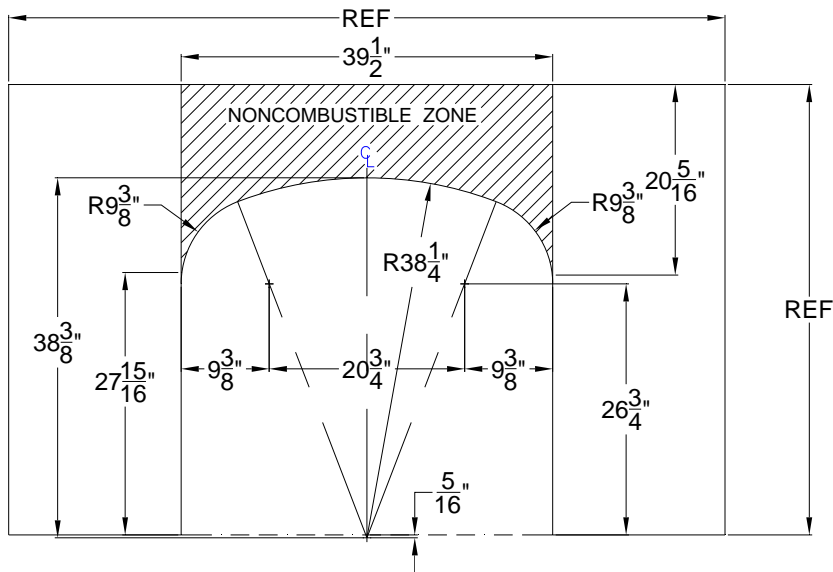


Figure 6: Framing Depth

**WARNING: See Figure 7. The cross hatched area labeled as "NONCOMBUSTIBLE ZONE" must be covered with noncombustible finishing materials. DO NOT ALLOW COMBUSTIBLE MATERIALS TO ENCROACH IN THIS AREA!**

Figure 7: NON COMBUSTIBLE ZONE



## HEARTH PROTECTION PAD REQUIREMENTS

Hearth Protection R Rating: **MINIMUM R-1 IS REQUIRED.** USE OF A 1/2" THICK (MINIMUM) CEMENT BOARD (Hardibacker, Wonderboard or other brand) plus 1/4" thick mortar (ThinSet type) plus 1/4" thick ceramic tile exceed the R-1 requirement. Use this as a reference, if in doubt. Natural Stones of 1" or greater thickness also exceed R-1 rating.

All hearth pads must be non-combustible (metal, brick, stone, or mineral fiberboard). **Do not use any combustible material to protect the floor in front of this fireplace. For the M-50, the hearth protection pad must be rated at R-1 minimum AND it must extend 24 inches in front of the fireplace face if the M-50 fireplace is installed at floor level.**

Use the following procedure to determine if a hearth pad meets the requirements listed in this manual. Find the available values, R, K or C and follow the formulae below to arrive at a R value.

- R-value** = Thermal Resistance
- K-value** = Thermal Conductivity
- C-value** = Thermal Conductance

Convert the specification to R-value;

- a. If R-value is given, no conversion is needed.
- b. If K-value is given with for a thickness (t) in inches:

$$R = \frac{1}{K} \times T \dots (1 \text{ divided by } K, \text{ then multiplied by thickness}).$$

- c. If C-value is given:  $R = \frac{1}{C} \dots (1 \text{ divided by } C).$

Determine the R-value of the proposed hearth pad. For multiple layers, add R-values of each layer to determine overall R-value. If the overall R-value of the system is greater than R-1, then the proposed hearth pad is acceptable.

**Example:**

Required minimum R value for hearth protection pad is R=1. The proposed alternative is 1/4" tile with a C- factor of 1.25 over 1/8" mineral board with a K-factor of 0.29. Determine if the proposed layers will provide the minimum R=1 rating.

**Step A.** Use formula to convert C-factor of the 1/4" tile to R-value.

$$R \text{ of the tile: } R = \frac{1}{C} = 1/1.25 = 0.80$$

**Step B.** Use formula to convert K-factor of mineral board to R-value.

$$R \text{ of mineral board: } R = \frac{1}{K} \times T = 1/0.29 \times 0.125 = 0.431$$

**Step C.** Add R values of 1/4" Tile and mineral board to get the Total R-value of proposed alternative:

$$R_{\text{Total}} = R_{\text{tile}} + R_{\text{mineral board}} = 0.8 + 0.431 = 1.231.$$

**Step D.** Compare proposed system R = 1.231 to required R of 1.0. Since R of proposed system is greater than the required R=1, the proposed system is acceptable.

This fireplace may be installed in an elevated position by created an elevated deck and an appropriate framed enclosure. NOTE: This fireplace may be elevated but MUST allow a minimum of 72" distance between this fireplace's floor level and the ceiling.

NOTE: For every 1" this fireplace is raised off the floor, the non-combustible hearth protection pad may be reduced by 2". If this fireplace is raised off the floor more than 6", No hearth protection pad is required.

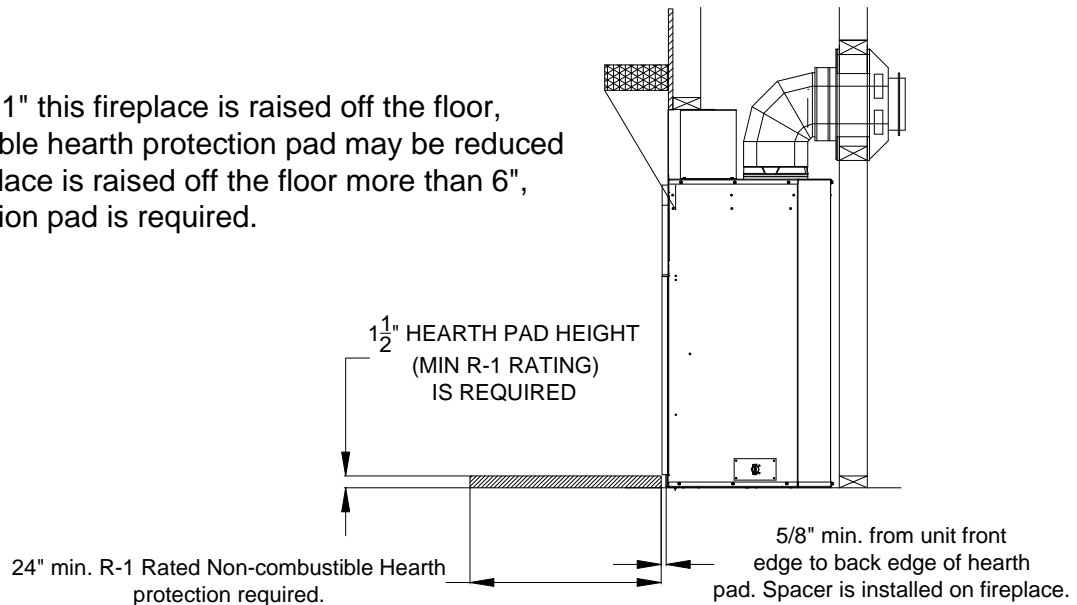


Figure 8: HEARTH PROTECTION REQUIREMENT

## **GENERAL INFORMATION**

Your Mendota Gas Fireplace has a state-of-the-art co-axial direct vent, sealed combustion system. This advanced and highly efficient system brings in outside air for combustion, has a separate exhaust vent and efficiently heats and re-circulates room air. The Mendota system maintains high air quality, maximizes efficiency and assures proper operation in today's "air-tight" homes.

### **SAFETY AND STRUCTURAL CONCERNS:**

The M-50 Fireplace must be installed and serviced by a Mendota approved serviceperson. Any adjustments to burner, pilot, logs or coal bed must be made by a Mendota approved service person. Pilot system voltage must be checked with a voltmeter. Pilot system thermopile must register a minimum of 325 mV on a voltmeter. If pilot goes out, always wait five (5) minutes before attempting to relight pilot, always open glass door before lighting pilot light.

### **VENTING REQUIREMENTS:**

This Mendota Fireplace can be vented using DURAVENT brand coaxial pipe (5"X 8") off the top. Use only Mendota specified vents and vent caps when installing your fireplace. Closely follow venting locations, directions and requirements. Observe the restrictions relating to vent position on exterior of home (see Figure 13). Be sure all vent pipe sections are fully twist-locked and leak-proof. Be sure 1000° Silicate Stove Sealant is used on the inner pipe joints of all Simpson DuraVent pipe components and all adjustable pipe sections.

### **WARNING: ALWAYS REMOVE THE GLASS DOOR WHEN LIGHTING THE PILOT.**

The burners must light immediately & the flame must travel promptly and smoothly around "curves" and light entire burner. The flame must not "lift" off burner. DO NOT operate unit if burner does not light immediately or if flame lifts off burner.

The Mendota Direct Vent Fireplace may be placed within 18 inches of adjacent sidewalls. The fireplace may be placed directly on concrete or wood flooring. If the appliance is to be installed on carpeting, vinyl or other combustible material other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance. An 8" combustible mantel may be installed at a minimum of 15" above top of the heat outlet (50") up from the floor level of this fireplace) and no more than 8" out from wall at that height. Non-combustible (marble, brick, stone, etc.) mantels or mantels with steel protector plate on underside can be installed at any desired height above decorative front.

Never block off convection air openings or paths. Always use Mendota decorative fronts and Mendota approved vent systems and vent caps.

A non-combustible hearth protector with a total insulation rating of R-1 is required when installing this fireplace directly on the floor and must extend a minimum of 24" in front of the fireplace. For every 1 inch the fireplace is raised off the floor, the depth of the hearth protector may be reduced by 2 inches. If fireplace is raised off the floor 6" or more, no hearth protector is required.

### **HEATING PERFORMANCE:**

Mendota Gas Built-in Fireplaces are true, high efficiency gas heaters. With its high heat output the Mendota Fireplace will heat a large area of your home if situated to maximize heat/ air circulation. Air movement options for maximizing heat circulation that can be considered are through-the-wall grills or floor grills, the continuous operation of central heating furnace blowers, or ceiling fans. **The most efficient method for overall heat distribution within a single room is a ceiling fan.** The heat output of the Fireplace can be reduced to a low 15,000 BTUH by turning off the Rear Burner and turning the Hi/Lo pressure regulator knob on the gas valve, counter clockwise, from "Hi" to "Lo". Blower can be turned down or turned off to reduce heat output.

### **AESTHETIC CONSIDERATIONS:**

Burning or static fireplaces are a major aesthetic focus in any room. Locate your gas fireplace as you would a television set. The Mendota Hearth Gas Fireplace will be a continuing source of comfort and fascination. Corner installations will afford you the greatest potential for viewing in many rooms. We suggest installing this Mendota Fireplace a minimum of 12 inches above the floor by utilizing an elevated hearth. This fireplace may be installed in an elevated position as long as 72 in. minimum distance is provided between the floor level of this fireplace and the room's ceiling surface.

### **ELECTRICAL REQUIREMENTS:**

Dual Blowers are included in this Mendota Direct Vent Fireplace. A 115-volt electrical service must be supplied at the fireplace location at the time of installation. It must be electrically grounded in accordance with local codes, or in their absence, with the current edition of the National Electric Code ANSI/NFPA 70. Use of a wall switch control in the power supplied to this fireplace is allowed.

**NOTE:** The blower output can be adjusted with the rheostat. There will be delays in blower operation during "heat-up" (approx. ½ hr.) and extended blower operation during "cool-down" (approx. ½ hr.).

Thermostat wire should be run from desired thermostat (or "on/off" switch) location to the main gas valve (located on the left side) – see thermostat installation section.

## GAS SUPPLY REQUIREMENTS

Correct gas pressure and proper gas supply line sizing is imperative to the successful performance of your Mendota gas fireplace. Be sure the gas supplier or plumber carefully checks for correct gas pressure and gas line sizing when installing the fireplace.

- It is critical to carefully check for gas leaks when hooking up the fireplace -- check with soap & water solution.
- Be sure to install "approved" flex gas line with brass-to-brass fittings to prevent gas leaks at connections.
- Gas supply piping must include a drip leg to eliminate the possibility of contaminants entering the gas train.
- Adhere strictly to local and national codes for entire installation.
- Correct gas pressure and proper gas supply line sizing is required.

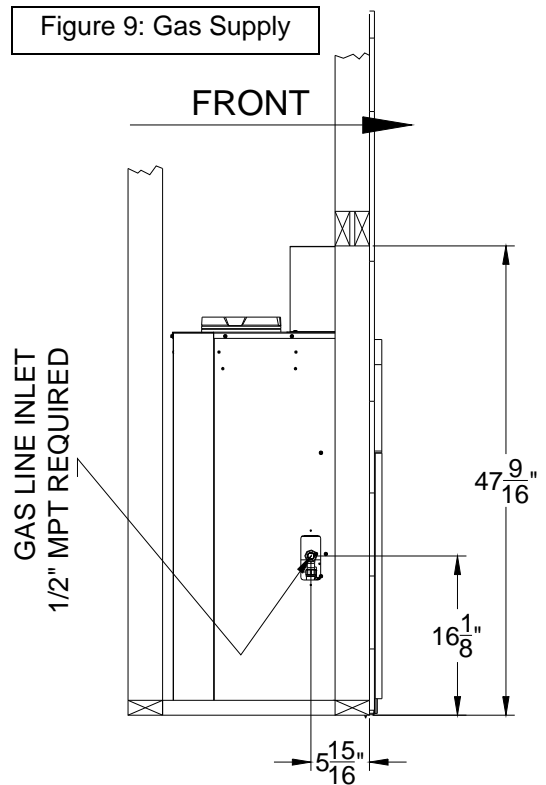
### GAS SUPPLY LINE SIZING

The Mendota Gas Fireplace comes equipped with a 1/2" N.P.T. Female inlet on a Street Elbow. Gas supply piping must enter the Fireplace cabinet on the left side.

An approved manual shut-off ball valve is supplied in the fireplace. The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 PSIG (3.5 kPa).

The appliance must be isolated from the gas supply piping system by closing its manual shut-off ball valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG (3.5 kPa).

A proper gas line diameter must be selected to run from the supply regulator to the Fireplace. Refer to the following table for proper gas pipe diameters. Strictly adhere to the correct pipe sizes.



**WARNING:** Never use any type of pipe thread sealants or compounds on the seats of flare or compression connections.

PIPE LENGTH (FEET)	SCHEDULE 40 PIPE INSIDE DIA.		TUBING, TYPE L OUTSIDE DIA.	
	NAT.	L.P.	NAT.	L.P.
0-10	1/2" (1.3 cm)	3/8" (1.0 cm)	1/2" (1.3 cm)	3/8" (1.0 cm)
10-40	1/2" (1.3 cm)	1/2" (1.3 cm)	5/8" (1.6 cm)	1/2" (1.3 cm)
40-100	1/2" (1.3 cm)	1/2" (1.3 cm)	3/4" (2.0 cm)	1/2" (1.3 cm)
100-150	3/4" (2.0 cm)	1/2" (1.3 cm)	7/8" (2.3 cm)	5/8" (1.6 cm)
150-200	3/4" (2.0 cm)	1/2" (1.3 cm)	7/8" (2.3 cm)	3/4" (2.0 cm)

**NOTE:** Some areas allow coated stainless steel (CSST), copper tubing or galvanized pipe - check with local approval agencies and codes. **NEVER** use plastic pipe.

### GAS PRESSURE CHECKING REQUIREMENTS

Inlet and manifold gas pressure checking taps are located on gas valve. A qualified installer shall take pressure measurements at these ports to verify and set the correct gas pressures during initial installation.

**NOTE:** Check for gas leaks with soap and water solution.

## GAS PRESSURE REQUIREMENTS

### ONE MAJOR CAUSE OF OPERATING PROBLEMS WITH GAS APPLIANCES CAN BE IMPROPER GAS PRESSURE!

Problems such as changes in flame color or configuration, gas pilot or burner outages, intermittent operation, changes in heat output, excessive burner noise, etc. are nearly always the result of changes in gas pressure or improper gas pressure at the time of the installation. The most important item to check during the installation and the first thing to check when problems occur is gas pressure!

Gas supplies normally enter a residence at 1/2 PSI (13" - 15" W.C.) (3 KPA). A pressure regulator is then placed outside the residence, near the gas meter, which drops this pressure to 7" W.C. (1.8 KPA) (Nat. Gas). This "inches to inches" regulator is of adequate capacity to service the gas appliances (such as dryer, furnace, etc.). If this regulator's capacity is not sufficient to add the Gas Fireplace, an additional "inches to inches" regulator must be installed for the Fireplace. EXCEPTION: Some codes allow 2-PSI (1.4KPA) supplies to enter the residence, in which case "pounds to inches" regulators are used.

The following table provides information on correct gas pressure requirements. Be sure your gas supplier or plumber carefully follows this table.

### GAS PRESSURE REQUIREMENTS

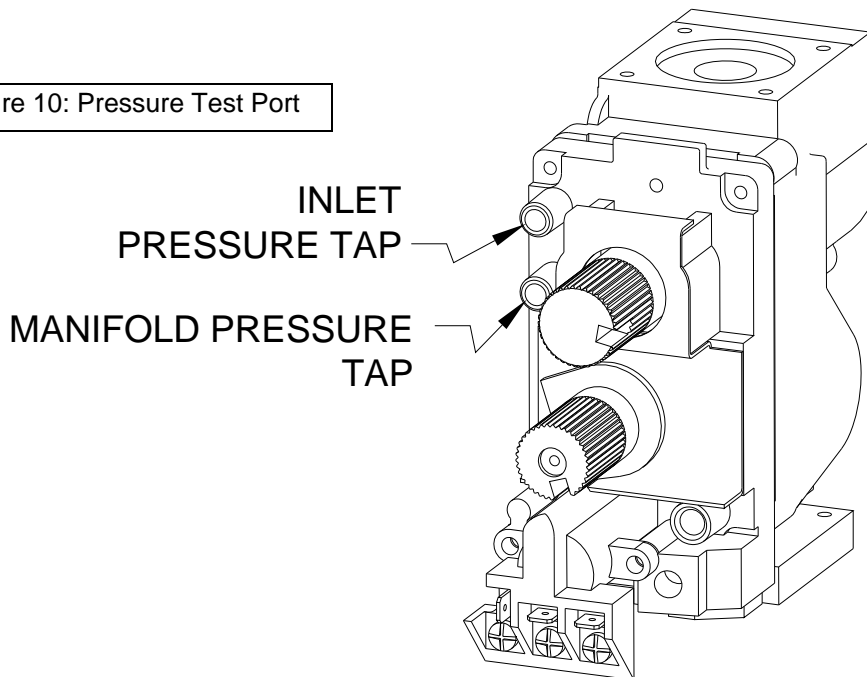
	DESIRED INLET PRESSURE	MINIMUM INLET PRESSURE	MAXIMUM INLET PRESSURE	MANIFOLD OUTLET PRESSURE	AIR SHUTTER POSITION*
NATURAL GAS	7.0" W.C. (1.75 kPa)	5.0" W.C. (1.12 kPa)	11" W.C. (2.61 kPa)	3.5" W.C. (0.87 kPa)	0 - 1/8 " OPEN (3 mm)
L.P. GAS	11.0" W.C. (2.75 kPa)	11" W.C. (2.75 kPa)	13.0" W.C. (3.24 kPa)	10.0" W.C. (2.5 kPa)	1/4" OPEN MIN. (5 mm)

TURN GAS VALVE HI-LO KNOB TO "HIGH" POSITION. GAS PRESSURES MAY VARY PLUS OR MINUS 5%.

**\*NOTE:** For high altitude (above 2,000 feet) some variations in air shutter settings may be required.

Manifold pressure must be taken at the "MANIFOLD PRESSURE" tap and inlet pressure at the "INLET PRESSURE" tap **with the burner operating** by a qualified installer.

Figure 10: Pressure Test Port





## GENERAL INSTALLATION INSTRUCTIONS

**CAUTION:** Each installation must conform to all local, state and national codes. Refer to the national fuel gas code and local zoning and code authorities for details on installation requirements. The Mendota Fireplace must be vented to the outside in accordance with the latest edition of the National Fuel Gas Code. In the absence of local codes, the installation must conform to the most current edition of the National Fuel Gas Code ANSI Z223.1, also known as NFPA 54. NOTE: The Mendota M-50 Fireplace is approved for mobile home and bedroom installations.

**CAUTION:** The Mendota M-50 Fireplace may be installed in a manufactured (mobile) home after the first sale of the home. Manufactured home (mobile home) installation must conform with the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280, or, when such a standard is not applicable, the Standard for Manufactured Home Installations, ANSI A225.1/NFPA 501A, or CSA Z240.4-Gas Equipped Mobile Housing. Consult your local building official. Note: For mobile home installations unit must be bolted to the floor and properly grounded.

**The M-50 Fireplace must be installed by a qualified service person.**

**HIGH ALTITUDE INSTALLATION INFORMATION:** Prior to installing at altitudes higher than 7500, please contact the Mendota technical service department for specific venting requirements and venting restrictions.

1. After selection of the desired fireplace location, prepare the rough opening using framing dimensions on page 10. Be sure to also prepare opening to allow for co-axial vent).
2. Check to make certain all venting requirements and locations are being followed.
3. This Fireplace is designed for installation into rough framing. **NOTE:** FRAMING MATERIAL ABOVE FIREPLACE MUST MAINTAIN CORRECT CLEARANCE TO FIREPLACE AND VENT PIPES.

**WARNING: One-inch clearance to sides & below and 2 inches clearance on top of horizontal sections and elbows.**

4. NOTE: A removable panel in the enclosure for future visual inspection of flue connection is recommended.
5. Have an electrician install a 115-Volt supply to the junction box on lower right side of the fireplace cabinet. Connect wires using wire nuts. Make sure the grounding wires are properly connected and that the installation conforms to all local and national wiring codes.
6. Have gas supplier or qualified plumber install gas supply line to fireplace and connect to the ½" female connector. Be sure gas and plumbing instructions (see Page 15 and 16) and all local and national codes are carefully followed.

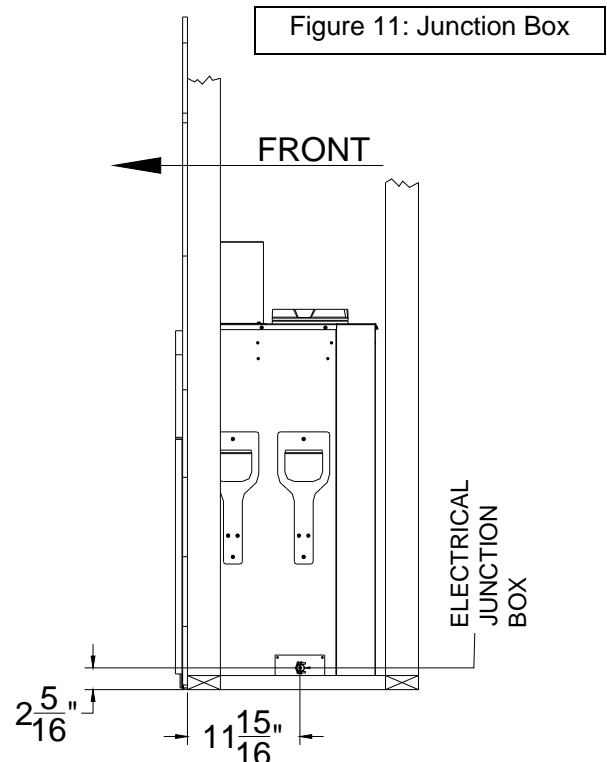
**IMPORTANT:** Any safety screen, guard, glass, grill etc. removed for servicing this fireplace must be replaced prior to operating this fireplace.

### **BLOWER OPERATION**

The blower output can be regulated with the rheostat (included).  
NOTE: There will be a time delay in blower operation during "heat-up" (approx. 20 min.) and extended blower operation during "cool-down" of unit (approx. ½ hour).

### **OPERATION DURING POWER OUTAGES**

The fireplace is designed to operate during power outages. The blower will not operate during the power outage.



## **GENERAL FLUE VENTING INSTRUCTIONS**

The Mendota Fireplace must be vented using the Mendota approved vent system components. Approved brands of vent components include DuraVent, Amerivent, Selkirk and Security vent pipes and venting components. All warranties will be voided and serious fire, health or other safety hazards may result from any of the following actions: Installation by unauthorized personnel; installation of any damaged component; unauthorized modification of vent system; installation of any components not approved by Mendota; failure to meet all clearance requirements; failure to properly twist-lock and positively seal all components. Consult local building codes before beginning the installation.

### **WARNING**

Always maintain required clearances (air spaces) to combustibles to prevent a fire hazard. Do not fill air spaces with insulation. Check installation instructions for minimum clearance requirements between the outer walls of the vent pipe and nearby combustible surfaces. Be sure to check the vent termination clearance requirements from decks, windows, soffit, gas regulators, air supply inlets, and public walkways, as specified in these installation instructions and local building codes.

**SAFETY PRECAUTIONS FOR THE INSTALLER:** 1) Wear gloves and safety glasses for protection; 2) Exercise extreme caution when using ladders or on rooftops; and 3) Be aware of electrical wiring locations in walls and ceilings.

This gas appliance and vent system must be vented directly to the outside of the building, and never attached to a chimney serving another solid fuel or gas burning appliance. Each direct vent gas appliance must have its own separate vent system. Common vent systems are prohibited.

To assure proper venting performance of this high-performance Mendota Direct Vent Fireplace, it is critical that all brands of vent pipe sections are sealed tightly and leak-proof. This means that all pipe sections must be carefully rotated into the fully "twist-locked" position.

**We strongly recommend that fixed length pipe sections be used in place of telescoping sections whenever possible.**

**Note:** When using vent pipe and components that do not incorporate a fiberglass or graphite gasket at the inner exhaust tube joints, you must use Milpak 1000F silicate stove sealant (#65-06-00909). Aluminum foil tape may be used on the outer (air intake) pipe joint but is not mandatory. Local Codes may vary. Contact your dealer for proper materials.

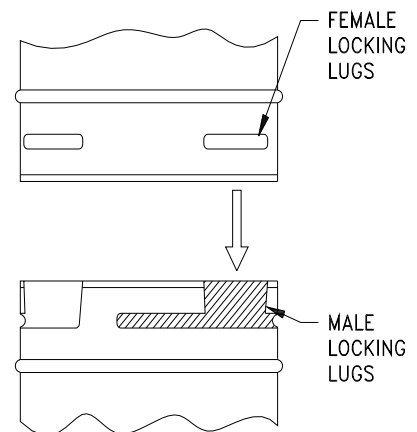
**Do not separate telescoping sections. They must be used as complete assemblies.**

### **COMPONENT "TWIST-LOCK" CONNECTION PROCEDURE**

DuraVent and American Metals pipe and fittings are designed with special twist-lock connections. Twist-lock procedure is as follows: four (4) indentations, located on the female ends of pipes and fittings are designed to slide straight in to the male ends of the adjacent pipes and fittings, by orienting the four pipe indentations so that they match and slide into the four entry slots on the male ends.

Push the pipe sections completely together then twist-lock one section clockwise, approximately  $\frac{1}{4}$  turn until the two sections are fully locked. The female locking lugs will not be visible from the outside on the black pipe or fittings. They may be located by examining inside of the female ends.

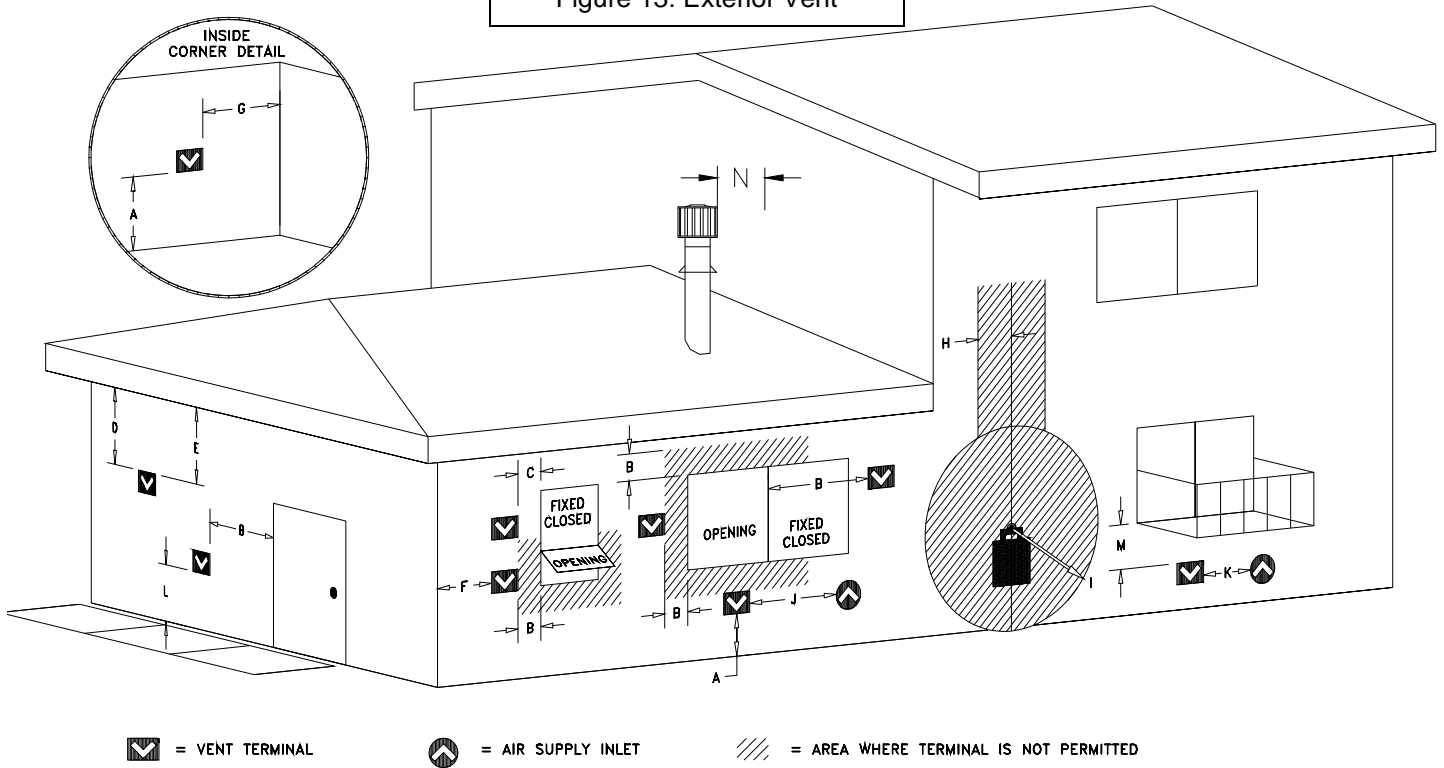
Figure 12: Twist-Lock Piping



**HIGH ALTITUDE INSTALLATION INFORMATION:** Prior to installing at altitudes higher than 7500, please contact the Mendota technical service department for specific venting requirements and venting restrictions.

## EXTERIOR VENT LOCATIONS AND RESTRICTIONS

Figure 13: Exterior Vent



### ALL MEASUREMENTS FROM CENTER LINE OF VENT CAP

∇ - Vent Terminal

^ - Air Supply Inlet

≡ - Area where terminal is not permitted

<p>A = Clearance above grade, veranda, porch, deck, or balcony (*12 inches (30 cm) minimum). Vinyl surfaces require 24" min.</p> <p>B = Clearance to window or door that may be opened (*12 inches (30 cm) minimum).</p> <p>C = *Clearance to permanently closed window (minimum 12 inches (30 cm) recommended to prevent condensation on window)</p> <p>D = *Vertical clearance to ventilated soffit located above the terminal from the center-line of the terminal 24" (60 cm) min.</p> <p>E = *Clearance to unventilated soffit 24" min (60 cm) min.</p> <p>F = Clearance to outside corner - 7 inches (18 cm).</p> <p>G = Clearance to inside corner - 12 inches (30 cm). Vinyl surfaces require 24" min (60 cm).</p>	<p>H = *Not to be installed above a meter/regulator assembly within 3 feet (90 cm) horizontally from the center-line of the regulator</p> <p>I = *Clearance to service regulator vent outlet *3 feet (92 cm) minimum.</p> <p>J = *Clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance. 12 inches (30 cm) minimum.</p> <p>K = *Clearance to a mechanical air supply inlet 6 feet (1.8 m) minimum</p> <p>L = † Clearance above paved side-walk or a paved driveway located on public property (*7 feet (2.1 m) minimum)</p> <p>M = Clearance under veranda, porch, deck, or balcony (*12 inches (30 cm) minimum ‡)</p> <p>N = Minimum 24" horizontal clearance to any surface, such as an exterior surface, for vertical terminations.</p>
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† 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 of two sides beneath the floor.

\* As specified in CGA B1:19 Installation Codes (1991). **Note:** Local codes or regulations may require different clearances.

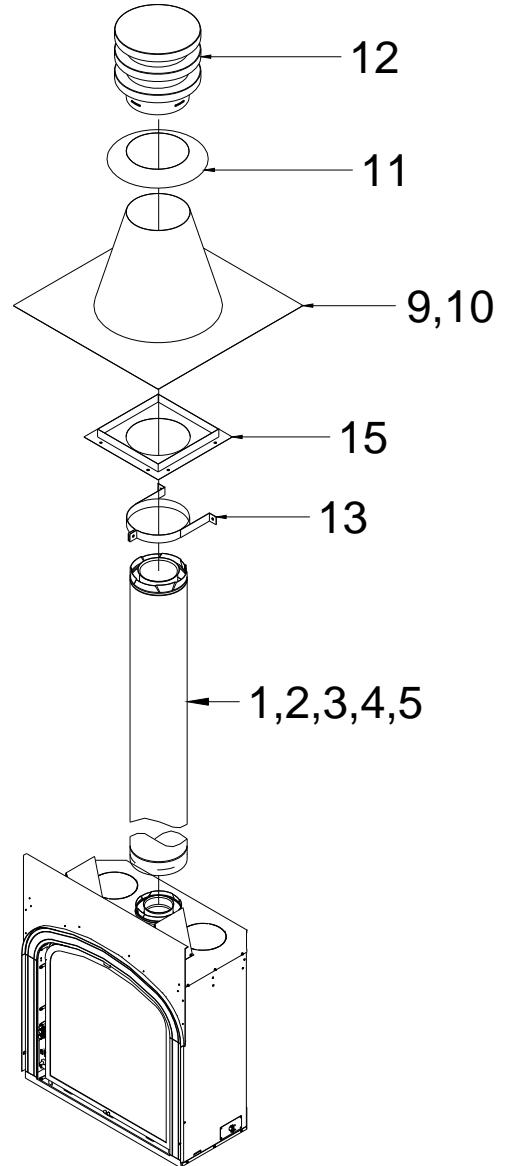
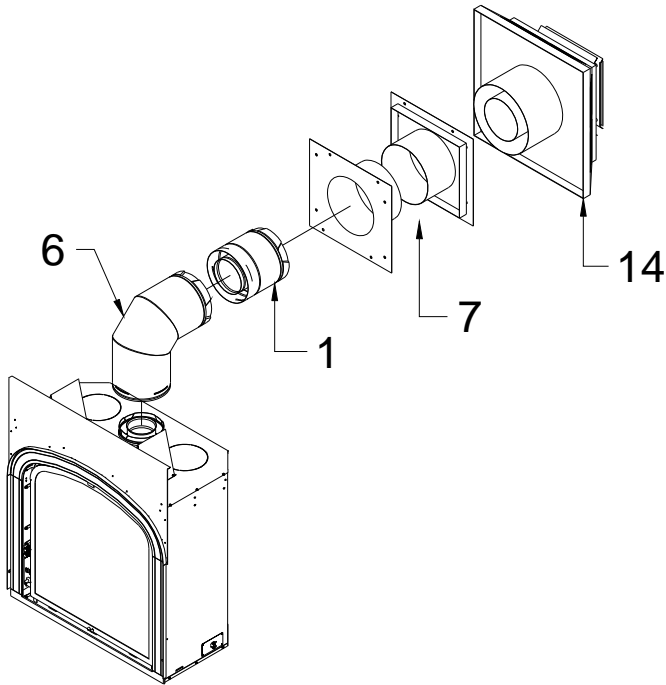
## FLUE VENTING COMPONENTS IDENTIFICATION

**DO NOT SEPARATE TELESCOPING SECTIONS.  
USE TELESCOPING SECTIONS AS COMPLETE ASSEMBLIES.**

**HIGH ALTITUDE INSTALLATION INFORMATION:** Prior to installing at altitudes higher than 7500, please contact the Mendota technical service department for specific venting requirements and venting restrictions.

ITEM	DESCRIPTION
1	6" or 7" PIPE (DuraVent 6"/Amerivent 7")
2	12" VENT STACK
3	24" VENT STACK
4	36" VENT STACK
5	48" VENT STACK
6	90° GALVANIZED ELBOW
7	ADJUSTABLE WALL THIMBLE
8	ATTIC INSULATION SHIELD 12"
9	ROOF FLASHING (0/12 TO 6/12)
10	ROOF FLASHING (7/12 TO 12/12)
11	STORM COLLAR
12	VERTICAL VENT CAP
13	SUPPORT BAND
14	HORIZONTAL VENT CAP
15	FIRE STOP SPACER

**Figure 14: Flue Venting Components**



## M50 MASTER FLUE VENTING REQUIREMENTS CHART

**NOTE: THIS CHART IS APPLICABLE TO BOTH NATURAL GAS AND LPG INSTALLATIONS.**

**IMPORTANT NOTES: See Figure 15, below.**

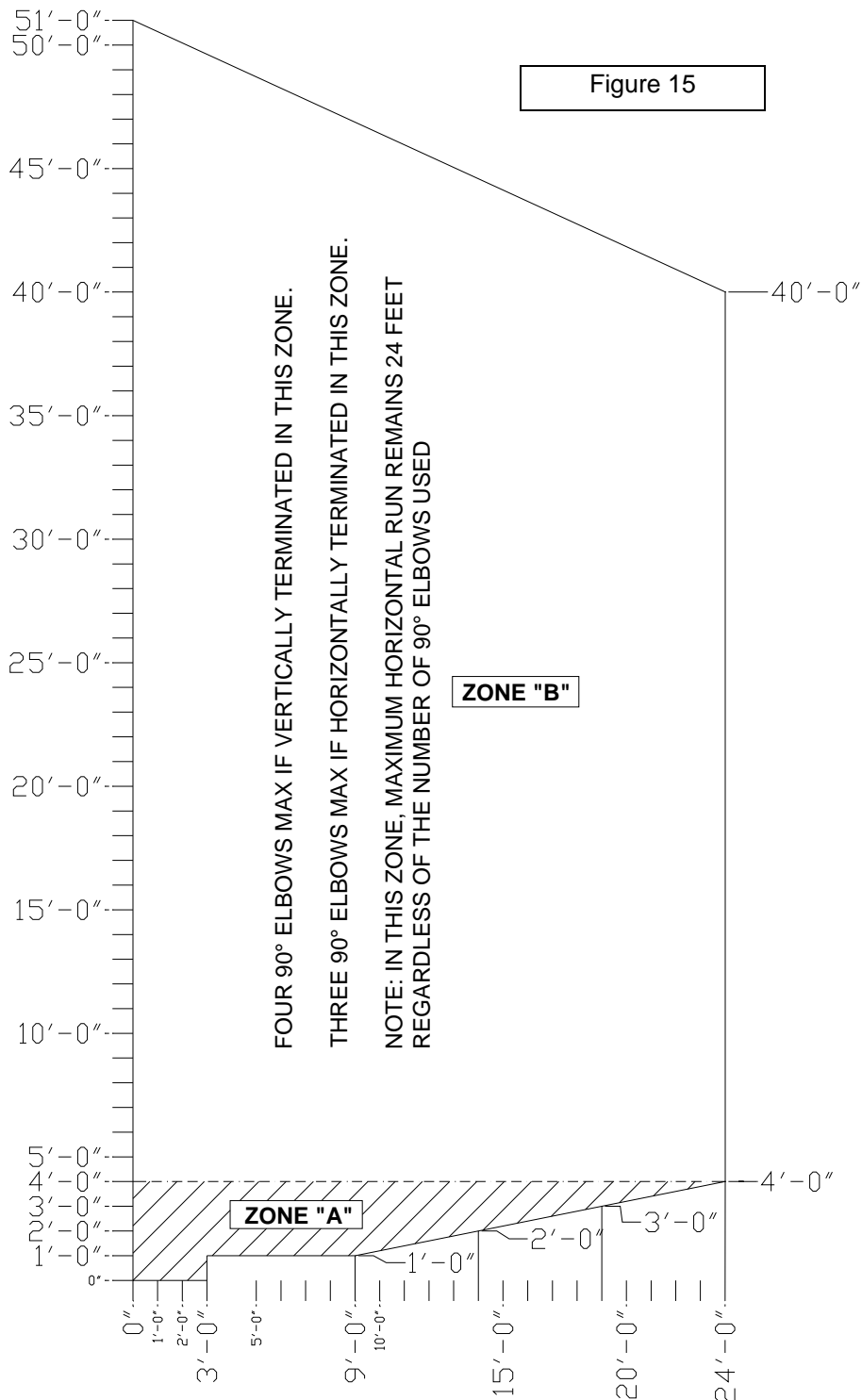
1. 3 feet maximum horizontal pipe run allowed with a 90° elbow connected directly to this fireplace's flue starter collar.
2. Maximum Vertical Run allowed is 51 feet.
3. Maximum Vent System length allowed is 64 feet.
4. In **Zone "A"**, 24 feet maximum horizontal run allowed with a 4 feet starter section. If the starter vertical section is less than 4 feet, use the chart and reduce 3 feet for every 90° elbow installed after the first 90° elbow.

5. In **Zone "B"**, 24 feet maximum horizontal run allowed only if the first vertical section connected directly to the top of this fireplace is 4 feet or longer. Three 90° elbows may be installed anywhere within the 24 feet horizontal run. No reduction in horizontal is required for the 90° elbows used.

**HIGH ALTITUDE INSTALLATION**

**INFORMATION:** Prior to installing at altitudes higher than 7500, please contact the Mendota technical service department for specific venting requirements and venting restrictions.

V min	H max
0 in.	36"
6 in.	36"
12 in.	9'
18 in.	11'6"
24 in.	14'
36 in.	19'
4 ft. - 40 ft.	24'



## **IMPORTANT VENTING CONFIGURATION NOTES**

See Figure 15 [MASTER FLUE VENTING REQUIREMENTS CHART].

**HIGH ALTITUDE INSTALLATION INFORMATION:** Prior to installing at altitudes higher than 7500, please contact the Mendota technical service department for specific venting requirements and venting restrictions.

### **MAXIMUM HORIZONTAL RUN**

- A. Maximum Horizontal Run allowed is 24 feet if a vertical starter section that is between 4 feet to 40 feet is connected directly to this fireplace's flue starter collar and no more than three (3) 90 degree elbows are used.
- B. Maximum Horizontal Run allowed is 3 feet if a 90-degree elbow is connected directly to this fireplace's flue starter collar.

### **MAXIMUM VENT SYSTEM LENGTH**

- A. Combined total length of all straight pipe sections in the vent system shall be less than 64 feet.
- B. Combined total length of all straight pipe sections in the vent system shall be less than 64 feet when using three(3) 90-degree elbows or equivalent and terminating the vent system horizontally.
- C. Combined total length of all straight pipe sections in the vent system shall be less than 64 feet when using four(4) 90-degree elbows or equivalent and terminating vertically.

### **HOW TO CALCULATE THE VENT SYSTEM LENGTHS**

For calculation purposes and usage of charts in this manual, simply add the lengths of all individual straight pipe sections. For example: if you use two 2-foot lengths and one 4-foot length, the total vent system length will be  $2+2+4 = 8$  feet.

### **USING 90° ELBOWS IN ZONE "B"**

The M50 Fireplace by MENDOTA allows maximum flexibility in the use of 90° elbows in the vent system. The length of the first straight vertical section directly connected to the fireplace's starter collar determines the maximum horizontal run and the number of 90° elbows allowed for this fireplace.

For vent systems that provide a starting vertical section that is 4 feet or longer, you may connect up to 24 feet of horizontal pipe and up to three (3) 90° elbows within the 24 feet run in any configuration and terminate the vent horizontally. No reduction in horizontal run is required for the elbows used as long as the 4 feet long vertical starter section is connected directly to this fireplace's starter collar.

### **USING 90° ELBBOWS IN ZONE "A"**

For vent systems that provide a starting vertical section less than 4 feet, the following rules apply:

- a. You must use the Master Flue Venting Requirements Chart. See Zone "A" below the 4' vertical run line.
- b. A single 90° vertical-to-horizontal elbow is already calculated into the allowable maximum 24' horizontal run. The Venting Requirements Chart (Figure 15) assumes that for all horizontal runs calculated, one 90° elbow is used within the venting system. **Each additional 90° elbow reduces the maximum horizontal distance by 3'.**
- c. If you plan to use more than one 90° elbow within the vent system, first use the Venting Requirements Chart (Figure 14) and calculate the maximum horizontal run you are allowed based on the first vertical section connected directly to the fireplace. From this maximum horizontal run calculated, subtract 3 feet for each additional 90° elbow you will use.

**Example 1:** Assume you are using a 3 feet long starter vertical section. This should allow, per figure 15, 19 feet of horizontal run. If you want to use three 90° elbows, subtract 6 feet for two elbows from the 19 feet maximum allowed [3 feet for each elbow after the first elbow]. This yields 13 feet as the maximum horizontal run that you are allowed to install using the 3 foot vertical starter section.

**CAUTION:** If a vertical-to-horizontal discharge elbow or a horizontal-to-horizontal discharge elbow is enclosed within a wall, floor or ceiling, a top air space clearance of 3" must be maintained.

### **USING 45-DEGREE ELBOWS**

Two 45-degree elbows may be used in place of one 90-degree elbow. On 45-degree runs, one foot of diagonal pipe is equal to 8-1/2 inches horizontal run and 8-1/2 inches vertical run. Two 45-degree elbows may be connected directly to the vent starter adapter on this fireplace to create an offset to provide the required clearances to combustible framing or sheathing materials.

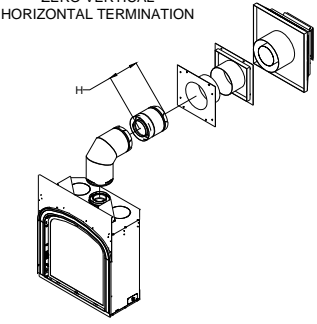
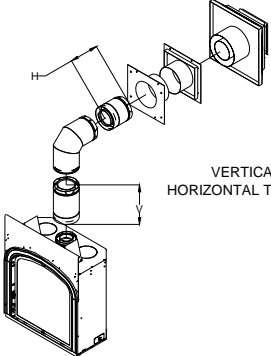
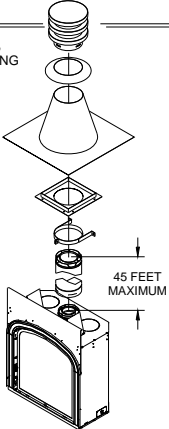
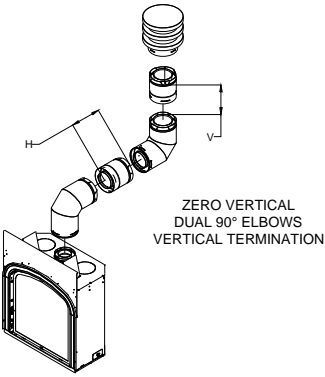
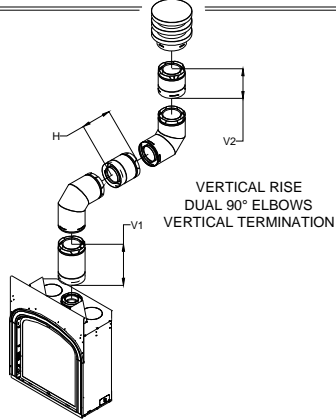
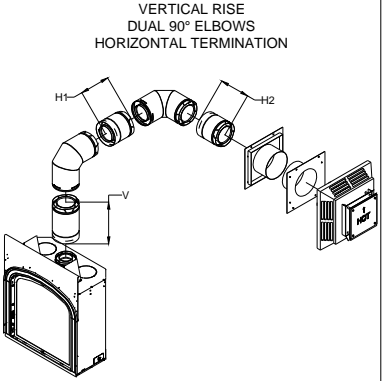
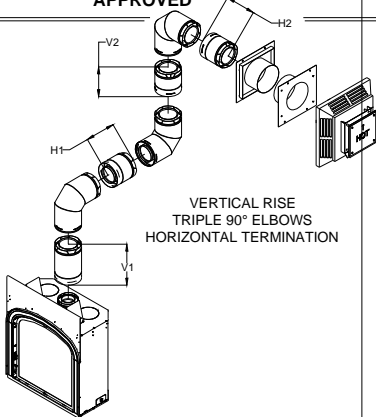
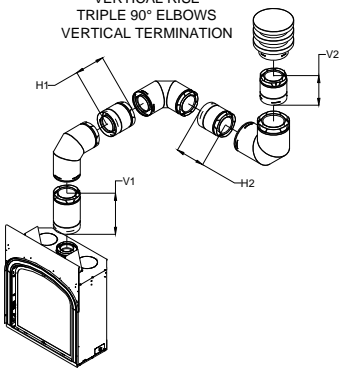
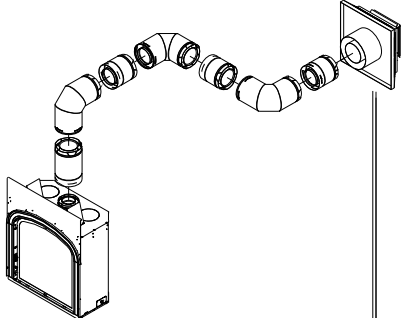
Two 45-degree elbows may be connected directly to the top of this fireplace to create a horizontal offset. 24 feet maximum horizontal run allowed with this offset configuration only if the first vertical section connected directly to the last 45-degree elbow is more than 4 feet long. For maximum allowable horizontal distances with the 45-degree offsets, see the Master Venting Configuration Chart.

**Note:** Each horizontally positioned 45° elbow reduces the maximum horizontal distance by 1½'.

**SUPPORT:** Horizontal runs of pipe will require one vent support for every 3 ft. of pipe.

# APPROVED VENT SYSTEMS QUICK REFERENCE CHART

Figure 16: Vent Systems

<p>ZERO VERTICAL HORIZONTAL TERMINATION</p> 	<p>VERTICAL RISE HORIZONTAL TERMINATION</p> 	<p>STRAIGHT UP, VERTICAL VENTING</p> 
APPROVED	APPROVED	APPROVED
<p>ZERO VERTICAL DUAL 90° ELBOWS VERTICAL TERMINATION</p> 	<p>VERTICAL RISE DUAL 90° ELBOWS VERTICAL TERMINATION</p> 	<p>VERTICAL RISE DUAL 90° ELBOWS HORIZONTAL TERMINATION</p> 
APPROVED	APPROVED	APPROVED
<p>VERTICAL RISE TRIPLE 90° ELBOWS HORIZONTAL TERMINATION</p> 	<p>VERTICAL RISE TRIPLE 90° ELBOWS VERTICAL TERMINATION</p> 	<p>THREE HORIZONTAL DISCHARGE 90° ELBOWS APPROVED w/ RESTRICTIONS</p> 
APPROVED	APPROVED	APPROVED

## ZERO RISE HORIZONTAL TERMINATION

**The M-50 Fireplace must be installed by a qualified Mendota approved serviceworker.**

A Maximum Horizontal Run allowed is 3 feet if a 90-degree elbow is connected directly to this fireplace's flue starter collar.

When a 90-degree elbow is connected directly to this fireplace, the horizontal centerline of the 90° elbow will be 46-3/4" inches up from the floor level of this Fireplace.

See Figure 15, MASTER FLUE VENTING REQUIREMENTS CHART and Figure 18 and Figure 17 below.

Use "fixed" pipe sections in place of adjustable pipe sections wherever possible. 1000° sealant must be used on ALL inner pipe joints that do not have factory installed gasket material.

Always maintain 1" clearance from vent pipe sides and bottom to combustibles, 2" clearance on top of pipe on horizontal runs and on top of horizontal discharge elbows. Do not fill air spaces with insulation or other material.

1. Position fireplace in desired location. See Figure 13 for guidelines on proper vent cap placement on the exterior of home. Check to determine if wall studs are in the way when venting system is attached. If this is the case, you may want to adjust the fireplace location or modify the exterior wall framing to allow the vent system to penetrate the wall.
2. Measure from the floor level of the fireplace up 46-3/4 inches [add 1/4" rise for every foot of horizontal run] and mark wall directly at the center of where the vent pipe will penetrate the exterior wall.
3. Cut and frame a 10-3/4" wide x 10-3/4" high opening in the wall. The hole must be positioned so the vent system will run level or have a 1/4" rise per foot of run AND be perpendicular to the wall. The height of the opening must be located to meet all local and national building codes. Do not allow the termination to be easily blocked or obstructed. If wall being penetrated is non-combustible material, i.e. masonry block, brick, etc., a 9-inch diameter hole is acceptable.
4. Attach the 90-degree elbow to the fireplace starter adapter. Attach a horizontal section to the 90-degree elbow. Be sure all vent component connections are in their fully twist-locked position and are leak-proof. Be sure 1000° sealant is used on the inner pipe joints of all pipe sections manufactured by Simpson DuraVent. The length of the horizontal piece that fits through the wall will be determined by the location of the fireplace relative to the wall. For a normal installation where this fireplace is installed directly against an exterior wall constructed using 2x4 lumber or 2x6 lumber, only a 6" horizontal section is required. There MUST be a minimum of 1" air space clearance to combustibles from all vent components (2" above horizontal runs and horizontal discharge elbows).
5. **A wall thimble must always be used when penetrating combustible wall materials.**
6. From the exterior of the home, slide the horizontal vent cap over the end of the horizontal pipe and tightly secure the cap to the wall with screws. Seal with a high quality caulking.

**NOTE:** Combustible wall thickness must be 4" to 8" maximum

**NOTE:** Vent Cap should not be recessed into wall or siding.

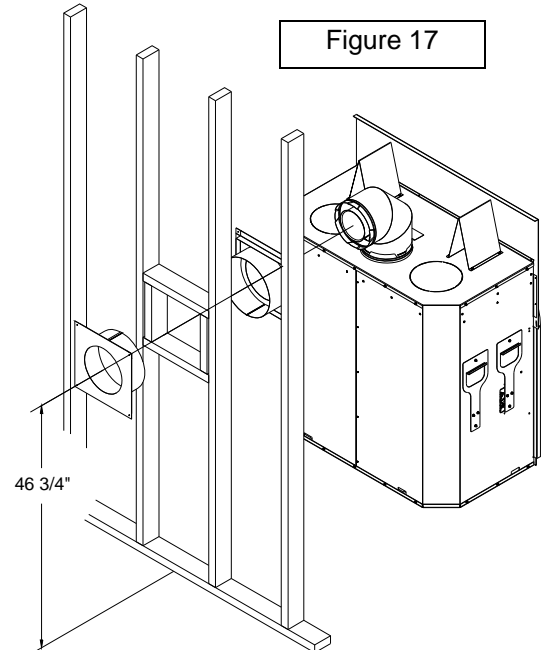


Figure 17

### ZERO VERTICAL HORIZONTAL TERMINATION H = 3 FEET MAXIMUM

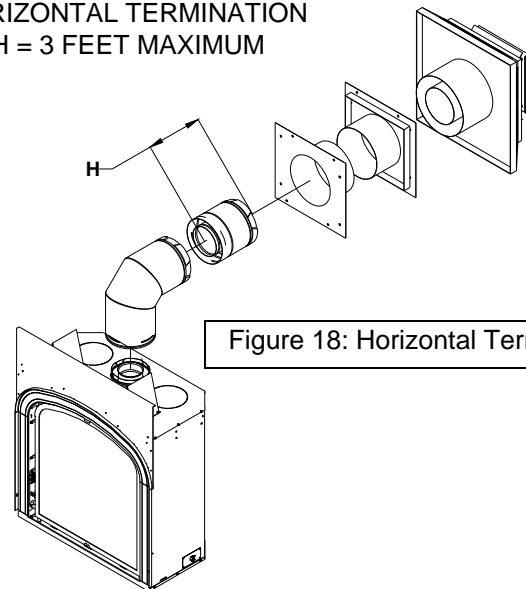


Figure 18: Horizontal Termination



## VERTICAL RISE HORIZONTAL TERMINATION

The minimum vertical section required to be connected directly to the starter adapter on this fireplace is 48 inches when used with a maximum horizontal run of 24 ft. If the total length of the vertical sections connected directly to the starter adapter on this fireplace is between 4 feet and 40 feet, you are allowed a maximum 24 feet horizontal run. This fireplace provides a maximum flexibility in the use of 90° elbows when more than 4 feet of vertical starter section is connected to the starter collar. If 4 feet or more vertical section is connected to the starter collar, you may use three 90 degree elbows and 24 feet of horizontal pipe sections. No reduction in horizontal run is required for the use of the elbows. For other venting configurations within these maximum limits, see Figure 15, Zone A and Zone B.

Combined total length of all pipe sections (include restriction of elbows) in the vent system shall be less than 62 feet.

**NOTE:** The horizontal run of vent pipe must be level or have a ¼" rise for every 1' of run toward the termination. Never allow the vent to run downward. This will cause high temperatures and the possibility of a fire.

### This M-50 Fireplace must be installed by a qualified Mendota service person

1. Position fireplace in desired location. See Figure 13 for guidelines on proper vent cap placement on exterior of home. Check to determine if wall studs are in the way when vent system is attached. If this is the case you may want to adjust the fireplace location.
2. Locate where vent pipe will pass through any ceilings and will penetrate the outside wall. Since vent pipe sections "overlap" we suggest pre-assembling and measuring the total vent pipe run so you can more accurately locate the point where the vent pipe will penetrate the outside wall (See Figure 13). Be sure all vent components are properly twist locked and leak-proof. Be sure 1000° sealant is used in the inner pipe joints of all pipe sections manufactured by Simpson DuraVent.
3. Cut and frame a 10-3/4" wide x 10-3/4" high opening in the outside wall openings and 10" x 10" opening in ceiling openings. The outside wall hole must be positioned so the vent system will run level or have a ¼" on rise AND be perpendicular to the wall. The height of the opening must be located to meet all building codes and not allow the termination to be easily blocked or obstructed. A ceiling fire stop spacer is required at any floor (ceiling) opening.
4. Connect vent pipe to the fireplace adapter on top of fireplace vent outlet.
5. The horizontal pipe must end flush with the exterior wall of the home. Horizontal pipe will require a proper support every 3 ft. of vent pipe. THERE MUST BE A MINIMUM OF 1" CLEARANCE TO COMBUSTIBLES FROM ALL VENT PIECES ON THE SIDES AND BOTTOM AND 2" ABOVE HORIZONTAL RUNS).

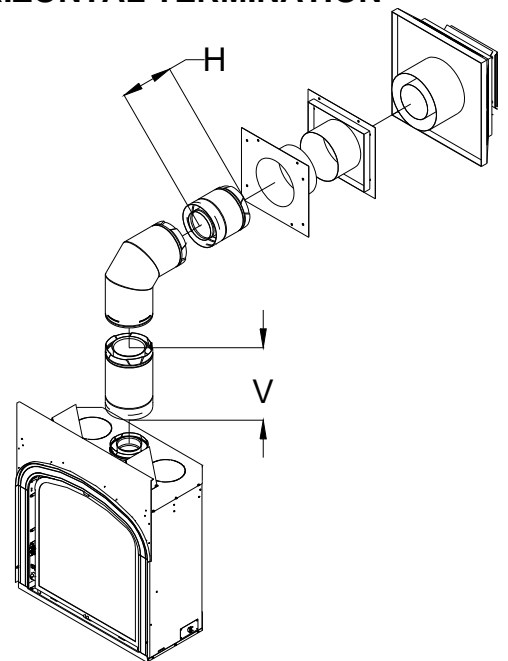
**NOTE:** DO NOT SEPARATE TELESOPING SECTIONS. THEY MUST BE USED AS COMPLETE ASSEMBLIES.

6. **A wall thimble must always be used when penetrating combustible wall materials.**  
**NOTE:** Combustible wall thickness must be 4" to 8" maximum.
7. From the exterior of the home, slide the horizontal vent cap over the end of the horizontal pipe and tightly secure the vent cap to the wall with screws. Seal with high quality caulking.  
**NOTE:** Venting terminal (Vent Cap) should not be recessed into wall or siding.

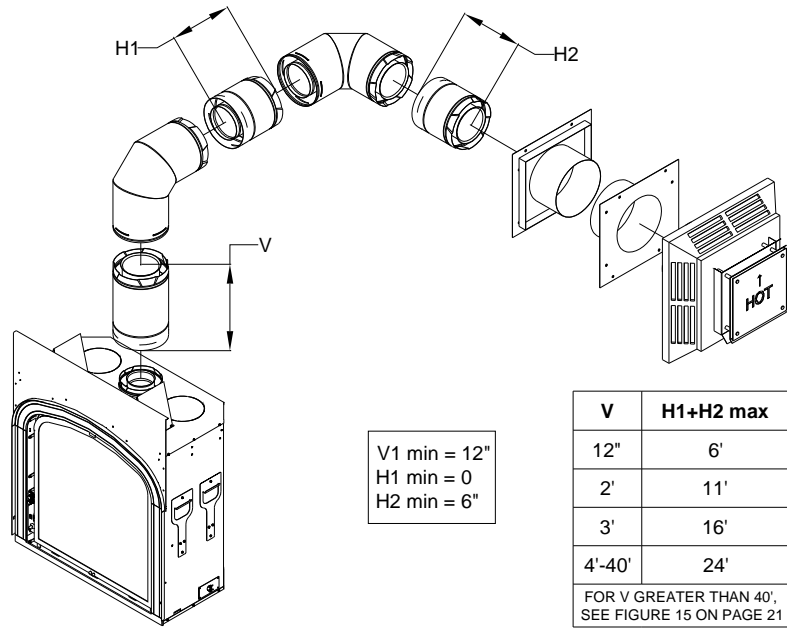
Figure 19

V	H
0"	36"
12"	9'
2'	14'
3'	19'
4'- 40'	24'
For V greater than 40', see Figure 15 on Page 21	

### ONE(1) 90° ELBOW TOP VENT HORIZONTAL TERMINATION



TWO(2) 90° ELBOWS  
WITH STARTER VERTICAL SECTION  
HORIZONTAL TERMINATION



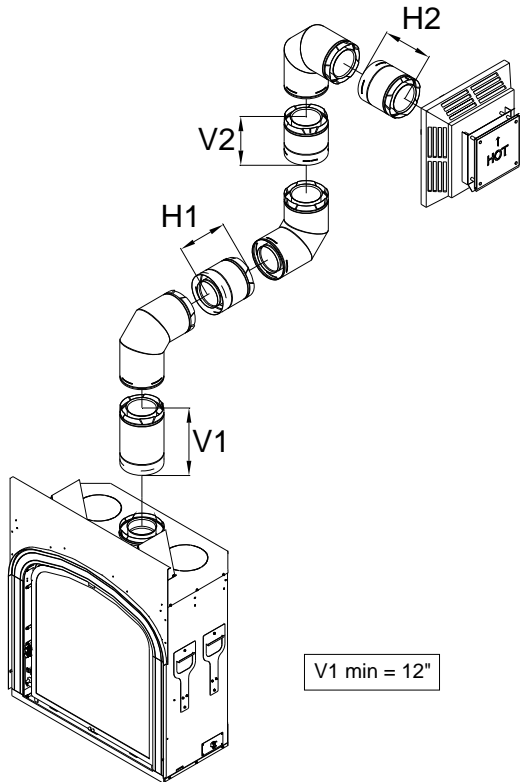
V1 min = 12"  
H1 min = 0  
H2 min = 6"

V	H1+H2 max
12"	6'
2'	11'
3'	16'
4'-40'	24'

FOR V GREATER THAN 40',  
SEE FIGURE 15 ON PAGE 21

Figure 20

THREE (3) 90° ELBOWS  
WITH STARTER VERTICAL SECTION  
HORIZONTAL TERMINATION



V1 min = 12"

V1	H1 + H2 max
12" min.	3'
2'	8'
3	13'
4'-40'	24'

FOR V GREATER THAN 40',  
SEE FIGURE 15 ON PAGE 21

Figure 21

## **VERTICAL THROUGH-THE-ROOF VENTING**

The maximum vertical run of vent pipe is 51 ft. from the top of the fireplace. The fireplace will support a run of a maximum of 51 ft. Maintain 1" air space clearances on all sides of vents (2" above horizontal runs).

If an offset is required directly on top of the fireplace, two 45° elbows may be connected directly to the top of this fireplace to create a horizontal offset then to run upwards vertically. Doing so will continue to allow the use of the 51 feet maximum vertical run.

### **The M-50 Fireplace must be installed by a qualified Mendota approved serviceperson.**

1. Place the fireplace in its desired location. Drop a plum bob from the ceiling to the position of the fireplace flue exit. Mark the location where the vent will penetrate the ceiling. Drill a small hole at this point. Next, drop a plum bob from the roof to the hole previously drilled in the ceiling. Mark and drill the spot where the vent will penetrate the roof. Determine if ceiling joists, roof rafters or other framing will obstruct the venting system. You may wish to relocate the fireplace or to offset, to avoid cutting load bearing members.
2. Cut and frame a 10" x 10" opening in the ceiling centered on the hole drilled in Step No. 1.
3. To determine the length of the vent pipe required, measure the distance from the fireplace flue outlet to the ceiling, the ceiling thickness and the vertical rise in the attic or second story and allow sufficient vent height above roofline. For two story installations, fire stops are required at each floor level. If an offset is needed in the attic, additional pipe and elbows will be required.
4. Assemble the desired lengths of vent pipe and elbows to reach from the fireplace flue outlet. Ensure that all vent pipe and elbow connections are in their fully twist-lock position and that inner pipe joints (DuraVent only) are sealed and are leak-proof. Maintain 1" airspace clearances to combustibles (2" above horizontal runs). Cut a 10" x 10" opening in the roof, centered in the small drilled hole placed in the roof in No. 1. The opening should be a sufficient size to meet all clearance requirements. Continue to assemble lengths of pipe and elbows necessary to reach up through the roofline. Galvanized pipe and elbows may be utilized in the attic, as well as above the roofline. The galvanized finish is desirable above the roofline due to its higher corrosive resistance.
  - a) If an offset is necessary, it is important to support the vent pipe every 3 ft. to avoid excessive stress on the elbows and possible separation. Wall straps are available for this purpose.
6. Slip the flashing over the pipe sections protruding through the roof. Secure the base of the flashing to the roof with roofing nails and seal flashing to roof. Ensure the roofing material overlaps the top edge of the flashing. Verify you have at least the minimum clearance to combustibles at the roofline.
7. Continue to add pipe sections until the pipe and the vent cap meet the minimum building code requirements, as outlined in No. 8 on the following page.
  - a) For multi-story vertical installation, a ceiling fire stop is required at the second floor and any subsequent floors. The opening should be framed to 10" x 10" inside dimensions as described in step No. 5.
  - b) Any occupied areas above the first floor, including closets and storage spaces, which the vertical vent passes through, must be enclosed. The enclosure may be framed and sheet rocked with standard construction materials, however, be sure to maintain minimum allowable clearances between the outside of the vent pipe and the combustible surfaces of the enclosure.

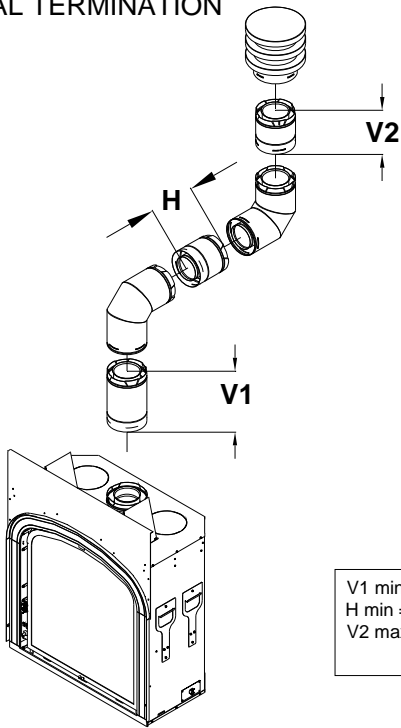
8. Height "H" of top of vent cap can be determined as follows:

ROOF PITCH	"H" DIMENSION	
	FEET	METERS
FLAT to 6/12	2	.6
7/12 to 9/12	2	.6
10/12 to 12/12	4	1.2
13/12 to 16/12	6	1.8
17/12 to 21/12	8	2.4

Figure 22

9. Complete installation with storm collar and vent cap.

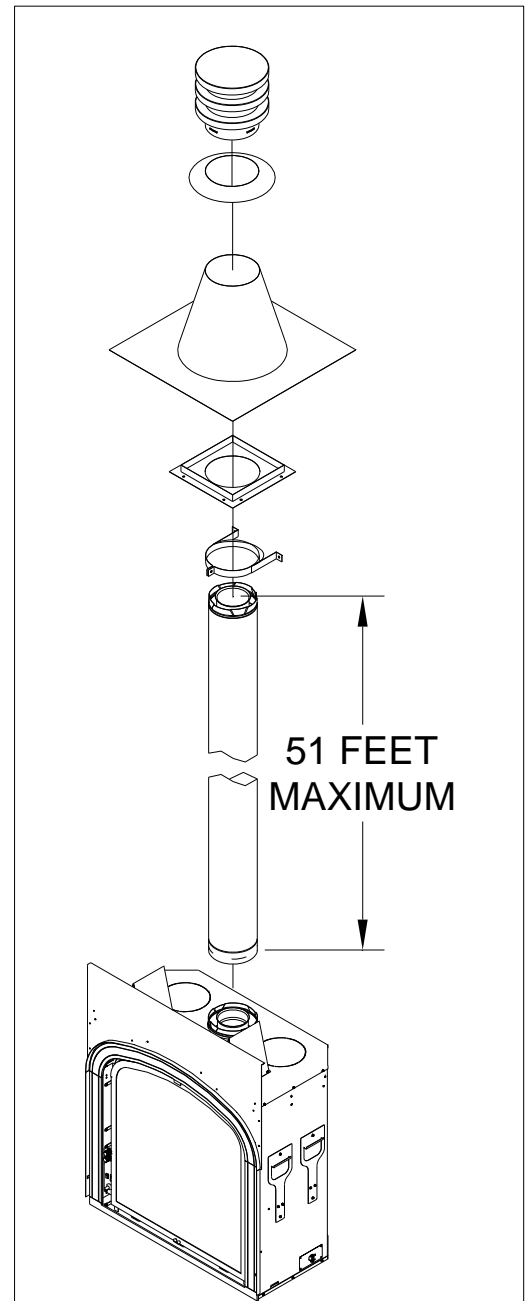
TWO(2) 90° ELBOWS  
WITH STARTER VERTICAL SECTION  
VERTICAL TERMINATION



V1	H
0"	3'
12"	9'
2'	14'
3'	19'
4'-25'	24'

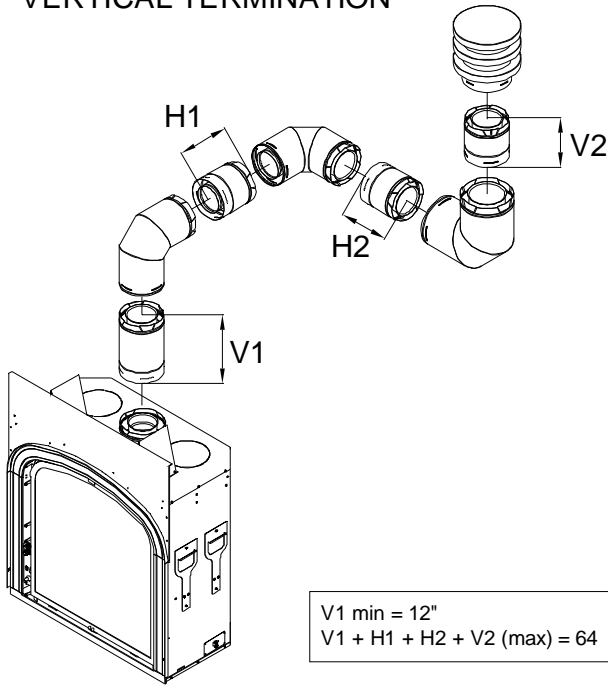
FOR 'V' GREATER THAN 40', SEE FIG15 ON P.21

V1 min = 0"  
H min = 0"  
V2 max = 51-V1



**THREE(3) 90° ELBOWS  
WITH STARTER VERTICAL SECTION  
VERTICAL TERMINATION**

Figure 23



V1	H1 + H2 max	V1 + H1 + V2 + H2 max
12"	6'	64'
2'	11'	64'
3'	16'	64'
4'-40'	24'	64'

FOR V GREATER THAN 40', SEE  
FIGURE 15 ON PAGE 21.

V1 min = 12"  
V1 + H1 + H2 + V2 (max) = 64'

**THREE(3) 90° ELBOWS  
WITH STARTER VERTICAL SECTION  
ALL ELBOWS IN HORIZONTAL DISCHARGE POSITION  
HORIZONTAL TERMINATION**

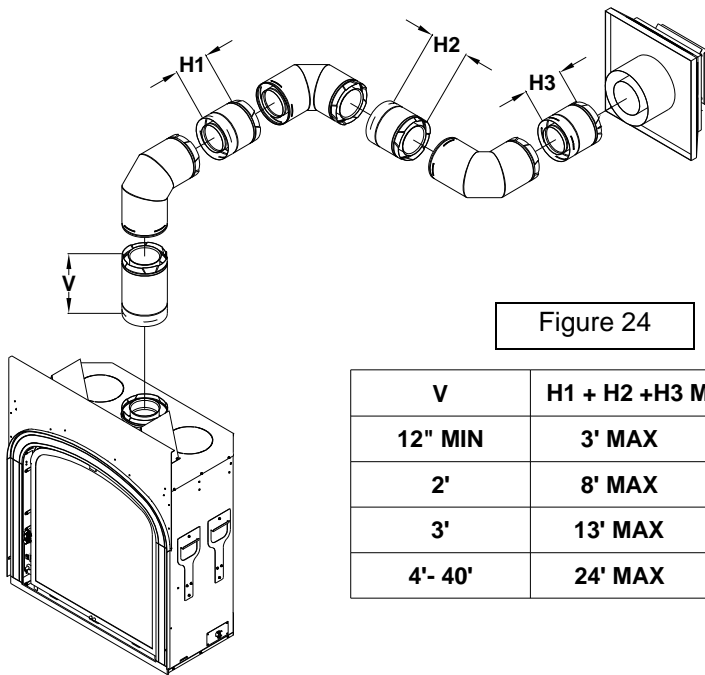


Figure 24

V	H1 + H2 + H3 MAX
12" MIN	3' MAX
2'	8' MAX
3'	13' MAX
4'- 40'	24' MAX

## VERTICAL THROUGH-THE-ROOF VENTING USING FOUR 90° ELBOWS

In extreme situations, Four 90° elbows may be required to reach a proper exit point for the vent system. Mendota has spent considerable time and effort in the design of this fireplace and its venting system. Through this effort, Mendota has been able to certify the use of Four 90° elbows.

**The use of Four 90° elbows must meet some minimum prerequisites.**

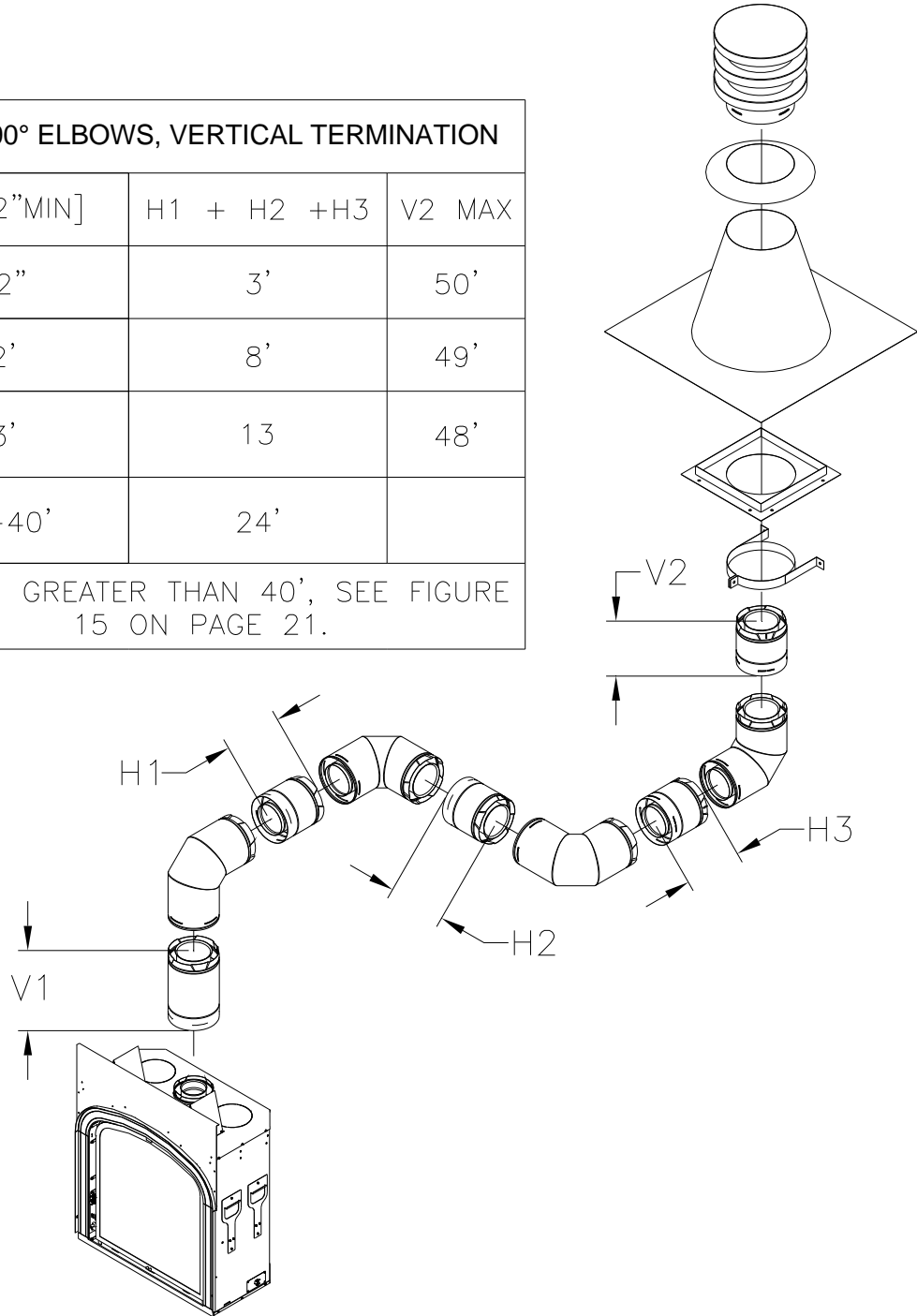
Prerequisite #1: The vent system must terminate vertically using a vertical vent cap.

Prerequisite #2: There must be a minimum 12 inches of vertical starter section connected directly to the top of this fireplace.

Prerequisite #3: For vertical starter sections less than 4 feet tall, you must reduce 6 feet off the maximum horizontal run allowed per Figure 15 on page 21, Zone A.

FOUR 90° ELBOWS, VERTICAL TERMINATION			
V1 [12"MIN]	H1 + H2 + H3		V2 MAX
12"	3'		50'
2'	8'		49'
3'	13'		48'
4'–40'	24'		

FOR V1 GREATER THAN 40', SEE FIGURE 15 ON PAGE 21.



## M-50 DOOR OPERATION

### TO REMOVE DOOR

1. Use the tool to disconnect the spring latches from the glass frame. Insert tool into hole in latch, pull towards you and up to disengage top latches, sideways to disengage side latches. **There are six spring latches; two on top and two on each side.**
2. With both hands, rotate glass frame away from unit a few inches.

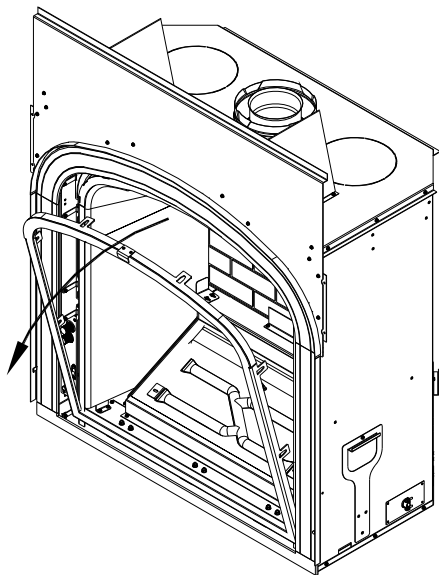


Figure 26

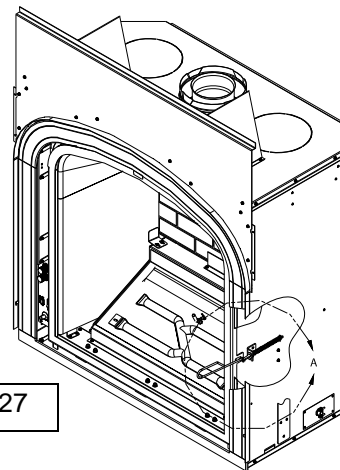
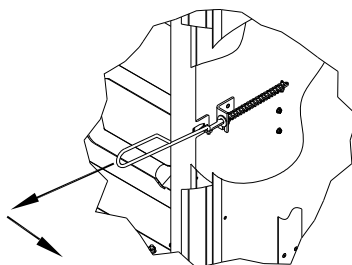


Figure 27

3. Pull glass frame straight up and away from unit.

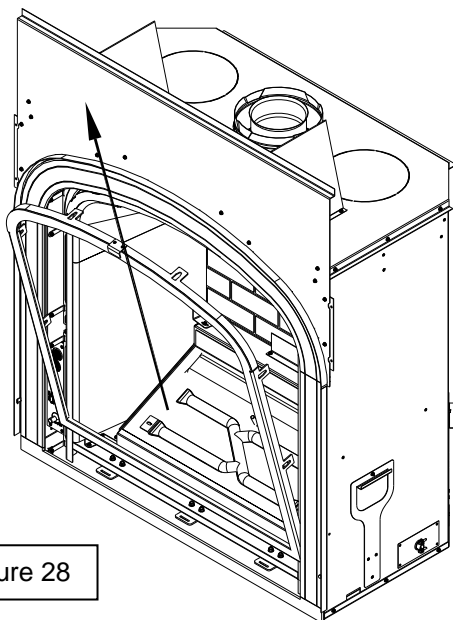


Figure 28

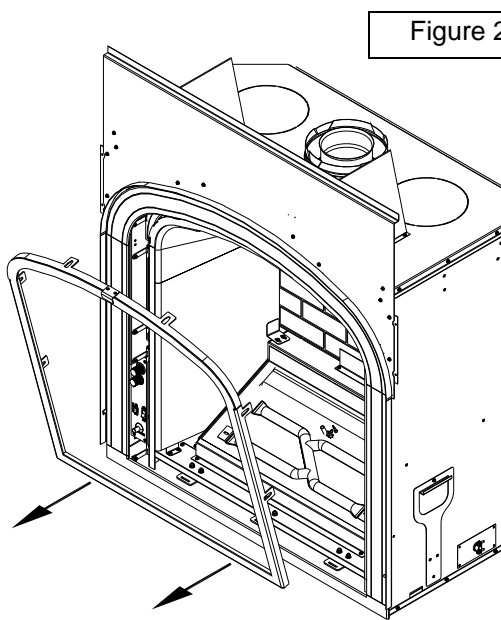
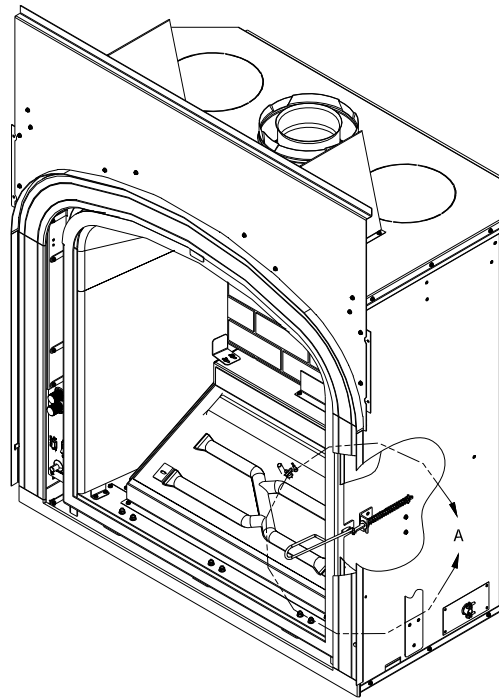
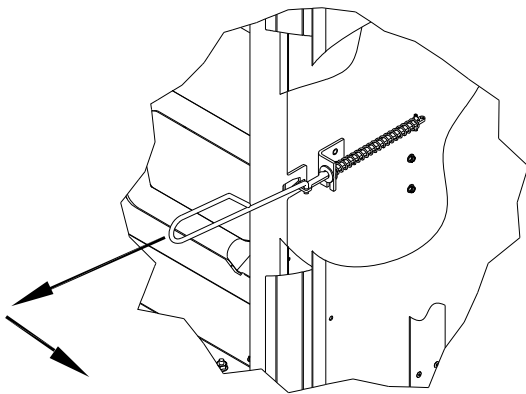


Figure 25

4. Door is now free from unit.

## TO REPLACE DOOR

1. Line up the three bottom tabs on glass frame with slots in glass clips on firebox bottom. Insert tabs into slots.
2. Center Glass Frame over Firebox; left to right.
3. After door has been placed into slots, rotate door towards firebox until gasket seal is touching the firebox frame.
4. Use the tool provided to connect the spring latches to the glass frame. Insert tool into hole in spring latch, pull latch towards you, then down into slot in glass frame until it catches.
5. Door is now connected and sealed to unit.



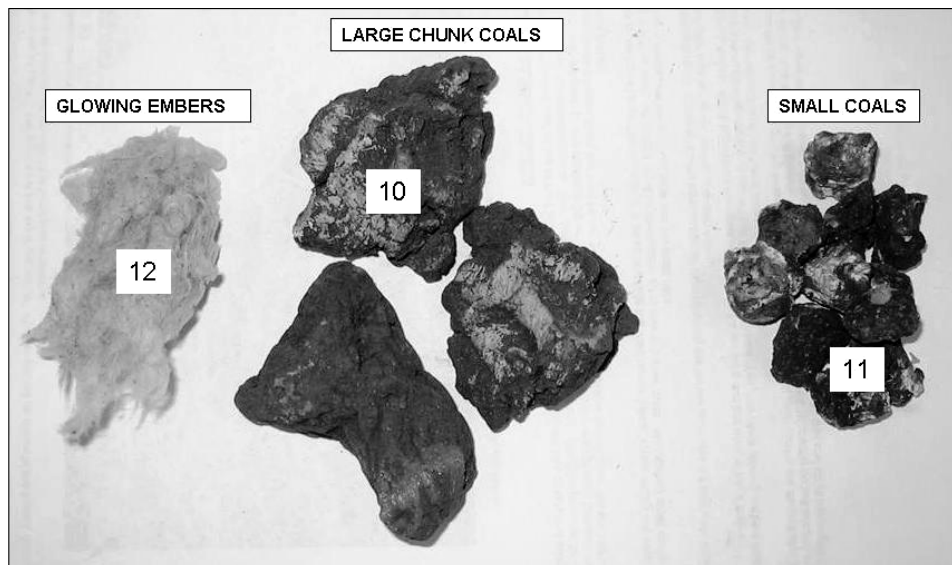
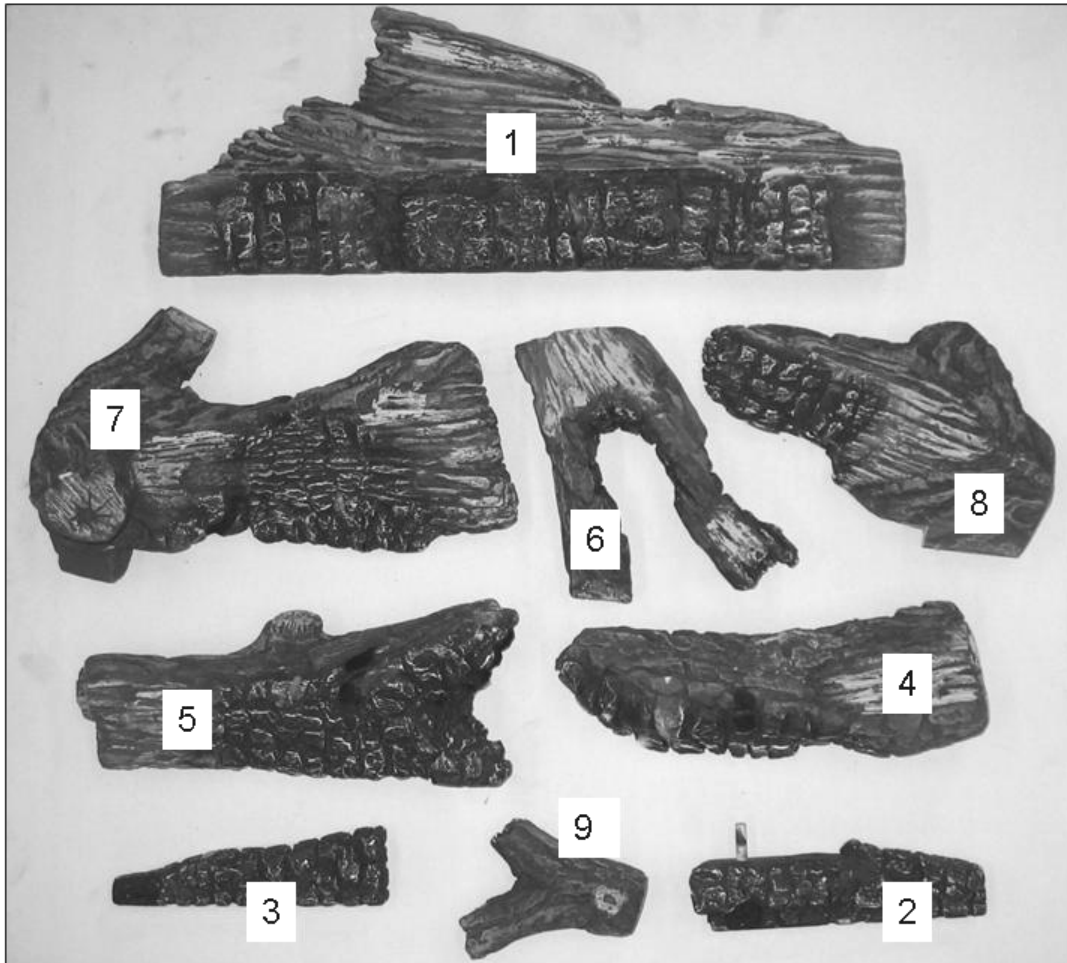


## M-50 LOG SET INSTALLATION INSTRUCTIONS

6. Cut the clear tapes and outer plastic wrap using a sharp utility knife or equivalent. Locate the 2 bags of coals, glowing embers and the log pieces. Identify each log piece numbered 1 through 7 and the Large Chunk coals (H), Small coals (I) and Glowing Embers (J) per the diagram show on this page.

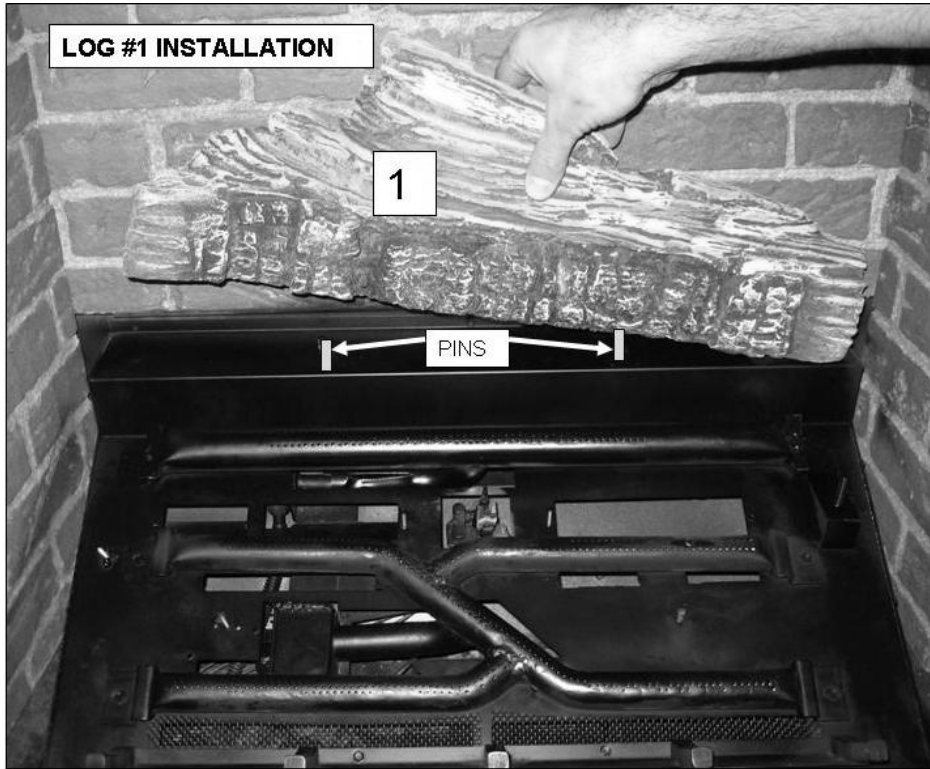
**CAUTION: LOGS ARE FRAGILE, HANDLE LOG PIECES WITH CARE.**

### **M50 LOG SET PARTS IDENTIFICATION DIAGRAM**



FOLLOW EACH STEP DEPICTED IN THE FOLLOWING DIAGRAMS TO INSTALL THE LOG SET.

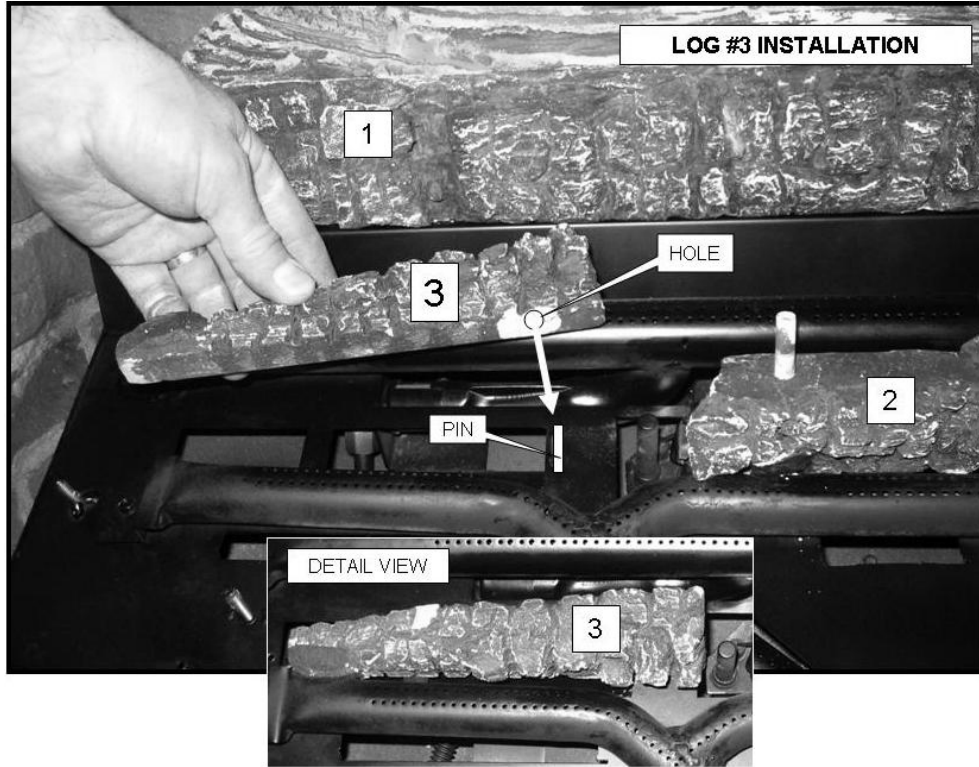
1. Identify two ¼" diameter Pins located on the top-most shelf of the burner airbox. Identify two holes located in the base surface of Log #1. Align holes in log with pins on the top-most shelf and set the log on that shelf.



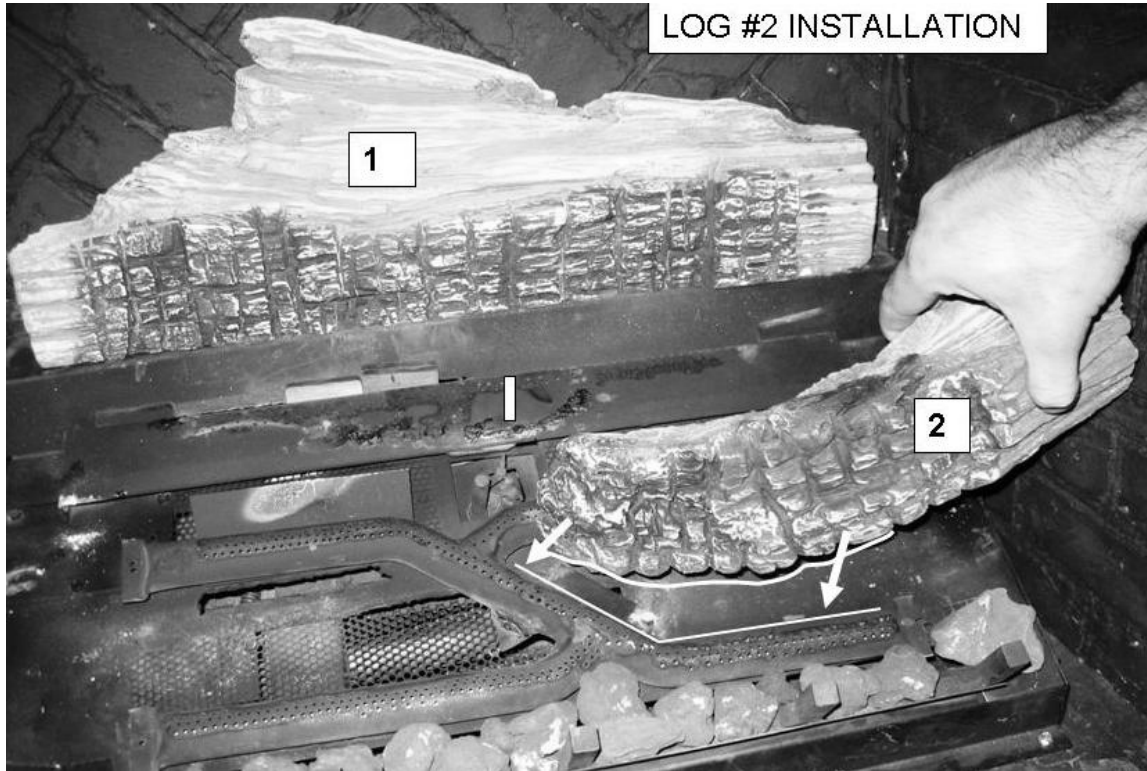
2. Identify Log #2. Log #2 installs between the rear burner and the middle burner, on the right side. Locate the hole in the base of Log #2. This hole aligns with a stud located to the right of the pilot light assembly. Set Log #2 as shown in the diagram, below, against the middle burner.



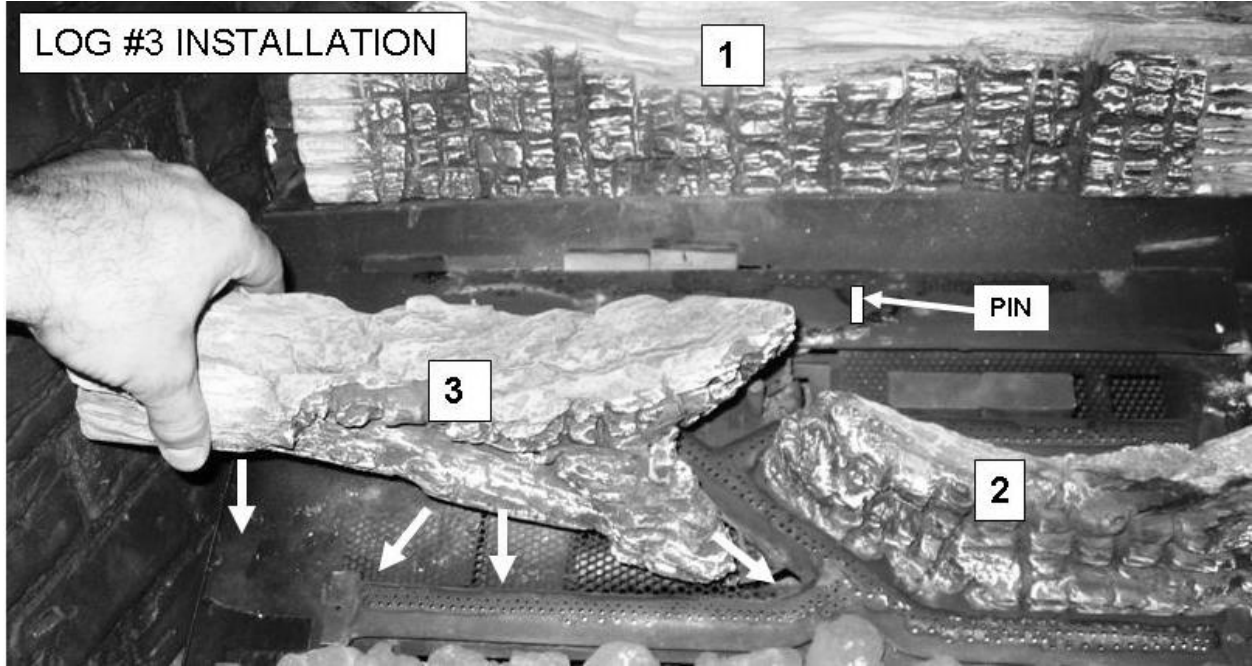
3. Identify Log #3. Locate the hole in the base of Log #3. This hole aligns with a stud located to the left of the pilot light assembly. Set Log #3 as shown in the diagram, below, against the middle burner and adjacent to the pilot light's Thermopile. Allow a 1/4" gap between right edge of Log #3 and the thermopile body.



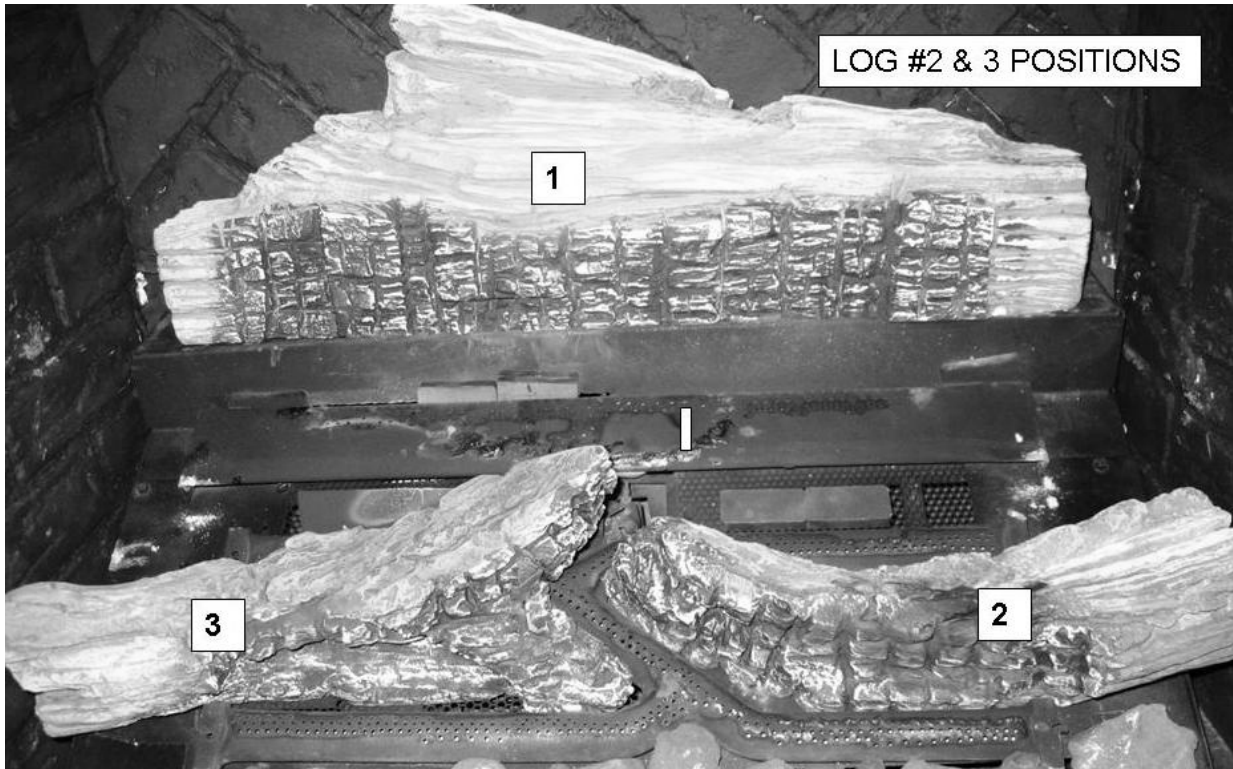
2. Identify Log #2 and the ¼" Pin Located on the right side between the middle and front burner legs. Log #2 has a hole in its base surface. Align this hole with the pin and set Log #2 between the middle and front burner legs as shown in the diagram, below.



3. Identify Log #3 and the ¼" Pin Located on the left side between the middle and front burner legs. Log #3 has a hole in its base surface. Align this hole with the pin and set Log #3 between the middle and front burner legs as shown in the diagram, below.

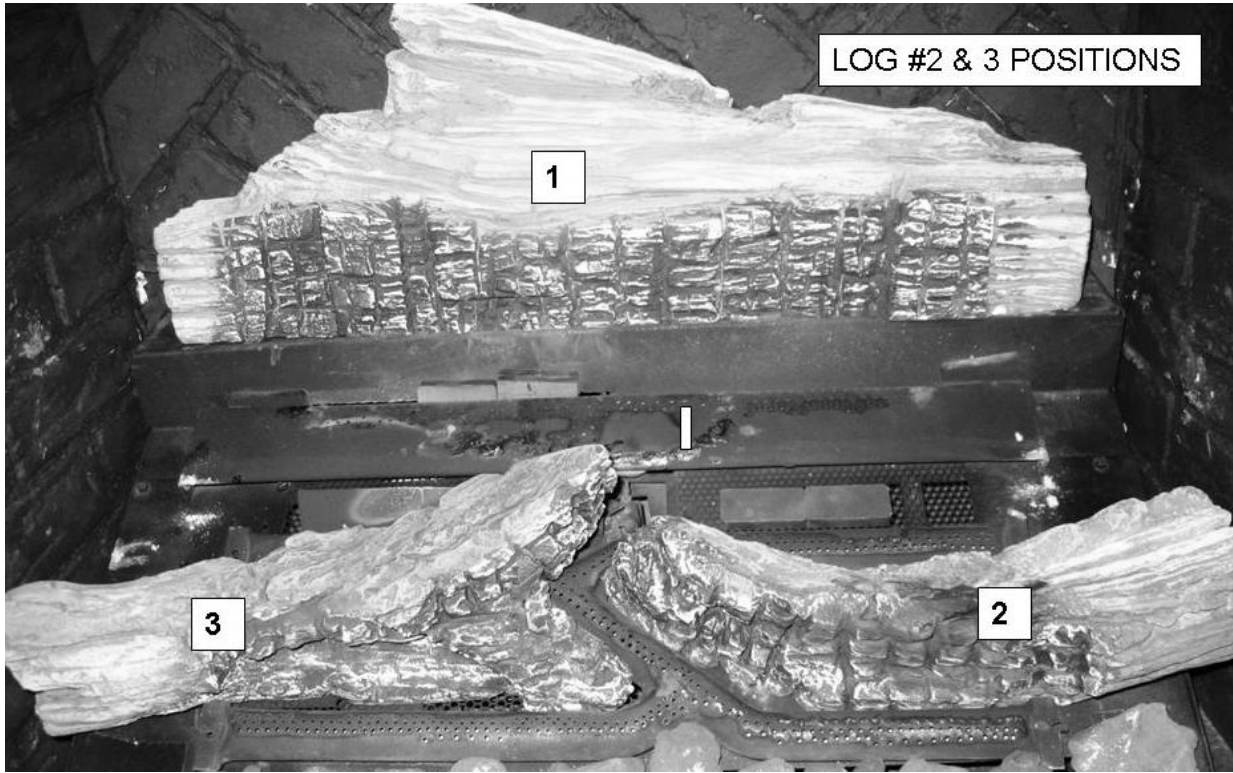


4. See Figure, below. Logs #1, #2 and #3 should be located as shown in this diagram relative to the burner legs.

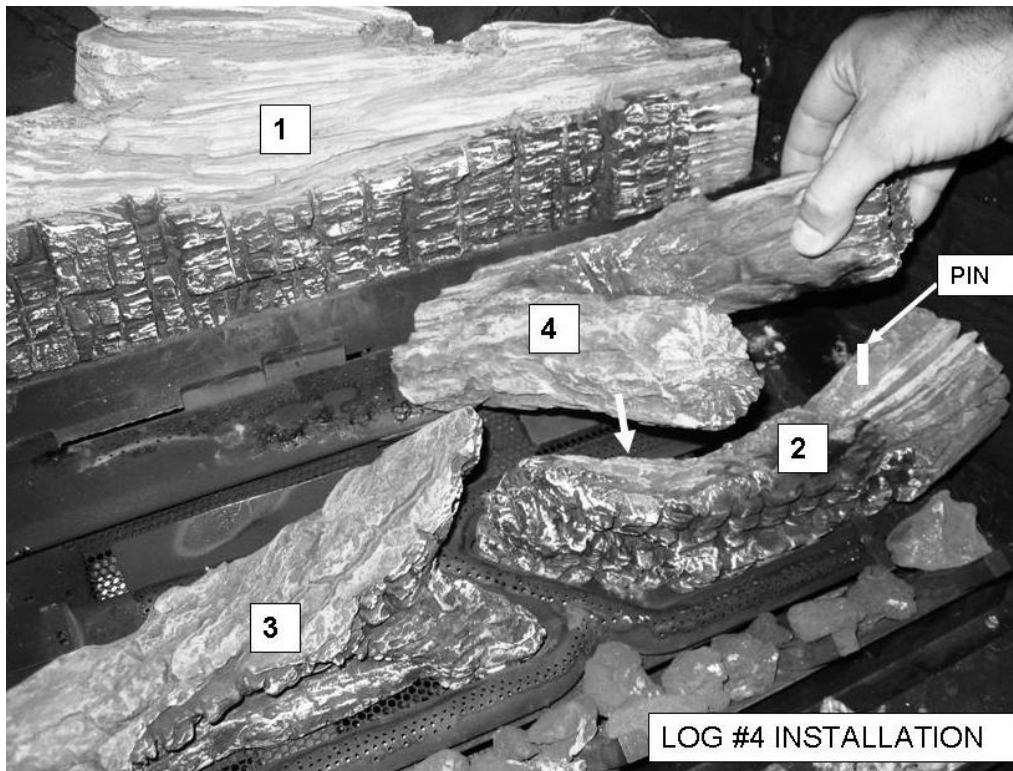




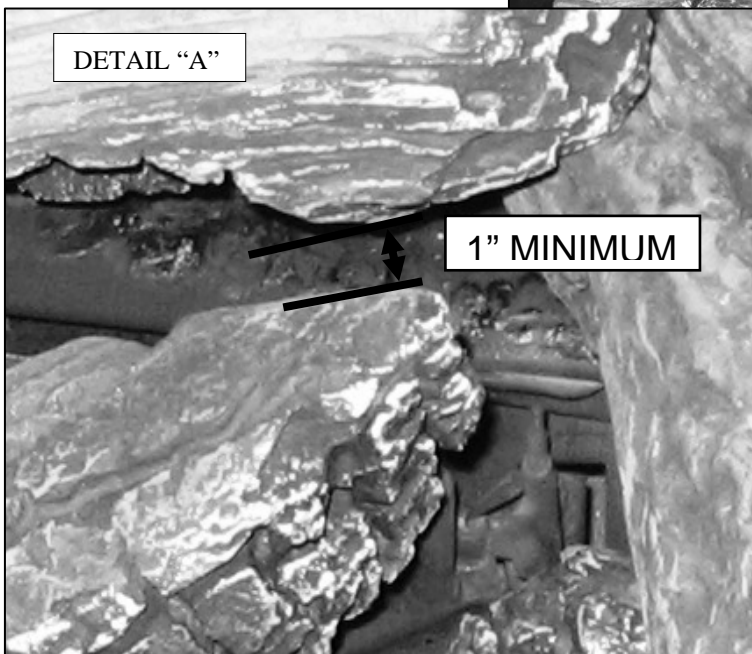
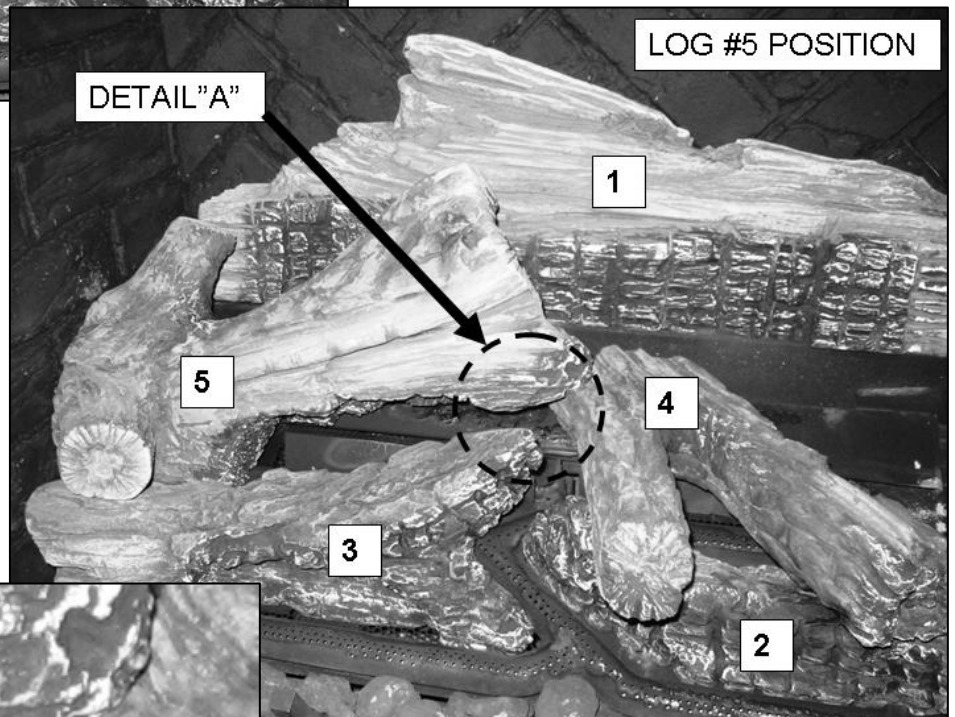
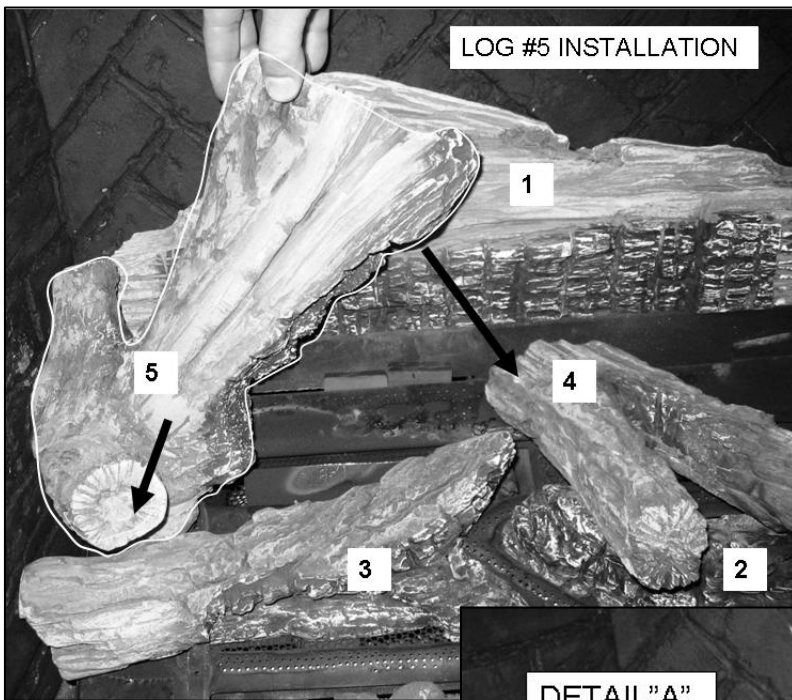
5. Identify the ¼" Pins located on the top surface of the Rear Burner and on the top surface of Log #2.



6. Log #4 has two holes in its base surface. Align corresponding holes and pins per diagrams in this page and set log #4 on top of Rear Burner and cross over Log #2.

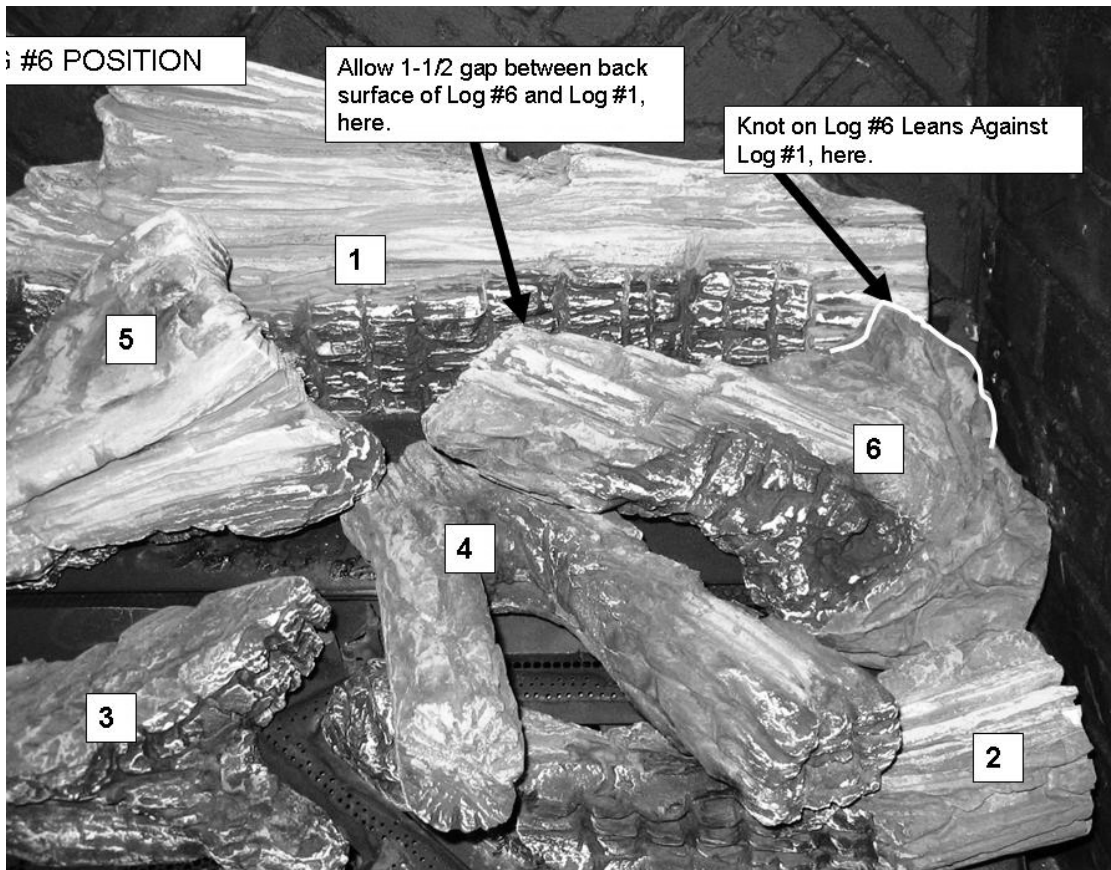
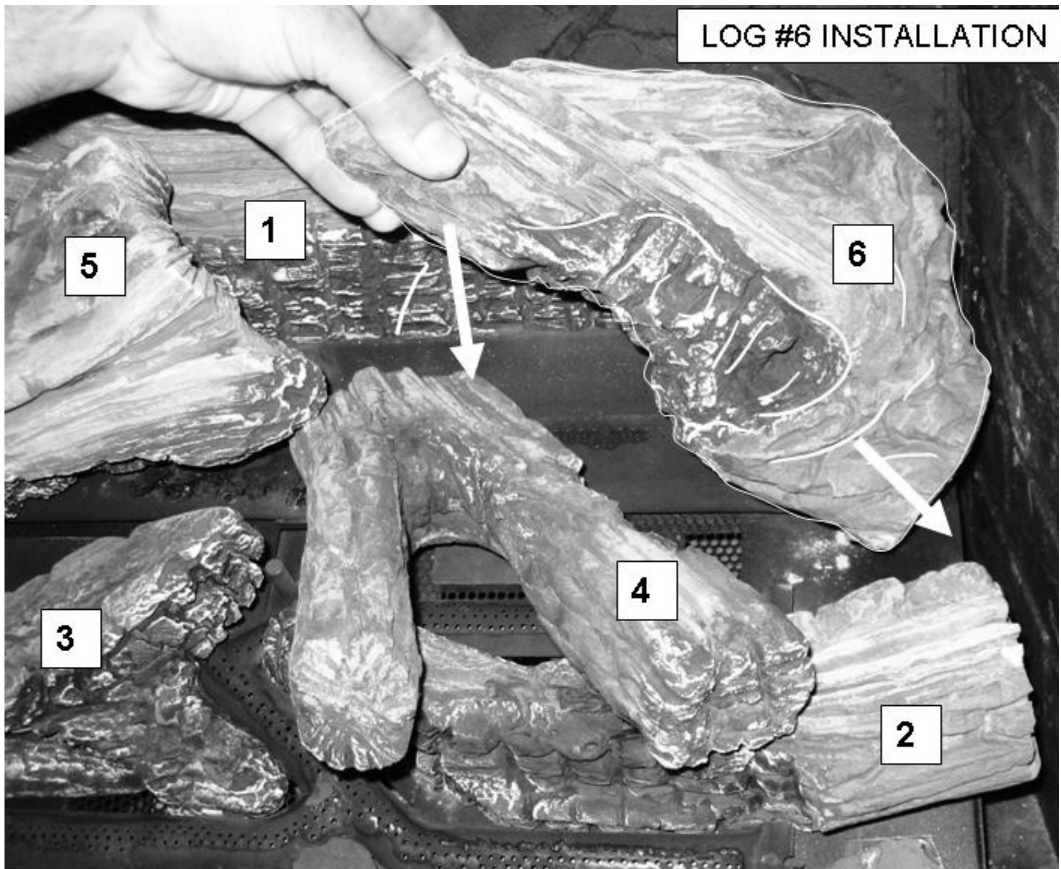


7. Log #5 should be placed by first setting its left end behind Log #3. The small branch on Log #5 will rest against Log #3.



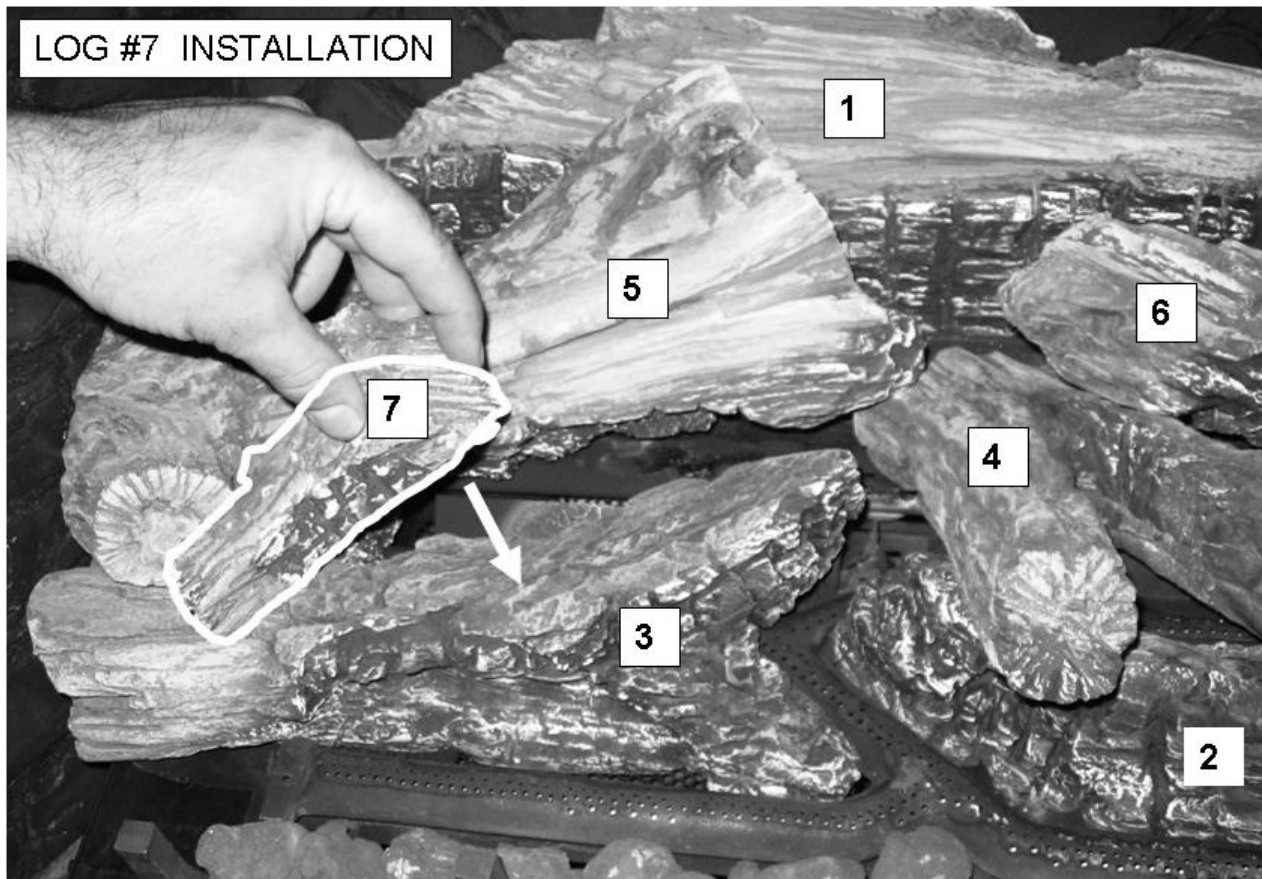
8. See Detail "A" in the Figure to the left. Maintain a 1" Gap between the front tip of Log #5 and Log #3.

9. Log #6 sits in the right corner inside the cavity created by Log #1, Log #2 and Log #4. Place the Right Bottom corner of Log #6 behind middle burner tube leg and in front of rear burner leg. The Left End of Log #6 sits on top of Log #4. The Knot on the right top of Log #6 leans against Log #1. Make certain that there is a minimum 3/4" gap between Rear Surface of Log #6 and Front Surface of Log #1 to allow flames to travel between these two logs.





10. Log #7 Sits on top of Log #3. The position of this log is not critical. Position this log as shown in the figures, below. Small variations in its position will not affect the flame characteristics.



11. When all log pieces are placed in the proper locations, the completed log set shall look as shown, below.

### **ADDING COALS AND GLOWING EMBERS**

Add Large Chunk Coals (8) in front and on top of front burner. Space them apart about ¼ inches side to side and bridge coals across the front burner in random locations. The coals should not plug any burner ports. This also provides for a cove under each coal that will glow red and create an attractive ember bed effect. If you provide large gaps between the large chunk coals and leave the gaps open, the front burner flames will yield random yellow flames along the front edge and between the coal pieces.

Spread small coals (9) on top of Large Chunk Coals to build up and hide the front burner tubes. When adding the small coals, space them ½ inches apart, left to right, to allow combustion air to flow to burner ports. Also spread small coals, randomly, on the floor between the firebox front edge and the grate bars.

Avoid packing small coals tightly. Doing so blocks combustion air from reaching the burner ports and will only yield blue front flames and red glow effects. Some sooting may also occur.

Loosely spread Glowing embers (Rock Wool) over the coals and the front burner tube and any area of the X-shaped burner tube. Loosely spread glowing embers on top of Rear Burner's Flat Surface. You may place glowing embers loosely on top of burner ports. Do not pack tightly on top of burner ports.

Do not use large and dense amounts of glowing embers in any area over burner ports. If taller flames are desired along front burner or rear burner, add thin layers of glowing embers over burner ports in that area. If sooting occurs around areas where coals or glowing embers are located, remove and allow more room in that area for gas and air to mix together properly.

The following Check-Off Lists must be completed prior to final operation of the Fireplace.

### **INSTALLATION CHECK OFF LIST**

- Co-axial vent rigid pipe, wall vent cap or roof vent cap must be installed by a Mendota approved person in accordance with instructions. All joints must be secured, "twist-locked" and leak-proof. 1000 °F sealant must be used on the inner pipe joints of all DuraVent pipe sections.
- Horizontal or vertical vent cap must be installed "**right-side-up**" and tightly sealed to structure per instructions. Vent Caps must be Mendota approved.
- Proper exterior and interior clearances for vent systems and locations for wall vent cap/roof vent cap must be maintained.
- Carefully check for correct gas pressure, proper size gas lines and for gas leaks.
- 115 V electrical service and gas supply must be installed in accordance with instructions and local and national codes.

### **LIGHTING CHECK OFF LIST**

- All items on "Installation Check Off List" (see above) must be completed.
- Connect thermostat to speaker terminal panel next to gas valve.
- System millivolt readings must be taken by a qualified installer. CAUTION: Pilot flame must register a minimum of 325 millivolt.
- Check air shutter opening - 0" to 1/4" Nat. gas or 1/4" to 1/2" LP gas.
- Carefully follow all Lighting and Log Installation Instructions.
- Make certain that burner lights immediately and flame runs promptly around "curve" in burner and lights entire burner. DO NOT proceed with operation unless burner cycles "on/off" without delays.
- Make certain that the flame is "stable" and does not "lift" off burner. If flame lifts off burner, turn unit off and check that all vent pipes are "twist locked" and leak proof, the vent cap is "right side up" and that 1000 ° Sealant has been used on the inner pipe joints of all DuraVent pipe sections. DO NOT proceed with operation if flame is "lifting off" burner.  
**Note: Do not separate telescoping sections. They must be used as complete assemblies.**
- Make certain glass door is in proper closed position and "centered" in firebox opening.

## LIGHTING INSTRUCTIONS

**IMPORTANT:** Be sure all items on "INSTALLATION CHECK OFF LIST" (PG. 44) have been completed!

**CAUTION:** If the pilot goes out, be sure to wait a minimum of five minutes before relighting - be sure to always remove the glass before relighting the pilot.

1. Remove glass door - ALWAYS LIGHT PILOT WITH GLASS REMOVED!
2. Make sure any gas supply shut-off cocks are open and Thermostat is "OFF".
3. Push in Gas Cock Dial Slightly and turn clockwise to "OFF".
4. Wait five (5) minutes to allow gas which may have accumulated in main burner compartment to escape. If you smell gas, STOP.

**NOTE:** Dial cannot be turned from "PILOT" to "OFF" unless dial is pushed slightly. DO NOT FORCE!

5. Turn Gas Cock Dial Counterclockwise to "PILOT" position.
6. Depress Gas Cock Dial and push in red Piezo igniter button. Once pilot ignites, continue depressing dial for about ½ minute. If pilot does not remain ignited, repeat operation allowing a longer period before releasing Gas Cock Dial.

7. After pilot is lit, turn Gas Dial to "ON".

**IMPORTANT:** After pilot is lit, a qualified installer should take system millivolt readings and measure gas input and output pressures. **Pilot flame must register a minimum of 325 millivolts.**

8. Push Main Burner ON/OFF switch to "on" position. Burners should light immediately.
9. If Rear Burner does not light, Push Rear Burner ON/OFF switch to "on".
10. Push MAIN BURNER ON/OFF SWITCH to ON then OFF to "cycle" the burner on/off to make certain it ignites promptly and that the flame runs smoothly around burner curves and promptly lights both burners.

11. With pilot operating, install log module and coals (see PG. 34). With logs/coals in place, "cycle" the burner again to make sure of prompt ignition of burner and that the flame runs smoothly around entire burner. **NOTE:** Logs will produce a strong, acrid odor on initial contact with flames.
12. Reinstall glass frame by lining up tabs on the bottom of glass frame over slots on glass clips, which are mounted to the firebox floor. Then "swing in" upper edge of glass frame. Carefully pull up and towards you the four (4) spring loaded clips located on the top and both sides of the firebox and guide into slots on glass frame.

13. NOTE: Be sure doorframe is "centered" in firebox opening.

14. Turn Gas Dial counterclockwise to "ON" then set Thermostat or push Main Burner ON/OFF switch to turn on burners. Main burner should now light IMMEDIATELY and flame should not "lift" off burner. If there is any delay in ignition or if flame is "lifting off" burner, turn off burner and carefully check for proper installation of logs/coals, vent system and proper pilot flame impingement on burner and thermopile. Logs or coals must not block pilot flame or main burner flame. Vent system must be leak proof. **DO NOT PROCEED WITH OPERATION UNLESS BURNER "CYCLES" ON/OFF WITHOUT DELAYS!**

15. To reduce heat output, turn Hi/Lo Knob counterclockwise to desired temperature (see FIGURE 30).

16. Heat output can be reduced to 6,750 BTUH using the Hi-Lo Control. NEVER "over fire" by increasing BTUH above nameplate specifications. NEVER turn down (reduce) pilot flame to yield thermopile voltage below the minimum 325 millivolts.

17. To reduce the flame and heat down to 6,750 BTUH use the Rear Burner On/OFF Switch to turn off rear burner.

**NOTE:** The rear burner is controlled by a 9 Volt DC solenoid valve. One 9 Volt cell battery (located behind the control panel) provides power for this unique feature. Replace with a new high quality 9 Volt battery annually.

18. Open windows for first four hours of operation.

FIGURE 30: Gas Valve

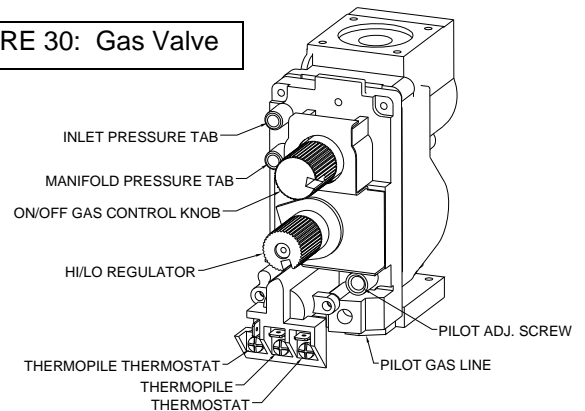
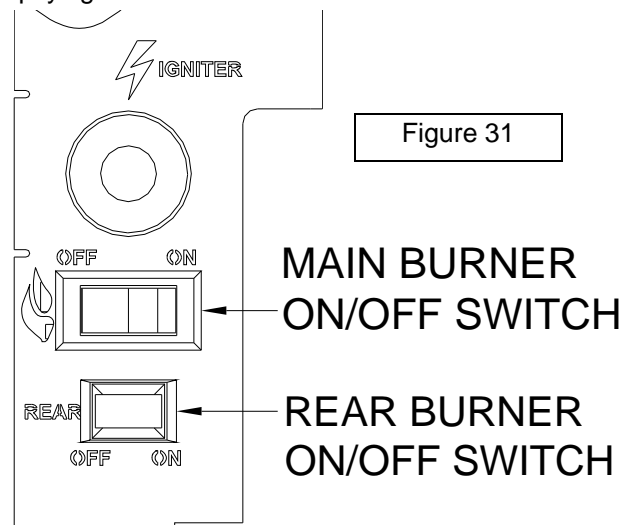


Figure 31



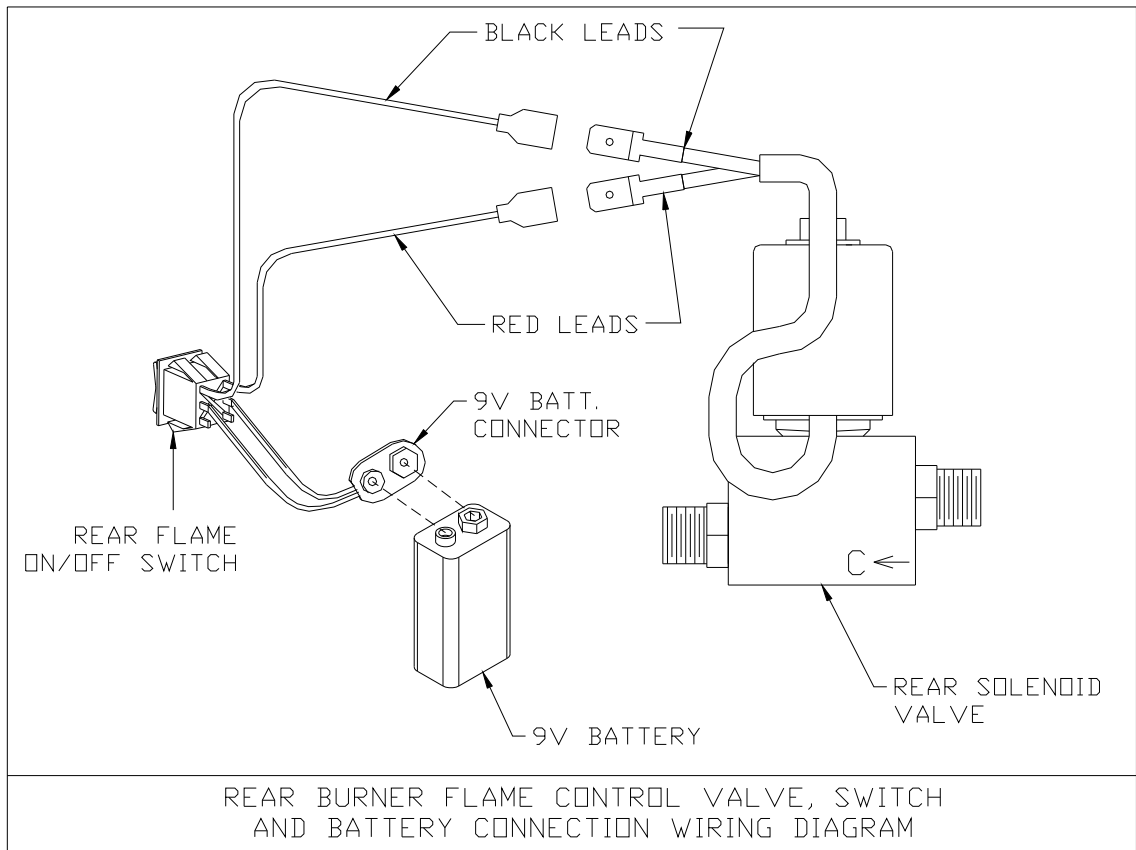
**NOTICE:** Initial heater start-up will cause some NON TOXIC "off gassing" of adhesives, gasket binders, paint and other materials. Most nuisance odors will be eliminated after the first two hours of operation; however, slight amounts may be present during first 24 hours of initial operation. To eliminate all nuisance odors, continuously operate this fireplace on the HIGH setting for 6 to 8 hours.

**SHUT DOWN PROCEDURE:**

1. Turn Remote Control, Thermostat and Main Burner ON/OFF Switch to "OFF". Pilot will remain lit for return to normal service.
2. For complete shutdown turn Gas Cock Dial to "OFF".

**WARNING:** Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

Figure 32



## THERMOSTAT OPERATION AND WALL SWITCH KIT CONNECTIONS

A millivolt rated wall thermostat is supplied with this fireplace. The thermostat should be placed in the same room as the fireplace, approx. 4-5 ft. off the floor (out of reach of children). DO NOT place thermostat within 8 feet of this fireplace or on an outside wall.

**CAUTION:** Burner should light immediately after turning thermostat "on". If burner does not come **on** immediately, turn the thermostat **off** and wait 60 seconds before turning on again. If burner does not come **on** immediately after second try recheck complete installation of logs, pilot, vent system, etc. To insure proper pilot flame impingement on the thermopile, log and coals positioning and prompt burner ignition. Do not operate fireplace if burner does not light immediately. Call service technician.

### NEVER TURN BURNER ON & OFF "QUICKLY" - ALWAYS WAIT 30 SECONDS!

When using remote control, be sure to hold in button firmly until unit lights. DO NOT push button and release quickly before burner lights. Burner should light IMMEDIATELY and then button can be released. If unit does not light immediately, release button, wait 60 seconds and repeat lighting procedure. If burner does not come on immediately after second try recheck complete installation. If necessary, contact your Mendota dealer.

**CAUTION:** THIS CONTROL IS A MILLIVOLT SYSTEM. NO ADDITIONAL POWER SUPPLY CAN OR SHOULD BE USED.

NOTE: If thermostat is located over 25 ft. from fireplace the pilot flame may need to be increased to provide thermopile output up to 750 millivolt.

**Use two-wire, solid copper lead wires per chart and install as shown in the diagram below.**

**NOTE: Thermostat Must Be 460-750 Millivolt Rated**

**CAUTION:** THIS CONTROL IS A MILLIVOLT SYSTEM. NO ADDITIONAL POWER SUPPLY CAN OR SHOULD BE USED.

RECOMMENDED MAXIMUM LEAD LENGTH (TWO-WIRE) WHEN USING WALL THERMOSTAT (CP-2 SYSTEM)	
WIRE SIZE	MAX. LENGTH
14 GA.	100 FT.
16 GA.	64 FT.
18 GA.	40 FT.
20 GA.	25 FT.
22 GA.	18 FT.

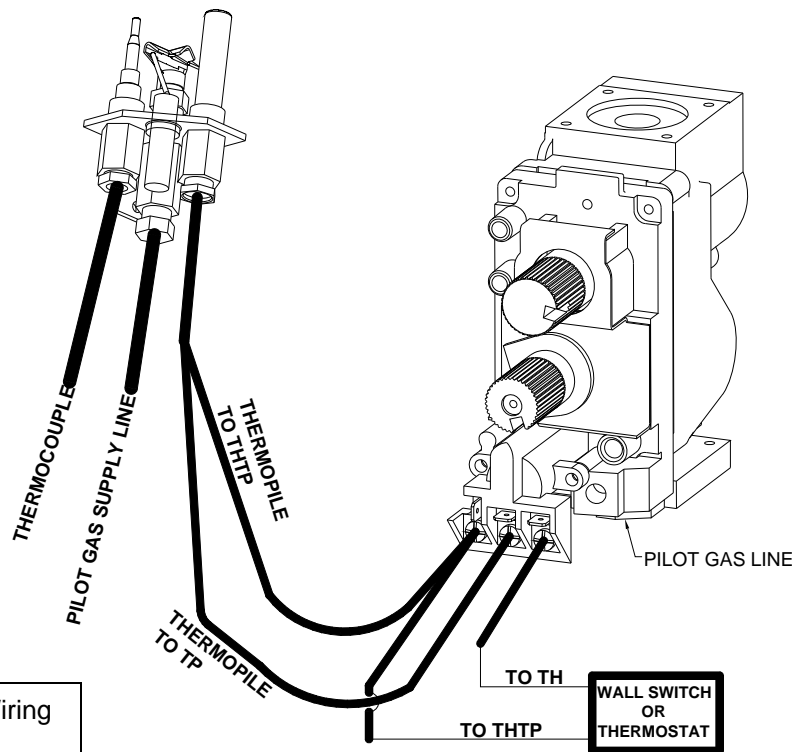


Figure 33: Thermostat Wiring

## **MAKING WIRE CONNECTIONS TO WALL SWITCH KIT #AA-11-00873 and #AA-11-00874**

Wall Switch Kits #AA-11-00873 and 874 are options and may be installed to remotely control various functions of this fireplace. Wall Switch Kits #AA-11-00873 and 874 provide the following remote functions on your Mendota Fireplace:

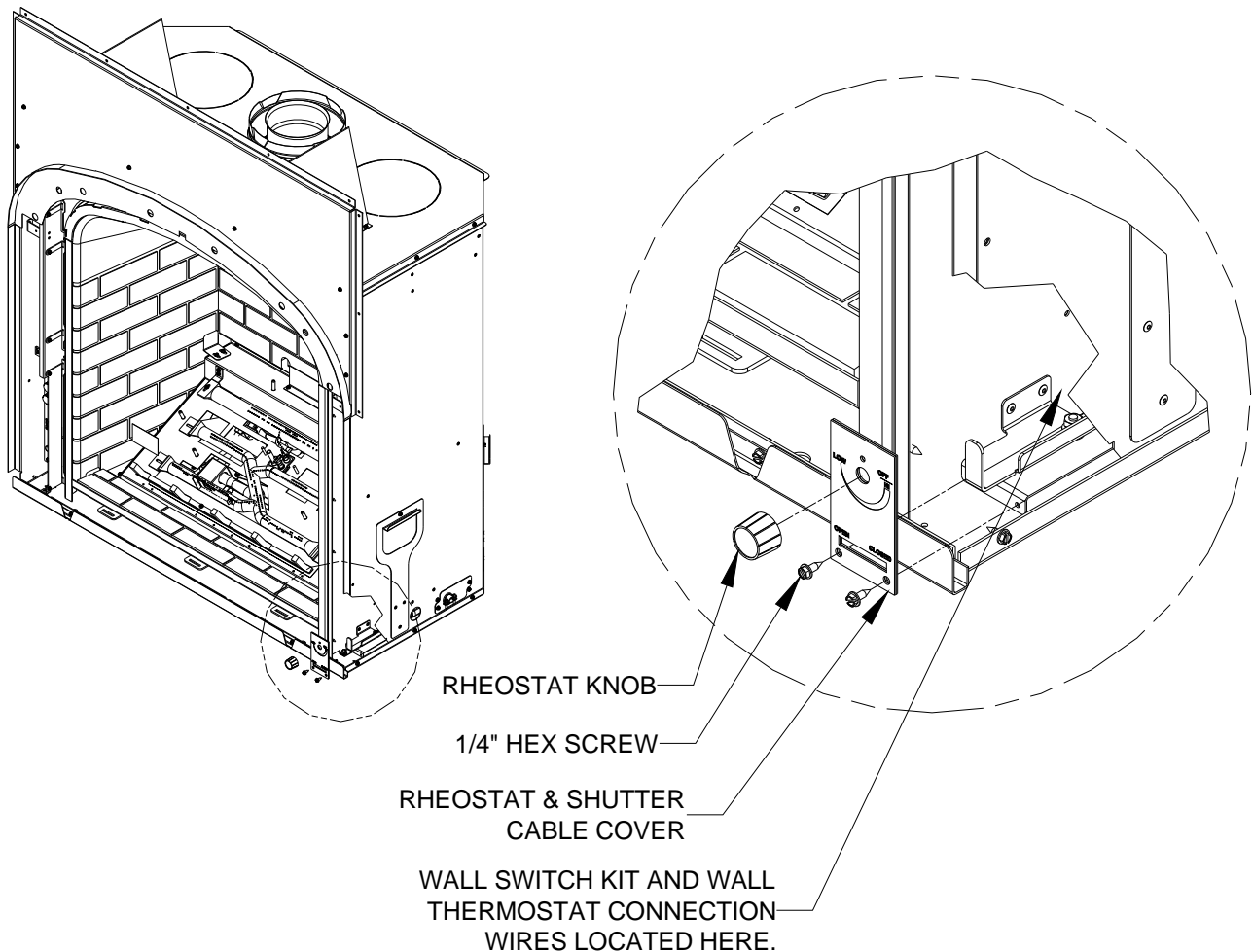
1. Thermostatic control of this Gas Fireplace.
2. ON and OFF control of the Main Gas Valve.
3. ON and OFF control of the Rear Burner Flames.
4. Variable Speed control of the convection air blower.

**NOTE:** Digital wall switch kits #AA-11-00873 and 874 provide thermostatic control of the fireplace. Contact your Mendota Dealer for detailed information and availability of these thermostatic hard-wired and RF switch kits.

Wire Connections are located on the right side of this fireplace, behind the Rheostat & Shutter Cable Cover. See Figure 34. Wire connections for the AA-11-00873 and 874 are simplified using a 12 pin block connector. Follow instructions supplied with Wall Switch Kits #AA-11-00873 or 874.

**NOTE:** All internal components of this gas fireplace, gas valve, rear burner solenoid and blower are pre-wired in the factory to the 12 pin block connector. No internal wiring modification is required to connect the AA-11-00873 or 874 Digital Wall Switch Kits to the M-50 Fireplace. Simply connect the transformer block of the AA-11-00873 or 874 kit to the 12 pin block connector provided in this gas fireplace.

Figure 34



## BLOWER SYSTEM INFORMATION

**WARNING: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.**

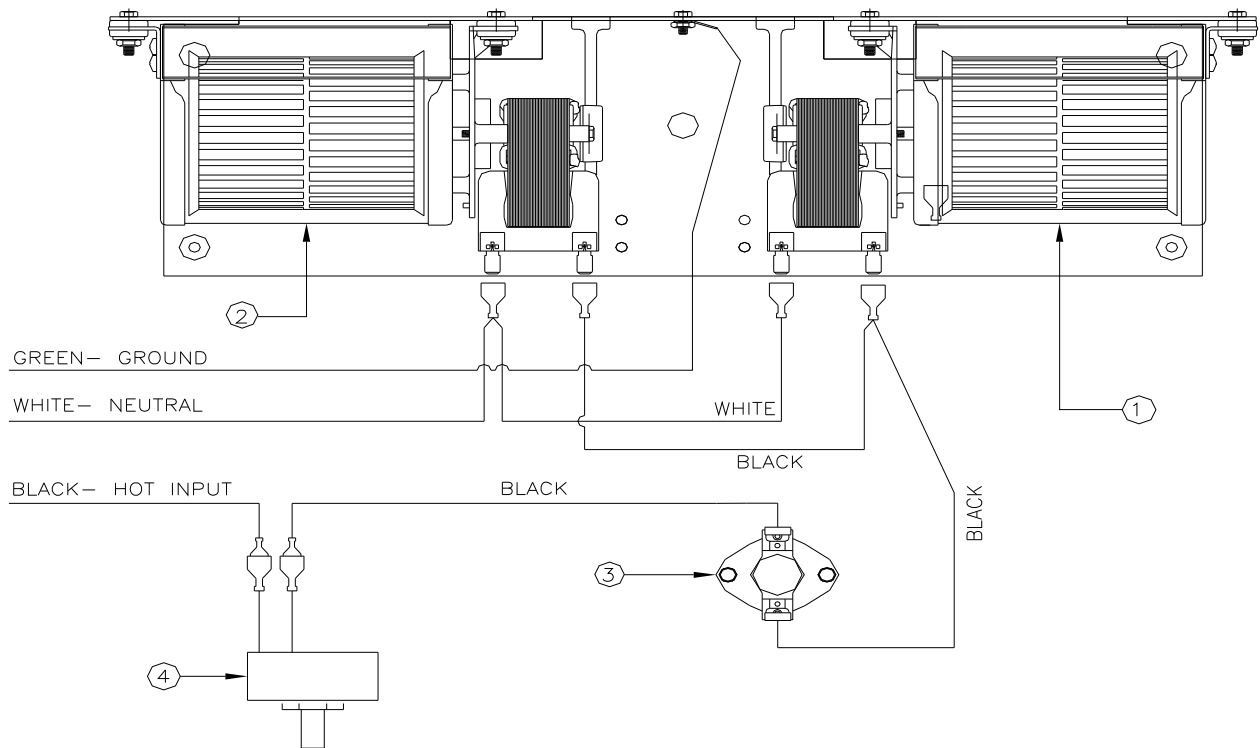
Dual blowers are provided as standard equipment with this M-50 fireplace. The dual blowers have an air output rating of 210 CFM (in free air). This fireplace is designed to operate with the blowers turned OFF or ON. Turning the blower on increases the overall efficiency of this fireplace and aids in distributing and circulating heat to the room this fireplace is installed in.

### **BLOWER OPERATION**

The blower speed control (rheostat) supplied with this blower system can turn the blowers ON or OFF and infinitely regulate the speed of the blowers. The blower output can be regulated by turning the rheostat knob..

NOTE: There will be a time delay in blower operation during "heat-up" (approx. 15 minutes) and extended blower operation during "cool-down" of unit (approximately ½ hour).

Figure 35: BLOWER WIRING DIAGRAM



M-50 BLOWER KIT REPLACEMENT PARTS LIST			
ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	1	15-02-00064	BLOWER, RIGHT HAND, J238-100-10101
2	1	15-02-00065	BLOWER, LEFT HAND, J238-100-10100
3	1	05-01-00157	SNAP DISC
4	1	10-01-00046	RHEOSTAT w/ OFF

## TROUBLE SHOOTING THE M-50 FIREPLACE

SYMPTOM	PROBABLE CAUSES	CORRECTIVE ACTION
1. Thin black coating (soot) forms on viewing glass.	A. Incorrect gas pressure B. Not enough combustion air	Have gas supplier check for correct gas inlet pressure (7" W.C. Nat. Gas; 11" W.C. LP Gas). If sooting continues, open air shutter on burner (see "Gas Flame Adjustment" below). If sooting still continues, shut off unit and call Mendota service person. <b>NOTE:</b> To clean glass - remove glass and wipe glass with cloth or paper towel.
2. Humming or whistling coming from Fireplace.	A. Normal operating noise.	Some noise is normal. It is caused by the gas supply flowing through the gas orifice. It is expected from any gas fireplace. Turning the Hi/Lo Knob on the control can reduce the noise. Turning down the flame will reduce the heat output of the unit.
3. A change in flame appearance or burner operation.	A. A change in gas pressure. B. Carbon dirt or lint.	Have your gas supplier check for correct gas 7" W.C. Nat. Gas; 11" W.C. LP Gas). If flame still needs adjustment see "Flame Adjustment" below. Clean out carbon, spider webs, lint, etc. from shutter area. Logs and burner. <b>NEVER BLOCK AIR INTAKE OR OUTLET VENTS.</b>

### FLAME APPEARANCE ADJUSTMENT- AIR SHUTTER ADJUSTMENTS

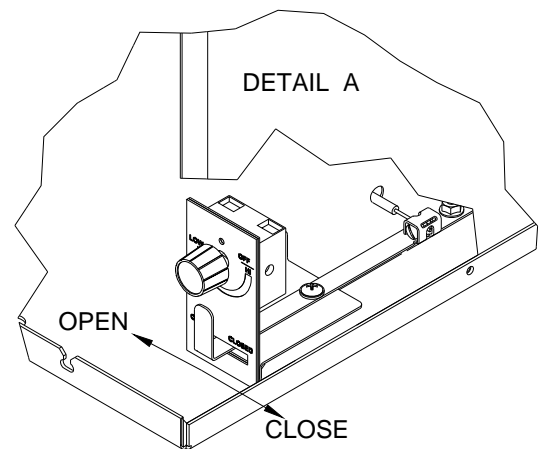
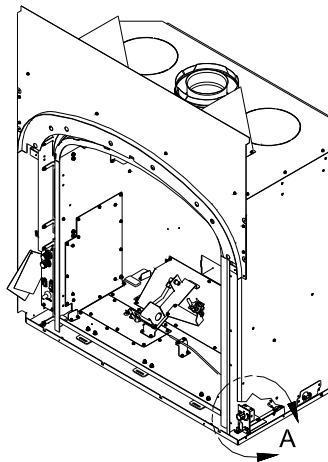
Be sure burner and logs are properly installed (see M-50 Log Set Installation Section). After burner has been properly installed and operated for one hour, small additional adjustments to the air shutter may be necessary for final flame appearance. These small shutter adjustments can be made by following these procedures:

**NOTE: Very small changes in shutter settings make major changes in flame appearance. Start with the rear burner air shutter set at 1/8" open for NG and 1/4" open for LPG. Front burner shutter can be manipulated with the fireplace operating. Rear burner shutter cannot be adjusted while the fireplace is operating. It is necessary to adjust the rear burner shutter when the fireplace is turned off and cool.**

1. The front burner air shutter adjustment lever is located behind the right side access door. The shutter control lever controls the front burner flames only. Slide the lever to the "left" to open and to the "right" to close the front burner shutter. Opening the shutter will yield shorter and blue(er) flames and closing the shutter will yield taller and yellow(er) flames.

Figure 36: Air Shutter

2. Light pilot; install logs and glass, and burn unit for 1/2 hour.
3. If flame is too "blue" slide Air Shutter Control Lever to the "right" until flame turns yellow.
4. If flame is too "orange" or is causing sooting, slide Air Shutter Control Lever to the "left" until flame begins to turn blue. **NOTE:** If sooting does not stop, turn off fireplace & call a Mendota Service Person.



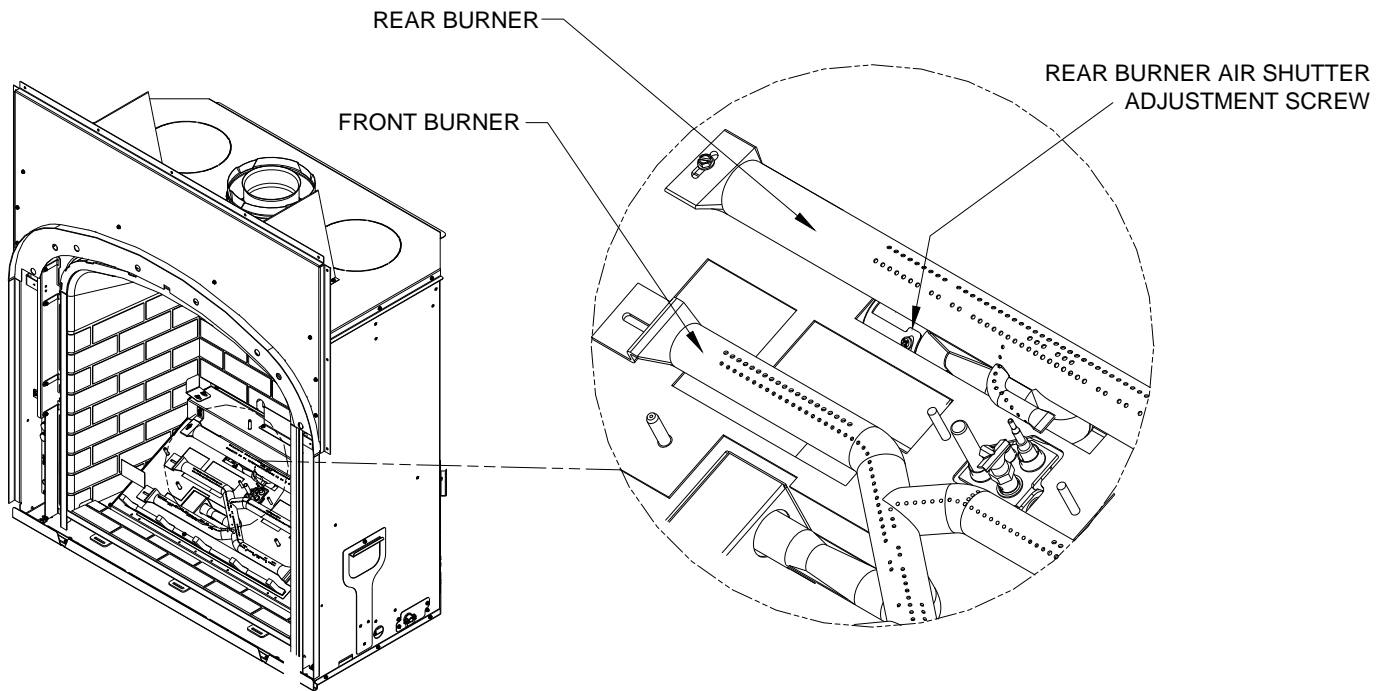
**IMPORTANT:** Try each new shutter setting for approx. 1/2 hour before making additional changes.

**NOTE:** Changes in front burner flame can be made by re-arranging the coals as well. Densely packed coals will yield more glow and blue flames. Loosely packed coals will yield less glow and yellow flames.

**CAUTION:** Any changes in pilot flame size must be made by qualified person and checked with a voltmeter.



5. The rear burner air shutter must be manually adjusted after removing the glass door and loosening a screw that secures the rear burner shutter. The rear burner air shutter adjustment screw is located near the rear burner orifice. See diagram, below.
6. Loosen the screw and rotate the air shutter open or closed as desired to achieve the desired flame pattern.
7. For NG applications, start with the rear burner air shutter open 1/8". For high altitude applications, air shutter may need to be open further.
8. For LPG applications, start with the rear burner air shutter open 1/4". For high altitude applications, air shutter may need to be open further.



## **CUSTOMER INFORMATION**

### **MAXIMUM ALLOWABLE SURFACE TEMPERATURE**

Mendota Fireplaces comply with UL Standards for maximum surface temperatures on exposed combustible surfaces adjacent to the unit. The Maximum allowable surface temperature is 117° F. over ambient (room) temperature. Thus, if a room is 70° – 80° the exposed combustible surfaces immediately surrounding the Fireplace can have a surface temperature as high as 187° F. – 197° F. (Too hot to touch). This fireplace is certified to keep all adjacent surfaces close to this fireplace within the allowed temperature limits as long as all clearances to such surfaces are provided as required in this manual.

### **OVER FIRING OF BURNER**

NEVER "over fire" units by adjusting gas pressure or drilling out the orifice to increase BTUH above nameplate specifications. Over firing can cause permanent damage to firebox and deterioration of parts and void warranty.

### **MAINTAINING CORRECT PILOT-FLAME -- PILOT OUTAGE & RELIGHTING**

The pilot flame must be checked with millivolt meter and must always be a minimum of 325 millivolt.

Never lower (reduce) pilot flame below this minimum 325-millivolt setting. If pilot flame goes out, always wait 5 minutes before relighting. Always remove glass when lighting pilot.

### **CLEANING VIEWING GLASS**

The viewing glass should be cleaned periodically. Exterior glass surface may be cleaned with cleaner as desired. To clean interior surface of glass - use soap and water. CAUTION: Do not use oven cleaner to clean glass.

**NOTE:** Additives that are put in gas (both natural and propane) to make it smell can be harmful to glass and can leave a white film deposit on the glass. This deposit can be removed with cleaners such as KEL KEM "Polish Plus" (part # 65-06-00455) or comparable product (contact your dealer).

In some cases (especially when burning propane) additives can cause "crazing" or etching of the glass. This is not a common occurrence. However, any "crazing" or etching of the glass is not covered under the warranty. The solution may be to change propane suppliers.

### **SOOTING**

Sooting is caused by improper installation or air shutter operation. However, some small areas of soot deposits on log surfaces are deemed acceptable. If you observe large soot areas (larger than 1"x1") on log surfaces or signs of sooting on the door glass (usually a thin black film on the Fireplace viewing glass or on the outside of the home around the vent cap), the unit must be immediately turned off and the local Mendota dealer promptly informed. Mendota dealers will correct "sooting" problems, but Mendota and their dealers are not responsible for damage caused by excessive sooting that has not been immediately brought to their attention.

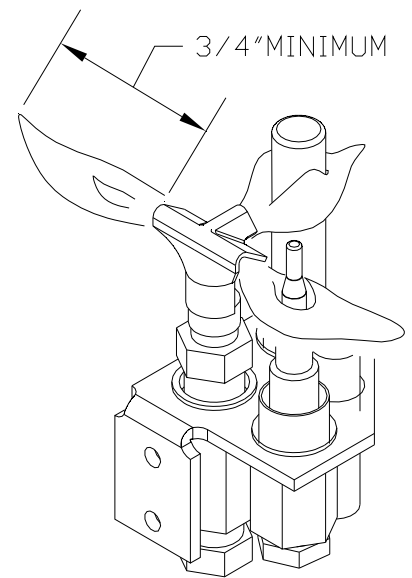
### **OPERATION DURING POWER FAILURE**

This fireplace is designed to operate during power outages. Blower will not function during power outages. However, all burners will continue to function normally. Heat output will be reduced slightly without the blower functioning (approximately 5% less).

## MAINTENANCE

1. **ANNUAL MAINTENANCE OF MENDOTA UNITS IS REQUIRED.** The following procedures must be performed each year by a Mendota approved service person. NOTE: Any adjustments to burner, pilot or logs must be done by a qualified Mendota service person.

- A. Clean all lint and dust build-up around the control. Inspect the condition of any wiring under the burner for melting or damage.
- B. Remove logs & coals and clean away any foreign matter (lint, Carbon, etc.) on the burner and logs. Be sure the burner ports are "open". Clean the pilot and under side of the logs for any Carbon deposits. NOTE: Logs should be visually checked for Carbon "build-up". If carbon deposits are visible on logs, unit should be turned off and Mendota service person contacted. Be sure logs are re-installed per instructions on PAGE 34.
- C. Check condition of gaskets, gaskets must be tight, replace if necessary.
- D. Periodically check to verify that the vent system and vent cap are open and free of blockage.
- E. Before re-installing glass, have qualified service person check the operation of the pilot with millivolt meter and cycle the burner per LIGHTING INSTRUCTIONS (see PG. 43). Pilot must read a minimum of 460 millivolt. Be sure all items in LIGHTING and INSTALLATION "check off" lists are completed (see PG. 44).



2. **COMBUSTION SYSTEM MILLIVOLT READING:**

Millivolt readings must be taken by a qualified installer at the time of installation and after any interruption in burner operation. These readings will establish proper thermopile millivolt generation and assure trouble-free burner operation. Readings must be taken with: a.) Pilot ONLY operating. b.) Main Burner operating.

A. **PILOT ONLY OPERATING - Thermostat "OFF" - Minimum Millivolts 325**

Using a Millivolt Meter, a millivolt reading should be taken by attaching Meter leads to terminals #1 and #2 on the main gas valve. The Meter must read a minimum of 325 millivolts with the Pilot Light operating, Thermo-stat turned "OFF" and Main Burner "OFF". To increase or decrease millivolts (and pilot flame) adjust pilot screw on control (see Figure 37). Pilot Flame must be a minimum of 3/4" long on all three branches.

C. **MAIN BURNER OPERATING - Thermostat "ON" - Minimum Millivolts 100**

Using a Millivolt Meter a millivolt reading should be taken by attaching Meter leads to terminals #2 and #3 on the millivolt panel on the main gas valve. The Meter must read a minimum of 100 millivolts with the Gas Cock Dial turned "ON", Thermostat "ON" and Main Burner operating. To increase or decrease millivolts (and pilot flame) adjust pilot screw on control (see Figure 37:).

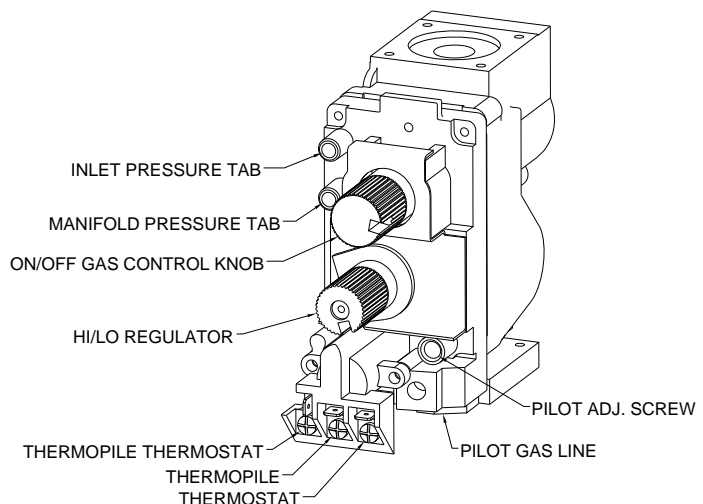
1. The viewing glass should be cleaned periodically. Exterior glass may be cleaned with cleaner as desired. Interior glass - use kel kem "polish plus" (part # 65-06-00455) or comparable product. Do not use oven cleaner or abrasive cleaners to clean glass. Do not clean when glass is hot.

2. Periodic visual check of pilot flames is required.

3. Periodic visual check of main burner's rear and front flames is required.

CHECK TEST	TO TEST	CONNE CT METER LEADS TO TERMINALS	THERMOSTAT CONTACTS	METER READING SHOULD BE
A	COMPLETE SYSTEM	2 & 3	CLOSED	100MV OR MORE
B	THERMO-PILE OUTPUT	1 & 2	OPEN	GREATER THAN 325 MV
C	SYSTEM RESISTANCE	1 & 3	CLOSED	LESS THAN 2.8 ohms
D	AUTO/PILOT DROPOUT	1 & 2	OPEN	BETWEEN 120-30 MV

Figure 37: Millivolt Readings



**BURNER FLAMES GENERAL HEIGHT DIAGRAM**



## NATURAL TO LP GAS CONVERSION

### Kit # HA-52-00145 for Mendota Model M-50

This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the owner instructions supplied with the kit.

**Caution:** The electrical supply to the fireplace must be turned off prior to performing the conversion. The gas supply must be shut off prior to disconnecting the electrical power.

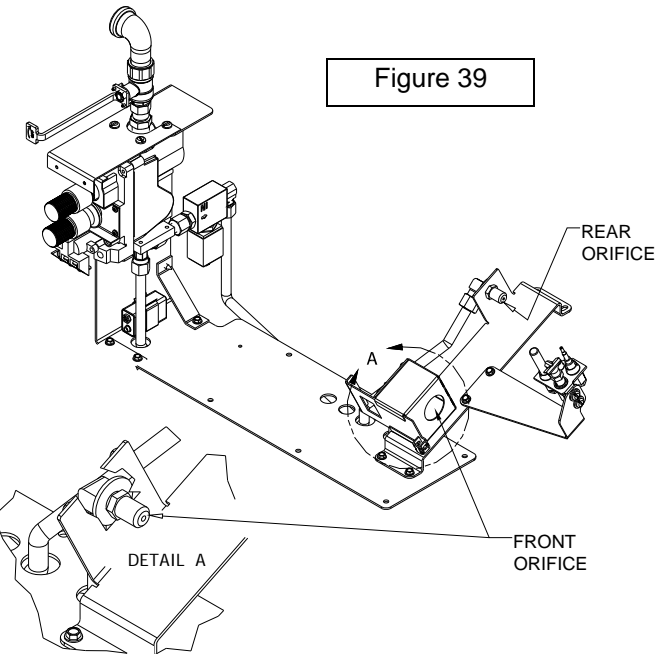
#### ORIFICE SIZES REQUIREMENT:

A Natural Gas to LPG conversion kit #HA-52-00145 must be ordered and installed to convert the M-50 Fireplace to burn LPG.

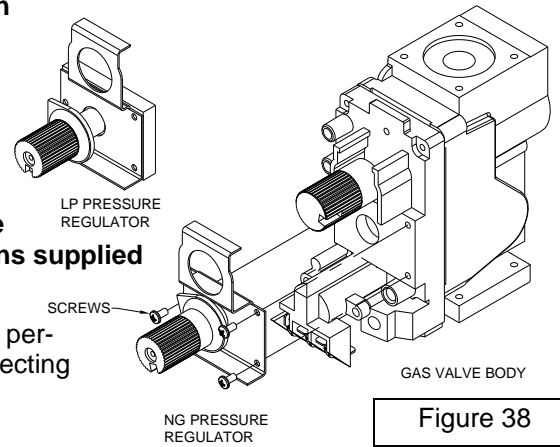
LP Conversion Kit #HA-52-00145 contains the following parts: One LP Pressure Regulator, One LP Pilot Orifice Thimble, One Cap Orifice **drill #54** (for rear burner) and One Cap Orifice **drill #51** (for front burner). Specifically, identify the Rear and Front Burner Cap Orifices. Use proper sized drill bits' shaft ends to verify orifice sizes.

**WARNING: IT IS OF THE UTMOST IMPORTANCE THAT THE CORRECT BURNER ORIFICE BE INSTALLED FOR BOTH THE REAR AND FRONT BURNERS.**

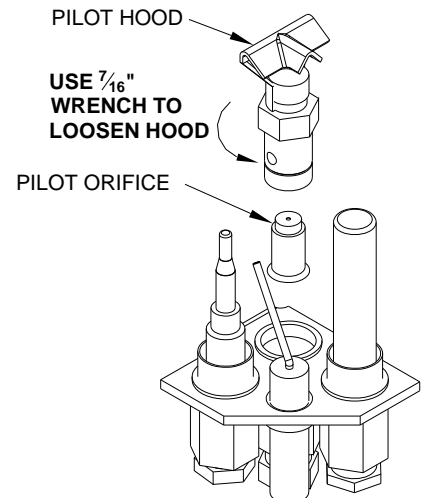
1. Turn off gas supply at the appliance service valve. Identify the Pressure Regulator on the Valve Body; see Figure 13 on PAGE 45.



5. Install Rear Burner Orifice #65-14-00054(#54 drill) for the Rear Burner. Tighten down securely.
6. Install Front Burner Orifice #65-14-00051 (#51 drill) for the Front Burner. Tighten down securely.
7. Install pilot orifice thimble #05-04-00036 (.014") see Figure 15 for location. Remove and install pilot hood with 7/16" open-end wrench. (Pilot orifice thimble is located inside pilot hood base).
8. Re-assemble pilot hood. Tighten down until pilot flame hood that is directed towards thermocouple is aligned properly with thermocouple.



2. Using a 1/4" flat blade screwdriver, remove 3 screws that secure the NG Pressure Regulator to the gas valve body and remove NG Pressure Regulator as shown above. Identify the pressure regulator spring that is located in the center of the black rubber gasket. Discard both the black rubber gasket and spring.
3. Install the new LP Pressure Regular onto the gas valve body in the same position and orientation as the NG Pressure Regulator you removed in Step 2, above. The LP Pressure Regulator can only be mounted in one position. Secure the LP Pressure Regulator in place using the 3 screws you removed in Step 2. Tighten down using a 1/4" flat blade screwdriver.
4. Remove both Rear and Front Burners. Locate and Identify the Rear Burner Orifice Spud and the Front Burner Orifice Spud. Both Front and Rear Orifice Spuds are removed and installed using a 1/2" deep well socket and ratchet.



## LP GAS PRESSURE REQUIREMENTS

Inlet and manifold gas pressure checking taps are located on gas valve. A qualified installer shall take pressure measurements at these ports to verify and set the correct gas pressures during the LP Kit installation. Manifold pressure must be taken at the "MANIFOLD PRESSURE" tap and inlet pressure at the "INLET PRESSURE" tap **with the burner operating** by a qualified installer.

Figure 40: Pressure Test Port

	DESIRED INLET PRESSURE	MINIMUM INLET PRESSURE	MAXIMUM INLET PRESSURE	MANIFOLD OUTLET PRESSURE	AIR SHUTTER POSITION
<b>L.P. GAS</b>	<b>11.0" W.C.</b> (2.75 kPa)	11" W.C. (2.75 kPa)	13.0" W.C. (3.24 kPa)	10.0" W.C. (2.5 kPa)	1/4" OPEN MIN. (5 mm)

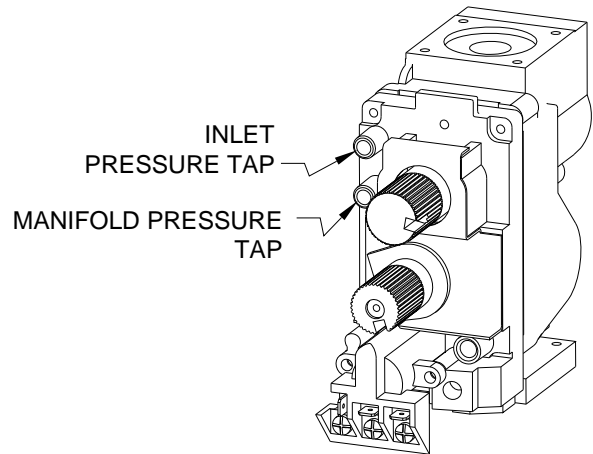
**TURN GAS VALVE HI-LO KNOB TO "HIGH" POSITION. OUTLET GAS PRESSURES MAY VARY PLUS OR MINUS 5%.**

### LPG PROPER INPUT RATES:

With the proper orifices installed, as specified above, this fireplace utilizing LP Gas will have a maximum input rate of 50,000 Btu/Hr.

### LEAK TESTING REQUIREMENTS

Prior to completing the conversion process, check for gas leaks with soap and water solution at all plumbing joints prior to placing this appliance into operation. It is recommended that all gas-plumbing joints, factory installed and field installed are checked for leaks.



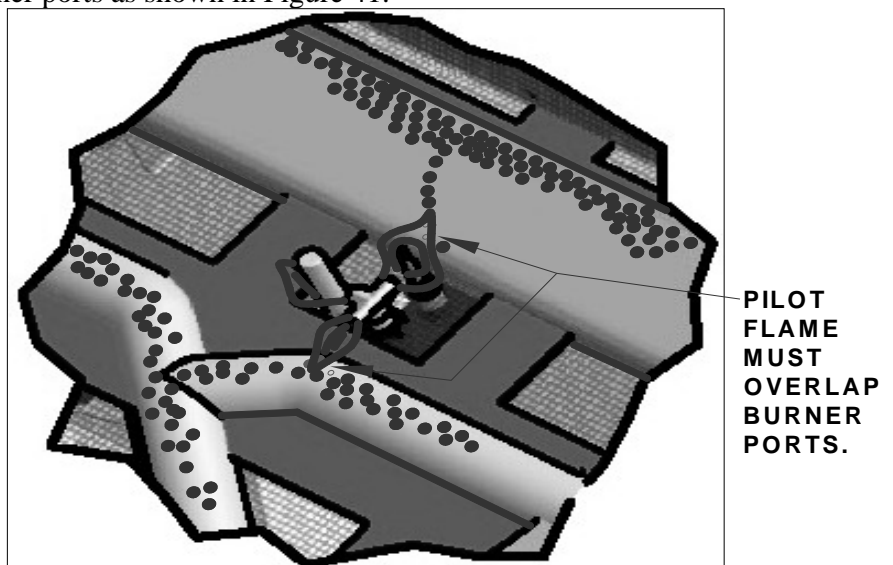
### PILOT FLAME AND MAIN BURNER RELATIONSHIP VERIFICATION

Prior to completing the conversion process, the qualified service technician must, light the pilot light and verify the relationship between the pilot light flames and the main burners. The pilot light flames directed towards the propagation ports on the rear and front burner must overlap the propagation ports on the burners. The pilot light flames must be a minimum of 3/4" long and must overlap the propagation ports on both the rear and front burners as shown in Figure 41. Verify that the burner tubes ignite quickly and the burner flames propagate smoothly along the entire length of the burners.

### PILOT FLAME LENGTH ADJUSTMENT

If the pilot light flame length is too short or the required minimum thermopile voltage cannot be achieved using the factory default setting of the pilot light flame length, a qualified installer may adjust the length of the pilot light flames to meet the two requirements: Minimum Thermopile output voltage shall be 325mV and the pilot light flames must be long enough to overlap the burner ports as shown in Figure 41.

Figure 41: PILOT FLAMES AND BURNER PORTS ALIGNMENT



## **COMBUSTION SYSTEM MILLIVOLT READING**

Millivolt readings must be taken by a qualified installer once the LPG conversion kit parts have been installed. These readings will establish proper thermopile millivolt generation and assure trouble-free burner operation. Readings must be taken with: a.) Pilot ONLY operating. b.) Main Burner operating.

### **A. PILOT ONLY OPERATING - Thermostat "OFF" - Minimum Millivolts 325**

Using a Millivolt Meter, a millivolt reading should be taken by attaching Meter leads to terminals #1 and #2 on the main gas valve. The Meter must read a minimum of 325 millivolts with the Pilot Light operating, Thermostat turned "OFF" and Main Burner "OFF". To increase or decrease millivolts (and pilot flame) adjust pilot screw on control (see Figure 37). Pilot Flame must be a minimum of 3/4" long on all three branches.

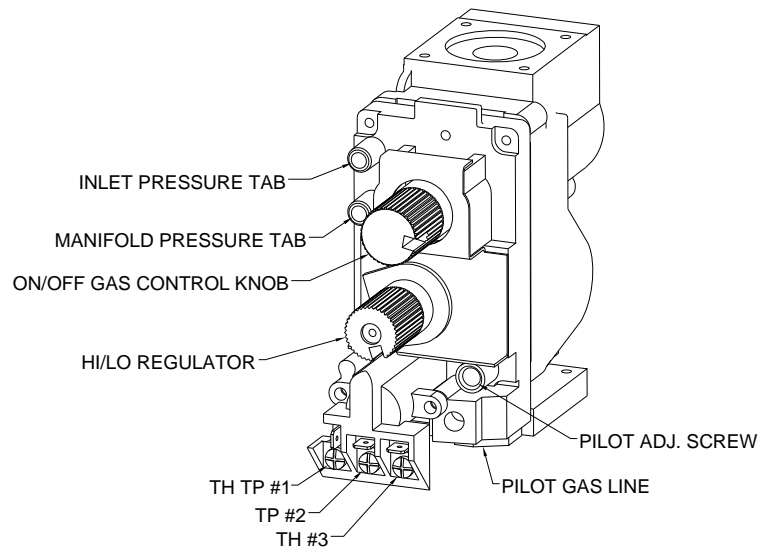
### **B. MAIN BURNER OPERATING - Thermostat "ON" - Minimum Millivolts 100**

Using a Millivolt Meter a millivolt reading should be taken by attaching Me-

ter leads to terminals #2 and #3 on the millivolt panel on the main gas valve. The Meter must read a minimum of 100 millivolts with the Gas Cock Dial turned "ON", Thermostat "ON" and Main Burner operating. To increase or decrease millivolts (and pilot flame) adjust pilot screw on control (see Figure 37: Millivolt Readings).

CHECK TEST	TO TEST	CONNECT METER LEADS TO TERMINALS	THERMOSTAT CONTACTS	METER READING SHOULD BE
A	COMPLETE SYSTEM	2 & 3	CLOSED	100MV OR MORE
B	THERMOPILE OUTPUT	1 & 2	OPEN	GREATER THAN 325 MV
C	SYSTEM RESISTANCE	1 & 3	CLOSED	LESS THAN 2.8 ohms
D	AUTO/PILOT DROPOUT	1 & 2	OPEN	BETWEEN 120-30 MV

Figure 42: Millivolt Readings



## **CHECKING FOR NORMAL BURNER (S) IGNITION CHARACTERISTICS**

Once the conversion to LPG and all the above steps have been completed, light the main burners.

Turn Gas Dial counterclockwise to "ON" then set Thermostat or push Main Burner ON/OFF switch to turn on burners. Main burner should now light IMMEDIATELY and flame should not "lift" off burner. If there is any delay in ignition or if flame is "lifting off" burner, turn off burner and carefully check for proper installation of logs/coins, vent system and proper pilot flame impingement on burner and thermopile. Logs or coins must not block pilot flame or main burner flame. Vent system must be leak proof.

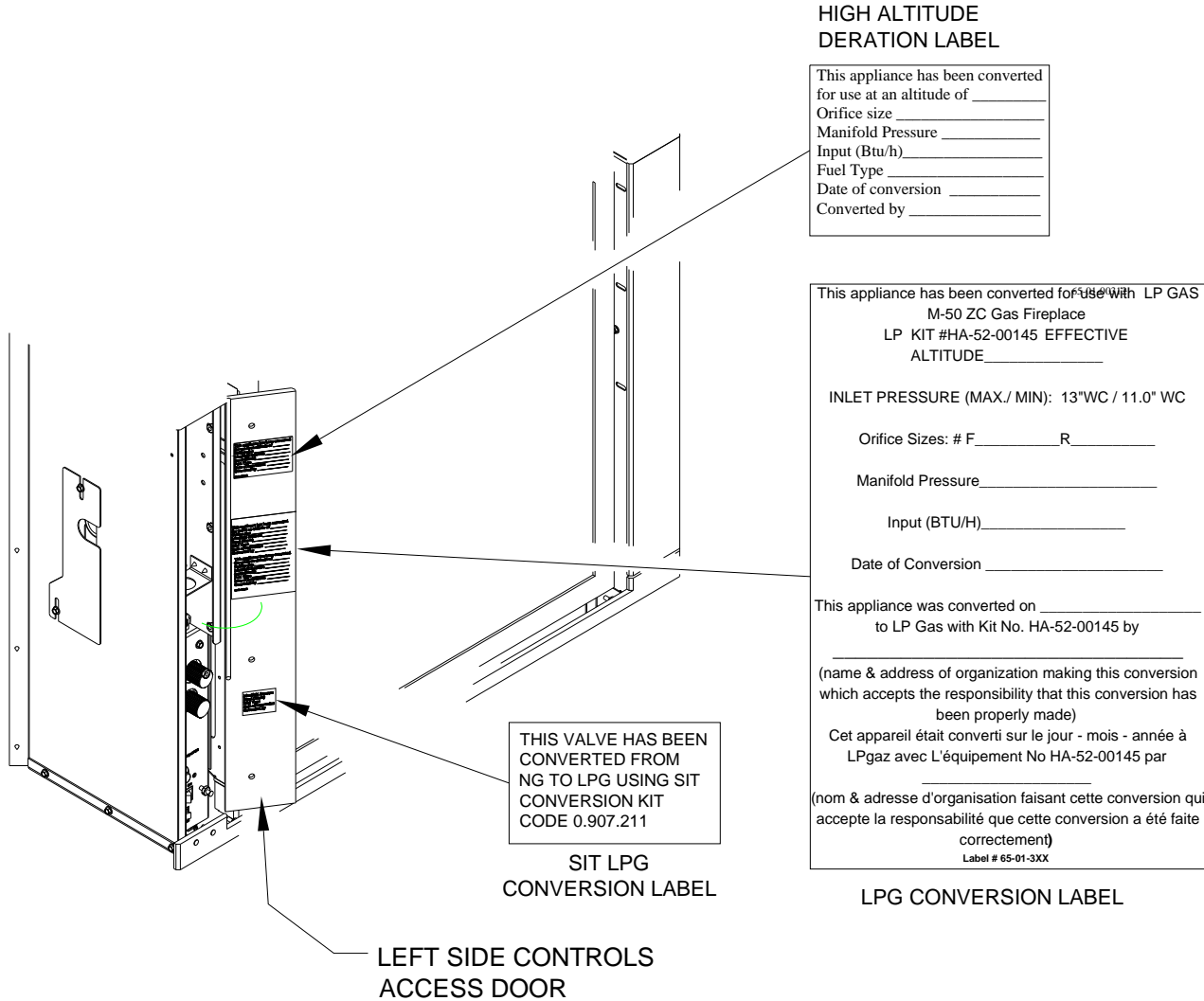
### **WARNING**

DO NOT PROCEED WITH OPERATION OF THIS FIREPLACE UNLESS BURNER "CYCLES" ON/OFF WITHOUT DELAYS!

**ATTACHING LPG CONVERSION LABELS AND HIGH ALTITUDE DERATION LABEL**

Two printed informational labels are included with the LPG Conversion Kit. Attach these two labels to the inner surface of the left side controls access door. If you are derating this appliance at a high altitude, also attach the High Altitude Deration Label, supplied in the Owner's Manual Packet, to this same surface.

Prior to attaching the labels, fill in all the information that is requested in these labels.



**HIGH ALTITUDE DERATION LABEL**

This appliance has been converted for use at an altitude of \_\_\_\_\_  
 Orifice size \_\_\_\_\_  
 Manifold Pressure \_\_\_\_\_  
 Input (Btu/h) \_\_\_\_\_  
 Fuel Type \_\_\_\_\_  
 Date of conversion \_\_\_\_\_  
 Converted by \_\_\_\_\_

THIS VALVE HAS BEEN CONVERTED FROM NG TO LPG USING SIT CONVERSION KIT CODE 0.907.211

**SIT LPG CONVERSION LABEL**

This appliance has been converted for use with LP GAS  
 M-50 ZC Gas Fireplace  
 LP KIT #HA-52-00145 EFFECTIVE  
 ALTITUDE \_\_\_\_\_  
 INLET PRESSURE (MAX./ MIN): 13"WC / 11.0" WC  
 Orifice Sizes: # F \_\_\_\_\_ R \_\_\_\_\_  
 Manifold Pressure \_\_\_\_\_  
 Input (BTU/H) \_\_\_\_\_  
 Date of Conversion \_\_\_\_\_  
 This appliance was converted on \_\_\_\_\_  
 to LP Gas with Kit No. HA-52-00145 by \_\_\_\_\_  
 (name & address of organization making this conversion which accepts the responsibility that this conversion has been properly made)  
 Cet appareil était converti sur le jour - mois - année à LPgaz avec L'équipement No HA-52-00145 par \_\_\_\_\_  
 (nom & adresse d'organisation faisant cette conversion qui accepte la responsabilité que cette conversion a été faite correctement)  
 Label # 65-01-3XX

**LPG CONVERSION LABEL**

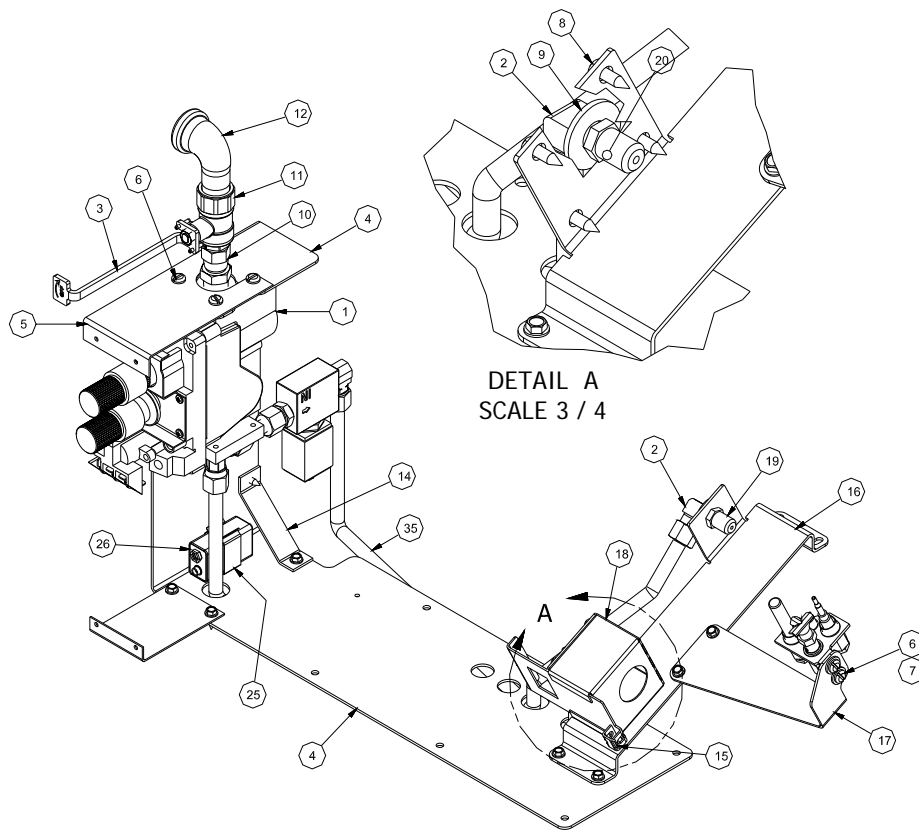
**LEFT SIDE CONTROLS ACCESS DOOR**



## VALVE ASSEMBLY REPLACEMENT PARTS

ITEM	QTY	PART#	DESCRIPTION
1	1	05-02-00313	VALVE,SIT,NATURAL GAS,225F,3.5-1.3
2	2	65-07-00010	BCF,3/8 TBE X 1/8MPT COMP ELBW-AF
3	1	HA-48-00021	EXTENSION,MANUAL SHUTOFF,ASM
4	1	HA-51-00019	VALVE BRACKET, M50
5	1	HA-51-00017	TOP BRACKET VALVE M50
6	6	50-01-00123	SCREW,PLATED,10-32 x 1/4",RSLMS
7	2	50-04-00047	WASHER,FLAT, #10
8	12	50-01-00102	TEKS, HEX #8 X 1/2 BLK ZINC
9	2	50-04-00022	WASHER, STD 3/8" 7/16 X 1 OD
10	1	65-07-00748	CONNECTOR, SWIVEL 3/8MPT FLARE
11	1	65-07-00744	VALVE,BALL 1/2FPT X 3/8 FLARE
12	1	60-05-00049	ELBOW, 1/2" STREET BLACK
13	1	HA-51-00032	BRACKET, COVER PLATE, M50
14	1	HA-51-00054	STIFFENER, VALVE BRACKET
15	1	HA-51-00059	SLIDER, AIRBOX, M50
16	1	HA-51-00062	BRACKET, ORIFICE, M47
17	1	HA-51-00063	BRACKET, PILOT ASSY, M47
18	1	HA-51-00058	SHUTTER BOX, M50
19	1	65-14-00043	ORIFICE, #59 4,268 BTU NAT
20	1	65-14-00033	ORIFICE, #33
21	1	05-04-00039	ASSY, PILOT NAT #PSE-NA274
22	1	05-02-00283	EXTENSION,SHORT KNOB, ON/OFF
23	1	05-02-00284	EXTENSION,SHORT KNOB, HI/LO
24	1	05-02-00310	VALVE, SOLENOID REAR BURNER,9VDC
25	1	65-06-00986	BATTERY CLIP
26	1	65-06-00987	BATTERY, 9V ALKALINE
27	1	60-02-00005	BUSHING, 3/8 MPT X 1/4 FPT HEX BLK
28	1	HA-41-00119	LINE, GAS FRONT BURNER DXV-45
30	1	65-07-00020	3/8 BCH COMPRESSION NUT
31	1	65-07-00021	3/8" BCF SLEEVE
32	1	HOSE	
33	1	65-07-00060	BCF, 3/8" X 3/8" X 1/4" MALE
34	1	65-07-00745	BCF, 1/4 MPT X 3/8 COMP ELBOW
35	1	HOSE REAR	

Figure 43: VALVE ASSEMBLY



## GLASS FRAME ASSEMBLY REPAIR AND REPLACEMENT

**DO NOT** substitute other manufacturer's materials or components.

**DO NOT** operate unit with cracked, broken or missing glass.

**DO NOT** abuse the glass door by striking the glass, slamming the door shut, etc

### **WARNING**

Use only authorized parts and materials obtained from Johnson Gas Appliance Company when replacing defective or damaged glass.

### **WARNING**

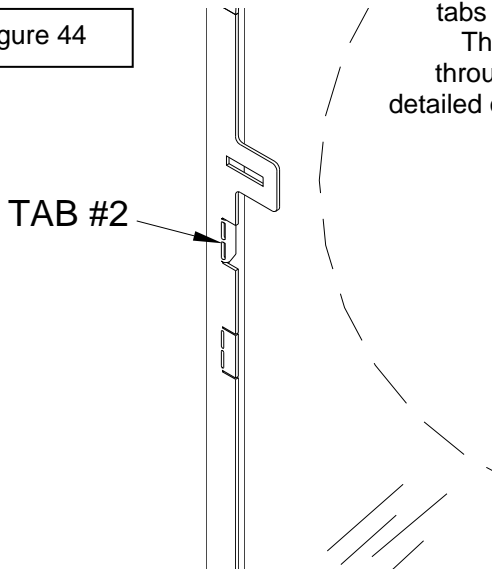
Do not operate this appliance with the glass removed, cracked or broken. Glass should be replaced by a licensed or qualified person.

### TO REPLACE DAMAGED GLASS

1. Bend Glass Retainer Tabs (Figure 44) up 90 degrees. Four tabs hold down the glass and gasket assembly.
2. Remove the damaged glass and gasket material. Clean the inner surface of the glass frame.
3. Assemble new gasket on glass edge starting with the bottom left corner. The adhesive on the gasket should make contact with the glass surface. Use tracer lines in gasket to determine where the glass should sit on the gasket surface. See Figure 45.
4. Place glass and gasket assembly in glass frame and carefully bend down glass retainer tabs. Extra glass retainer tabs are provided should any originally used tabs break off.

The glass frame assembly and its individual components are available through Johnson Gas Appliance Company. Contact your dealer for more detailed ordering information.

Figure 44



### **GLASS FRAME ASSEMBLY # HA-48-00103 REPLACEMENT PARTS LIST**

ITEM	PART NUMBER	DESCRIPTION
1	HA-52-00003	FRAME, WELDMENT, GLASS, M50
2	65-02-00103	GASKET, TADPOLE, 3/8" BULB, 3/4" TAIL
3	65-06-01063	GLASS, CERAMIC, M50

Figure

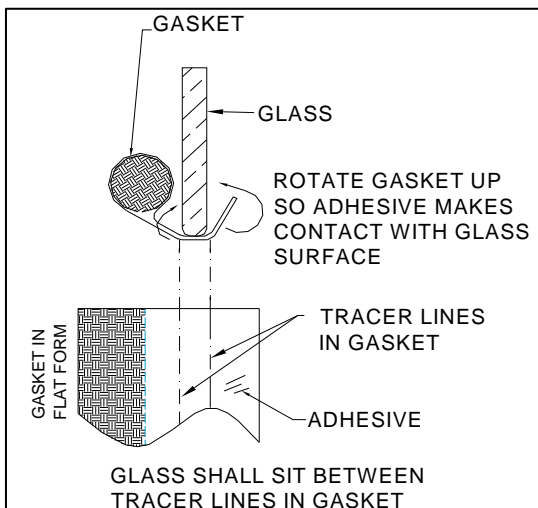
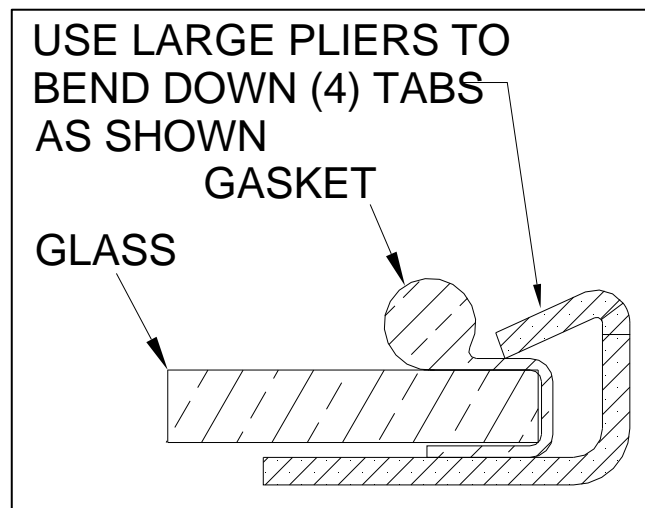


Figure 45



## LISTING LABEL INFORMATION

The model information regarding your specific appliance can be found on the rating plate, which is located inside the right side controls access door. When contacting your dealer for any cleaning service or warranty service, always provide the Model Number, Serial Number and Manufactured Date. This information will expedite the warranty verification process.



LISTED DIRECT VENT GAS FIREPLACE HEATER  
(POELE AU GAZ HOMOLOGUÉE, À AÉRATION DIRECTE)  
NOT FOR USE WITH SOLID FUEL  
(NE DOIT PAS ÊTRE UTILISÉ AVEC UN COMBUSTIBLE SOLIDE)

MANUFACTURED BY (FABRIQUÉ PAR):  
JOHNSON GAS APPLIANCE CO. CEDAR RAPIDS, IOWA  
CERTIFIED FOR CANADA HOMOLOGUE POUR LE CANADA  
TESTED TO (TESTÉ AUX NORMES)  
ANSI Z21.88-2002 \* CSA 2.33-2002

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE. REFER TO THE OWNER'S INFORMATION MANUAL PROVIDED WITH THIS APPLIANCE. INSTALLATION AND SERVICE MUST BE PERFORMED BY A QUALIFIED INSTALLER. DO NOT OPERATE WITH GLASS DOOR REMOVED, CRACKED, OR BROKEN. THIS VENTED GAS FIREPLACE HEATER IS NOT FOR USE WITH AIR FILTERS. REGISTER KIT MAY BE USED.

MISE EN GARDE: INSTALLATION, RÉGLAGE, MODIFICATION, ENTRETIEN OU DÉPANNAGE NON APPROPRIÉS POURRONT CAUSER DES BLESSURES OU DES DOMMAGES MATÉRIELS. RÉFÉREZ-VOUS AU MANUEL DU PROPRIÉTAIRE FOURNI AVEC CET APPAREIL. POUR ASSISTANCE OU RENSEIGNEMENTS COMPLÉMENTAIRES, VEUILLEZ CONSULTER UN INSTALLATEUR EXPÉRIMENTÉ, UNE AGENCE DÉPANNAGE/ENTRETIEN OU VOTRE COMPAGNIE GAZIÈRE. POUR UTILISATION AVEC LES PORTES EN VERRE CERTIFIÉE L'APPAREIL

	<input type="checkbox"/> NATURAL GAS (GAZ NATUREL)	<input type="checkbox"/> LP GAS (GAS DE PÉTROLE LIQUÉFIÉ (GPL))
INPUT RATING (BTR/HR) 0-610m (ENTRÉE NOMINALE)	50,000	50,000
MIN. INPUT RATING (BTU/HR) 0-610m (MINIMALE ENTRÉE NOMINALE)	15,800	16,200
ORIFICE 0-610m (ORIFICE)	FRONT #35 REAR #43	FRONT #51 REAR #54
ORIFICE 610-1370m (ORIFICE)	FRONT #36 REAR #44	FRONT #52 REAR #55
INPUT RATING (BTU/HR) 610-1370m	26,200	23,800
MAXIMUM OUTPUT (BTU/HR) (SORTIE MAXIMALE)	21,060	19,500
MANIFOLD PRESSURE (in. w.c./kPa) (PRESSION AU COLLECTEUR)	3.5	10.0
MANIFOLD PRESSURE, LOW (in. w.c./kPa) (PRESSION D'ENTRÉE MINIMALE)	1.3	3.3
MINIMUM INLET PRESSURE (in. w.c./kPa) (PRESSION D'ENTRÉE MINIMALE)	5.0	11.0

THIS APPLIANCE IS ONLY FOR USE WITH THE TYPE OF GAS INDICATED ON THE RATING PLATE AND MAY BE INSTALLED IN AN AFTERMARKET, PERMANENTLY LOCATED MANUFACTURED (MOBILE) HOME WHERE NOT PROHIBITED BY LOCAL CODES. SEE OWNER'S MANUAL FOR DETAILS. THIS APPLIANCE IS SUPPLIED WITH A CONVERSION KIT.  
CET APPAREIL SERA INSTALLÉ CONFORMÉMENT AVEC LES CODES LOCAUX, LE CAS ÉCHÉANT. SI AUCUN CODE N'EXISTÉ, SUIVEZ LA NORME ANSI Z223.1 OULA NORME CAN/CGA (ACNOR)-B149.

### MINIMUM CLEARANCES TO COMBUSTIBLE CONSTRUCTION

UNIT TO FLOOR	0in. (0 mm)	GLASS EDGE TO ADJACENT SIDEWALL	18in. (457 mm)
UNIT TO ENCLOSURE SIDEWALL	0in. (0 mm)	VENT PIPE TOP TO COMBUSTIBLES	2in. (51 mm)
UNIT TO ENCLOSURE BACK WALL	1in. (25 mm)	VENT PIPE SIDES TO COMBUSTIBLES	1in. (0 mm)
UNIT BOTTOM TO ENCLOSURE CEILING	47-9/16 in. (121 mm)	VENT PIPE BOTTOM TO COMBUSTIBLES	1in. (0 mm)
UNIT BOTTOM TO ROOM CEILING	72in. (1829 mm)	7-1/2" MANTLE ABOVE DISCHARGE AIR OPENING	15in. (368 mm)

CAUTION: HOT WHILE IN OPERATION. DO NOT TOUCH. KEEP CHILDREN, CLOTHING, FURNITURE, AND FLAMMABLE LIQUIDS OR VAPORS AWAY.

ATTENTION: L'APPAREIL EST CHAUD LORSQU'IL FONCTIONNE. NE PAS TOUCHER L'APPAREIL. SURVEILLER LES ENFANTS. GARDER LES VÊTEMENTS, LES MEUBLES, L'ESSENCE OU AUTRES LIQUIDES À VAPEUR INFLAMMABLES LOIN DE L'APPAREIL.

ELECTRICAL RATING (COURANT NOMINAL): 120 VOLTS 60 HERTZ LESS THAN 1.5 AMPERES

**DO NOT REMOVE OR COVER THIS LABEL**  
**VEILLEZ A NE JAMES ENLEVER NI DISSIMULER CETTE ÉTIQUETTE**

<b>MFG. DATE:</b>	MODEL: M-50	SERIAL NO.	65-01-000310
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## MENDOTA WARRANTY QUALIFICATION & SERVICE REFERENCE FORM

As a part of Mendota's on-going program of customer satisfaction, this Form verifies proper installation and operation. It is important as a reference for future service. It insures long life and trouble-free operation of Mendota fireplaces & stoves and qualifies the owner for Mendota's lifetime limited warranty. Owner should sign Form when completed and mail a copy along with Warranty Registration to Mendota. OPTIONALLY, PLEASE REGISTER AT OUR WEBSITE AT:

[WWW.JOHNSONGAS.COM/MENDOTA-REGISTRATION.ASP](http://WWW.JOHNSONGAS.COM/MENDOTA-REGISTRATION.ASP)

HOME OWNER: \_\_\_\_\_ DEALER: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ ADDRESS: \_\_\_\_\_  
CITY/STATE/ZIP: \_\_\_\_\_ CITY/STATE/ZIP: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ PHONE: \_\_\_\_\_  
MODEL #: M-50 \_\_\_\_\_ SERIAL #: \_\_\_\_\_ DATE INSTALLED: \_\_\_\_\_

Mendota direct vent fireplaces are sophisticated, hi-tech gas appliances. All installation and operating instructions must be carefully followed. This M-50 fireplace must be installed and serviced by a qualified Mendota approved service person.

**REF: \_\_\_\_\_ MENDOTA M-50 INSTALLATION MANUAL**

- APPROVED VENT PIPES AND VENT CAP INSTALLED - Per Manual.  
Vent pipes must be fully twist-locked and leak proof.  
Check minimum and maximum vertical / horizontal and vent runs.  
1000° sealant must be used on inner joints at adjustable pipe sections.
- CHECK FOR PROPER CLEARANCES TO COMBUSTIBLES & VENT LOCATIONS - Per Manual
- INSTALL PROPER SIZE GAS LINES - CHECK FOR GAS LEAKS - Per Manual
- CHECK FOR CORRECT GAS PRESSURE AT MANIFOLD - Per Manual
  - a. 3.5 Inches Water Column Maximum - Nat. Gas
  - b. 10.5 Inches Water Column Maximum - L.P. Gas
- TAKE COMBUSTION SYSTEM MILLIVOLT READINGS
  - a. Pilot only - [Minimum Millivolts 325] Reading: \_\_\_\_\_
  - b. Main burner operating - [Minimum Millivolts 100] Reading: \_\_\_\_\_
- CYCLE BURNERS ON/OFF FOR PROMPT IGNITION - Per "LIGHTING INSTRUCTIONS"  
Burner must light IMMEDIATELY - Flame must travel promptly around "curve" & light burner.
- INSTALL LOGS AND ADJUST FLAME - Per Manual  
Proper pilot flame impingement on thermopile & burner - Air shutter opening: 1/8" Nat. Gas - 1/4"-1/2" LP  
Check that flame is "stable" and is not "lifting" off burner
- BRIEF OWNER ON OPERATION AND MAINTENANCE OF UNIT
  - Light Pilot
  - Operate Burner
  - Explain blower "delay" operation

### WARRANTY REGISTRATION

Your Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Dealer (Place of Purchase) \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Date of Purchase \_\_\_\_\_ Serial Number \_\_\_\_\_  
Purchaser's Signature \_\_\_\_\_

MENDOTA M-50 DIRECT VENT FIREPLACE

CUT OUT PAGE AND MAIL TO: JOHNSON GAS APPLIANCE CO., 520 E AVE. N.W., CEDAR RAPIDS, IOWA 52405

**PLEASE REGISTER AT OUR WEBSITE AT: [WWW.JOHNSONGAS.COM/MENDOTA-REGISTRATION.ASP](http://WWW.JOHNSONGAS.COM/MENDOTA-REGISTRATION.ASP)**

**TAPE SHUT**

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**POSTAGE  
NEEDED**

**JOHNSON GAS APPLIANCE COMPANY  
520 E AVENUE N.W.  
CEDAR RAPIDS, IA 52405**







## NOTES




# **MENDOTA EXTENDED LIFETIME PROTECTION AND LIMITED WARRANTY**

## **MENDOTA M-50 DIRECT VENT FIREPLACE**

Mendota Division of Johnson Gas Appliance Company, 520 E Avenue N.W. Cedar Rapids, Iowa 52405, extends this Extended Lifetime Protection and Limited Warranty to the original purchaser of a Mendota M-50 Fireplace, which is limited and used under normal home conditions.

### **STANDARD WARRANTY:**

JOHNSON GAS APPLIANCE CO., MENDOTA DIVISION, WARRANTS THAT YOUR NEW MENDOTA FIREPLACE IS FREE FROM MANUFACTURING AND MATERIAL DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF INSTALLATION, SUBJECT TO THE FOLLOWING CONDITIONS AND LIMITATIONS:

### **EXTENDED LIFETIME WARRANTY:**

THE HEAT EXCHANGER, BURNER TUBE COMBUSTION CHAMBER AND OUTER SHIELD OF THE MENDOTA M-50 FIREPLACE ARE WARRANTED FOR THE LIFETIME OF THE ORIGINAL OWNER, SUBJECT TO PROOF OF PURCHASE AND THE FOLLOWING CONDITIONS AND LIMITATIONS:

- 1) This new Mendota Fireplace must be installed & serviced by a competent, authorized service contractor. It must be installed and operated at all times in accordance with the installation and operating instructions furnished with the Fireplace. All adjustments to logs, coals or burner must be made by an authorized Mendota person. Any alteration, willful abuse, accident or misuse of the product shall nullify this warranty. This warranty does not cover glass or log breakage.

This limited warranty does not cover the cost of service calls, the cost of labor to remove or install parts covered by this limited warranty, freight or other transportation expenses, which may be incurred in connection with obtaining performances under this limited warranty. The remedy for damages as the result of any defects in this product which have been warranted herein is limited to replacement parts and does not include any incidental, indirect or consequential damages or expenses sustained in connection with the product, including damages to property, except as provided by law.

- 2) This warranty is non-transferable and is made to the original retail purchaser, provided the purchase was made through an authorized Mendota dealer. Mendota is not responsible for any damage to or malfunction of the Fireplace unless caused by a defect in material or workmanship from normal home use. Damage caused by abuse, improper installation, improper servicing, and installation by unqualified personnel or breach of conditions of this limited warranty will excuse Mendota from performance of any part of this limited warranty. Mendota has the right to investigate and inspect the exact, original Fireplace and entire installation (without any alterations or tampering) in the event a claim is made to determine whether the claimed damage or malfunction was caused by abuse, improper installation or other cause outside this warranty. Mendota is not responsible for any repairs or material purchases that have not received prior written approval from Mendota.

NOTE: Minor warping of certain parts or discoloration is normal and is not a defect covered by this warranty. Major warping of parts can be caused by over-firing of your Mendota Fireplace. Over-firing above rated nameplate specification is as contrary to the manufacturer's instructions and may void this warranty.

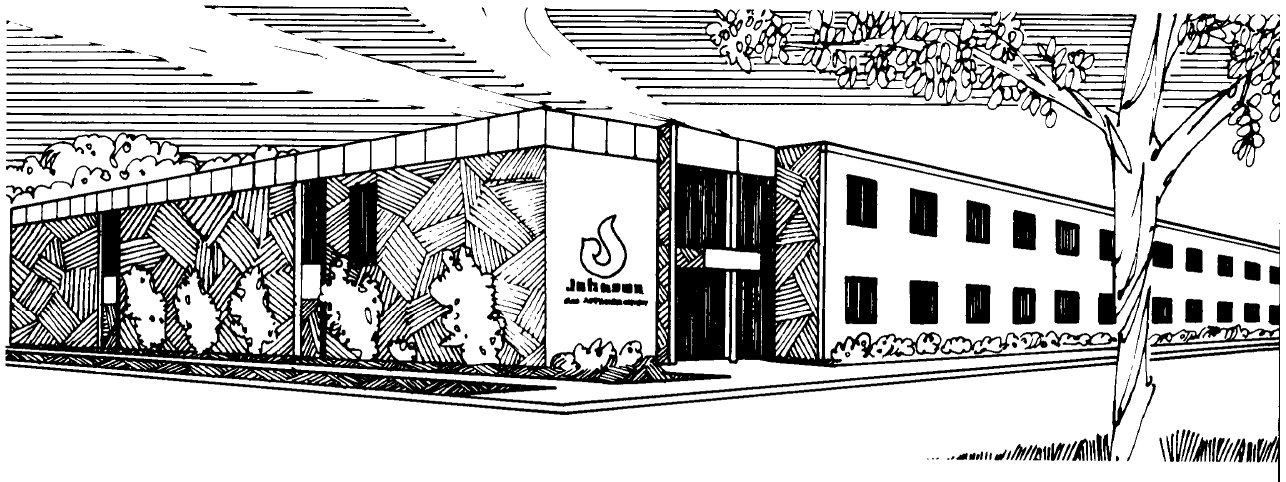
This warranty may not be extended by our representatives or any third party in any manner. The company neither assumes, nor authorizes any third party to assume, on its behalf, any other liabilities with respect to the sale of this Mendota product.

- 3) Mendota may at its discretion, fully discharge all obligations of this warranty by refunding the wholesale price of the defective part(s).
- 4) All other warranties - expressed or implied - with respect to the product, its components and accessories, or any obligation/liabilities on the part of the company are hereby expressly excluded. Products made by other manufacturers, sold with the Fireplace or thereafter, are not covered by this limited warranty. The use of unauthorized components will make this warranty null and void.

This warranty shall be effective only if the original purchaser of the Mendota appliance is registered with Mendota Division within thirty (30) days of the date of purchase. Such registration or the failure to register shall not be deemed to create any obligation or liability by the manufacturer and this warranty with its conditions and limitations shall be the only procedure for obtaining any rights against the manufacturer and expresses the sole obligation and responsibilities of the manufacturer which are offered to the original purchaser and accepted upon purchase of the appliance.

Mendota Division, reserves the right to make changes at any time without notice, in design, material, specifications, prices and the right to discontinue styles and products.

Some states do not allow the exclusion of limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.



Johnson Gas Appliance Company  
520 E Avenue N.W. - Cedar Rapids, IA 52405  
Mendota Hearth Division

WEBPAGE: [www.johnsongas.com](http://www.johnsongas.com) or [www.mendotahearth.com](http://www.mendotahearth.com)