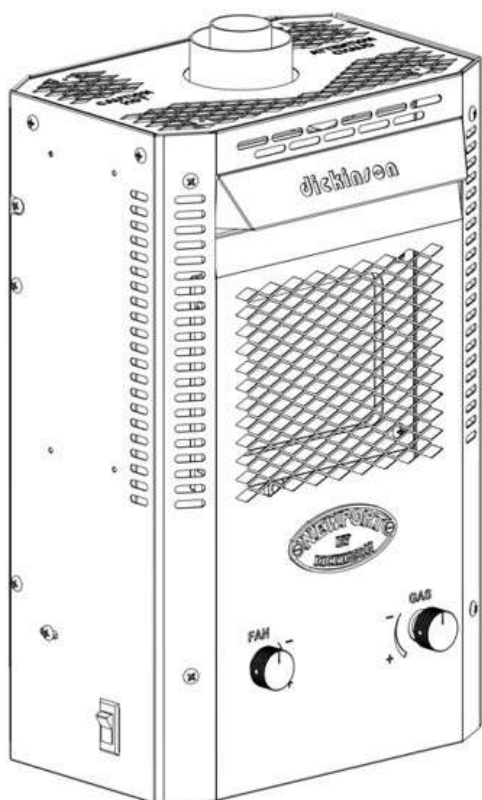


Serial #: _____



NEWPORT EXPLORER

Model # 00-NEW-EXPLORER

INSTALLATION & OPERATING INSTRUCTIONS

Dickinson Marine #101 - 17728 66 Ave,
Surrey, BC, Canada, V3S 7X1
Toll Free: 1-800-659-9768
Email: info@dickinsonmarine.com

! DANGER



**HOT GLASS WILL
CAUSE BURNS.
DO NOT TOUCH GLASS
UNTIL COOLED.
NEVER ALLOW CHILDREN
TO TOUCH GLASS.**

A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals.

! WARNING:
FIRE OR EXPLOSION HAZARD Failure to follow safety warnings exactly could result in serious injury, death, or property damage.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS**
 - Do not try to light any appliance.
 - Evacuate all persons from the vehicle immediately.
 - Shut off the gas supply at the gas container or source.
 - Do not touch any electrical switch or use any phone or radio in the vehicle.
 - Do not start the vehicle's engine or electric generator.
 - Contact the nearest gas supplier or qualified service technician for repairs.
 - If you cannot reach your gas supplier, or qualified technician, contact the nearest fire department.
 - Do not turn on the gas supply until the gas leak(s) has been repaired.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

This appliance may be installed in an OEM installation manufactured home (USA only) or mobile home and must be installed in accordance with the manufacturer's instructions and the *Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280*, in the United States, or the *Standard for installation in Mobile Homes, CAN/CSA Z240 MH Series*, in Canada.

A manufactured home (USA only) or mobile home OEM 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 *Standard for Gas Equipped Recreational Vehicles and Mobile Housing, CSA 2240.4*

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

INSTALLER: Leave this manual with the appliance.

CONSUMER: Retain this manual for future reference.

All rights reserved. No part of this manual may be reproduced without permission in writing from Dickinson Marine. Dickinson also reserves the right to modify or change without notice, any materials, applications, equipment, accessories, and/or prices. All dimensions, measurements and weights are approximate.

www

dickinsonmarine.com



info@dickinsonmarine.com



@dickinsonmarine



@dickinsonmarine1932



/dickinsonmarine

We'd love to see your Dickinson Marine pictures & videos, please follow, tag us and share!

Service notes:

Appliance model:

Fuel Type:

Serial No.:

Date of purchase:

Serial No.:

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1. INTRODUCTION



Since 1932, Dickinson Marine have been among the most well known producers of marine appliances on the market. The uncompromising quality and legendary robustness of Dickinson appliances have earned them a place in the hearts of sailors and fishing crews for decades. Still manufactured today using the most modern methods & high quality materials available, Dickinson stoves & heaters are now available for more applications than ever. Every Dickinson appliance is assembled by highly trained personnel and undergoes rigorous quality controls at every step of the process. At Dickinson we're pleased to be able to offer you tough & reliable heating systems to keep you warm wherever your adventures may take you.

Thank you for choosing a Dickinson Appliance! In order to get the most out of your new Dickinson appliance, please read all of the warnings and technical specifications found on the following page and throughout this instruction manual.

CAUTION! FAILURE TO ADHERE TO THE SAFETY WARNINGS LISTED IN THIS MANUAL COULD RESULT IN DAMAGE TO PROPERTY OR SEVERE PERSONAL INJURY!

GENERAL APPLIANCE WARNINGS

- Leak test all connections before first use
- Leak test connections after each tank refill
- Always check the heater, tank and hose connections prior to each use
- This heater is configured for propane. Do not use natural gas.
- Never use charcoal, lava rocks or any other source of solid fuel in this heater
- Ensure that flames are coming out of the entire burner. Occasionally insects can enter when the unit isn't in use and create blockages which can lead to malfunctions or burner fires.
- Never check for leaks using an open flame. Use soapy water on the connections and look for bubbles.
- Never use or store gasoline or any other flammable vapors or liquids in or near your heater
- Keep children and pets away from a hot appliance. DO NOT allow children to operate.
- Do not leave this heater unattended when in use.
- Keep any electrical cords away from the heater when it's in use
- DO NOT operate while under the influence of drugs or alcohol
- Do not use any other regulator other than ones supplied by or ordered from Dickinson Marine
- Parts of the heater become hot when in use. To avoid burns DO NOT touch any of the hot surfaces.
- This heater is not intended for commercial use.
- Adhere to all clearances listed in this manual.
- Do not use this appliance if any part has been underwater. 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.
- Toddlers, young children, and others may be susceptible to accidental contact burns. A physical barrier is recommended if there are at-risk individuals in the house. To restrict access to a fireplace or stove, install an adjustable safety gate to keep toddlers, young children, and other at-risk individuals out of the room and away from hot surfaces.
- Clothing or other flammable material should not be placed on or near the appliance.
- Any safety screen, guard, or barrier removed for servicing an appliance must be replaced prior to operating the appliance.
- Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation after servicing. Verify proper operation after servicing.
- Installation and repair should 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 might be required due to excessive lint from carpeting, bedding material etc. It is imperative that control compartments, burners, and circulating air passageways of the appliance be kept clean.

LP GAS CYLINDER SPECS & INSTALLATION

- Heater and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of ½ PSI (3.5kPa)
- The heater must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system in equal or less than ½ PSI (3.5 kPa)
- The LP gas supply cylinder to be used MUST be constructed and marked in accordance with the specifications for LP gas cylinders, U.S. Department of Transportation (DOT) or the standard for cylinders, spheres and tubes for the Transportation of Dangerous Goods, CAN/CSA-B339.
- The propane supply cylinder system must be installed with proper vapor withdrawal capabilities.
- A pressure regulator must be used in the operation with this unit.
- Any replacement regulators must be of those specified by the appliance manufacturer.

WARRANTY

We at Dickinson wish to maintain a reasonable and easy system for returns, warranty, returns and exchanges. To accomplish this, we would like to inform you of some helpful guidelines and procedures to use and follow when sending back product to the Dickinson Marine. All correspondence regarding returns, warranties and exchanges will go through the factory of Dickinson Marine in Surrey, BC, Canada and the product must be returned to this location.

DICKINSON WARRANTY POLICY

Dickinson Marine appliances are covered under limited warranty for a period of one year dated from the purchase of the product by the end user with proof of purchase or a registered warranty. The warranty page at the end of this manual should be copied for your records and returned to Dickinson to activate your warranty within 90 days of your purchase. You can also activate it online at dickinsonmarine.com/contact. In order to activate your warranty the warranty page must be mailed back to us or the warranty must be registered online. In order to access after sales service within the warranty period without completing your warranty registration, proof of purchase must be presented.

1. Customers can contact Dickinson Marine directly to settle any warranty issues. We are pleased to help. Call us toll free 1-800-659-9768 or email: info@dickinsonmarine.com

2. Products that are demonstrably older than the warranty period or those that have obviously been misused will not be returned, exchanged, or repaired.

3. If a customer is returning a complete product they believe to be defective, we ask them to confirm that the product has been assembled and put into use correctly. If you are not sure please call 1-800-659-9768 to book a phone consultation with tech support. Dickinson Marine will not provide credit for used products that are not defective. In these cases, it is best to call the factory to determine if the product is being used correctly, has been assembled correctly or is in fact defective.

4. All products being sent back to Dickinson Marine must have a Return Authorization Number. Contact us at Dickinson Marine toll free 1-800-659-9768 or e-mail info@dickinsonmarine.com to obtain a Return Authorization Number (RA#). This allows us to track and process your return. Once you have received an RA# from us, ship to the address below. We recommend you ship using the mail service insured and retain a tracking number. Customers are responsible for the shipping costs for all returns and exchanges. Please note that in order to obtain an RA# number we may ask you to provide proof of purchase, photographs or video recordings demonstrating the issue in question.

Dickinson Marine Returns
#101-17728 66th Avenue
Surrey, BC
V3S 7X1, Canada

Non-defective Returns & Exchanges: Dickinson reserves the right to apply a 20% restocking fee for non-defective returns & exchanges. An RA # will be needed from the factory to facilitate any return. Credits will be made at the last purchased price for that part number.



PLEASE FILL OUT AND MAIL, FAX OR EMAIL US A COPY OF THIS CARD TO REGISTER YOUR WARRANTY, OR REGISTER YOUR WARRANTY ONLINE AT dickinsonmarine.com/contact

Dickinson Marine
#101-17728 66th Avenue,
Surrey, BC
V3S 7X1 Canada
Tel: 604-574-8641
Fax: 604-574-8659
E-mail:
info@dickinsonmarine.com
Website:
www.dickinsonmarine.com

WARRANTY CONDITIONS & LIMITATIONS

WARRANTY PROVISIONS: Dickinson warrants this product to be free of defects in workmanship and materials for a period of one year. This warranty is limited to claims submitted in writing within a one-year period following the date of purchase. If any part of your new product fails because of a manufacturing defect within the warranty period Dickinson offers to replace said parts free of charge, provided, however, that such parts have not been improperly repaired, altered or tampered with or subjected to misuse, abuse or exposed to corrosive conditions. This warranty, however, is limited by certain exclusions, time limits and exceptions as listed below. Read these limitations and exclusions carefully.

TIME LIMIT: This warranty is given to and covers only the original purchaser. Coverage terminates one year from the date of purchase for parts replacement.

EXCLUSIONS: This warranty does not cover or include : (a) Any normal deterioration of the product and appearance of items, due to wear and/or exposure; (b) any guarantees, promises, representations, warranties or service agreements given or made by an authorized distributor or other person selling this product, other than those specifically stated herein; (c) any damage or defect due to accident, improper repair, alteration, unreasonable use including failure to provide reasonable and necessary maintenance, misuse or abuse of the equipment, or exposure to corrosive conditions. This warranty is conditioned upon normal use, reasonable and necessary maintenance and service of your product, and written notice being given promptly upon Buyer's discovery of a warranty claim, pursuant to paragraph 6 below. Reasonable and necessary maintenance is 29 maintenance which you are expected to do yourself or have done for you. It is maintenance, which is necessary to keep your product performing its intended function and operating at a reasonable level of performance.

DAMAGE LIMITATION WARNING: IN NO EVENT SHALL Dickinson BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING (BUT NOT LIMITED TO) LOSS OF USE OF THE PRODUCT, LOSS OF TIME, INCONVENIENCE, EXPENSES FOR TRAVEL, LODGING TRANSPORTATION CHARGES, LOSS BY DAMAGE TO PERSONAL PROPERTY OR LOSS OF INCOME, PROFITS OR REVENUE.

ORAL OR IMPLIED WARRANTY LIMITATIONS: The foregoing warranty is exclusive and in lieu of all other warranties, written or oral, expressed or implied, including but not limited to any warranty or merchantability or fitness for a particular purpose.

TRANSFER LIMITATIONS: This warranty is not assignable or transferable. It covers only the original purchaser.

CLAIM PROCEDURE: In the event of a defect, problem or that a breach of this warranty is discovered, in order to protect any warranty rights you must promptly notify Dickinson. Give name, address, and model name, location of unit, description of problem and where you can be reached during business hours.

RESERVED RIGHT TO CHANGE: Dickinson reserves the right to make changes or improvements to products it produces in the future without imposing on itself any obligations to install the same improvements in the products it has previously manufactured.

SECOND OR SUBSEQUENT OWNER: Dickinson does not give any warranty to secondary or subsequent purchasers, and it disclaims all implied warranties to such owners.

INSPECTION: To assist you in avoiding problems with your product and to validate this warranty you are required to do the following: (a) read the warranty; (b) inspect the product. Do not accept delivery until you have examined the product with your supplier; (c) ask questions about anything you do not understand concerning the product.

OWNER REGISTRATION: Fill out the WARRANTY CARD within 90 days from the date of delivery.

WARRANTY: WARRANTY COVERAGE REQUIRES THE RETURN OF THE FILLED OUT WARRANTY PAGE IN THIS MANUAL, OR THE WARRANTY MUST BE REGISTERED ONLINE. YOU MUST REGISTER YOUR WARRANTY WITH US IN ORDER FOR THE APPLIANCE TO BE COVERED UNDER OUR LIMITED WARRANTY.



Please register your warranty with Dickinson Marine. Fill out and send back this warranty registration, or register online at dickinsonmarine.com/contact. Make sure to include the serial number of your appliance for our records.

No warranty will be extended for improper installations. Use of any unapproved materials, equipment, installation procedures and/or unsafe usage will result in a voided warranty. Do not use any substitutes for components such as the regulator, valve, burner or fan other than ones supplied & approved by Dickinson. Dickinson Marine accepts no liability for any damage or loss of service resulting from unapproved modifications.

DICKINSON WARRANTY REGISTRATION FORM

(PLEASE PRINT)

Name: _____ E-mail: _____
Address line 1: _____ Model name: _____
Address line 2: _____ Serial No.: _____
Telephone: _____ Date of purchase: _____
Purchased from: _____

I confirm have read and understand the Limited Warranty and the contents of the Instruction Manual and agree to the terms and conditions.

Date: _____ Signature: _____

2. ABOUT THIS APPLIANCE



Firebox is sealed against water entry, resists splashes & moisture
(See Fireplace Maintenance, page 33)



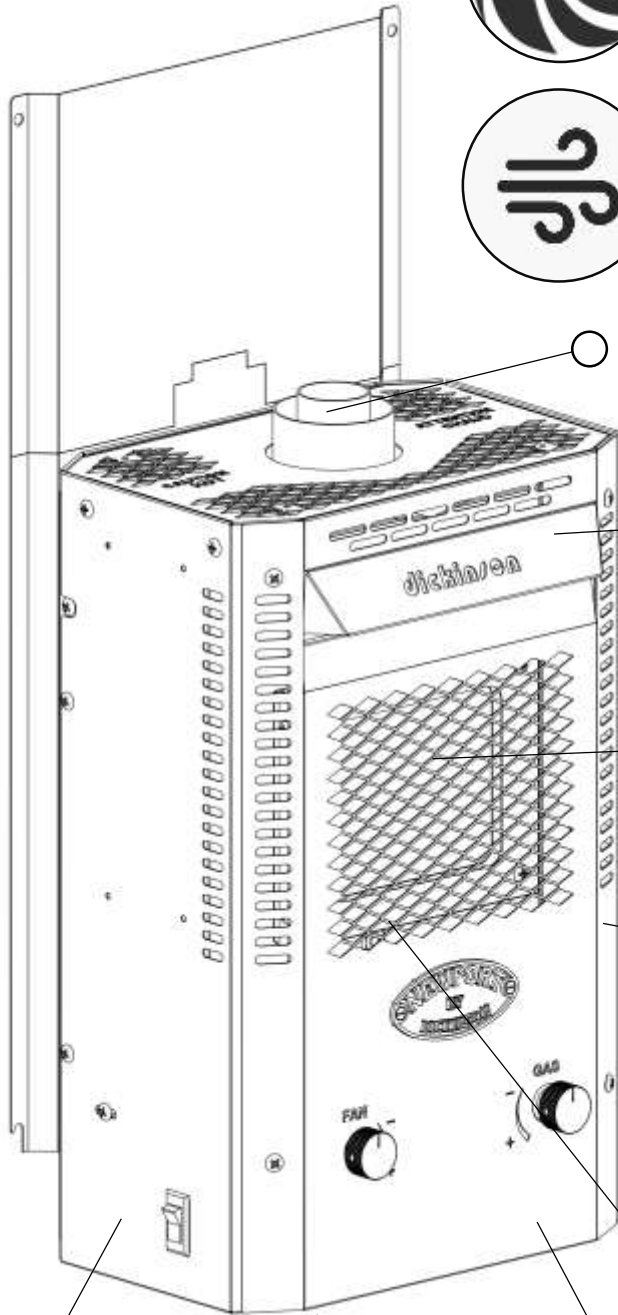
Protective window grate shields vulnerable individuals from accidental burns
(See Fireplace Maintenance, page 33)



Resists blowouts in wind speeds up to 60km/h
(See FAQ, page 7)



Combustion tested for use up to 5000 feet above sea level
(See FAQ, page 7)



EXHAUST & FRESH AIR INTAKE ISOLATED FROM THE ROOM

Separate exhaust vent and fresh air intake keep the flame burning reliably and the atmosphere inside the room safe.
(See Direct Venting, page 10)

DUAL HOT AIR VENTING

Both the top of the heater and the hot air vent will discharge hot air. With the blower fan off heat will emit from the top grill, and with fan on, heat will blow from the vent above the window.
(See Hot Air Vents, page 31)

CERAMIC WINDOW GLASS

The viewing window is made from a thick slab of transparent ceramic specifically developed for fireplaces. This material was chosen for its high impact resistance, thermal shock resistance and overall toughness.
(See Fireplace Maintenance, page 32-33)

HEAT ISOLATING CONSTRUCTION

The outer panels of the heater are configured to not conduct heat from the firebox within, minimizing burn risks from the outside of the appliance.
(See Children & Pets, page 13)

PUSH BUTTON LIGHTING

Pressing the button on the right side of the heater (not pictured) will activate the sparker inside the heater, quickly igniting the burner.
(See Fireplace Operation, page 29)

AIRTIGHT BURN CHAMBER

The firebox of the heater is kept airtight by means of advanced high temperature gaskets and a sealed stainless steel construction.
(See Fireplace Maintenance, page 33)

FULLY STAINLESS STEEL BODY

Every panel of the heater is manufactured from stainless steel, both inside and out, ensuring longevity.
(See Fireplace Maintenance, page 32)

QUIET BLOWER FAN

Equipped with a 12v three inch boxer fan with a low power draw (.4 amps) to spread heat more rapidly.
(See Fan wiring, pages 26-27)

EASY CONTROLS ACCESS

Swing open the hatch beneath the heater to access the controls compartment for servicing or maintenance.
(See section Internal Components, page 11)

FREQUENTLY ASKED QUESTIONS

The Explorer propane fireplace

The Dickinson Model Explorer is a direct vent propane gas fireplace approved for manufactured home, mobile home and onboard marine installations. Broadly based on the popular Dickinson propane boat heaters, the Explorer also features several upgrades that have granted it certification for a use in a wider range of environments. For decades now, the name Dickinson has been a byword for reliability among the fishermen and boaters of the Pacific Northwest. We're very pleased to now offer that same legendary reliability to our valued customers for use on land as well as at sea.

What is a direct vent appliance?

Direct vent means that the fireplace both vents and draws in air from outside the structure. This means that the fireplace won't deplete the room's oxygen, allow exhaust or smoke to enter the space or introduce additional moisture into the air. The fire inside the Explorer burns completely isolated from the atmosphere in the room.

What parts do I need to install this fireplace?

The Explorer fireplace comes with everything it needs to be installed into a structure or vehicle. Additionally, in order to connect the fireplace to a fuel tank, you'll need to obtain and install a low pressure regulator and low pressure fuel hose as well. These are not included with this appliance (see pages 23-24)

Where can this fireplace be installed?

The Explorer is ANSI/CSA approved for install in manufactured homes, mobile homes and ABYC approved for use aboard boats. The fireplace is capable of heating a maximum area of approximately 230 square feet. This is assuming a ceiling height within the normal range and a location within temperate climate zones. The ability to build and accumulate heat within the space will also depend on the age and quality of the structure's construction and insulation. This fireplace is intended for Indoor use only.

How safe will Children, at risk individuals and pets be around this fireplace?

During its design and development the Explorer fireplace was subjected to extensive in house and independent safety tests. The Explorer fulfills all safety requirements and has passed all safety tests stipulated in ANSI Z21.88-2019 / CSA 2.33-2019; CSA 2.17-2017 and ABYC A-26-2018. The outer shell and interior parts of the fireplace can become a potential burn hazard when the fireplace is or has been in operation. Every effort has been made to reduce the burn hazard potential of the fireplace shell. The operational controls of the fireplace are prevented from absorbing heat and remain safe to operate at all times.

Every appropriate precaution should be taken to protect children, at risk individuals and pets from coming into contact with the fireplace or its controls. Additional barriers may be required to keep them away from danger. This fireplace must never be left to run unattended for any length of time.

How important is the chimney?

The length and shape of your chimney is the most important consideration when choosing a spot to install your fireplace. In order to burn reliably the fireplace requires both its venting and air intake to conform to the manufacturers venting requirements. Chimneys must be no shorter than 21" and no longer than 56". Within this range any bends introduced to the chimney should be gradual not sharp. 90 degree bends and horizontal, wall exits are not feasible. Ensuring your chimney is able to vent and draw in air freely is key to reliable fireplace operation.

Does this fireplace need a low pressure regulator?

Yes, this fireplace is rated for fuel input of no more than 11 inches of water column, which is equivalent to 0.39 pounds per square inch (PSI) The pressure of a refillable propane bottle ranges from 100-200 PSI, so a low-pressure regulator must be used to reduce incoming pressure to 0.39 PSI. **YOU MUST NEVER ATTEMPT TO CONNECT THE FIREPLACE TO FUEL WITHOUT A LOW PRESSURE REGULATOR!**

Can this fireplace be used at higher altitudes?

Yes, the Explorer fireplace is tested and approved under CSA 2.17-2017 for use at an altitude range of 0-5000 feet above sea level. No fuel input reduction or modifications are required to operate the fireplace at elevations within this range. For elevations above 5000 feet a 4% reduction in fuel volume would be recommended per every 1000 feet of elevation.

How will the fireplace be affected by rain, wind and snow?

The Explorer fireplace has been designed to keep working in poor weather conditions. The chimney cap is designed to resist rain and has a wind splitter to ensure it can still vent in high winds. If the chimney cap becomes covered with snow, expose a small area beneath both bells on one side to allow exhaust to exit and air to enter – the heat of the cap will melt the rest of the snow away from it, preventing snowmelt from entering the chimney.

Can the Fireplace operate without electrical power?

Yes, the appliance can be run as normal without the optional blower fan being connected to power. The appliance will still require power from 1 AA battery to generate a spark inside the combustion chamber and ignite the flames.

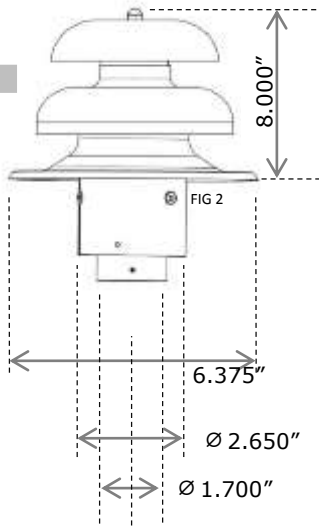
Have other questions?

If you have any questions about our product that are not answered by this manual, we'd be happy to answer them! Email info@dickinsonmarine.com with your Dickinson Product enquiries.

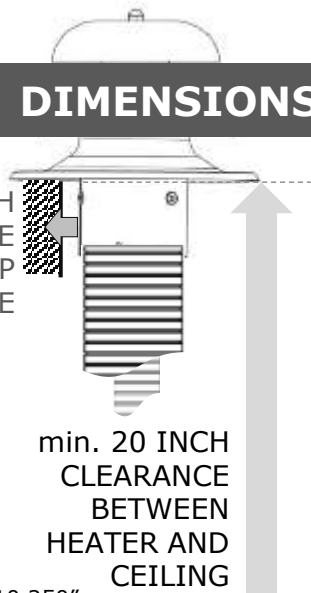
ALL MEASUREMENTS IN INCHES

CAP MUST BE min. 20 INCHES AWAY FROM VENTS OR REFUELING POINTS

DIMENSIONS & CLEARANCES

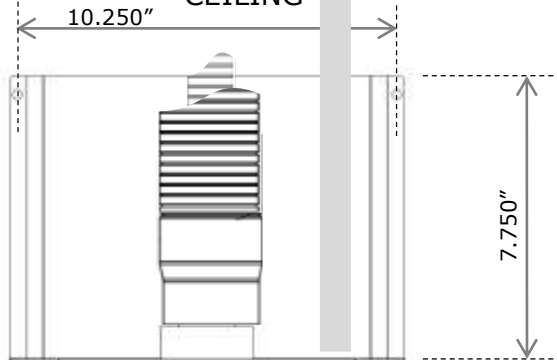
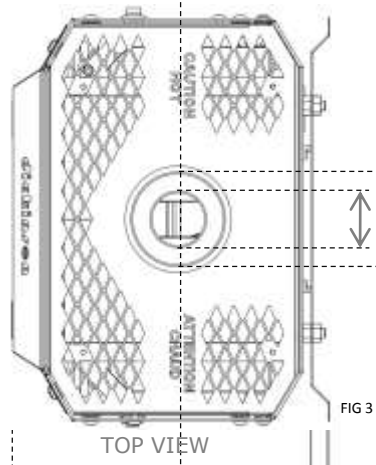


min. 0.5 INCH CLEARANCE AROUND CAP SLEEVE

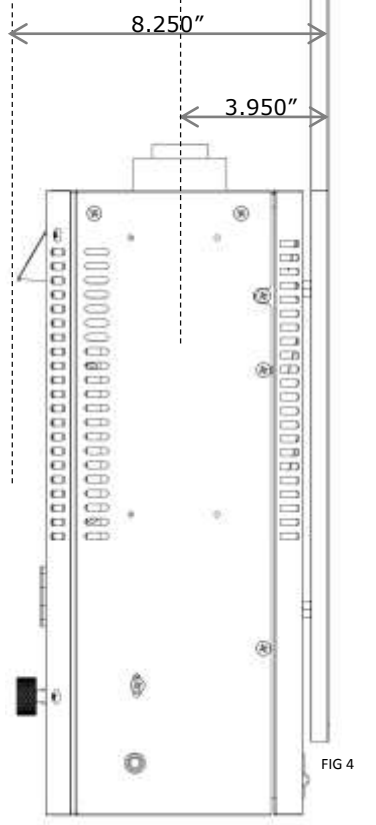


HEATER MUST BE INSTALLED WITH DEPICTED SAFETY CLEARANCES IN PLACE

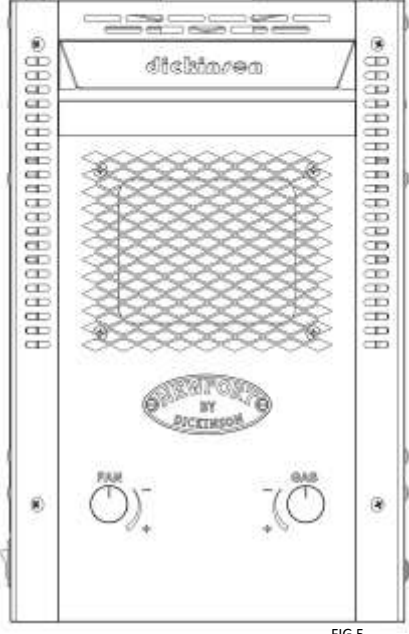
MIN. FLUE LENGTH: 21.000"
MAX. FLUE LENGTH: 56.000"



min. 20 INCH CLEARANCE IN FRONT



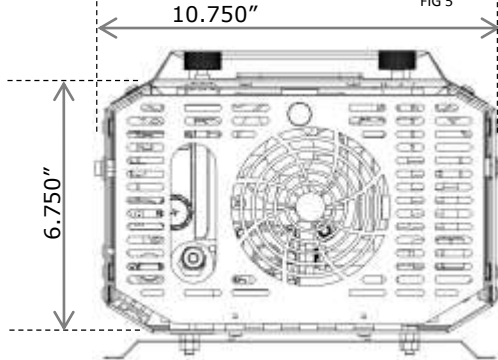
min. TWO INCH CLEARANCE



min. TWO INCH CLEARANCE

17.000"

min. 6 INCH CLEARANCE BENEATH



RATINGS & SPECIFICATIONS

Part no.	00-NEW-EXPLORER
Model name	Newport Explorer fireplace
Product type	Vented Gas Fireplace Heater
Conforms to	ANSI Z21.88-2019 / CSA 2.33-2019; CSA 2.17-2017; ABYC A-26-2018
Max. electrical input rating	12 Vdc, 0.4 Amp
Fuel type	LP propane
Max. fuel input rating	11 inH ₂ O (0.397 PSI)
BTU/hr	4,700
Maximum Capacity	230 sq. ft
Ignition control	manual
Gas control	manual
pilot	No
Thermostatic control	No
Orifice drill size	#D71 (0.66mm)
High limit switch °F	-2 low / 392 high
High Limit conforms to	RoHS; CSA C22.NO.0:20; UL 873; EN 60730-1
Thermocouple type	fast-acting
Thermocouple output voltage decay	Max. 30 seconds
Valve rating	2PSI ; 40,000 BTU/hr
Regulator rating	Adjustable max. ½ PSI inlet
Regulator conforms to	ANSI Z21.18-2007 / CSA 6.3-2007
Blower Fan	12 Vdc; 0.4 amp; 67 CFM; 44.2 dbA
Resistor rating	250 Ohms
Ignition power	1.5v DC, AA battery
Sparker Frequency Hz	≥ 4.0
Battery terminal conforms to	ANSI Z21.92-2001 / CSA 6.29-2001
Vent pipe diameter	ø 1.500"
Air intake diameter	ø 2.500"
min/max Venting lengths	21" / 56"
Ducting wall thickness	.015"
Flue pipe pressure rating PSI	5
Window glass	Transparent Ceramic Glass Panel
Thermal shock resistance °F	≤ 1292
Window Gasket	Graphite laminate
Max Temperature exposure °F	698
Install Clearances	21" above ; 6" below ; 2" at sides
Mounting	Wall mounting with metal back plate
Flue mounting	Adjacent to wall with flue-guard installed

THE Explorer PACKAGE CONTAINS

- 1x direct vent propane fireplace
- 1x 1.5" ø x 28" inner vent pipe
- 1x 2.5" ø x 28" outer air intake pipe
- 4x spacer springs for vent pipe
- 1x vent/intake deck cap
- 1x deck cap rubber sealing gasket
- 1x deck cap interior trim dress ring
- 1x hardware for cap attachment
- 1x installation and operating instructions
- 1x 1.5V AA Battery



What's In The Box?

In case of any questions regarding the contents of your appliance packaging please enquire at <info@dickinsonmarine.com>

DIRECT VENTING

Inside The Firebox

The Explorer is a direct vent gas fireplace. It produces heat from within a sealed firebox by means of combustion.

Because this firebox is sealed air-tight, it will only vent via the attached chimney. Using the attached air intake pipe, the heater is also only able to access air from outside of the structure. This means that smoke, exhaust and unpleasant smells cannot enter the living space from the fireplace.

The heater will not deplete oxygen from inside the living space except in cases where it has been installed improperly without adhering to the instructions in this manual.

To ensure efficient and proper operation, a direct vent fireplace must always be installed per the manufacturers instructions. Failure to do so may result in unpredictable or unsatisfactory operation.

The Fire Triangle Δ

Every fire relies on the same 3 elements to sustain itself - Oxygen, Fuel and Heat. These make up the fire pyramid. This drawing illustrates how these 3 elements are kept in balance inside the Explorer's firebox.

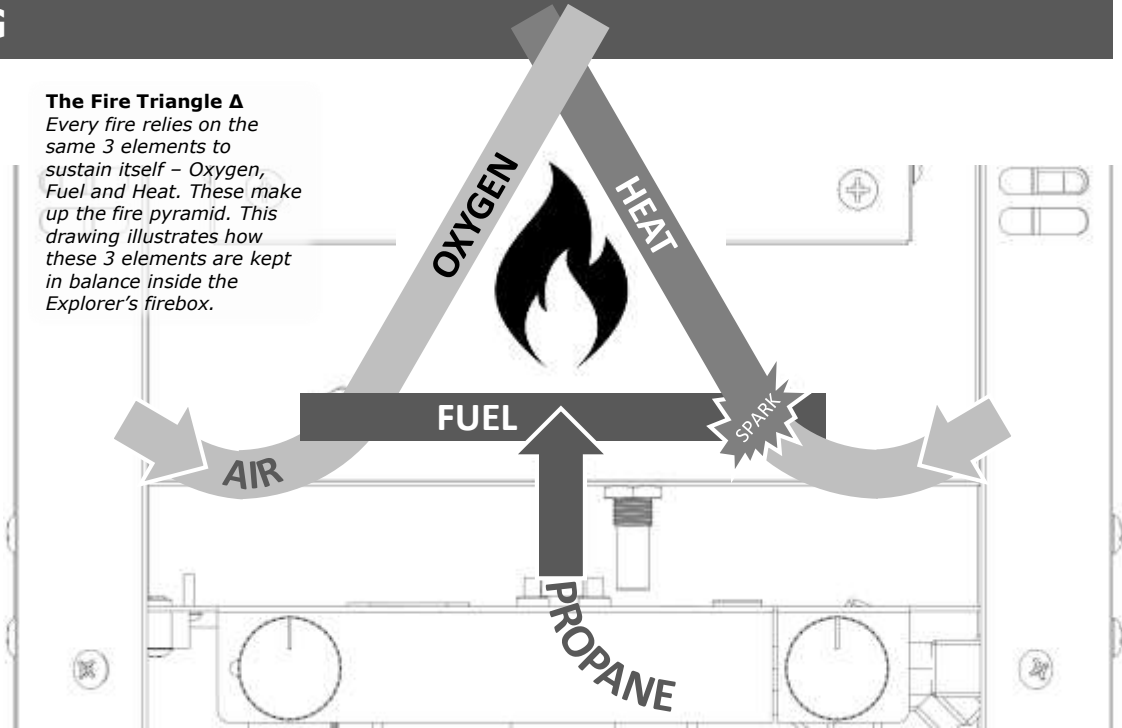


FIG 7

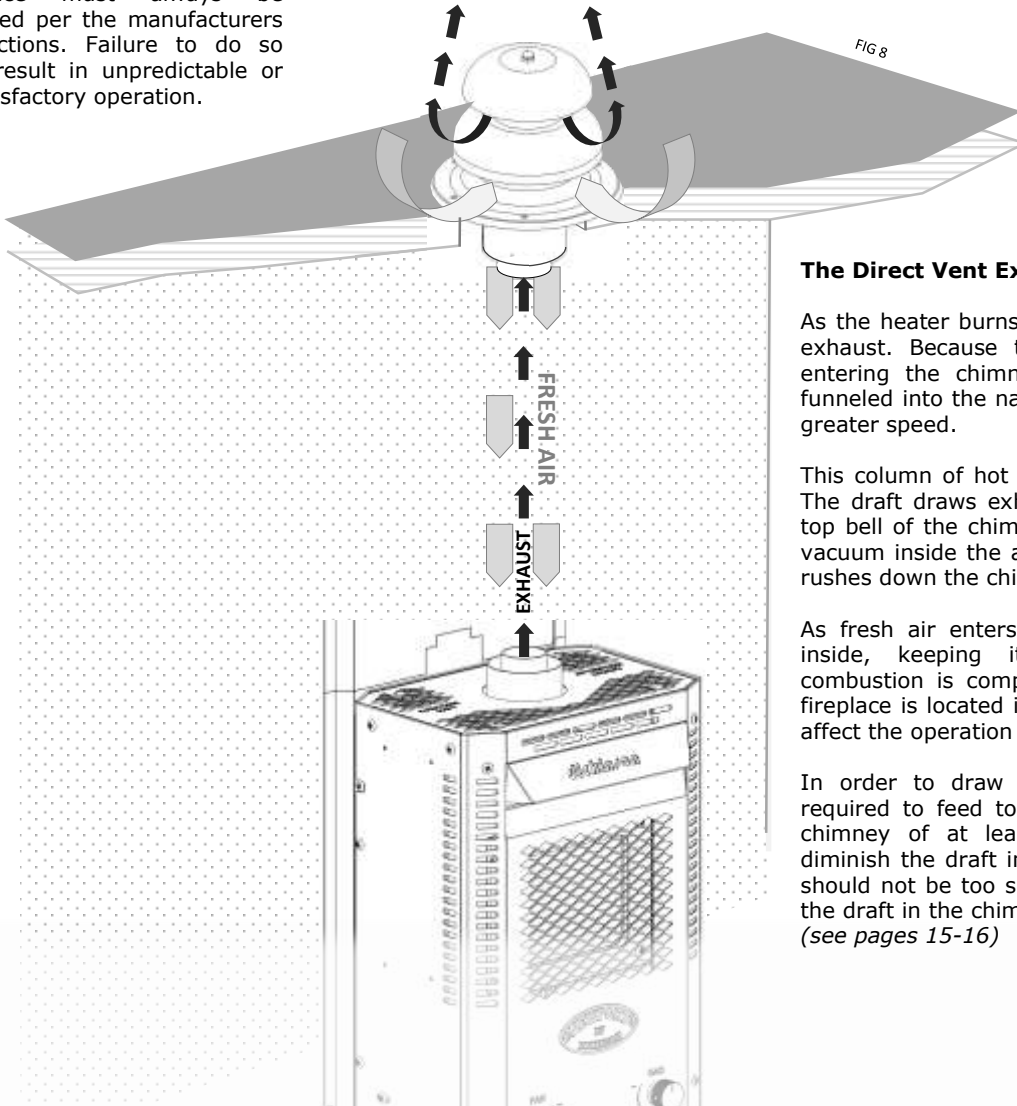


FIG 8

The Direct Vent Exchange

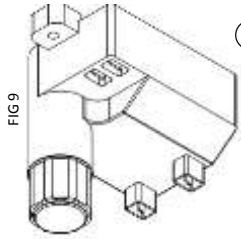
As the heater burns, it will immediately begin to produce exhaust. Because this exhaust is hot it rises rapidly, entering the chimney vent pipe above. As exhaust is funneled into the narrow vent pipe it begins to travel at a greater speed.

This column of hot gas inside the chimney creates draft. The draft draws exhaust up the chimney and out of the top bell of the chimney cap. As this happens it creates a vacuum inside the air-tight firebox, fresh air immediately rushes down the chimney's intake pipe to fill the heater.

As fresh air enters the burn chamber it feeds the fire inside, keeping it burning steadily. Because this combustion is completely sealed off from the room the fireplace is located in, conditions inside the space will not affect the operation of the fireplace.

In order to draw in the correct amount of fresh air required to feed to fireplace, the Explorer must have a chimney of at least 21 inches in length. Bends will diminish the draft in the chimney - chimneys with bends should not be too short. The sharper the bend, the more the draft in the chimney will be reduced.
(see pages 15-16)

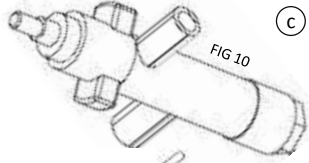
INTERNAL COMPONENTS



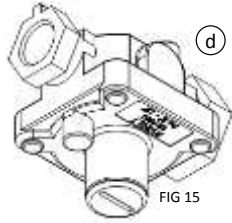
(a) **Battery Box**
#23-052



(b) **High Heat Sensor**
#19-161



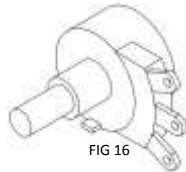
(c) **Control Valve**
#19-020



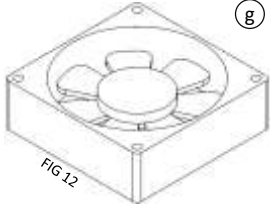
(d) **Built-in Regulator**
#19-500



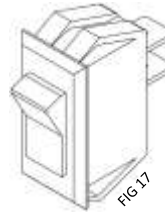
(e) **Sparker Probe**
#SPARK-1



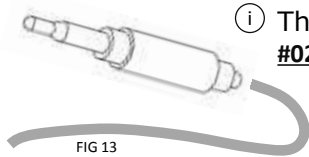
(f) **Fan Speed Control**
#01-998



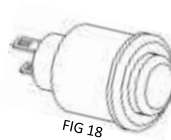
(g) **Blower Fan**
#01-999



(h) **Fan ON/OFF switch**
#01-073



(i) **Thermocouple**
#02-014



(j) **Ignition Button**
#19-502

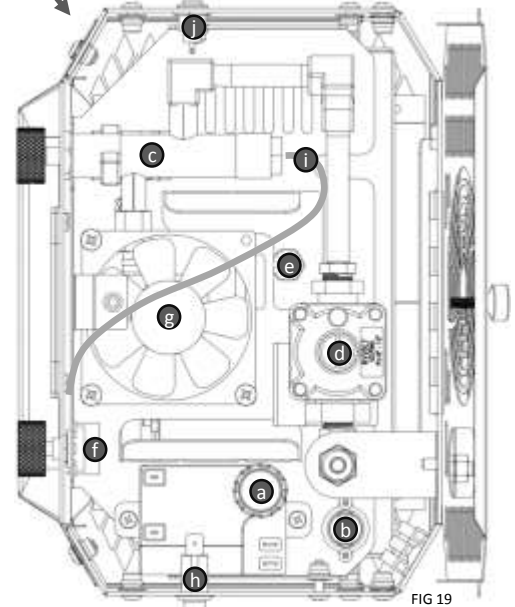
EXTERNAL COMPONENTS (Not included)

- *Low pressure regulator (one appliance): **19-151**
- **Regulator/Tank fittings kit (for 19-151 only): **19-152**
- 2 stage Low pressure regulator (2 or more appliances): **19-162**
- Disposable propane bottle regulator kit: **19-150**
- ***Low pressure fuel hose (10ft/20ft): **19-100-10/19-100-20**
- Chimney extensions (10" / 28"): **19-005/19-000**
- 110V AC to 12V DC Transformer Plug: **19-211**
- Solenoid shut off valve: **19-153**

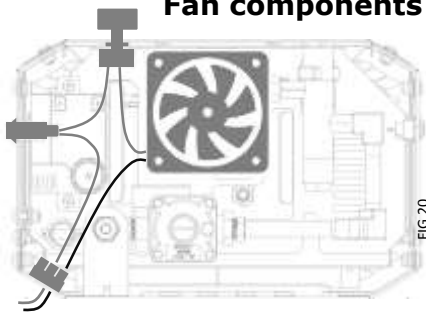
***This fireplace MUST be installed with a regulator**
****Required for 19-151**
*****This appliance must be connected to it's regulator using a low pressure fuel hose.**

The CONTROLS COMPARTMENT houses all of the heaters primary controls and safety devices. The components inside this space form the 3 different systems needed to operate the fireplace;

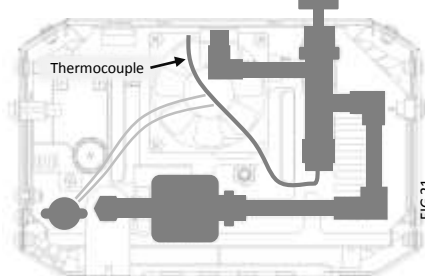
- **The 12v Fan system**
- **The 1.5v sparker system**
- **The gas manifold system**



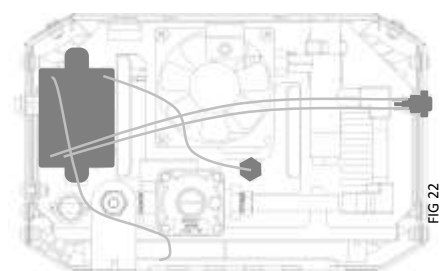
Fan components



Fuel Manifold



Ignition Components



This appliance comes equipped with a 12 VDC; 0.40 A optional blower fan. This fan does not need to be connected to operate the appliance. Expected Fan volume max. 44.2 dbA. CFM = 67.

If applicable this fan must be grounded in accordance with local codes, or in accordance with **National Electrical Code ANSI/NFPA 70 (United States)** or with **The Canadian Electrical Code CSA C22.1-18-2018**

THIS APPLIANCE IS EQUIPPED FOR NATURAL (LP/PROPANE) GAS ONLY. Max. inlet pressure 11" water column. Regulator inlet adjustable 1/2 PSI.

This appliance must be installed in accordance with local codes, if any; if none, follow ANSI Z223.1/NFPA 54 or CSA B149.1.

This appliance is equipped with a 4.0 Hz spark ignition powered by 1 x 1.5v DC, AA battery. The battery terminal resists water ingress for up to 72 hours at a max. depth of 10". The battery terminal conforms to **ANSI Z21.92-2001 / CSA 6.29-2001.**

3. INSTALLATION GUIDE

WHERE CAN YOU INSTALL THIS FIREPLACE?

Choosing a suitable install location for the fireplace is key to getting optimal performance out of it. A suitable install location is one that can accommodate all the manufacturers install requirements for the appliance. Please pay close attention to the **safety clearances, min. and max. chimney lengths, fuel and power hookup** requirements stipulated in this manual. Failure to meet one or more of these install requirements may result in unsatisfactory or unreliable operation of the fireplace. Please note that Dickinson bear no responsibility for unsatisfactory performance damage or loss resulting from non-conforming product installations that do not meet the requirements in this manual.

HEATING CAPACITY

The Explorer can be used in conjunction with alternative heat sources, or on its own as a lone source of heat. If the heater is going to be the main or only source of heat, it will be necessary to verify that it provides enough BTU to comfortably heat the space it is intended for.

What is BTU?

BTU stands for British Thermal Unit. 1 BTU is roughly the equivalent of the amount of energy that is released when you light one match. This is roughly enough heat energy to heat 1 pound of water by 1 degree Fahrenheit. BTU is the energy unit most commonly used in the calculating of AC and heating requirements.

Basic BTU calculation

As a general rule of thumb, for every square foot of the space you wish to heat you'll need roughly **20 BTU** of heat energy. This estimate makes a few assumptions however, it assumes that;

- The space has a standard ceiling height of between 7-9 feet
- The space is well insulated with minimal heat loss
- The space is located in a climate zone without extreme temperature lows

Provided that the proposed install location falls within these criteria, the formula below can be used to work out the approximate BTU required to heat a space.

No. of sq ft. x 20 = approximate requirement in BTU

Example: **200 (sq ft.) x 20 = 4000 (BTU)**

This calculation tells us that the Explorer, which generates 4500 BTU/hr meets the minimum requirements to serve as a primary heat source for a well insulated, 200 sq ft. space located in a temperate climate.

Because we know that the maximum BTU output of the Explorer is 4500 BTU/hr, we can also work out the maximum square footage that the Explorer is potentially able to heat under the same conditions as above;

4500 (BTU) ÷ 20 = 225 (sq ft.)

From this we can see that the biggest area the Explorer can potentially be expected to heat on its own under the conditions described above is roughly 225 sq ft.

Other Factors

Several factors need to be taken into account when calculating the BTU needs and possible variations for the space you wish to heat. Some of the factors mentioned below are more obvious than others, but all of them have the potential to affect how efficiently and reliably the fireplace will be able to heat the space.

Insulation condition: Insulation condition is an assessment of how well insulated a structure or vehicle is. This will depend on the thickness and type of insulation used, its rated R-value, its age and condition. An older home will likely have less effective or degraded insulation compared to a newer home insulated with newer, modern materials.

Windows: Windows typically have poor thermal resistance compared to walls even if a space is well insulated. Poorly fitting window frames will also lead to heat loss. Double glazed windows will help retain more heat where applicable. The use of thermal curtain liners can help to reduce heat loss.

Climate: the BTU needed to heat a given space will vary depending on the climate zone. For example, heating a well insulated space with minimal heat loss in Atlanta, Georgia will require less BTU overall than it will take to heat the same well insulated space if it was located in Anchorage, Alaska.

Number of inhabitants: Every inhabitant (human and animal) sharing the space will dissipate body heat, contributing to a temperature increase. This effect is more noticeable in smaller rather than larger structures.

Elevation: Elevation, altitude and atmospheric pressure will also affect how the fireplace is able to burn. Oxygen is less plentiful as you travel up in altitude, making it harder for the fireplace to draw in enough clean mixing air for combustion. As a result, the flames may become richer, with less blue flame and more orange. Rich, orange propane flames don't generate nearly as much heat as blue flames, so the richer the flames are the less heat is being generated.

Dead spots: In order to heat a room, the hot air introduced and the colder air present must be able to flow freely. Dead spots in the room where air movement is reduced by partitions or the placement of furniture can prevent this from happening.

CHOOSING AN OPTIMAL INSTALL LOCATION

Choosing an unsuitable install location for your Explorer fireplace may result in unsatisfactory or poor performance from the fireplace without it being defective. The fireplace has strict chimney requirements, and its safety clearances must be taken into consideration when choosing where to install it. Below are the most important considerations to keep in mind while selecting the right spot for the fireplace.

Chimney run

Often underestimated, the length and shape of your chimney is **the most important install consideration that can affect the performance of the fireplace!** Longer, straighter chimneys always offer better venting performance than shorter chimneys with bends will. If at all possible, always choose an install location that will allow for the install of the 28" chimney pipes without the need to bend them. If bends in the chimney are unavoidable, you can achieve an offset of bend of between 1-10 inches without significantly affecting the chimney's draw. Any install locations that won't allow for the full length of chimney pipe or a reasonably straight run should not be considered unless unavoidable. Any locations that require a 90 degree chimney bend or wall mounted, horizontal exit cannot be considered.

(See Chimney Variations, pages 15-16)

Outside venting

Where the chimney exits will also be critical to the fireplace's operation. Keep in mind that the chimney cap is both an exit and an intake. If any adjacent or overhanging structures trap exhaust and cause it to linger, it could be drawn back into the fireplace and unbalance combustion. A chimney cap placed in an updraft may also cause issues with combustion.

(See Chimney Cap Install, page 17)

Safety clearances

The safety clearances for the fireplace were determined during extensive safety testing and must be applied in all installations for the safety of property and people in the vicinity of the fireplace. If an install location won't allow for these clearances to be observed, a safer alternative location for the fireplace which can accommodate the safety clearances must be chosen. Dickinson accept no responsibility for unsatisfactory performance as a result of an unapproved install.

(See Dimensions & Clearances, page 8)

Replacing an existing fireplace?

When installing a fireplace it often seems to make the most sense to utilize the location of a fireplace. While this can certainly be true, the manufacturers installation requirements will differ from appliance to appliance. Different fireplaces will have varying requirements for chimney diameters, heights, safety clearances and other considerations. For this reason, the location of an old fireplace may be less than ideal or even unsuitable for the installation of the Explorer. If in doubt, please contact Dickinson Marine with your questions.

(See Unsupported Variations, page 16)

Heating Capacity

Determining how big of a space the fireplace will be able to comfortably keep warm is very important when choosing where to install it. In cases where the fireplace is installed in a space beyond its capacity to heat, in a poorly insulated room or in a location subjected to substantially low outside temperatures, it will likely fail to provide enough heat. This does not mean the fireplace is defective. In order to operate normally the fireplace must be determined to be suitable for the space intended.

(See Heating Capacity, page 12)

Children & pets

Every effort has been made to make sure that the Explorer poses a minimal safety risk to children, pets and other vulnerable individuals who may be sharing the space the fireplace is located in. Despite the safeguards built into the appliance however, utmost care must be taken to make sure vulnerable individuals who may be in the vicinity of the fireplace cannot come into contact with it accidentally or on purpose. A folding fireplace screen or other barrier can be erected a safe distance in front of the fireplace for protection. Children and at risk individuals should never be allowed to remain in the vicinity of the fireplace unsupervised while in operation, and must never be allowed to operate the fireplace controls.

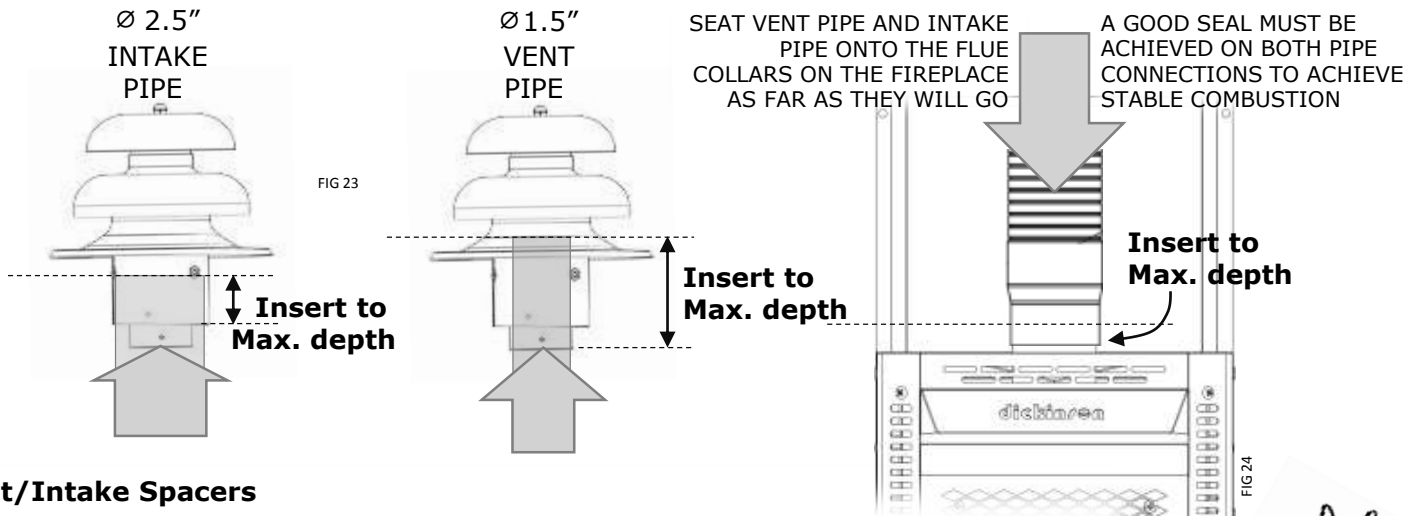
(See Flue Guard Install, pages 20-21)

CHIMNEY ASSEMBLY

The efficiency of a chimney can make all the difference to the fireplace. A poorly configured chimney may cause the fireplace to become extinguished unexpectedly, refuse to light, or burn unreliably. The effectiveness of a chimney will be affected by its overall shape, length and install tolerances. Below are some examples of both effective and ineffective chimneys.

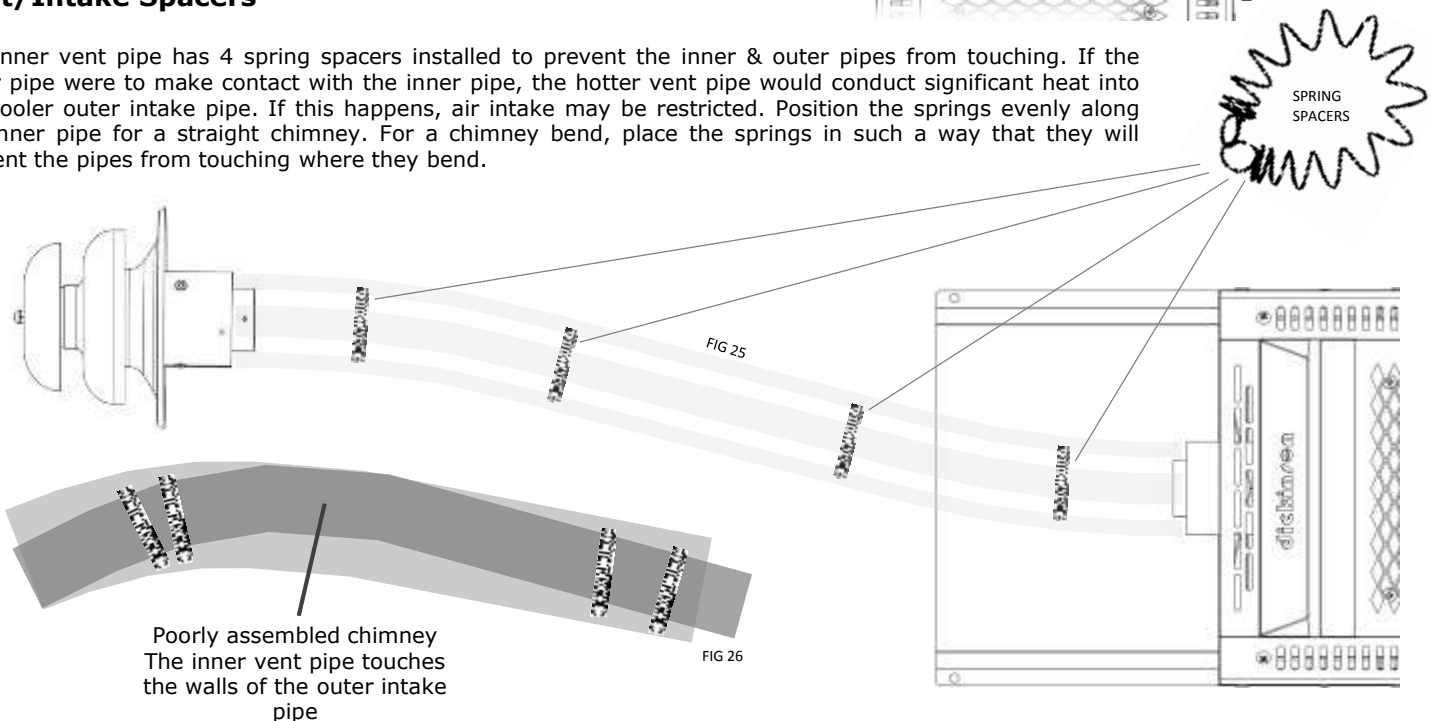
Establishing good chimney connections

For any shape or size of chimney, the chimney must be seated tightly onto the fireplace, it must also be seated all the way into the chimney cap, and it must be installed with the spring spacers provided. If the chimney is not seated into the fireplace/cap correctly, you risk an exchange of exhaust/combustion air which may extinguish the flames. The spring spacers are intended to keep the 2 pipes separated at all times – before attaching the chimney pipes to the heater & cap make sure these springs are present and evenly spaced along the inner pipe – without these spacers, the pipes may touch one another, preventing the chimney from doing its job.



Vent/Intake Spacers

The inner vent pipe has 4 spring spacers installed to prevent the inner & outer pipes from touching. If the outer pipe were to make contact with the inner pipe, the hotter vent pipe would conduct significant heat into the cooler outer intake pipe. If this happens, air intake may be restricted. Position the springs evenly along the inner pipe for a straight chimney. For a chimney bend, place the springs in such a way that they will prevent the pipes from touching where they bend.



CHIMNEY VARIATIONS

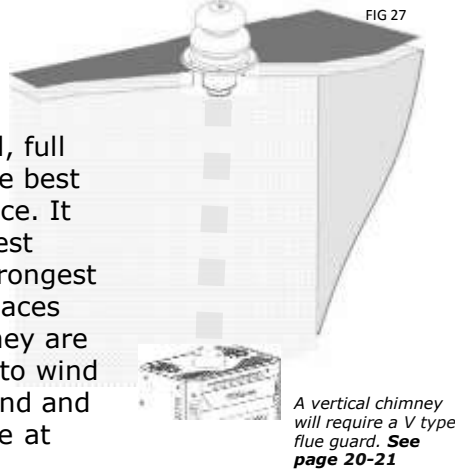
Where the fireplace is mounted and where the chimney will exit and connect to the chimney cap will determine the shape of the flexible chimney pipe.

While the chimney pipes are flexible, the fireplace's requirements are not.

The fireplace relies entirely on the chimney for its exhaust and air (oxygen) intake. The exchange of these gasses takes place via the chimney and will not happen efficiently unless the chimney is configured correctly. The following pages give examples of good, acceptable and bad chimney installs.

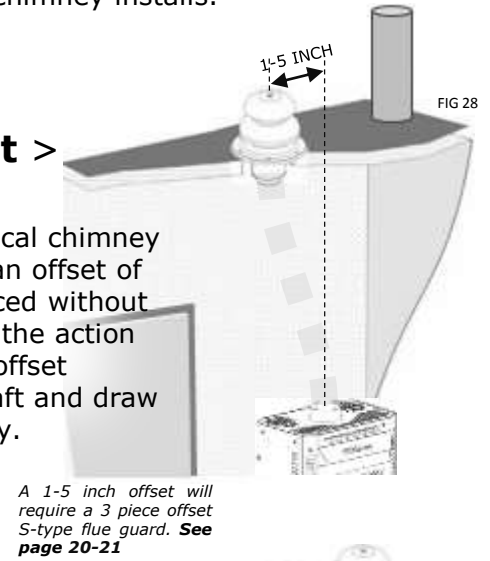
A. Vertical >

A completely vertical, full length chimney is the best option for the fireplace. It produces the strongest exhaust draft and strongest air intake pull. Fireplaces with a vertical chimney are the least vulnerable to wind and the effects of wind and atmospheric pressure at higher elevations.



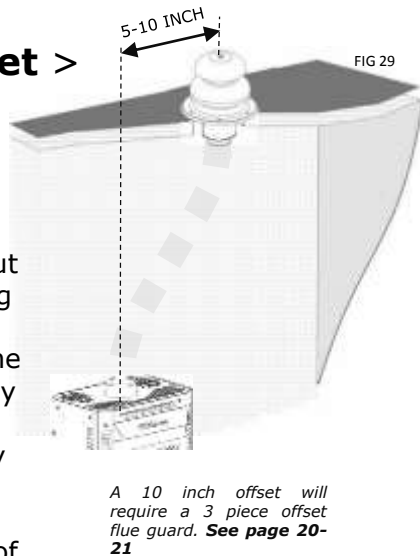
B. 1-5" Offset >

If a completely vertical chimney proves impossible, an offset of 1-5" can be introduced without noticeably affecting the action of the burner. A 5" offset chimney will still draft and draw in air very effectively.



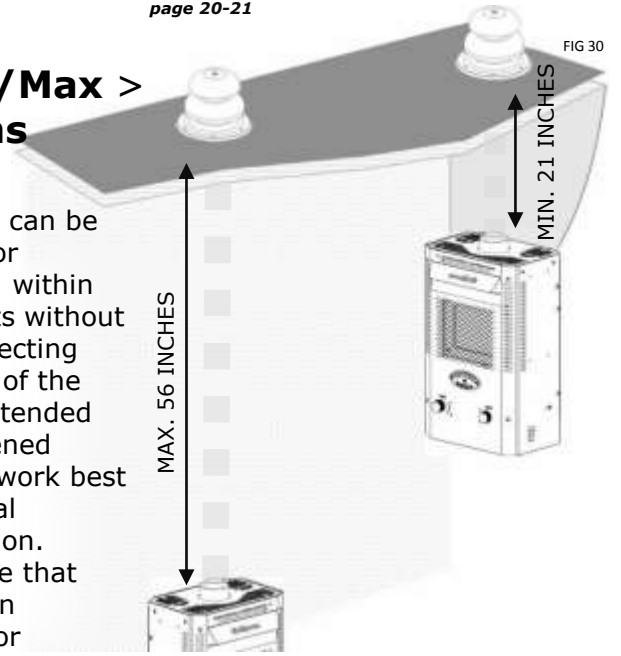
C. 5-10" Offset >

If an offset of more than 5 inches is required, it can be accomplished without significantly affecting the action of the burner, so long as the bends in the chimney are gradual and not abrupt. The chimney pipes must also be prevented from touching by means of the 4 spring spacers.



D. Min/Max Lengths

A chimney can be cut down or extended* within these limits without greatly affecting the action of the burner. Extended and shortened chimneys work best in a vertical configuration. Please note that bends in an extended or shortened chimney can affect its ability to draw in air efficiently, and may cause the fireplace to become extinguished unexpectedly.



* Chimney extension kit sizes available

#19-000 – 2.5" x 28" Flue Extension kit (with clamp)



#19-005 – 2.5" x 10" Flue Extension kit (with clamp)



UNSUPPORTED VARIATIONS

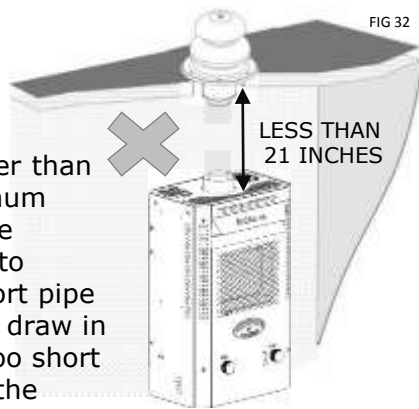


There are chimney configurations that will not support the action of the fireplace and must be expected to result in unsatisfactory operation. These unsupported chimney configurations severely reduce the chimney's ability to draw air into the fireplace which may cause it to be extinguished. Unsupported chimney variations leave the fireplace vulnerable to blowouts.

Attempting to install a chimney and operate the fireplace using an unsupported chimney variation will result in unsatisfactory or unpredictable operation!

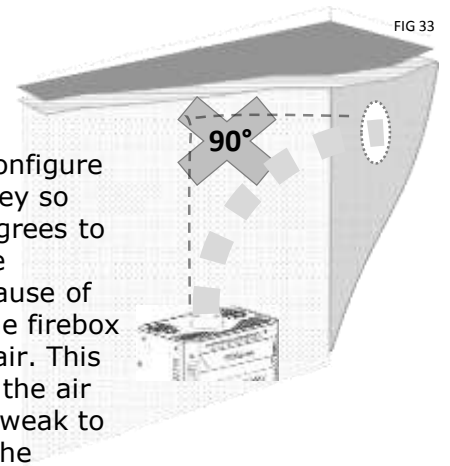
E. Less than 21 inches >

A chimney cut shorter than the stipulated minimum length will render the fireplace vulnerable to blowouts. A very short pipe will even struggle to draw in air. A chimney cut too short also won't allow for the required 20 inches of safety clearance above the fireplace.



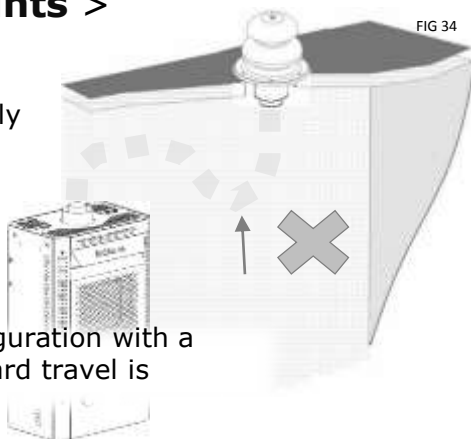
F. Horizontal exits >

It's not possible to configure the fireplace's chimney so that it exits at 90 degrees to the orientation of the fireplace. This is because of the airtightness of the firebox and how it draws in air. This configuration baffles the air intake making it too weak to adequately support the fireplace.



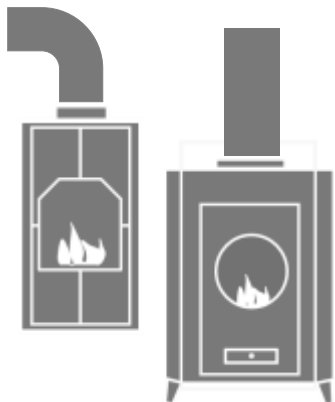
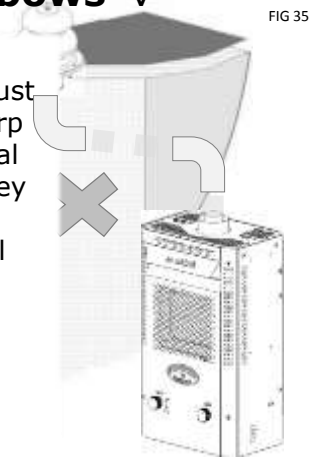
G. Low-points >

Low points in a chimney will likely impede the vent/intake severely enough to prevent the fireplace from staying on at all. A chimney configuration with a continuous upward travel is required.



H. Sharp bends & elbows v

Elbows and sharp bends in the chimney discourage both exhaust and air intake. Elbows and sharp bends are especially detrimental on lower sections of the chimney pipe. Any bends that are necessary should be as gradual as possible, bending the pipe slightly along its whole length. Bends to complete an offset of more than 10 inches are not recommended.



Other appliances and models

It may not be possible to replace a previous model Dickinson fireplace or other appliance with this fireplace in the same configuration. This fireplace may not support the chimney types, configurations and systems used on other appliances including other Dickinson fireplace heaters. The safe clearance requirements, electrical and fuel connection of this fireplace may also differ from any previously installed appliances.

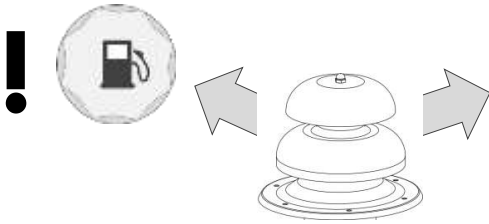
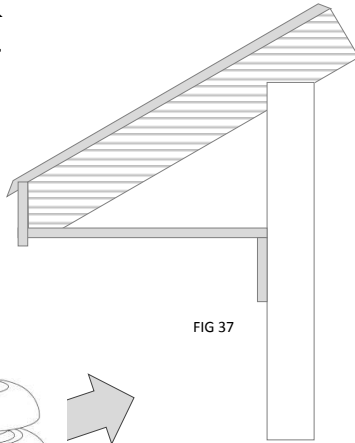
Where this fireplace may be replacing a similar or previous model, due attention must be paid to the warnings and recommendations specific to this fireplace included in this manual.

CHIMNEY CAP INSTALL

▪ Chimney cap replacement part: #19-051

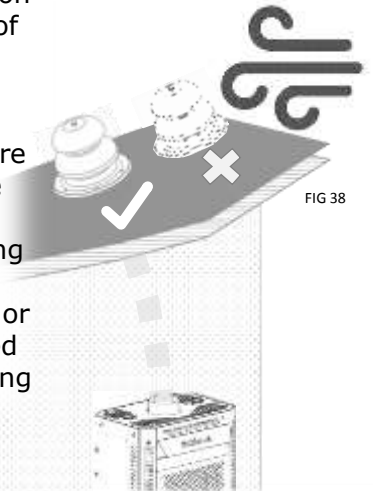
A. Clearances & Obstacles >

The cap must be safely removed from obstacles like overhanging eaves and flammable hazards like fuel filler caps.

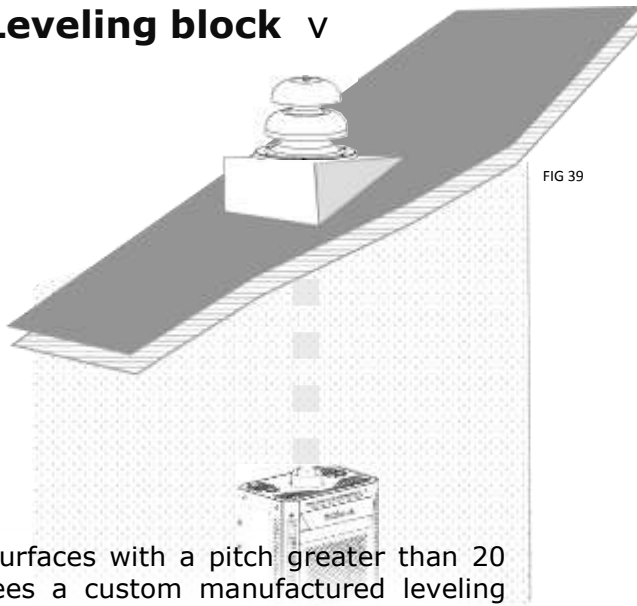


B. Pitched roof v

A cap can be installed on a surface with a pitch of 20 degrees or less without adaptation. Please note that caps installed on an angle are best located on the lee side of a roof or structure. Avoid locating an angled cap at the peak or edge of a roof or where it will be exposed to the brunt of prevailing winds.



C. Leveling block v

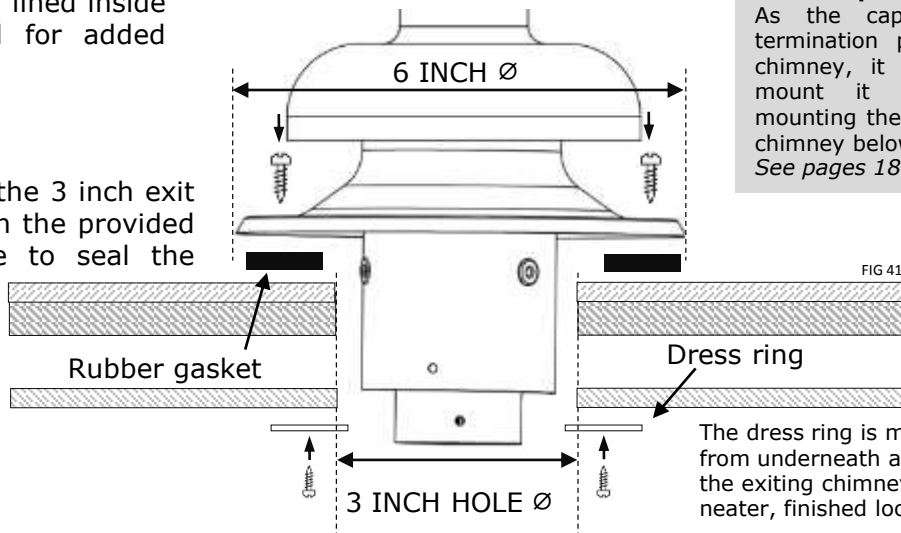


For surfaces with a pitch greater than 20 degrees a custom manufactured leveling block should be used. The leveling block should have a sufficient clearance from the chimney pipe passing through it and a wooden leveling block may be lined inside with non-flammable material for added heat resistance.

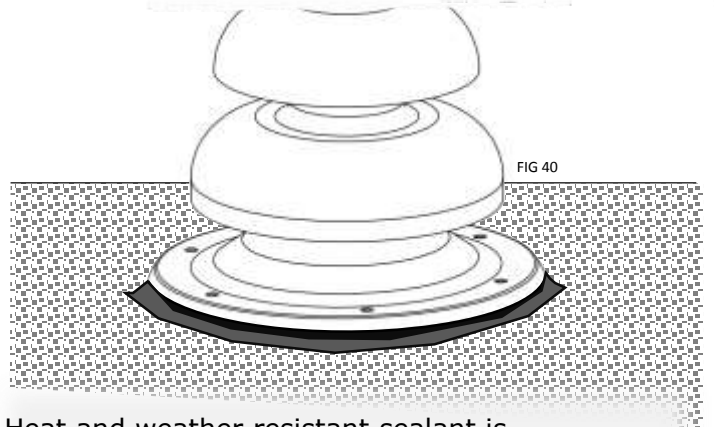
Mounting

Assembly of the cap through the 3 inch exit hole should be completed with the provided rubber gasket and hardware to seal the flange against water entry.

The cap is electro-polished for an extremely smooth and extremely corrosion-resistant finish.



D. Textured & rough surfaces v



Heat and weather resistant sealant is recommended for installs on textured or rough surfaces where the rubber gasket makes incomplete contact with a roof's surface

Install tip:

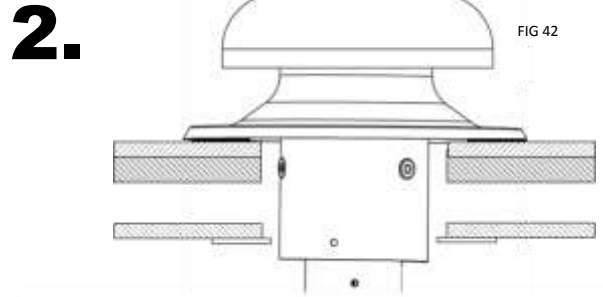
As the cap forms the termination point for the chimney, it is easiest to mount it first, before mounting the fireplace and chimney below. See pages 18-19

The dress ring is mounted from underneath around the exiting chimney for a neater, finished look.

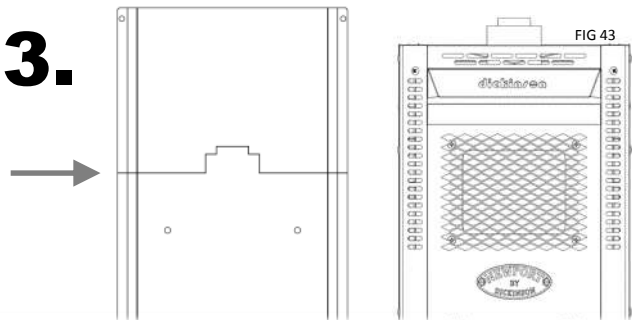
MOUNTING THE FIREPLACE



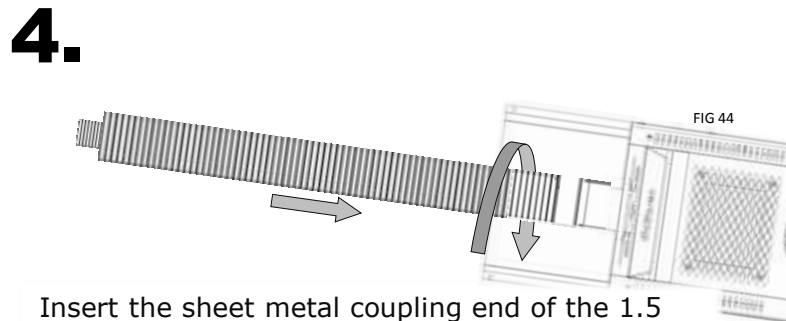
Before permanently mounting the fireplace or cutting a permanent hole for its chimney exit, please make sure you've completely read and understood the safety clearance and install requirements listed in the manual.



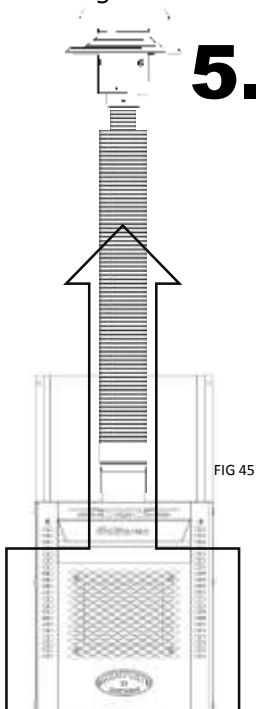
After cutting an exit in a spot determined to fulfill all install requirements, mount the cap in place as the first step to mounting the fireplace. Mounting the cap first will make it easier to install the fireplace and chimney correctly



The wall liner can be removed from the fireplace and used to facilitate approximate measuring for the appliance. The plastic border on the wall liner is located at the height of the flue connection. Measuring 28" up from this will help verify that the chimney will reach from the cap down to the proposed install location. Make sure to allow for some compression of the chimney pipes during final mounting.

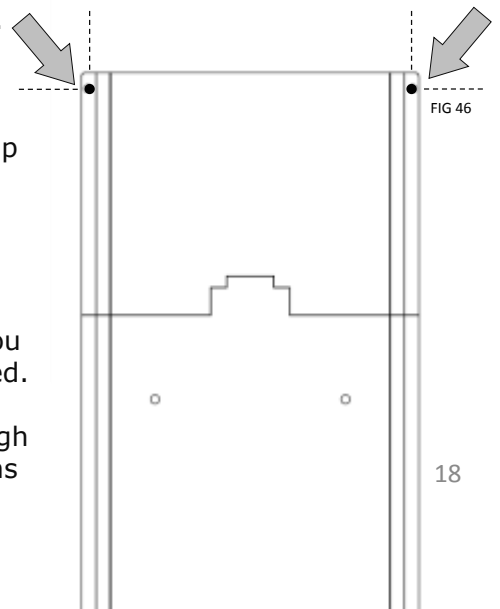


Insert the sheet metal coupling end of the 1.5 inch vent pipe onto the smaller of the fireplace's 2 flue collars. With the vent pipe **FIRMLY** attached about 1/2 an inch onto the collar, space the spring spacers as needed and attach the 2.5 inch outer vent pipe in the same way, pushing it onto the heater about 1/2 inch. *Please note that once attached and subject to heat, these collars can prove difficult to separate.*



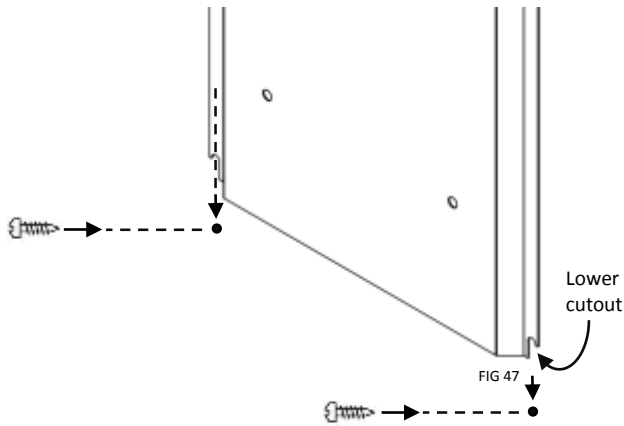
With the two pipes attached to the fireplace, reattach the wall liner and lift the whole fireplace and its chimney roughly into place. Maneuver the pipes so that they insert up into the chimney cap ferrules – someone helping guide these in is advised. With the fireplace's chimney fully inserted into the cap (give it a final 'push' upwards to make sure it's seated as far up as it will go) you can mark the position of the top two mounting holes in the wall liner.

Getting someone to mark the holes while you hold the fireplace in position is recommended. If working alone, position the fireplace and then support it with one hand for long enough to accurately mark the two top hole positions (fig 46)



MOUNTING THE FIREPLACE cont'd

7.



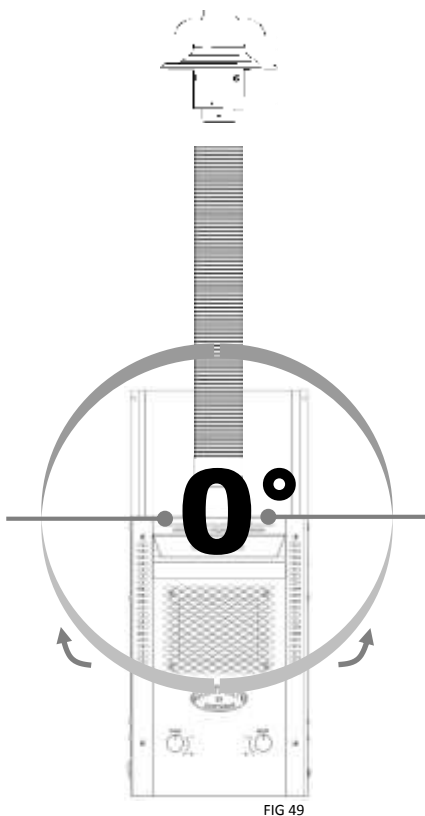
Once the holes for attaching the top of the wall liner have been marked, you can use the detached wall liner to line up with them and mark the positions of the 2 lower cutouts that the liner will rest on.

8.



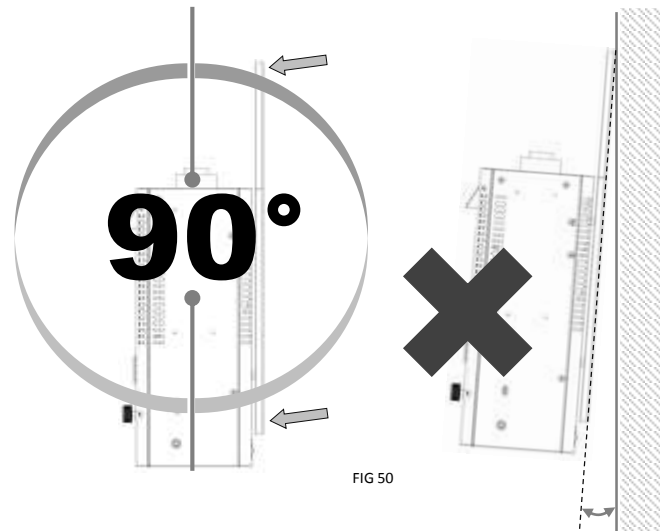
Attach the lower mounting hardware and then again lift the fireplace with it's attached wall liner up, inserting the pipes into the cap. When this is done, line up the fireplace/wall liner with the lower mounting screws and seat it so that the cutouts rest on them. When you're sure the fireplace is installed without gaps where the pipe meets the cap, tighten all 4 mounting screws.

9.



After mounting the fireplace, make certain it's sitting as level as possible to ensure optimum conditions for the burner flame. Loosen the mounting screws to shift the heater slightly to a 0° angle if required, then tighten the screws again to secure the heater in place.

10.



To correct an install that's pitched forward or backward, washers can be placed under the attachment points for an angle correction. A fireplace that is pitched backward on an angle may allow the flame to make contact with the glass barrier and firebox construction which will interfere with combustion conditions and may overheat or damage the appliance.

FLUE GUARD INSTALL

While much of the fireplace body will remain safely below the burn hazard threshold while the appliance is in operation, parts of the appliance install will become VERY HOT. These areas constitute potential burn hazards both during and for some time after the fireplace has been in use. The greatest burn risks are around the air discharge vents* the glass barrier or the chimney pipes.

*see page 31

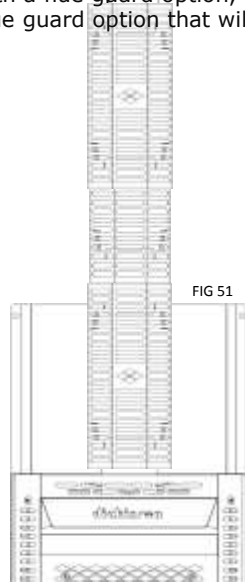
TO COMPLETE AN APPROVED INSTALLATION OF THE FIREPLACE, A FLUE GUARD MUST BE ASSEMBLED TO THE CHIMNEY PIPES TO PREVENT ACCIDENTAL CONTACT AND INJURY. THE CHIMNEY MUST BE INSTALLED PERPENDICULAR TO A WALL BEHIND IT FOR YOUR SAFETY.

Each appliance comes with a flue guard option, option (V) for mostly chimneys and options (S) for re-curved installs. It is up to the customer to select the flue guard option that will better accommodate the install.

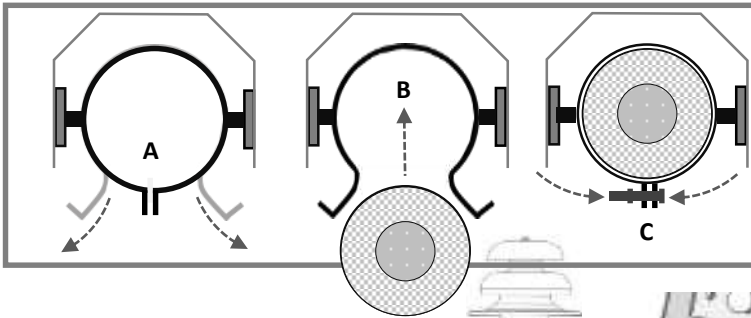
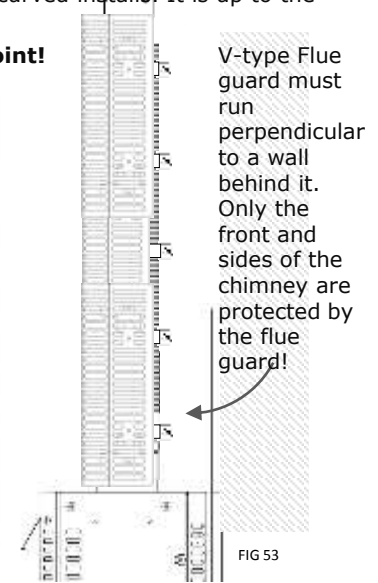
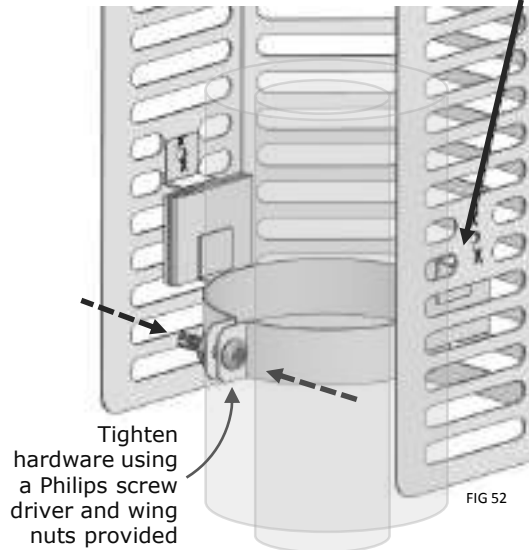
TYPE-V

Attaching the flue guard can be done after the fireplace has been installed. NEVER attempt to attach or detach the flue guard while the chimney is hot!

The vertical flue guard is made up of 3 individual straight sections to better follow any minor bends in the pipe that may be needed. It can also be installed on a completely straight pipe.



CAUTION: hot attachment point!



ATTACHING THE CLAMPS

In order to attach the flue guard, the clamps will have to be pulled apart until there is a gap of about 1 inch between the jaws (A) This will enable to clamp to slip around the pipe (B) where it can be fastened using the hardware provided (C)

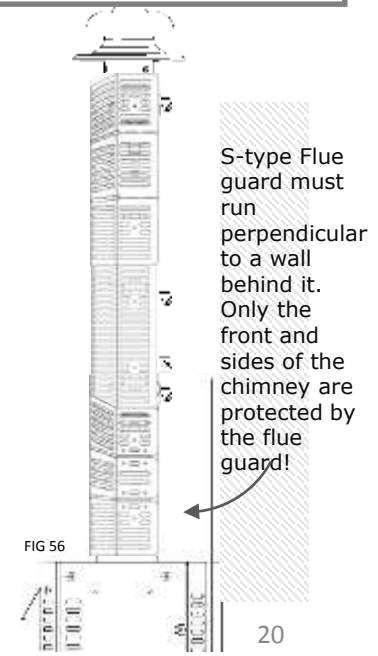
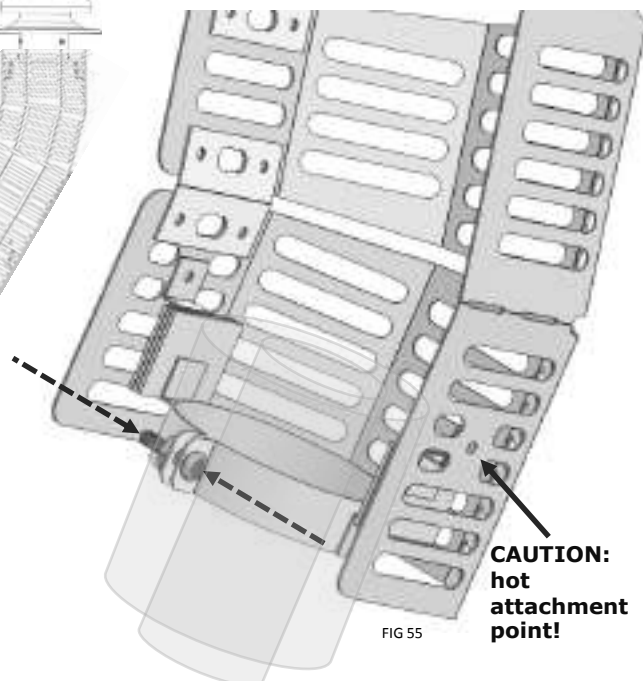
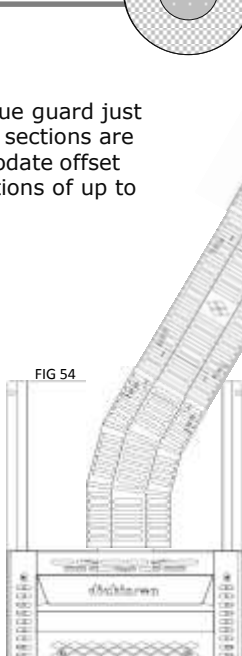
NOTE: We ship the clamps unbent as it helps them retain their shape, but they can be bent without difficulty.

TYPE-S

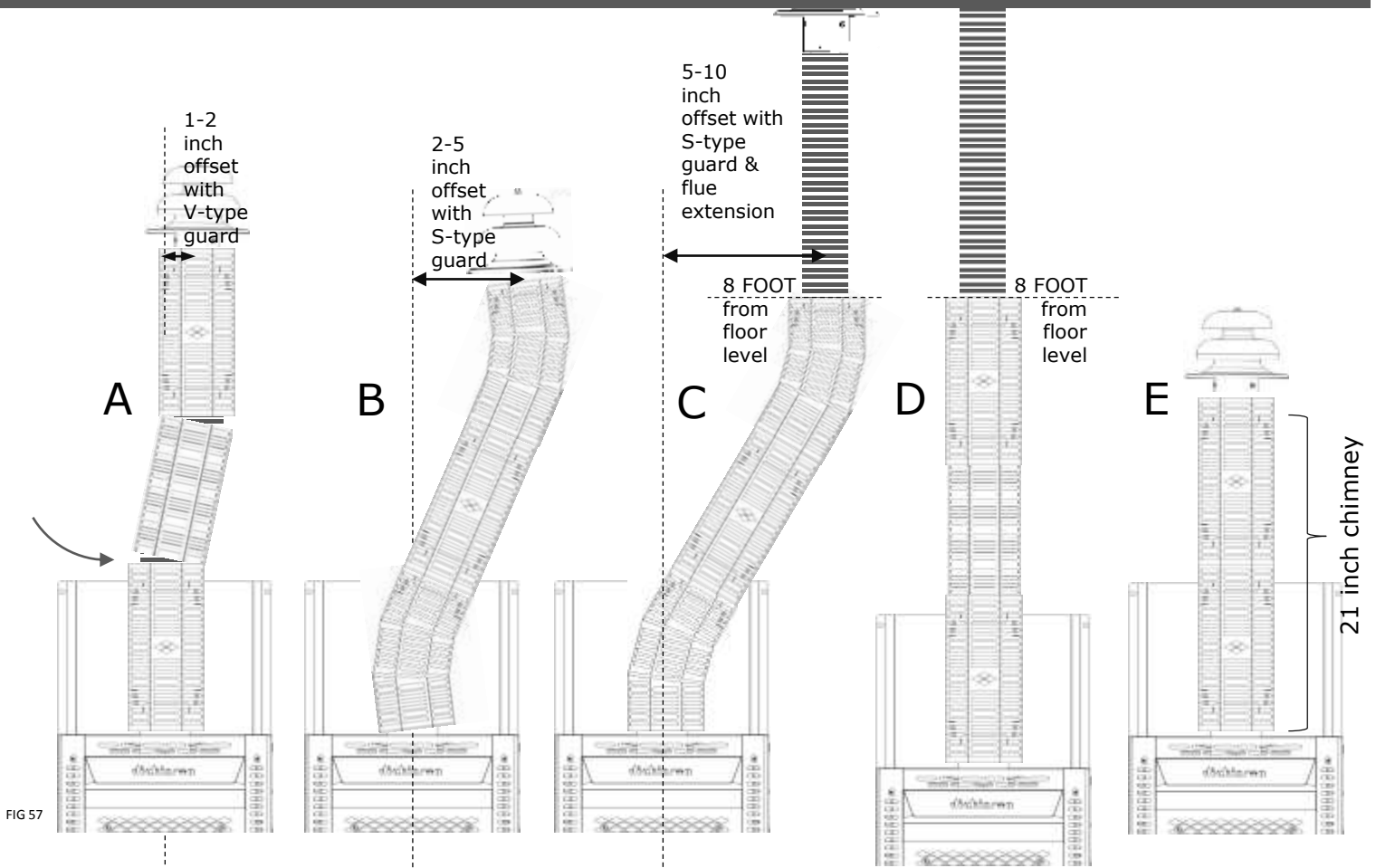
Attach an S-type flue guard just like the V-type. Its sections are angled to accommodate offset chimney configurations of up to 10 inches.

If an offset of less than 10 inches is required, the flue guard sections can be attached at whatever angles are needed.

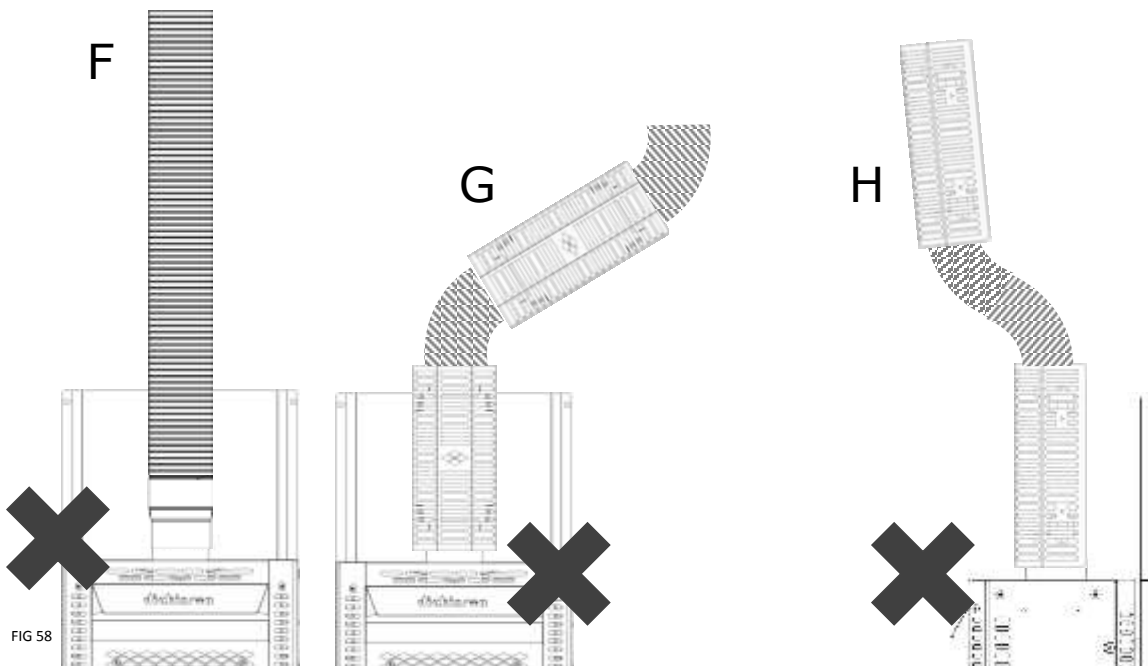
PLEASE NOTE that an offset of more than 10 inches is not recommended for this appliance.



FLUE GUARD INSTALL OPTIONS



The flue guard must be installed to shield inhabitants from the hot chimney pipe. Straight runs & slight offsets can be accomplished using a V-type flue guard **(A)** An S-type guard can be used to offset a chimney up to 10 inches **(B, C)** Any exposed chimney pipe **MUST** be well out of reach of vulnerable individuals and other members of the household **(C, D)** All chimney installations require a protective flue guard regardless of length **(E)** The pipe becomes very hot in operation and constitutes a burn hazard if **NOT** covered by the original flue guard **(F)** No portions of the chimney should be left exposed where inadvertent contact and burns can occur **(G, H)**



PROPANE GAS CONNECTION

When the fireplace has been correctly mounted in accordance with the instructions found on pages 18-19, and compliant to the safety clearance information for the fireplace, cap & chimney on pages 8, 15, 16 & 17, the fireplace can then be hooked up to the propane fuel source.

This is a low pressure propane appliance. Do not use high pressure propane. **The heater only operates on low pressure propane (11' WC or 27.4 mbars)** and should have a low pressure regulator (part# 19-151 or 19-162) installed within the fuel line. The **propane gas connection is a 3/8" flare male fitting (SAE 45° flare)** and can either come from an already installed propane system, a single 10 or 20 lbs tank or a 1 lb disposable bottle. The propane tank should always be oriented upright. To run the fuel to the unit, copper tubing or a rubber approved hose can be used. The size of the fuel line internal diameter should be no smaller than 1/4" for fuel lines under 20 feet, and no smaller than 3/8" in diameter for fuel lines over 20 feet. When running the fuel line, make sure the ends are sealed so no debris can get inside the line. This can block the gas coming through the heaters gas orifice. Make sure to blow through the fuel line before connecting.



WARNING!

DEATH OR SERIOUS INJURY CAN RESULT FROM FAILURE TO FOLLOW THESE INSTRUCTIONS

- NEVER connect this heater directly to the propane/LPG supply! This heater requires an external low-pressure regulator that is NOT included with the purchase of an appliance! **Attempting to operate the fireplace without a low-pressure regulator can lead to property damage, personal injury or even death!**
- After the gas connection has been hooked-up, test all gas lines and connections for leaks with a soap & water solution. Tighten any leaking connections and re-test them thoroughly! Test all lines and connections **THOROUGHLY** before lighting the fireplace.
- All splitting of propane gas connections needs to be completed outside! Propane connections are a hazard as they represent potential leak points! **NEVER split a propane connection inside the home or vehicle!**
- **Propane Locker Caution Plate Installation:** Install your propane locker CAUTION plate on or inside your propane locker in a prominent location where important safety reminders can be reviewed.

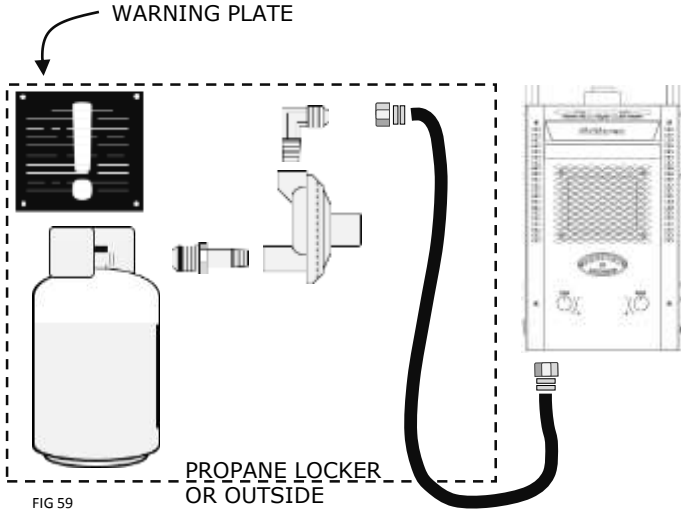
The diagrams on the following pages are meant to illustrate a typical installation only are not intended to be used to illustrate any particular regulatory code, insurance requirement or to override any manufacturer's instructions on any lines, fittings or other components.

Install your propane system in accordance with local, national or industry specific codes and/or regulations. Retain the installation instructions and owner's manual for any and all gas components such as the regulator or fuel hose. Installation requirements for these components may vary according to their manufacturer. Always install components as directed by the original equipment manufacturer's instructions.

PROPANE GAS CONNECTION OPTIONS

This appliance must be installed in accordance with local codes, if any; if none, follow ANSI Z223.1/NFPA 54 or CSA B149.1.

The diagrams below are meant to illustrate a typical installation only are not intended to be used to illustrate any particular regulatory code, insurance requirement or to override any manufacturer's instructions on any lines, fittings or other components.



REFILLABLE TANK CONNECTION

CONNECTING A SINGLE APPLIANCE TO A REFILLABLE TANK

ALL CONNECTIONS EXCEPT FIREPLACE INLET MUST BE COMPLETED OUTSIDE IN A PROPANE LOCKER! FURNISH YOUR PROPANE LOCKER WITH WARNING PLATE!

ADDITIONAL COMPONENTS INCLUDED IN THIS CONFIGURATION:

- Low pressure regulator: **19-151**
- Regulator/Tank fittings kit: **19-152**
- Low pressure fuel hose: **19-100-10/19-100-20**

FIG 59

DISPOSABLE PROPANE BOTTLE CONNECTION

CONNECTING A SINGLE APPLIANCE TO DISPOSABLE TANK & REGULATOR KIT

ALL CONNECTIONS EXCEPT FIREPLACE INLET MUST BE COMPLETED OUTSIDE IN A PROPANE LOCKER! FURNISH YOUR PROPANE LOCKER WITH WARNING PLATE!

ADDITIONAL COMPONENTS INCLUDED IN THIS CONFIGURATION:
 Low pressure fuel hose: **19-100-10/19-100-20**
 Disposable propane bottle regulator kit: **19-150**

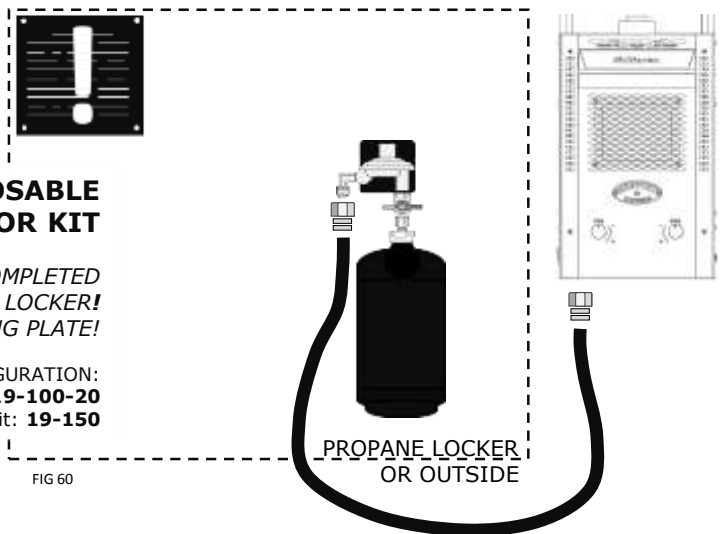
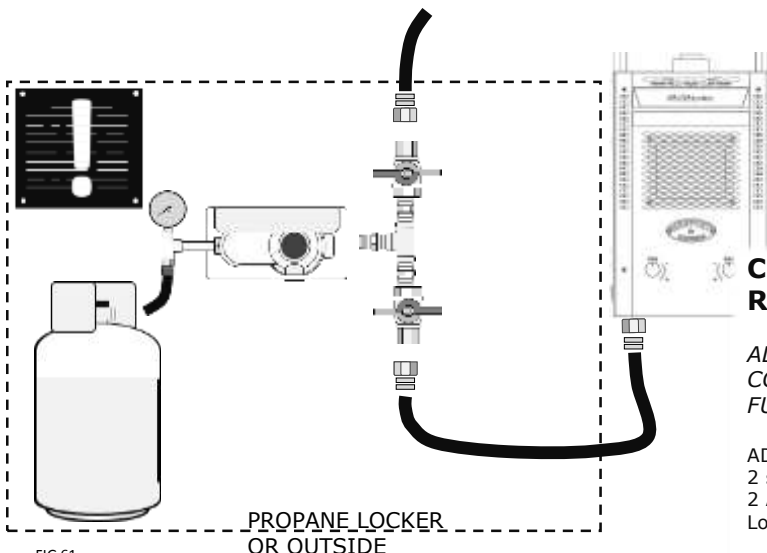


FIG 60



REFILLABLE TANK CONNECTION FOR 2 APPLIANCES

CONNECTING TWO APPLIANCES TO ONE REFILLABLE TANK

ALL CONNECTIONS EXCEPT FIREPLACE INLET MUST BE COMPLETED OUTSIDE IN A PROPANE LOCKER! FURNISH YOUR PROPANE LOCKER WITH WARNING PLATE!

ADDITIONAL COMPONENTS INCLUDED IN THIS CONFIGURATION:
 2 stage Low pressure regulator (2 or more appliances): **19-162**
 2 Appliance Fittings & Shut-offs Kit: **19-165**
 Low pressure fuel hose: **19-100-10/19-100-20**

FIG 61

PROPANE GAS CONNECTION OPTIONS cont'd

This appliance must be installed in accordance with local codes, if any; if none, follow ANSI Z223.1/NFPA 54 or CSA B149.1.

The diagrams below are meant to illustrate a typical installation only are not intended to be used to illustrate any particular regulatory code, insurance requirement or to override any manufacturer's instructions on any lines, fittings or other components.

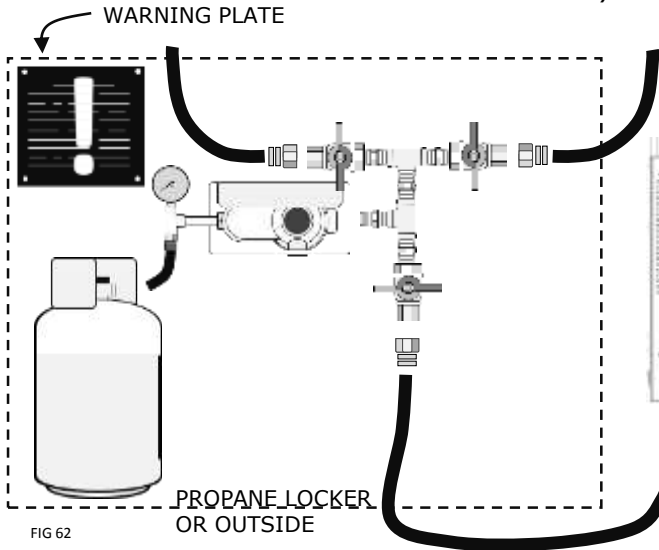


FIG 62

REFILABLE TANK CONNECTION FOR 3 APPLIANCES

CONNECTING 3 APPLIANCES TO ONE REFILLABLE TANK

ALL CONNECTIONS EXCEPT FIREPLACE INLET MUST BE COMPLETED OUTSIDE IN A PROPANE LOCKER! FURNISH YOUR PROPANE LOCKER WITH WARNING PLATE!

ADDITIONAL COMPONENTS INCLUDED IN THIS CONFIGURATION:
 2 stage Low pressure regulator (2 or more appliances): **19-162**
 2 Appliance Fittings & Shut-offs Kit: **19-165**
 3RD Appliance fittings & shut-off kit: **19-167**
 Low pressure fuel hose: **19-100-10/19-100-20**

SINGLE APPLIANCE CONNECTION WITH SOLENOID VALVE

CONNECTING A SINGLE APPLIANCE TO A REFILLABLE TANK WITH A SOLENOID VALVE

ALL CONNECTIONS EXCEPT FIREPLACE INLET MUST BE COMPLETED OUTSIDE IN A PROPANE LOCKER! FURNISH YOUR PROPANE LOCKER WITH WARNING PLATE!

ADDITIONAL COMPONENTS INCLUDED IN THIS CONFIGURATION:
 Low pressure regulator: **19-151**
 Regulator/Tank fittings kit: **19-152**
 Low pressure fuel hose: **19-100-10/19-100-20**
 Solenoid shut off valve: **19-153**

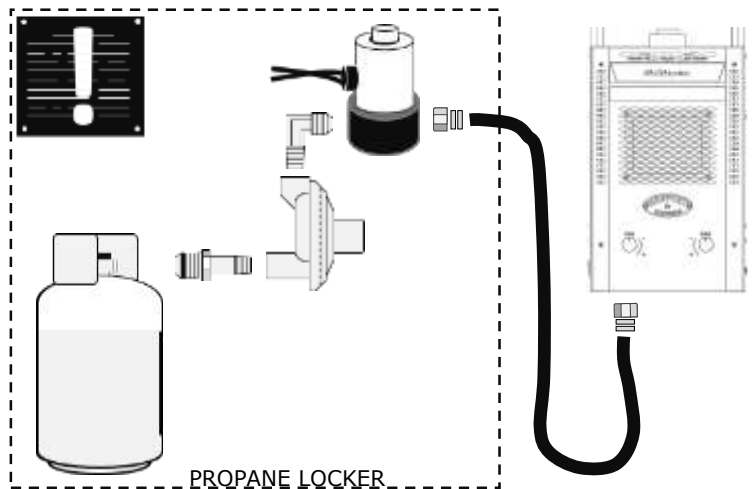


FIG 63

TWO APPLIANCE CONNECTION WITH SOLENOID VALVE

CONNECTING TWO APPLIANCES TO A REFILLABLE TANK WITH A SOLENOID VALVE

ALL CONNECTIONS EXCEPT FIREPLACE INLET MUST BE COMPLETED OUTSIDE IN A PROPANE LOCKER! FURNISH YOUR PROPANE LOCKER WITH WARNING PLATE!

ADDITIONAL COMPONENTS INCLUDED IN THIS CONFIGURATION:
 2 stage Low pressure regulator (2 or more appliances): **19-162**
 2 Appliance Fittings & Shut-offs Kit: **19-165**
 Low pressure fuel hose: **19-100-10/19-100-20**
 Solenoid shut off valve: **19-153**

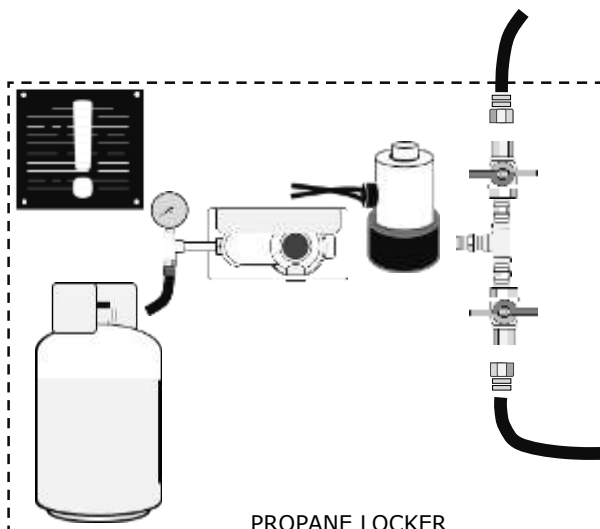
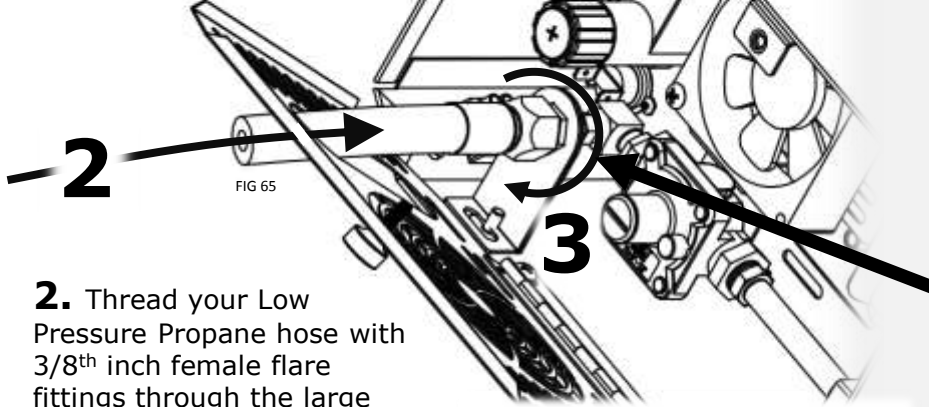


FIG 64

PROPANE LOCKER OR OUTSIDE

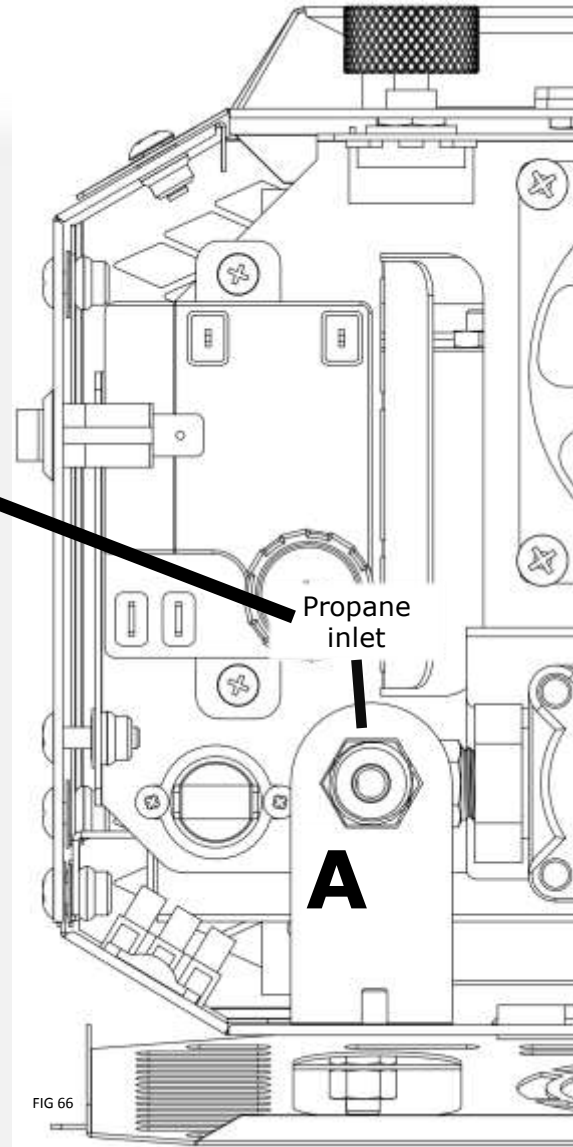
SAFELY CONNECTING THE FUEL HOSE

1. Open the bottom panel of the heater by turning the brass thumbscrew counter-clockwise until it hinges down.



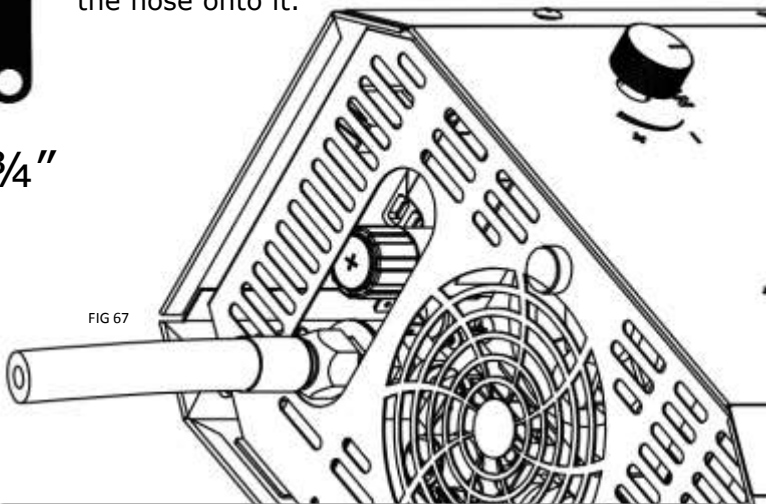
2. Thread your Low Pressure Propane hose with 3/8th inch female flare fittings through the large cut-out on the left side of the bottom panel.

3. Gently thread the hose flare fitting onto the inlet fitting on the fireplace.



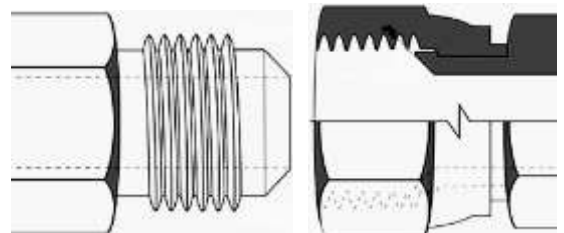
4. Tighten fitting with a 3/4 inch wrench. The inlet fitting has a steel surround (A) to prevent it from spinning as you tighten the hose onto it.

3/4"



5. After completing the propane connection test it for leaks with a soapy water solution! Bubbling in the solution indicate a dangerous leak! Never operate the fireplace without testing new connections for leaks!

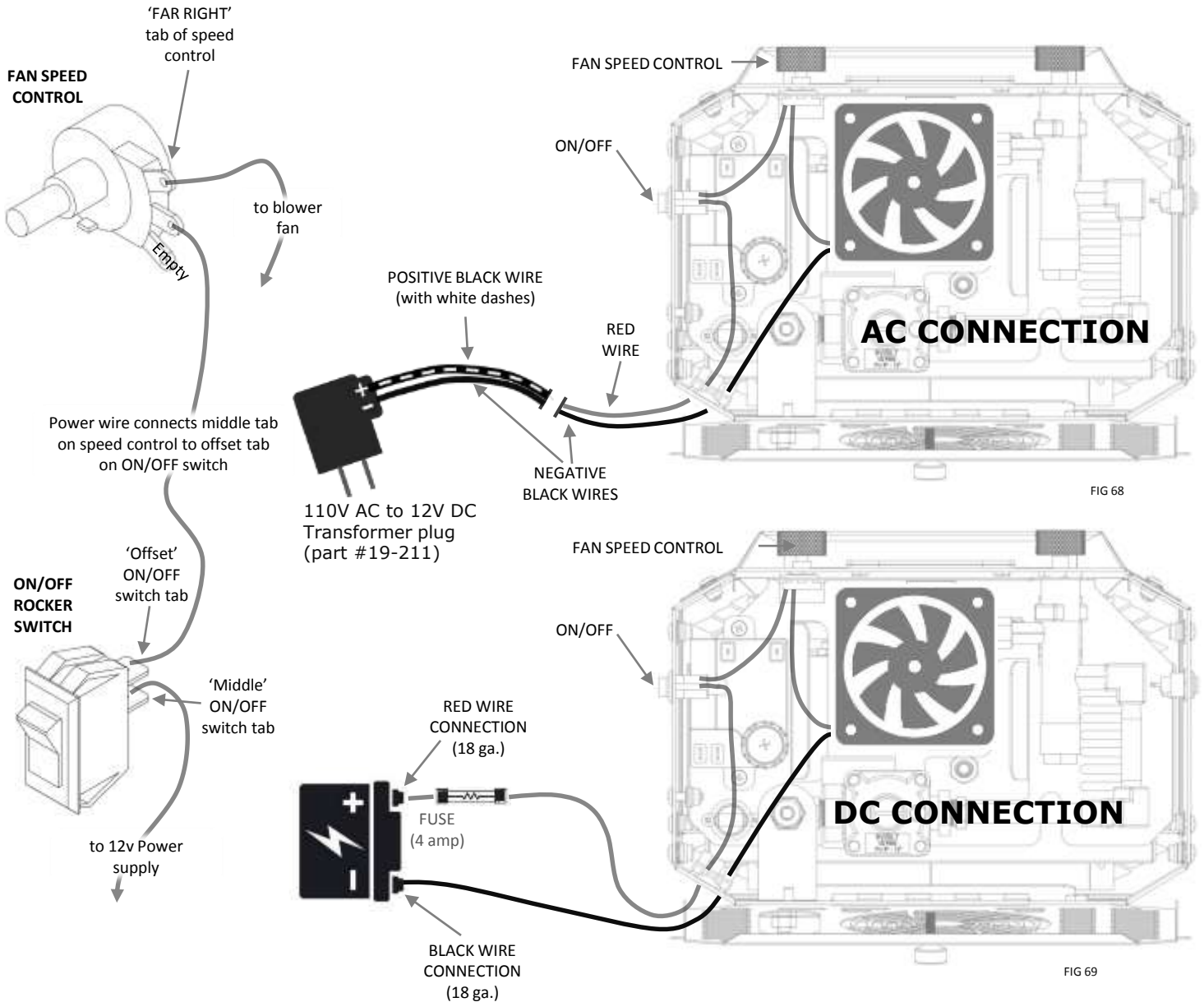
CAUTION!



- The propane inlet and hose are a flared fitting connection.
- NEVER use tape, putty or other sealants on a flared fitting.
- The use of tape or other sealant on threads may cause dangerous leaks.

FAN WIRING

Where applicable, this appliance must be electrically grounded in accordance with local codes or in absence of local codes, with the *National Electrical Code, ANSI/NFPA 70*, or the *Canadian Electrical Code, CSA C22.21*.



Noisy fan?

The blower fan of the fireplace is very quiet, generating under 45 dbA in operation on its fastest speed (a human whisper is about 30 dbA, and normal conversation generates about 60 decibels) If the fan is emitting more noise than this it may be caused by an inadequate power supply or something physically coming into the path of the fan blades.

To correct excessive fan noise see: 6. Troubleshooting - page 38

This Fireplace can be operated without the use of the blower fan and without connecting it to electrical power. The use of the fan does not have an effect on the flames inside the firebox, on the venting of exhaust or on the intake of fresh air.

When in use, the blower fan discharges air from the opening above the fireplace's viewing window, allowing it to spread quickly and efficiently throughout the space you are heating. **When the fan is not in use, hot air will discharge from the grate on the top of the fireplace around the chimney.**

See page 31

Care must be taken when working inside the controls compartment that the exposed wires do not become detached or dislodged. Gently press any obstructing wires aside and avoid tugging or pulling on any wiring. Damage to the wiring system may damage or disable one or more of the appliance controls and render it inoperable.

FAN WIRE TERMINAL

The blower fan requires an external power source to operate. A 12v power supply can be connected to the fan system via the terminal block **(A)** located in the lower left corner at the rear of the controls compartment.

To access this compartment, unscrew the brass thumbscrew latch and hinge the bottom panel open. Locate the terminal block and attach the positive wire from your power supply opposite the red wire. Attach the negative wire from your power supply opposite the black wire.

Secure the wires through the strain relief clamp **(B)**. The clamp can be detached and then re-attached over the wires to hold them in place and prevent damage to the appliance should the wiring get caught or pulled on something. Do not over-tighten the strain relief clamp.

To bring them out of the fireplace, feed the wires through the panel gap in the corner beneath the terminal block.

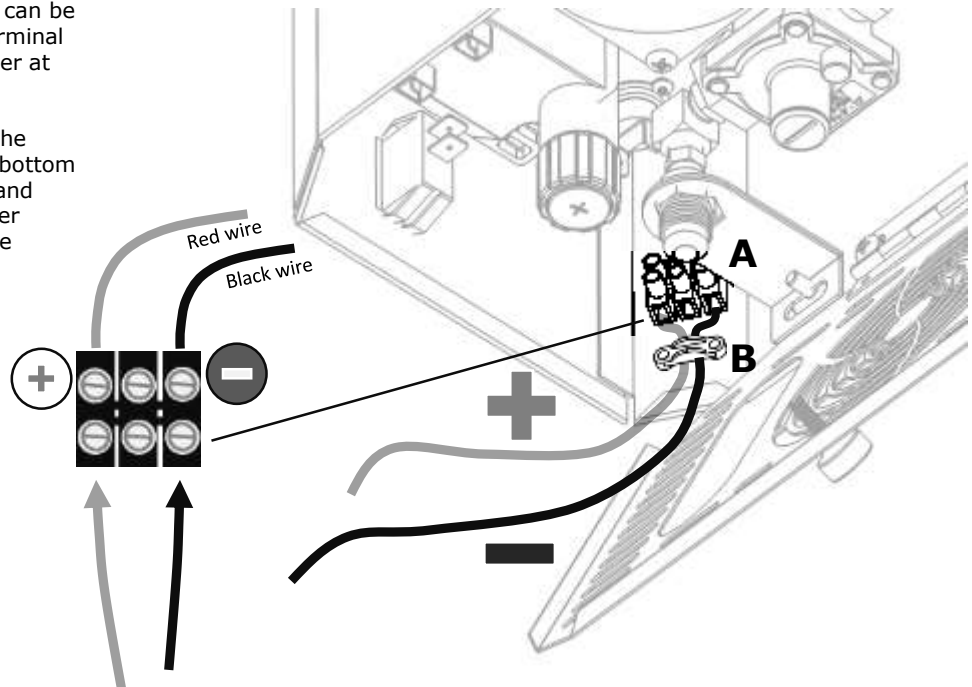


FIG 70

BATTERY INSTALL

ignition BATTERY INSTALL

The ignition spark inside the fireplace is powered by a single 1.5V AA battery (included). To install the battery, open the bottom panel of the fireplace to access the controls compartment. Identify the battery box **(A)** and unscrew its cap. Insert the AA battery as shown with the negative terminal first.

Installation of the battery must be completed before the fireplace can be operated. After installing the battery, test the spark ignition by holding down the ignition button – a faint clicking sound should be heard from inside the fireplace. By looking through the window while pressing the ignition button, the spark can be observed where it hits the burner.

If no spark can be heard or seen after installation of the battery, verify that it has been inserted correctly and is not depleted.

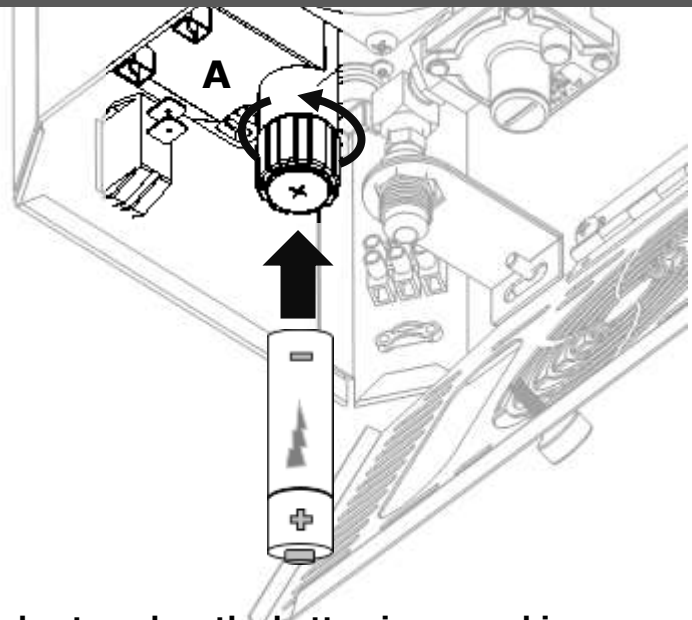


FIG 71

**IF THERE IS NO SPARK inside the heater when the button is pressed in:
DO NOT ATTEMPT ALLOW GAS INTO THE FIREPLACE!**

**IF THERE IS NO SPARK inside the heater when the button is pressed in:
DO NOT ATTEMPT TO LIGHT THE FIREPLACE BY HAND!**

READ THIS BEFORE FIRST LIGHTING

PROTECTIVE PLASTIC

The stainless steel panels of the appliance come in an attractive brushed finish and are protected from scratches in shipping with a plastic film.

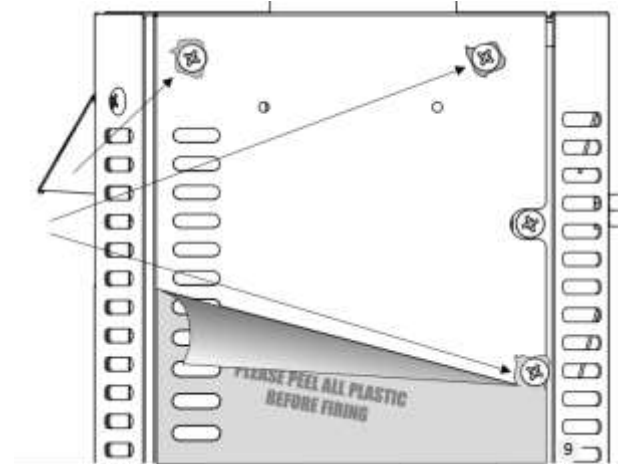
All traces of this protective film must be removed from the appliance before first use to avoid unpleasant burning odors. While all efforts are made to remove unnecessary plastic film from hard to reach areas, to remove all traces of plastic you may have to loosen some screw heads to free plastic trapped beneath. Simply loosen (don't fully remove) the screw a single turn and pull any trapped plastic free with your fingers or a plastic tool – avoid any metal implements or tools that might scratch the finish of the appliance.

DETECTABLE ODOR?

On the very first lighting, the fireplace may emit some faint burning odors as its components reach operating temperature. Oils & lubricants used in sheet metal fabrication and machining are the reasons for this. While any odor from evaporating oils should only be noticeable during the initial operation of the fireplace, it may take a few hours for it to completely dissipate.

NOTE: Only on first lighting, the lubricating oil on the stainless steel pipe will produce smoke and burn off. THIS IS NORMAL. We suggest that windows and hatches be opened. Smoke from the inside pipe will be emitted outside, through the flue cap.

NOTE: If all traces of the protective plastic have not been removed as instructed above, baking plastic will contribute to any odors the fireplace creates.



! CARBON MONOXIDE

WE STRONGLY RECOMMEND INSTALLING A CARBON MONOXIDE DETECTOR INSIDE THE ROOM WHERE YOU INSTALL THE FIREPLACE - A CO DETECTOR CAN SAVE LIVES!

Carbon Monoxide (CO) is a colorless, odorless and tasteless gas.

In homes and other enclosed spaces, carbon monoxide (CO) is dangerous; it can make you sick or, in extreme cases, cause brain damage and death. CO poisoning symptoms include headache, shortness of breath, dizziness, drowsiness, watering and sore eyes, confusion, nausea and fatigue. Even a small amount of CO is dangerous in your home, garage, vehicle, cottage, boat, recreational vehicle or tent. Children, people with heart and respiratory conditions, and the elderly, may be particularly sensitive to CO's effects.

- For your safety we recommend that a Carbon Monoxide detector be installed with the appliance
- NEVER operate this appliance with the window cracked, damaged or removed.
- NEVER operate this appliance without the approved venting system that has been installed to the manufacturers instructions
- Be aware of environmental signs, such as an abnormal burning odor, stale or stuffy air, abnormal moisture forming on windows and walls, soot on equipment or rich, dark flames in the appliance. If any of these occur, turn off the appliance and speak with a licensed professional.

If you suspect CO is present or someone is showing symptoms of CO poisoning:

- Evacuate the building and call 911.
- If safe to do so, open windows and turn off appliances you suspect may be releasing CO.
- Call your propane supplier or a qualified service technician to check CO levels and your propane equipment



4. FIREPLACE OPERATION

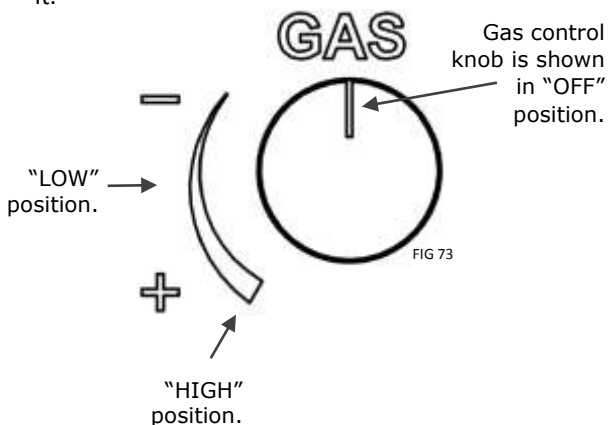
FOR YOUR SAFETY READ BEFORE LIGHTING

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



- A. This appliance does not have a pilot. It is equipped with an ignition device that automatically lights the burner. Do not try and light the burner by hand
- B. **BEFORE LIGHTING** smell around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS
- Do not try to light any appliance
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas suppliers instructions.
- If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try and repair it; call a qualified service technician. Force or attempted repair may result in fire or explosion.
- D. Do not use this appliance if any part of it 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.

OPERATING INSTRUCTIONS

1. **STOP!** Read the safety information above on this page.
2. Turn off all electric power to the appliance.
3. This appliance is equipped with a push button ignition. Do not attempt to light the burner by hand.
4. Push the gas control knob inward and rotate clockwise  to the 'OFF' position. NOTE: the knob cannot be turned 'OFF' unless it is pushed in before turning. Do not attempt to force it.
5. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow 'B' in the safety information above on this page. If you do not smell gas, go to the next step.
6. Press down on the ignition button on the right hand side of the appliance until you hear the clicking of the spark action inside.
7. While holding down the ignition button, push the gas control knob inward and rotate counter-clockwise  until the indicator on the knob points left to "LOW"
8. Once the fireplace is lit, continue holding the gas control knob pressed inward for up to 30 seconds to allow the gas valve to stay open.
9. Set the gas control knob to the desired setting.
10. If the appliance will not operate, follow the instructions "To Turn Off Gas Appliance" and call your service technician or gas supplier.



TO TURN OFF GAS TO APPLIANCE

1. Push gas control knob inward and turn clockwise  to the "LOW" Position. Do not force.
2. Continue rotating knob clockwise  to the "OFF" position. Do not force.
3. Turn off all electric power to the appliance if service is to be performed.

MODES OF OPERATION

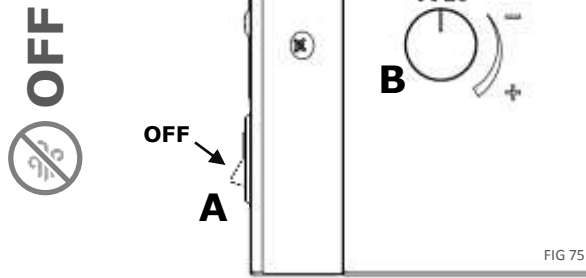
FAN SETTINGS

The modes of operation for the fan are depicted below. The fan must be connected to a 12v power source in order to run. The fan ON/OFF switch is located on the lower, left hand side of the appliance (A) and the fan speed control is located on the front, lower left of the appliance (B)

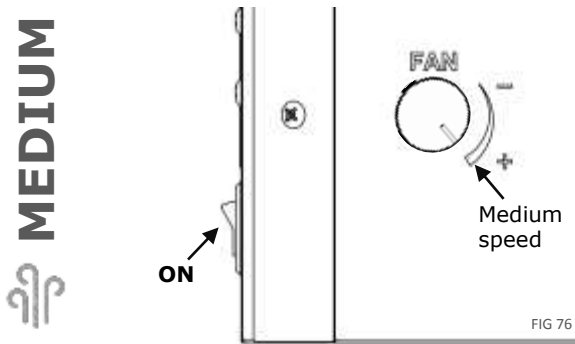
The fan control rotates clockwise ↻ to increase speed and counter-clockwise ↺ to reduce speed.

In the first image below the fan control is shown in its 'OFF' position (12 o'clock position)

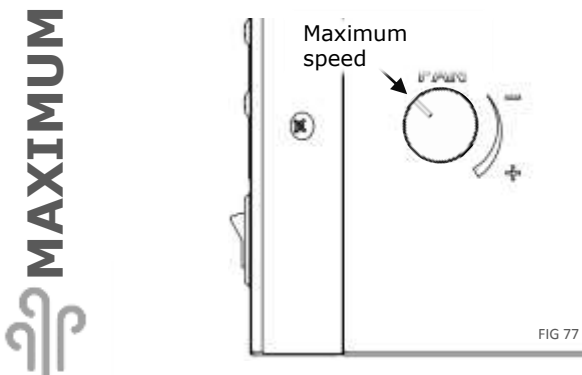
NOTE: Please note that the orientation of the ON/OFF switch may vary. The switch on your fireplace may be assembled in the reverse of the ON/OFF positions shown below. The depictions below are for illustrative purposes only.



The image below shows the fan switched to 'ON' and the knob positioned to medium speed (5 o'clock position)



The image below shows the fan knob positioned to maximum speed (11 o'clock position)

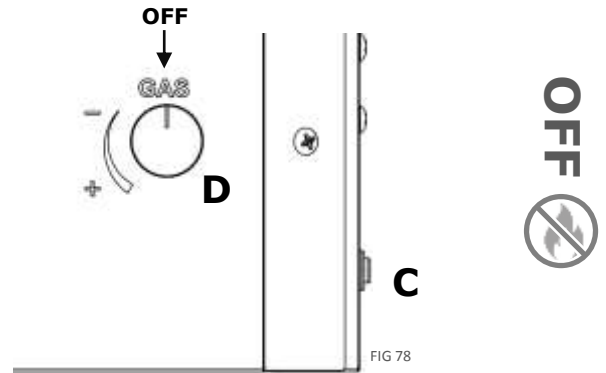


GAS SETTINGS

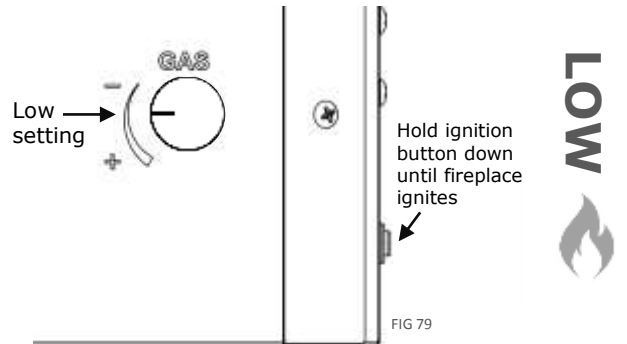
The modes of operation for the gas controls are depicted below. Before operating the gas control follow the safety information on the preceding page. The ignition button is located on the lower, right hand side of the appliance (C) and the gas control knob (D) is located on the front, lower right of the appliance.

The gas control knob rotates counter-clockwise ↺ to increase gas flow and clockwise ↻ to reduce gas flow and shut off the appliance.

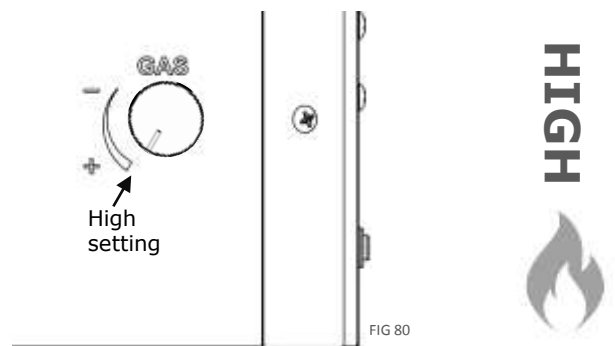
In the first image below the gas control is shown in its OFF position (12 o'clock position)



The image below shows the gas control knob positioned to its 'LOW' setting (9 o'clock position)



The image below shows the gas control knob positioned to its 'HIGH' setting (7 o'clock position)



HOT AIR VENTS

Blowing Hot Air

The fireplace has two primary ways of spreading the heat it generates; it will propel heat into the space by means of its blower fan **(A)** or it will radiate heat upward from the vents located on the top panel **(B)**

(A) With the fan turned ON and adjusted to the desired speed setting, the heat produced by the fireplace will be directed to emit from the vent louvre on the front of the appliance, above the window. Use of the fan to blow hot air out of this vent will cause the heat produced by the fireplace to spread around the room more quickly.



CAUTION: THE VENT ABOVE THE WINDOW OF THE FIREPLACE IS A POTENTIAL BURN HAZARD, PARTICULARLY WHEN THE FAN IS SWITCHED 'ON'

(B) With the fan turned off, heat will naturally rise from the top of the appliance. Heating a room this way may take somewhat longer than heating in conjunction with the blower fan, as the heat will fill the uppermost areas of the room first. As hot air gathering close to the ceiling cools, it will begin to drop and become replaced by more heat from the fireplace. In this way, heat in the space will gradually equalize as the hot air from the fireplace circulates warming the whole space.



CAUTION: THE VENTS ON TOP OF THE FIREPLACE ARE A POTENTIAL BURN HAZARD, PARTICULARLY WHEN THE FAN IS SWITCHED 'OFF'

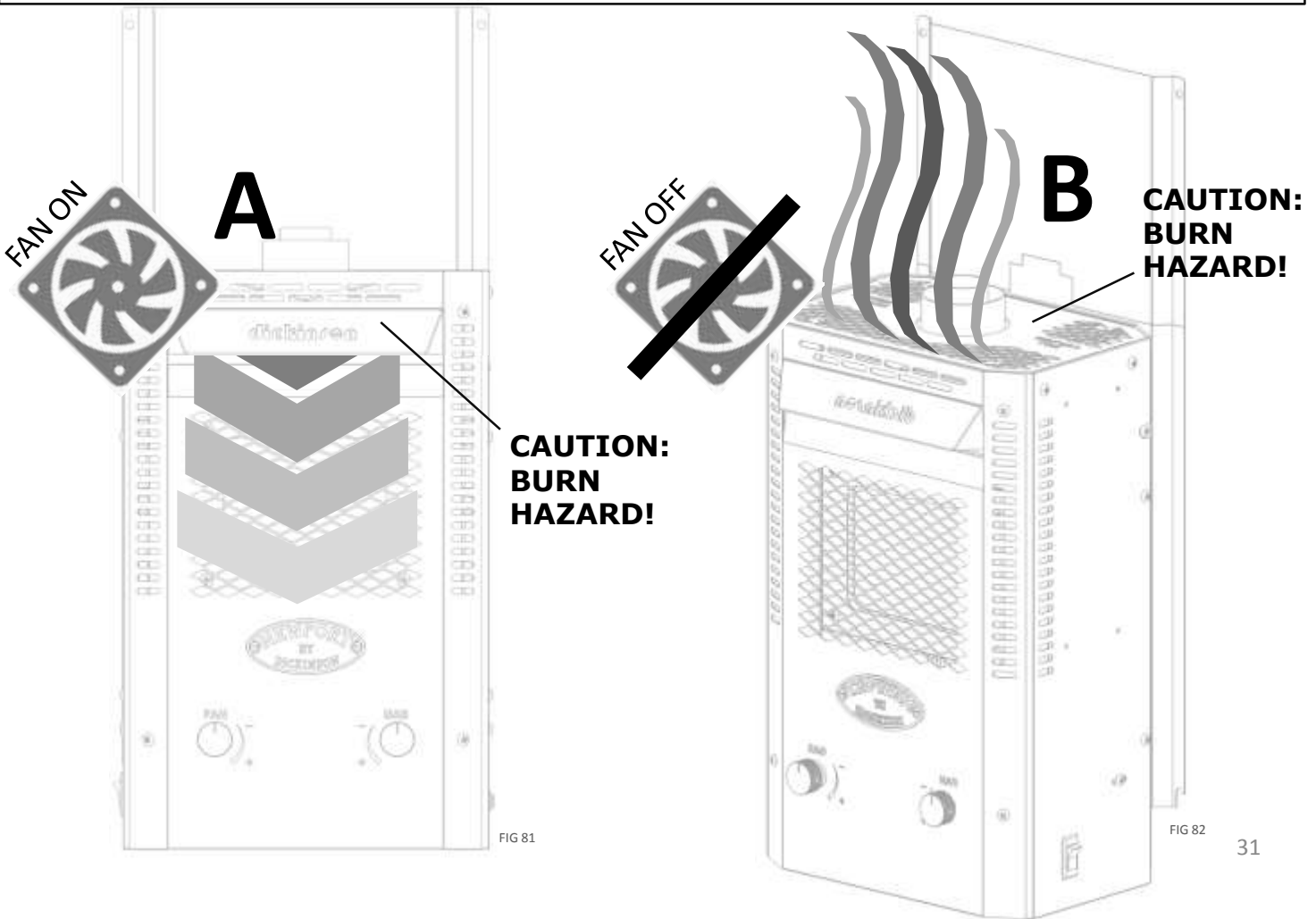


FIG 81

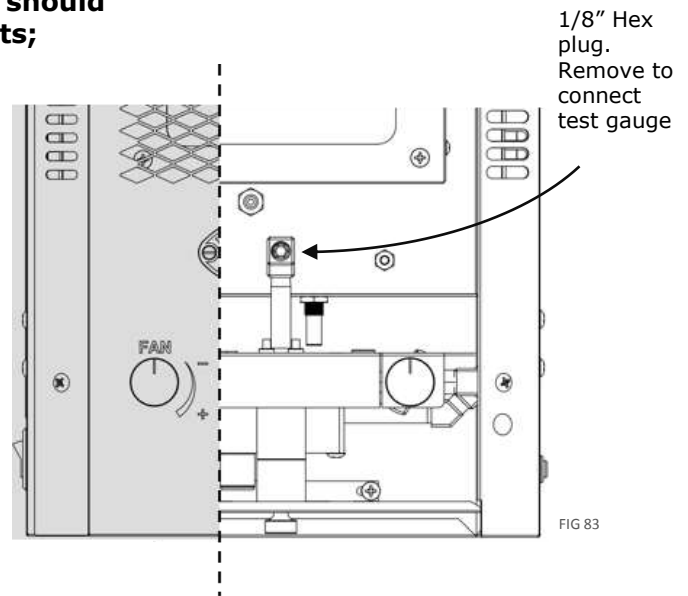
FIG 82

5. FIREPLACE MAINTENANCE

GENERAL MAINTENANCE

Have the fireplace inspected annually. The inspection should include, however not be limited to, the following points;

- A visual check of the fireplace, it's entire ventilation system and fuel connection.
- Inspection of the window gaskets
- Inspection of the burner and interior of the firebox
- Inspection of the gas valve, built-in regulator and other gas supply components.
- Manifold pressure test - the gas system can be accessed for pressure testing using the 1/8" NPT fitting located adjacent to the propane orifice (see FIG 83)
- Inspection of blower fan & speed control
- Inspection of window glass



CLEANING

- Clean the outside of the fireplace with a soft, lightly dampened cloth and allow to dry.
- Never wipe down or apply cleaning agents to the fireplace while it is in use or if it remains hot after operation.
- Never clean the outside of the fireplace with scotch-brite pads or steel wool or anything else that will scratch the finish of the appliance.
- Always wipe the appliance down in the direction of the steel grain.
- Avoid using cleaning agents that will leave residue behind or 'off gas' when subjected to heat.

WINDOW GLASS

A hazy film may develop on the inside of the viewing window glass over time. This is a normal byproduct of the atmosphere inside the fireplace. The window frame can be removed to access the inside surface of the window for cleaning. The window is removable using only a Philips screwdriver (*read: page 33 before removing window*) The window frame comes away as one piece – do not disassemble the window further. **Repair or replacement of the window glass should be done by a qualified service person.**

- The fireplace **MUST NEVER** be operated without the original intact gasket in place! When removing the fireplace window for cleaning, great care must be taken not to damage or tear the gasket between the window and the firebox.
- **DO NOT** attempt to force the window bolts when removing or replacing them. If the bolts have seized or will not turn, **STOP!** Contact a qualified service person or the manufacturer. Forcing any hardware connections could cause them to break.
- **NEVER** attempt to disassemble the fireplace panels or remove the window while the fireplace is in operation or if it remains hot after use.

window removal instructions found on next page

REMOVING & REPLACING THE WINDOW

CLEANING THE WINDOW

Over time a hazy film may develop on the inside surface of the glass viewing window. This is normal and an expected byproduct of the combustion happening inside the heater. If the glass does become noticeably hazy in appearance, it may be as a result of a fuel-air imbalance, a chimney that is not configured to adequately support the fireplace, impurities in fuel or the effects of atmospheric pressure at elevation. If the inside of the glass has become hazy it can be removed for cleaning.



CAUTION: THE REMOVAL OF THE WINDOW FOR CLEANING OR MAINTENANCE MUST BE UNDERTAKEN WITH THE UTMOST CAUTION TO AVOID SERIOUS DAMAGE TO YOUR FIREPLACE.

DO NOT USE EXCESSIVE FORCE TO UNSCREW WINDOW BOLTS.

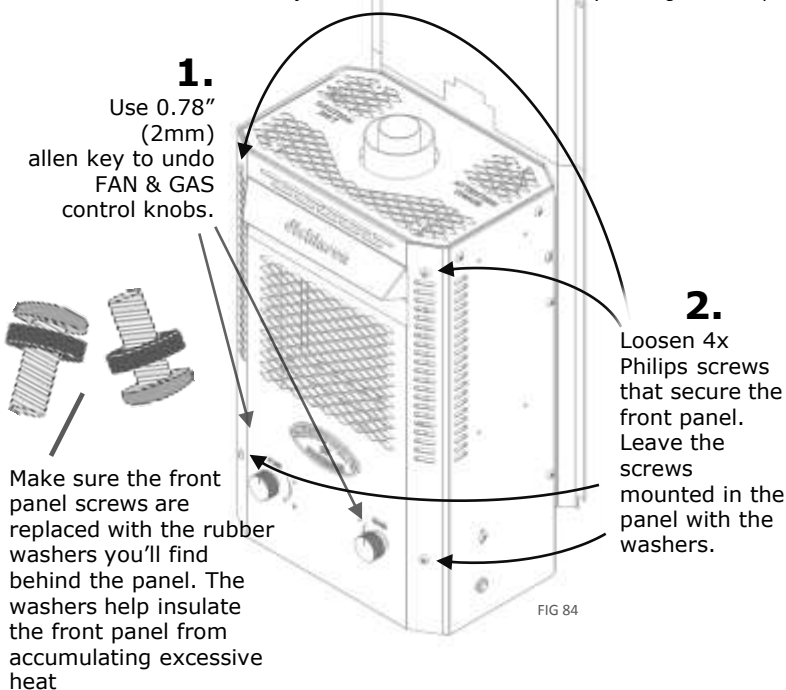
WINDOW NUTS & BOLTS

The window of the fireplace is attached by means of four bolts that thread into the firebox of the heater. **These screws are subject to intense heat! Forcing them to turn may result in irreparable damage to the fireplace!** Gently unscrew and screw in these bolts.

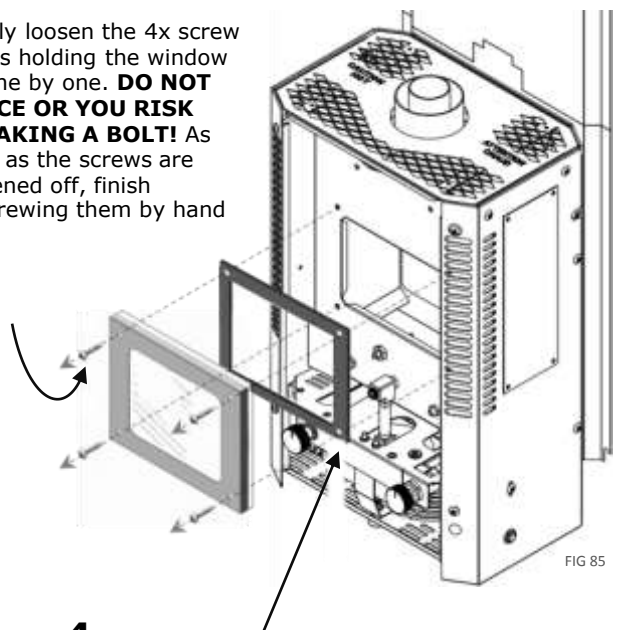
ONLY loosen the bolts with a Philips screwdriver when removing, then remove by hand.

ONLY thread the bolts in by hand to replace them, tightening them with a Philips screwdriver on only the final turn.

TIP: If the bolts won't thread in smoothly rubbing some soap into the threads or applying a drop of dish soap will help



3. Gently loosen the 4x screw heads holding the window on one by one. **DO NOT FORCE OR YOU RISK BREAKING A BOLT!** As soon as the screws are loosened off, finish unscrewing them by hand



4. Take care not to damage the window gasket. To remove the gasket from a metal surface use a sharp blade to gently separate it from the metal. **This heater must never be operated without the gasket installed!**

CAUTION: IF THE ORIGINAL GASKET IS DAMAGED, IT MUST BE REPLACED WITH AN OEM GASKET SUPPLIED BY DICKINSON*. IT CANNOT BE SUBSTITUTED WITH ALTERNATIVE MATERIALS. USING AN UNAPPROVED GASKET CAN RESULT IN EXHAUST LEAKS!

*Replacement window gasket PART # **GASKET-6**

6. TROUBLESHOOTING

GENERAL ISSUES

Like with any piece of equipment, over time you may experience unexpected issues with fireplace operation that may need to be corrected with maintenance or repair before proper operation can be resumed. These issues are generally caused by install deviations, alterations to existing installs, excess humidity, fuel system blockages or expected wear and tear on components.

The information contained within the troubleshooting section of this manual describes the most common issues and corrective actions that we are aware of for this appliance. In case of difficulty understanding or following the instructions, or a failure to correct the issue and return the fireplace to its normal working condition, please contact Dickinson marine to ask for assistance from our tech support team.

Reminder: Servicing and repairs should only be carried out by an authorized technician!

List of troubleshooting guides	Page #
1 Fireplace won't light.....	35
2 Fireplace lights but quickly goes out.....	36
3 Fireplace goes out unexpectedly.....	37
4 Fan is not working.....	38

TECHNICAL SUPPORT

Our tech support personnel are here to help explain any aspects of this manual, its instructions or the operation and servicing of the fireplace. Dickinson Marine technicians draw on a wealth of experience gained from manufacturing and servicing thousands of Dickinson appliances.

- In the event of any technical issues with the appliance, please email Dickinson with;
- The serial number & model name of your appliance
 - A brief description of what the problem is and when it happens
 - Pictures of the appliance install and the chimney (if applicable)

Please bear in mind that Dickinson technicians are available for remote support only and are by no means authorized to attend service calls or offer technical support or help in person.

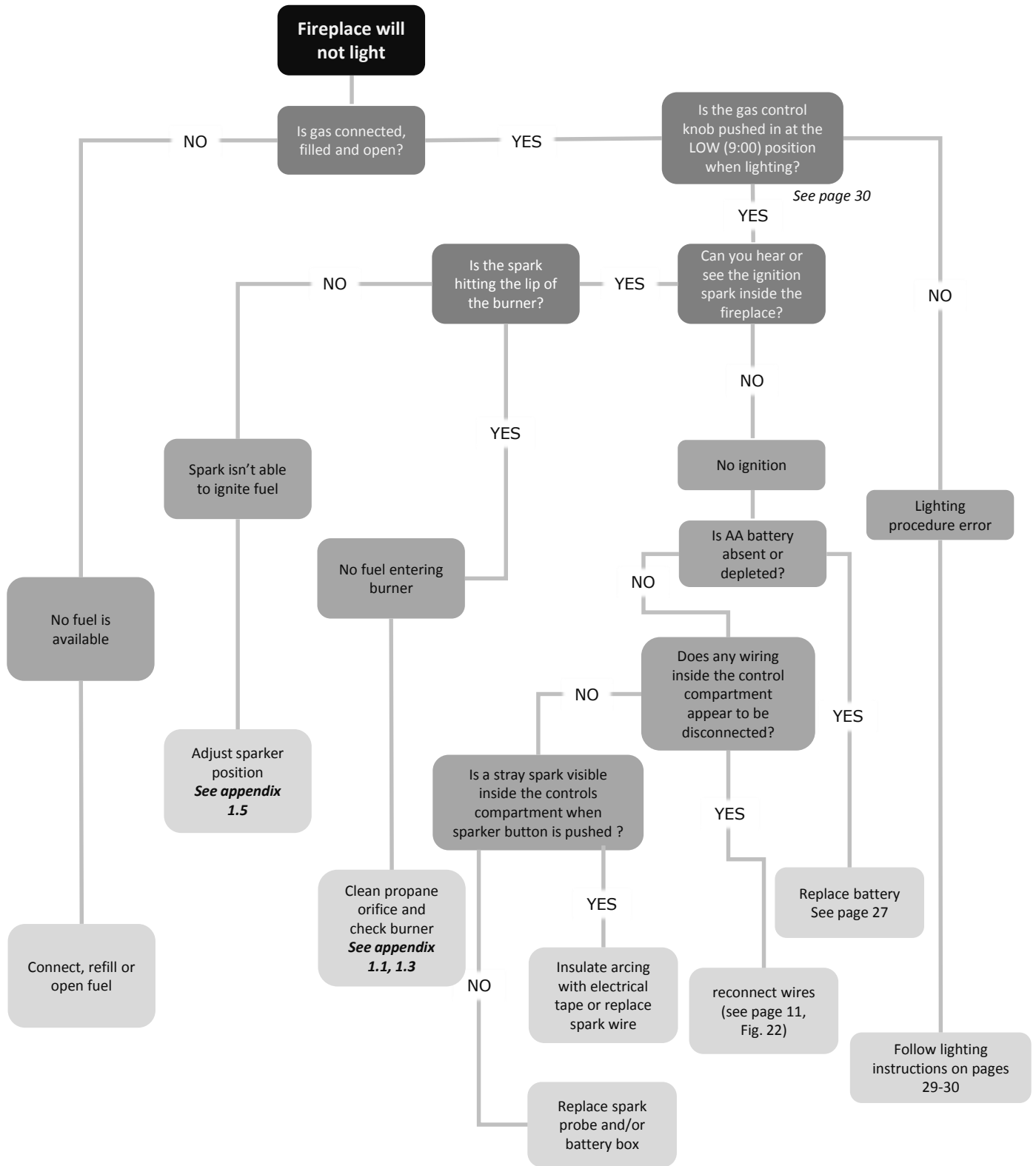
FIREPLACE WON'T LIGHT

CAUTION: ALWAYS FOLLOW THE MANUFACTURER'S LIGHTING INSTRUCTIONS FOR THIS APPLIANCE FOUND ON **PAGE 29**. FAILURE TO ADHERE TO SAFE RECOMMENDED LIGHTING PROCEDURES CAN RESULT IN INJURY, DAMAGE TO PROPERTY OR EVEN DEATH.

Investigate

Diagnose

Correct



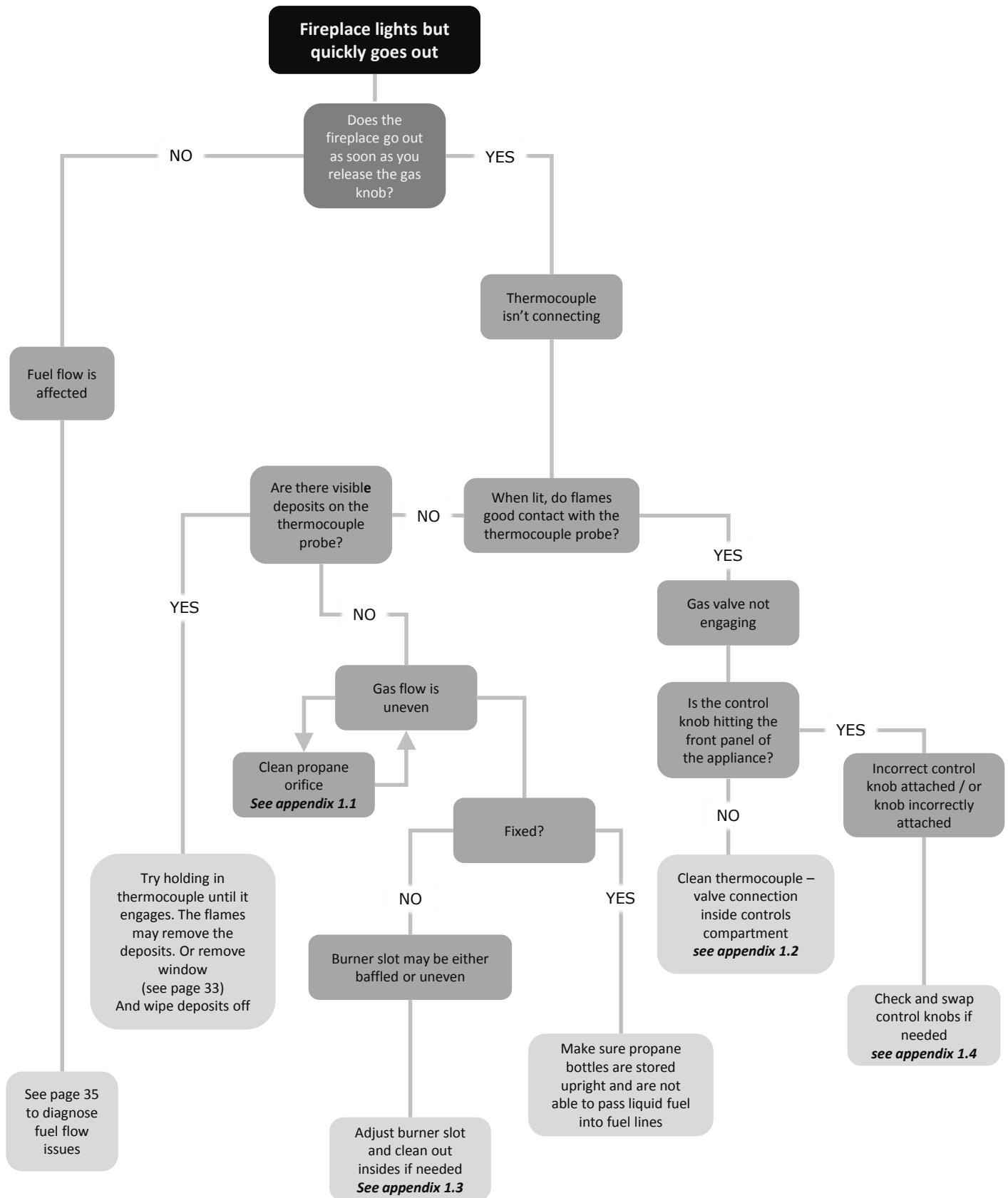
FIREPLACE LIGHTS BUT QUICKLY GOES OUT

CAUTION: ALWAYS FOLLOW THE MANUFACTURER'S LIGHTING INSTRUCTIONS FOR THIS APPLIANCE FOUND ON **PAGE 29**. FAILURE TO ADHERE TO SAFE RECOMMENDED LIGHTING PROCEDURES CAN RESULT IN INJURY, DAMAGE TO PROPERTY OR EVEN DEATH.

Investigate

Diagnose

Correct



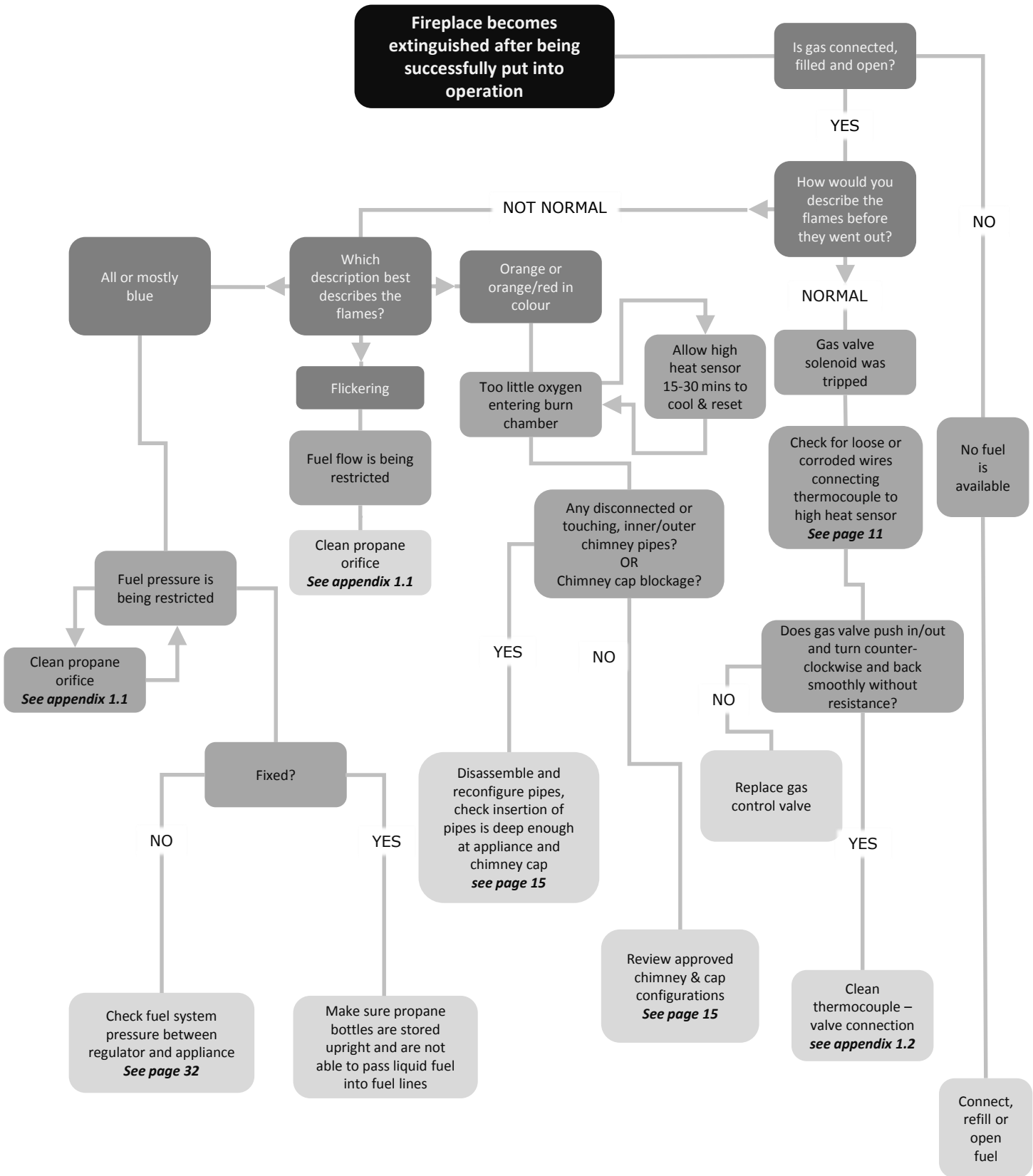
FIREPLACE GOES OUT UNEXPECTEDLY WHILE ON

CAUTION: ALWAYS FOLLOW THE MANUFACTURER'S LIGHTING INSTRUCTIONS FOR THIS APPLIANCE FOUND ON **PAGE 29**. FAILURE TO ADHERE TO SAFE RECOMMENDED LIGHTING PROCEDURES CAN RESULT IN INJURY, DAMAGE TO PROPERTY OR EVEN DEATH.

Investigate

Diagnose

Correct



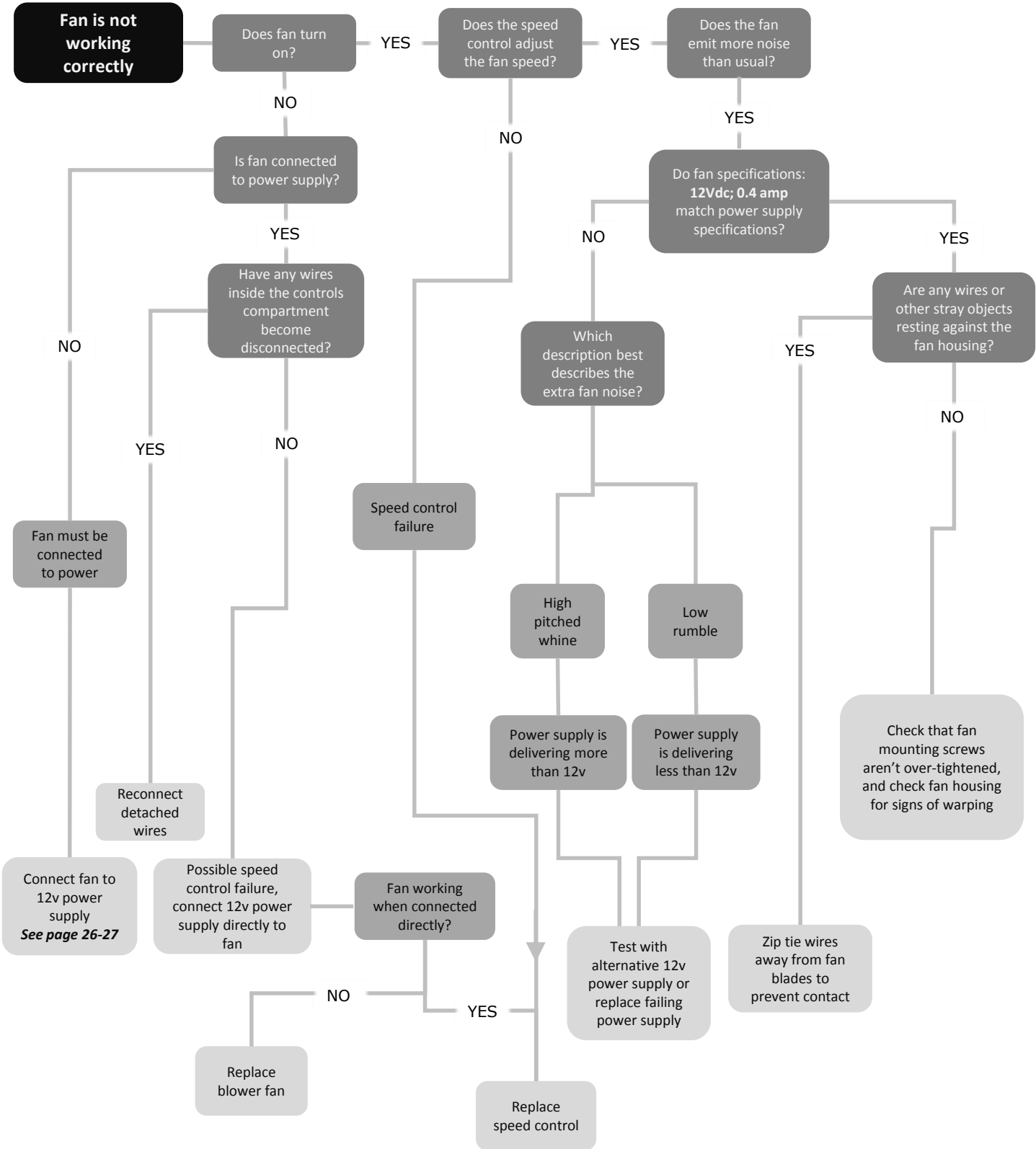
FAN NOT WORKING

CAUTION: ALWAYS FOLLOW THE MANUFACTURER'S LIGHTING INSTRUCTIONS FOR THIS APPLIANCE FOUND ON **PAGE 29**. FAILURE TO ADHERE TO SAFE RECOMMENDED LIGHTING PROCEDURES CAN RESULT IN INJURY, DAMAGE TO PROPERTY OR EVEN DEATH.

Investigate

Diagnose

Correct



APPENDIX



TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

	Directory	Page #
1.1	Cleaning the propane orifice	40
1.2	Clean thermocouple/Valve Connection	41
1.3	Adjust & inspect burner	42
1.4	Gas knob making contact with front panel	43
1.5	Sparker Probe Adjustment	44
1.6	Replacing Thermocouple	45
1.7	Replacing Fan	46
1.8	Replacing High Heat Sensor	47
1.9	Replacing Battery Box	47
2.0	Replacing Sparker Probe	48
2.1	Replacing ignition Button	48
2.2	Replacing Speed Control	49
2.3	Replacing Gas valve	49-50

WARNING!

Explosion hazard



DEATH OR SERIOUS INJURY CAN RESULT FROM FAILURE TO FOLLOW THESE INSTRUCTIONS

- SERVICE BY AUTHORIZED TECHNICIAN ONLY
- SHUT OFF GAS SUPPLY AND DISCONNECT POWER BEFORE SERVICING
- REPLACE ALL PARTS & PANELS BEFORE OPERATING



TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

1.1 Cleaning the propane orifice

WARNING!

Explosion hazard



DEATH OR SERIOUS INJURY CAN RESULT FROM FAILURE TO FOLLOW THESE INSTRUCTIONS

- SERVICE BY AUTHORIZED TECHNICIAN ONLY
- SHUT OFF GAS SUPPLY AND DISCONNECT POWER BEFORE SERVICING
- REPLACE ALL PARTS & PANELS BEFORE OPERATING

Use 0.78" (2mm) allen key to undo FAN & GAS control knobs.

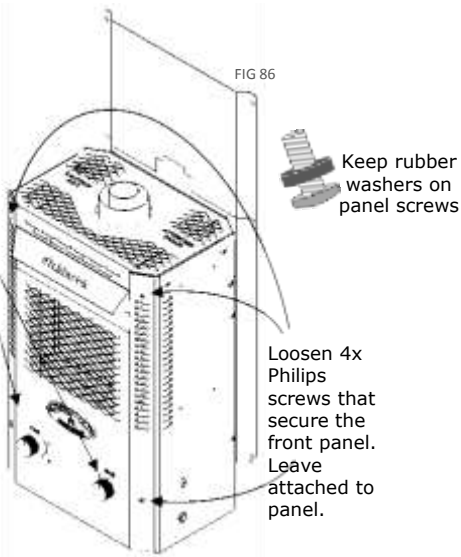


FIG 86

Keep rubber washers on panel screws

Loosen 4x Philips screws that secure the front panel. Leave attached to panel.

Location of test gauge plug. Remove to access orifice for cleaning

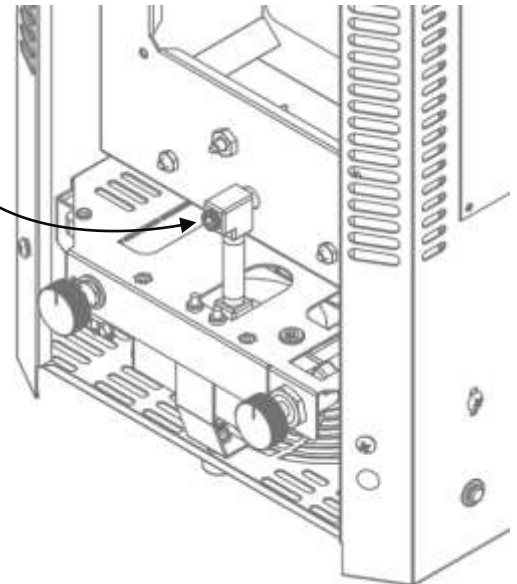


FIG 87

1/8" NPT test gauge plug. Use 3/16" (4.5 mm) sized allen key to remove

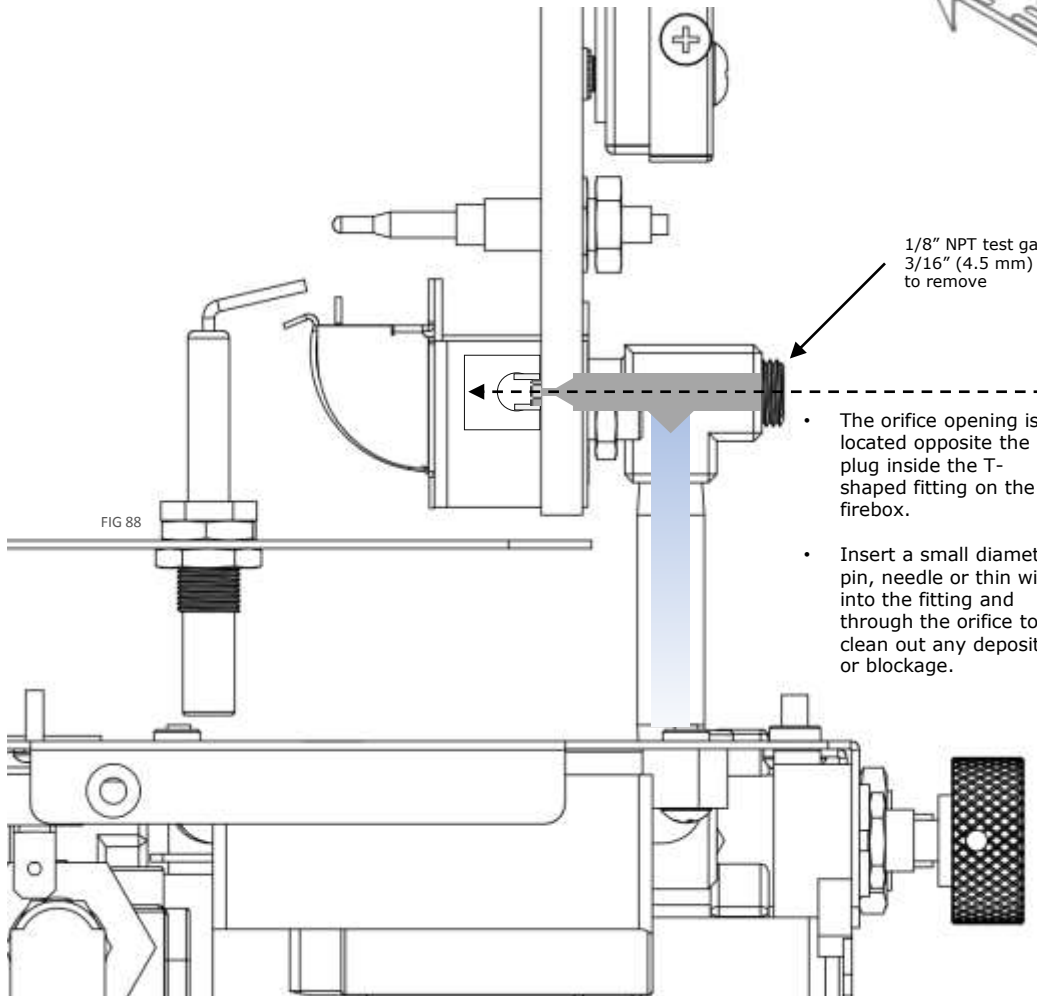


FIG 88

- The orifice opening is located opposite the plug inside the T-shaped fitting on the firebox.
- Insert a small diameter pin, needle or thin wire into the fitting and through the orifice to clean out any deposits or blockage.

- The size of the orifice opening is #D71 (0.66mm)
- **DO NOT** use anything to clean the orifice opening that is bigger than 0.66mm or that could enlarge the opening. *Do not use a drill bit!*
- **DO NOT** insert anything into the orifice that could damage, enlarge or break off inside it.



TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

1.2 Cleaning thermocouple-valve connection

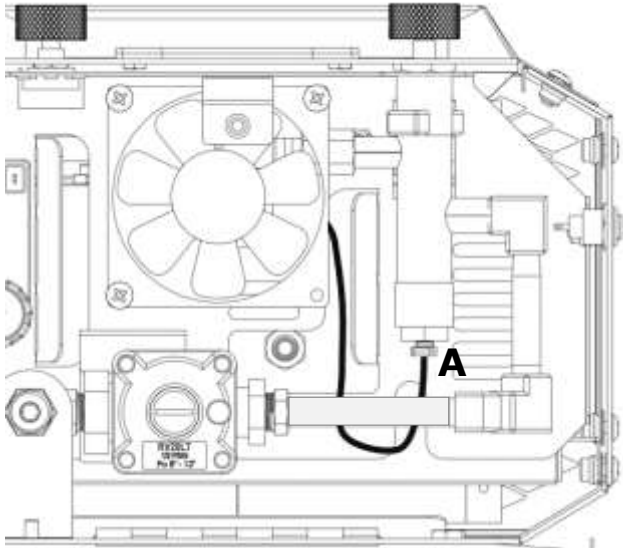


FIG 89

- The thermocouple-valve connection is located inside the controls compartment.
- Use a 5/16" wrench to loosen the thermocouple fitting where it screws into the propane control valve **(A)**
- **DO NOT** bend, twist or pinch the thermocouple. The thermocouple will no longer enable fireplace operation if it is damaged.
- Pull down gently on the copper tube of the thermocouple until it's tip is freed from the propane valve.
- When freed from the valve, gently pull the tip toward you a small amount until you're able to reach the tip with your abrasive.
- **DO NOT** pull the thermocouple outside of the fireplace in order to clean it

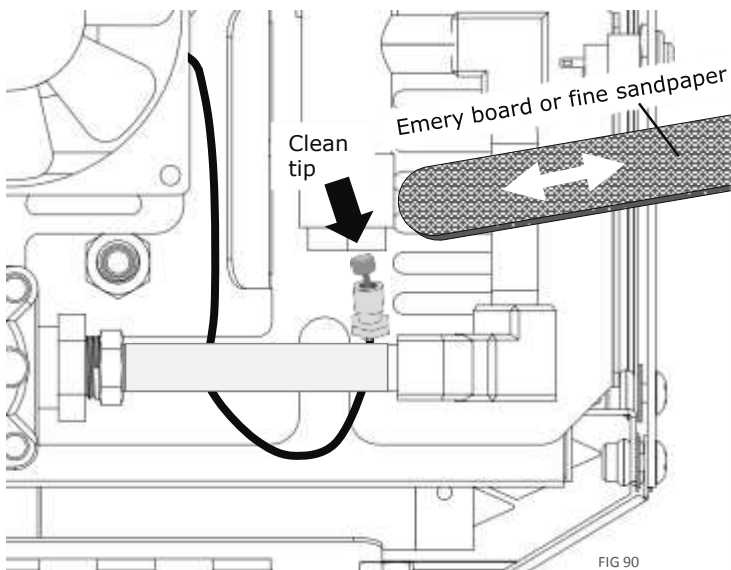


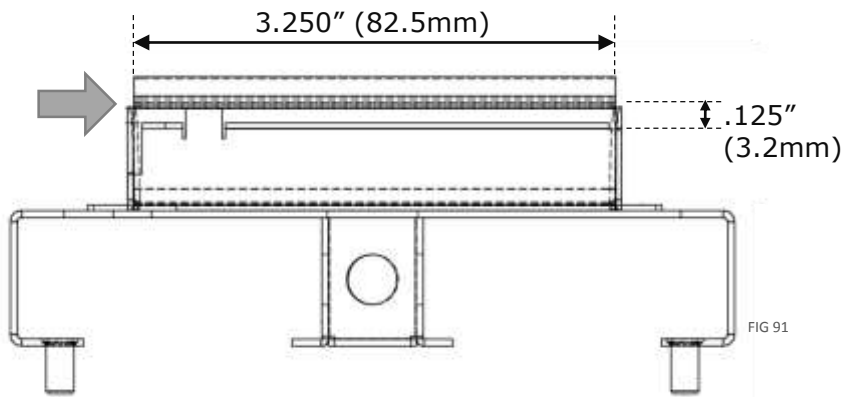
FIG 90

- Clean the small grey aluminum disk on the thermocouple tip with an abrasive like fine grit sandpaper, an emery board or nail file.
- Tarnish on this disk prevents the thermocouple from keeping the gas valve engaged and the fireplace on.
- **MOISTURE:** The valve, which is cooled by the gas flowing through it, can accumulate condensation in the heat of the controls compartment. This condensation can make its way inside the valve where it may tarnish the thermocouple tip.
- A small amount of dielectric grease on the thermocouple tip can prevent it from re-tarnishing.
- After cleaning, gently feed the thermocouple tip back inside the valve and thread it in by hand to start it.
- **DO NOT** force the thermocouple tip to thread into the valve – the threads on the valve will be easily damaged if it is forced or cross-threaded in.
- When threaded in all the way it will go by hand, use the 5/16th wrench to tighten the fitting – **DO NOT OVERTIGHTEN.**



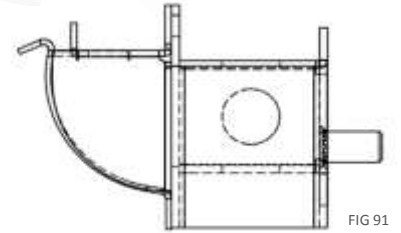
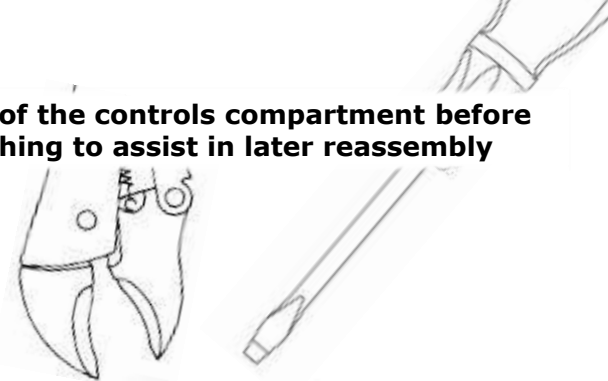
TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

1.3 Adjust & Inspect Burner



The size of the opening in the burner or its 'slot' should measure approximately .125" by 3.250" (3.2 x 82.5mm)

Because it is subject to extreme heat, we cannot guarantee that the burner will maintain its shape indefinitely. A correction may be required at some point. An uneven burner slot may result in inconsistent or unbalanced flames (see below)



To correct an uneven burner slot, careful pressure can be applied to it with tools. Use pliers to squeeze the slot narrower if needed, or a flat head screwdriver to lever the slot wider. The goal is to achieve an even burner slot roughly matching the dimensions of FIG 91 and a flame profile like the example (A) below.

Inspecting the Burner:

Rarely, blockages in the inside of the burner are sometimes caused by insects able to enter via the chimney while the heater is not in use, likely attracted to the lingering warmth. The burner cannot be disassembled for cleaning, but you can remove it to blow out any debris. Debris left inside a burner may ignite and or cause unpleasant odors, or prevent the burner from working at all.

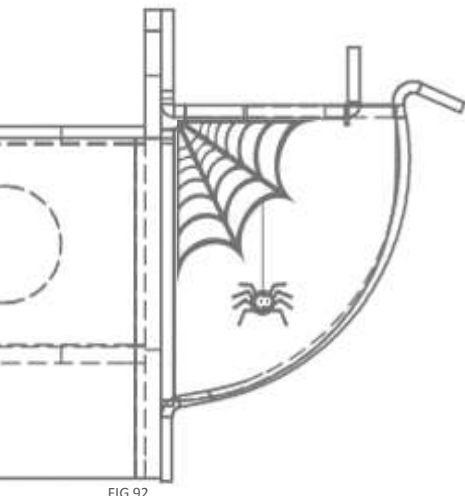


FIG 92

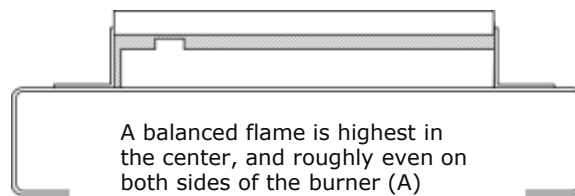


FIG 93

A balanced flame is highest in the center, and roughly even on both sides of the burner (A)

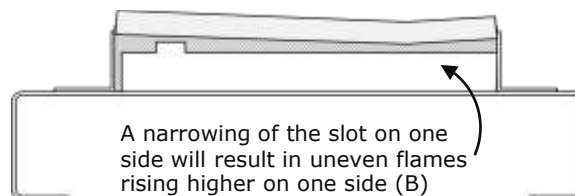
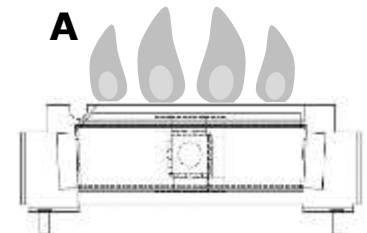


FIG 94

A narrowing of the slot on one side will result in uneven flames rising higher on one side (B)

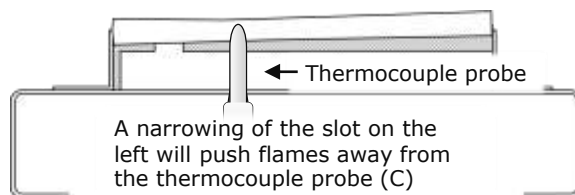
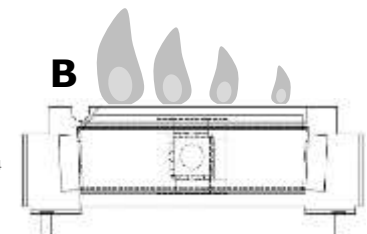


FIG 95

A narrowing of the slot on the left will push flames away from the thermocouple probe (C)

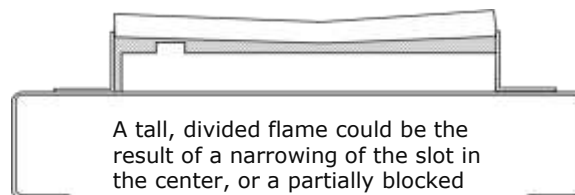
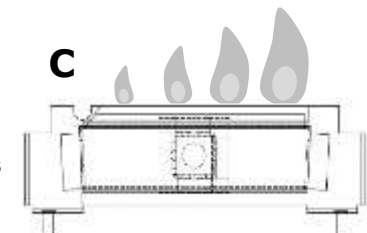
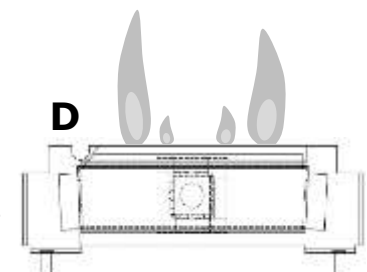


FIG 96

A tall, divided flame could be the result of a narrowing of the slot in the center, or a partially blocked orifice





TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

1.4 Gas Knob Making Contact With Front Panel

If the knobs for the gas and fan supply are accidentally switched, or the front panel of the fireplace has been reassembled incorrectly, the gas knob may hit the front panel of the appliance when engaged. If this happens, it may prevent the gas valve from being able to engage the thermocouple and keep the fire going. See below for correct install directions and ways to tell the brass knobs that control the fan and gas apart.

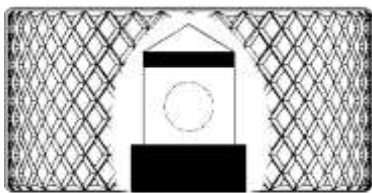
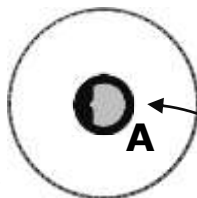


FIG 97



GAS KNOB

The knob for the gas control is recognizable by its letter-**D** shaped keyway insert (**A**). The depth of the shaft hole is also different to that of the fan knob.

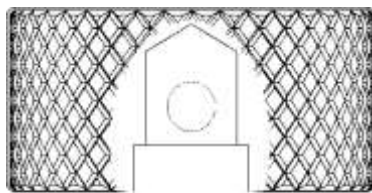
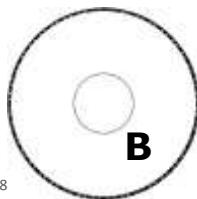


FIG 98



FAN KNOB

The knob for the fan has no keyway (**B**) and is unmodified inside giving it a deeper shaft hole.

>>
Normal
standby
position
of gas
knob

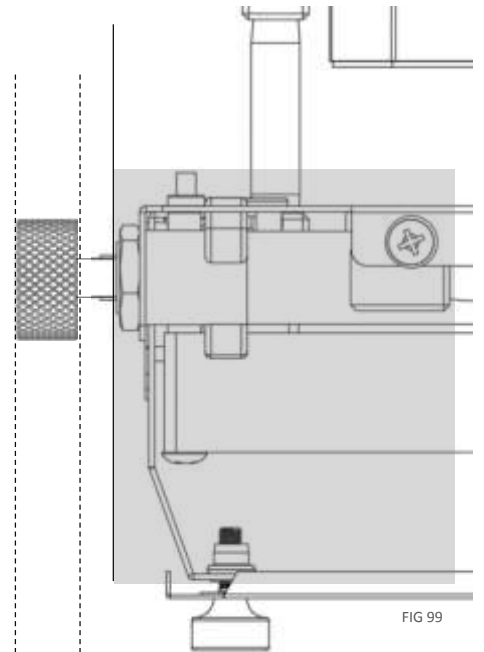


FIG 99

>>
Normal
engaged
position
of gas
knob

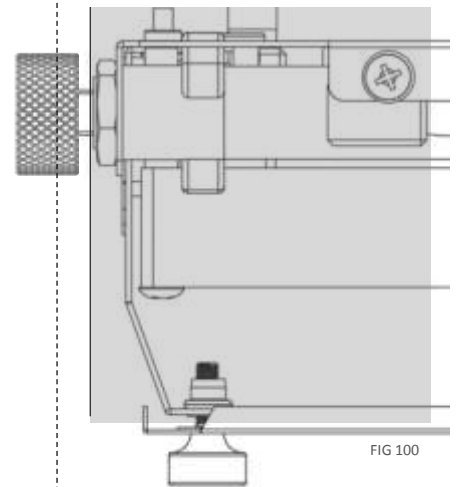


FIG 100

>>
The knob
pictured
is
bottoming
out on the
front panel
of the
fireplace.

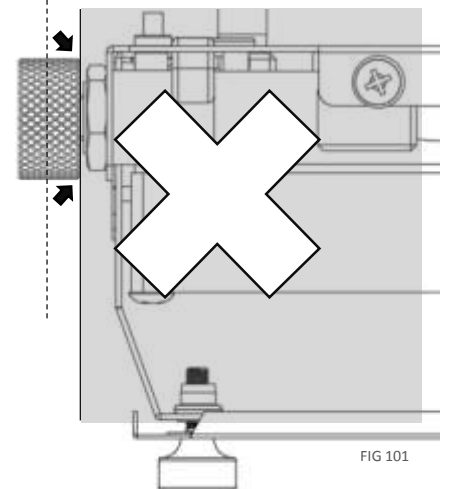


FIG 101



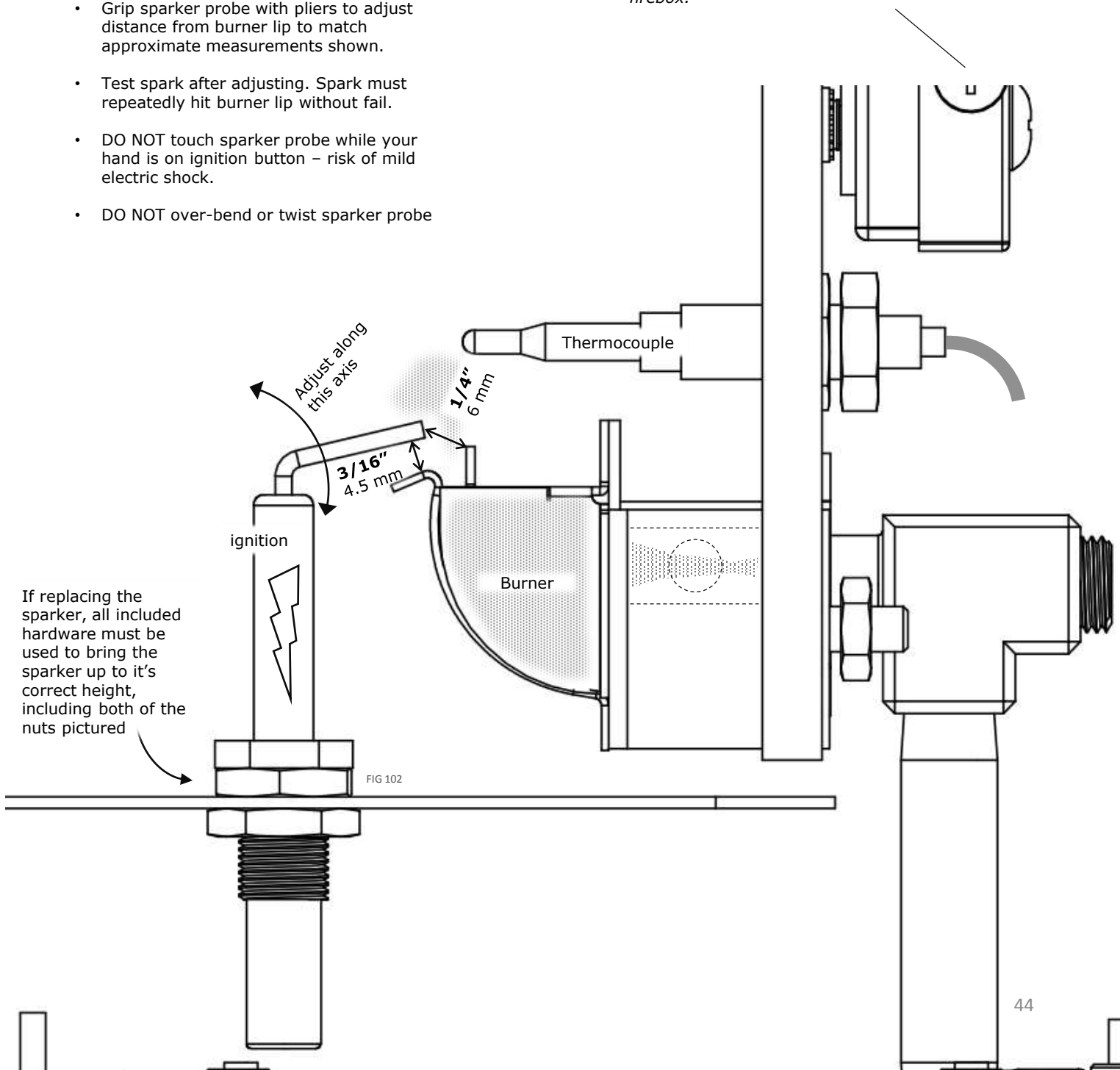
TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

1.5 Sparker Probe Adjustment

SHUT OFF GAS SUPPLY AND DISCONNECT BEFORE SERVICING.

- Grip sparker probe with pliers to adjust distance from burner lip to match approximate measurements shown.
- Test spark after adjusting. Spark must repeatedly hit burner lip without fail.
- DO NOT touch sparker probe while your hand is on ignition button – risk of mild electric shock.
- DO NOT over-bend or twist sparker probe

See page 33, Removing and Replacing the window, for instructions on how to access the inside of the firebox.



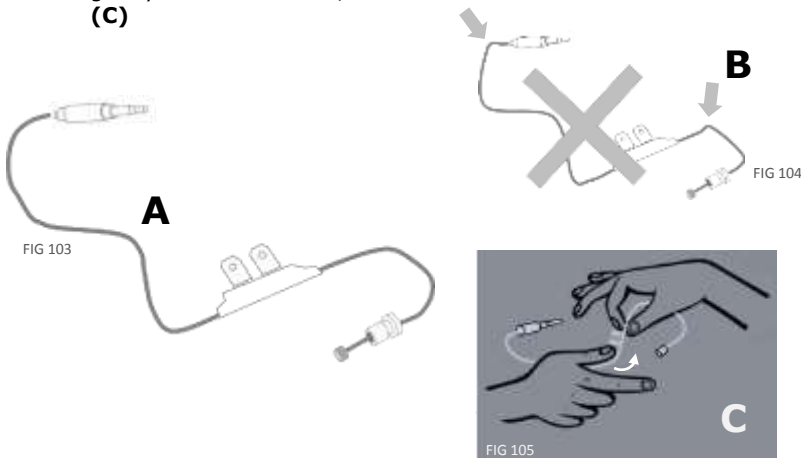


TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

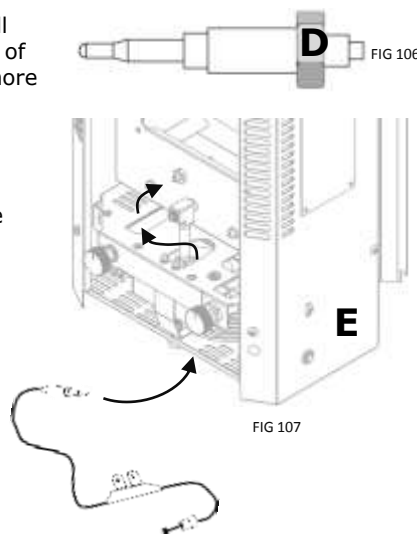
1.6 Replace Thermocouple

Follow the steps as described below to remove and replace the thermocouple on the fireplace. Take great care when manipulating and installing a new thermocouple that absolutely no kinks or pinches be introduced to the copper tube – just like a garden hose it will not work if flow is not maintained open within the thermocouple.

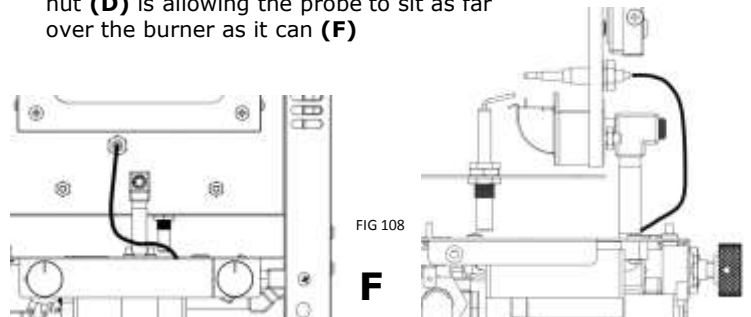
1. Disconnect all electrical power to the appliance before servicing.
2. Disconnect the 2 wires that plug into the thermocouple. (These may be located out of sight behind the blower fan)
3. Undo the old thermocouple connections using a 5/16" and a 1/2" wrench.
4. Remove window (see page 33) and loosen the nut on the inside of the firebox to withdraw the old thermocouple (**G**)
5. Take the new thermocouple and gently manipulate it's shape into roughly the shape shown (**A**) Take care not to bend or kink the copper tube (**B**) Always bend the tube gently around a thumb, forearm or other rounded surface (**C**)



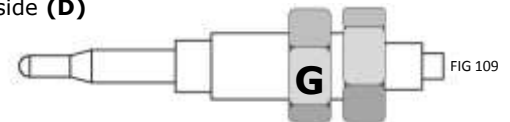
6. Thread only one of the thermocouple nuts (**D**) all the way onto the threads of the probe end, until no more threads are showing.
7. Carefully feed the thermocouple up into the heater, passing the probe end through the opening in the center of the panel in the controls compartment (**E**)



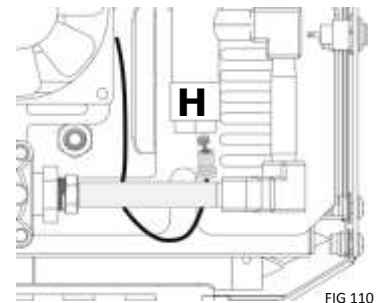
8. Feed the thermocouple probe through the opening into the firebox, making sure the nut (**D**) is allowing the probe to sit as far over the burner as it can (**F**)



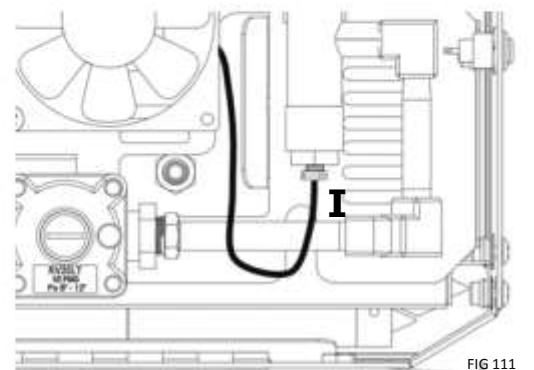
9. Once the probe is positioned correctly, thread the 2nd nut onto the thermocouple from inside (**G**) and tighten. After tightening make sure the thermocouple is still positioned as far as it is able to extend over the burner, then snugly tighten the nut outside (**D**)



10. Gently position the other end of the thermocouple where it can be threaded into the bottom of the gas control valve (**H**)



11. Thread the thermocouple in carefully (**I**) DO NOT cross thread! DO NOT force! Make sure the thermocouple threads in without resistance by hand. Use 8mm wrench to tighten snugly but DO NOT over-tighten!





TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

1.7 Fan Replacement

- Only use the replacement fan recommended for this appliance by the manufacturer
- Disconnect appliance from electrical power before servicing
- The fan is held in by 3 long Philips screws (see arrows for placement) FIG 113
- Install the fan with it's label facing upwards – air must come into the fan from under the fireplace and blow upwards.
- Make sure to position fan so that wiring will exit on the left side (when facing the fireplace) where it can connect to the corresponding wires in the fireplace

- Once installed, connect the black wire on the fan to the corresponding black wire inside the controls compartment, and connect the red wire to the corresponding red wire inside
- After installation test the fan to verify that the ON/OFF switch is working correctly
- Check the settings of the speed control to verify that you have the full range of speeds the fan offers. This is best done in a quiet room where the quiet fan can be heard without difficulty

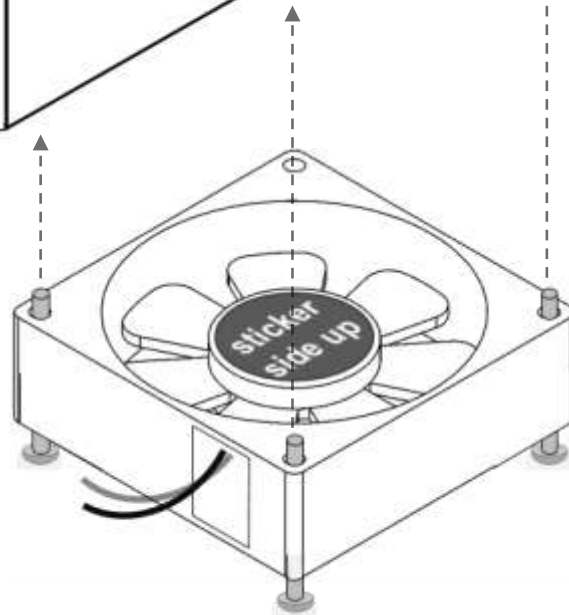


FIG 112

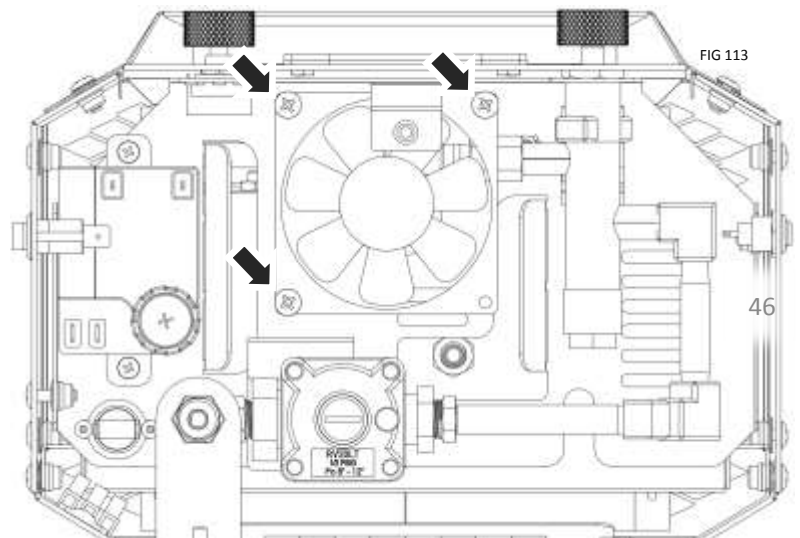


FIG 113



TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

1.8 Replace High Heat Sensor

1. The high heat sensor is found in the rear left of the controls compartment **(A)**
2. The sensor is attached with 2 x nuts & bolts. When replacing the sensor removal of the left side panel of the fireplace is recommended as it will make disassembly and reattaching much easier.
3. Disconnect the wires that lead from the high heat sensor to the thermocouple and reconnect them to the new sensor.
4. The thermocouple – sensor wires must be connected in order for the flames to stay on.

NEVER ATTEMPT TO BYPASS THE HIGH HEAT SENSOR OR TO OPERATE THE FIREPLACE WITHOUT THE HIGH HEAT SENSOR INSTALLED.

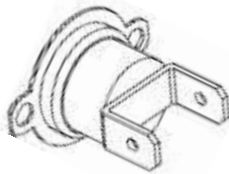


FIG 114

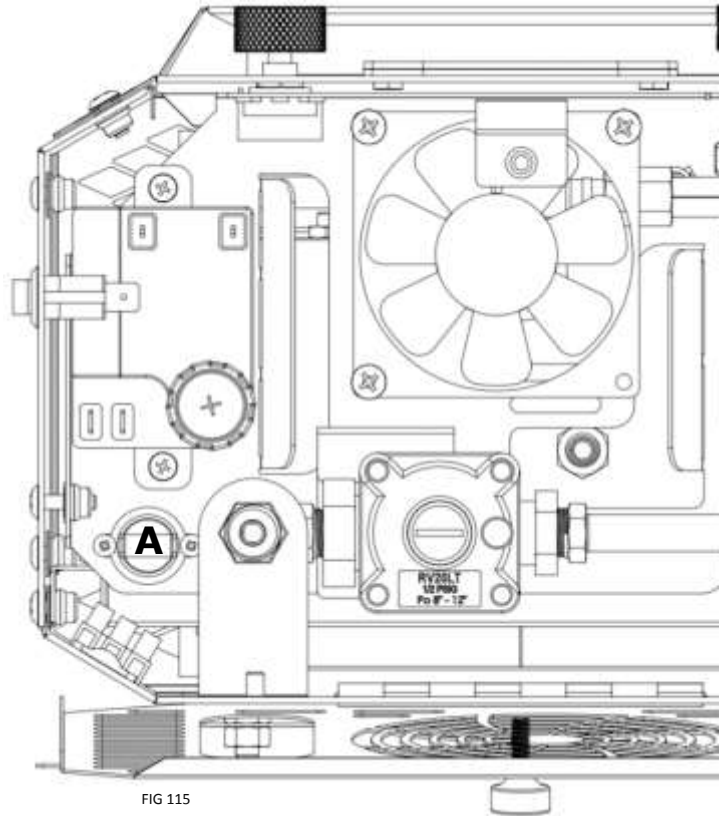


FIG 115

1.9 Replace Battery Box

1. The battery box is found on the far left side of the controls compartment **(B)**
2. Take a photograph showing the wire connections to the battery box before unplugging any wiring.
3. Disconnect battery box wiring and if you wish, label each wire with where it is to be re-connected
4. Unscrew the two Philips screws holding the battery box to the panel behind it.
5. Replace the old battery box with a new one oriented and wired up in the same way as the old one.
6. After installing, insert an AA battery and test the spark inside the fireplace. See pages 35 & 44 for spark troubleshooting.

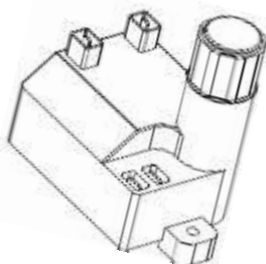


FIG 116

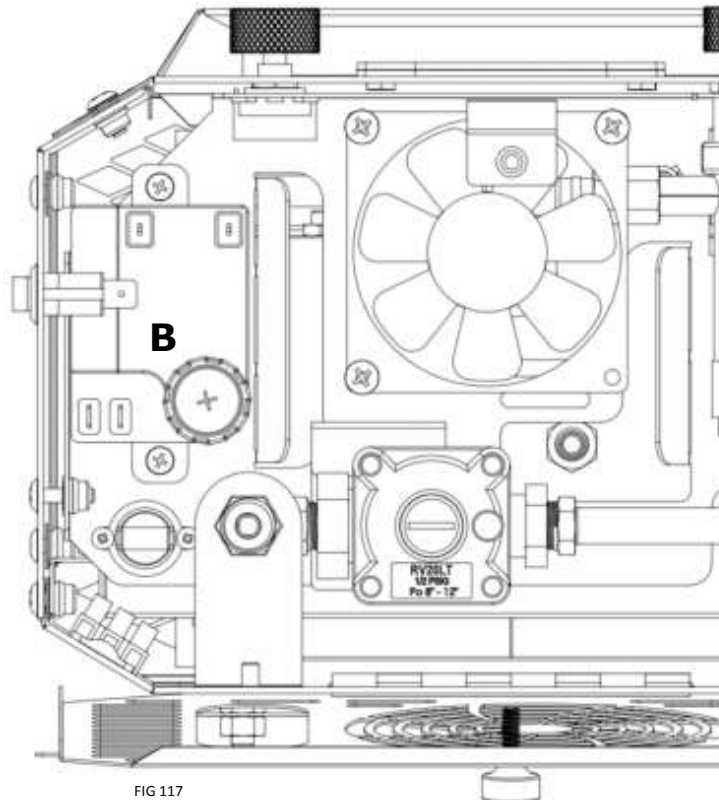


FIG 117



TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

2.0 Replace Sparker Probe

1. Before replacing a sparker it's first necessary to troubleshoot its operation to determine whether or not replacing it will fix the problem. See pages 35 & 44 for spark troubleshooting.
2. If a new sparker is required, access to the firebox will be required. Follow the steps on page 33 to remove the firebox window.
3. Remove the old sparker by loosening the nut securing it onto the firebox from underneath. Use a 5/8th inch wrench (**A**)
4. With the bottom nut removed, the sparker can be pulled out via the firebox window (**B**)
5. **With both old and new sparkers side by side, use 2 sets of pliers to carefully bend the metal probe of the new sparker to match the bend and angle of the old one. DO NOT bend by hand or you risk snapping its white shaft.**
6. To attach the new sparker, first remove the extra nut found on the old sparker (**C**) This is necessary to bring the sparker to the correct height.
7. Tightly thread the bottom nut (**A**) back onto the new sparker.
8. **Ensure that there is no gas connected to the fireplace.**
9. Check spark action before reassembling the window. If necessary make adjustments (see page 44)

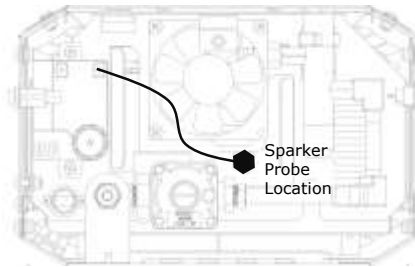


FIG 118

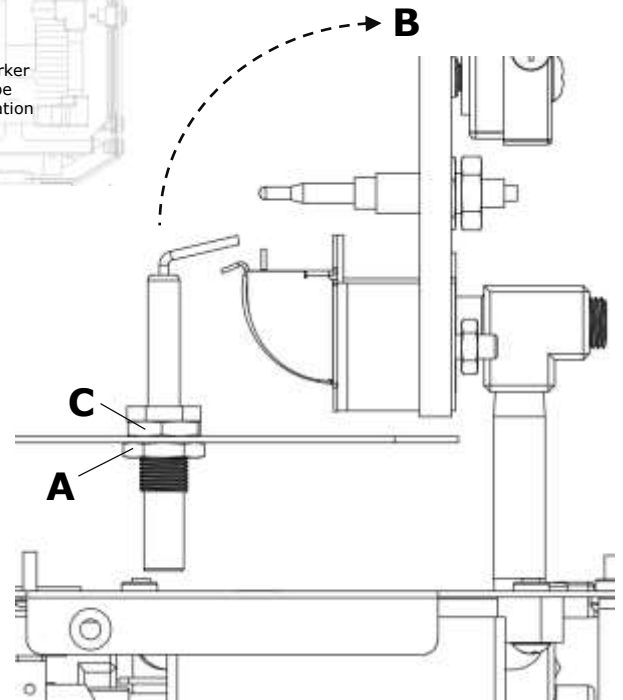


FIG 119

2.1 Replace Ignition Button

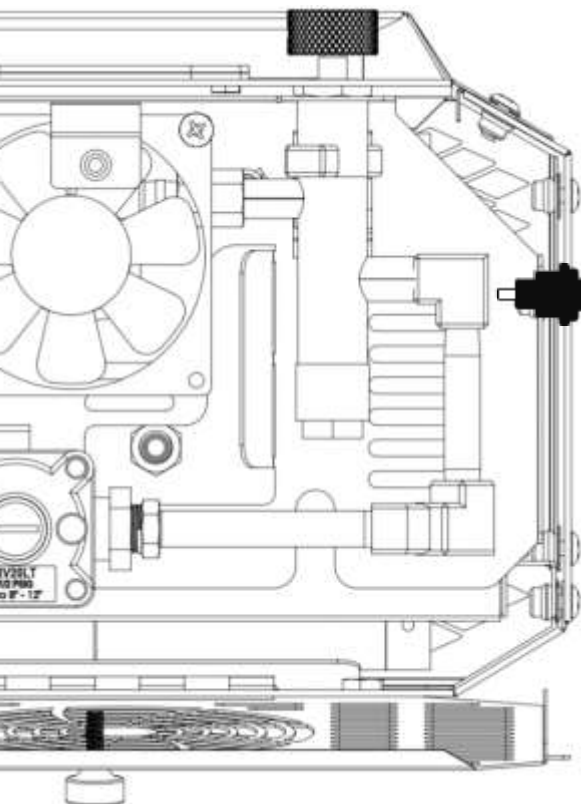


FIG 120

1. In order to replace the ignition button of the fireplace (**A**), open the bottom panel to gain access to the controls compartment.
2. Unplug the yellow ignition wires from the battery box on the left.
3. Use a 5/8 wrench to loosen the retaining nut of the ignition button. Once loosened, back off by hand.
4. When the nut and lock washer have disengaged from the ignition button, pull the button free from the fireplace.
5. Insert the new ignition button, wires first, through its mounting hole. Thread the new lock washer & retaining nut onto the yellow wires and the ignition button. Tighten with a 5/8" wrench – do not overtighten!
6. Plug yellow sparker wires back into either 1/4" terminal on the battery box.

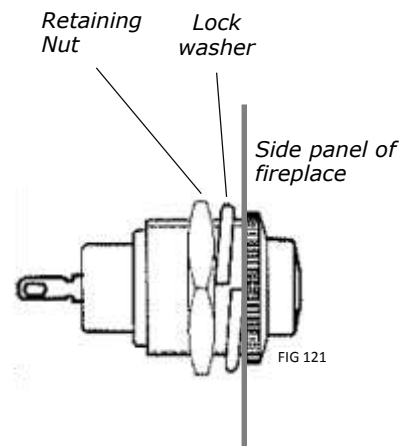


FIG 121



TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

2.2 Replace Speed Control

1. Disconnect all electric power from the appliance before servicing.
2. Remove the front panel of the appliance to access speed control (see page 33)
3. Detach old speed control wiring.
4. Use 1/2" wrench to loosen nut & washer attaching speed control and remove.
5. Attach new speed control and plug in new wiring.
6. Reassemble all wiring, components and panels to the appliance before connecting to power.

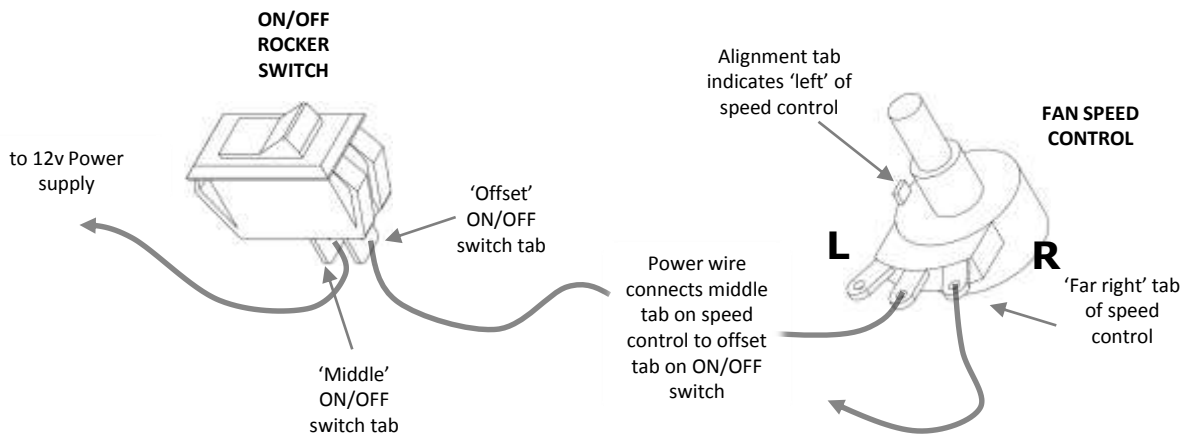


FIG 122

2.3 replace Gas Valve

1. Disconnect fireplace from all electric power and gas connections before servicing.
2. Remove Fireplace from its wall mounted location for servicing.
3. Remove the front panel of the appliance
4. Remove the 6 x screws attaching the side panels to the fireplace (A) With all 6 screws removed, the firebox and control panels of the fireplace will come away from its back panel..

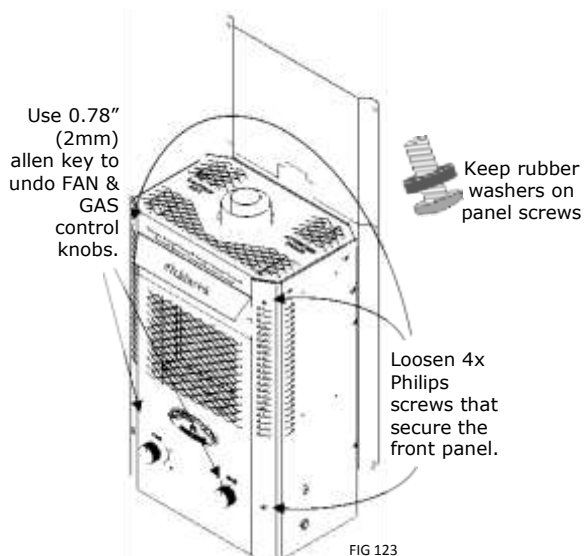


FIG 123

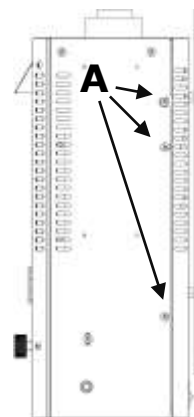


FIG 124

5. With the front, side and rear panels removed, the fireplace will consist of just its firebox and the open controls compartment. Place the firebox and its attached controls panel carefully on a work surface.





TIP: take a picture of the controls compartment before disassembling anything to assist in later reassembly

2.3 replace Gas Valve cont'd

6. The next step involves detaching the panel housing the controls and gas manifold from the firebox. To make this easier, you can remove the blower fan from the controls panel first
7. Disconnect the thermocouple (see page 45) and the sparker (see page 48) before attempting to remove the control panel from the firebox.
8. Using an adjustable wrench, grip the brass elbow fitting (B) and carefully turn it counter-clockwise to loosen the brass pipe connected to the firebox (C)
9. Once loosened, use both hands to spin the panel and its attached manifold to disconnect them from the firebox.

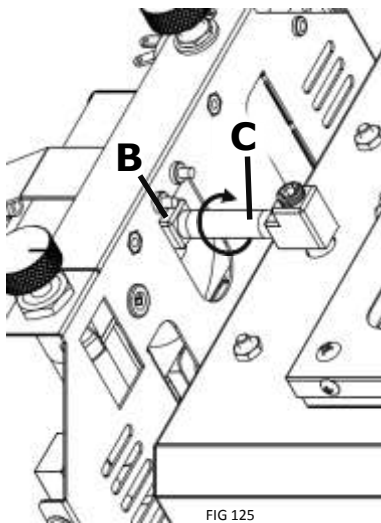


FIG 125

10. With the control panel detached from the firebox, detach the manifold from the control panel by disconnecting the nut securing the valve (D) and the screw securing the built in regulator (E)
11. Once the manifold has been separated from the control panel, disconnect the manifold fittings from the old gas valve's input (F) and outlet (G)
12. Assemble the new valve to the manifold using loctite on all tapered connections.
13. Reattach the manifold to the controls panel by reattaching the gas valve and built in regulator.
14. Reattach the controls panel to the firebox by reconnecting the pipe (C) to the brass fitting on the firebox.
15. Reattach the thermocouple (see page 45) and the sparker (see page 48)

16. Reassemble all components and panels to the fireplace before connecting it to power, connecting it to the gas supply or testing the appliance.
17. Test every gas connection thoroughly with soapy water before lighting the fireplace again
18. Reassemble all components and panels to the fireplace before lighting again!

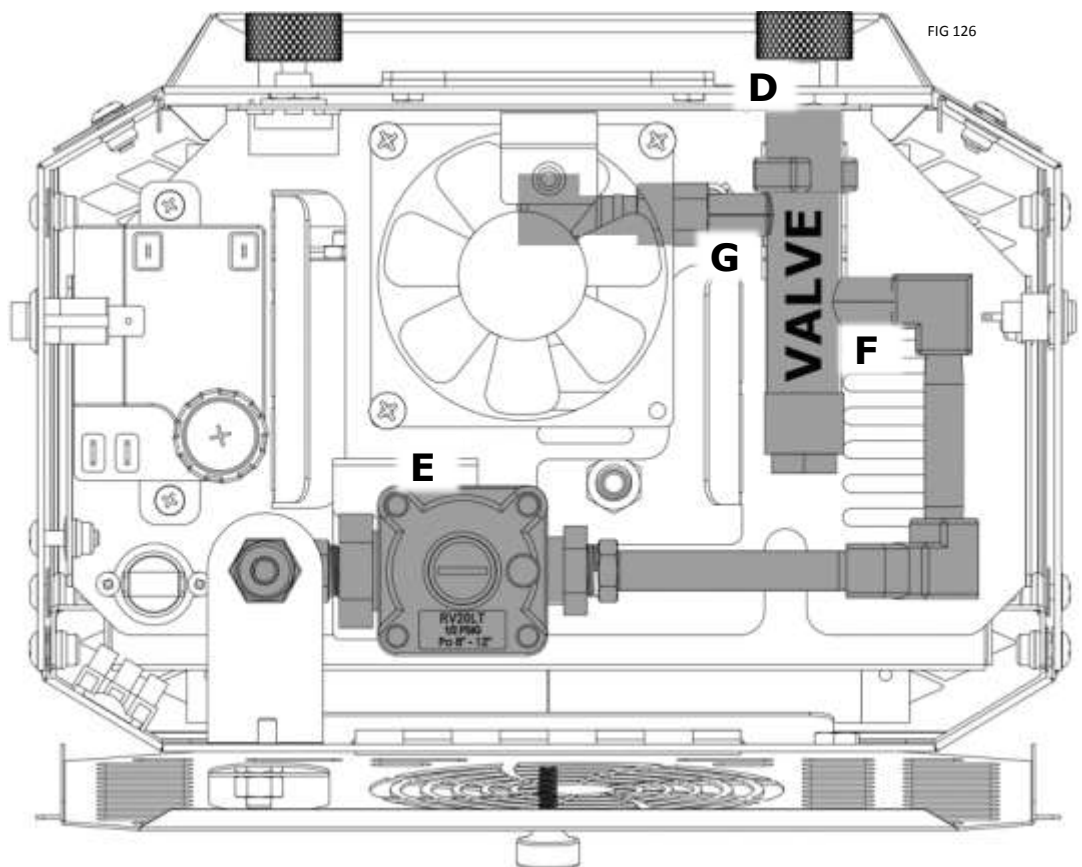


FIG 126

WARNING!

Explosion hazard

DEATH OR SERIOUS INJURY CAN RESULT FROM FAILURE TO FOLLOW THESE INSTRUCTIONS

- SERVICE BY AUTHORIZED TECHNICIAN ONLY
- SHUT OFF GAS SUPPLY AND DISCONNECT POWER BEFORE SERVICING
- REPLACE ALL PARTS & PANELS BEFORE OPERATING

GLOSSARY OF TERMS

Bells	The inverted bowl-shaped chimney cap elements	Propane locker	A secure outdoor compartment where propane bottles and split connections can be safely kept
Blowout	The action of a fireplace being extinguished by high winds	Psi	psi (pounds per square inch) is the standard tire pressure measurement used in the USA
BTU/hr	Btu's per hour (Btuh) is the benchmark used to estimate the capacity of heating systems, such as gas furnaces	Radiate (heat)	Energy emitted in the form of rays or waves, e.g. heat travelling through air
CFM	Cubic feet per minute (CFM) is a volumetric unit of measurement while expressing gas, air or liquid flow	Regulator	A device to restrict and control the flow of gas
Clearance	A stipulated safe distance from surfaces that may be damaged by the fireplace	Resistor	a device having a designed resistance to the passage of an electric current.
CO	Carbon Monoxide – a colorless, odorless toxic flammable gas resulting from incomplete combustion of carbon	Rheostat	an electrical instrument used to control a current by varying the resistance. See also: <i>speed control</i>
Combustion	The process of burning something	Solenoid	An electromagnet generating a controlled magnetic field. In this case the solenoid is a switch capable of shutting off fuel flow to the fireplace.
Conduction	The direct transmission of heat through a material such as metal or glass	Spacer springs	Springs that sit between the layers of chimney pipe to keep them separated from one another
Control valve (gas)	The gas control valve meters and distributes fuel to the burner in the fireplace	Sparker terminal	The 1/8" inch wire connector found on the ignition device
Convection	The process of heat transfer through air or water	Sparker probe	The metal tip of the sparker that emits the ignition spark
Cross-thread	The action of forcing a screw into threads on angle	Speed control	The variable resistor device that regulates fan speed.
dB	Decibels, a unit for measuring the volume of sound	Strain relief (clamp)	A plastic clamp tightened down over wiring exiting the appliance, to prevent it from being disconnected if pulled on
Direct vent	An appliance that both vents and draws combustion air only from outside a structure	Tank fittings	The propane fittings needed to attach a low pressure regulator and hose to a refillable propane bottle.
Draft	The suction developed inside a chimney filled with hot gasses	Terminal block	Modular insulated block to facilitate easy wire connections to the appliance
Draw (chimney)	See: <i>draft</i> , above	Test gauge plug	A removable plug accessible to a gas fitter or service technician where a manometer can be attached to read manifold pressure.
Dress ring	A decorative ring for install around the chimney cap exit hole in a ceiling	Thermocouple	A thermoelectric device which uses the heat of the flames to develop the voltage needed to keep the gas valve open.
Equalize (temperature)	The point at which every part of an appliance has reached the maximum operating temperature it is expected to produce	Thermocouple probe	The metal tip of the thermocouple meant to sit within the flames and conduct heat
Exhaust	The combustion gasses produced inside the fireplace	Unattended (operation)	Being not present or not able to observe or correct the operation of the appliance.
Firebox	The sealed metal chamber within the fireplace's outer panels that houses the burner and contains the combustion	VDC	VDC refers to volts of direct current , and it can come from either a battery or a power supply that converts AC (alternating current) into DC.
Flue	A chimney	Vent pipe	The 1.5 inch flexible pipe for expelling exhaust gasses from the fireplace to the outdoors
Flue guard	A guard design to sit around a hot chimney and remain safe to the touch	Wall liner	A protective wall mounting plate attached to the back of the appliance
Grate	The protective barrier in front of the viewing window		
Grill	Used interchangeably with <i>grate</i> , above		
High heat sensor	A sensor meant to trip the thermocouple connection and extinguish the fireplace if it overheats		
Hz	Hertz, the SI unit of frequency, equal to one cycle per second		
ignition	The system by which a spark ignites the gas emanating from the burner inside the firebox		
Inh2o	Inches of Water Column, a measurement unit for measuring static pressure		
Intake pipe	The 2.5 inch flexible pipe for drawing outside air into the firebox		
Louvre	The angled metal opening above the window to allow hot air to discharge		
LP gas	Liquefied Petroleum Gas or Propane		
Manifold	The piping and connections for distributing propane gas to the fireplace controls		
Ohms	a measurement of how well a current can travel through a circuit or a given path		
Orifice	The small opening or 'jet' that allows a controlled amount of propane gas into the burner		
Potentiometer	The variable resistor or 'speed control' used to regulate fan speed. See also: <i>speed control</i>		

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