

This appliance has been retired.
Service parts pages within have been removed.
For replacement parts, please refer to the individual
service parts list located on the brand websites.



PATENT 4,875,464 AND PATENTS PENDING

MODEL ZC-INSERT INSTALLATION AND OPERATION INSTRUCTIONS

A.G.A. DESIGN CERTIFIED
AND
CGA CERTIFIED



THIS MANUAL MUST BE USED FOR INSTALLATION AND RETAINED BY THE HOMEOWNER FOR
OPERATION AND MAINTENANCE.

GAS TECHNOLOGIES, INC.
6665 W. Hwy 13 Savage, MN 55378 (612)890-8367



INSTALLATION AND OPERATION INSTRUCTIONS

PLEASE READ THIS MANUAL BEFORE INSTALLING AND USING THE FIREPLACE

MODEL ZC-INSERT IS A.G.A.-DESIGN CERTIFIED AND CGA-CERTIFIED FOR NATURAL GAS AND PROPANE.

FOR YOUR SAFETY

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

FOR YOUR SAFETY

If you smell gas:

1. Do not try to light any appliance.
2. Do not touch any electrical switch; do not use any phone in the building.
3. Immediately call your gas supplier from a neighbors phone. Follow the gas supplier's instructions.
4. If you cannot reach your gas supplier, call the fire department.

DUE TO HIGH TEMPERATURES, THE APPLIANCE SHOULD BE LOCATED OUT OF TRAFFIC AND AWAY FROM FURNITURE AND DRAPERIES.

DO NOT PLACE CLOTHING OR OTHER FLAMMABLE MATERIAL ON OR NEAR THE APPLIANCE. CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURE AND SHOULD STAY AWAY TO AVOID BURNS OR CLOTHING IGNITION.

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE INJURY OR PROPERTY DAMAGE. REFER TO THIS MANUAL FOR ASSISTANCE OR ADDITIONAL INFORMATION CONSULT A QUALIFIED INSTALLER, SERVICE AGENCY OR THE GAS SUPPLIER.

IMPORTANT: READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN A POSSIBLE FIRE HAZARD AND WILL VOID THE WARRANTY.

PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE.

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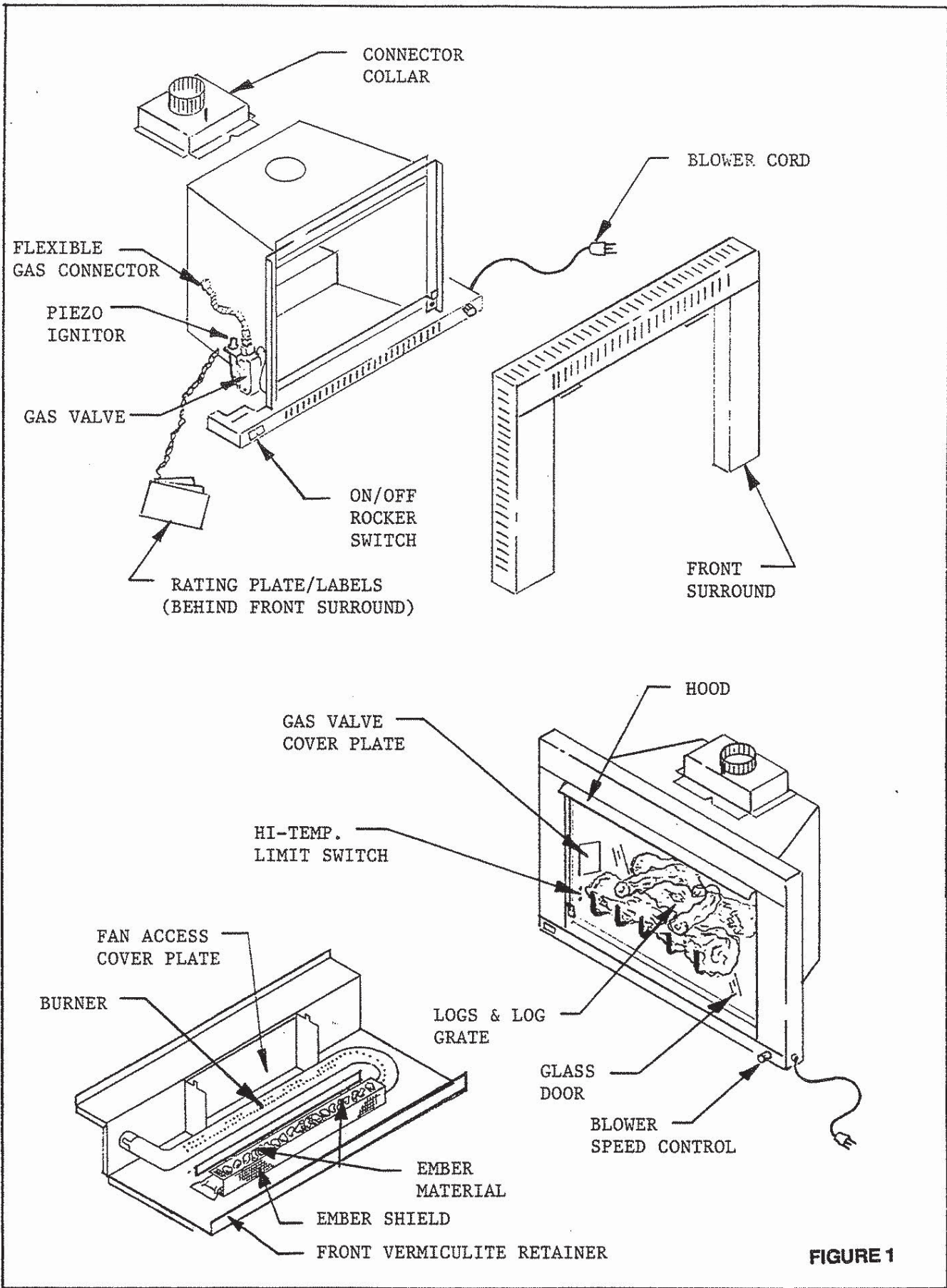
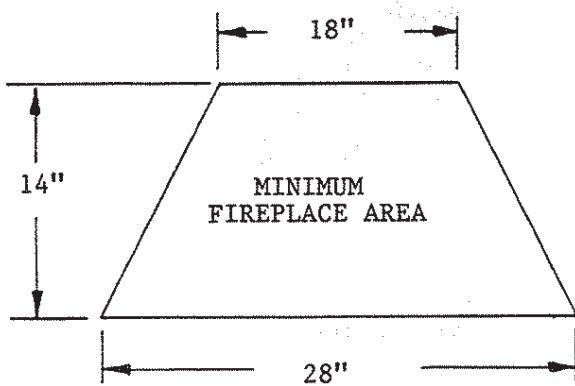
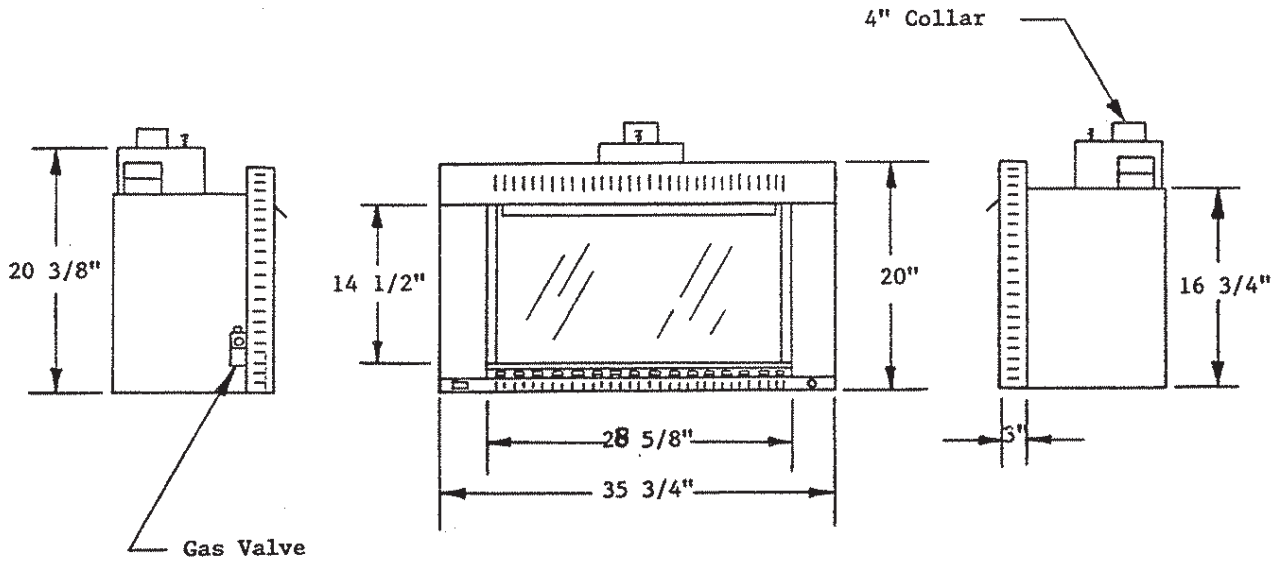
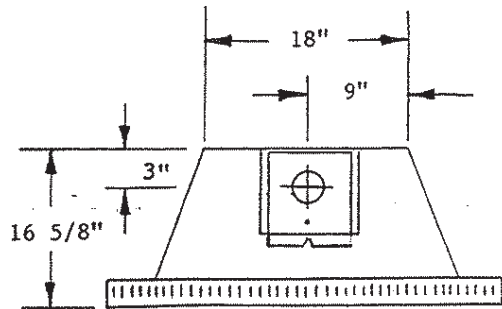


FIGURE 1



MINIMUM FIREPLACE SIZE
 HEIGHT: 17"
 DEPTH: 14"
 FRONT
 WIDTH: 28"

FIGURE 2

1.0 INTRODUCTION

The Model ZC-Insert is a Decorative Gas Appliance for installation in a Vented Fireplace. It is intended to be installed in a solid-fuel burning, factory-built fireplace. The fireplace in which the ZC-INSERT is to be installed, may have to be modified by removing existing brick or refractory; sheetmetal brackets or baffles; or flue damper or damper controls. See Figure 2 for minimum fireplace size to accommodate the ZC-INSERT.

WARNING: IF THE FACTORY-BUILT FIREPLACE INTO WHICH THE ZC-INSERT IS INSTALLED IS MODIFIED IN ANY WAY, THE FIREPLACE CANNOT BE USED AGAIN TO BURN SOLID FUEL PRODUCTS.

WARNING: THIS UNIT IS NOT FOR USE WITH SOLID FUEL.

NOTE: FOR PROPER OPERATING BENEFITS, THE MODEL ZC-INSERT MUST BE CONNECTED TO AN APPROVED FOUR (4) INCH DIAMETER FLEXIBLE STAINLESS STEEL OR ALUMINUM CHIMNEY LINER WHICH IS INSTALLED INSIDE THE EXISTING SOLID-FUEL FIREPLACE CHIMNEY. CONSULT LOCAL BUILDING CODES FOR REQUIREMENTS.

The control system for Model ZC-INSERT is a millivolt type. It consists of a gas control valve/regulator, a standing pilot assembly, a thermopile, a piezo ignitor, and an ON/OFF rocker switch. The controls are located behind the left hand side of the combustion box. Access to the controls is gained by removing the cover plate on the left hand wall of the inside of the combustion box. This unit is not intended to be used with a thermostat.

WARNING: DO NOT CONNECT 110-120 VAC TO THE GAS CONTROL VALVE OR CONTROL WIRING SYSTEM OF THIS UNIT.

Installation must conform to local codes. In the absence of local codes installation must conform with the National Fuel Gas Code ANSI Z223.1-1988/NFPA 54-1988 (in the United States) or with the current Installation Code CAN/CGA1-B149 (in Canada). The appliance when installed must be electrically grounded in accordance with local codes; in absence of local codes, with The National Electric Code ANSI/NFPA NO 70-1990 (in the United States) or with the current CSA C 22.1 Canadian Electrical Code (in Canada).

NOTE: 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 MAY BE REQUIRED DUE TO EXCESSIVE LINT FROM CARPETING, BEDDING MATERIAL ETC. IT IS IMPERATIVE THAT THE UNITS CONTROL COMPARTMENT, BURNERS, AND CIRCULATING AIR-PASSAGEWAYS BE KEPT CLEAN TO PROVIDE FOR ADEQUATE COMBUSTION AND VENTILATION AIR.

Provide adequate clearances around air openings into the combustion chamber and allow accessibility clearance for servicing and proper operation.

NEVER OBSTRUCT THE FRONT OPENINGS OF THE FIREPLACE INSERT OR THE CHIMNEY TERMINATION ON THE EXTERIOR OF THE BUILDING.

IF YOUR FACTORY-BUILT FIREPLACE IS A HEAT CIRCULATOR, THE VENTED AREAS ABOVE AND BELOW THE FIREPLACE OPENING CANNOT BE BLOCKED.

Minimum inlet gas supply pressure for purpose of input adjustment is 4.5 inches water column natural gas and 11.0 inches water column propane. Maximum inlet gas supply pressures is 10.5 inches w.c. natural gas and 13.0 inches w.c. propane. For the purpose of input adjustment, inlet gas supply pressure should be 7.0 inches w.c. natural gas and 11.0 inches w.c. propane and manifold pressure should be set at 3.5 inches w.c. and 10.0 inches w.c. respectively.

A 1/8 inch N.P.T. plugged tapping is provided on the outlet side of the gas control for a test gauge connection to measure the manifold pressure. Provisions must be made to attach a test gauge tapping immediately upstream of the gas supply connection to the appliance to measure inlet pressure.

The appliance and its individual shut off valve must be disconnected from the gas supply piping system during any pressure testing of the system at test pressures in excess of 1/2 psig (3.45 kPa).

This appliance 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 at test pressures equal to or less than 1/2 psig (3.45 kPa).

ATTN JOE

2.0 INSTALLATION PRECAUTIONS

This Fireplace Insert and its components are tested and safe when installed in accordance with this Installation Manual. Report to your dealer any parts damaged in shipment - specifically check glass condition. The gas logs are in a separate package. Read all instructions before starting installation and follow these instructions carefully during installation to insure maximum benefit and safety. Failure to follow them will void your warranty and may present a fire hazard.

The Gas Technologies, Inc. warranty will be voided by, and Gas Technologies, Inc. disclaims any responsibility for, the following actions:

- Installation of any damaged fireplace or chimney component,
- Modification of the fireplace or vent system,
- Installation other than as instructed by Gas Technologies, Inc.
- Improper positioning of the gas logs or the glass door,
- Installation and/or use of any component part not manufactured or approved by Gas Technologies, Inc., notwithstanding any independent testing laboratory or other party approval of such component part or accessory.

ANY SUCH ACTION MAY POSSIBLY CAUSE A FIRE HAZARD.

Consult your local building codes.

Open the bag of vermiculite and spread it evenly on the bottom of the firebox pan. The depth of the vermiculite between the ember shield and the front vermiculite retainer should be level with the top of the ember shield.

Logs - 20 is
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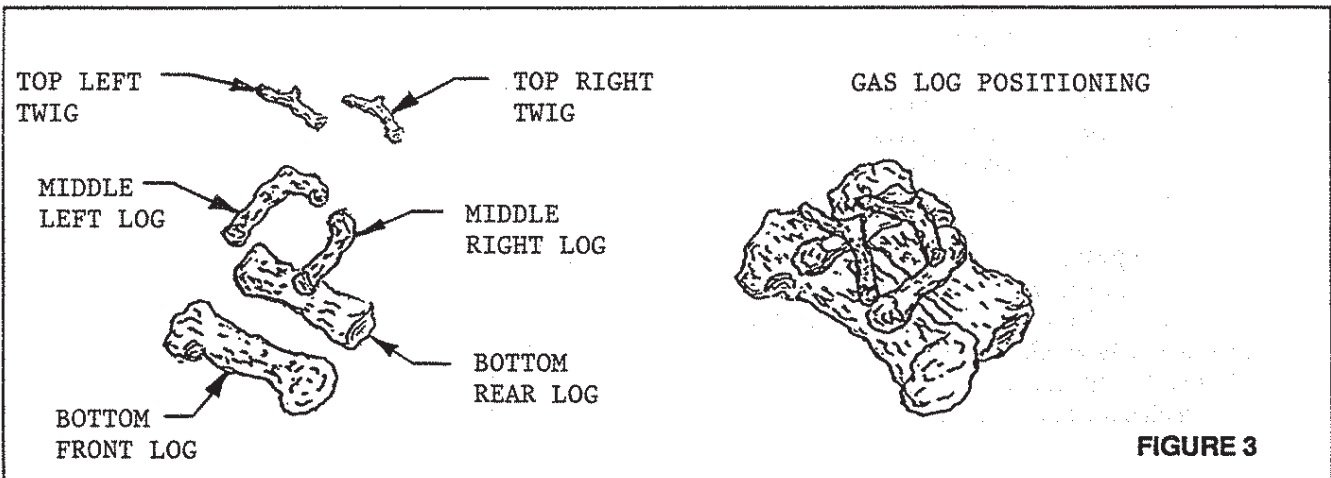
To install the logs, remove the glass door assembly from the fireplace. Place the bottom front and rear logs on the fireplace grates - positioning them using the pre-drilled holes in the bottom of the logs and the tabs on the grates. Place the middle left and right logs in the flat cut-out areas on the top of the lower logs and the top left and right twigs in the flat cut-out areas on the middle logs. See Figure 3 for proper log placement.

WARNING: THE GAS LOGS MUST BE POSITIONED SO THAT THERE IS NO FLAME IMPINGEMENT ON THEM. IF THE BURNER FLAME IMPINGES ON THE LOGS, REPOSITION THEM SO THAT NO IMPINGEMENT OCCURS.

Replace the glass door assembly.

WARNING: THE GLASS DOOR ASSEMBLY MUST BE IN PLACE ON THE FIREPLACE INSERT BEFORE THE UNIT CAN BE PLACED INTO SAFE OPERATION. UNDER NO CONDITIONS SHOULD THE UNIT BE OPERATED WITHOUT THE GLASS IN PLACE.

Prior to first firing, read Operations Instructions section of this manual.



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

3.0 INSTALLATION INSTRUCTIONS

In planning the installation for the fireplace insert it is necessary to install certain components before the insert is completely positioned and installed. These include the vent system flue connector, gas piping for the fireplace, and Optional Remote Control or Wall Switch Accessory Kit (if desired). All installations require up venting. This unit comes with a removable front surround to allow access for gas line hook-up and venting hook-up. To remove the outer surround, remove the two (2) screws at the top corners and carefully pull it away from the front of the unit.

3.1 VENTING THE UNIT

The Model ZC-INSERT is a top venting fireplace insert. The unit must be installed only in a vented fireplace with a working flue and constructed of noncombustible material. THE MODEL ZC-INSERT MUST NEVER BE INSTALLED WITHIN COMBUSTIBLE CONSTRUCTION.

The Model ZC-INSERT can be installed into a fireplace which has an approved chimney liner or into a fireplace without a chimney liner. For proper operating benefits, it is recommended that the Model ZC-INSERT be installed into a fireplace with an approved chimney liner with a top termination. Removal of the fireplace flue damper might be required in some fireplace models for installation of the chimney liner and flue connector collar.

When installing into a fireplace with a chimney liner, the Model ZC-INSERT must be connected with the Connector Collar to an approved four (4 inch) diameter flexible stainless steel or aluminum chimney liner which is installed inside the existing solid-fuel fireplace chimney.

When installing into a fireplace without a chimney liner, DO NOT use the Connector Collar. The chimney damper must be fixed in a manner which will maintain a minimum permanent vent opening of 20 square inches at all times. Means to accomplish this include placing a screw or bolt in the edge of the damper to prevent its closing, or by placing a hole or holes in the damper itself.

3.1.1 INSTALLING THE CHIMNEY LINER

Model ZC-INSERT is designed to be connected to an approved 4-inch diameter, stainless steel or

aluminum, flexible chimney liner. Refer to and follow the manufacturer's Installation Instructions provided with the flex-liner kit obtained. An approved flex-liner kit (Model FP1-04) is available from your Dealer.

Consult your local building codes and code officials for proper installation.

CAUTION: TO AVOID DOWNDRAFTS AND/OR COLD AIR PROBLEMS, IT IS RECOMMENDED TO SEAL OFF THE AREA BETWEEN THE CHIMNEY LINER AND THE TOP OF THE SOLID-FUEL CHIMNEY OPENING INTO WHICH THE LINER HAS BEEN INSTALLED.

3.1.2 CONNECTING THE VENT SYSTEM COMPONENTS

Remove the connector collar from the top of the unit. Pull down on the spring-loaded T-handle (found at the top of the firebox chamber) and remove the attachment plate from the inside top of the firebox. The attachment plate is slotted to allow access for the T-handle. See Figure 4.

Slide the connector collar (removed from the unit) into the bottom of the previously installed chimney flex-liner and fasten the collar to the liner with a minimum of three (3) sheetmetal screws. See Figure 5.

Carefully slide the insert unit into the fireplace opening. Reach up through the hole on the inside firebox top and pull the connector collar down and forward onto the top of the unit. When the connector collar has been positioned on the top of the insert, pull down on the T-handle and re-install the slotted attachment plate. Release the T-handle and the connector collar will be held in place. Access for observing the vent connection to the chimney liner must be maintained.

WARNING: THE CONNECTOR COLLAR MUST BE PULLED ALL THE WAY FORWARD TO PERMIT PROPER UNIT OPERATION.

NOTE: THE CONNECTOR COLLAR MUST BE INSTALLED IN THE SAME ATMOSPHERIC PRESSURE ZONE AS THE COMBUSTION AIR INLET OF THE APPLIANCE.

Carefully replace the surround and glass door assembly to the front of the unit with the attachment screws previously removed and adjust the unit to its final position inside the fireplace.

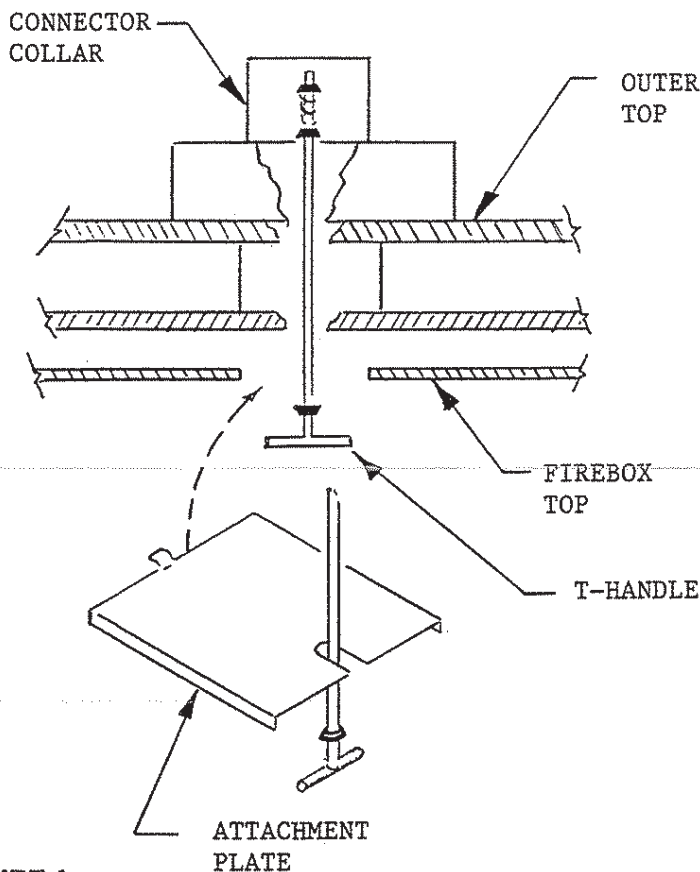


FIGURE 4

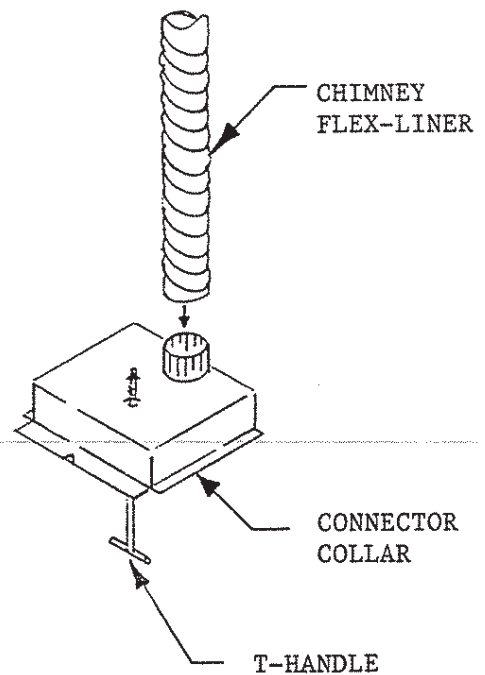


FIGURE 5

CAUTION: Prior to re-attaching the front surround and adjusting the unit to its final position, please read the next four (4) sections of this manual - 3.2 CONNECTING THE GAS LINE; 3.3 LEVELING THE UNIT; 3.4 ELECTRICAL WIRING; AND 3.5 WALL SWITCH WIRING.

3.2 CONNECTING THE GAS LINE

The gas insert has a listed flexible gas connector on the control valve which will accept a 3/8 inch gas supply line with adaptor. Have the gas line and supply connection to the unit installed by a qualified service person in accordance with all applicable building codes. Consult local building codes to properly size the gas supply line leading to the 3/8-inch reduction for hook-up at the unit. An N.P.T. plugged tapping, accessible for test gauge connection, should be provided upstream of the control valve. An accessible manual shut-off valve, upstream of the units control valve, should also be provided. Check local codes for requirements in installing this shut-off valve.

Remove the unit's front surround by removing the two screws in the top corners and carefully pulling it away from the unit. The control valve is located on the front left-hand side. (Figure 6). Connect the flexible gas connector from the control valve to the gas supply pipe previously installed. After the gas supply installation is complete, carefully check all gas connections for leaks with a soap solution. **DO NOT USE AN OPEN FLAME.** Use insulation to tightly pack and seal the space around the supply pipe into the factory-built fireplace.

NOTE: THE GAS SUPPLY LINE SHOULD BE PURGED OF ANY TRAPPED AIR PRIOR TO THE FIRST FIRING OF THE UNIT.

After testing the gas piping for leaks, carefully slide the ZC-INSERT into the fireplace. **NOTE:** the vent system flue connector **MUST** be in place - See Section 3.1.1 for details. Re-attach the front surround to the insert.

3.3 LEVELING THE UNIT

Two (2) leveling nuts attached to the base pan of the appliance. Insert two (2) 5/16-24 bolts through the bottom of the unit's base pan to level the unit as needed.

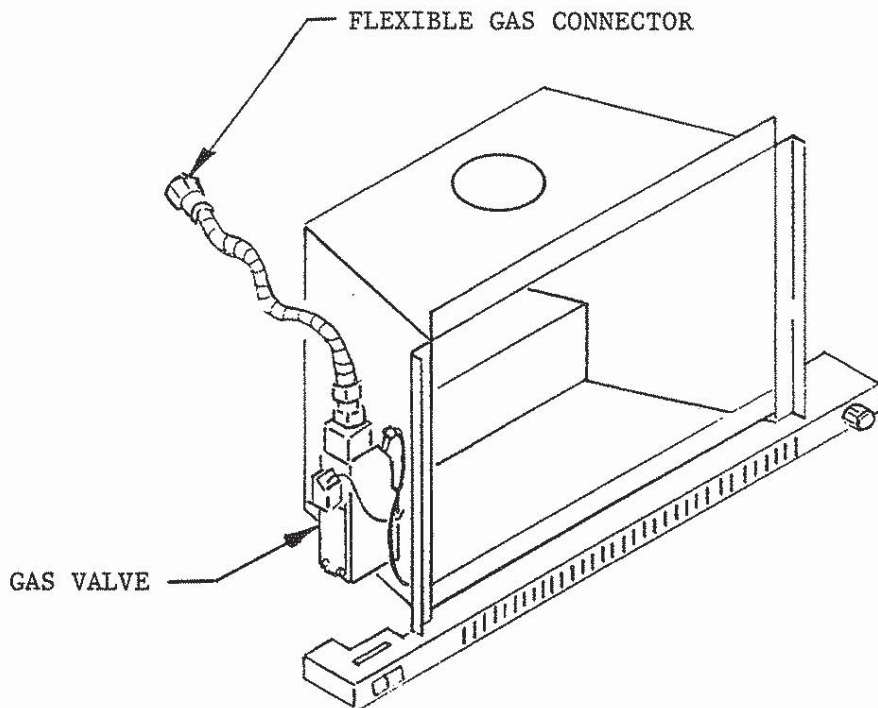


FIGURE 6

3.4 ELECTRICAL WIRING

Model ZC-INSERT has a factory installed Blower, variable speed Rheostat Control Switch, and Temperature Sensor Switch for the Blower. To provide the 110-120 VAC, 60 HZ needed at the Junction Box, simply plug the 3-prong grounded cord into a 3-prong grounded 110-120 VAC, 60 HZ wall outlet. This cord exits the unit at the lower right hand front surround corner. To operate the Blower, turn the Rheostat Switch "ON" to a desired setting. The Temperature Sensor Switch will automatically turn the blower ON when the unit warms up. See Figure 7.

To gain access to the fan, remove the logs from the unit. Locate and remove the rear grate/cover plate which is installed with three screws. If the fan is removed from the unit, unplug the male to female wire connectors.

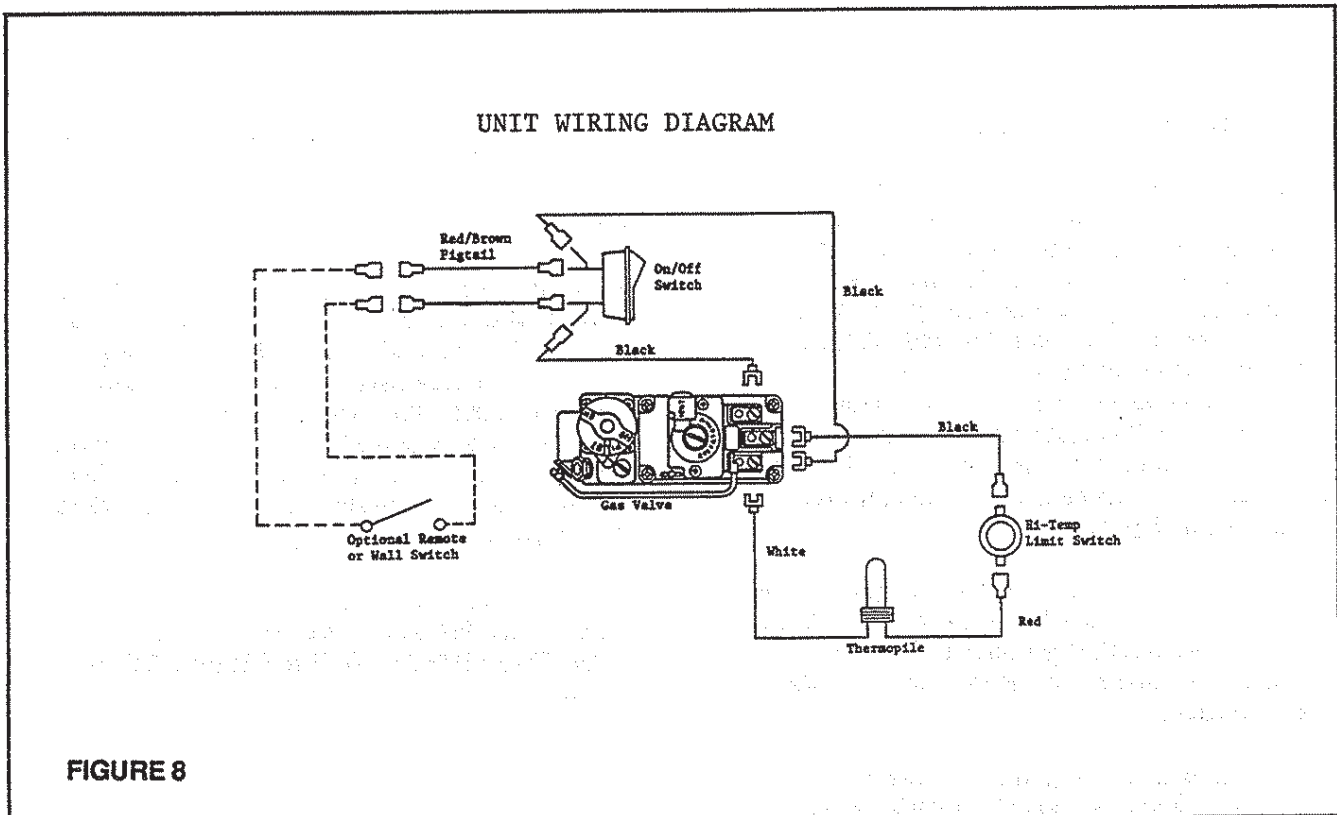
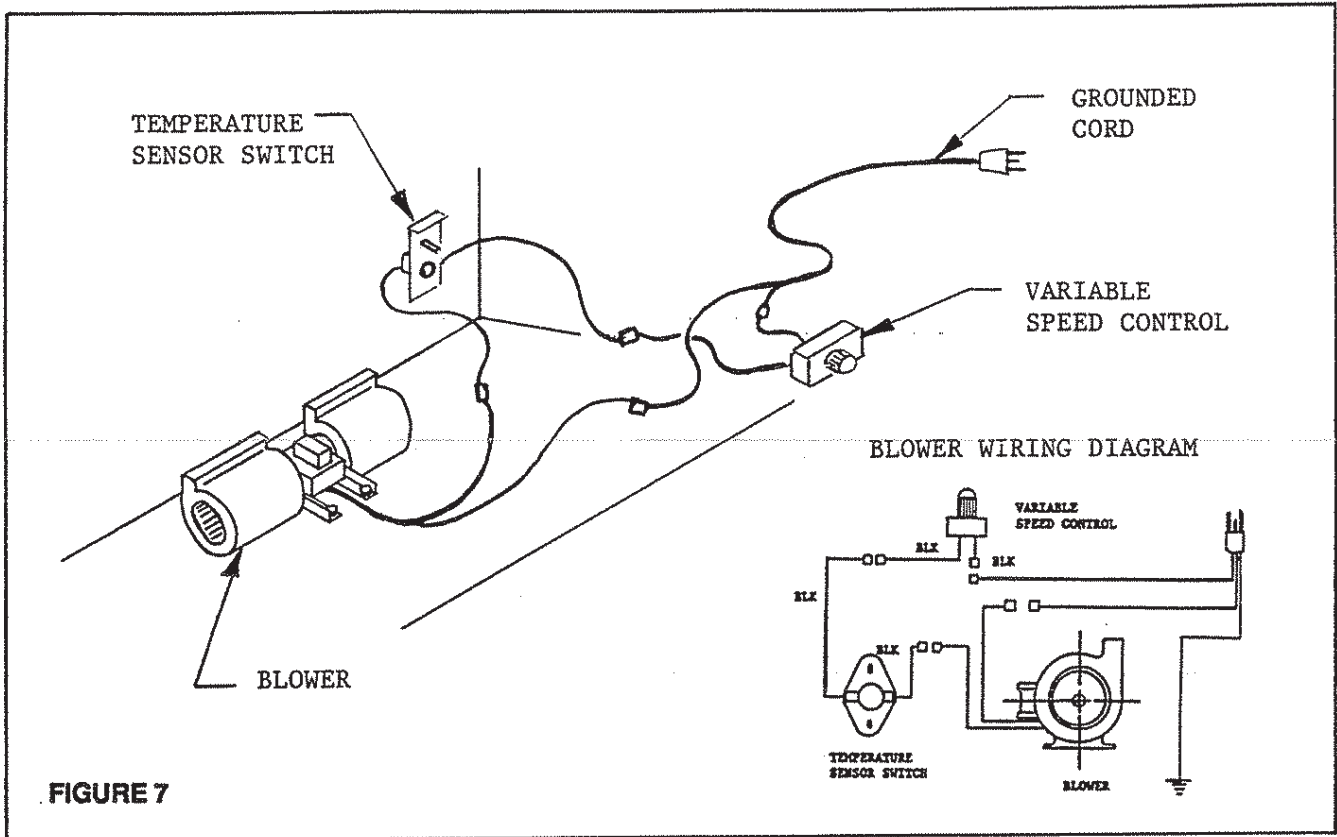
An optional hand held Remote Control Kit (RCH-09A), for turning the unit ON/OFF, is also available. Detailed instructions for the optional Remote Control are included with the kit.

WARNING: DO NOT CONNECT 110-120 VAC TO THE GAS CONTROL VALVE

3.5 WALL SWITCH WIRING

An optional wall switch kit (WSK-21) for turning the fireplace ON/OFF is also available. This kit does NOT require 110 VAC. Connect the low voltage wires from the wall switch to the red and brown pigtail wires from the ON/OFF rocker switch. These wires are labeled "FOR REMOTE OR WALL SWITCH ONLY". Turn the unit's ON/OFF rocker switch to the "OFF" position to use the wall switch. See Figure 8 - unit wiring diagram.

NOTE: POSITION THE WALL SWITCH SO THAT A MAXIMUM OF 25 FEET OF WIRING FROM THE SWITCH TO THE FIREPLACE IS USED.



3.6 POSITIONING THE INSERT

When the flue connector, gas hook-up and accessory electrical installations have been completed and tested, carefully slide the insert as far back into the fireplace as possible. (See Section 3.1.1) Care must be taken not to damage the gas line hook-up. Once the insert is in place, re-attach the front surround to the face of the unit.

3.7 FINISHING

Do not install a combustible mantle or other combustible projection above the insert opening unless it is a minimum of 12 inches above the front edge of the heat deflector hood (Figure 9).

When finishing the fireplace NEVER OBSTRUCT OR MODIFY THE AIR INLET/OUTLET GRILLES OF THE INSERT IN ANY MANNER.

CAUTION: NO MATERIAL CAN BE APPLIED AS FACING TO THE INSERT SURROUND.

WARNING: THE HEAT DEFLECTOR HOOD MUST BE INSTALLED IN ALL APPLICATIONS.

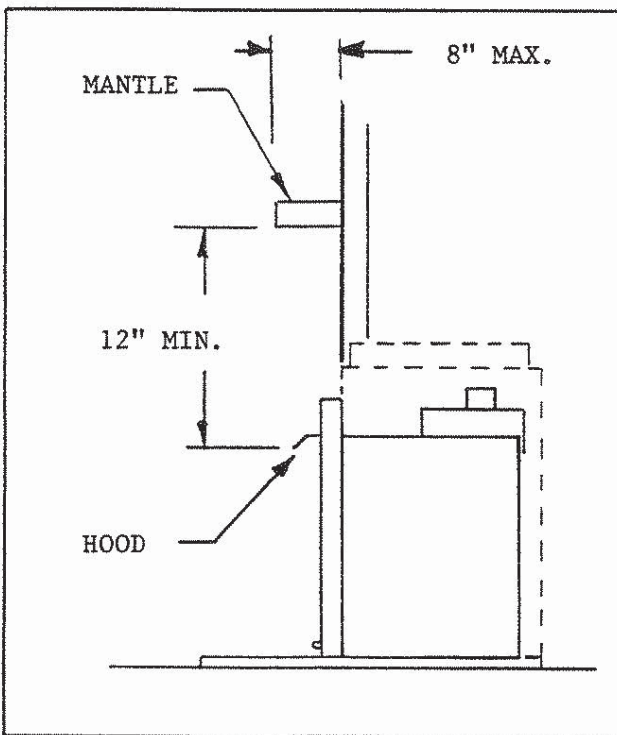


FIGURE 9

3.8 HEARTH EXTENSION

While a hearth extension may be desirable for aesthetic reasons, it is not required for decorative gas appliances per ANSI or CAN/CGA Testing Standards.

4.0 ELECTRICAL SAFETY SYSTEM

WARNING: DO NOT CONNECT 110-120 VAC CURRENT TO THE GAS CONTROL VALVE OR CONTROL WIRING SYSTEM OF THIS UNIT.

The MODEL ZC-INSERT system is wired so the thermo generator, when heated with the pilot light, will produce approximately 350-500 millivolts. This activates the gas control valve. The unit is equipped with an ON/OFF rocker switch for turning the burner on and off. A high temperature limit switch is also used and will close the gas valve should a high surface temperature condition be encountered. See Figure 10 and Figure 11.

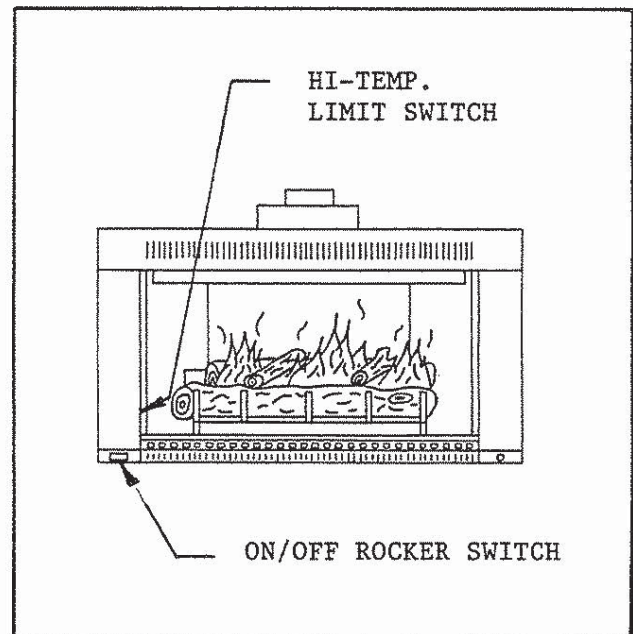


FIGURE 10

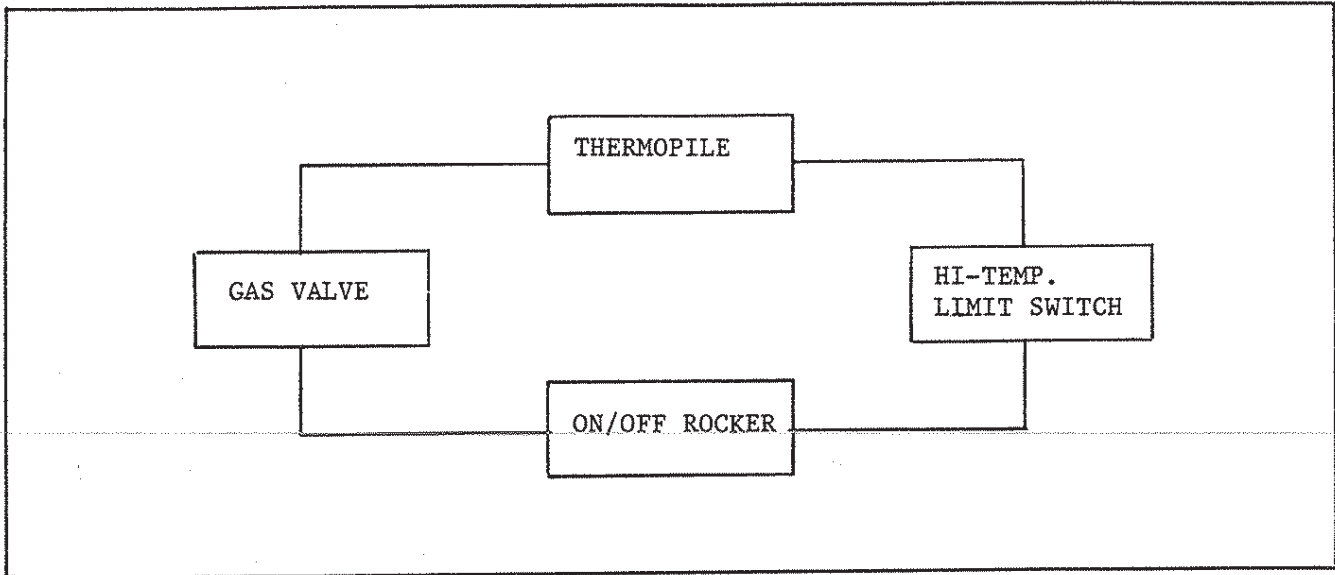


FIGURE 11

5.0 OPERATING GUIDELINES AND MAINTENANCE INSTRUCTIONS

Upon completing the gas line connection, a small amount of air will be in the lines. When first lighting the pilot light, it will take a few minutes for the lines to purge themselves of this air. Once the purging is complete, the pilot and burner will light and operate as indicated in the instruction manual. Subsequent lighting of the appliance will not require such purging.

CAUTION: DURING THE INITIAL PURGING AND SUBSEQUENT LIGHTING, NEVER ALLOW THE GAS VALVE CONTROL KNOB TO REMAIN DEPRESSED IN THE "PILOT" POSITION WITHOUT PUSHING THE RED IGNITOR BUTTON AT LEAST ONCE EVERY SECOND.

When lit for the first time, the appliance will emit a slight odor for an hour or two. This is due to paint and lubricants used in the manufacturing process. Additionally, for the first few minutes after each lighting, vapor may condense and fog the glass, and the flames may be blue. After a few minutes this moisture will disappear and within 15-30 minutes the flames should become yellow.

Keep the control compartment, logs and burner area surrounding the logs clean by vacuuming or brushing at least twice a year.

CAUTION: THE LOGS CAN GET VERY HOT - HANDLE ONLY WHEN COOL.

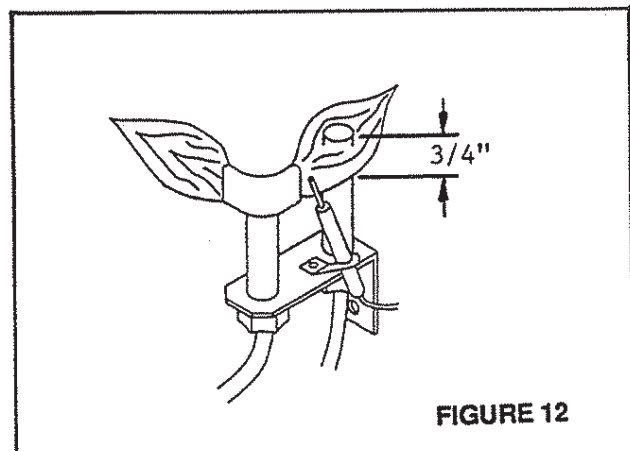
Always turn off gas to the pilot before cleaning. For relighting, refer to lighting instructions located behind the right side surround.

The appliance and venting system should be inspected before initial use and at least annually by a qualified field service person.

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

Never obstruct the flow of combustion and ventilation air. Keep the front of the appliance clear of all obstacles and materials.

To obtain proper operation, it is imperative that the pilot and main burner flame characteristics are steady, not lifting or floating. Typically the top 3/4 inch at the pilot generator should be engulfed in the pilot flame. (Figure 12).



WARNING: CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURE AND SHOULD STAY AWAY TO AVOID BURNS OR CLOTHING IGNITION. YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE APPLIANCE.

IMPORTANT: TURN OFF GAS BEFORE SERVICING APPLIANCE. IT IS RECOMMENDED THAT A COMPETENT SERVICEMAN PERFORM THESE CHECKUPS AT THE BEGINNING OF EACH HEATING SEASON.

Inspect the external vent opening on a regular basis to make sure that no debris is interfering with the air flow.

5.1 GLASS DOOR REMOVAL

1. To remove the glass door assembly. Loosen the top glass retainer fasteners and remove the top retainer.
2. Lift the glass up out of the bottom glass retainers, and carefully set it aside.

5.2 CLEANING BURNER AND PILOT

In order to properly clean the burner and pilot assembly, turn off the gas to the unit and remove the logs exposing the burner and pilot assembly. Clean all foreign materials from the top of burner. Check to make sure that burner orifice is clean.

Visually inspect the pilot periodically. Brush or blow away any dust or linen accumulations. If the pilot orifice is plugged, disassembly may be required to remove any foreign material from the orifice or tubing. When the appliance is put back in service check burner flame patterns with Figure 13.

5.3 LOG REPLACEMENT

1. Remove the glass door assembly (see Section 5.1)
2. The Log(s) can now be removed as required. Replace the log(s) as previously shown in Figure 3, Gas Log Positioning. Replace the glass assembly.

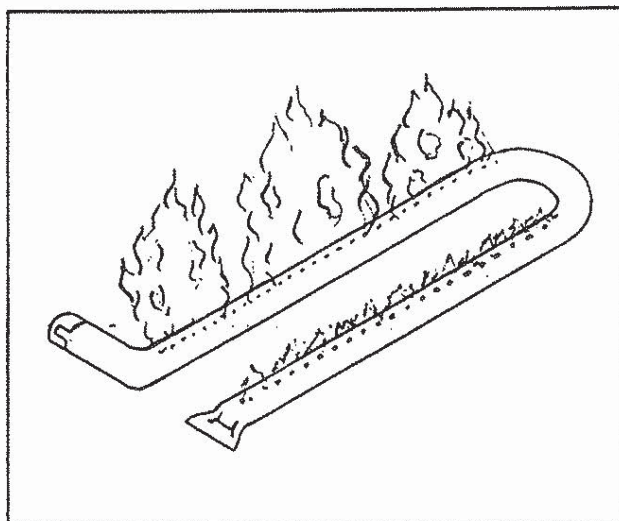


FIGURE 13

5.4 GLASS DOOR REPLACEMENT

1. Before replacing the glass door make sure the vermiculite material is spread evenly over the bottom of the firebox and the logs are properly positioned.
2. Set the bottom edge of the glass behind the bottom glass retainers, push the top of the glass against the top gasket, and re-install the top glass retainer.

WARNING: THE GLASS DOOR ASSEMBLY MUST BE IN PLACE ON THE FIREPLACE INSERT BEFORE THE UNIT CAN BE PLACED INTO SAFE OPERATION.

6.0 SAFETY INFORMATION

FOR YOU 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 has a pilot. When lighting the pilot, follow these instructions exactly.

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

WHAT TO DO IF YOUR 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 supplier's 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 to repair it, call a qualified service technician. Forced or attempted repair may result in a fire or explosion.


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

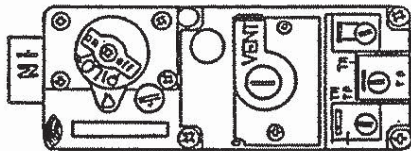
7.0 LIGHTING INSTRUCTIONS

LIGHTING INSTRUCTIONS

1. "STOP" Read the safety information above first.

2. To access controls, remove the glass door and the control cover plate.

3. Turn the control to the OFF position. To do this, you must turn the knob clockwise  to the pilot position and then press in and continue turning clockwise to the OFF position.



GAS VALVE


4. WAIT FIVE (5) MINUTES TO CLEAR OUT ANY GAS. If you then smell gas, STOP! Follow "B" in the safety information above. If you don't smell gas, go to next step.

5. The pilot should not require accessing for lighting purposes. The pilot is located inside the combustion chamber.


THERMOPILE

PILOT BURNER



6. To put the control in the pilot position, turn the control knob counter-clockwise  to the pilot position.


7. To light the pilot depress the control knob and then depress the red piezo button until it makes a clicking sound. It may be necessary to repeat this step. If the pilot does not light after 10 seconds, go back to step 3. The control knob should be held down for a MINUTE after pilot ignition. If the pilot lights but will not stay lit after two tries, turn the gas control knob to the "OFF" position and call your service technician or gas supplier. If the control knob does not pop out when released, STOP - shut off the gas supply to the fireplace control valve, and IMMEDIATELY call your service technician or gas supplier.

8. After the pilot has been lit, the burner can be turned on by turning the control knob counter-clockwise  to the "ON" position. Then flip the ON/OFF switch to the "ON" position.

TO TURN OFF GAS TO APPLIANCE

a. Remove glass door and control cover plate.

c. Re-install control cover plate.

b. Turn control knob clockwise  to pilot position, then depress knob and continue turning to "OFF" position.

NOTE: After the unit has warmed up (i.e. approx. 15 min.), flame height should be slightly below the top of the top glass retainer (Figure 14).

NOTE: THE TOPS OF THE FLAMES SHOULD NEVER HIT THE TOP OF THE FIREBOX.

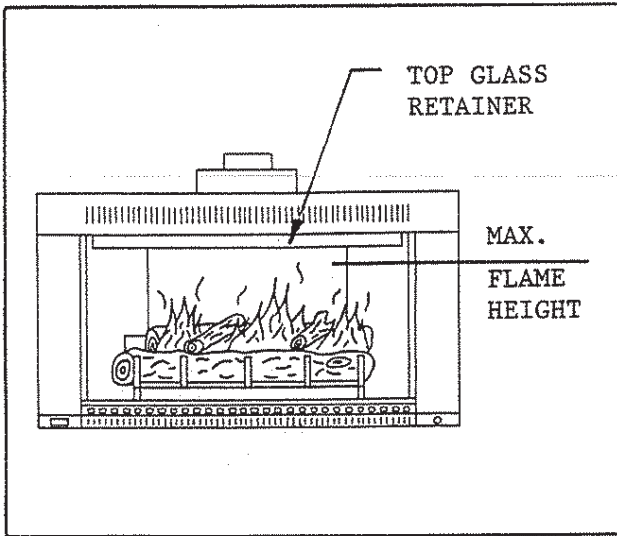


FIGURE 14

LPG (PROPANE) INFORMATION

THE FOLLOWING WARNING APPLIES TO INSTALLATIONS USING L.P. (PROPANE) GAS:

WARNING: To avoid possible injury, fire, and explosion, please read and follow these precautions and all instructions on this appliance before lighting the pilot. This appliance uses L.P. (Propane) gas which is heavier than air and will remain at floor level if there is a leak. Before lighting, smell at floor level and/or use other means (such as using a soap solution on all piping and connections, using a gas detector, etc.) to check for gas leaks. **NOTE: L.P. (Propane) gas can become odorless and CANNOT always be detected by smell.** If you smell gas, detect a gas leak, or suspect that a gas leak exists, follow these rules:

1. Get all people out of building.
2. DO NOT light matches. DO NOT turn electric lights or switches on or off in area. DO NOT use an electric fan to remove gas from area. DO NOT use a telephone inside the building.
3. Shut off gas at L.P. tank outside of building.
4. Telephone gas company and fire department. Ask instructions.

Before hanging up, give your name, address, and phone number. DO NOT go back into building. If your L.P. tank runs out of fuel, turn off gas at the appliance. After L.P. tank is refilled, appliance must be re-lit according to manufacturer's instructions. If the gas control has been exposed to WATER in any way, DO NOT try to use it. It must be replaced. DO NOT attempt repair on gas control or appliance.

Tampering is DANGEROUS and voids all warranties. Any component that is found to be faulty, must be replaced with an approved component.

8.0 HIGH ELEVATION INSTALLATION

A.G.A. Design Certified units are tested and approved for elevations from 0-2000 feet. CGA approved units are certified for elevations from 0-4500 feet.

When installing this unit at an elevation above 2000 feet, (in United States) it may be necessary to decrease the input rating by changing the existing burner orifice to a smaller size. Input should be reduced 4 percent for each 1000 feet above sea level. Check with the local gas utility for proper orifice size identification.

When installing this unit at an elevation between 2000-4500 feet (in Canada) the input rating must be reduced by 10 percent.

When installing this unit at an elevation above 4500 (in Canada), check with local authorities.

Consult your local gas company for assistance in determining the proper orifice for your location.

9.0 TROUBLE SHOOTING - ZC-INSERT

With proper installation and maintenance, your new Gas Fireplace should provide years of trouble-free service. If you do experience a problem, refer to the trouble shooting guide shown below. This guide will assist a qualified service person in the diagnosis of problems and the corrective action to be taken.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
I. Spark Ignitor will not light after repeated triggering of red button.	A. Defective Ignitor (no spark at electrode.)	1. Check for spark at electrode and pilot; if no spark and electrode wire is properly connected, replace ignitor.
	B. Defective pilot or misaligned electrode at pilot (spark at electrode).	1. Using a match, light pilot. If pilot lights, turn off pilot and trigger the red button again. If pilot lights, an improper gas/air mixture caused the improper lighting and a longer purge period is recommended. If pilot will not light - check gap at electrode and pilot - should be 1/8 inch to have a strong spark. If OK, replace pilot.
	C. No gas or low gas pressure.	1. Check remote shut off valves from fireplace. Usually there is a valve near the fireplace and sometimes there is a valve near the main. There can be more than one (1) valve between the fireplace and main.
		2. Low pressure can be caused by a variety of situations such as a bent line, too narrow diameter of pipe or even low line pressure. Check for kinked lines. If none, consult with plumber or gas supplier.
II. Pilot will not stay lit after carefully following lighting instructions.	D. No L.P. in tank.	1. Check L.P. (Propane) You may be out of fuel.
	A. Defective thermo generator.	1. Check pilot flame. Must impinge on thermo generator. Clean and or adjust pilot for maximum flame impingement on generator. 2. Be sure wire connections from generator at valve terminals are tight and generator is fully inserted into pilot bracket.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
<p>III. Pilot burning, no gas burner, valve knob "ON", "ON/OFF" switch "ON".</p>	B. Defective Valve.	<p>3. Check thermo generator with millivolt meter. Take reading at "TH-TP & TP" terminals of gas valve. Should read 325 millivolts minimum while holding valve knob depressed in pilot position, pilot lit, and on/off switch "OFF". Replace faulty generator if reading is below specified minimum.</p>
	C. Open wire connection in pilot circuit.	<p>1. Connect the millivolt meter probes to the "TH TP" and "TP" terminals on gas valve. Turn green knob to pilot position, depress and light. If meter reading is greater than 325 m.v. after 30 seconds, the pilot generator is good. If pilot does not stay lit, the valve is defective. If the meter reading is less than 325 m.v. the thermo-generator is defective</p>
	A. "ON/OFF" switch or wires defective.	<p>1. Check wire continuity and connections in pilot circuit.</p> <p>1. Check "on-off" switch and wires for proper connections. Place jumper wires across terminals at switch - if burner comes on, replace defective switch. If OK place jumper wires across switch wires at gas valve - if burner comes on, wires are faulty or connections are bad.</p>
	B. Thermo-Generator may not be generating sufficient millivoltage (325 m.v.)	<p>1. Recheck Symptom #2.</p> <p>2. Pilot flame not physically close enough to thermo-generator.</p>
	C. Defective Valve.	<p>1. Turn valve knob to "ON", place on-off switch to "ON". Check with millivolt meter at generator terminals. Millivolt meter should read greater than 100 m.v. If the reading is okay and the burner does not come on, replace the gas valve.</p>

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
IV. Frequent pilot outage problem.	D. Plugged burner orifice.	1. Check burner orifice for stoppage and remove.
	E. Wall switch or wires defective.	1. Follow corrective action in A.1 above; check switch and wiring. Replace where defective.
V. Pilot and main burner go out while being in operation.	A. Pilot flame may be too low or blowing (high), causing the pilot safety to drop out.	1. Clean and adjust pilot flame for maximum flame impingement on pilot generator.
	A. High limit switch is defective or has reached its maximum temperature.	<p>1. Allow unit to cool. Then repeat lighting instructions.</p> <p>2. If 1 above does not allow for ignition, check high limit switch. Place jumper wires across high limit switch. If you can re-ignite the pilot, your high limit switch is defective. Do not use fireplace until the high limit switch is replaced, as this is an important safety feature. If the unit does not light with jumper wires in place, the wires may be defective or the connectors are bad.</p>
VI. Glass soots.	B. No L.P. in tank.	1. Check L.P. (Propane) tank. You may be out of fuel.
	C. Bad thermo-generator.	1. Replace if necessary.
	A. Flame impingement on logs.	1. Adjust the log set so that the flame does not impinge on it.
	B. Improper venturi setting.	1. Adjust the air shutter at the base of the burner.
VII. Flame burns blue and lifts off burner.	C. Vermiculite around base of burner or blocking bottom front grille.	1. Inspect the base of the burner. It is imperative that NO material be placed around the base of the burner or in bottom front grille air passage way.
	A. Insufficient oxygen being supplied.	1. Check to make sure that the vermiculite has not been improperly placed at the burner base or blocking bottom front grille.

LIMITED WARRANTY POLICY FOR GAS TECHNOLOGIES, INC. GAS FIREPLACES

The limited two year warranty will not become effective until the completed warranty card has been mailed to GAS TECHNOLOGIES, INC., Savage, MN 55378.

This card must be mailed within 60 days of the fireplace installation.

Subject to the conditions set forth herein, Gas Technologies, Inc. extends the following limited warranty with respect to Gas Technologies, Inc. Decorative Gas Fireplaces.

If Gas Technologies, Inc. is satisfied that any part or portion of the fireplaces covered by this warranty is defective in material or workmanship under normal use and service as described in the operating instructions, Gas Technologies, Inc. will take the following actions:

1. Within the first year from the date of installation, Gas Technologies, Inc. shall, at its option, replace or repair any such defect in material or workmanship, at Gas Technologies, Inc. expense. GAS TECHNOLOGIES, INC. SHALL NOT BE RESPONSIBLE FOR ANY OTHER LABOR COSTS, OR EXPENSES, INCLUDING INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.
2. During the second year after the date of installation, GAS TECHNOLOGIES, INC. shall supply replacement parts at the current minimum wholesale price, but GAS TECHNOLOGIES, INC. SHALL NOT BE RESPONSIBLE FOR ANY LABOR, TRANSPORTATION, OR OTHER INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.
3. During the first six months after installation, GAS TECHNOLOGIES, INC. shall, at its option, replace or repair the glass door if operation is faulty (this does not include glass panels broken during shipping, misuse or careless handling). GAS TECHNOLOGIES, INC. SHALL NOT BE RESPONSIBLE FOR ANY LABOR, TRANSPORTATION OR OTHER INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. IF GLASS DOORS OTHER THAN FACTORY DOORS ARE USED, ALL WARRANTY AND LIABILITY ON THE FIREPLACE IS VOIDED.
4. All electrical, manual, and optional components or accessories found to be defective will be repaired or replaced without charge during the first year after installation.

Gas Technologies, Inc. may discharge its entire warranty liability by refunding the price of the product.

Products made by other manufacturers, sold with the fireplace or thereafter are not covered by this limited warranty. The use of other unauthorized components will make this warranty null and void.

This limited warranty will be void if the appliance is not installed by a qualified installer and according to the installation instructions. The limited warranty also is void if the fireplace is not operated, at all times, according to the operating instructions furnished.

EXCEPT TO THE EXTENT PROVIDED BY LAW, NO IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND NO IMPLIED WARRANTIES SHALL APPLY TO THE FIREPLACE AFTER THE ABOVE LIMITED WARRANTY HAS EXPIRED.

In states that do not allow limitations on how long implied warranty lasts, or do not allow exclusion of indirect damages, those limitations or exclusions may not apply to you. You may also have additional rights not covered in this limited warranty.

Gas Technologies, Inc. reserves the right to make changes at anytime, without notice, in design, material, specifications and prices and the right to discontinue styles and products.



The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

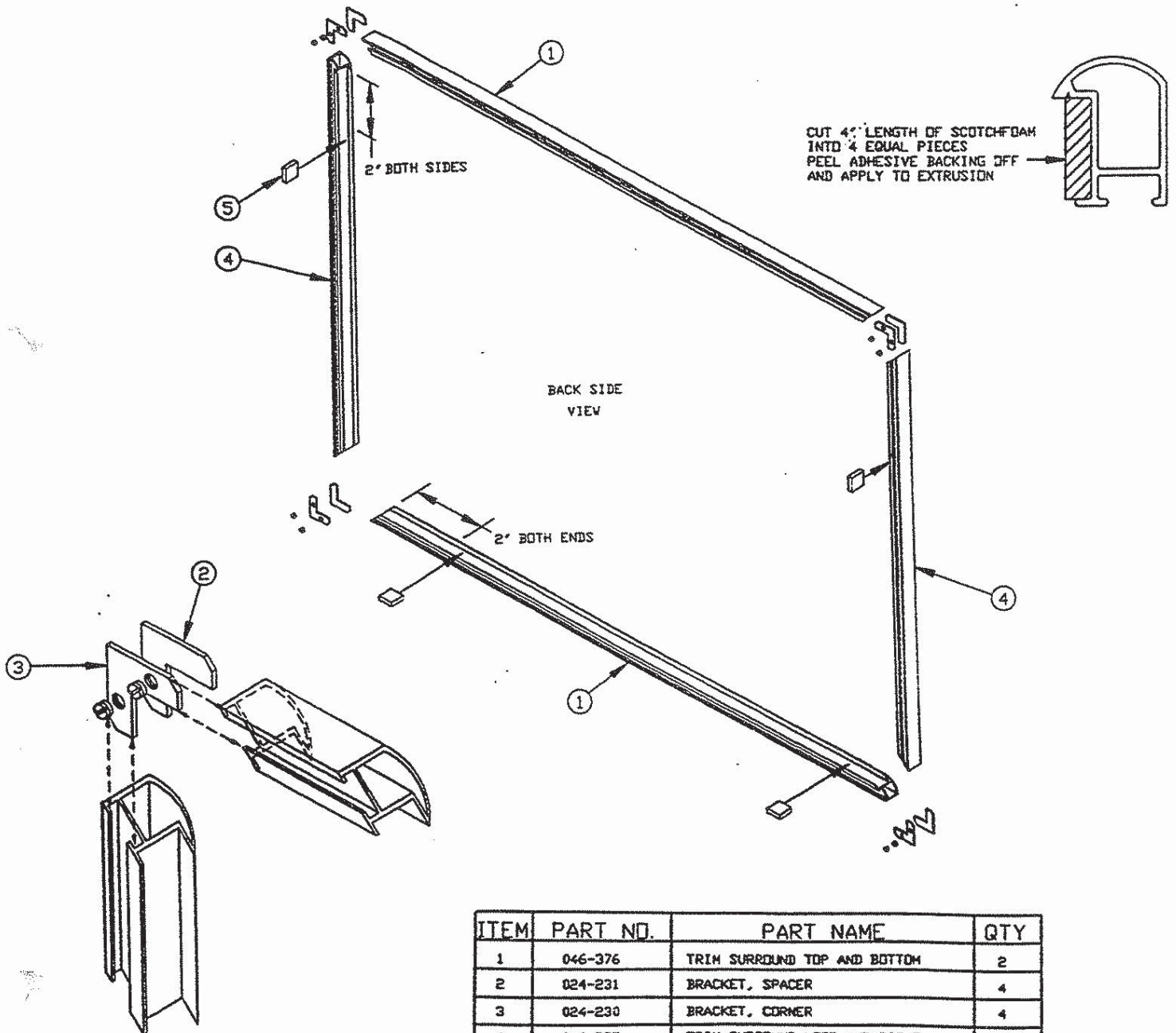
In the second section, the author details the various methods used to collect and analyze the data. This includes both manual and automated processes. The goal is to ensure that the information is both reliable and up-to-date.

The third part of the document focuses on the results of the analysis. It shows that there has been a significant increase in sales over the period covered. This is attributed to several factors, including improved marketing strategies and better customer service.

Finally, the document concludes with a series of recommendations for future actions. These include continuing to invest in marketing, maintaining high standards of customer service, and regularly reviewing financial performance to identify areas for improvement.

BRASS TRIM FOR MODEL ZC-INSERT

1. Remove the pre-cut brass trim pieces and the hardware bag from the shipping carton taking care not to scratch the finish.
2. Starting at one corner, insert the corner spacer and the corner bracket into the small channel on the back side of the first two trim pieces. Match-up the 45-degree corners of the trim pieces and tighten the set screws of the corner brackets.
3. Add the third and fourth trim pieces in a similar manner making certain that the 45-degree corners are aligned.
4. Carefully slide the finished trim frame onto the ZC-INSERT front surround.



ITEM	PART NO.	PART NAME	QTY
1	046-376	TRIM SURROUND TOP AND BOTTOM	2
2	024-231	BRACKET, SPACER	4
3	024-230	BRACKET, CORNER	4
4	046-375	TRIM SURROUND LEFT AND RIGHT	2
5	048-418	SCOTCHFOM	4"

FOR MODEL ZC-INSERT-HSI ADDENDUM FOR ELECTRONIC IGNITION SYSTEM

This unit requires 110VAC service in order to operate. Connection to house wiring should ONLY be done by a Qualified Electrician.

FOR YOUR SAFETY READ BEFORE OPERATING HSI CONTROLS

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

A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.

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

WHAT TO DO IF YOU SMELL GAS

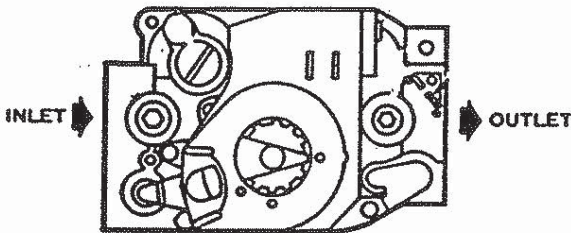
- * Do not try to light any appliance.
- * Do not touch any electric switch, do not use any phone in your building.
- * Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- * If you cannot reach your gas supplier, call the fire department.

C. Use only your hand to turn the gas control knob. Never use tools. If the knob will not turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

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

LIGHTING INSTRUCTIONS ZC-INSERT-HSI CONTROLS

1. **STOP!** Read the safety information on the "For Your Safety Read Before Operating" label.
2. Turn off all electric power to the appliance.
3. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.




4. Remove glass door and control valve access cover plate.

5. Turn gas control knob clockwise  to "OFF".

6. Wait five (5) minutes to clear out any gas. If you then smell gas, **STOP!** Follow "B" in the safety information on the label located on the previous page. If you don't smell gas, go to next step.

7. Turn on all electric power to the appliance.

8. Turn gas control knob counter-clockwise  to "ON".

9. Re-install valve access cover plate and glass door.

10. Flip ON/OFF rocker switch to "ON".

11. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call service technician or gas supplier.

TO TURN OFF GAS TO APPLIANCE

1. Flip ON/OFF switch to "OFF".

2. Turn off all electric power to the appliance if service is to be performed.

3. Remove glass door and valve cover plate.

4. Turn gas control knob clockwise  to "OFF". Do not force.

OPTIONAL SWITCH WIRING MODEL ZC-INSERT-HSI

An Optional Wall Switch (WSK-21) or Remote Control Switch (RCH-09A) may be wired to this appliance. The Wall Switch **DOES NOT** require 110-120 VAC electrical service connection. The remote control receiver **DOES** require 110-120 VAC which is obtained at a wall outlet. Connect low voltage wires from the optional switch installed to the grey wires (labeled Optional Wall Switch or Remote) found on the left side of the unit by the gas valve. Set the unit's ON/OFF rocker switch to the "ON" position. Activate the optional switch installed to control the main burner of the unit. Detailed installation instructions for optional switches are found in each accessory kit.

NOTE: When using an optional switch in Model ZC-INSERT-HSI, a humming sound from the control system transformer may be audible when the burner is turned off. This sound will stop if the ON/OFF rocker switch is turned to "OFF".

WARNING: DO NOT CONNECT 110-120 VAC TO AN OPTIONAL WALL SWITCH INSTALLED TO THIS FIREPLACE.

