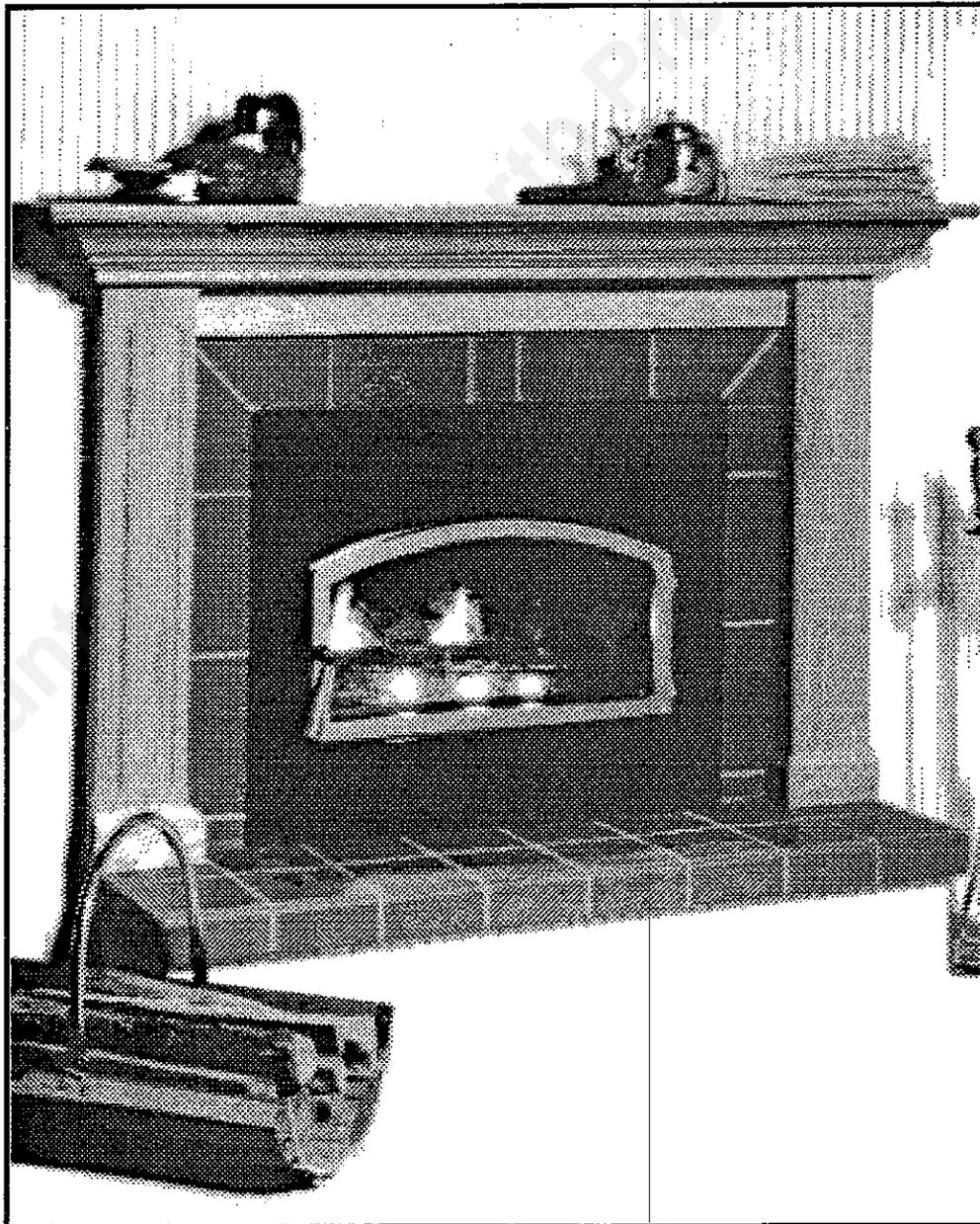




*Model Clay-40DV Zero Clearance*  
**DIRECT VENT FIREPLACE**



*Installation / Operator's Manual #85133* 4/94

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## FOR YOUR SAFETY

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

### If you smell gas:

1. Open windows
2. Don't touch electrical switches
3. Extinguish any open flame
4. Immediately call your gas supplier

## CAUTION:

**Read Rules for Safe Operation & Instructions CAREFULLY**

## IMPORTANT:

Installation must be made in accordance with State and local ordinances which may differ from this installation manual.

# INTRODUCTION

## WARNING

Improper installation, adjustment, alteration, service or maintenance may void warranty and cause injury or property damage. Refer to this manual.

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

Installation must conform with local codes or with the national fuel gas code ANSI Z223.1-1992 or with CANI-B149 installation code.

## IMPORTANT INFORMATION

For safe installation and operation of your gas fireplace, please note the following:

1. This appliance gives off high temperature and should be located out of traffic areas and away from furniture and draperies.
2. Children and adults should be alerted to the hazards of the high surface temperatures of this appliance and should stay away to avoid burns or ignition of clothings.
3. Children should be carefully supervised when they are in the same room as your fireplace appliance.
4. Under no circumstances should this appliance be modified. Parts that have to be removed for servicing should be replaced prior to operating this appliance.
5. Installation and any repairs to this appliance should be done by a qualified service person. A professional service person should be called to inspect this appliance annually. Make it a practice to have all of your gas appliances checked annually.
6. Control compartments, burners and air passages in this appliance should be kept clean and free of dust and lint. Make sure that the gas valve and pilot light are turned off before you attempt to clean this unit.
7. The venting system of this appliance should be inspected at least once a year and if needed, your venting system should be cleaned.
8. Keep the area around your appliance clear of combustible and liquids. This appliance should not be used as a drying rack for clothings, nor should Christmas stockngs or decoration be hung in the area of it.
9. Do not operate this appliance without glass in place. Replace damaged glass only with original equipment glass or equivalent. (Consult your Clayton dealer).
10. Under no circumstances should any solid fuels (wood, paper, cardboard, coal) be used in this appliance.

**THIS APPLIANCE IS FOR USE WITH NATURAL OR PROPANE GAS ONLY AS INDICATED ON RATING PLATE.**

**NOTE:** BTU ratings shown on the rating plate area for elevations up to 2,000 feet, for elevations up to 2,000 feet. For elevations above 2,000 feet, rating should be reduced at the rate of four (4) percent for each 1,000 feet above sea level.

### High altitude Statement

*This unit has been tested for installation at high altitude in accordance with Canadian test standard CAN/CGA-2.17. Higher altitudes affect the atmospheric pressure and heat value of gaseous fuels. When installing this unit at high altitudes the rated input will be lower than at sea level. The lowered oxygen content in the air and lowered gas density require installing a different orifice in order to achieve clean combustion of the unit. Consult the unit date plate for the proper high altitude orifice size and fill out the information sticker attached to the unit when field converting.*

## GAS SPECIFICATIONS

MODEL	FUEL	GAS CONTROL	MAXIMUM INPUT
C40NG	Natural	Remote On/Off	28,000 BTU/HR
C40PG	Propane	Remote On/Off	23,500 BTU/HR
Manifold Pressure - Natural Gas 3.5" W.C.P. Propane Gas 10.5" W.C.P.			
Gas Inlet - 1/2" NPT			
Supply	Minimum Pressure	Maximum Pressure	
Natural Gas	4.5" W.C.P.	10.5" W.C.P.	
Propane "	10.0" W.C.P.	14.0" W.C.P.	

## L.P. AND NATURAL ORIFICE

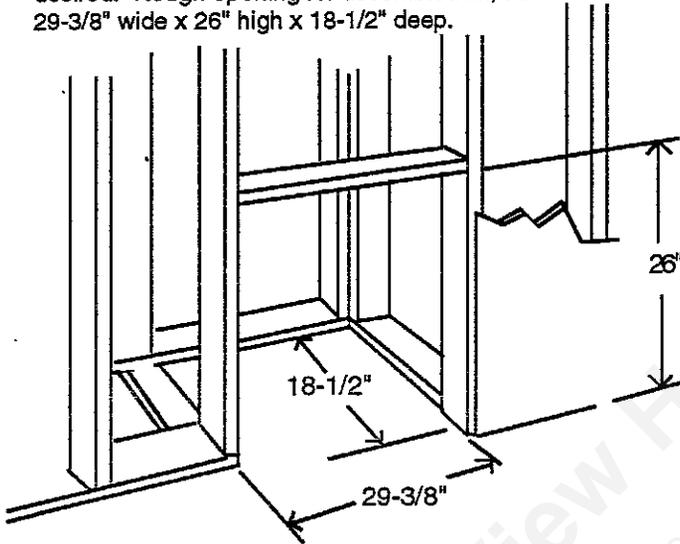
0-2,000 feet	-	Natural	#38
		L.P.	#53
2,000-4,500 feet	-	Natural	#39
		L.P.	#54
4,500-6,000 feet	-	Natural	#40
		L.P.	#55

# ZERO CLEARANCE GAS FIREPLACE

## PREPARATION OF INSTALLATION SITE

The CLAY-40 Gas Fireplace with zero-clearance kit may be installed directly on and against standard combustible building materials. **DO NOT, HOWEVER, INSTALL THIS UNIT ON CARPETS AND VINYL FLOORING OR AGAINST AN EXPOSED PLASTIC VAPOR BARRIER.**

1. Install hearth if desired. A hearth is not required, but will add Greater realism to the installation and provide added safety. The hearth should be a non-combustible material (stone, tile, etc.) and should extend 12" in front of the unit.
2. Frame in enclosure for fireplace with 2 x 4's. The unit may be elevated on a platform also constructed of 2 x 4 framing if desired. Rough opening for assembled kit, as shown below is 29-3/8" wide x 26" high x 18-1/2" deep.



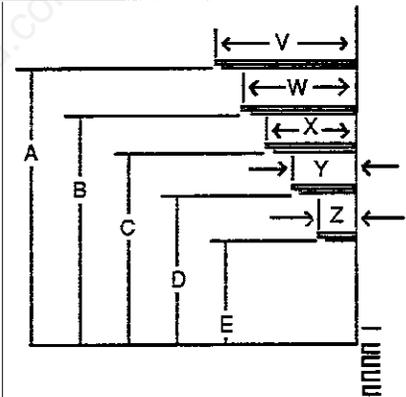
In cold climates, if the unit will be placed against exterior wall or chase, it is recommended that the exterior walls be insulated to conform to application insulation codes.

## INSTALLATION

1. Position assembled unit in rough opening and secure to floor and wall studs.
2. Run gas line to the **right** side of the unit.
3. Run electrical to the **left** side of unit.
4. Make gas connections and install logs as shown on page 5.
5. Make electrical connections
6. Install door handle.
7. Re-hang door assembly.
8. Push bottom trim piece into flush position with face of unit.

## MANTEL CLEARANCES

	MANTEL DEPTH INCHES	HEIGHT FROM TOP GRILL				
		A	B	C	D	E
V	10"	12"				
W	8"		10"			
X	6"			8"		
Y	4"				6"	
Z	2"					4"



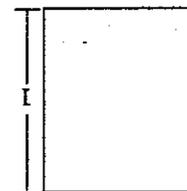
## CLEARANCES TO COMBUSTIBLES

- Back 0 inches
- Sides 0 inches
- Floor 0 inches
- Top 0 inches from standoffs

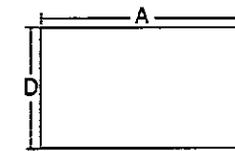
● See exceptions under "Preparation of Installation Site".

1. Install finished surface on framing. Drywall can extend flush with appliance on all 4 sides of front face, or can be flush with z/c panels. Non-combustible materials such as brick, tile or stone may project in front of and/or onto the face of the fireplace, but must not block any of the grill openings or interfere with removal of the door assembly.
2. The height at which a mantel must be installed above the top grill depends on the depth of the mantel. If the mantel will be painted, use a heat resistant paint to prevent discoloration.

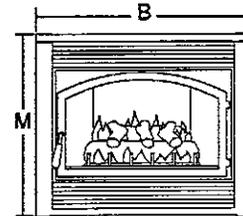
**NOTE:** Combustible materials must not extend below the triangular standoffs on the top of the unit.



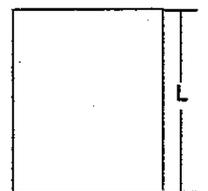
LEFT SIDE



TOP



FRONT



RIGHT SIDE

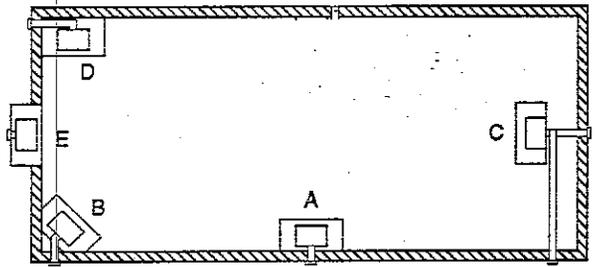
- A 28-3/8"
- B 29-3/8"
- C 11-1/4"
- D 17-1/2"
- E 18"
- F 1/2"
- G 3"
- H 4-1/2"
- I 25-1/2"

# LOCATING YOUR CLAY-40 DV FREESTANDING

- (A) Flat on wall
- (B) Cross corner
- (C) \*\*Island
- (D) \*Flat on wall corner
- (E) Alcove

**NOTE:** \*\*Island installation is possible as long as the systems Venting Configuration conforms to the guidelines on 7.

**NOTE:** \*When you install your fireplace in (D) Flat or wall corner positions, a minimum of 6 inches clearance must be maintained from the perpendicular wall and the front of the appliance.



## VENTING INSTRUCTIONS

The Model Clay-40 DV-FS fireplace is designed for direct venting through a side wall or roof.

Only venting components specifically approved and labeled for this fireplace may be used. Venting of unit must not be connected to a chimney flue serving a separate solid fuel burning appliance according to ANSI Z21.11.1, 126.1b(12).

The flow of combustion and ventilation air must not be obstructed.

Minimum clearance between vent pipes and combustible materials is one (1) inch.

**CAUTION: ALL JOINTS MUST BE AIRTIGHT.**

THE INSTALLATION OF THIS APPLIANCE MUST CONFORM WITH LOCAL CODES, OR, IN THE ABSENCE OF LOCAL CODES, WITH THE LATEST EDITION OF THE NATIONAL FUEL GAS CODE, ANSI Z223.1-1992.

### SIDE WALL VENTING Location of Vent Termination

**IMPORTANT:** The minimum clearances given for the vent termination must be strictly adhered to. There must not be any obstruction such as bushes, fences, garden sheds, decks or utility buildings within 24" from the front of the termination hood.

Do not locate termination hood where excessive snow or ice buildup may occur. Check vent termination area after

snowfalls, and clear to prevent potential blockage of venting system. When using snow blowers, make sure snow is directed away from the vent termination area.

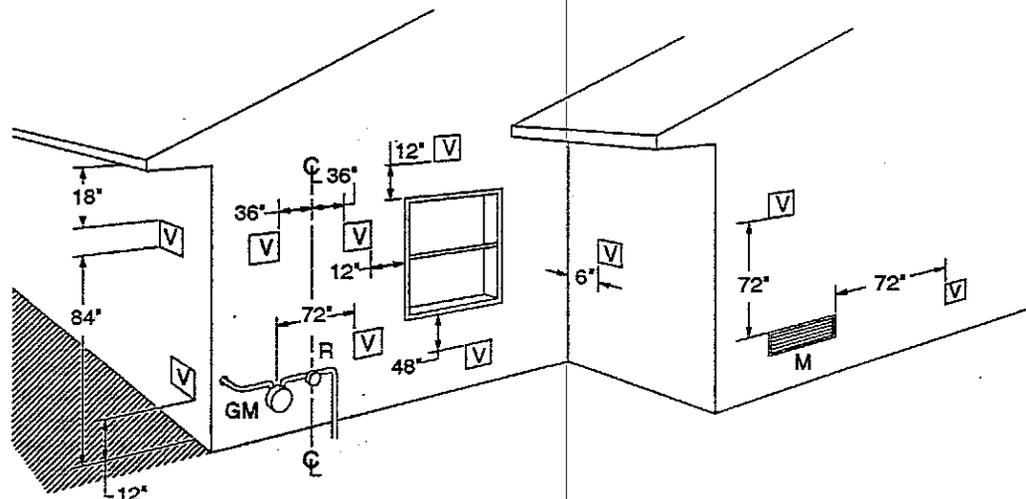
**The vent termination must not be located:**

1. Less than 7 feet above a paved sidewalk or a paved drive way located on public property.
2. Within 6 feet of a mechanical air supply inlet to any building.
3. Above a meter/regulator assembly within 3 feet horizontally of the vertical center-line of the regulator.
4. Within 6 feet of any gas service regulator vent outlet.
5. Less than 1 foot above grade level; (see section on below ground installation for special venting.)
6. Within the following distances of a window or a door which can be opened, any non-mechanical air supply inlet or the combustion air inlet of another appliance;
  - a. 12 inches top and sides.
  - b. 4 feet below.
7. Underneath a veranda, porch or deck where,
  - a. the veranda, porch or deck is not fully open on a minimum two sides beneath the floor
  - b. the distance between the top of the vent termination and the underside of the veranda, porch or deck is less than 4 feet.

### MINIMUM VENT TERMINATION CLEARANCES

From combustible's exterior surfaces, gas meter, air intakes, etc.

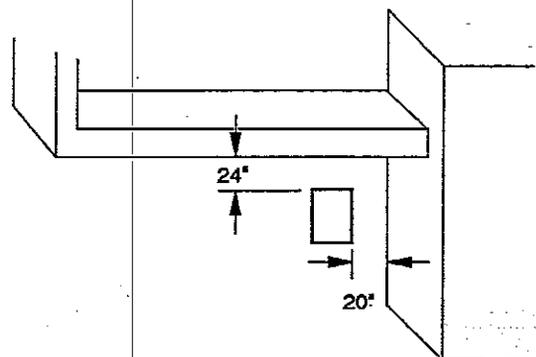
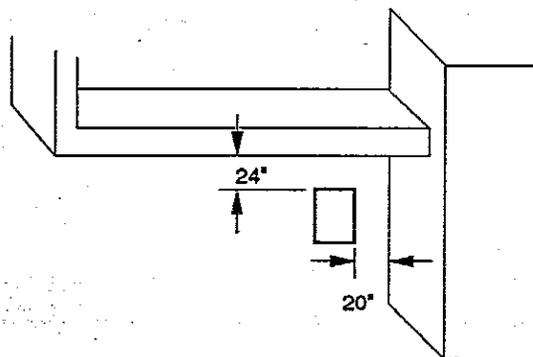
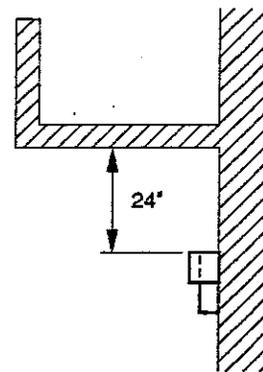
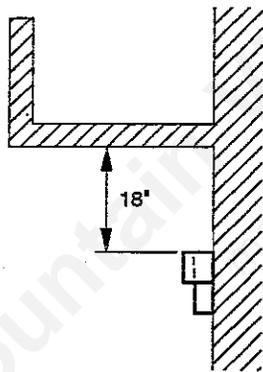
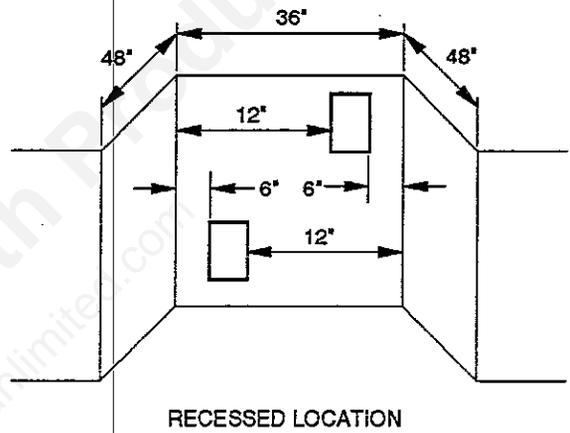
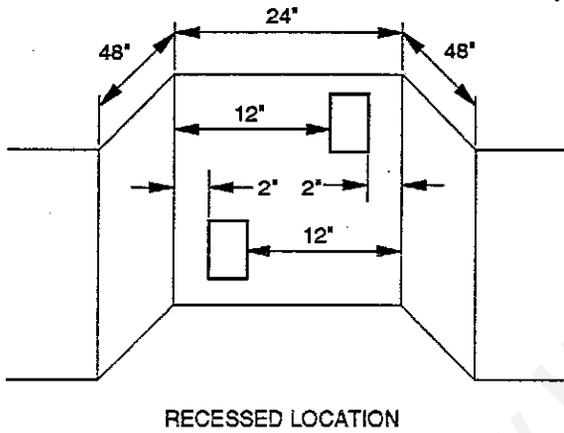
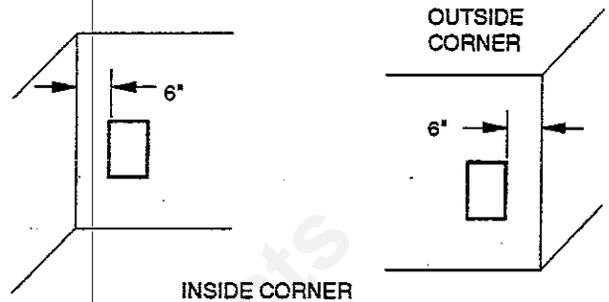
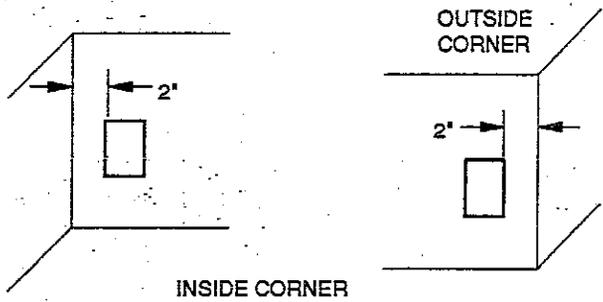
- V - Vent Termination
- M - Mechanical Air
- I - Intake
- GM - Gas Meter
- R - Regulator



# VENTING INSTRUCTIONS

If the exterior of the building is non-combustible the following minimum clearances are applicable:

If exterior of the building is combustible the following minimum clearances are applicable.



BALCONY WITH PERPENDICULAR SIDE WALL

BALCONY WITH PERPENDICULAR SIDE WALL

## INFORMATION ON VENTING ROUTES AND COMPONENTS

Since it is very important that the vent system maintain its balance between the combustion air intake and the flue gas exhaust, certain limitations as to vent configurations apply and must be strictly adhered to.

- Max. horizontal vent run is 32 ft. (670 cm).
- Max. vertical vent run is 25 ft. for U.S. (15 ft.) for Canada
- The maximum number of elbows in any one configuration is 1 (one) horizontal elbow and 2 (two) vertical elbows.
- A 1/4" rise per foot of horizontal run must be maintained on all horizontal runs.
- It is possible to configure a venting system with 32 feet of horizontal vent run and 25 feet of vertical vent run and include up to (3) three elbows.

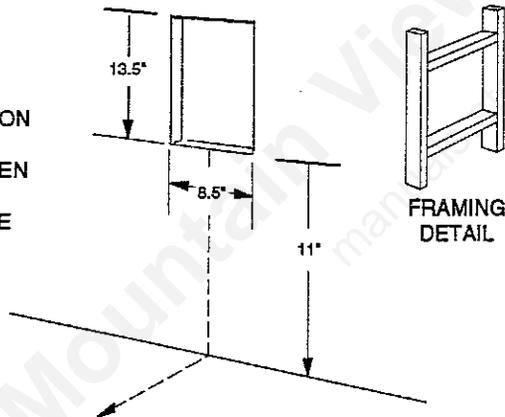
**IMPORTANT:** It is always best to locate the fireplace in such a way that a minimum of offsets and /or horizontal run is required.

## INSTALLATION

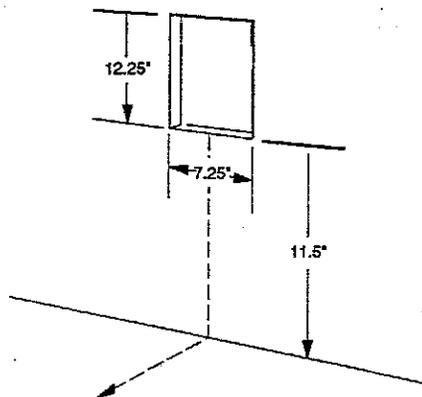
The final location of the fireplace must be such that the horizontal vent dimensions fall within those stated. A manufactured home (mobile home) installation must conform with the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 and requires a mobile home kit #69080 to permanently secure unit to floor or structure. The unit must also be electrically grounded to metal frame of the mobile home.

**IMPORTANT: MINIMUM CLEARANCE BETWEEN VENT PIPES AND COMBUSTIBLE MATERIALS IS ONE (1) INCH.**

CONSTRUCTION OF VENT OPENING WHEN WALL IS COMBUSTIBLE



OPENING WHEN WALL IS NON-COMBUSTIBLE



### STEP 1

Locate and mark the vent opening location on the wall.

### STEP 2

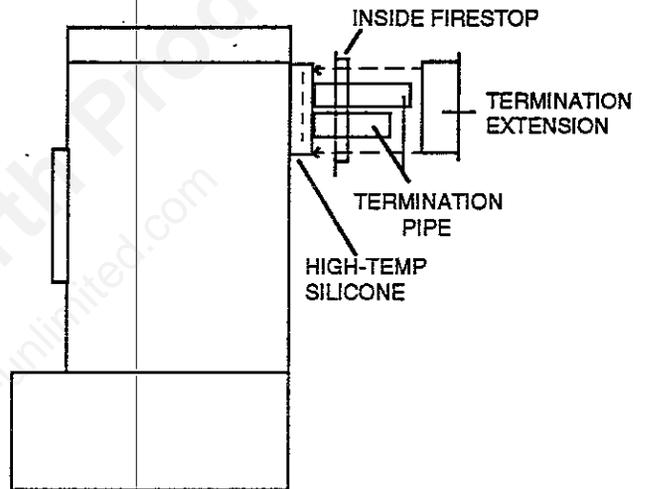
**COMBUSTIBLE WALLS:** Cut an 8-1/2" x 13-1/2" hole through the exterior wall and frame as shown.

**NON-COMBUSTIBLE WALLS:** Cut a 7-1/4" x 12-1/4" hole through the exterior wall and frame as shown.

### STEP 3

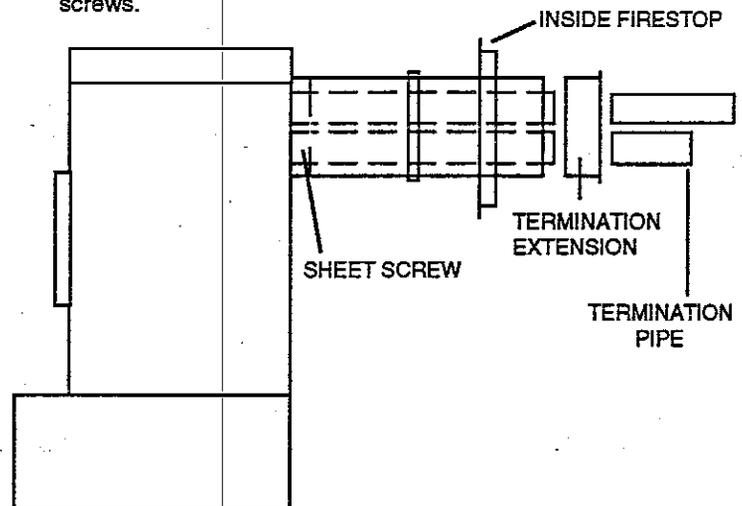
For application against wall:

Silicone takeoffs in the back of the unit using high temp silicone. Slide on the termination pipe (4" aluminized on top & 5" galvanized on bottom). Secure with sheet metal screws. Slide on inside firestop so that it can be secured to inside wall once the termination extension is in place. Be sure mineral wool insulation sleeve is in place where the assembly passes through the wall. Slide termination extension over pipes and flange. Secure with sheet metal screws.

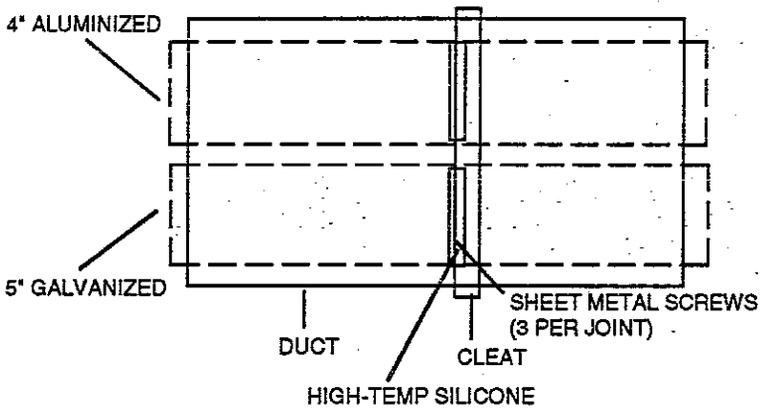


For horizontal or vertical run:

Silicone takeoffs in the back of unit using high temp silicone. Attach pipe and secure with sheet metal screws. After the pipe has been assembled, place duct around pipes. Secure the first duct to unit with sheet metal screws. Secure rest of duct with cleats provided. Next, place termination pipes on the run. Secure with sheet metal screws. Slide on inside firestop so that it can be secured to inside wall once the termination extension is in place. Slide termination extension over pipes and inside duct work. Secure with sheet metal screws.

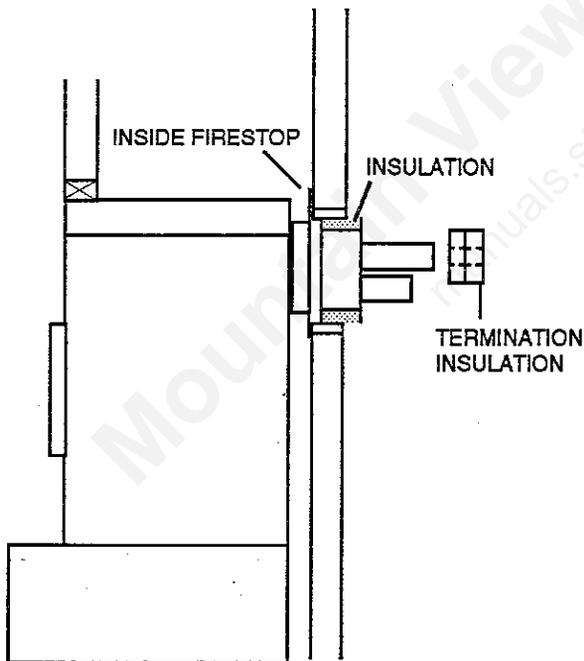


## INSTALLATION (continued)



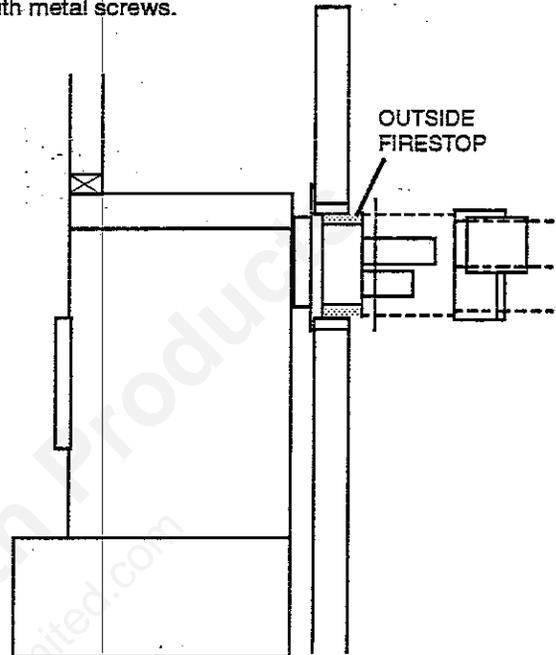
### STEP 4

Place unit into position. If unit is flush with wall, secure the inside firestop at this time. Place termination insulation provided over the 4" aluminumized pipe, thus insulating the termination extension only. Insulate on the top and bottom of the termination extension to seal up hole with fiberglass insulation.

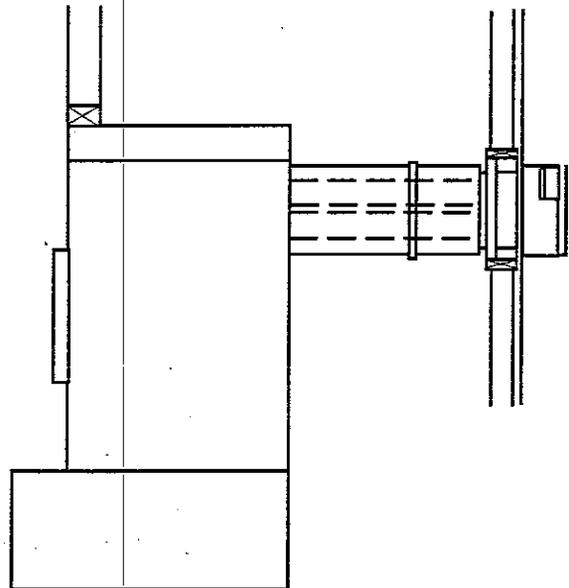


### STEP 5

Place outside firestop on according to the pipe pattern and secure with sheet metal screws (provided) using the top and bottom set of holes. Next, silicone the outside of the firestop to seal up area. Place the termination cap onto firestop securing it with metal screws.



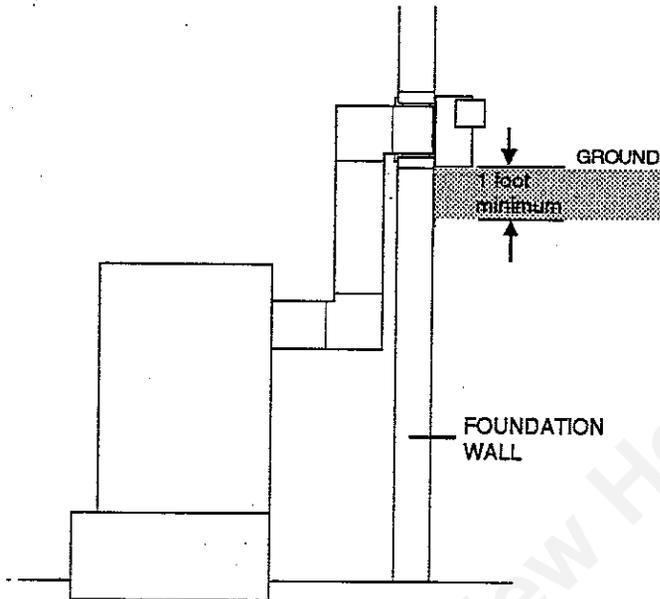
OR:



## INSTALLATION (below ground)

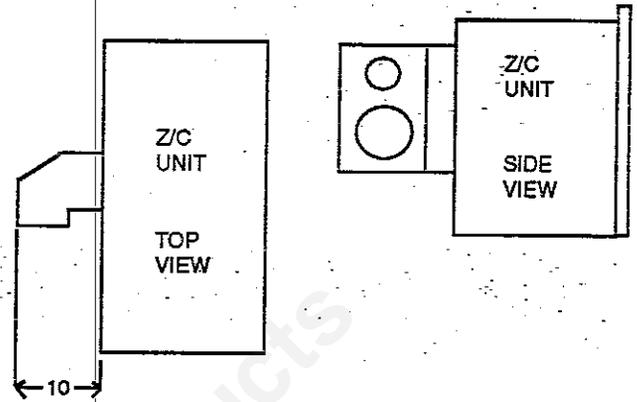
Make sure all sidewall venting clearances are observed, as shown on page 6.

1. Establish vent hole through the wall.
2. Remove soil at a minimum of approximately 12 inches below termination cap area as shown below.
3. Install vent system.
4. Install firestops and caulk to provide a watertight seal.
5. Apply high silicone caulking around the 4" and 5" pipe.
6. Slide termination on and secure to the firestop.

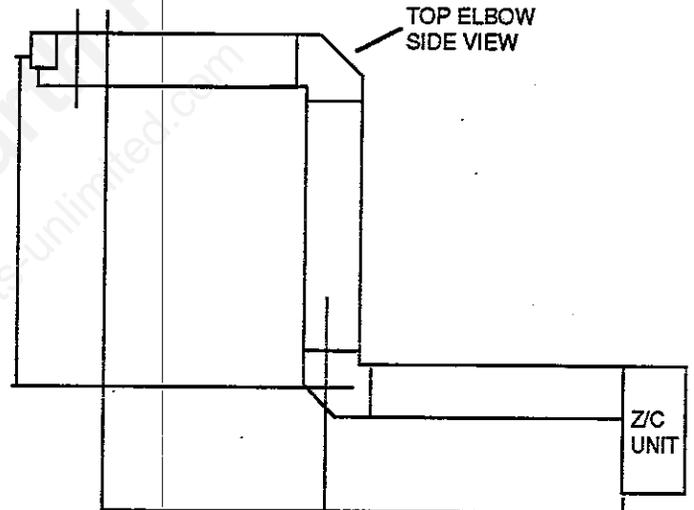


### 40 DV VENTING ELBOWS AVAILABLE

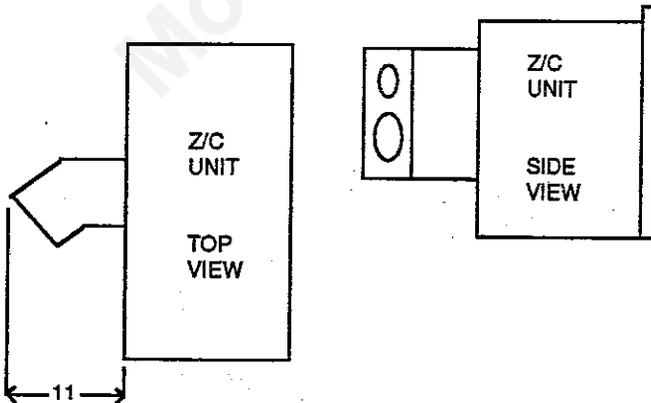
#### 90° ELBOW PARALLEL #69184



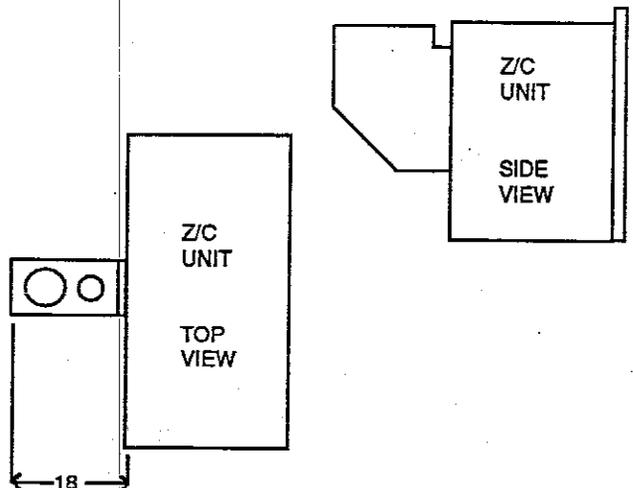
#### 90° ELBOW - TOP #69182



#### 45° ELBOW #69190

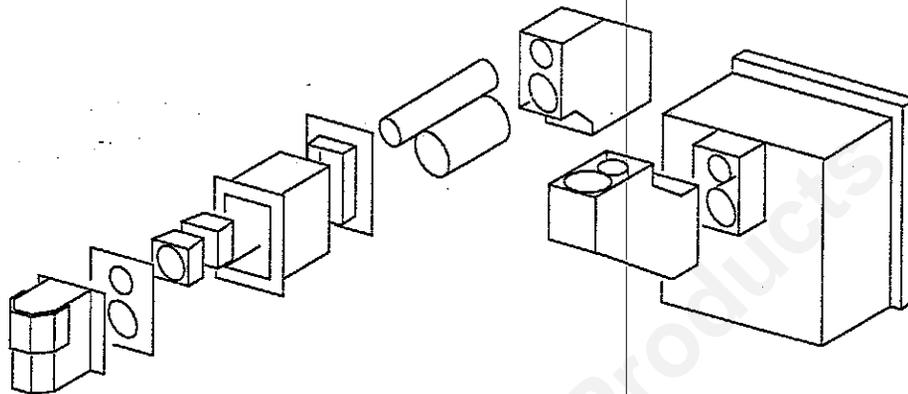


#### 90° ELBOW - BOTTOM #69180



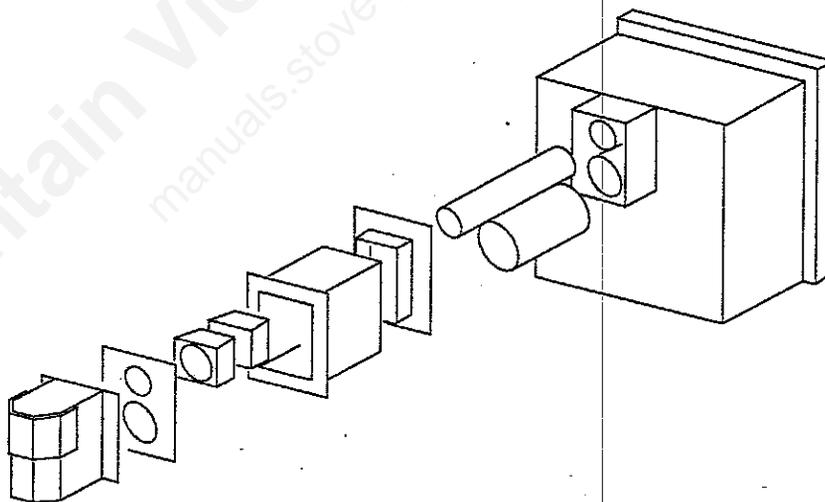
# 40 DV SAMPLE VENTING CONFIGURATION

## HORIZONTAL TERMINATION



- A) Two 90° elbows off back of unit with a max. 32', plus termination kit.
- B) 45° or 90° elbow off back of unit with a max. 32' horizontal plus termination kit (RH or LH).

## HORIZONTAL TERMINATION



- A) Straight off back of unit with a max. 32' horizontal plus termination kit.
- B) 45° or 90° elbow off back of unit with a max. 32' horizontal plus termination kit (RH or LH).

## GAS PIPE AND BURNER INSTALLATION

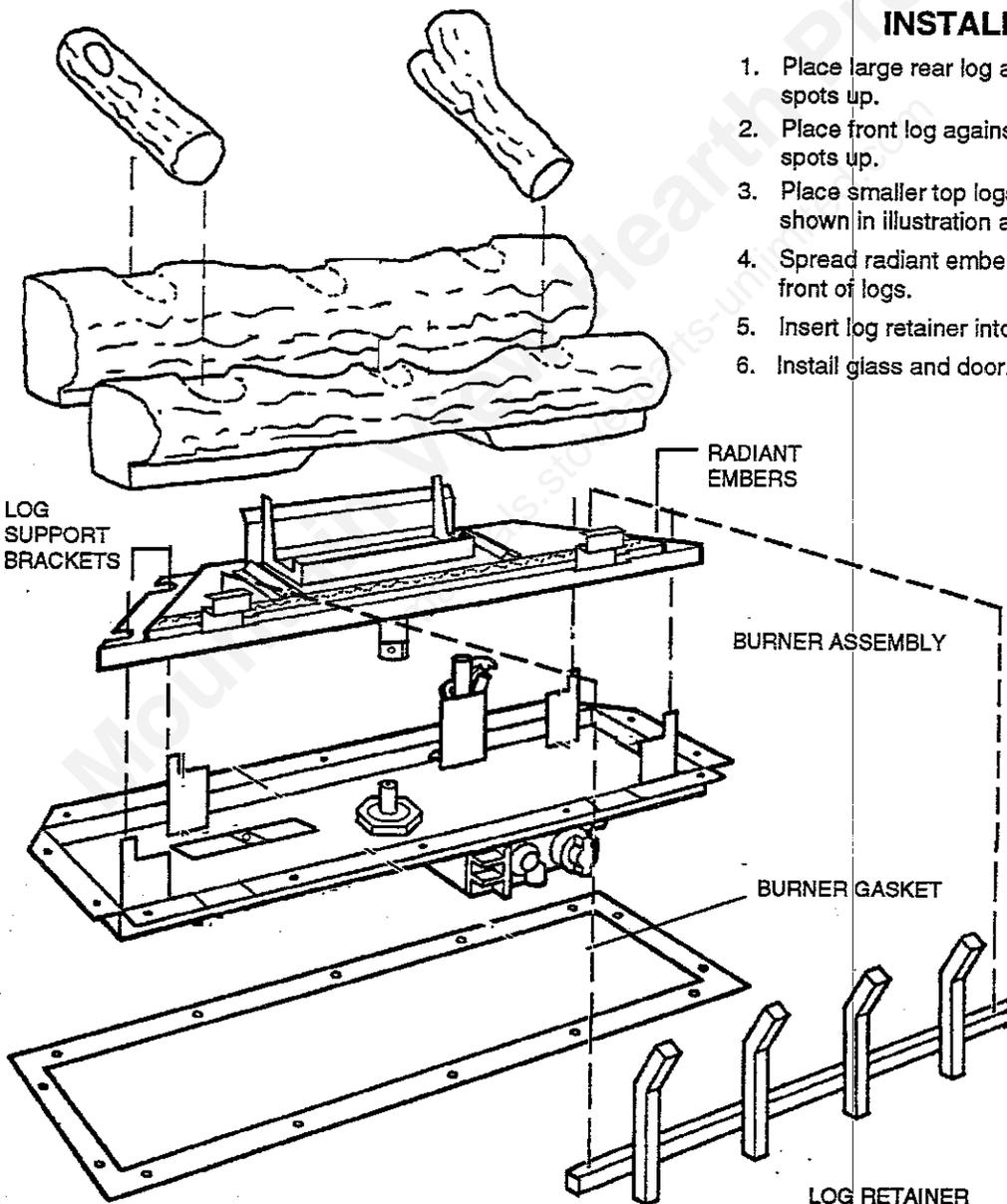
The gas line is piped to the outside of the unit at the factory on the right side. Installation must conform to local codes, or in the absence of local codes, to the latest edition of the National Fuel Gas Code, ANSI Z 223.1-1992.

- A. An accessible manual shut-off valve is required in the gas supply line. A ground joint union is required in the gas supply line to provide for burner removal or servicing.
- B. When a vertical section of piping is required for installation, a condensation trap (drip leg) is required.
- C. For natural gas, a minimum of 3/8" iron pipe with gas pressure of 4.5 WC must be used for supply from the meter. Consult with the local gas utility for any questions concerning pipe size.

- D. A 1/8" NPT plugged tapping, accessible for test gauges connection, must be installed immediately up stream of the gas supply connection to the appliance.
- E. Make gas connection to burner assembly with pipe or listed flexible connection. Seal space between pipe and knockout on firebox with high temp caulk. See illustration below.
- F. Turn gas supply on and check for leaks using a soap and water solution. (DO NOT USE AN OPEN FLAME).

**NOTE:** The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing where the test pressure is in excess of 1/2 psig. The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressure equal to or less than 1/2 psig.

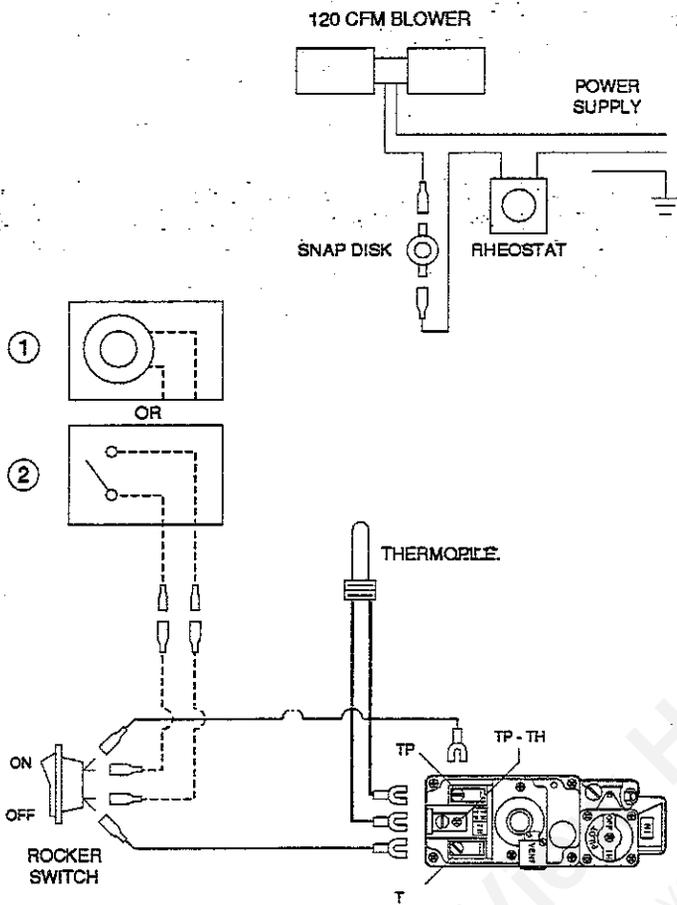
### LOGS



### INSTALLATION OF LOGS

1. Place large rear log against back support bracket, flat spots up.
2. Place front log against front support bracket, flat spots up.
3. Place smaller top logs on flat spots of bottom logs as shown in illustration at right.
4. Spread radiant ember material along screen area in front of logs.
5. Insert log retainer into brackets.
6. Install glass and door.

## CLAY-40-DV WIRING SCHEMATIC



### CONTROL OPTIONS

- ① THERMOSTAT
- ② A. WALL SWITCH  
B. REMOTE

---- Indicates low voltage wiring

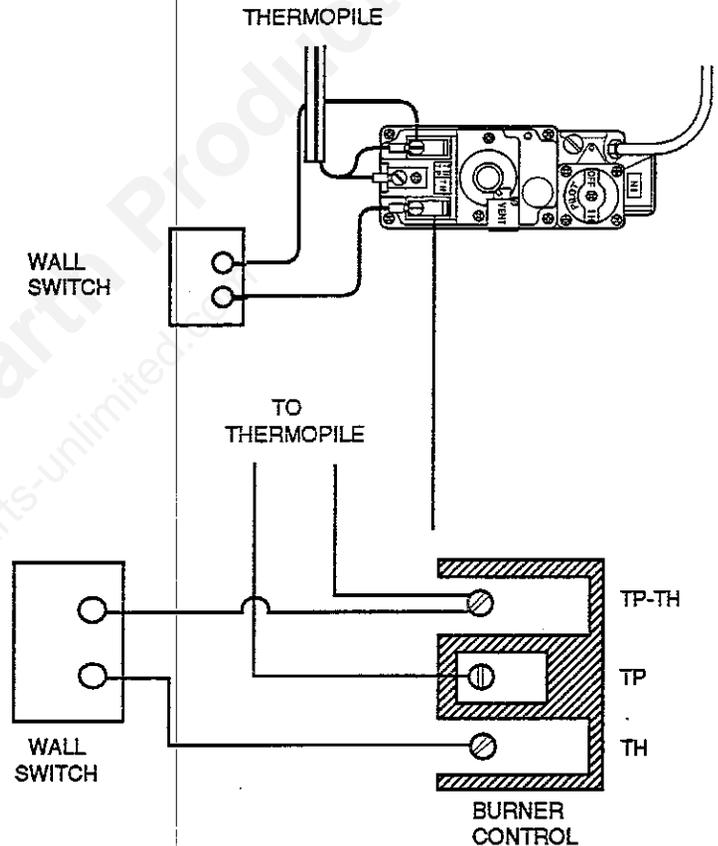
NOTE: Gas unit will not operate unless spill switch is installed.

## INSTALLATION OF BLOWER (Factory Installed)

The Clay-40DV is equipped with a blower which has a speed control and a three wire grounded cord. This appliance, when installed, must be electrically grounded in accordance with local code and national electric code, ANSI/SFPA 70 and current Canadian electrical code CSA C22.1.

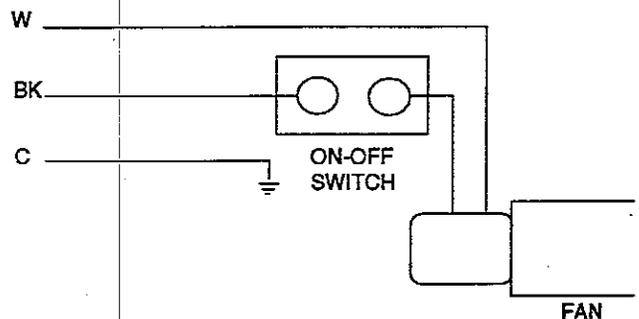
## INSTALLING MILLIVOLT REMOTE WALL SWITCH FOR AUTOMATIC GAS VALVE

1. Thread wire through gas inlet opening. Be sure not to cut wire. Run wire to a conveniently located wall switch box. For best long term results, switch must not be more than 10 feet from fireplace.
2. Attach wire to switch and mount in switch box.
3. Connect wires to gas valve. One wire to the top terminal and one wire to the bottom terminal. CAUTION: do not wire millivolt remote wall switch or gas valve to a 110 volt power supply.



THIS APPLIANCE IS FOR USE WITH NATURAL OR PROPANE GAS ONLY AS INDICATED ON RATING PLATE.

## FAN WIRING DIAGRAM



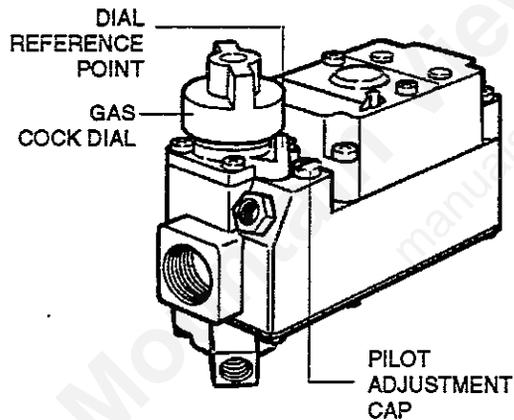
# OPERATION AND MAINTENANCE

**WARNING: WHEN PURGING THE GAS LINE, THE GLASS FRONT MUST BE REMOVED.**

**WARNING: DO NOT USE THIS HEATER IF ANY PART HAS BEEN UNDER WATER. IMMEDIATELY CALL A QUALIFIED SERVICE TECHNICIAN TO INSPECT THE HEATER AND TO REPLACE ANY PART OF THE CONTROL SYSTEM AND ANY GAS CONTROL WHICH HAS BEEN UNDER WATER.**

## LIGHTING PROCEDURE

1. Depress and turn gas valve knob to "off". Wait sufficient time to allow gas which may have accumulated in the burner compartment to escape. (At least 60 minutes.)
2. Depress valve knob and turn to "pilot".
3. Depress and hold valve knob while pushing Piezoelectric spark lighter (red button). Hold valve knob depressed until pilot remains lit when knob is released (approximately one minute).
4. Turn valve knob to "on".
5. If unit fails to start, repeat steps one through four.



**NOTE:** If unit is equipped with remote "on-off" wall switch, switch must be in "on" position for burner to light.

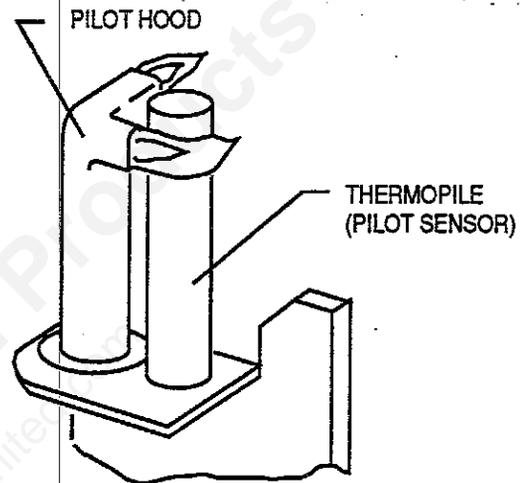
**NOTE:** The gas control is designed to be either fully on or off. Never use control to vary flame height.

**NOTE:** It is normal for the new fireplace to give off some odor the first time it is burned. This is due to the curing of the paint and any undetected oil from the manufacturing process.

It is recommended that you burn your new fireplace for at least two (2) hours the first time you use it.

## PILOT BURNER ADJUSTMENT

1. Remove pilot adjustment cap on gas valve.
2. Adjust pilot key to provide properly sized flame. The flame should cover the upper 3/8" of the tip.
3. Replace pilot adjustment cap.
4. Leak test



## MAINTENANCE

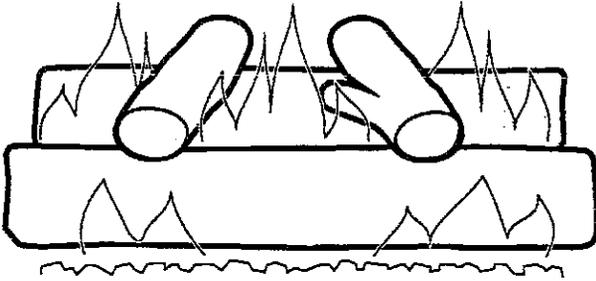
It is important to keep burner and the burner compartment clean. This must be done periodically, at least once per season.

### Steps for Cleaning Procedure

1. Turn off pilot.
2. Remove glass door frame assembly.
3. Remove logs.
4. Vacuum burner compartment, especially around the orifice opening.
5. Re-install logs.
6. Re-install glass front.
7. Ignite pilot - see Lighting Procedure Section.
8. Operate the burner and visually check to make sure the flame pattern appears similar to the illustration shown below.

**NOTE:** It is important to periodically perform a visual check of the pilot and the burner flame and to compare then with this illustration.

**NOTE:** It is important to periodically perform a visual check of the pilot, the burner flame and flame impingement and to compare them with the diagram shown below. No flame should directly hit the logs.



**CAUTION:** SHOULD OVERHEATING OCCUR OR GAS SUPPLY FAIL TO SHUT OFF, THEN SHUT OFF THE APPLIANCE'S MANUAL GAS VALVE BEFORE SHUTTING OFF ELECTRICAL SUPPLY.

### SHUT-DOWN PROCEDURE

- a) To turn off Main Burner only, turn Valve Knob to "PILOT" position.
  - b) For complete shut down, slightly depress Valve Knob, turn to "OFF" position.
- All safety devices or gaurds removed for servicing this heater must be replaced prior to operat ing the heater.
  - The Burner Assembly has been engineered and permanently adjusted for proper flame control. **DO NOT ALTER GAS ORIFICE.**
  - Periodic visual checks of the Pilot Flame should be conducted to ensure that the flame is continuously present except when the Valve Knob is in the "OFF" position.
  - Periodically remove the logs from the grate assembly and vacuum any loose particles from the Grate and Burner area.

### GLASS CLEANING

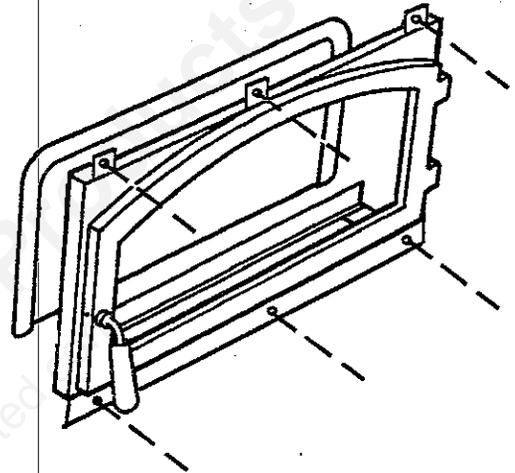
It will be necessary to clean the glass periodically. During start-up, condensation forms on the inside of the glass and causes dust, lint, etc. to cling to the glass surface. This is normal. Also initial paint curing can deposit a slight film on the glass.

**Do not clean glass when it is hot.**  
**Do not use abrasive cleaners on glass or door.**

### REMOVAL OF DOOR ASSEMBLY AND GLASS

1. Remove top grill-pull out and down at bottom of grill.
2. Remove 3 screws at bottom of door frames adn 3 screws at top of door frames.

**NOTE:** Do not substitute gasket material on glass.



**NOTE:** Do not strike glass because of possible shattering of glass

### FAN REMOVAL INSTRUCTIONS

1. Turn off gas and electricity.
2. Remove door assembly (see instructions above).
3. Remove logs and disassemble burner assembly.
4. Remove burner pan assembly.
5. Remove two fan mounting nuts.

## OPTIONAL EQUIPMENT

#### THERMOSTAT KIT #69142

Provides automatic temperature control. You set the temperature at your comfort level.

#### HAND HELD REMOTE KIT #69070

Arm Chair convenience at the press of a button.

#### WALL SWITCH KIT #69055

Allows convenience of turning unit on with a switch.

# GAS PRESSURE REQUIREMENTS

The number one cause of all operating problems with gas appliances is improper gas pressure!

Such problems as changes in flame color or configuration, gas pilot or burner outages, intermittent operation, changes in heat output, excessive burner noise, etc., are nearly always the result of changes in gas pressure or improper gas pressure at the time of the installation.

The most important item to check during the initial installation and the first thing to check when operating problems occur is gas pressure!

Gas Supplies normally enter a typical residence at 1/2 PSI (13"-15" W.C.) (3.KPA). A regulator is then placed inside the residence which drops this pressure to 7" W.C. (1.8KPS) (Nat. Gas).

This "inches to inches" regulator is of adequate capacity to service the gas appliances such as water heater, dryer, furnace, etc. If this regulator's capacity is not sufficient to add the Clay-40 an additional "inches to inches" regulator must be installed specifically for the fireplace.

**EXCEPTION:** some codes allow 2 PSI (1.4KPA) supplies to enter the residence, in which case "pounds to inches" regulators are used.

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

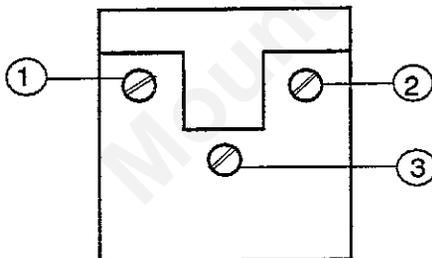
	DESIRED PRESSURE	MINIMUM PRESSURE	MAXIMUM PRESSURE	MANIFOLD PRESSURE*	AIR SHUTTER POSITION
<b>NATURAL GAS</b>	7.0" W.C	4.5" W.C.	10.5" W.C.	3.5" WC	1/8" OPEN
<b>L.P. GAS</b>	11.0" W.C.	10.0" W.C.	14.0" W.C.	10.5" W.C.	FULL OPEN

\*1/8" N.P.T. Pressure tap is located on Robertshaw Control - manifold pressure must be taken with burner operating.

## MILLIVOLT SYSTEM CHECK

The millivolt system and individual components may be checked with a millivolt meter having a 0-1000 MV range. Before checking the system, be certain wall thermostat lead wire does not exceed length recommended in the Wiring Section Table, and all connections are clean and tight.

Conduct each check shown in the chart below by connecting meter test leads to terminals as indicated. All readings are closed circuit.



Component Check	Connect Meter Test Leads To Terminals	Wall Thermostat Contacts Should Be	Meter Reading Should Be	See Check Result Below
Valve Operator System	2 & 3	Closed	Greater Than 100 MV	A
Wall Thermostat	1 & 3	Closed	Less Than 80 MV	C
Thermopile and Magnet	1 & 2	Open	Greater Than 325 MV	B

### A. TEST RESULTS

If the reading is more than 100 millivolts and the automatic valve does not come on, replace the valve operator. If the closed circuit reading is less than 100 millivolts, determine the cause by preceding with steps "B" and "C".

### B. TEST RESULTS

If "B" reading is less than 325 MV, clean and tighten all electrical connections and adjust pilot if necessary to increase millivolt output. If unable to adjust to at least the specified minimum, change the thermopile.

When proper thermopile output is obtained, the magnet may then be checked. With pilot in operation, allow meter reading to stabilize. Extinguish pilot burner and note meter reading at dropout point of magnet. If magnet remains locked up to a reading of 120 MV or less, the magnet is good.

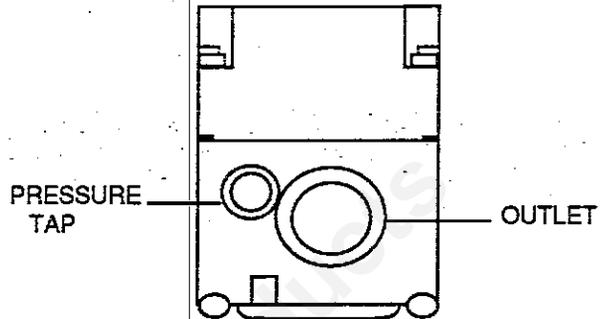
### C. TEST RESULTS

If "C" reading is more than that specified for the system being checked, clean and tighten thermostat leads and connection, shorten lead wires if possible or use heavier gauge wire. Rapidly cycle thermostat to clean contacts, or change the thermostat.

# PRESSURE REGULATOR ADJUSTMENTS

Adjustment of the pressure regulator is not normally necessary since it is preset at the factory. However, field adjustment may be accomplished as follows:

**NOTE:** Manometer attachment may be accomplished at pressure tap plug, below control outlet, as shown in figure below.



## MANUAL AND ELECTRIC MODELS

1. Manometer or gauge attachment may be accomplished at pressure tap plug.
2. Remove regulator adjustment screw cap (top of regulator).
3. With small screwdriver, rotate adjustment screw "clockwise" to increase, or "counterclockwise" to decrease pressure.
4. Replace regulator adjustment screw cap.

Clayton products have been safety tested by Warnock Hersey Inc. to the following standards: ANSI 21.11.1-1991, Can-2.1-1989 "Vented Room Heater", ANSI 21.44a-1992 "Direct Vent Wall Furnaces", UL 307B-87 "Gas Burning Heating Appliances for Mobile Homes", I.R. #41 "Direct Vent Gas Fireplaces" and CAN/CGA-2.17-M91 "Gas-Fired Appliances For Use At High Altitudes".

Safety Controls - AGA Certified  
Switches and Rheostats - UL Listed

## ANSI APPROVAL

Gas appliances must be tested and certified by a nationally recognized testing and certification laboratory to ANSI (American National Standards Institute) gas appliance safety standards.

There are a number of nationally recognized testing and certification agencies around the United States and Canada. Among them are Warnock Hersey, American Gas Association Laboratories, Underwriters Laboratories, etc.

The Clay-40 DV has been tested and certified by Warnock Hersey Inc., 8431 Murphy Drive, Middleton, Wisconsin 53562 to ANSI 21.11.1-1991, Can-2.1-1989 "Vented Room Heater", ANSI 21.44a-1992 "Direct Vent Wall Furnaces", UL 307B-87 "Gas

Burning Heating Appliances for Mobile Homes", I.R. #41 "Direct Vent Gas Fireplaces" and CAN/CGA-2.17-M91 "Gas-Fired Appliances For Use At High Altitudes".

The Clay-40 DV has met all necessary ANSI and CAN/CGA Standards and are fully certified for installation in any community. If there are any questions or if you need further substantiation either write to or call Warnock Hersey, Inc. in Middleton at (608) 836-4400, Wisconsin or call Clayton Manufacturing Inc., at (615) 837-2100.

# TROUBLESHOOTING

**PROBLEM:** Piezo sparker won't light pilot.

**POSSIBLE CAUSES:**

1. Misaligned electrode.
2. Incorrect wire connections.
3. Defective electrode, (too cracked, dirty, or out of alignment)
4. Defective push button.
5. No gas present.

**REMEDIES:**

1. Realign electrode so it produces spark into pilot hood (approximately 1/8" from pilot hood).
2. Make sure connections are proper.
3. Replace electrode if shorted out or if it has cracked porcelain.
4. Replace push button.
5. Turn gas on.

**PROBLEM:** Pilot will not stay lit.

**POSSIBLE CAUSES:**

1. Incorrect lighting procedure.
2. Pilot flame not making proper contact with thermopile.
3. Bad connection between thermopile and screw terminals on gas valve.
4. Wires on wrong terminals.
5. Thermopile is defective, dirty, or weak.
6. Thermopile is shorting out where it passes through cabinet.
7. Gas valve will not prove pilot.
8. Air in line.
9. Wire from valve to wall switch or remote switch is nicked or shorting out.
10. Switch defective or short in circuit.

**REMEDIES:**

1. Checking lighting instructions found on label in gas fireplace or in owners manual.
2. Adjust pilot (see page 11).
3. Make sure screws are snug holding thermopile. (Do not overtighten or the screws will become stripped.)
4. White lead from thermopile must go to top screw TH TP terminal and red wire must go to spill switch wire.
5. Test with millivolt meter and replace if necessary.
6. Replace thermopile.
7. Replace valve.
8. Purge air from gas line.
9. Remove wall switch wires from top and bottom screw of millivolt valve. If unit is OK and you reconnect the wall switch and it cuts out again, then replace wires to wall switch.
10. Replace switch.

Remember: if unit is O.K. and you reconnect the wall switch and cuts out again, then replace wires to wall switch.

**PROBLEM:** Pilot stays on but main burner won't come on.

**POSSIBLE CAUSES:**

1. Wired incorrectly.
2. Wall switch, on/off switch, or remote hand switch defective.
3. Not enough voltage being generated by pilot.
4. Defective control valve.

**REMEDIES:**

1. One wire to top screw (TH TP) of valve, one to bottom (TH). One wire to each side of switch or thermostat.
2. Replace wall switch, on/off switch, or remote hand switch.
3. Adjust pilot light up to create more voltage or replace thermopile.
4. Replace gas control valve.

**PROBLEM:** Wall switch must be pushed multiple times to make flame come on.

**POSSIBLE CAUSES:**

Defective wall switch.

**REMEDIES:**

Replace wall switch.

Note: Can use standard single pole electrical switch.

# TROUBLESHOOTING (CONT.)

**PROBLEM:** Window keeps getting sooty.

**POSSIBLE CAUSES:**

Unit needs more primary air.

1. Blocked primary air port.
2. Flame impingement on logs or elsewhere.
3. Logs too close to or touching glass.
4. Valve and burner over-fired.

**REMEDIES:**

1. Check primary air assembly. Over a period of time dust, lint, pet hair, etc. can plug primary air hole. Clean out.
2. Reposition logs or adjust flame.
3. Move logs to allow at least 3/8" clearance from logs to glass.
4. Check the amount of flow with monometer, and adjust regulator if necessary.

**PROBLEM:** Dirty window. (White on window).

**POSSIBLE CAUSES:** Initial burn off of paint and sealants used to produce unit.

**REMEDIES:**

1. Clean window using AJAX or COMET, and paper towel.
2. Dissolve powder AJAX or powder COMET in water on window. Clean in small circular motions. Rinse thoroughly and reinstall in unit. **DO NOT USE ANY LIQUID CLEANERS ON WINDOW.** It will burn black on window when reinstalled.

**NOTE:** Windows are made of neo (pyro) ceramic, NOT glass. Because of this, they will handle temperatures in excess of 1,200 degrees Fahrenheit constant temperature. The window only reaches between 500-600 degrees Fahrenheit. Because of this it is almost impossible to bake something into the window. Most things will, with a little effort, come off if you follow these directions.

**PROBLEM:** Circulating fan speed does not vary.

**POSSIBLE CAUSES:** Variable speed rheostat defective.

**REMEDIES:**

Replace rheostat.

**NOTE:** Only replace rheostat with a rheostat supplied by Clayton Manufacturing. Light dimmer switches or incorrect rheostats will burn out the fan motor. This will void the warranty of the fan.

**PROBLEM:** Fan makes humming sound, but won't come on.

**POSSIBLE CAUSES:**

1. Rheostat needs adjustment.
2. Fan impellers dirty.
3. Fan defective.

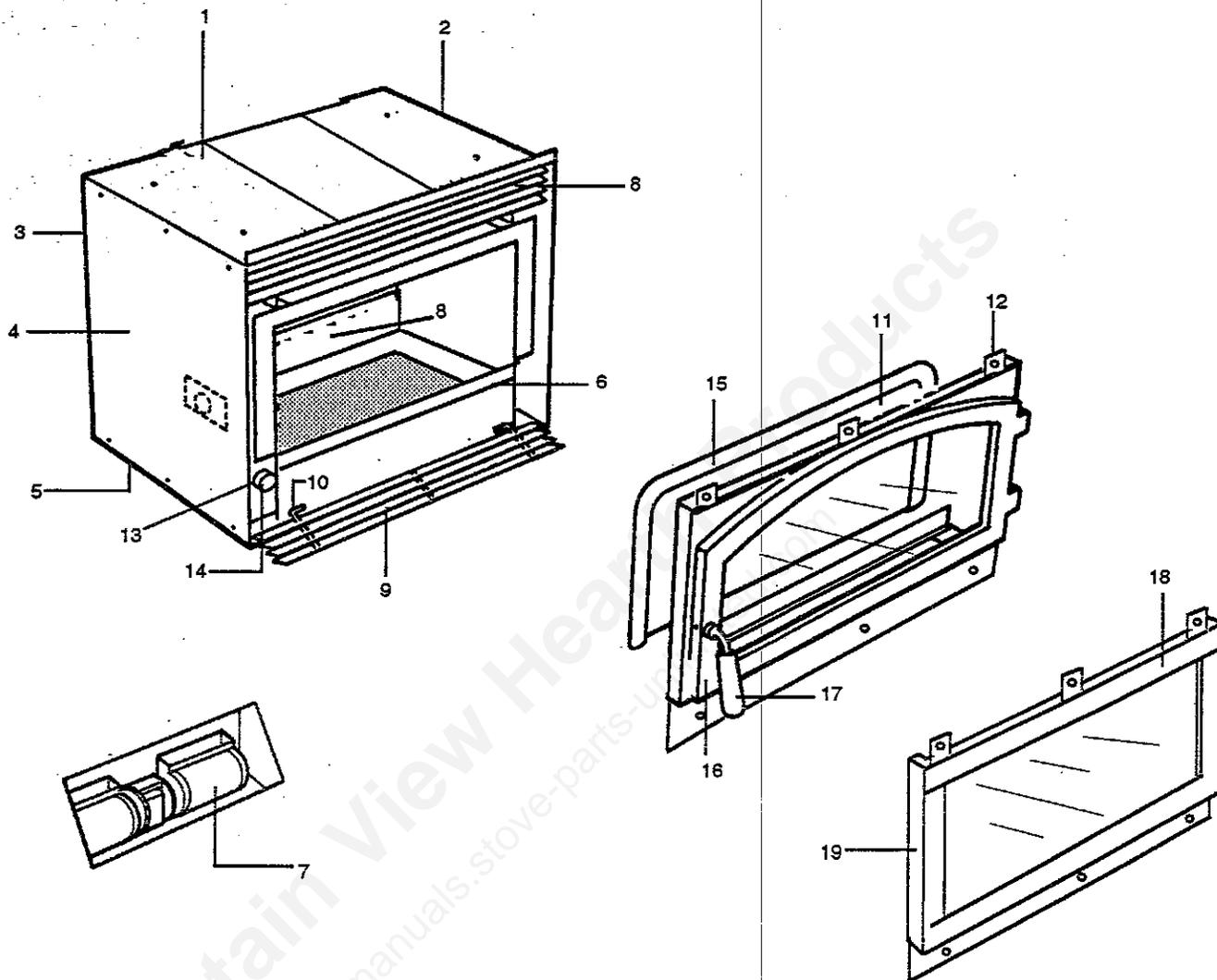
**REMEDIES:**

1. Adjust variable speed control.
2. Clean fan.
3. Replace fan.

**Note:** Make sure the fan plug-in cord is not nicked by decorative trim kits. This could cause the fan to short out and also damage the gas valve.

## CLAY-40 GAS FIREPLACE PARTS LIST

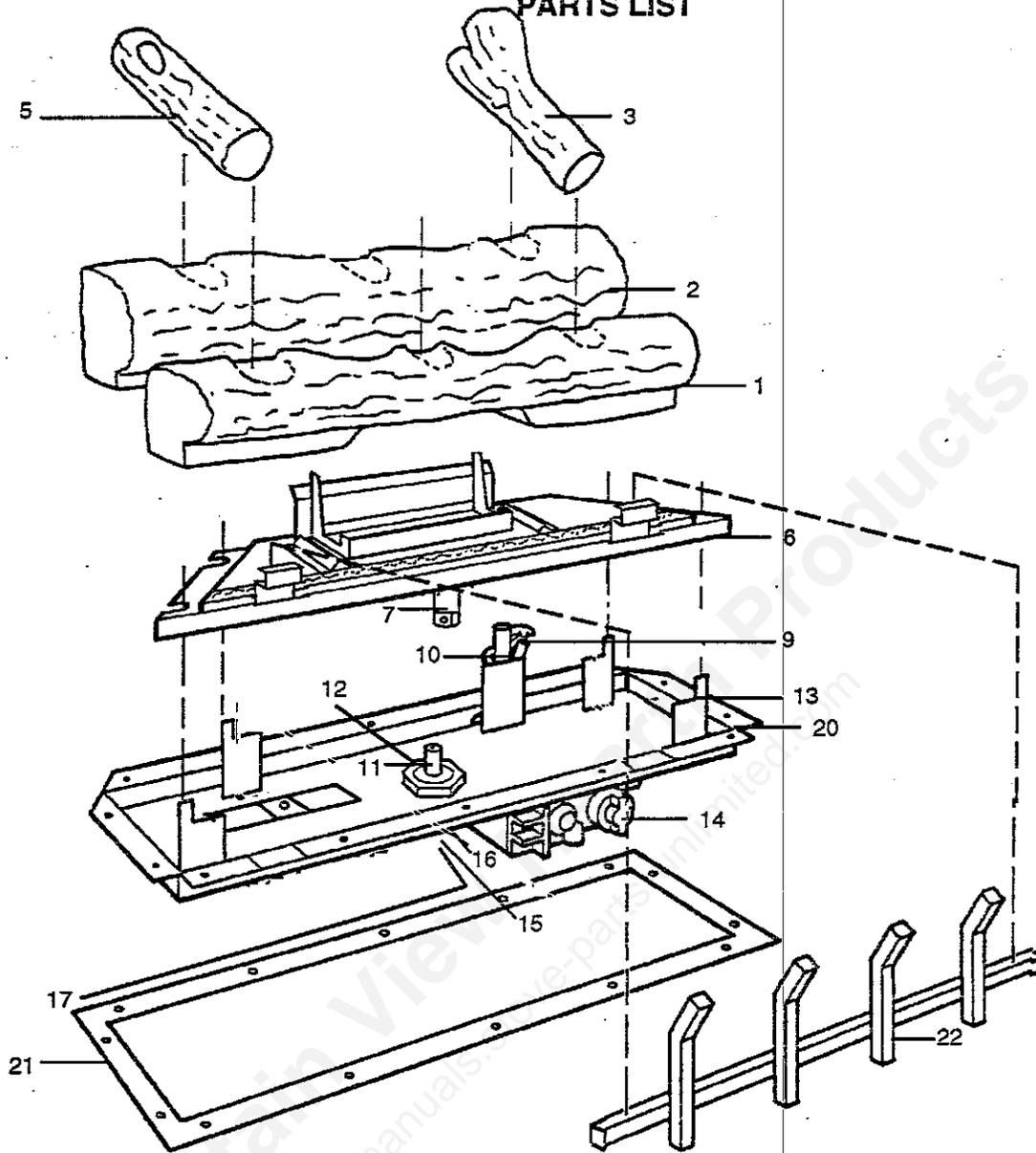
All repair parts will be available from your local dealer. When ordering, always give the following information: (A) part number, (B) part description and (C) model number.



ITEM	QTY	PART #	DESCRIPTION
1	1	14207PS	Top
2	1	14206PS	Rightside
3	1	14208	Outer Back
4	1	14205PS	Left Side
5	1	14209PS	Bottom
6	1	142100	Firebox
7	1	58001	Blower Assembly
8	1	95965	Top Grill
9	1	95970	Bottom Grill

ITEM	QTY	PART #	DESCRIPTION
10	2	29800	Hinge
11	1	93945	Glass and Seal Assembly
12	1	18510	Glass Holder
13	1	42375	Fan Speed Control
14	1	42380	Speed Control Knob
15	1	99460	Glass Rope
16	1	50465	Door
17	1	95660	Wooden Handle
18	2	95914	Brass Trim
19	1	14595BL	Door Frame

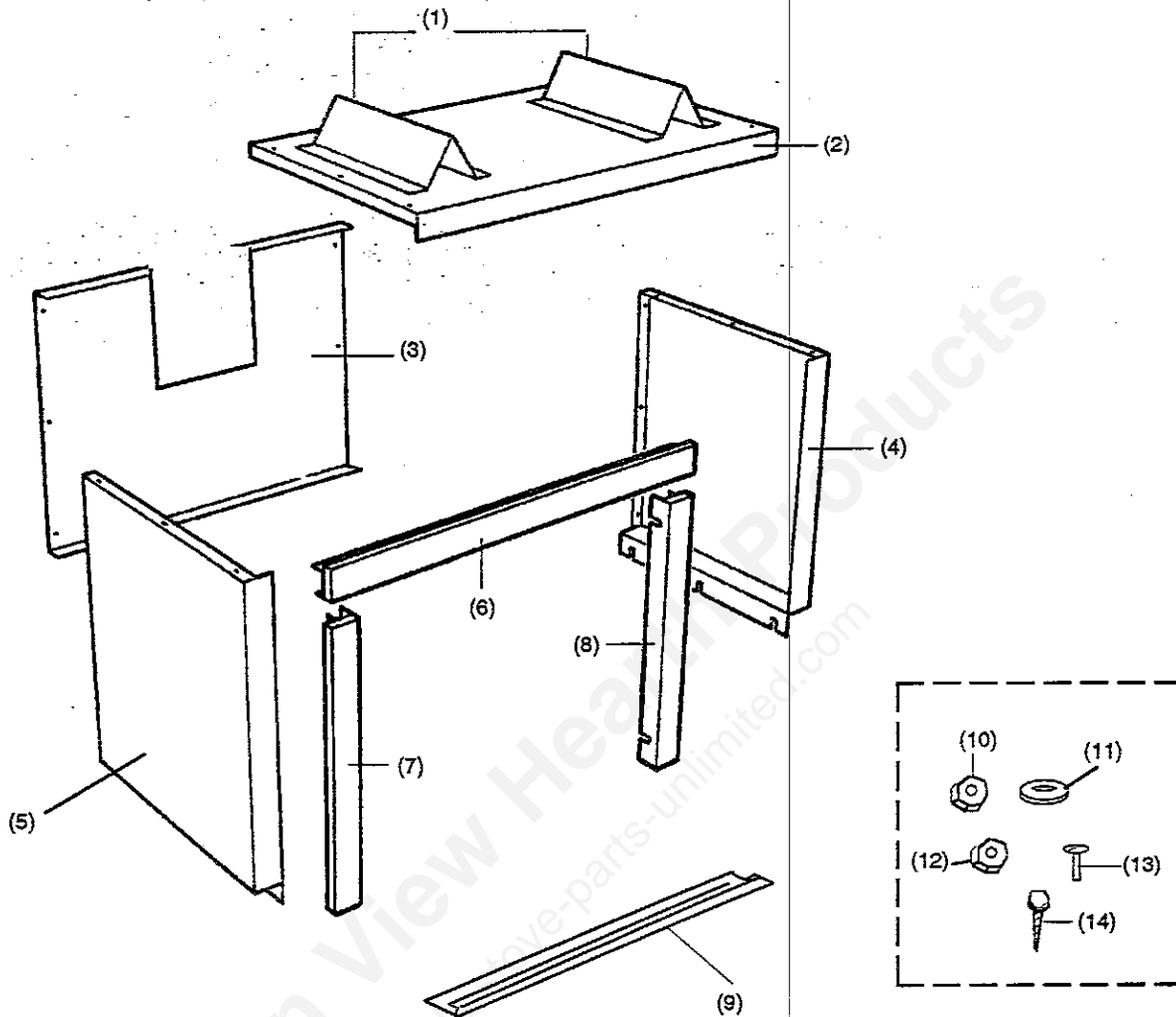
## CLAY-40 ZERO CLEARANCE FIREPLACE PARTS LIST



ITEM	QTY	PART #	DESCRIPTION
1	1	94164	Front Log
2	1	93166	Rear Log
3	1	93167	Right Twig
5	1	94165	Left Twig
6	1	142101LLBL	L.P. Burner
6	1	142101NLBL	N.G. Burner
7	1	43894	Shutter
9	1	43805	Pilot ASM (N.G.)
	1	43806	Pilot ASM (L.P.)
10	1	43815	Thermopile
11	1	43831	#38 Orifice N.G.
	1	43826	#53 Orifice L.P.

ITEM	QTY	PART #	DESCRIPTION
12	1	19950	3/8" to 1/2" Bushing
13	4	16541	Burner Support
14	1	43800	Gas Valve (N.G.)
	1	43812	Gas Valve (L.P.)
15	1	26801	1/2" BLK Pipe Nut
16	1	42104	1/2" Chase Nipple
17	1	26802	1/2" 90 Degree Elbow
18	1	42373	Rocker Switch
19	1	43810	Piezo Ignitor
20	1	145102BL	Burner Pan
21	1	92823	Burner Gasket
22	1	145105BL	Log Stop

# 40G ZERO CLEARANCE PARTS LIST



ITEM #	QTY.	PART #	DESCRIPTION
1	2	14541	Zero Clearance Standoff
2	1	14235	Zero Clearance Top
3	1	14234	Zero Clearance Back
4	1	14239	Zero Clearance Right Side
5	1	14538L	Zero clearance Left Side
6	1	14537	Zero Clearance Front Panel
7	1	14536L	Zero Clearance Left Panel
8	1	14536R	Zero Clearance Right Panel
9	1	14526B	Zero Clearance Black Trim
10	4	23265	10-24 Hex Nut
11	4	23266	3/16" Flat Washer Black
12	2	20799	10-24 Hex Nut
13	2	27457	10-24 Pan Head Screw
14	33	20499	#8 x 1/2" Tek Screw

## CLAY-40 DV ZERO CLEARANCE VENTING COMPONENTS

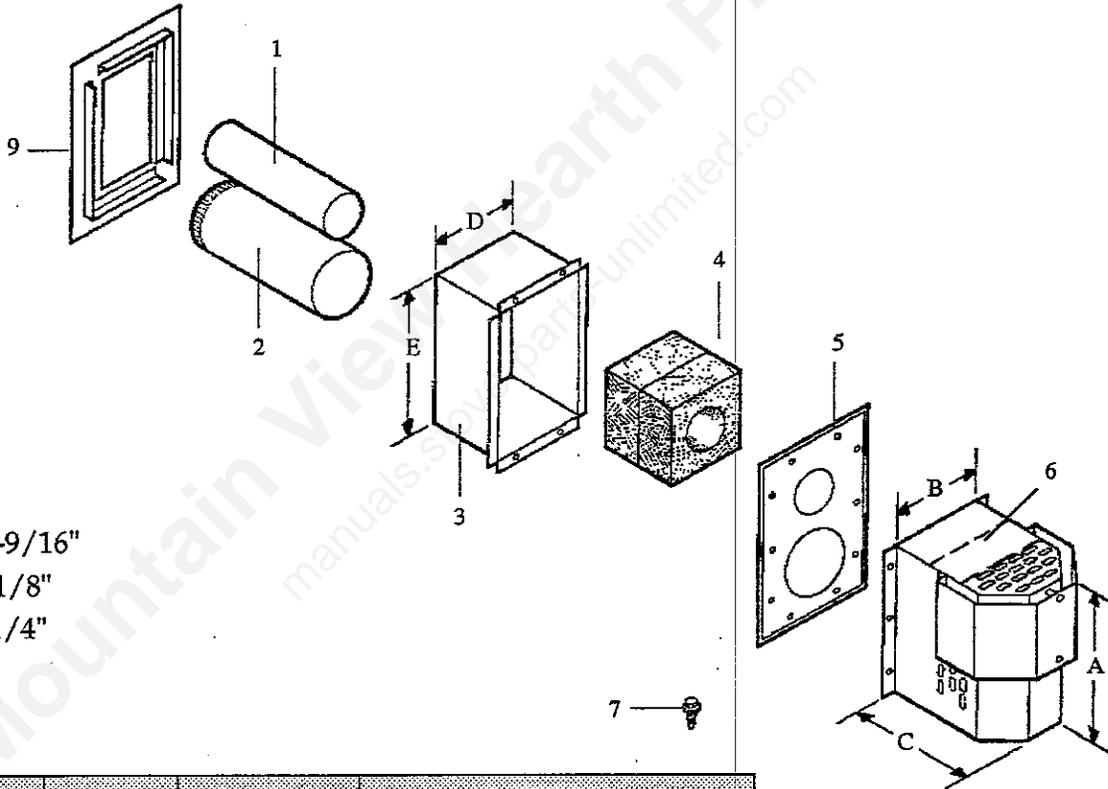
### Starter Kit - Model Clay 40

- Includes: ✓ 4" diameter pipe  
 ✓ 5" diameter pipe  
 ✓ Inside wall spacer  
 ✓ Vent termination cap  
 ✓ Tube high temp silicone  
 ✓ Pack sheet metal screws

- 90 degree elbow kit - Horizontal  
 45 degree elbow kit - Horizontal  
 90 degree elbow kit - Vertical  
 90 degree elbow kit - Parallel

- Vent sections:**  
 length -  
 " - 24"  
 " - 36"  
 " - 48"

## CLAY-40 DV ZERO CLEARANCE FIREPLACE PARTS LIST



- A - 11-9/16"  
 B - 5-1/8"  
 C - 8-1/4"  
 D - 6"  
 E - 11"

ITEM #	QTY.	PART #	DESCRIPTION
1	1	92803	4" Termination Pipe
2	1	92802	5" Termination Pipe
3	1	142112	Termination Extension
4	2	90519	Termination Insulation
5	1	14228	Outside Fire Stop
6	1	142105AV	Termination Cap
7	18	20499	#8 x 1/2 Teks
8	1	95899	High Temp. Silicone
9	1	142107	Inside Fire Stop

# CLAY-40 DV - GAS ZERO CLEARANCE

## FLUE PARTS LIST

PART#	DESCRIPTION
	<b>45° Degree Elbow #69245</b>
10750	4" Elbow
10748	5" Elbow
10746	Duct
10745	Snap Tab 11"
10744	Duct Tab 6"
	<b>90° Elbow Par. #69247</b>
10768	4" Elbow
10766	5" Elbow
10764	Duct
10745	Snap Tab 11"
10744	Duct Tab 6"
	<b>90° Elbow Top #69251</b>
10762	4" Elbow
10760	5" Elbow
10758	Duct
10745	Snap Tab 11"
10744	Duct Tab 6"
	<b>90° Elbow Bottom #69249</b>
10756	4" Elbow
10754	5" Elbow
10752	Duct
10745	Snap Tab 11"
10744	Duct Tab 6"

PART#	DESCRIPTION
	<b>24" Pipe DV #69254</b>
10775	4" Pipe
10781	5" Pipe
10769	Duct
10745	Snap Tab 11"
10744	Duct Tab 6"
142155	Spacer 40 DV
	<b>36" Pipe DV #69256</b>
10777	4" Pipe
10783	5" Pipe
10771	Duct
10745	Snap Tab 11"
10744	Duct Tab 6"
142155	Spacer 40 DV
	<b>48" Pipe DV #69258</b>
10779	4" Pipe
10785	5" Pipe
10773	Duct
10745	Snap Tab 11"
10744	Duct Tab 6"
142155	Spacer 40 DV



## CLAYTON GAS APPLIANCE LIMITED WARRANTY

Under the conditions of this warranty, the manufacturer of the Clayton gas appliance warrants that the appliance is free from defects in material and workmanship for normal home use. The obligation under this warranty shall be limited to repair and/or replacement of any part or parts of the appliance which prove defective under normal home use and service with five (5) years from the date of sale of the appliance to the original purchaser and which shall be found defective by manufacturer or its authorized agent. This warranty is expressly in lieu of all other warranties expressed or implied, including warranties by statute, operation of law, or otherwise.

Manufacturer assumes no obligations or liabilities except as stated in this limited warranty which is provided for the purpose of stating the total obligations and liabilities under which manufacturer sells the appliance and to provide or original purchaser with an express, extended limited warranty. No person is authorized to bind manufacturer to any obligation or liability and this warranty expresses legal obligations of the manufacturer to the original purchaser. No obligation is assumed with respect to any other party. manufacturer assumes no liability or obligation for any unit or accessory altered by purchaser.

This warranty does not apply to the appliance or any part thereof which has been subject to accident, negligence, alterations, abuse or misuse even is used only for home applications. The manufacturer, Clayton Manufacturing, Inc., makes no warranty whatsoever in respect to accessories or parts not manufactured by Clayton, and which bear the name of the actual manufacturer. As to such items, the limited warranty of the accessory or part, to the extent allowed, is transferred from Clayton, to the original purchaser. Paint finish, trim and glass are expressly excluded from this warranty.

The original purchaser, as used in this warranty, shall be that person to whom the appliance is originally sold for home use.

This warranty shall be effective only if the original purchaser of the appliance is registered with Clayton Mfg., by sending this warranty for to Clayton within thirty (30) days of the date of purchase or the date upon which the original purchaser takes possession of the appliance, whichever comes first. Such registration or failure to register shall not be deemed to create any obligation or liability by the manufacturer and this warranty with its conditions and limitation shall be the only procedure for obtaining any rights against the manufacturer and expresses the sole obligations and responsibilities of the manufacturer which are offered to the original purchaser and accepted upon purchased of the appliance.

Any cause of action by the original purchaser against the manufacturer under this warranty can be only at the situs of Clayton Manufacturing, Inc. and the laws of the State of Tennessee shall be applicable to this warranty.



## OWNERSHIP RECORD

DEALER'S NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_

CLAYTON MODEL NO. \_\_\_\_\_

SERIAL NO. \_\_\_\_\_

WARNOCK HERSEY / SERIAL NO. \_\_\_\_\_

NOTES \_\_\_\_\_

\_\_\_\_\_

The Claytons have been safety tested by Warnock Hersey Inc. to the following standard: ANSI 21.11.1-1991, CAN-2.1-1989 "Vented Room Heater", ANSI 21.44a-1992 "Direct Vent Wall Furnaces", UL 307B-87 "Gas Burning Heating Appliances for Mobile Homes", I.R. #41 "Direct Vent Gas Fireplaces" and CAN/CGA-2.17-M91 "Gas-Fired Appliances for Use at High Altitudes".

**Registration Card must be completed and mailed within 10 days of purchase to validate warranty.**

### CLAYTON MANUFACTURING, INC. WARRANTY REGISTRATION CARD

PLEASE PRINT CLEARLY

1) Name \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Phone ( \_\_\_\_\_ ) \_\_\_\_\_

2) Dealer's Name \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Date of Purchase \_\_\_\_\_

3) Clayton Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

4) First learned of Clayton through: \_\_\_\_\_

5) Purchased this Clayton because: \_\_\_\_\_

6) Additional Comments: \_\_\_\_\_

Please complete and mail within 10 days of purchase to validate warranty.

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