Warm Morning®

MODEL LSC25R
UPRIGHT
DIRECT VENT COMPONENTS

INSTALLATION AND OPERATING INSTRUCTIONS

DANGER

FAILURE TO FOLLOW THESE INSTRUCTIONS CAREFULLY AND WITHOUT ERROR, OR FAILURE TO HEED ANY AND ALL WARNINGS IN THESE INSTRUCTIONS CAN RESULT IN AN EXPLOSION, FIRE OR THE PRODUCTION OF CARBON MONOXIDE GAS WHICH CAN CAUSE PROPERTY DAMAGE, BODILY INJURY OR DEATH.

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

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

— WHAT TO DO IF YOU SMELL GAS

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

— Installation and service must be performed by a qualified installer, service agency or the gas supplier.

"WARNING: IF NOT INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, THIS PRODUCT COULD EXPOSE YOU TO SUBSTANCES IN FUEL OR FROM FUEL COMBUSTION WHICH CAN CAUSE DEATH OR SERIOUS ILLNESS AND WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. ALSO, OPERATION, INSTALLATION AND SERVICING OF THIS PRODUCT COULD EXPOSE YOU TO AIRBORN PARTICLES OF GLASS WOOL FIBERS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER THROUGH INHALATION."

CAUTION

a. Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.

b. Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.

c. Young children should be carefully supervised when they are in the same room as the appliance.

d. Do not place clothing or other flammable material on or near the appliance.

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

f. 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.

g. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.

h. The appliance must be kept clean and free from combustible materials, gasoline and other flammable vapors and liquid.

A. GENERAL INFORMATION

1. MODELS AND EQUIPMENT

The serial number plate on the unit indicates the model number, B.T.U. input rating, and the type of gas for which it has been equipped at the factory. Do not use this unit with any type of gas other than the type indicated on the serial number plate!

2. INPUT RATINGS

The B.T.U. input ratings of this direct-vent gas unit is as follows: Model LSC25R -- 25,000 B.T.U. Input/Hr.

The above model is design certified by American Gas Association Laboratories for use with Natural and L.P. Gases when equipped with orifices of the proper size, at the input ratings shown.

NOTE: If the heater is to be installed at an altitude above 2,000 feet, the input rating should be reduced 4% for each 1,000 feet above sea level.

3. CONTROLS

These units are factory equipped with an automatic gas valve that includes: a manual gas valve, pilot filter, 100% safety shutoff valve, thermostat and an internal pressure regulator.

4. WALL THICKNESS (MINIMUM 6")

These units are factory equipped with vent parts for walls ranging from 6 to 13 inches. The LSC25R may be installed in walls ranging from 13 to 20 inches thick with an optional 13 to 20 inch vent pipe kit that can be obtained from your dealer at nominal cost.

NOTE: While a wall less than 6 inches thick can be built out, **NO INSTALLATION SHOULD BE ATTEMPTED ON A WALL THICKER THAN SPECIFIED ABOVE.**

5. TYPES OF GAS

Units are shipped from the factory with correctly sized orifices and equipment for only the type of gas specified on the serial number and rating plate attached to the bottom of the contol compartment.

WARNING: Do not use any other type of gas than that shown on this plate!

B. INSTALLATION

This appliance must be installed in accordance with local codes, if any; if not follow ANSI Z223.1-1988 in the United States and the current Installation Code CAN1-B149 in Canada.

1. LOCATION OF UNIT

Direct Vent Wall Furnaces are designed for installation only on an outside wall of a room. The vent assembly must be installed outdoors to provide adequate combustion and ventilation air. They may be positioned so that the bottom of the cabinet is either above or flush with the floor. A few inches of clearance between the bottom of the cabinet and the floor will provide better access to the controls and permit easier servicing of the burner.

If the appliance is to be installed directly on carpeting, tile or any other combustible material other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance.

Certified clearances that must be maintained, are as follows: (all clearances are measured from outer casing except for VENT CAP which is measured from center line of cap to nearest building or obstruction).

	Clearance Inches		Clearance Inches
Left Side	4	Bottom	0
Right Side	4	Rear	0
Top	24	Vent Cap	24

The minimum clearance to the floor is measured from the top surface of carpeting or tile.

Locate the unit, if possible so that the hole cut for the air intake and flue outlet assembly is exactly centered between two wall studs 16 inches on center.

This appliance must be installed in accordance with local codes, if any; if not, follow ANSI Z223.1-1988.

NOTE: Locate the unit so as to provide at least 18 inches of clearance between the bottom of the exterior vent cap and the surface of the ground; otherwise, drifting snow might cause a reduction of operating efficiency. The venting area must be kept clear and free from combustible materials; and the flow of combustion and ventilation air must not be obstructed.

NOTE: The efficiency rating of the appliance is a product thermal efficiency rating, determined under continuous operating conditions and was determined independently of any installed system.

2. PREPARING INSIDE UNIT

If unit is delivered in its original shipping carton, carefully unpack - being sure to remove all literature and parts from accessory packages before discarding carton.

a. Carefully determine the location of the unit, centering between wall studs if possible. Position and smooth out full size paper template where unit is to be installed. Use carpenter's level to make sure the template is level & fasten to wall with tape or thumb tacks.

b. Drill all holes on templates as specified & cut the 9" dia. vent opening through both the inner and outer walls. **NOTE:** If gas supply is to be through the floor do not drill hole for gas supply through wall, use alternate dimensions for drilling shown on template.

c. With the 9" diameter hole cut through the wall, measure the wall thickness and cut the vent pipes as follows: **FOR MODEL LSC25R** -- cut the flue pipe (4" diameter) 3 3/4" longer than the wall thickness. Cut the air intake pipe (6" diameter with flange) 2 5/8" longer than the wall thickness. Cut the insulation pipe (7" diameter) 3/4" longer than the wall thickness.

NOTE: After cutting vent pipes, check for proper fit on appropriate flanges.

Remove the complete front of the cabinet. First remove the burner compartment door by pulling the bottom forward and down until top studs on door clear openings. Then remove the front louver panel assembly by removing the sheet metal screws on each side.

3. INSTALLING INSIDE UNIT, MODEL LSC25R

a. Install vent pipes on unit by removing the rear wall shield (item no. 1 on the parts drawing) from the back of the unit by removing two sheet metal screws. Apply a liberal amount of furnace cement to the outside of the small diameter flue pipe flange that is welded to the rear of the combustion chamber, then slide the flue pipe onto it. Attach the air intake pipe, with the gasket properly aligned, to the back of the combustion chamber with 8 sheet metal screws (See figure 1). Slide the insulation pipe onto the flange on the rear wall shield and replace the shield on the back of the heater.

CAUTION: The flue pipe must be cemented around the combustion chamber flange, and the air intake pipe gasket must be in position, or the unit may malfunction due to leakage.

b. With the vent pipes in place, set the unit against the wall with the vent pipes protruding through the hole previously cut. Mount the unit to the wall with 2 wood screws (Provided) through the holes in the rear of the cabinet just above the combustion chamber. Proceed to part 4 "INSTALL OUTSIDE VENT CAP."

4. INSTALL OUTSIDE VENT CAP

Apply a small amount of furnace cement all around the outside of the small diameter flange on the vent cap, and then push the cap partway onto the flue pipe that protrudes through the wall. Caulk well under the edge of the cap with glazing compound and slide the vent cap further onto the flue pipe until the cap is against the wall. Secure the cap with the four round head wood screws. See figure 2.

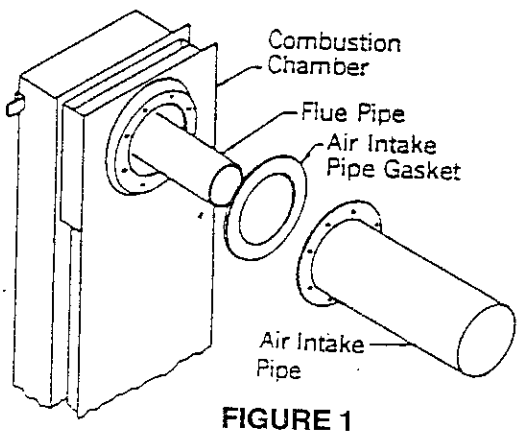


FIGURE 1

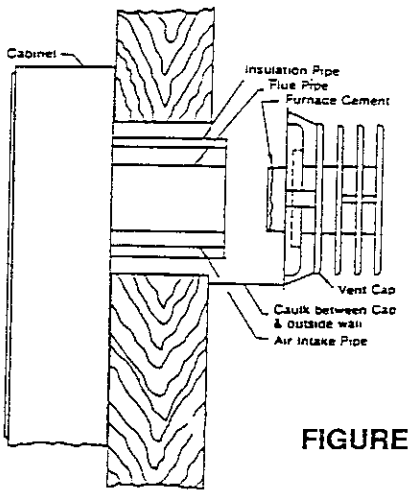


FIGURE 2

SPECIAL NOTE: The above instructions would apply to the installation of the direct-vent component in a wall with a shingle, batt-and-board, lapsiding, or any kind of wood exterior. If the house has brick-veneer, stone or stucco siding, drills and saws suitable for these materials will be required, and masonry expansion screws or bolts will be needed to fasten the vent cap to the outer wall.

CAUTION: Some types of vinyl siding are subject to distortion and discoloring from heat at the exterior vent cap. As a precaution, it may be necessary to apply a metal sheathing around the outer dimensions of the vent cap. This should extend 12 to 18 inches out from the sides and top of the venting assembly. (Any light gauge metal would be suitable for this purpose, such as aluminum, galvanized steel, etc.).

5. GAS SUPPLY

To insure best performance and full input capacity, the gas supply line to the unit must be of adequate size. A main shut-off valve and union (ground joint type or flanged joint having packing resistant to the action of LP Gases) must be installed between the unit controls and the gas meter. Do not put any unnecessary strain on the manifold or control valve with pipe wrench.

An 1/8-inch N.P.T. plugged tapping accessible for test gauge connection should be installed immediately upstream of the gas supply connection to the appliance.

For the purpose of input adjustment the Minimum gas supply pressure for Natural gas is 4.5" water column and 11.0" water column for L.P. gas. The Maximum gas supply pressure for Natural gas is 7.0" water column and for L.P. 13" water column.

When a vertical gas supply installation is used, a condensate trap must be installed in the supply line adjacent to connection.

Check gas pipe connections for leaks, using a soapy solution. **Caution:** Do not check for gas leaks with lighted match!

CAUTION: USERS OF L.P. GAS

a. Piping and fittings used in connecting unit must be of type approved for use with L.P. Gas, and should be suitable for working pressure of not less than 124 lbs. per square inch.

b. Use pipe thread compound specifically approved for use with L.P. Gas. Under no circumstances should ordinary pipe dope be used on connections for L.P. Gas.

Once gas connections are made, reinstall the front of the unit.

6. PRESSURE REGULATOR

a. A pressure regulator is furnished as standard equipment. It is preset for 3.5" water column pressure for Natural Gas and 10.0" w.c. for L.P.

b. Manifold pressure can be obtained by removing the plug on the outlet side of the gas control, marked "Press, Tap." and securing a manometer fitting in its place. Operating pressures are 3.5" w.c. for natural gas and 10.0" w.c. for L.P.

The unit and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig.

The unit 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 pressures equal to or less than 1/2 psig

C. LIGHTING AND OPERATION OF HEATER

1. LIGHTING AND OPERATION

Access to the pilot burner is through a sealed door on the upper left corner of the burner access plate on the front of the combution chamber. Wingnuts must be removed to permit the pilot acccess door to be opened. Procedure for lighting is as follows:

FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

A. THIS APPLIANCE HAS A PILOT WHICH MUST BE LIGHTED BY HAND. 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 YOU SMELL GAS:

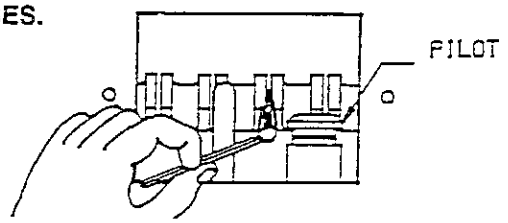
- DO NOT TRY TO LIGHT ANY APPLIANCE.
- DO NOT TOUCH ANY ELECTRIC SWITCH; DO NOT USE ANY PHONE IN YOUR BUILDING.
- IMMEDIATELY CALL YOUR GAS SUPPLIER FROM A NEIGHBORS PHONE. FOLLOW THE GAS SUPPLIERS INSTRUCTIONS.
- IF YOU CANNOT REACH YOUR GAS SUPPLIER, CALL THE FIRE DEPARTMENT.

C. USE ONLY YOUR HAND TO PUSH IN OR TURN THE GAS CONTROL KNOB. NEVER USE TOOLS. IF THE KNOB WILL NOT PUSH IN OR TURN BY HAND, DON'T TRY 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

1. STOP! READ THE SAFETY INFORMATION ON THE FIRST LABEL.
2. TURN THE CONTROL KNOB CLOCKWISE ↷ TO OFF. THE KNOB WILL CLICK BETWEEN PILOT AND OFF. THIS CONTROL HAS A LOCK-OUT FEATURE. IF THE PILOT IS BURNING WHEN THE CONTROL IS TURNED TO OFF, THE KNOB WILL LOCK UNTIL THE PILOT VALVE CLOSES.



3. WAIT FIVE (5) MINUTES TO CLEAR OUT ANY GAS. THEN SMELL FOR GAS, INCLUDING NEAR THE FLOOR. IF YOU SMELL GAS, STOP! FOLLOW "B" IN THE SAFETY INFORMATION ON THE FIRST LABEL. IF YOU DON'T SMELL GAS, GO TO THE NEXT STEP.
4. REMOVE THE TWO WINGNUTS THEN REMOVE THE PILOT ACCESS DOOR. LOCATE THE PILOT AS ILLUSTRATED.

5. TURN THE KNOB COUNTERCLOCKWISE ↶ TO PILOT (AGAINST A STOP - DO NOT PUSH THE KNOB IN AS YOU TURN).
6. POSITION YOURSELF SO THE PILOT CAN BE SEEN. PUSH THE CONTROL KNOB IN FULLY AND HOLD IT IN. IMMEDIATELY LIGHT THE PILOT WITH A MATCH. CONTINUE TO HOLD THE KNOB IN AND REPLACE THE PILOT ACCESS DOOR. HOLD THE KNOB IN ABOUT ONE MINUTE AFTER THE PILOT LIGHTS. RELEASE THE KNOB AND IT WILL POP BACK OUT. THE PILOT SHOULD REMAIN LIT. IF IT GOES OUT REPEAT STEPS 2 THROUGH 6.
   - IF THE KNOB DOES NOT POP OUT WHEN RELEASED, STOP AND IMMEDIATELY CALL YOUR SERVICE TECHNICIAN OR GAS SUPPLIER.
   - IF THE PILOT WILL NOT STAY LIT AFTER SEVERAL TRIES, TURN THE GAS CONTROL KNOB CLOCKWISE ↷ TO "OFF", THEN CALL YOUR SERVICE TECHNICIAN OR GAS SUPPLIER.
7. TURN THE KNOB COUNTERCLOCKWISE ↶ TO HIGH. ADJUST THE KNOB BETWEEN HI AND LOW AS DESIRED.

TO TURN OFF GAS TO APPLIANCE

1. TURN KNOB CLOCKWISE ↷ TO OFF. KNOB WILL CLICK BETWEEN PILOT AND OFF.
2. IF THE HEATER IS EQUIPPED WITH OPTIONAL BLOWER, TURN OFF ALL ELECTRICAL POWER TO THE HEATER IF SERVICE IS TO BE PERFORMED.

2. PILOT

The pilot flame should cover 3/8-inch to 1/2-inch of the thermocouple tip. See Figure 4.

IMPORTANT:

Because this series of Direct-Vent components is designed so that all air for combustion is obtained from the outside atmosphere and all flue gases are discharged to the outside atmosphere, any excessive leak in the system will cause improper pilot and main burner operation.

Should there be an indication of pilot and/or main burner flames being extinguished or unstable, the following steps should be taken:

1. Recheck installation of the vent assembly, following instructions outlined in steps 2, 3, 4 and 5 of "B. INSTALLATION."
2. Make certain pilot access door is closed tightly. (Check for good impression of combustion chamber opening on pilot access door gasket.)

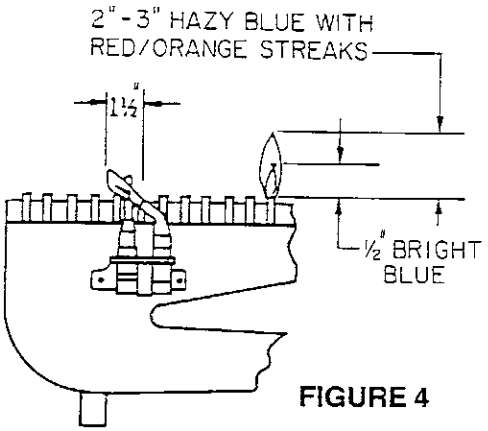


FIGURE 4

D. CARE & MAINTENANCE

1. CARE OF FINISH

The finish on the cabinet of this direct-vent component is painted. With proper care it will last for many years. To protect the finish, observe these precautions:

a. Clean surface with dry cloth only when unit is cool.
b. To remove soil that cannot be dusted or wiped off with a dry cloth, use a damp cloth or wash with mild soap and water, drying thoroughly afterward.
c. Do not apply varnish, plastic coatings, or furniture polish!

2. CLEANING INSIDE OF UNIT

The surface of the combustion chamber and the top baffles will accumulate a layer of dust and need an occasional cleaning because of the large amount of air that passes through it while it is operating.

3. MAIN BURNER AND PILOT

A visual check of the main burner and pilot flames should be made periodically.

If excessive yellow tipping flames are noted, the main burner and pilot should be removed and cleaned with a brush and blown out with an air hose.

Refer to Figure 4 for illustration of approximate pilot and main burner flame size and configuration.

4. VENTING SYSTEM

The outside vent cap should be inspected annually, before each heating season, for damage. If the outside vent is hit with enough force to move or distort any portion of it, the joint connections and seals must be inspected.

If any blockage (leaves, debris, etc.) is found on or around the outside vent, remove it before operating the furnace.

If any damage or other than surface corrosion is noted, the vent cap and/or vent pipes must be replaced.

To inspect and/or reseal the joints in the vent system refer to section B, item 4, and dismantle the system in reverse order.
WARNING: WHEN A CONNECTION SEALED WITH FURNACE CEMENT IS BROKEN FOR ANY REASON, ALL THE OLD CEMENT MUST BE REMOVED AND FRESH CEMENT APPLIED AS THE PARTS ARE RECONNECTED.

5. SUMMER MAINTENANCE

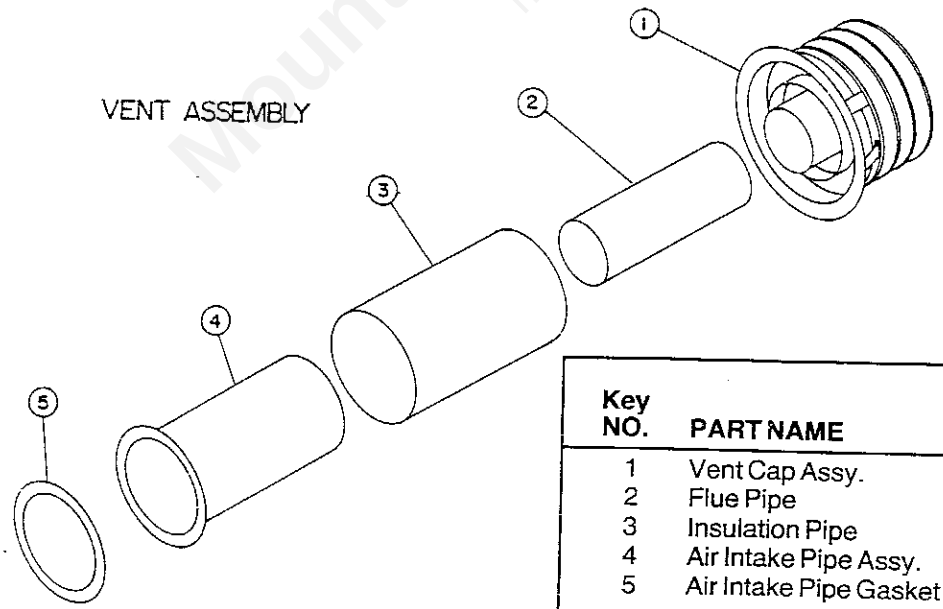
During the Summer the inner surfaces of the outdoor sections of the air intake and flue outlet assembly may gather dust, insects, cobwebs, or even wasps nests. It would be advisable, therefore, to protect the exposed section with a polyethylene bag or "dust cover" during seasons of non-use. The outside spacer section and air intake assembly may be removed, if necessary, for cleaning.

6. REPAIR AND SERVICE

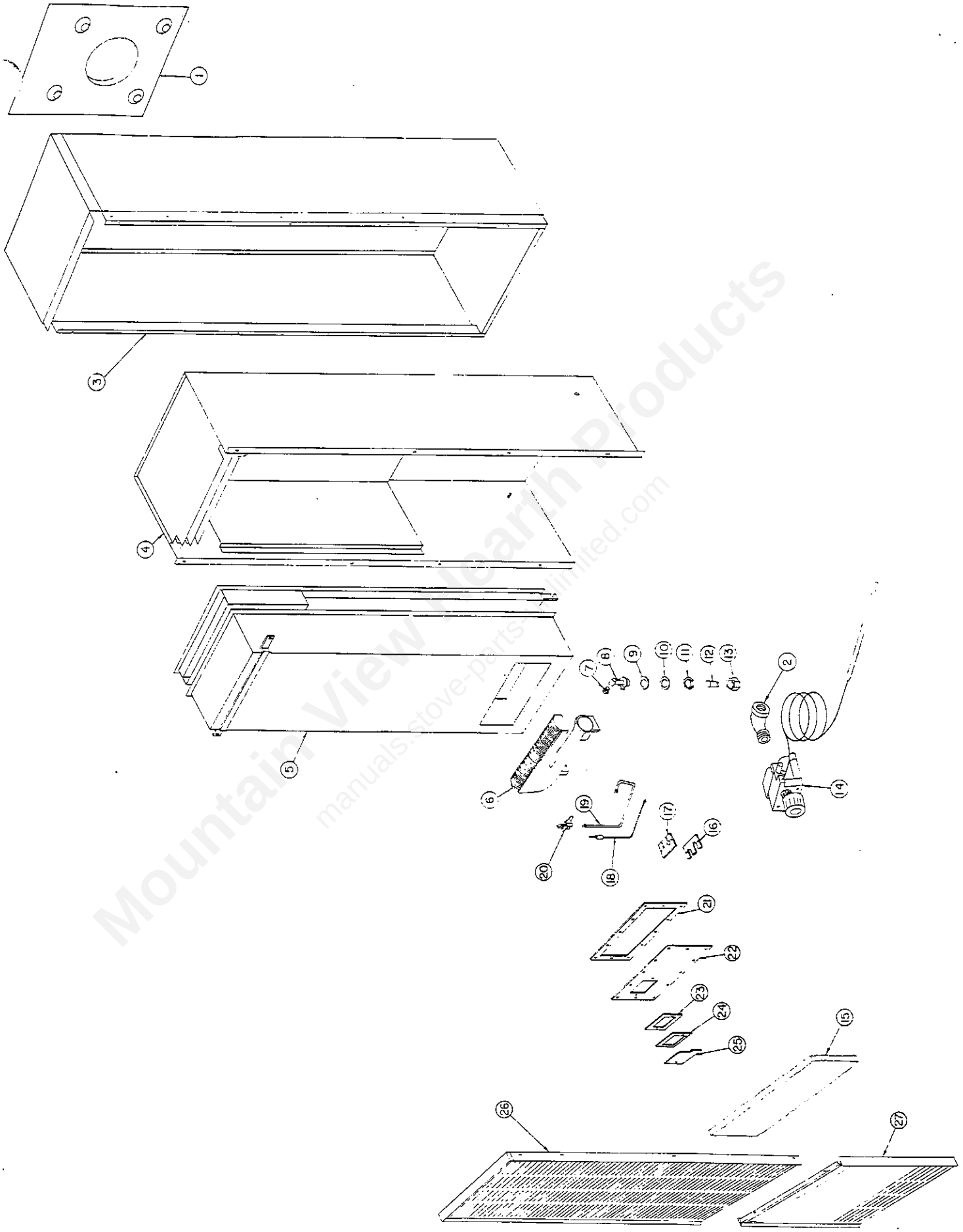
If and when your direct-vent wall furnace needs service or a new part, consult the dealer from whom it was purchased, giving this information:

a. Description of operating problem or necessary replacement part.
See parts list for description and proper name.
b. Model number and serial number of unit.
c. Type of gas used.
d. Date unit was purchased.
e. Name and Address of dealer from whom purchased.

CAUTION: To ensure safety and good performance, all adjustments, servicing and replacement of parts should be handled by your dealer.



Key NO.	PART NAME	QTY.	6" To 13" Wall PART NO.	13" To 20" Wall PART NO.
1	Vent Cap Assy.	1	804505P	804505P
2	Flue Pipe	1	815239	825487
3	Insulation Pipe	1	815240	825488
4	Air Intake Pipe Assy.	1	804487P	814736P
5	Air Intake Pipe Gasket	1	804486	804486



KEY NO.	PART NAME	QTY.	LSC25R PART NO.
1	Rear Wall Shield	1	804637
2	Elbow 3/8 Street	1	P1028
3	Cabinet Assy.	1	836835PC
4	Inner Casing Weld	1	836833
5	Combustion Chamber Ptnd.	1	804684P
6	Burner	1	804688
7	Orifice Nat. Gas	1	P4932
	Orifice L.P. Gas	1	P4903
8	Manifold	1	804454
9	Manifold Gasket	1	804658
10	Manifold Ring	1	814767
11	Locknut		*
12	Tail Piece	1	5538Z
13	Nut Tail Piece	1	5538Z
14	Control Assy. Nat. Gas	1	050078
	Control Assy. L.P. Gas	1	050079
15	Access Door Insulation	1	814985
16	Pilot Tube Cover	1	804689
17	Pilot Tube Cover Gasket	2	804667
18	Thermocouple	1	K15DA18
19	Tubing Alum. 1/4	1	039554
20	Pilot Burner Nat. Gas	1	J999EHA7218D
	Pilot Burner L.P. Gas	1	J999EHA4210D
21	Burner Access Plt. Gasket	1	804657
22	Burner Access Plate Ptnd.	1	804654P
23	Pilot Window Gasket	1	804508
24	Pilot Window Weld	1	804527
25	Pilot Window Cover Ptnd.	1	804456P
26	Front Panel Assy.	1	048415
27	Compartment Door Assy.	1	048416

* Supplied With Key No. 8

WARM MORNING
A Division of Martin Industries, Inc.
4200 St. Clair Avenue
Washington Park, IL 62203