

UNVENTED (VENT-FREE) GAS STOVE HEATER OWNER'S OPERATION AND INSTALLATION MANUAL





IMPORTANT: This burner system must be installed into approved FMI PRODUCTS, LLC cast iron stove bodies, models CISB, CISNI, CISAW or CISAS only.

MODELS SVYD18NRA AND SVYD18PRA REMOTE-READY CONTROL GAS LOG HEATER (BURNER SYSTEM FOR CAST IRON STOVES)

▲ 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 instructions.
 - 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.

INSTALLER: Leave this manual with the appliance. CONSUMER: Retain this manual for future reference.

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SAFETY

WARNING: The SVYD18NRA/PRA series vent-free gas log heater is only approved for use in the CISB, CISNI, CISAW, or CISAS cast iron stove models.

(* Indicates Color Suffix Designation)

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

A WARNING: This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to <u>Air for Combustion and Ventilation</u> section on page 5 of this manual.

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

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

* Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer

WARNING: This product contains and/or generates chemicals known to the state of California to cause cancer or birth defects or other reproductive harm.

IMPORTANT: Read this owner's manual carefully and completely before trying to assemble, operate or service this heater. Improper use of this heater can cause serious injury or death from burns, fire, explosion, electrical shock and carbon monoxide poisoning.

ADANGER: Carbon monoxide poisoning may lead to death!

SAFETY

Continued

Carbon Monoxide Poisoning: Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness or nausea. If you have these signs, the heater may not be working properly. Get fresh air at once! Have heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol and those at high altitudes.

Natural and Propane/LP Gas: Natural and propane/LP gases are odorless. An odormaking agent is added to the gas. The odor helps you detect a gas leak. However, the odor added to the gas can fade. Gas may be present even though no odor exists.

Make certain you read and understand all warnings. Keep this manual for reference. It is your guide to safe and proper operation of this heater.

WARNING: Any change to this heater or its controls can be dangerous.

WARNING: Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this heater.

WARNING: Do not allow fans to blow directly into the heater. Avoid any drafts that alter burner flame patterns. Ceiling fans can create drafts that alter burner flame patterns. Altered burner patterns can cause sooting.

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. Never place any objects on the heater. Stove becomes very hot when running heater. Keep children and adults away from hot surface to avoid burns or clothing ignition. Heater will remain hot for a time after shutdown. Allow surface to cool before touching.

Carefully supervise young children when they are in the room with stove. When using the optional hand-held remote accessory, keep selector switch in the OFF position to prevent children from turning on burners with remote.

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

- This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.
- Do not place propane/LP supply tank(s) inside any structure. Locate propane/LP supply tank(s) outdoors (propane/LP units only).
- 3. If you smell gas
 - · shut off gas supply
 - · 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 instructions
 - if you cannot reach your gas supplier, call the fire department
- 4. This heater shall not be installed in a bedroom or bathroom.
- Do not use this stove as a wood burning fireplace. Use only model SVYD18PRA/ NRA series vent-free gas log heater for CISB, CISNI, CISAW or CISAW cast iron stove models.

SAFETY

Continued

- Do not add extra logs or ornaments such as pine cones, vermiculite or rock wool. Using these added items can cause sooting.
- This log heater is designed to be smokeless. If logs ever appear to smoke, turn off heater and call a qualified service person.
 Note: During initial operation, slight smoking could occur due to log curing and heater burning manufacturing residues.
- To prevent the creation of soot, follow the instructions in <u>Cleaning and Maintenance</u>, page 18.
- Before using furniture polish, wax, carpet cleaners or similar products, turn heater off. If heated, the vapors from these products may create a white powder residue within burner box or on adjacent walls or furniture.
- 10. This heater needs fresh, outside air ventilation to run properly. This heater has an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS shuts down the heater if not enough fresh air is available. See <u>Air for Combustion and Ventilation</u>, page 5. If heater keeps shutting off, see *Troubleshooting*, page 17.
- 11. Do not run heater
 - where flammable liquids or vapors are used or stored

- · under dusty conditions
- 12. Do not use this stove to cook food or burn paper or other objects.
- 13. Do not use heater if any part has been exposed to or under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
- Do not operate heater if any log is broken.
 Do not operate heater if a log is chipped (dime-sized or larger).
- Turn heater off and let cool before servicing. Only a qualified service person should service and repair heater.
- 16. Operating heater above elevations of 4,500 feet could cause pilot outage.
- To prevent performance problems, the use of a propane/LP tank of less than 100 lb. capacity (propane/LP units only).
- Provide adequate clearances around air openings.
- Screen must be completely closed before using heater. Never run heater with screen open.

PRODUCT IDENTIFICATION

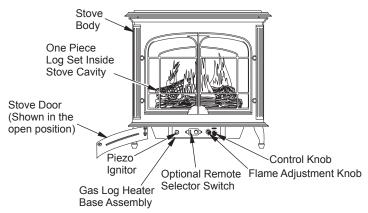


Figure 1 - Typical Stove Cabinet Model with Gas Log Heater (Shown is Oxford™ Model with Model SVYD18PRA/NRA Heater)

LOCAL CODES

Install and use heater with care. Follow all local codes. In the absence of local codes, use the latest edition of *The National Fuel Gas Code*, *ANSI Z223.1/NFPA 54**.

*Available from:

American National Standards Institute, Inc. 1430 Broadway New York. NY 10018

National Fire Protection Association, Inc. Batterymarch Park Quincy, MA 02269 State of Massachusetts: The installation must be made by a licensed plumber or gas fitter in the Commonwealth of Massachusetts.

Sellers of unvented propane or natural gas-fired supplemental room heaters shall provide to each purchaser a copy of 527 CMR 30 upon sale of the unit.

Vent-free gas products are prohibited for bedroom and bathroom installation in the Commonwealth of Massachusetts.

PRODUCT FEATURES

OPERATION

This heater is clean burning. It requires no outside venting. There is no heat loss out a vent or up a chimney. Heat is generated by realistic, dancing yellow flames. This heater is designed for vent-free operation. State and local codes in some areas prohibit the use of vent-free heaters.

SAFETY PILOT

This heater has a pilot with an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS/pilot is a required feature for vent-free room heaters. The ODS/pilot shuts off the heater if there is not enough fresh air.

PIEZO IGNITION SYSTEM

This heater has a piezo ignitor. This system requires no matches, batteries or other sources to light heater.

AIR FOR COMBUSTION AND VENTILATION

WARNING: This heater shall not be installed in a room or space unless the required volume of indoor combustion air is provided by the method described in the National Fuel Gas Code, ANSI Z223.1/NFPA 54, the International Fuel Gas Code, or applicable local codes. Read the following instructions to insure proper fresh air for this and other fuel-burning appliances in your home.

Today's homes are built more energy efficient than ever. New materials, increased insulation and new construction methods help reduce heat loss in homes. Home owners weather strip and caulk around windows and doors to keep the cold air out and the warm air in. During heating months, home owners want their homes as airtight as possible.

While it is good to make your home energy efficient, your home needs to breathe. Fresh air must enter your home. All fuel-burning appliances need fresh air for proper combustion and ventilation.

Exhaust fans, fireplaces, clothes dryers and fuel burning appliances draw air from the house to operate. You must provide adequate fresh air for these appliances. This will insure proper venting of vented fuel-burning appliances.

PROVIDING ADEQUATE VENTILATION

The following are excerpts from National Fuel Gas Code, ANSI Z223.1/NFPA 54, Air for Combustion and Ventilation.

All spaces in homes fall into one of the three following ventilation classifications:

- 1. Unusually Tight Construction
- 2. Unconfined Space
- 3. Confined Space

The information on pages 5 through 7 will help you classify your space and provide adequate ventilation.

AIR FOR COMBUSTION AND VENTILATION

Continued

Unusually Tight Construction

The air that leaks around doors and windows may provide enough fresh air for combustion and ventilation. However, in buildings of unusually tight construction, you must provide additional fresh air.

Unusually tight construction is defined as construction where:

- walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of one perm (6 x 10-11 kg per pa-sec-m²) or less with openings gasketed or sealed and
- b. weather stripping has been added on openable windows and doors and
- c. caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical and gas lines and at other openings.

If your home meets all of these three criteria, you must provide additional fresh air. See *Ventilation Air From Outdoors*, page 7.

If your home does not meet all of the three criteria above, proceed to <u>Determining Fresh-Air Flow For Fireplace Location</u>.

Confined and Unconfined Space

The National Fuel Gas Code, ANSI Z223.1/ NFPA 54 defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 Btu/hr (4.8 m³ per kw) of the aggregate input rating of all appliances installed in that space and an unconfined space as a space whose volume is not less than 50 cubic feet per 1,000 Btu/hr (4.8 m³ per kw) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed*, through openings not furnished with doors, are considered a part of the unconfined space.

* Adjoining rooms are communicating only if there are doorless passageways or ventilation grills between them.

DETERMINING FRESH-AIR FLOW FOR HEATER LOCATION

Determining if You Have a Confined or Unconfined Space

Use this work sheet to determine if you have a confined or unconfined space.

Space: Includes the room in which you will install fireplace plus any adjoining rooms with doorless passageways or ventilation grills between the rooms.

١.	Determine the volume of the space (length
	x width x height).	
	Length x Width x Height =	_cu. ft.
	(volume of space)	

Example: Space size 20 ft. (length) x 16 ft. (width) x 8 ft. (ceiling height) = 2560 cu. ft. (volume of space)

If additional ventilation to adjoining room is supplied with grills or openings, add the volume of these rooms to the total volume of the space.

2.	Multiply the space volume by 20 to determine			
	the maximum Btu/Hr the space can sup-			
	port.			

____ (volume of space) x 20 = (Maximum Btu/Hr the space can support)

Example: 2560 cu. ft. (volume of space) x 20 = 51,200 (maximum Btu/Hr the space can support)

3. Add the Btu/Hr of all fuel burning appliances in the space.

Vent-free fireplace		Btu/Hr
Gas water heater*		Btu/Hr
Gas furnace		Btu/Hr
Vented gas heater		Btu/Hr
Gas fireplace logs		Btu/Hr
Other gas appliances* +		Btu/Hr
Total =	:	Btu/Hr

* Do not include direct-vent gas appliances. Direct-vent draws combustion air from the outdoors and vents to the outdoors.

Example:

Gas water heater		40,000	_Btu/Hr
Vent-free fireplace	+	30,000	Btu/Hr
Total	=	70,000	_ _Btu/Hr

 Compare the maximum Btu/Hr the space can support with the actual amount of Btu/ Hr used.

support)	Btu/Hr (maximum the space car
support)	Btu/Hr (actual amount of Btu/H
used)	(

AIR FOR COMBUSTION AND VENTILATION

Continued

Example: 51,200 Btu/Hr (maximum the

space can support)

70,000 Btu/Hr (actual amount of

Btu/Hr used)

The space in the above example is a confined space because the actual Btu/Hr used is more than the maximum Btu/Hr the space can support. You must provide additional fresh air. Your options are as follows:

- A. Rework worksheet, adding the space of an adjoining room. If the extra space provides an unconfined space, remove door to adjoining room or add ventilation grills between rooms. See <u>Ventilation Air From Inside</u> <u>Building</u>.
- B. Vent room directly to the outdoors. See Ventilation Air From Outdoors.
- C. Install a lower Btu/Hr fireplace, if lower Btu/ Hr size makes room unconfined.

If the actual Btu/Hr used is less than the maximum Btu/Hr the space can support, the space is an unconfined space. You will need no additional fresh air ventilation

A WARNING: If the area in which the heater may be operated does not meet the required volume for indoor combustion air, combustion and ventilation air shall be provided by one of the methods described in the National Fuel Gas Code, ANSI Z223.1/NFPA 54, the International Fuel Gas Code, or applicable local codes.

VENTILATION AIR

Ventilation Air From Inside Building

This fresh air would come from an adjoining unconfined space. When ventilating to an adjoining unconfined space, you must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor on the wall connecting the two spaces (see options 1 and 2, Figure 2). You can also remove door into adjoining room (see option 3, Figure 2). Follow the National Fuel Gas Code, ANSI Z223.1/NFPA 54, Air for Combustion and Ventilation for required size of ventilation grills or ducts.

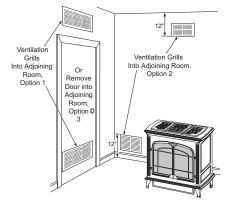


Figure 2 - Ventilation Air from Inside Building (Oxford™ Stove Model Shown)

Ventilation Air From Outdoors

Provide extra fresh air by using ventilation grills or ducts. You must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor. Connect these items directly to the outdoors or spaces open to the outdoors. These spaces include attics and crawl spaces. Follow the *National Fuel Gas Code, ANSI Z223.1/NFPA 54, Air for Combustion and Ventilation* for required size of ventilation grills or ducts.

IMPORTANT: Do not provide openings for inlet or outlet air into attic if attic has a thermostat-controlled power vent. Heated air entering the attic will activate the power vent.

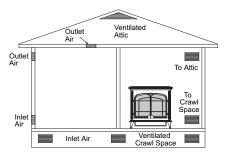


Figure 3 - Ventilation Air from Outdoors (Oxford™ Stove Model Shown)

NOTICE: This heater is intended for use as supplemental heat. Use this heater along with your primary heating system. Do not install this heater as your primary heat source. If you have a central heating system, you may run system's circulating blower while using heater. This will help circulate the heat throughout the house. In the event of a power outage, you can use this heater as your primary heat source.

WARNING: A qualified service person must install fireplace. Follow all local codes.

WARNING: Never install the heater

- in a bedroom or bathroom
- · in a recreational vehicle
- where curtains, furniture, clothing or other flammable objects are less than 42" from the front, top or sides of the heater
- · in high traffic areas
- in windy or drafty areas

A CAUTION: This heater creates warm air currents. These currents move heat to wall surfaces next to heater. Installing heater next to vinyl or cloth wall coverings or operating heater where impurities (such as, but not limited to, tobacco smoke, aromatic candles, cleaning fluids, oil or kerosene lamps, etc.) in the air exist, may discolor walls or cause odors.

IMPORTANT: Vent-free heaters add moisture to the air. Although this is beneficial, installing heater in rooms without enough ventilation air may cause mildew to form from too much moisture. See Air for Combustion and Ventilation, page 5.

CHECK GAS TYPE

Use only the correct type of gas (natural or propane/LP). If your gas supply is not the correct gas type, do not install heater. Call dealer where you bought heater for proper type heater.

WARNING: This appliance is equipped for either natural gas or propane/LP gas but not both. Gas type is indicated on the rating plate. Field conversion is not permitted.

CLEARANCES TO COMBUSTIBLES

WARNING: Maintain the minimum clearances. If you can, provide greater clearances from floor, ceiling and adjoining side and back walls.

Carefully follow the instructions below. This stove is a freestanding unit designed to set directly on the floor. *IMPORTANT*: You must maintain minimum wall and ceiling clearances during installation. The minimum clearances are shown in Figure 4, page 9. Measure from outermost point of stove top.

Minimum Wall and Ceiling Clearances (see Figure 4, page 9)

- A. Clearances from outermost point of stove top to any combustible side wall should not be less than 12".
- B. Clearances from outermost point of stove top to any combustible back wall should not be less than 6" (includes corner installations).
- C. Clearances from the stove top to the ceiling should not be less than 48".

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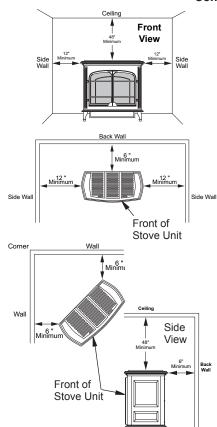


Figure 4 - Minimum Clearance to Walls and Ceiling (Stove May Vary Depending on Model)

UNPACKING

- Lift off corrugated box enclosing stove body crating.
- Remove screws fastening back and top of wood frame enclosure. Two or more people must carefully lift stove up and out of wooden crate.
- Remove plastic bag from stove body.
- Remove back panel from stove (see Figure 5). Use an adjustable wrench or a 10 mm socket. Remove 4 bolts and washers. Keep bolts and washers to reattach back panel later.

- Remove bubble-wrapped log set, rod and screen from stove. Remove all protective packaging applied for shipment.
- Check heater for any shipping damage. If heater is damaged call FMI PRODUCTS, LLC at 1-866-328-4537 for replacement parts before returning to dealer. Some fiber flakes may fall from logs. This is acceptable.
- Place freestanding stove near desired location in room.

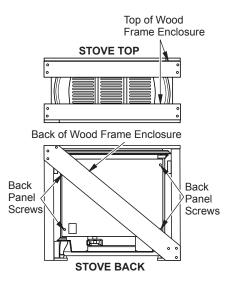


Figure 5 - Unpacking Stove from Wooden Shipping Enclosure

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CAUTION: Do not remove the data plates attached to the heater base assembly. The data plates contain important warranty and safety information.

WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.

INSTALLING GAS LOG INTO STOVE

- 1. Remove log from carton.
- 2. Remove all protective packaging applied to log for shipment.
- Check log for any shipping damage. If damaged (pieces larger than the size of a dime), promptly inform dealer where you bought heater.
- 4. Set one-piece log on heater base as shown in Figure 6. Make sure middle section at bottom of log is seated into "U" shaped cutout in center of heater base. Log will fit securely on base. *IMPORTANT*: Make sure log does not cover any burner ports and does not touch the stove cavity (see Figure 7).
- 5. Fasten back panel to stove with four M6 x 1 bolts and washers.
- Place freestanding stove in desired position in room. Be sure to maintain clearances to combustibles as outlined on page 8.

A CAUTION: After installation and periodically thereafter, check to ensure that no flame comes in contact with any log. With the heater set to HI, check to see if flames contact any log. If so, reposition logs according to the log installation instructions in this manual. Flames contacting logs will create soot.

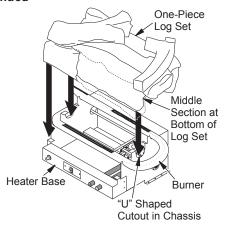


Figure 6 - Installing One-Piece Stove Log Set



Safety Pilot Location

Figure 7 - Top View of One-Piece Log Set on Gas Log Heater

CONNECTING TO GAS SUPPLY

WARNING: This appliance requires a 1/2" NPT (National Pipe Thread) inlet connection to the pressure regulator.

WARNING: A qualified service person must connect heater to gas supply. Follow all local codes.

A CAUTION: Never connect propane/LP heater directly to the propane/LP supply. This heater requires an external regulator (not supplied). Install the external regulator between the heater and propane/LP supply.

INSTALLATION Continued

WARNING: Never connect natural gas heater to private (non-utility) gas wells. This gas is commonly known as wellhead gas.

Installation Items Needed

Before installing heater, make sure you have the items listed below.

- external regulator propane/LP only (supplied by installer)
- · piping (check local codes)
- sealant (resistant to propane/LP gas)
- · equipment shutoff valve *
- test gauge connection *
- · sediment trap
- tee joint
- pipe wrench
- * A equipment shutoff valve with 1/8" NPT tap is an acceptable alternative to test gauge connection. Purchase the optional equipment shutoff valve from your dealer.

The gas inlet connection for the stove heater is located on the lower right-hand side of stove when viewed from the front of unit. The gas connection can be made either through the bottom right side or through the lower back opening as illustrated in Figure 8. Make sure gas log heater is secured to stove cavity assembly.

For propane/LP units, installer must supply an external regulator. The external regulator will reduce incoming gas pressure. You must reduce incoming gas pressure to between 11" and 14" of water. If you do not reduce incoming gas pressure, heater regulator damage could occur. Install external regulator with the vent pointing down as shown in Figure 9. Pointing the vent down protects it from freezing rain or sleet.

A CAUTION: Use only new, black iron or steel pipe. Internally-tinned copper tubing may be used in certain areas. Check your local codes. Use pipe of 1/2" diameter or greater to allow proper gas volume to heater. If pipe is too small, undue loss of volume will occur.

Installation must include a equipment shutoff valve, union and plugged 1/8" NPT tap. Locate NPT tap within reach for test gauge hook up. NPT tap must be upstream from heater (see Figure 10, page 12).

IMPORTANT: Install equipment shutoff valve in an accessible location. The equipment shutoff valve is for turning on or shutting off the gas to the appliances.

Check your building codes for any special requirements for locating equipment shutoff valve to fireplaces.

Apply pipe joint sealant lightly to male threads. This will prevent excess sealant from going into pipe. Excess sealant in pipe could result in clogged heater valves.

WARNING: Use pipe joint sealant that is resistant to liquid petroleum (LP) gas.

We recommend that you install a sediment trap in supply line as shown in Figure 10, page 12. Locate sediment trap where it is within reach for cleaning. Install in piping system between fuel supply and heater. Locate sediment trap where trapped matter is not likely to freeze. A sediment trap traps moisture and contaminants. This keeps them from going into heater controls. If sediment trap is not installed or is installed wrong, heater may not run properly.

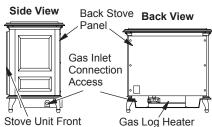


Figure 8 - Gas Regulator Location and Gas Line Access Into Stove Cabinet

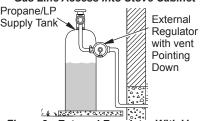


Figure 9 - External Regulator With Vent Pointing Down

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CAUTION: Avoid damage to regulator. Hold gas regulator with wrench when connecting it to gas piping and/or fittings.

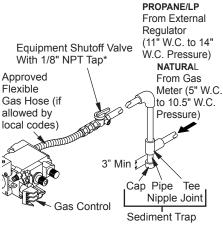


Figure 10 - Gas Connection (SVYD18PRA/NRA Series)

- * Purchase the optional equipment shutoff valve from your dealer.
- ** Minimum inlet pressure for purpose of input adjustment.

CHECKING GAS CONNECTIONS

WARNING: Test all gas piping and connections, internal and external to unit, for leaks after installing or servicing. Correct all leaks at once.

WARNING: Never use an open flame to check for a leak. Apply a noncorrosive leak detection fluid to all joints. Bubbles forming show a leak. Correct all leaks at once.

A CAUTION: Make sure external regulator has been installed between propane/LP supply and heater. See guidelines under <u>Connecting to Gas Supply</u>, page 10.

PRESSURE TESTING GAS SUPPLY PIPING SYSTEM

Test Pressures In Excess Of 1/2 PSIG (3.5 kPa)

- Disconnect appliance with its appliance main gas valve (control valve) and equipment shutoff valve from gas supply piping system. Pressures in excess of 1/2 psig will damage heater regulator.
- Cap off open end of gas pipe where equipment shutoff valve was connected.
- Pressurize supply piping system by either opening propane/LP supply tank valve for propane/LP gas or opening main gas valve located on or near gas meter for natural gas or using compressed air.
- Check all joints of gas supply piping system. Apply a noncorrosive leak detection fluid to gas joints. Bubbles forming show a leak.
- 5. Correct all leaks at once.
- Reconnect heater and equipment shutoff valve to gas supply. Check reconnected fittings for leaks.

Test Pressures Equal To or Less Than 1/2 PSIG (3.5 kPa)

- 1. Close equipment shutoff valve (see Figure 11).
- Pressurize supply piping system by either opening propane/LP supply tank valve for propane/LP gas or opening main gas valve located on or near gas meter for natural gas or using compressed air.
- Check all joints from gas meter for natural or propane/LP supply to equipment shutoff valve (see Figure 12 or 13, page 13). Apply a noncorrosive leak detection fluid to gas joints. Bubbles forming show a leak.
- 4. Correct all leaks at once.

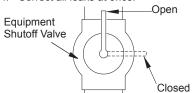


Figure 11 - Equipment Shutoff Valve

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PRESSURE TESTING HEATER GAS CONNECTIONS

- Open equipment shutoff valve (see Figure 11, page 12).
- Open main gas valve located on or near gas meter for natural gas or open propane/LP supply tank valve.
- 3. Make sure control knob of heater is in the OFF position.

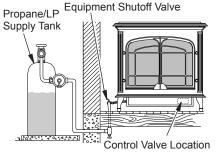


Figure 12 - Checking Gas Joints (Oxford™ Stove Model Shown)

- Check all joints from equipment shutoff valve to control valve (see Figure 12 or 13). Apply a noncorrosive leak detection fluid to gas joints. Bubbles forming show a leak.
- 5. Correct all leaks at once.
- 6. Light heater (see *Operation*). Check all other internal joints for leaks.
- 7. Turn off heater (see <u>To Turn Off Gas to Appliance</u>, page 15).

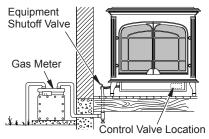


Figure 13 - Checking Gas Joints (Oxford™ Stove Model Shown)

INSTALLING ROD AND SCREEN

- Insert rod through small rings located at top of screen (see Figure 14).
- From back of stove, insert rod into hole located inside right front of stove as shown in Figure 15, page 13.
- Slip left side of rod down into slot on inside left front of stove (see Figure 15, page 13).

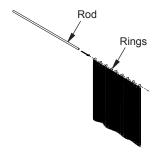


Figure 14 - Assembling Rod and Screen

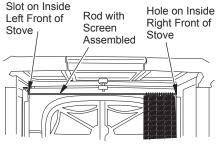


Figure 15 - Installing Screen Into Stove (View From Back of Stove)

OPERATION



FOR YOUR SAFETY READ BEFORE LIGHTING



LIGHTING INSTRUCTIONS



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 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 or gas supplier. 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.

NOTICE: During initial operation of new heater, burning logs will give off a paper-burning smell. Open window to vent smell. This will only last a few hours.

- STOP! Read the safety information above.
- Make sure equipment shutoff valve is fully open.
- 3. Set switch to OFF position.

WARNING: Burners will come on automatically within one minute when the remote selector switch is in the ON position after the pilot is lit.

- 4. Press in and turn control knob clockwise to the OFF position.
- 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, page 13. If you don't smell gas, go to the next step.
- Press in and turn control knob counterclockwise to the PILOT position. Press in control knob for five (5) seconds (see step 5).
 - Note: You may be running this heater for the first time after hooking up to gas supply. If so, the control knob may need to be pressed in for 30 seconds or more. This will allow air to bleed from the gas system.
- 7. With control knob pressed in, press and release ignitor button. This will light pilot. The pilot is attached to the front burner (see Figure 7, page 10). If needed, keep pressing ignitor button until pilot lights. Note: If pilot does not stay lit, contact a qualified service person or gas supplier for repairs. Until repairs are made, light pilot with match. To light pilot with match, see Manual Lighting Procedure, page 15.
- Keep control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release control knob.
 - If control knob does not pop out when released, contact a qualified service

OPERATION

Continued

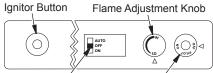
person or gas supplier for repairs.

Note: If pilot goes out, repeat steps 4 through 8.

- 9. Slightly push in and turn control knob counterclockwise to the ON position.
- Wait one minute and switch remote selector switch to the ON position to light burners. Note: AUTO is only functional when using GWMT1 or GWMS2 optional accessories.
- 11. Set flame adjustment knob to any level between HI and LO.
- 12. To leave pilot lit and shut off burners only, turn control knob clockwise to the PILOT position.

A CAUTION: Do not try to adjust heating levels by using the equipment shutoff valve.

WARNING: Make sure the selector switch is in the OFF position when you are away from home for long periods of time. Heater will come on automatically with selector switch in the ON position.



Selector Switch in OFF Position Control Knob (Optional Remote Control)

Figure 16 - Control Knob and Ignitor Button Location (Shown as Supplied, No Control Options)

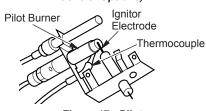


Figure 17 - Pilot

TO TURN OFF GAS TO APPLIANCE



Shutting Off Heater

- Turn control knob clockwise to the OFF position.
- Set selector switch in the OFF position to keep from draining battery.
- 3. Close equipment shutoff valve (see Figure 11, page 12).

MANUAL LIGHTING PROCEDURE



- Follow steps 1 through 6 under <u>Lighting</u> <u>Instructions</u>, page 14 and 15.
- Press control knob and light pilot with match.
- Keep control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release control knob. Now follow steps 9 through 11 under <u>Lighting Instructions</u>, page 14.



OPTIONAL HAND-HELD REMOTE OPERATION



Note: All remote control accessories must be purchased separately (see <u>Accessories</u>, page 24). Follow instructions included with the remote control.

NOTICE: You must light the pilot before using the hand-held remote control unit. See <u>Lighting</u> <u>Instructions</u> on page 14 and 15.

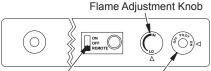
After lighting, let pilot flame burn for about one minute. Turn control knob to ON position. Adjust flame adjustment knob anywhere between HI and LO. Slide the selector switch to the REMOTE position (see Figure 18).

Note: The burner may light if hand-held remote was on when selector switch was last turned off. You can now turn the burner on and off with the hand-held remote control unit.

OPERATION

Continued

IMPORTANT: Do not leave the selector switch in the REMOTE or ON position when the pilot is not lit. This will drain the battery.



Remote Selector Switch in REMOTE Position (Optional Remote Control)

Control Knob in ON Position

Figure 18 - Setting the Remote Selector Switch, Control Knob and Flame Adjustment Knob for Remote Operation

INSPECTING BURNERS

Check pilot flame pattern and burner flame patterns often.

PILOT FLAME PATTERN

Figure 19 shows a correct pilot flame pattern. Figure 20 shows an incorrect pilot flame pattern. The incorrect pilot flame is not heating the thermocouple. This will cause the thermocouple to cool. When the thermocouple cools, the heater will shut down.

If pilot flame pattern is incorrect, as shown in Figure 20

- turn heater off (see <u>To Turn Off Gas to Appliance</u>, page 15
- see Troubleshooting, page 17

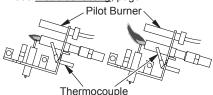


Figure 19 - Correct Figure 20 - Incorrect Pilot Flame Pattern (Propane/LP (Propane/LP Shown) Shown)

Note: The pilot flame on natural gas units will have a slight curve, but flame should be blue and have no yellow or orange color.

BURNER PRIMARY AIR HOLES

Air is drawn into the burner through the holes in the fitting at the burner entrance. These holes may become blocked with dust or lint. Periodically inspect these holes for any blockage and clean if needed. Blocked air holes will create soot

MAIN BURNER

Periodically inspect all burner flame holes with the heater running. All slotted burner flame holes should be open with yellow flame present. All round burner flame holes should be open with a small blue flame present. Some burner flame holes may become blocked by debris or rust, with no flame present. If so, turn off heater and let cool. Remove blockage. Blocked burner flame holes will create soot.

CLEANING AND MAINTENANCE

A WARNING: Turn off heater and let cool before cleaning.

CAUTION: You must keep control areas, burner and circulating air passageways of heater clean. Inspect these areas of heater before each use. Have heater inspected yearly by a qualified service person. Heater may need more frequent cleaning due to excessive lint from carpeting, pet hair, bedding material, etc.

WARNING: Failure to keep the primary air opening(s) of the burner(s) clean may result in sooting and property damage.

BURNER INJECTOR HOLDER AND PILOT AIR INLET HOLE

The primary air inlet holes allow the proper amount of air to mix with the gas. This provides a clean burning flame. Keep these holes clear of dust, dirt, lint and pet hair. Clean these air inlet holes prior to each heating season. Blocked air holes will create soot. We recommend that you clean the unit every three months during operation and have heater inspected yearly by a qualified service person.

We also recommend that you keep the burner tube and pilot assembly clean and free of dust and dirt. To clean these parts we recommend using compressed air no greater than 30 PSI. Your local computer store, hardware store or home center may carry compressed air in a can. If using compressed air in a can, please follow the directions on the can. If you don't follow directions on the can, you could damage the pilot assembly. Note: Removing the rear panel (Figure 5, page 9) and top grate(s) of your stove will make cleaning easier.

1. Shut off unit, including pilot. Allow unit to cool for at least thirty minutes.

- Inspect burner, pilot and primary air inlet holes on injector holder for dust and dirt (see Figure 21).
- 3. Blow air through the ports/slots and holes in the burner.
- Check injector holder located at end of burner tube again. Remove any large particles of dust, dirt, lint or pet hair with a soft cloth or vacuum cleaner nozzle.
- 5. Blow air into the primary air holes on the injector holder.
- In case any large clumps of dust have now been pushed into the burner repeat steps 3 and 4.

Clean the pilot assembly also. A yellow tip on the pilot flame indicates dust and dirt in the pilot assembly. There is a small pilot air inlet hole about 2" from where the pilot flame comes out of the pilot assembly (see Figure 22). With the unit off, lightly blow air through the air inlet hole. You may blow through a drinking straw if compressed air is not available.

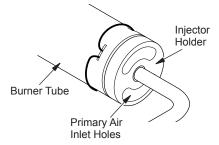


Figure 21 - Injector Holder On Outlet
Burner Tube

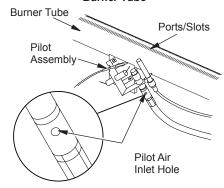


Figure 22 - Pilot Inlet Air Hole

TROUBLESHOOTING

MARNING: Turn off heater and let cool before servicing. Only a qualified service person should service and repair heater.

A CAUTION: Never use a wire, needle or similar object to clean ODS/pilot. This can damage ODS/pilot unit.

Note: All troubleshooting items are listed in order of operation.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
-------------------------	-----------------------	--------

When ignitor button is pressed, there is no spark at ODS/pilot

- Ignitor electrode not connected to ignitor cable
- 2. Ignitor cable pinched or wet
- 3. Broken ignitor cable
- 4. Bad piezo ignitor
- 5. Ignitor electrode broken
- 6. Ignitor electrode positioned wrong

- 1. Reconnect ignitor cable
- Free ignitor cable if pinched by any metal or tubing. Keep ignitor cable dry
- 3. Replace ignitor cable
- 4. Replace piezo ignitor
- Replace pilot assembly
- 6. Replace pilot assembly

When ignitor button is pressed, there is spark at ODS/pilot but no ignition

- Gas supply turned off or equipment shutoff valve closed
- 2. Control knob not in PILOT position
- Control knob not pressed in while in PILOT position
- Air in gas lines when installed
- ODS/pilot is clogged
- Gas regulator setting is not correct
- 7. Depleted gas supply (propane/LP only)

- 1. Turn on gas supply or open equipment shutoff valve
- 2. Turn control knob to PILOT position
- 3. Press in control knob while in PILOT position
- Continue holding down control knob. Repeat igniting operation until air is removed
- Clean ODS/pilot (see <u>Cleaning</u> <u>and Maintenance</u>, page 17) or replace ODS/pilot assembly
- 6. Replace gas control
- Contact local propane/LP gas company

ODS/pilot lights but flame goes out when control knob is released

- 1. Control knob not fully pressed in
- 2. Control knob not pressed in long enough
- 3. Equipment shutoff valve not fully open
- 4. Pilot flame not touching thermocouple, which allows thermocouple to cool, causing pilot flame to go out. This problem could be caused by one or both of the following: A) Low gas pressure
 - A) Low gas pressure
 B) Dirty or partially clogged
- ODS/pilot
 5. Thermocouple connection
- loose at control valve
- 6. Thermocouple damaged
- Control valve damaged www.fmiproducts.com

- 1. Press in control knob fully
- After ODS/pilot lights, keep control knob pressed in 30 seconds
- 3. Fully open equipment shutoff valve
- A) Contact local propane/ LP or natural gas company
 - B) Clean ODS/pilot (see <u>Cleaning and Maintenance</u>, page 17) or replace ODS/pilot assembly
- 5. Hand tighten until snug, then tighten 1/4 turn more
- 6. Replace pilot assembly
- 7. Replace control valve

TROUBLESHOOTING

Continued

Continued			
OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY	
Burner does not light after ODS/pilot is lit	Burner orifice clogged Inlet gas pressure is too low Thermopile leads disconnected or improperly connected Burners will not come on in remote position	1. Clean burner (see <u>Cleaning</u> <u>and Maintenance</u> , page 17) or replace burner orifice 2. Contact local propane/LP or natural gas company 3. Reconnect leads (see <u>Wiring Diagram</u> , page 21) 4. Replace battery in transmitter and hand-held remote	
Delayed ignition burner	Manifold pressure is too low Burner orifice clogged	Contact local propane/LP or natural gas company Clean burner (see <u>Cleaning and Maintenance</u> , page 17) or replace burner orifice	
Burner backfiring during combustion	Burner orifice is clogged or damaged Damaged burner Gas regulator defective	Clean burner (see <u>Cleaning</u> <u>and Maintenance</u> , page 17) or replace burner orifice Replace damaged burner Replace gas control	
Slight smoke or odor during initial operation	Not enough air Gas regulator defective Residues from manufacturing processes and logs curing	1. Check burner for dirt and debris. If found, clean burner (see <u>Cleaning and Maintenance</u> , page 17) 2. Replace gas control 3. Problem will stop after a few hours of operation	
Moisture/condensation noticed on windows	Not enough combustion/ ventilation air	Refer to <u>Air for Combustion</u> and <u>Ventilation</u> requirements (page 5)	
Heater produces a whistling noise when burner is lit	Turning control knob to HI position when burner is cold Air in gas line Air passageways on heater blocked Dirty or partially clogged burner orifice	Turn control knob to LO position and let warm up for a minute Operate burner until air is removed from line. Have gas line checked by local propane. LP or natural gas company Observe minimum installation clearances (see page 8) Clean burner (see Cleaning and Maintenance, page 17) or replace burner orifice	
Dark residue on logs or inside of fireplace	Improper log placement Drafts or other air currents affecting flame pattern Air holes at burner inlet blocked Burner flame holes blocked	Properly locate logs (see Installing Gas Log Into Stove, page 10) Eliminate source of drafts around heater Clean out air holes at burner inlet. Periodically repeat as needed Remove blockage or replace burner	
113084-01L	www.fmiproducts.com	19	

TROUBLESHOOTING

Continued

WARNING: If you smell gas

- · Shut off gas supply.
- · 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 instructions.
- If you cannot reach your gas supplier, call the fire department.

IMPORTANT: Operating fireplace where impurities in air exist may create odors. Cleaning supplies, paint, paint remover, cigarette smoke, cements and glues, new carpet or textiles, etc., create fumes. These fumes may mix with combustion air and create odors. These odors will disappear over time.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
White powder residue forming within burner box or on adjacent walls or furniture	When heated, vapors from furniture polish, wax, carpet cleaners, etc. may turn into white powder residue	Turn heater off when using furniture polish, wax, carpet cleaners or similar products
Remote does not function	Battery is not installed. Battery power is low	Replace 9-volt batteries in receiver and hand-held remote control
Heater produces a clicking/ ticking noise just after burner is lit or shut off	Metal expanding while heating or contracting while cooling	This is normal with most heat- ers. If noise is excessive, con- tact qualified service person
Heater produces unwanted odors	Heater burning vapors from paint, hair spray, glues, cleaners, chemicals, new carpet, etc. (See IMPORTANT statement above)	Open window and venti- late room. Stop using odor causing products while heater is running
	Gas leak. See Warning statement at top of page	Locate and correct all leaks (see <u>Checking Gas Connections</u> , page 12)
Heater shuts off in use (ODS operates)	Not enough fresh air is available Low line pressure ODS/pilot is partially clogged	Open window and/or door for ventilation Contact local propane/LP or natural gas company Clean ODS/pilot (see Cleaning and Maintenance, page 17)
Gas odor even when control knob is in OFF position	Gas leak. See Warning statement at top of page Control valve defective	Locate and correct all leaks (see <u>Checking Gas Connections</u> , page 12) Replace control valve
Gas odor during combustion	Foreign matter between control valve and burner Gas leak. See Warning statement at top of page	Take apart gas tubing and remove foreign matter Locate and correct all leaks (see <u>Checking Gas Connections</u> , page 12)
20	www.fmiproducts.com	113084-01L

SPECIFICATIONS

SVYD18PRA

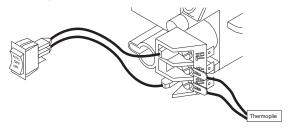
- Rating: 21,000/31,000 Btu/hr (Variable)
- · Gas Type: Propane/LP
- · Ignition: Piezo
- Pressure Manifold: 8" W.C.
- Inlet Gas Pressure (in. of water):
 Maximum 14" W.C., Minimum 11" W.C.
- · Shipping Weight: 28 lbs.

SVYD18NRA

- Rating: 24,000/35,000 Btu/hr (Variable)
- · Gas Type: Natural
- · Ignition: Piezo
- · Pressure Manifold: 3.5" WC
- Inlet Gas Pressure (in. of water):
 Maximum 10.5" W.C., Minimum 5" W.C.
- · Shipping Weight: 28 lbs.
- * For purposes of input adjustment

WIRING DIAGRAM

Note: For proper operation of optional accessories, the wires from the switch to the control must be connected exactly as shown.



REPLACEMENT PARTS

Note: Use only original replacement parts. This will protect your warranty coverage for parts replaced under warranty.

Contact authorized dealers of this product. If they can't supply original replacement part(s), call FMI PRODUCTS, LLC at 1-866-328-4537.

When calling, have ready:

- · vour name
- · your address
- · model and serial numbers of your heater
- · how heater was malfunctioning
- · purchase date

Usually, we will ask you to return the part to the factory.

TECHNICAL SERVICE

You may have further questions about installation, operation, or troubleshooting. If so, contact FMI PRODUCTS, LLC at 1-866-328-4537. When calling please have your model and serial numbers of your heater ready.

You can also visit our web site at **www.fmiproducts.com**.

SERVICE HINTS

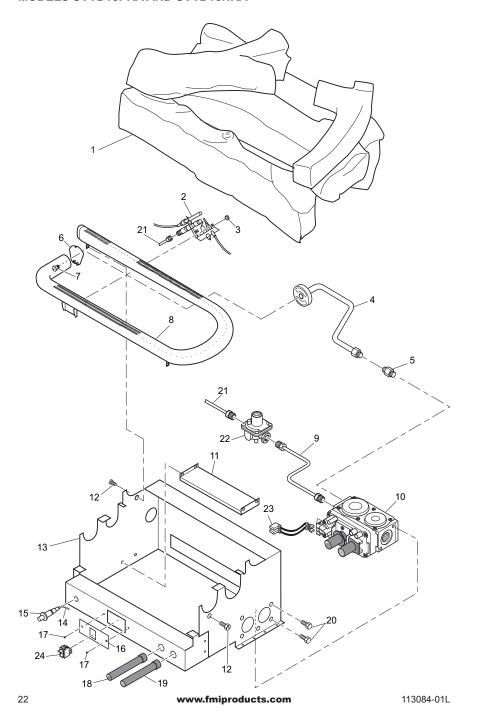
When Gas Pressure Is Too Low

- · pilot will not stay lit
- · burners will have delayed ignition
- heater will not produce specified heat
- propane/LP gas supply may be low (propane/LP only)

You may feel your gas pressure is too low. If so, contact your local propane/LP or natural gas supplier.

PARTS

MODELS SVYD18PRA AND SVYD18NRA



PARTS

This list contains replaceable parts used in your heater. When ordering parts, follow the instructions listed under $\underbrace{Replacement\ Parts}_{}$ on page 21 of this manual.

			180	18A1	OWRA
KEY			3	SVYDIS	/
	PART NO.	DESCRIPTION	ର	େ	QTY.
1	104026-01	Stove Log	•	•	ı
2	103778-01	ODS Pilot	•		1
0	103779-01	ODS Pilot		•	1
3	098249-01	ODS Nut			2
4	104423-02	Burner Outlet Tube	•		1
-	104423-01	Burner Outlet Tube		٠	1
5	098264-02	Male Connector	•	•	1
6	111124-01	Burner Retainer Spring	•	٠	1
7	099056-19	Burner Orifice Injector	•		1
	099056-26	Burner Orifice Injector		٠	1
8	102980-01	Burner	•	٠	1
9	099387-13	Pilot Tube	•		1
4.0	099387-15	Pilot Tube		•	1
10	103781-02	Gas Control Valve	•		1
	103781-01	Gas Control Valve		٠	1
11	103345-02	Lower Bracket	•	٠	1
12	M11084-38 **	Screw, #8 x 0.38	•	٠	7
13	ļ	Painted Base Assembly	•	•	1
14	098271-10	Ignitor Cable	•	•	1
15	102445-01	Piezo Ignitor	•	•	1
16	103587-02	Plate, Switch	•	•	1
17	098304-01	Screw	•	•	2
18	103784-04	Flame Adjustment Knob Extension	•	٠	1
19	103784-03	Off-Pilot-On Knob Extension	•	•	1
20	M12461-26	Screw, Hex Slt Wsr 10-32 x 0.38	•	٠	4
21	100609-01	Pilot Tube (Regulator to Pilot)	•	•	1
22	099918-02	Pilot Regulator	•	٠	1
23	103284-02	Wiring Harness	•	•	1
24	099998-01	Switch	•	•	1
		RTS AVAILABLE — NOT SHOWN			1
	100563-01 103877-01	Warning Plate Lighting Instructions Plate			1
	100565-01	Warning Plate Fastener	i.	•	1
	100303-01	Hardware Kit			1
	111531-01CK			•	1
	111531-01CK	Stove Dropped Pan (Black Only) Stove Back Panel (Black Only)		•	1
	111532-01CK	Screen Rod	i	•	1
	103297-04	Screen Rod Screen		•	1
	111698-23	Door Knob	•	•	1
**No	i I I I090-∠3 t a field renlaceabl		•	•	. 1

^{**}Not a field replaceable part.

ACCESSORIES

Purchase these accessories from your local dealer. If they can not supply these accessories call FMI PRODUCTS, LLC at 1-866-328-4537 for information. You can also write to the address listed on the back page of this manual.



RECEIVER AND HAND-HELD THERMOSTAT REMOTE CONTROL KIT - TLCR

For remote-ready models. Allows the gas log heater to be operated in a manually or thermostatically controlled mode. You can turn the gas log heater on and off without ever leaving the comfort of your easy chair.



RECEIVER AND HAND-HELD REMOTE CONTROL KIT - MLCR

For remote-ready models. Allows the gas log heater to be turned on and off by using a hand-held remote control.

WALL-MOUNT THERMOSTAT SWITCH - GWMT1

For remote-ready models. The desired comfort setting can be selected on the wall thermostat and the log heater will automatically cycle from pilot to the heat setting selected.

WALL-MOUNT ON/OFF SWITCH GWMS2

For remote-ready models. Allows the gas log heater to be turned on and off with a wall switch.

CAST IRON STOVE BODY

CISB - Flat black
CISNI - Natural iron
CISAW - Antique White

CISAS - Aged Silver

NOTES

NOTES

NOTES

WARRANTY

KEEP THIS WARRANTY

Model (located on product or identification tag)
Serial No. (located on product or identification tag)
Date Purchased

Keep receipt for warranty verification.

FMI PRODUCTS, LLC LIMITED WARRANTIES

New Products

Standard Warranty: FMI PRODUCTS, LLC warrants this new product and any parts thereof to be free from defects in material and workmanship for a period of four (4) years from the date of first purchase from an authorized dealer provided the product has been installed, maintained and operated in accordance with FMI PRODUCTS, LLC's warnings and instructions.

For products purchased for commercial, industrial or rental usage, this warranty is limited to 90 days from the date of first purchase.

Factory Reconditioned Products

Limited Warranty: FMI PRODUCTS, LLC warrants factory reconditioned products and any parts thereof to be free from defects in material and workmanship for 30 days from the date of first purchase from an authorized dealer provided the product has been installed, maintained and operated in accordance with FMI PRODUCTS, LLC's warnings and instructions.

Terms Common to All Warranties

The following terms apply to all of the above warranties:

Always specify model number and serial number when contacting the manufacturer. To make a claim under this warranty the bill of sale or other proof of purchase must be presented.

This warranty is extended only to the original retail purchaser when purchased from an authorized dealer, and only when installed by a qualified installer in accordance with all local codes and instructions furnished with this product.

This warranty covers the cost of part(s) required to restore this product to proper operating condition and an allowance for labor when provided by a FMI PRODUCTS, LLC Authorized Service Center or a provider approved by FMI PRODUCTS, LLC. Warranty parts must be obtained through authorized dealers of this product and/or FMI PRODUCTS, LLC who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty.

Travel, handling, transportation, diagnostic, material, labor and incidental costs associated with warranty repairs, unless expressly covered by this warranty, are not reimbursable under this warranty and are the responsibility of the owner.

Excluded from this warranty are products or parts that fail or become damaged due to misuse, accidents, improper installation, lack of proper maintenance, tampering, or alteration(s).

This is FMI PRODUCTS, LLC's exclusive warranty, and to the full extent allowed by law; this express warranty excludes any and all other warranties, express or implied, written or verbal and limits the duration of any and all implied warranties, including warranties of merchantability and fitness for a particular purpose to four (4) years on new products and 30 days on factory reconditioned products from the date of first purchase. FMI PRODUCTS, LLC makes no other warranties regarding this product.

FMI PRODUCTS, LLC's liability is limited to the purchase price of the product, and FMI PRODUCTS, LLC shall not be liable for any other damages whatsoever under any circumstances including indirect, incidental, or consequential damages.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For information about this warranty contact:

FMI PRODUCTS, LLC 2701 S. Harbor Blvd. Santa Ana, CA 92704 1-866-328-4537

1-866-328-4537 113084-01 Rev. L 02/10