



**Models 500/600
Commercial Condensing
Gas-Fired Water Boilers**

User Manual



⚠ 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 telephone in your building.
- Immediately call your gas supplier from a neighbor's telephone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- Installation & service must be performed by a qualified installer, service technician or the gas supplier.

How to Use This Manual

To do the following:	Read and Use:	Page(s)
Learn precautions	Safety warnings and information	<u>3-4</u>
Prevent air contamination	List of air contaminants to avoid	<u>5</u>
Identify and locate boiler components	Boiler illustrations	<u>6</u>
Start or shut down the boiler	Operating instructions	<u>7</u>
Utilize the control display	Control illustrations and information	<u>8-10</u>
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SECTION 1

Safety

This section is intended to provide safety information for users.

Section Contents

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Please Read Before Proceeding3

Safety Signals

The following defined terms are used throughout this manual to bring attention to the presence of hazards or other important information.

⚠ DANGER

Danger indicates the presence of hazards that will cause severe personal injury, death, or substantial property damage.

⚠ WARNING

Warning indicates the presence of hazards that can cause severe personal injury, death, or substantial property damage.

⚠ CAUTION

Caution indicates the presence of hazards that will or can cause minor personal injury or property damage.

NOTICE

Notice indicates additional information that may be related to property damage, but is not related to personal injury.

IMPORTANT

Important indicates additional information that is important, but is not related to personal injury or property damage.

Please Read Before Proceeding

⚠ WARNING

Adhere to all following guidelines and instructions in this section. Failure to adhere to these guidelines can result in severe personal injury, death, or substantial property damage.

User: Refer to this User Manual as your information source. Installation and service must be performed by a qualified installer, service technician, or gas supplier.

Installer: Refer to the Boiler Manual and all other information shipped with the boiler for installation and service.

Please include the boiler model number, CP number, and serial number when calling or writing about the boiler. The model number can be found on the boiler rating label.

IMPORTANT

Any claims for damage or shortage in shipment must be filed immediately against the transportation company by the consignee.

Boiler Maintenance

- To avoid electric shock, disconnect all electrical supplies to the boiler before performing maintenance.
- To avoid severe burns, allow boiler to cool before performing maintenance.
- This boiler contains ceramic fiber and fiberglass materials. Refer to the maintenance section of the boiler manual for warnings and information.
- The boiler must be maintained as outlined in this manual, including annual startup and service by a qualified service technician to ensure boiler system reliability.



Please Read Before Proceeding, continued

Safe Boiler Operation

- Do not block flow of combustion or ventilation air to boiler. This boiler is equipped with a control that automatically shuts down the boiler if the air or vent is blocked. Remove easily accessible and removable blockages. If the boiler indicates a manual reset lockout, select <Reset Lockout> on the control display after removing a blockage. If a blockage cannot be removed, have a qualified service technician check the boiler system.
- Do not allow contaminated air to enter the boiler room, or the air inlet pipe if direct vented. See [page 5](#) for details.
- Should overheating occur, or gas supply fail to shut off, do not turn off or disconnect electrical supply to pump. Shut off the gas supply at a location external to the appliance.

Boiler Water

- Have the boiler water chemistry checked at least annually by a qualified service technician.
- Do not use petroleum-based cleaning or sealing compounds in the boiler system. Gaskets and seals in the system may be damaged, which can result in substantial property damage.
- Do not use "homemade cures" or "boiler patent medicines." Serious injury or damage may result.
- Continual fresh make-up water will reduce boiler life. Mineral buildup in the heat exchanger reduces heat transfer, overheats the metal, and causes failure. Addition of oxygen carried in by make-up water can cause internal corrosion. Leaks in the boiler or piping must be repaired at once to prevent make-up water.
- Do not add cold water to a hot boiler. Thermal shock can cause the heat exchanger to crack.
- NEVER use automotive or standard glycol antifreeze in this boiler system, including glycol made for hydronic systems.

Frozen Water Damage

Power outages, unattended residences or buildings, boiler component failures, or other electrical system failures in cold weather could result in frozen plumbing and water damage in a matter of hours. Consult with a boiler contractor or a home security agent to take preventative actions, such as installing a security system that operates during power outages, senses low temperature, and initiates an effective action. Consult with your boiler contractor or a home security agency.

Damage from Water Contact

⚠ DANGER

DO NOT attempt to operate any boiler if any part of the boiler, burner, or controls has been partially or fully sprayed with or submerged under water. The boiler must either be replaced or completely repaired and inspected. The boiler and all components must be in good condition and fully reliable before operation.

If these requirements are not met, operating the boiler will cause fire, explosion, and electrical shock hazards, leading to serious injury, death, or substantial property damage.

Saltwater damage: The immediate effects of saltwater damage are like those of freshwater, with electrical components shorting out and the removal of critical lubricants. However, salt and other contaminants left behind can lead to long term issues due to the conductive and corrosive nature of salt residue. WM Technologies equipment contaminated with saltwater or polluted water will no longer be covered under warranty and should be replaced.

Electrical damage: If any electrical component or wiring has, or is suspected to have come into contact with water, replace the boiler.

SECTION 2

Operation

This section is intended to provide operating instructions and information for users.

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Operating the Boiler

Prevent Combustion Air Contamination

⚠ WARNING

If the boiler combustion air inlet is located in any area likely to cause contamination, or if products which would contaminate the air cannot be removed, you must have the combustion air and vent repiped and terminated to another location. Contaminated combustion air will damage the boiler, and can result in severe personal injury, death, or substantial property damage.

Do not operate an SVF boiler if the combustion air inlet is located in a laundry room or pool facility. These areas will always contain hazardous contaminants.

Pool and laundry products, hobby products, and other common household products often contain fluorine or chlorine compounds. These chemicals can form strong acids when they pass through the boiler. The acid can eat through the boiler wall, causing serious damage. This damage presents a possible threat of flue gas spillage or boiler water leakage into the building.

If contaminating chemicals will be present near the location of the boiler combustion air inlet, have your installer pipe the boiler combustion air and vent to another location per the boiler manual. See Table 1 for a list of products to avoid, and areas where contaminants are likely present.

Table 1 Corrosive contaminants and sources

Products to avoid
Spray cans containing chloro/fluorocarbons
Permanent wave solutions
Chlorinated waxes and cleaners
Chlorine-based swimming pool chemicals
Calcium chloride used for thawing
Sodium chloride used for water softening
Refrigerant leaks
Paint or varnish removers
Hydrochloric acid and muriatic acid
Cements and glues
Anti-static fabric softeners used in clothes dryers
Chlorine-type bleaches, detergents, and cleaning solvents
Adhesives used to fasten building products and other similar products
Excessive dust and dirt

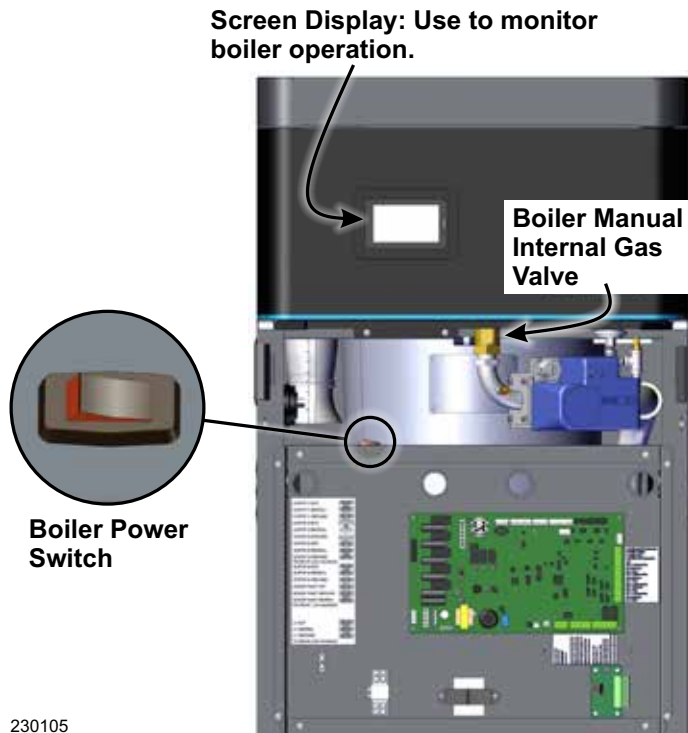
Areas likely to have contaminants
Laundry and dry cleaning areas and establishments
Swimming pools
Metal fabrication plants
Beauty shops
Refrigeration repair shops
Photo processing plants
Auto body shops
Plastic manufacturing plants
Furniture refinishing areas and establishments
New building construction
Remodeling areas
Garages with workshops

Operating the Boiler, continued

Boiler Operation

See the figures below for component locations. See the instructions and warnings in [Figure 3, page 7](#) to start and turn off the boiler.

Figure 1 SVF 500/600 power switch, screen display, and internal gas valve



230105

Figure 2 SVF 500/600 external gas piping (by installer)



230109

Figure 3 Operating instructions, warning

**FOR YOUR SAFETY
READ BEFORE OPERATING**

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

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

B. Before OPERATING, smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor. See below.

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

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

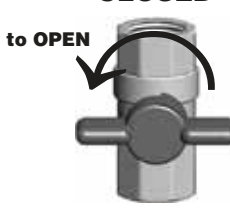

WHAT TO DO IF YOU SMELL GAS

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

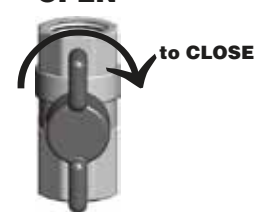

OPERATING INSTRUCTIONS

1. Stop! Read the safety information at left on this label. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
2. Set room thermostat(s) to lowest setting. Verify external manual gas cock is open (valve handle parallel to gas piping).
3. Turn OFF all electrical power to the appliance.
4. Remove boiler access door.
5. Turn boiler manual gas valve handle counterclockwise ↺ to open gas supply.
6. 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 to the left. If you don't smell gas, go to the next step.
7. Turn ON all electrical power to the appliance.
8. Set thermostat(s) to desired setting.
9. The display will show symbols and text describing the status of the boiler as it proceeds through its operating sequence.
10. If the appliance will not operate when there is a call for heat and piping is not hot, follow the instructions "To Turn Off Gas To Appliance" below and call your service technician or gas supplier.

**Gas valve
CLOSED**

**Gas valve
OPEN**

11. Reinstall boiler access door. Make sure panel is seated firmly in place.

TO TURN OFF GAS TO THE APPLIANCE

1. Set room thermostats to lowest setting.
2. Turn OFF all electrical power to the appliance.
3. Close external manual gas cock (valve handle perpendicular to gas piping). Remove boiler access door. Turn boiler manual gas valve handle clockwise ↻ to close gas supply.
4. Reinstall boiler access door.

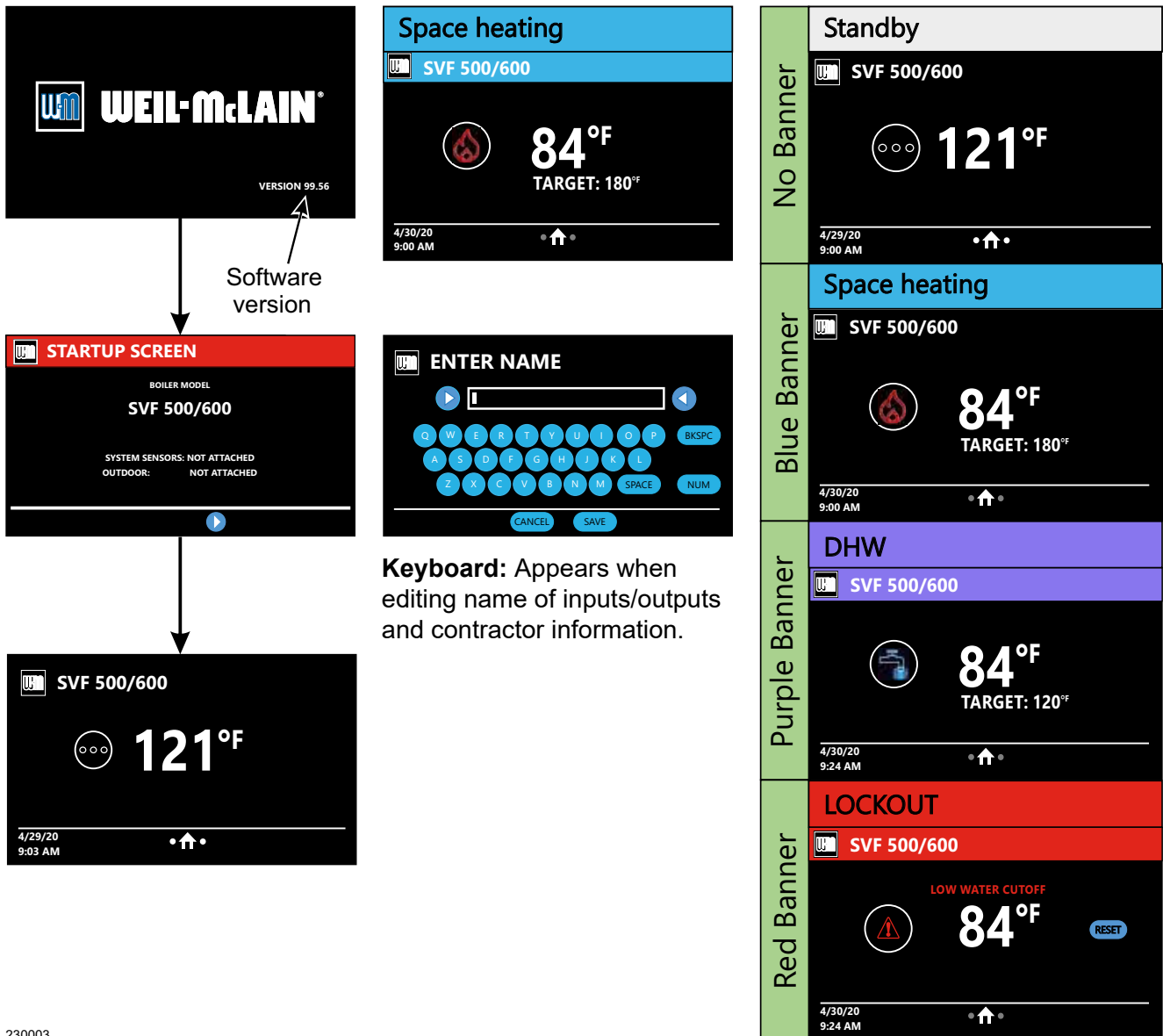
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Boiler Control

Control Navigation

The figures and instructions on these pages help guide users through various screens and settings.

Figure 4 Boiler control display states



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Navigation Controls

Swipe: Slide finger left or right on the screen to navigate forward and backward on applicable screens.

Press: Touch icons on screen to perform specified action.

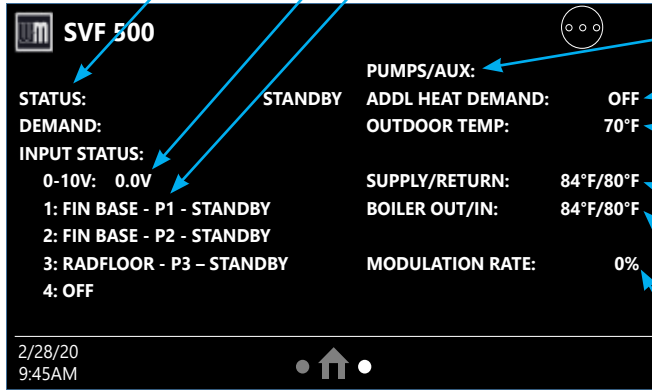
Scroll: Place finger on slide bar empty space and hold to scroll. Applicable screens can also be swiped up or down to scroll.

Double tap: Applicable on editable parameters. Allows user to enter edit mode by double tapping parameter.

Screens shown on these pages are typical only.
Actual screens depend on control settings chosen.

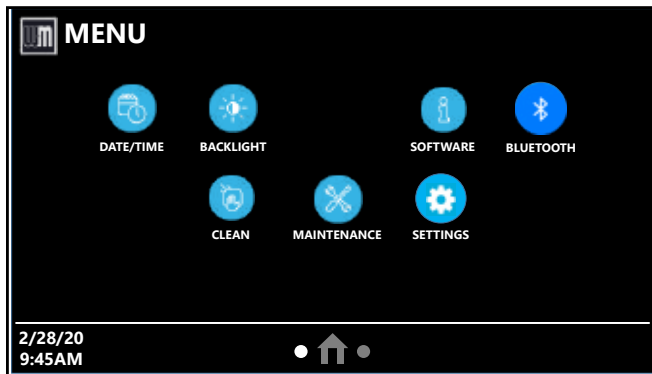
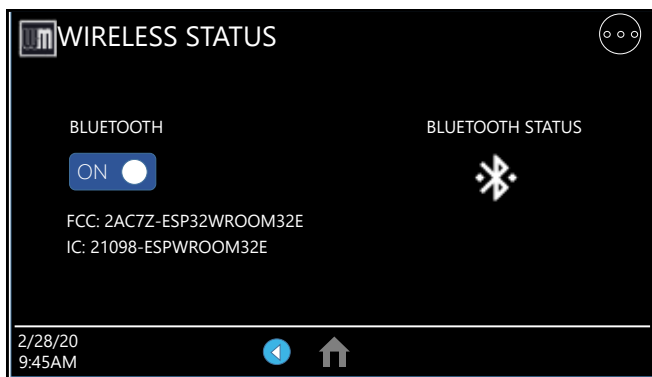


Figure 5 Status screen



Status:	Shows the current sequence of operation status with the active priority.
0-10v:	Shows the current 0-10v input value from external device.
1-4:	Shows inputs 1 through 4, what they are assigned to, their custom names and their status.
Pumps/Aux:	Shows which aux/pump outputs are currently active.
Additional Heat Demand:	Shows whether AHD is off or on. Only appears if a priority is selected to use AHD.
Outdoor Temp:	Shows the current outdoor temperature sensor value. Only visible if selected to use.
Supply/Return:	Shows the current System Supply and System Return temperature. Only visible if selected to use.
Boiler Out/In:	Shows the current Boiler Out and Boiler In temperatures.
Modulation Rate:	Shows the modulation rate of the boiler's blower motor.

Figure 6 USER menus

Date and Time:	Allows user to edit the current date, time, and daylight savings time.
Backlight:	Allows user to edit how bright the screen is during normal operation and when dormant.
Clean:	Locks the screen so nothing can be pressed for 10 seconds while the user cleans the screen.
Software:	Displays the current software revisions of the control and display.
Bluetooth®:	Allows the user to turn Bluetooth ON or OFF. Swipe right from HOME and press BLUETOOTH to reach FCC and IC information.
FCC	FCC: Wireless device unique identifier registered with the U.S. Federal Communications Commission.
IC	IC: Wireless certification approval number unique to all devices, required for Canada.
Assembled from tested components. Complete system not tested.	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Maintenance:	Allows the user to view contractor and maintenance information, as well as reset the maintenance reminder when present.
Settings:	Allows the user to edit temperature units, screen time out, and sound effect of presses.

Screens shown on these pages are typical only. Actual screens depend on control settings chosen.

Boiler Control, continued

Lockout Screen

When the boiler locks out, the display screen turns red as shown in Figure 7. Follow the instructions below to reset the boiler.

1. Highlight and select <Manual Reset>.
2. Press the <Reset> button on the next screen to reset the fault.
3. Call for service if the fault continues.

Maintenance Due

The Maintenance screen can be accessed from the User Menu screen. Maintenance intervals should be set by a qualified technician when the boiler is initially installed. See Figure 8.

When maintenance is due, the main screen will display wrenches like in Figure 9. When maintenance is due, please have a qualified technician inspect the boiler. When the maintenance reminder is displayed, reset it to clear the reminder.

Figure 7 Lockout screen

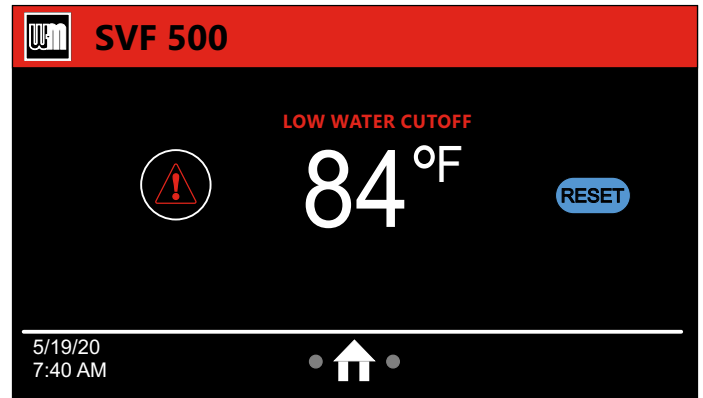


Figure 8 Maintenance screen

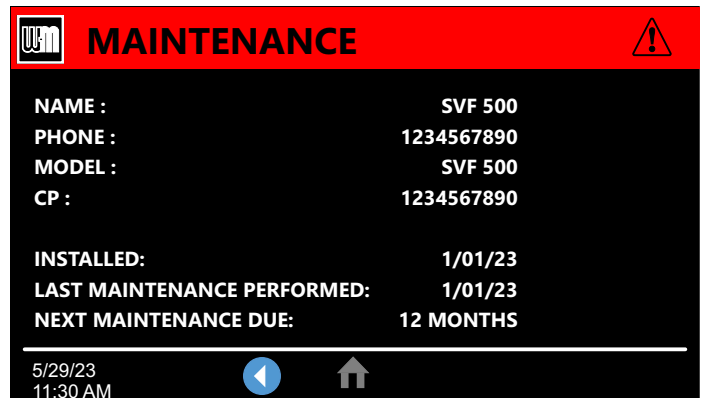
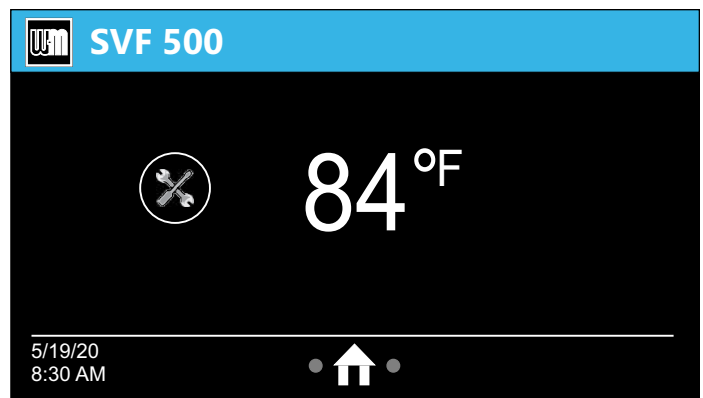


Figure 9 Maintenance notice



Screens shown on these pages are typical only.
Actual screens depend on control settings chosen.

SECTION 3

Maintenance

This section is intended to provide service schedules and maintenance information for users.

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Maintenance Overview

Servicing and Maintaining the Boiler

The boiler must be inspected and started at the beginning of the heating season every year by a qualified service technician.

The maintenance and service of the boiler listed in Figure 10 and explained in this manual must be performed to assure maximum boiler efficiency and reliability.

Figure 10 Service and maintenance schedule

Owner Maintenance <i>(see the following pages for instructions)</i>	
Beginning of Season	<ul style="list-style-type: none"> <input type="checkbox"/> Contact your boiler service technician to inspect, service, and start up your boiler. You must have an annual start-up performed by a qualified service technician to ensure reliable operation of the boiler and system.
Daily	<ul style="list-style-type: none"> <input type="checkbox"/> Check the boiler area. <input type="checkbox"/> Check air openings. <input type="checkbox"/> Check the pressure and temperature gauge. <input type="checkbox"/> Verify the boiler panels are securely in place.
Monthly	<ul style="list-style-type: none"> <input type="checkbox"/> Check the vent piping. <input type="checkbox"/> Check the air piping. <input type="checkbox"/> Check the relief valve. <input type="checkbox"/> Check the condensate drain system. <input type="checkbox"/> Check the air vents.
Every 3 Months	<ul style="list-style-type: none"> <input type="checkbox"/> Test low water cutoff by pressing the test button. <input type="checkbox"/> Check the time and date on the control display.
Every 6 Months	<ul style="list-style-type: none"> <input type="checkbox"/> Check the boiler gas and water piping. <input type="checkbox"/> Operate the relief valve.
End of Season	<ul style="list-style-type: none"> <input type="checkbox"/> Shut down the boiler (unless the boiler is used for domestic water).

⚠ WARNING

Follow the service and maintenance procedures given in this manual. Failure to perform service and maintenance could result in damage to the boiler or system. Failure to follow the directions in this manual and component literature could result in severe personal injury, death, or substantial property damage.



Maintenance Procedures — DAILY

Check the Boiler Area

Eliminate all combustible materials and air contaminants from the vicinity of the boiler and combustion air inlet.

If contaminants or flammable materials are found, immediately remove the products from the area; if they have been there for an extended period of time, call a qualified service technician to inspect the boiler for possible damage from acid corrosion.

If contaminants or flammable materials are found but cannot be removed, immediately call a qualified service technician to repipe the vent and air piping to locate the vent termination and air intake away from the contaminated areas.

⚠️WARNING

All combustible materials and air contaminants must be eliminated from the vicinity of the boiler and piping intake and termination to prevent the potential of severe personal injury, death, or substantial property damage.

Combustible Materials:

Combustible materials, such as gasoline or any other flammable vapors or liquids, cannot be stored near the boiler. Remove immediately if found.

Air contaminants:

Products containing chlorine or fluorine will cause acidic condensate in the boiler if allowed to contaminate the boiler intake air. This will cause significant damage to the boiler over time. Read the list of potential materials listed in [Table 1, page 5](#) of this manual. Remove immediately if found.

Check the Pressure and Temperature Gauge

Make sure the pressure reading on the P&T gauge remains at least 5 psig less than the relief valve setting. For example, if the relief valve is set for 30 psig, the P&T gauge must be 25 psig or lower. If the pressure is too high, contact a qualified service technician.

DIRECT EXHAUST Installations

In direct exhaust installations, combustion air is taken from the inside. Air piping is not connected to the air intake.

1. Visually inspect all combustion air openings.
 - a. Remove any debris or blockage from combustion air louvers.

⚠️WARNING

Combustion air openings must remain unobstructed to allow combustion and ventilation air to be drawn into the boiler room. Failure to provide proper combustion air can result in severe personal injury, death, or substantial property damage.

2. Verify that the boiler vent discharge is clean and free of obstructions.
3. Remove any debris on the flue exhaust openings.

If removing any debris does not allow the boiler to operate correctly afterwards, contact your qualified service technician to inspect the boiler and the vent and air systems.

DIRECT VENT Installations

In direct vent installations, combustion air is piped to the boiler from the outside.

1. Verify that the boiler vent discharge and air intake are clean and free of obstructions.
2. Remove any debris on the air intake or flue exhaust openings.

If removing any debris does not allow the boiler to operate correctly afterwards, contact your qualified service technician to inspect the boiler and the vent and air systems.

Maintenance Procedures — MONTHLY

IMPORTANT

In addition to the daily routine, perform the following procedures on a monthly basis.

Check Vent Piping

Visually inspect the flue gas vent piping for any signs of blockage, leakage or deterioration. Notify your qualified service technician at once for repairs if you find any problems.

WARNING

Failure to inspect the vent system and have it repaired as necessary can result in vent system failure, causing severe personal injury or death.

Check Air Piping (Direct Vent Systems)

Visually inspect the air inlet to be sure it is unobstructed. Inspect entire length of air piping to ensure piping is intact and all joints are properly sealed. Call your qualified service technician if you notice any problems.

Check the Relief Valve

Inspect the boiler relief valve and the relief valve discharge pipe for signs of weeping or leakage.

If the relief valve often weeps, the expansion tank may not be working properly; Immediately contact your qualified service technician to inspect the boiler and system.

Check the Condensate Drain System

While the boiler is running, check the discharge end of the condensate drain tubing by holding your fingers in front of the opening.

If you notice flue gas escaping, this indicates a dry condensate drain trap. See the following steps to fill the trap.

If the condensate trap dries out on a regular basis, call your qualified service technician to inspect the boiler and condensate line and refill the condensate trap.

WARNING

The condensate trap must be filled with water during all times of boiler operation to avoid flue gas emission from the condensate drain line. Failure to fill the trap could result in severe personal injury or death.

Under some circumstances, an SVF vent system may not produce enough condensate to keep the condensate trap full of liquid. If the trap is not full, small amounts of flue products can be emitted into the boiler room through the condensate drain line. Follow the procedure below to fill the trap.

1. Fill the condensate trap with fresh water by pouring water into the exhaust sampling port on the flue connection (piping end of boiler).
 - a. Verify that the condensate assembly is unobstructed by pouring until the water runs out the end of the condensate drain line.
 - b. If the water does not run out, there is an obstruction. Proceed to the next step.
2. To remove an obstruction, remove and flush the trap and drain line.
 - a. Loosen any attachments to the supplied flexible drain hose.
 - b. Loosen the condensate trap inlet connection.
 - c. Remove and flush out the condensate trap and drain line.
 - d. Reinstall the trap and drain line. Tighten all attachments.
 - e. Pour water into the port and ensure that water runs out the end of the drain line.
 - f. If the water still does not run out, call your qualified service technician to inspect the boiler and clean or replace the condensate assembly.

(continued on the next page)

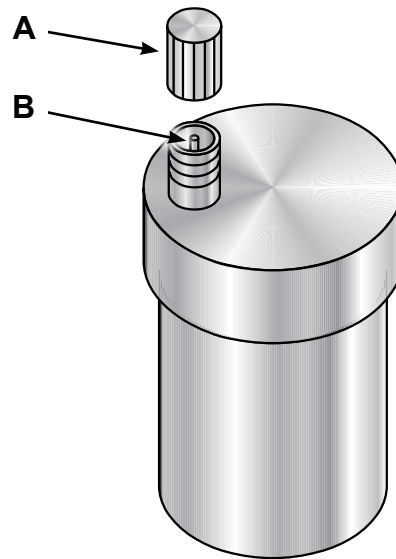
Maintenance Procedures — MONTHLY, continued

Check Automatic Air Vents

Refer to the figures in this section for the instructions below.

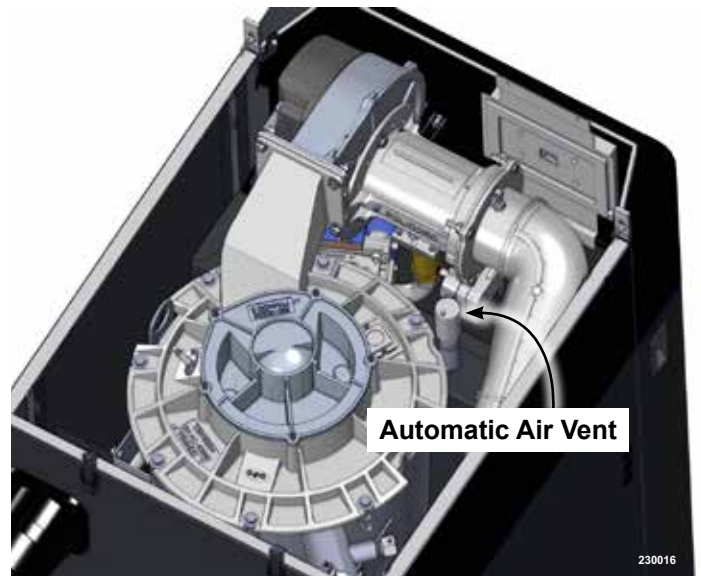
1. Remove the cap (A) from any automatic air vent in the system.
2. Check operation by depressing the valve (B) slightly with the tip of a screwdriver.
3. If the air vent valve appears to be working freely and not leaking, replace the cap.
 - a. Twist the cap all the way on.
 - b. Loosen the cap one turn to allow vent to operate.
4. If the vent does not operate correctly, have it replaced.

Figure 11 Automatic air vent cap and valve



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Figure 12 Automatic air vent location



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Maintenance Procedures — EVERY 3 MONTHS

IMPORTANT

In addition to the daily routine, perform the following procedures every three months.

Test the Low Water Cut-Off

A gray low water cut-off (LWCO) button is located on the control below the J7 and J8 connectors. The LWCO probe is integrated in the Boiler Out sensor on the heat exchanger.

Pushing and holding the LWCO button for at least 5 seconds will shut the boiler down. The LWCO is manually reset through the main control. This can be performed through the control display by selecting <Reset>.

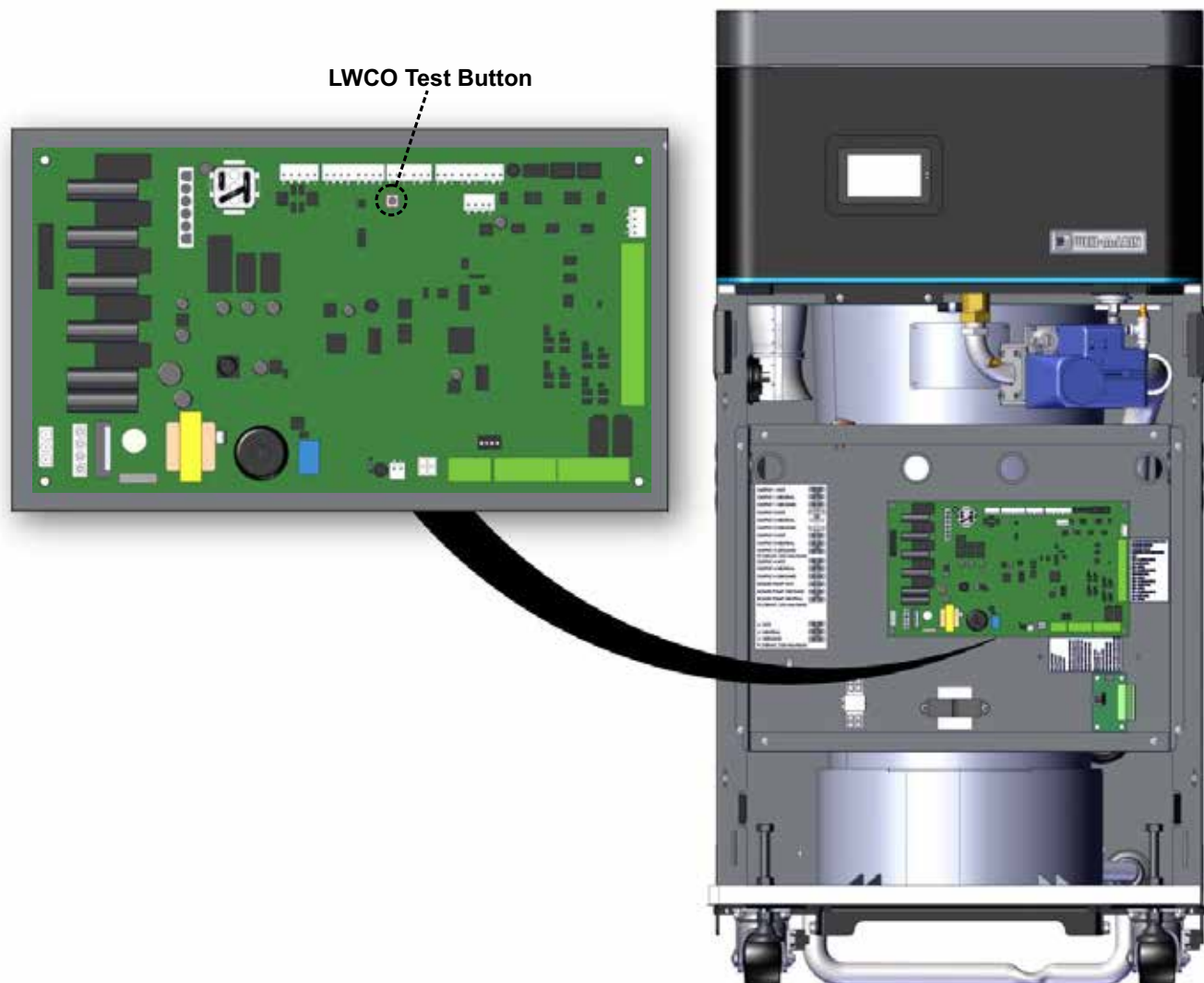
WARNING

If the LWCO fails to cause a manual reset lockout condition, immediately turn off all power to the boiler. If the LWCO fails, or the service light is on, contact your service technician right away.

Check the Time and Date

Check the time and date shown on the control display. If the time or date is incorrect, correct it through the control. Refer to [Figure 6, page 9](#) for more information.

Figure 13 Low water cutoff test button



Maintenance Procedures — EVERY 6 MONTHS

IMPORTANT

In addition to the daily routine, perform the following procedures every six months.

Check the Water and Gas Piping

1. Perform gas leak inspection per steps 1 through 7 of the Operating Instructions, [Figure 3, page 7](#).
 - If gas odor or leak is detected, immediately shut down the boiler following procedures in the Operating Instructions. Call a qualified service technician.
2. Visually inspect for leaks around internal water piping. Also inspect external water piping, circulators, relief valve and fittings. Immediately call a qualified service technician to repair any leaks.

⚠ WARNING

Have leaks fixed at once by a qualified service technician. Failure to comply could result in severe personal injury, death or substantial property damage.

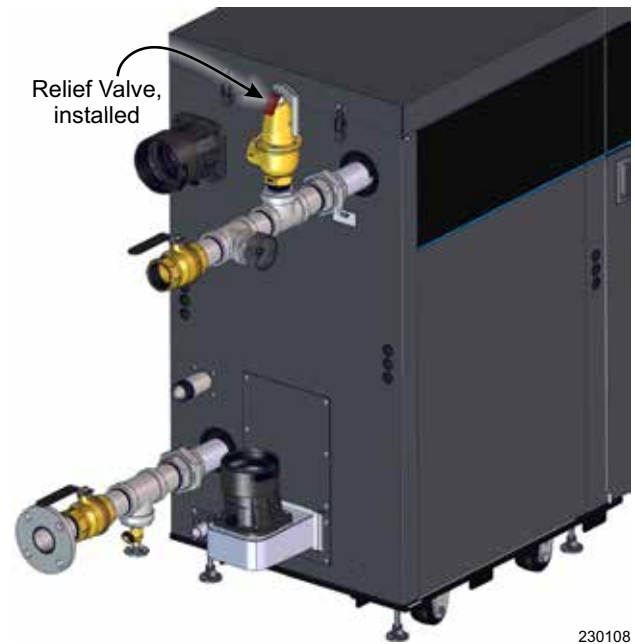
Operate the Relief Valve

1. Before proceeding, verify that the relief valve outlet has been piped to a safe place of discharge, avoiding any possibility of scalding from hot water.

⚠ WARNING

To avoid water damage or scalding due to valve operation, a metal discharge line must be connected to relief valve outlet and run to a safe place of disposal. This discharge line must be installed by a qualified heating installer or service technician in accordance with the instructions in the SVF Boiler Manual. The discharge line must be terminated so as to eliminate the possibility of severe burns or property damage should the valve discharge.

Figure 14 Relief valve installed



230108

2. Read the boiler pressure/temperature gauge to make sure the system is pressurized.
3. Lift the relief valve top lever slightly, allowing water to relieve through the valve and discharge piping.
4. If water flows freely, release the lever and allow the valve to seat.
 - a. Watch the end of the relief valve discharge pipe to ensure that the valve does not weep after the line has had time to drain.
 - b. If the valve weeps, lift the seat again to attempt to clean the valve seat.
 - c. If the valve continues to weep afterwards, contact your qualified service technician to inspect the valve and system.
5. If water does not flow from the valve when you lift the lever completely, the valve or discharge line may be blocked.
 - a. Immediately shut down the boiler, following the operating instructions on [page 6](#).
 - b. Call your qualified service technician to inspect the boiler and system.

Maintenance Procedures — END OF SEASON

To Continue Operation for DHW

If the boiler is to supply heat for domestic hot water generation during the summer, no changes should be needed.

1. Leave the boiler power on and allow the DHW storage tank to call for heat as necessary.
2. Set back room thermostats to prevent any unnecessary call for heat during the off season.

To Leave the Boiler in Stand-By Mode

1. The SVF boiler's control provides effective features for stand-by operation. These features include periodic exercising of the boiler and system circulators, and automatic operation of the boiler at low fire if water temperatures drop too close to freezing. Configure the control as needed to operate the necessary circulators.
2. Leave the boiler power on and allow the control to monitor the boiler and system during the stand-by period.

⚠ WARNING

The control must be configured to operate all circulators needed to ensure the system and all circuits will be protected against freezing. See the SVF Advanced manual for details.

3. Set back room thermostats to prevent any unnecessary call for heat during the off season.

To Shut Down the Boiler

1. DO NOT shut down boilers used for domestic water heating; these must operate year-round.
2. Follow "To Turn Off Gas to the Appliance" of the Operating Instructions, [Figure 3, page 7](#).
3. DO NOT drain the system unless exposure to freezing temperatures will occur.
4. DO NOT drain the system if it is filled with an antifreeze solution, even if freezing temperatures will occur.



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