



LGB *Gas-fired boiler*

Control Supplement

LGB-5 Series 2 – Propane gas
CSD-1 Control System





Please read this page first

Hazard definitions

The following terms are used throughout this Control Supplement to bring attention to the presence of hazards of various risk levels or to important information concerning the life of the product.

- DANGER** Indicates presence of hazards that will cause severe personal injury, death or substantial property damage.
- WARNING** Indicates presence of hazards that can cause severe personal injury, death or substantial property damage.
- CAUTION** Indicates presence of hazards that will or can cause minor personal injury or property damage.
- NOTICE** Indicates special instructions on installation, operation or maintenance that are important but not related to personal injury or property damage.

To the installer . . .

WARNING This Control Supplement must only be used by a qualified installer/service technician. Read these instructions completely before beginning the installation. Failure to follow these instructions can cause severe personal injury, death or substantial property damage.

This Control Supplement is for CSD-1 controls on LGB-5 boilers only.

This document is only intended as a supplement to the **LGB Installation • Start-up • Service • Parts Manual** (referred to in this Supplement as the **LGB Manual**). Follow all instructions in the **LGB Manual** in addition to the instructions in this Control Supplement.

NOTICE The installation must conform to the requirements of the authority having jurisdiction, or, in the absence of such requirements, to the National Fuel Gas Code, ANSI Z-223.1/NFPA-54 (latest edition). Where required by the authority having jurisdiction the installation must conform to the American Society of Mechanical Engineers (ASME) Safety Code for Controls and Safety Devices for Automatically-Fired Boilers, Number CSD-1.

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Carton guide

Table 1 Boiler cartons

Verify that the correct cartons are available before beginning assembly.

Carton	Comments	Weil-McLain part number
Section assembly	Left end section	313-300-109
	Intermediate section (3)	313-300-110
	Right end section	313-300-111
Assembly parts box	A-5 box	383-300-004
Base assembly (b)	Base size 5	383-300-039
	End panel	383-300-165
Jacket	Standard LGB	413-300-001
	Carton LGB-5	413-300-011
Collector hood	Collector hood 5	450-019-859
Draft hood	Draft hood 5	443-300-099
Control carton (a)	LGB-5 CSD-1 Control carton, Propane gas	383-300-256
Trim cartons — water (c)	Basic trim	383-300-114
	Manual reset limit (L4006E-1000)	510-312-041
	M/R probe LWCO (PS-851M-120)	511-114-529
Trim cartons — gravity return steam (c)	Basic trim	383-300-135
	Manual reset limit (L404C-1147)	510-312-060
	Auto reset float LWCO (61)	511-114-474
	Manual reset float LWCO (63M)	511-114-479
Trim cartons — pumped return (c) steam	Basic trim	383-300-135
	Manual reset limit (L404C-1147)	510-312-060
	A/R float LWCO/pump control (150S-MD)	511-114-526
	Manual reset float LWCO (63M)	511-114-479
Note a	Control carton contains CSD-1 gas train, CSD-1 ignition control panel, transformer, J-box, electronic pilot burner, standing pilot burner and mounting brackets.	
Note b	Base assembly includes burner tubes, gas orifices and burner manifold.	
Note c	Water Basic trim carton includes limit controls, relief valve, and pressure/temperature gauge. Steam Basic trim carton includes limit controls, relief valve, pressure gauge, and water gauge glass set and cocks.	



A Installation & boiler assembly

Place the boiler

Refer to the **LGB Manual** and read through entire manual. Follow all guidelines in Sections I through VI. Complete the following steps of Sections I through VI of the **LGB Manual**:

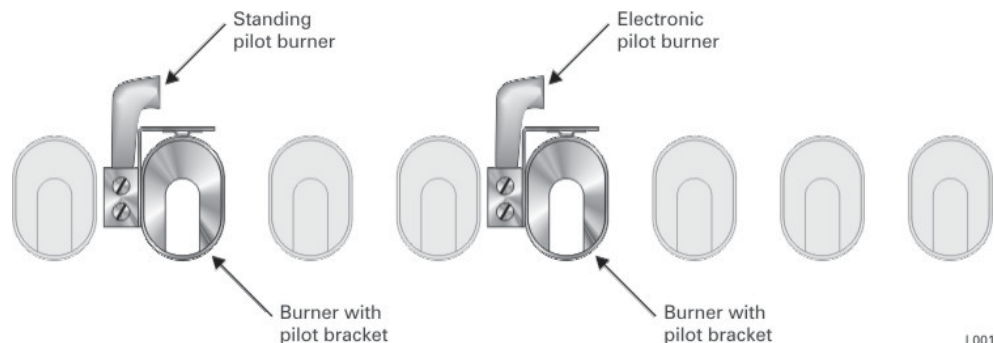
- I Pre-installation
- II Boiler assembly (base, sections, pressure test and flue collector hood)
- III Piping (boiler water or steam piping connections)
- IV Jacket
- V Draft hood
- VI Install boiler controls (refer to this Supplement for the controls supplied with CSD-1 boilers and requirements for installing them)

Install pilot burners — NEW installation

1. Remove all burners from base box assembly.
 - a. Remove 3.95 mm natural gas main burner orifices in manifold.
 - b. Install 2.40 mm propane gas main burner orifices.
- WARNING**
- Use pipe dope sparingly only on male ends. Use pipe dope compatible with propane gases. Do not overtighten orifices. Failure to follow these guidelines could result in severe personal injury, death or substantial property damage.
2. Install standing pilot on burner 2 from left. Install electronic pilot on burner 5 from left. See Figures 1 and 2.
 3. Remove pilot line components from pilot line elbow. Replace elbow with tee supplied and reconnect pilot line components. Install bushing, standing pilot shutoff valve and brass tubing adapter on the other side of the tee as shown in Figure 3 (page 6).
 4. Attach pilot switch box to interior jacket panel. See Figure 5 (page 12).
 5. Connect thermocouple from standing pilot to switch box. Cut 60” pilot tubing (provided) into 2 pieces to make connections from pilot shutoff valve to pilot switch box and from pilot switch box to standing pilot. See Figure 3 (page 6).
 6. Connect 125 °C ground wire (provided in control carton) from pilot mounting bracket (per Figure 2) to the ignition control module grounding screw on the control panel *after* ignition control panel is mounted per this Supplement.
 7. Connect pilot spark and sense wires to the ignition control (terminals **SPARK** and **SENSE**) *after* the ignition control panel is mounted per this Supplement.
 8. Reinstall burner assembly. Make sure pilot(s) are located in the positions shown in Figure 1.
 9. Attach:
 - a. 550-223-710 label at boiler operating instruction label. Place so that this label reads first.
 - b. 550-223-796 label at rating label.
 - c. Wiring diagram on jacket front panel.

Figure 1

Pilot burner assembly
Locate electronic pilot burner in 5th position from left, and standing pilot burner in 2nd position from left, as shown.



L001



Install pilot burners & orifices — EXISTING installation

WARNING

This conversion is to be installed by a Weil-McLain distributor or other qualified agency in accordance with the manufacturer's instructions and all codes and requirements of the authority having jurisdiction. Failure to follow instructions could result in serious injury or property damage. The qualified agency performing this work assumes responsibility for this conversion.

WARNING

For your safety, turn off electrical power supply before making any electrical connections to avoid possible electrical shock hazard.

1. These instructions are for use with the LGB-5 propane control carton only.
2. Remove jacket door and access panel.
3. Disconnect wiring and tubing from existing pilot burner and main flame sensor.
4. Remove all burners.
 - a. Remove 3.95 mm natural gas main burner orifices in manifold.
 - b. Install 2.40 mm propane gas main burner orifices.

WARNING

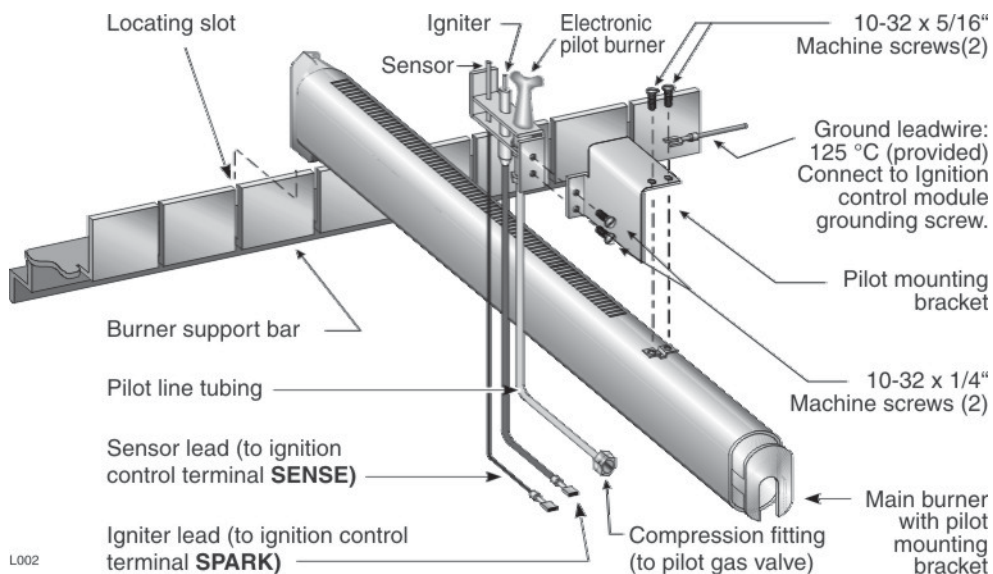
Use pipe dope sparingly only on male ends. Use pipe dope compatible with propane gases. Do not overtighten orifices. Failure to follow these guidelines could result in severe personal injury, death or substantial property damage.

5. Remove and discard existing electronic pilot burner from pilot burner tube. Replace with electronic pilot burner in carton.
6. Attach Q327 standing pilot to burner tube in kit. Connect pilot tubing and thermocouple to pilot.

7. Reinstall burners. See Figures 1 and 2 for pilot burner mounting and locations.
8. See Figure 3, page 6 for propane piping.
9. Replace elbow in pilot gas line with tee. Install pilot shutoff valve for standing pilot in one side of tee and electronic pilot shutoff valve in the other side, as shown in Figure 3, page 6.
10. Attach pilot switch box to jacket. See Figure 5 (page 12). Connect thermocouple to pilot switch box. Cut 60" pilot tubing (provided) into 2 pieces to make connections from tee in pilot line to pilot switch box and from pilot switch box to standing pilot.
11. Remove natural gas valve train.
12. See following section in this Supplement for installation of propane gas valve train.
13. Reinstall access panel.
14. Wire per wiring instructions and wiring diagrams in this Supplement. Add splices as needed.
15. Attach:
 - a. 550-223-710 label at boiler operating instruction label. Place so that this label reads first.
 - b. 550-223-796 label at rating label.
 - c. Wiring diagram over diagram on door (one on each base).
16. To place in operation, follow instructions in the **LGB Manual** and this **Supplement**.

Figure 2

Electronic pilot burner assembly to main burner





A Installation & boiler assembly – cont.

Install gas train assembly

Connect gas train assembly to burner manifold by:

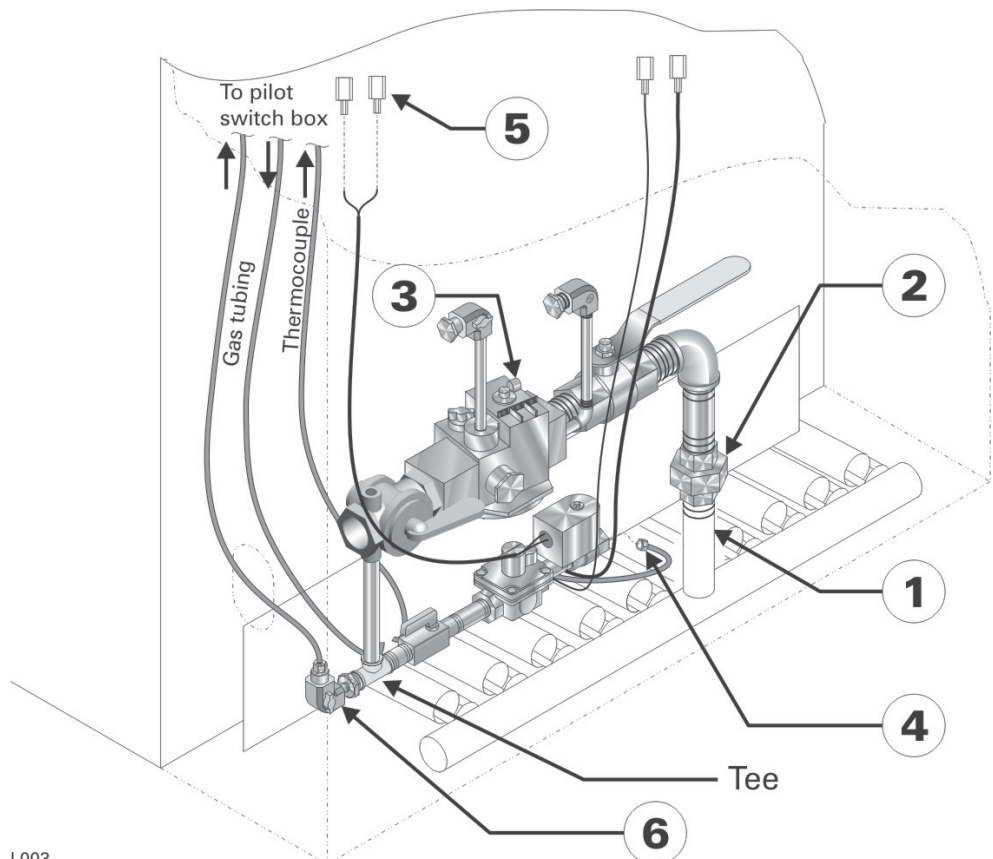
1. Apply pipe dope to burner manifold nipple (Figure 3, item 1).

WARNING

Pipe joint compound used must be resistant to corrosive action of liquefied petroleum gases. Apply sparingly only to male threads of pipe joints. Use of excessive pipe joint compound can result in damage and possible failure of gas train components.

2. Pipe lower half of gas train ground joint union to this nipple (Figure 3, item 2).
3. Knock out the gas valve opening on the left side of the boiler. The gas supply can only enter from the left because of the length of the gas train.
4. Place gas train in position and hand-tighten the ground joint union. Position the gas train assembly and tighten the union securely.
5. Connect vent lines (routed to outside per code requirements) to 1/4" tubing vent connections on main gas valve and pilot gas pressure regulator (Figure 3, item 3).
6. Connect pilot gas tubing (1/8" aluminum) to adapter in pilot gas valve outlet (Figure 3, item 4).
7. Crimp connect two 1/4" spade terminals to ends of pilot gas valve wires (Figure 3, item 5).

Figure 3
Gas train assembly



L003



B Gas piping

1. Contact gas supplier to size pipes, tanks and regulator.
 - a. Inlet gas pressure to manual main shut-off gas valve — minimum 11” W.C., maximum 13” W.C.
 - b. If pressure to gas valve exceeds 13” W.C., install 100% lockup gas pressure regulator upstream of hand valve.
2. Remove gas supply knockout disc from left side jacket panel. Gas supply can only enter from the left side because of the length of the CSD-1 gas train assembly.
3. Follow good piping practices.

WARNING

Pipe joint compound used must be resistant to corrosive action of liquefied petroleum gases. Apply sparingly only to male threads of pipe joints. Use of excessive pipe joint compound can result in damage and possible failure of gas train components.

4. Install drip leg and manual gas valve at inlet of gas connection to boiler. Where local utility requires, extend drip leg to floor.
5. Install ground joint union when required for servicing.
6. Support piping by hangers, not by boiler or its accessories.
7. Purge all air from supply piping.
8. Before operating boiler, check boiler and its gas connections for leaks.

WARNING

Do not check for gas leaks with an open flame — BUBBLE TEST. Failure to use bubble test or test for leaks can cause severe personal injury, death or substantial property damage.

- a. Close manual main shutoff valve (exterior to jacket) during any pressure testing at less than 13” W.C.
- b. Disconnect boiler from gas supply piping during any pressure test greater than 13” W.C.

C Water and steam trim components

1. LGB-5 CSD-1 boilers are equipped with the following components, as required by the ASME CSD-1. Consult local codes for any special or additional requirements.
 - a. LGB-5 CSD-1 water boilers include the following:
 - a manual reset high temperature limit control and an automatic reset limit control.
 - a manual reset low water cutoff (probe type supplied). Install the probe low water cutoff in the supply or return piping, above the top of the boiler. The low water cutoff must be mounted between the boiler and any isolation valve(s) installed in the piping.
 - b. LGB-5 CSD-1 steam boilers include the following:
 - a manual reset high pressure limit control and an automatic reset limit control.
 - a manual reset float low water cutoff plus an automatic reset float low water cutoff (gravity return steam boilers) or an automatic reset float low water cutoff/pump control (pumped return steam boilers).

NOTICE

The controls may be mounted on either end of the boiler. All controls (and the junction box) must be mounted on the same end.



D Wiring

WARNING

For your safety, turn off electrical power supply before making any electrical connections to avoid possible shock hazard.

WARNING

A strain relief bushing and adapter must be used at each point where wiring passes through the boiler jacket or control cases to protect wiring insulation.

NOTICE

The boiler limit controls and low water cutoff(s) are exterior to the boiler jacket, and must be wired per N.E.C. class 1 in conduit. The wire (No. 14 gauge or heavier) and conduit for these controls is supplied by the installer — it is not included with the boiler.

Assembly illustration and wiring diagrams

This Supplement contains a schematic and ladder wiring diagram.

The diagrams show limit control and low water cutoff connections for both water and steam boilers.

See Figure 5, pages 12 and 13 for a typical finished assembly.

General

Refer to **LGB Manual** for further information.

All wiring must be installed in accordance with the requirements of the National Electrical Code and any additional national, state or local code requirements having jurisdiction. All line voltage wiring external to boiler jacket must be N.E.C. class 1.

Provide a separate electrical circuit with a fused disconnect switch (15 amp recommended) to supply the boiler. Wiring to the boiler must be No. 14 gauge or heavier, installed in conduit.

The boiler must be electrically grounded in accordance with the National Electrical Code, ANSI/NFPA No. 70, latest edition.

Use 105 °C thermoplastic wire, or equivalent, if any original wire must be replaced (except for pilot spark and sense wires and 125 °C pilot burner ground wire).

Wiring procedure

1. Mount all controls as directed in Section C of this Supplement. Refer to the assembly illustration, Figure 5, page 12 for component locations.
2. Mount the junction box supplied with the boiler on the inside left (or right) side of the jacket as shown in the assembly illustration (using screws and nuts provided). The junction box must be mounted on the same end of the boiler as the controls will be mounted.
3. Attach the transformer/relay to the junction box.
4. Mount the CSD-1 control panel on the jacket interior panel as shown in the assembly illustration, Figure 5, page 12 (using screws and nuts provided).
5. Crimp connect ¼" spade terminals (provided) to the pilot gas valve wires (if not already done in Section A of this Supplement). Connect the pilot valve black wire to the ignition control **PV** terminal. Connect the pilot valve white wire to the main gas valve **TR** terminal.
6. Connect pilot burner ground wire, spark wire and sense wire to ignition control as directed in wiring diagram and Figure 2, page 5.
7. The main gas valve wires are pre-attached to the CSD-1 control panel. Connect these wires as shown in the wiring diagram.
8. Use minimum 14-gauge thermoplastic wire (105 °C or better), supplied by installer, to complete wiring of the remaining components according to the appropriate wiring diagram and the assembly illustration. Route all wiring to external components (limit controls and low water cutoffs) in conduit per N.E.C. class 1.



D Wiring — sequence of operation

General

The following sequence of operation applies to all wiring diagrams in this **Supplement** — both water and steam.

Call for heat

On a call for heat (from thermostat or operating control) —

1. Assumptions: Limit control and water level control contacts are closed and standing pilot is operating.
2. Ignition control checks for signal at electronic pilot. (No signal should be present.)

If no signal is sensed (normal condition):

- a. Pilot solenoid opens.
- b. Pilot ignition spark begins.
- c. Pilot ignites.
- d. Pilot proves.

If a signal is sensed (abnormal condition) by the ignition control, the control will lockout.

NOTICE

On failure to establish pilot flame signal within 15 seconds, the ignition control will turn off the pilot gas valve. It will wait 5 minutes, then retry for ignition. If the second ignition attempt fails, the ignition control will lockout and illuminate the red lockout light.

NOTICE

This will activate the alarm contact of the impulse relay, providing an isolated contact closure across terminals A1 and A2 of the CSD-1 control panel terminal strip. The contact rating is 15 amps at 250 VAC.

To reset the boiler, push the red lockout button on the CSD-1 control panel.

3. Once pilot is proved the ignition control activates main gas valve. Main burners will ignite and boiler will continue to fire until terminated by limit action or no call for heat.

Lockout modes

In addition to lockout on flame-sense failure, the boiler may also experience lockout due to shutdown of a manual reset control.

NOTICE

The boiler is equipped with a manual reset limit control and a manual reset low water cutoff. Should the limit control or the low water cutoff lockout, the boiler will only restart after the limit control or low water cutoff reset switch is pressed.

CAUTION

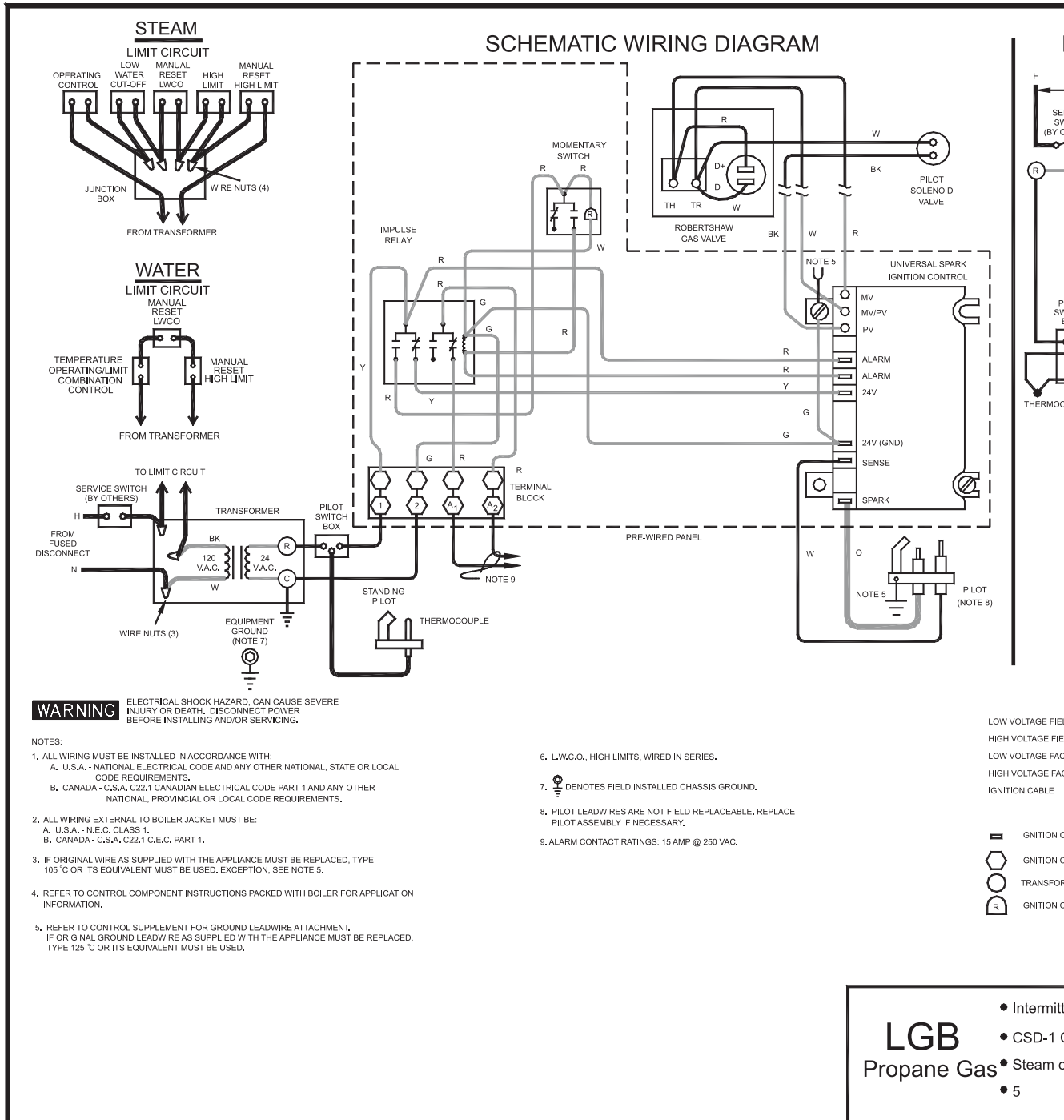
Steam boilers — Do not substitute another manual reset low water cutoff for the one specified and supplied with the boiler. Other controls may not operate as intended and could cause serious operating problems or failures.

NOTICE

The boiler is equipped with a standing pilot as well as an electrically-ignited pilot. Should the standing pilot thermocouple lose flame sense, the pilot switch box will open the electrical circuit, shutting off the boiler. The pilot must be manually lighted in accordance with the lighting instructions on the boiler label and in this Supplement in order to restart the boiler.



D Wiring — diagrams



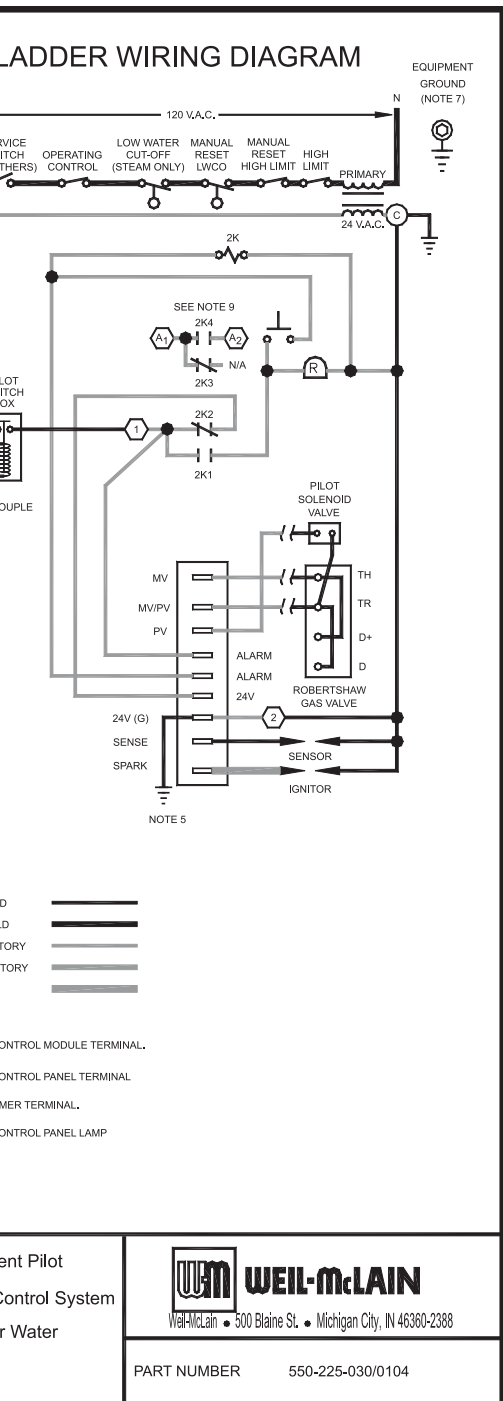
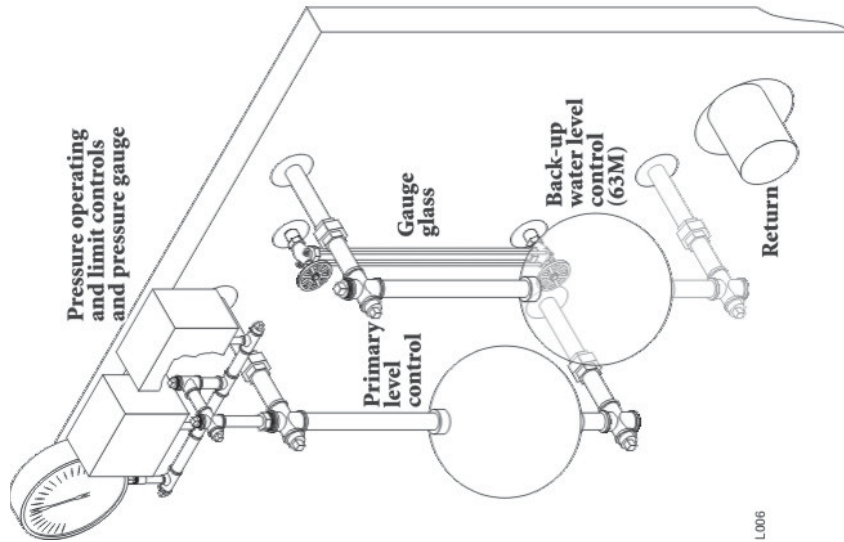


Figure 4
Ladder and schematic wiring diagrams

D Wiring

Figure 5

Assembly illustration — typical



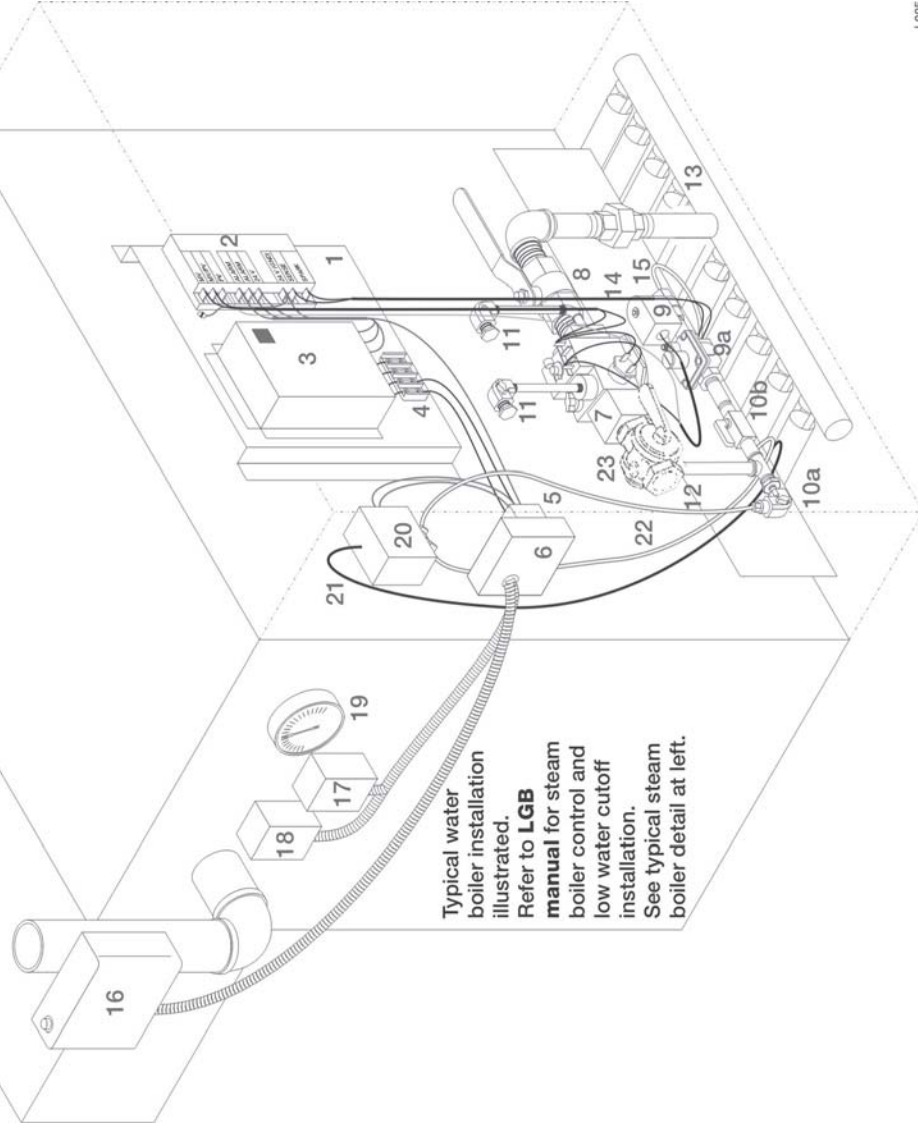
L006

Steam boilers — control and low water cutoff mounting

See **LGB manual** for piping of steam boiler pressure gauge, limit controls and low water cutoffs

NOTICE

All wiring to be supplied by installer except for:
 pilot spark, sense and ground wires
 pilot gas valve wires
 main gas valve wires
 Use minimum 14-gauge 105 °C or better wire.



Typical water boiler installation illustrated. Refer to **LGB manual** for steam boiler control and low water cutoff installation. See typical steam boiler detail at left.



L005

LGB-5 CSD-1 Series 2 Propane gas – Control Supplement



1	CSD-1 control panel	12	Gas supply connection
2	Ignition control	13	Burner manifold
3	Impulse relay and lighted push-button alarm silencing switch	14	Pilot spark & sense wires
4	Terminal strip	15	Pilot gas tubing
5	Transformer	16	Probe LWCO, manual reset
6	Junction box	17	Limit control, auto reset
7	Main gas valve	18	Limit control, manual reset
8	Manual gas valve	19	Pressure/temperature gauge
9	Pilot gas valve	20	Pilot switch box
9a	Pilot gas pressure regulator	21	Thermocouple lead
10a	Standing pilot shutoff valve	22	Pilot tubing, 1/4"
10b	Electronic pilot shutoff valve	23	Hand gas valve
11	Leak test valves with plugs		



E Leak test procedure

WARNING

For your safety, turn off electrical power supply before making any electrical connections to avoid possible shock hazard.

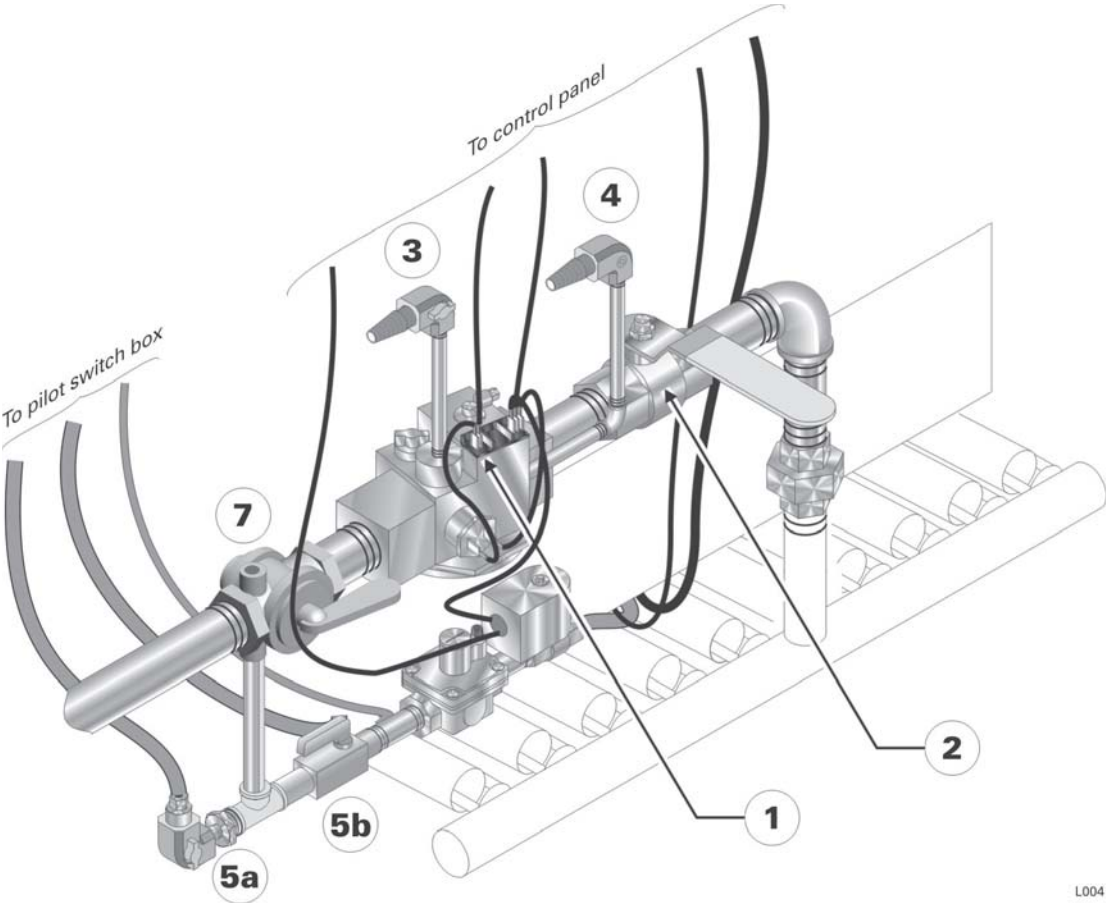
1. Light the standing pilot and start the boiler in accordance with Section **F** of this **Supplement**.
 - a. Allow the standing pilot to remain ignited.
 - b. Turn off power to the boiler and remove the (RED) wire from terminal TH of the main gas valve (Figure 6, item 1).
 - c. Tape off terminal end of removed wire and restore power to the boiler.
2. Open hand gas valve (Figure 6, item 7). Close manual gas valve (Figure 6, item 2).
3. Check that both leak test valves (Figure 6, items 3 and 4) are closed. Then remove plugs and insert 1/8" NPT hose barb fittings as shown in Figure 6.
4. Attach a U-tube manometer to first leak test valve (Figure 6, item 3).
5. Open first leak test valve (Figure 6, item 3) and check for pressure. See NOTICE below.
6. Close first leak test valve (Figure 6, item 3) and remove manometer.
7. Attach manometer to second leak test valve (Figure 6, item 4).
8. Apply call for heat to boiler and check that electronic pilot proves.
9. Open second leak test valve (Figure 6, item 4) and check for pressure. See NOTICE below.
10. Close second leak test valve and remove manometer.
11. Remove call for heat to boiler. Turn off power to the boiler.
12. Remove hose barbs from leak test valves and replace plugs.
13. Replace (RED) wire to terminal TH of gas valve.
14. Open manual gas valve (Figure 6, item 2) and restore power to boiler.

NOTICE

When checking for pressure at the leak test valves, it is normal to find a small pressure reading. If the pressure continues to rise after opening the leak test valve, the main valve seat is leaking and should be replaced.



Figure 6
Gas train assembly



L004



F Operating instructions

WARNING

- A. This boiler is equipped with a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly. The gas supply to this pilot is controlled by **pilot switch box**. This boiler is also equipped with an ignition device which automatically lights a second pilot. The gas supply to this pilot is controlled by the **ignition control and pilot gas valve**. Do not try to light this pilot by hand.
- B. BEFORE OPERATING THE MANUAL PILOT, 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.

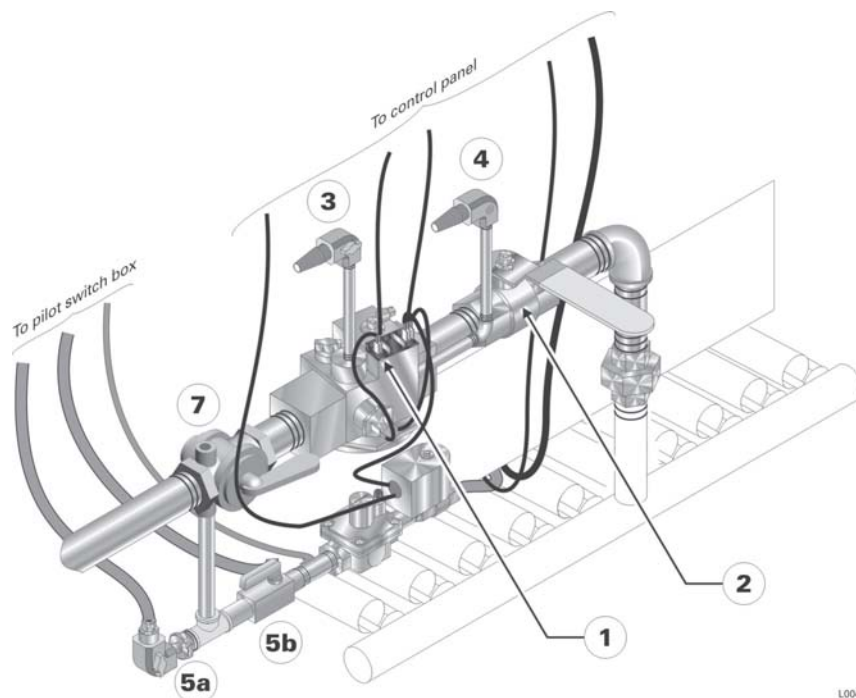
WHAT TO DO IF YOU SMELL GAS

- 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. 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.

WARNING

This document is intended only as a supplement to the **LGB Manual**. Follow all instructions in the **LGB Manual**, including those regarding final adjustment and boiler operation and maintenance (found in Sections VII, VIII, IX and X).

Figure 7
Gas train assembly



L004



Starting the boiler

1. **STOP!** Read the safety information on opposite page.
2. Set the **operating control** to lowest setting.
3. Turn off all electrical power to the appliance.
4. Remove the **jacket front panel** and **base access shield**.
5. Close the **pilot shutoff valves** (Figure 7, items 5a and 5b). Close **hand gas valve** (Figure 7, item 7). Close **manual gas valve** (Figure 7, item 2).
6. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor.
 - a. If you smell gas, **STOP!** Follow “B” in the safety information on the opposite page.
 - b. If you don’t smell gas, go to the next step.
7. Light the **standing pilot** as follows:
 - a. Open the **standing pilot pilot shutoff valve** (Figure 7, item 5a).
 - b. Press and hold the **reset lever** on the **pilot switch box** (Figure 8 and Figure 5, item 20, page 12). Manually light the **standing pilot** while holding the lever down. Air in the gas supply line will have to purge through the line before sufficient gas will reach the pilot.
 - c. After purging all air and lighting the pilot, hold the **pilot switch box lever** for about 1 minute to heat the thermocouple.
 - d. Release the **pilot switch box lever**. The standing pilot should remain lit.
8. Verify **ignition control** operation on flame failure:
 - a. **Electronic pilot shutoff valve** (Figure 7, item 5b) should be closed.

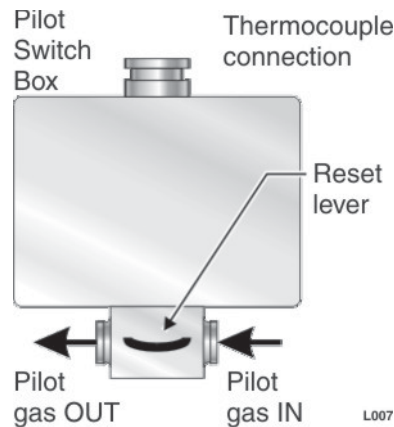


Figure 8

Pilot switch box

- b. Turn on electric power to the boiler.
 - c. The **ignition control** will initiate spark, attempting to light the pilot.
 - d. After 15 seconds the **ignition control** should shut down (no flame sensed). The **ignition control** should then wait approximately 5 minutes, then attempt once again to ignite the pilot.
 - e. With no gas available, the **ignition control** will be unable to light the pilot. After 15 seconds of ignition attempt, the control should shut down and lockout due to flame failure.
 - f. If the **ignition control** performs correctly, turn off the electric power to the boiler and proceed to step 9. If the **ignition control** does not operate correctly, skip to step 10.
9. Proceed with boiler start-up.
 - a. Open the **manual gas valve** (Figure 7, item 2). Open the **electronic pilot shutoff valve** (Figure 7, item 5b).
 - b. Turn on electric power to the boiler.
 - c. Set **operating control** to desired setting.
 - d. The boiler should operate correctly. If so, proceed to step 11 and skip step 10.
10. If the appliance will not operate:
 - a. Turn off gas to the appliance by closing the **manual gas valve** installed in the gas supply piping ahead of the drip leg.
 - b. Turn off electric power to the boiler.
 - c. Call your **service technician** or **gas supplier**.
11. Replace **base access shield** and **jacket front panel**.



Table 2 — Boiler replacement parts

Item	Part description	Vendor	Vendor part number	Weil-McLain part number
1	Electronic pilot burner, repair kit, propane	Weil-McLain		383-300-411
2	Standing pilot burner, repair kit, propane	Weil-McLain		383-300-410
3	Thermocouple	Honeywell	Q309A	511-724-245
4	Pilot switch box	Johnson Controls	L62GB-3C	511-330-229
5	Main gas valve	Robertshaw	7000DERHC-S7C	511-044-279
6	Manual gas valve, 1" NPT	Watts	FBV3-06	511-246-290
7	Leak test valve	Key Gas		511-246-339
8	Pilot gas valve	Honeywell	V8046C-1014	511-044-039
		Johnson Controls	H91ABG	
8a	Pilot gas pressure regulator	Maxitrol	RV20VL	510-933-195
9a	Pilot shutoff valve, electronic pilot line	Conbraco	53-300-01	511-246-345
9b	Pilot shutoff valve, standing pilot line	Key Gas		511-246-340
10	Pilot tubing, alum. 1/4" O.D.	Available at local supply house		
10a	Pilot tubing, alum. 1/8" O.D. x 34" long			
11	Ignition control	United Technologies	1003-615	511-330-086
12	Impulse relay	Potter-Brumfield	S89R-11ABD1-24	510-350-226
13	Push-button switch	Honeywell	AML21CBA2AA	511-624-580
		Eaton Controls	221K11810	
14	Lens cover (push-button switch)	Honeywell	AML51-C10R	511-624-581
		Eaton Controls	220PM02A	
15	Light bulb (push-button switch)	T1-¾ (available at local supply house)		
16	Transformer, 120vac/24vac, 75 va	Honeywell	AT175C-1004	511-842-364
		Johnson Controls	Y66ACD-1C	
17	Temperature limit control, automatic reset	Johnson Controls or Honeywell		510-312-209
18	Temperature limit control, manual reset	Honeywell	L4006E-1000	510-312-041
19	Pressure limit control, automatic reset	Johnson Controls	PA404A-1009	510-312-135
20	Pressure limit control, manual reset	Honeywell	L404C-1147	510-312-060
21	Probe LWCO, manual reset	McDonnell & Miller	PS851M-120	511-114-528
22	Float LWCO, automatic reset	McDonnell & Miller	61	511-114-494
23	Float LWCO/pump control, auto reset	McDonnell & Miller	150S-MD	511-114-526
24	Float LWCO, manual reset	McDonnell & Miller	63M	511-114-479
25	Hand gas valve	Weil-McLain		511-246-325
Replacement parts must be purchased through a local Weil-McLain distributor. When ordering, specify boiler model and series and include description and number of replacement part. Results from using modified or other manufactured parts will not be covered by warranty and may damage boiler or impair operation.				
Refer to illustrations and instructions in this Supplement for component locations.				
Refer to LGB manual for parts not listed above.				



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