

OBSELETED BY 550-141-699/0393

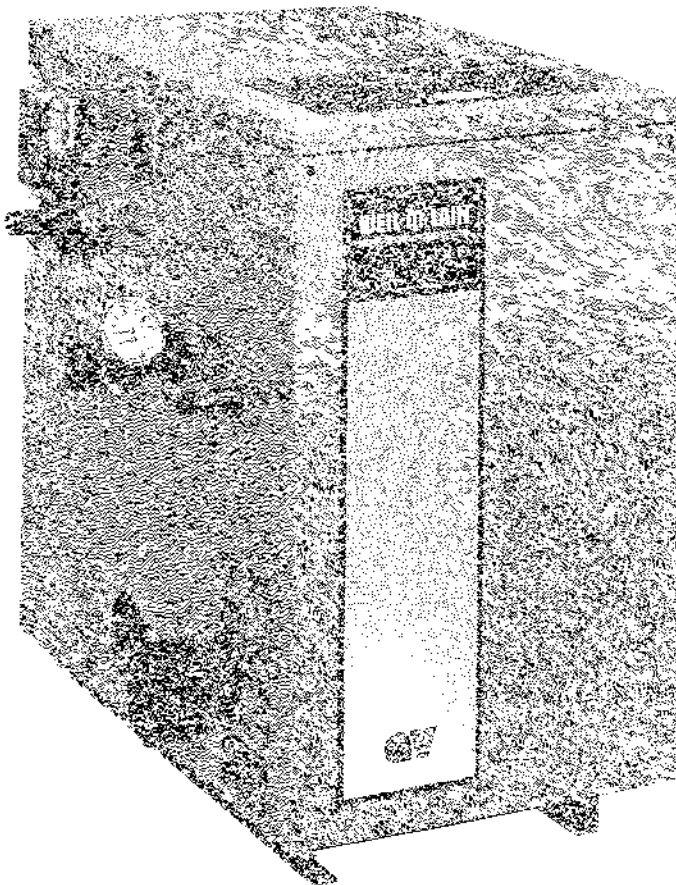
WEIL-McLAIN



GOLD

GV BOILER

GAS CONTROL
SUPPLEMENT
FOR NATURAL
OR PROPANE
GAS-FIRED
BOILERS



TO THE USER: Gas Control Supplement is to be used by a qualified service technician.

Part Number 550-141-602/0590WP

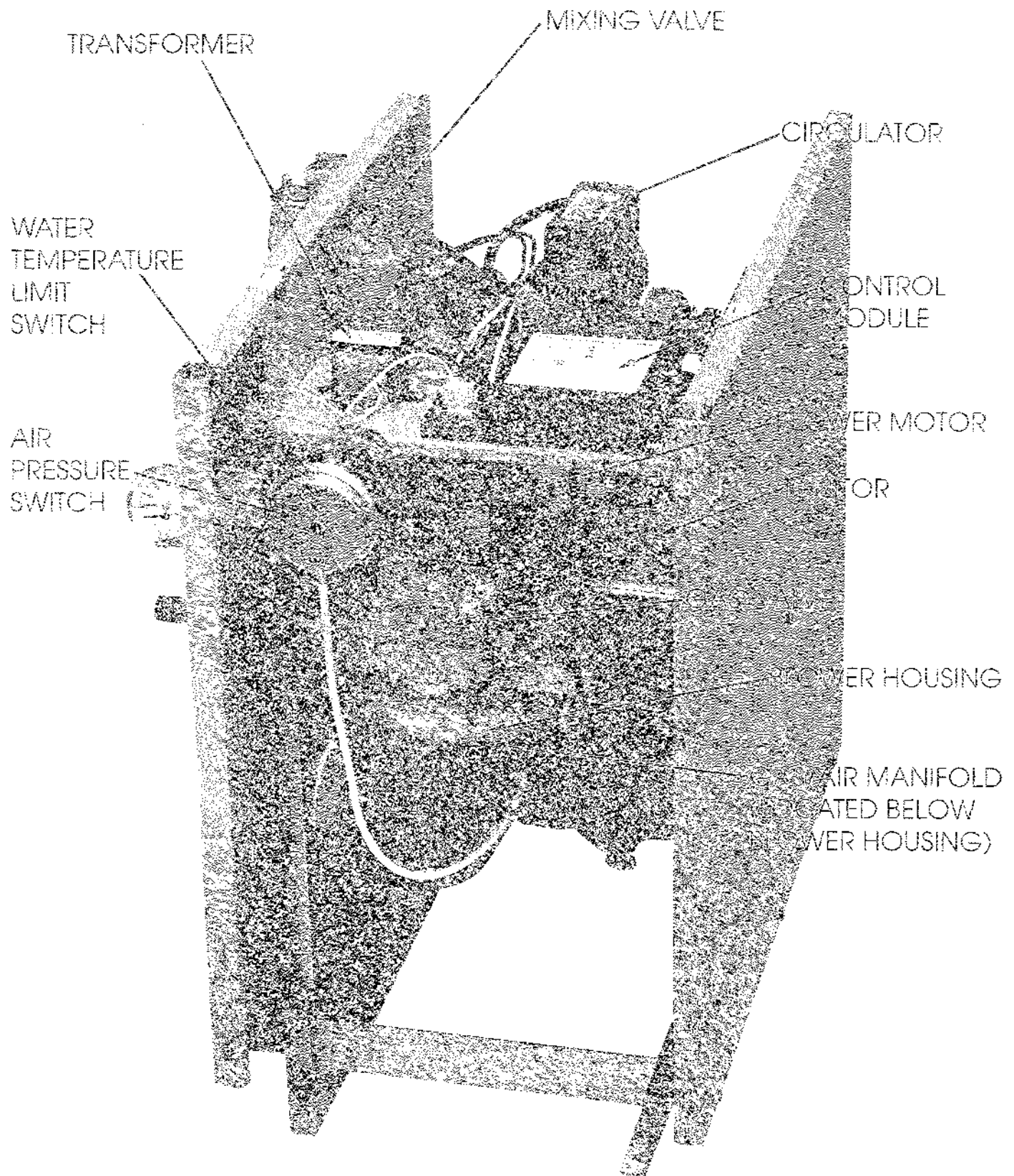
Table of Contents

Section A: Sequence of Operation 45

Section B: Troubleshooting 610

Section C: Parts 71

IMPORTANT: When calling or writing about the boiler, PLEASE GIVE THE MODEL listed on the boiler rating label AND THE CP NUMBER found next to the rating label.



Section A: Sequence of Operation

SEQUENCE OF OPERATION.

Use chart below and observe indicator lights located on control module.

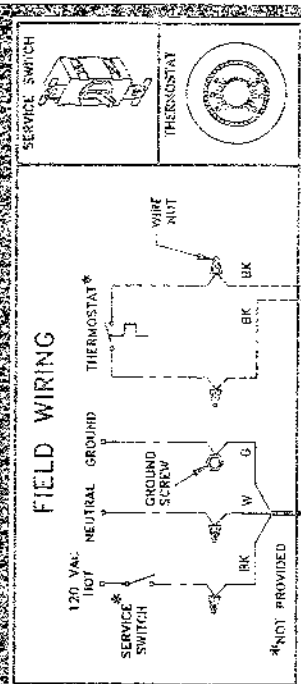
STEPS (After step #8 is completed, boiler goes back to Standby, Step #1)	Call For Heat	Indicator Lights				Timing
		Power	Purge	Ignitor	Vlv/Flm	
1. Standby • Waiting for call for heat	NO	●	○	○	○	—
2. Start Cycle • Circulator on • Blower on	YES	●	○	○	○	—
3. Pre-Purge • Air pressure switch contacts closed • Air flow proven	YES	●	●	○	○	15 sec
4. Ignitor • Ignitor on • Ignitor heating	YES	●	○	●	○	20 sec
5. Gas Valve • Gas valve open • Ignitor remains on	YES	●	○	●	●	2 sec
6. Proving Flame • Ignitor off • Gas remains on	YES	●	○	○	●	4 sec
7. Flame* • Flame proven • Boiler producing heat	YES	●	○	○	●	—
8. Post-Purge • Circulator off • Blower remains on	NO	●	●	○	○	30 sec

* If flame is not proven in 4 seconds, boiler recycles 2 times to retry for ignition before going into lockout. Recycle ignitor timing is 30 seconds.

● Indicator light ON.

○ Indicator light OFF.

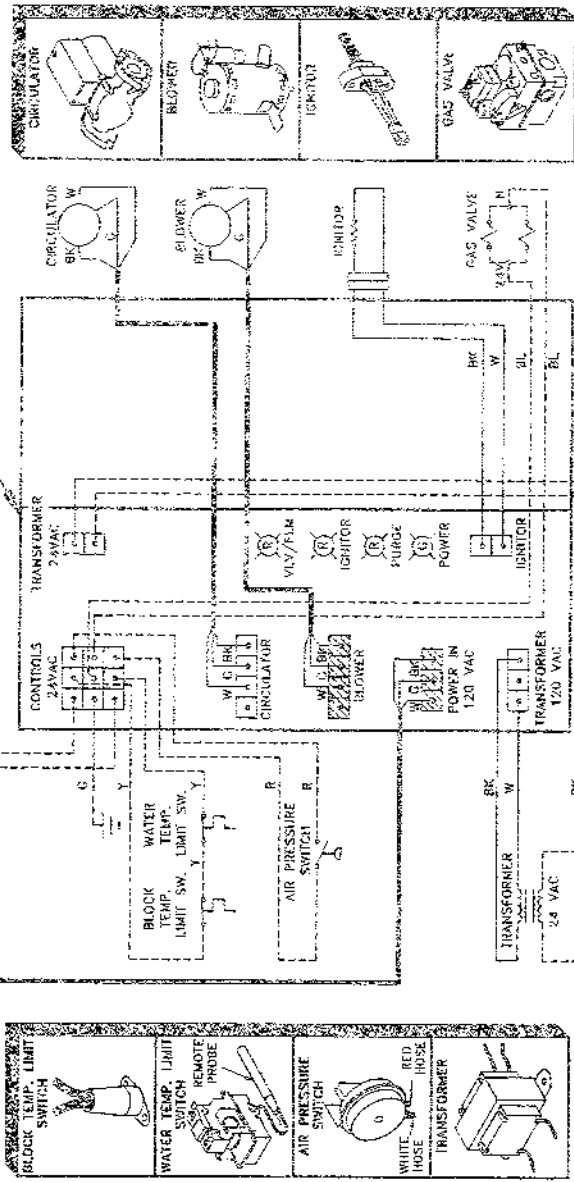
FIELD WIRING



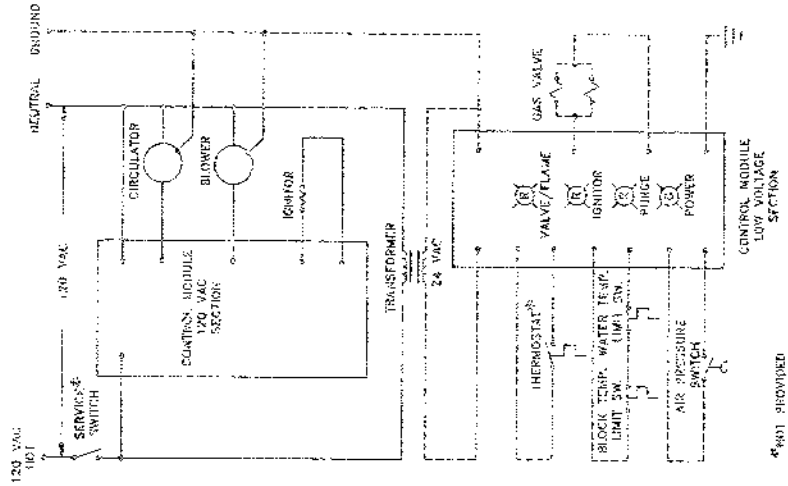
SCHEMATIC WIRING

[Red line symbol] = RED CONNECTOR
 [White line symbol] = WHITE CONNECTOR
 HIGH VOLTAGE FACTORY WIRING
 LOW VOLTAGE FACTORY WIRING
 HIGH VOLTAGE FIELD WIRING
 LOW VOLTAGE FIELD WIRING

CONNECTOR AND STATUS LIGHT LOCATIONS/ORIENTATIONS MAY VARY



LADDER WIRING



NOTES:

1. ALL WIRING MUST BE INSTALLED IN ACCORDANCE WITH:
 a. U.S.A. - N.E.C. AND ANY OTHER NATIONAL, STATE, OR LOCAL CODE REQUIREMENTS HAVING JURISDICTION.
 b. CANADA - C.S.A., C22.1 C.E.C. PART 1 AND ANY OTHER NATIONAL, PROVINCIAL, OR LOCAL CODE REQUIREMENTS HAVING JURISDICTION.

ELECTRICAL SHOCK HAZARD, CAN CAUSE SEVERE INJURY OR DEATH. DISCONNECT POWER BEFORE INSTALLING AND/OR SERVICING.

2. ALL SAFETY CIRCUIT WIRING MUST BE:
 a. U.S.A. - N.E.C. CLASS 1.
 b. CANADA - C.S.A. C22.1 C.E.C. PART 1.

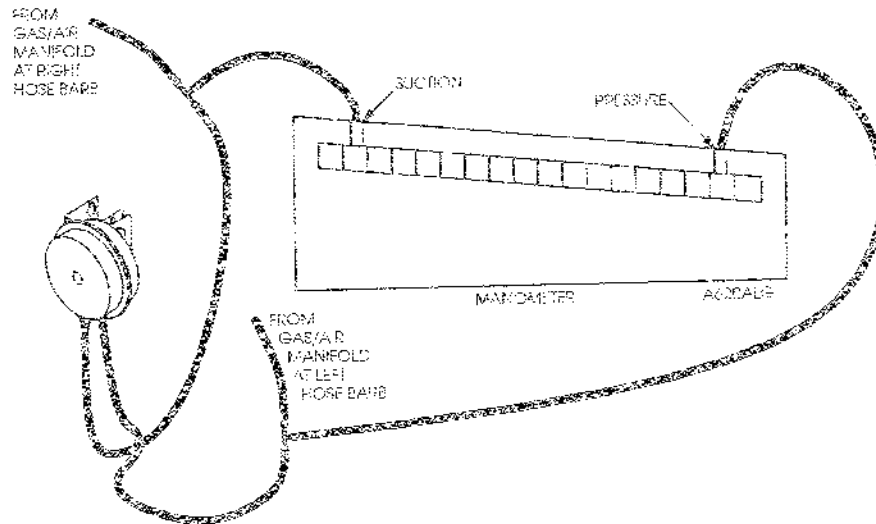
3. IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, TYPE 90°C WIRE OR ITS EQUIVALENT MUST BE USED.
4. THERMOSTAT ANTICIPATOR SETTING (SINGLE ZONE):
 SEE LABEL ON CONTROL MODULE.

NOTICE - ALL CONTACTS SHOWN WITHOUT POWER APPLIED - OFF SLEEF CONDITION.

5. FOR MULTIPLE ZONING USE EITHER ZONE VALVES OR CIRCULATORS. REFER TO THE COMPONENT MANUFACTURER'S INSTRUCTIONS FOR APPLICATION AND WIRING.
6. REFER TO CONTROL COMPONENT INSTRUCTIONS PACKED WITH THE BOILER FOR APPLICATION INFORMATION.

Section B: Troubleshooting

CHECKING AIR PRESSURE SWITCH:



CHECKING AIR PRESSURE SWITCH
FIGURE 1

WARNING: DO NOT USE MANOMETER TO TEST GAS VALVE. Manometer fluid will cause permanent damage to gas valve. Severe personal injury can result.

1. Remove both air pressure switch hoses from gas/air manifold.
2. Install tees and tubing as shown in Figure 1 to inclined manometer.
3. Turn off gas valve and set thermostat to call for heat. Blower will run but burner will not ignite.
4. Check for 24VAC between air pressure switch terminals and ground.
5. If manometer reading is at least 1.4" W.C., but there is not 24VAC across air pressure switch terminals and ground, replace air pressure switch.
6. If reading is lower than 1.4" W.C. check for possible causes:
 - blockage in hoses.
 - Loose blower wheel on motor shaft.
 - blower motor not at proper rpm.
 - blockage in air inlet or hose.
 - blockage in flue pipe or termination.
7. When pressure reading is proper and air pressure switch is operating properly, remove tees and reinstall hoses to air pressure switch.

SPECIAL SERVICING TIPS:

1. Ignitor

WARNING: Wait several minutes until ignitor cools down before attempting replacement. Failure to do so will cause severe personal injury.

Unplug from wiring harness and remove before removing blower assembly.

Ignitor is fragile - handle with care.

2. Gas Valve:

Negative pressure and left-hand thread - DO NOT ATTEMPT to test (see "WARNING" in 1st column) or repair. Replace only through Web-McLain distributor.

3. Blower Housing:

Do not disassemble - sealed gas-tight.

4. Control Module:

Make sure ground wire is attached per wiring diagram. Good grounding is extremely important for proper operation.

TROUBLESHOOTING PROCEDURE:

⚠ DANGER ⚠ NEVER JUMPER (BY-PASS) any safety device except for momentary testing as outlined in Troubleshooting Charts. A fire or explosion causing property damage and/or personal injury will result.

1. Before troubleshooting:

- Have a voltmeter that can check 120VAC and 24VAC and a continuity checker.
- Check for 120VAC (min. 102-max. 132) to boiler.
- Have an inclined manometer with 0-2" W.C. range.
- Make sure thermostat is calling for heat and contacts (including appropriate zone controls) are closed. Check for 24VAC between thermostat wire nuts and ground.

2. Check the following:

- Wire connectors to control module are securely plugged in at module and originating control.
- Hoses are properly and securely plugged in and are not damaged.

CHART 1 - IS GREEN LIGHT OFF OR FLASHING - NOT ON STEADY?

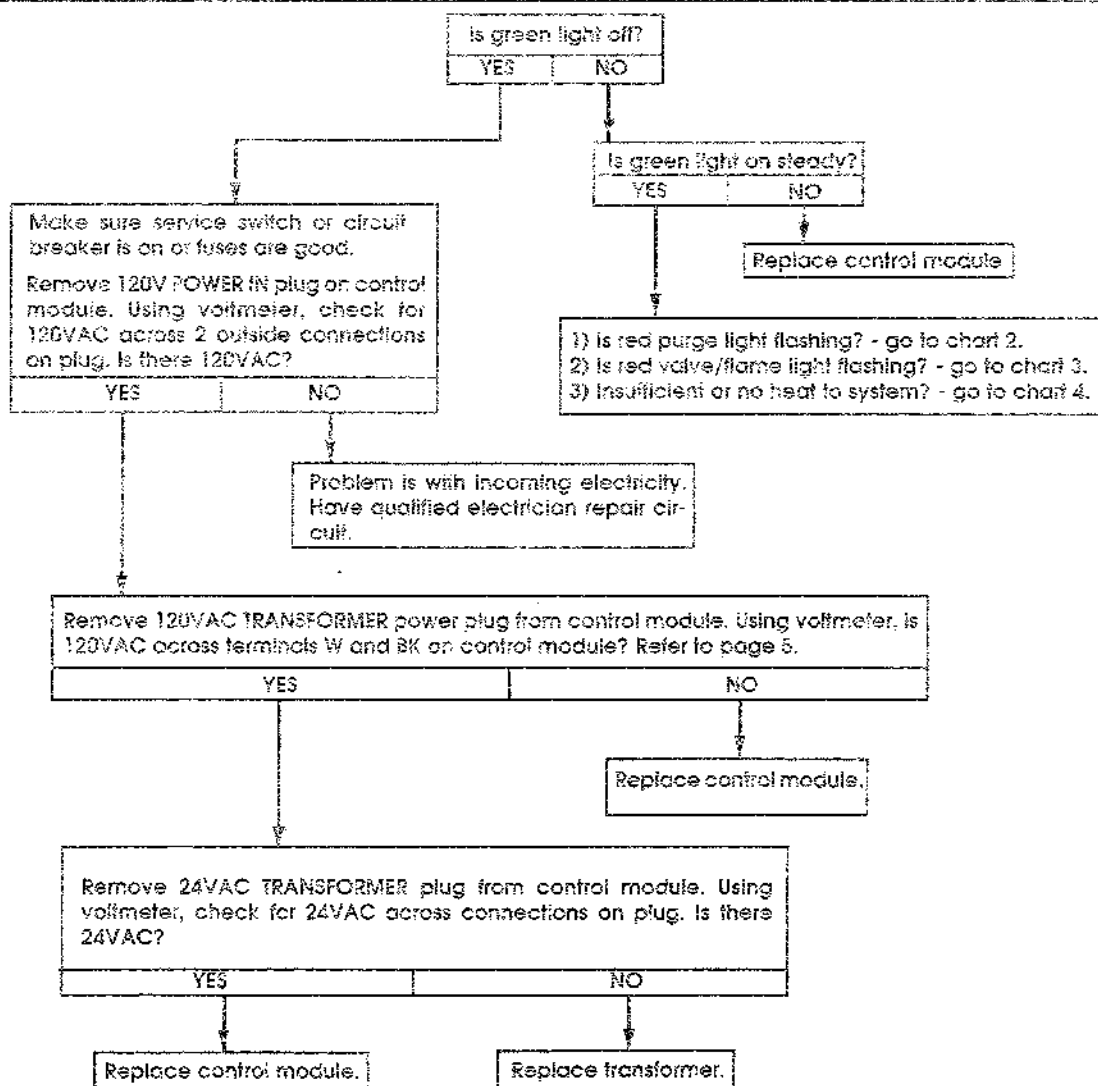


CHART 2 - IS RED PURGE LIGHT FLASHING?

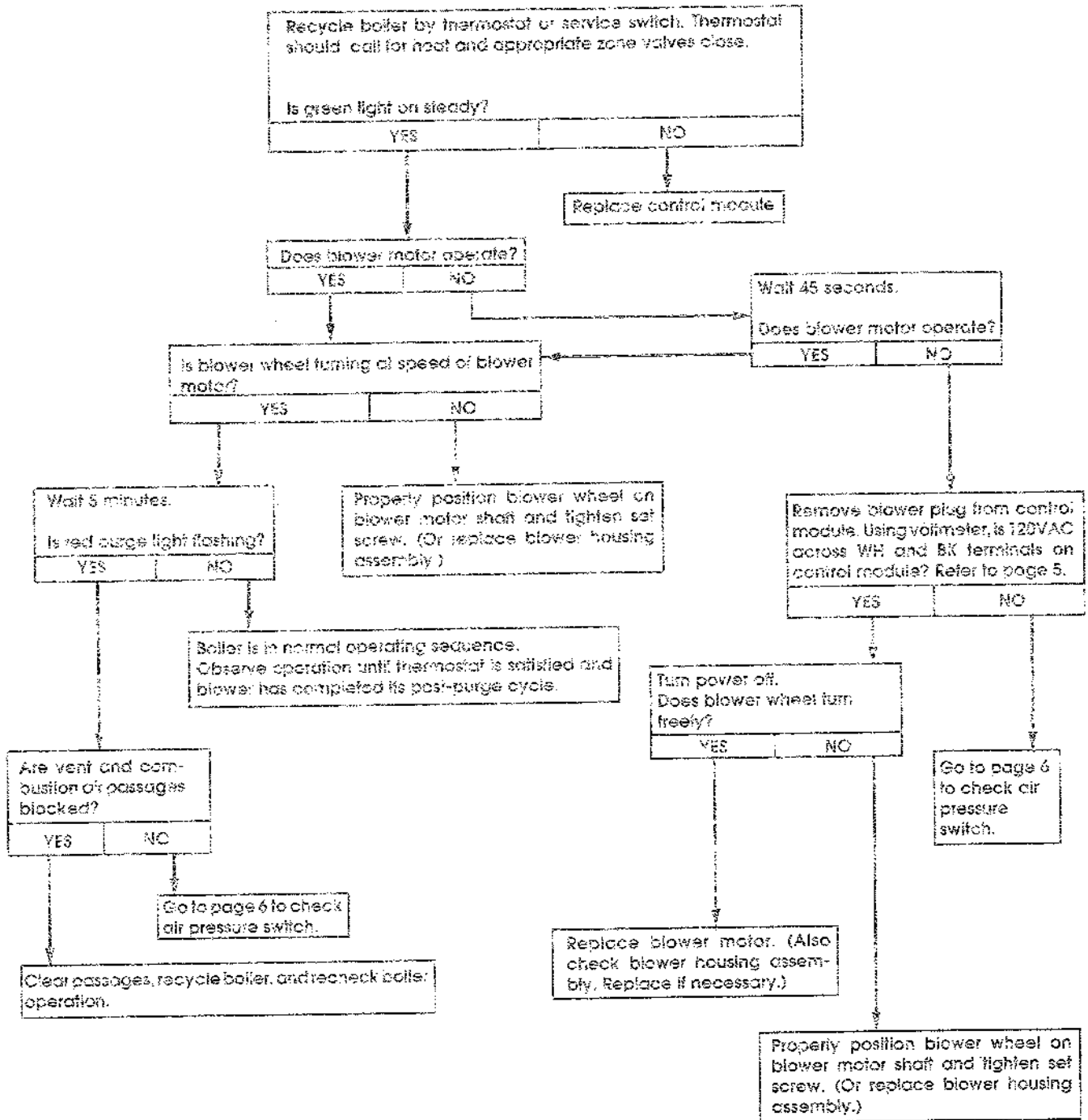


CHART 3 - IS RED VALVE/FIAME LIGHT FLASHING?

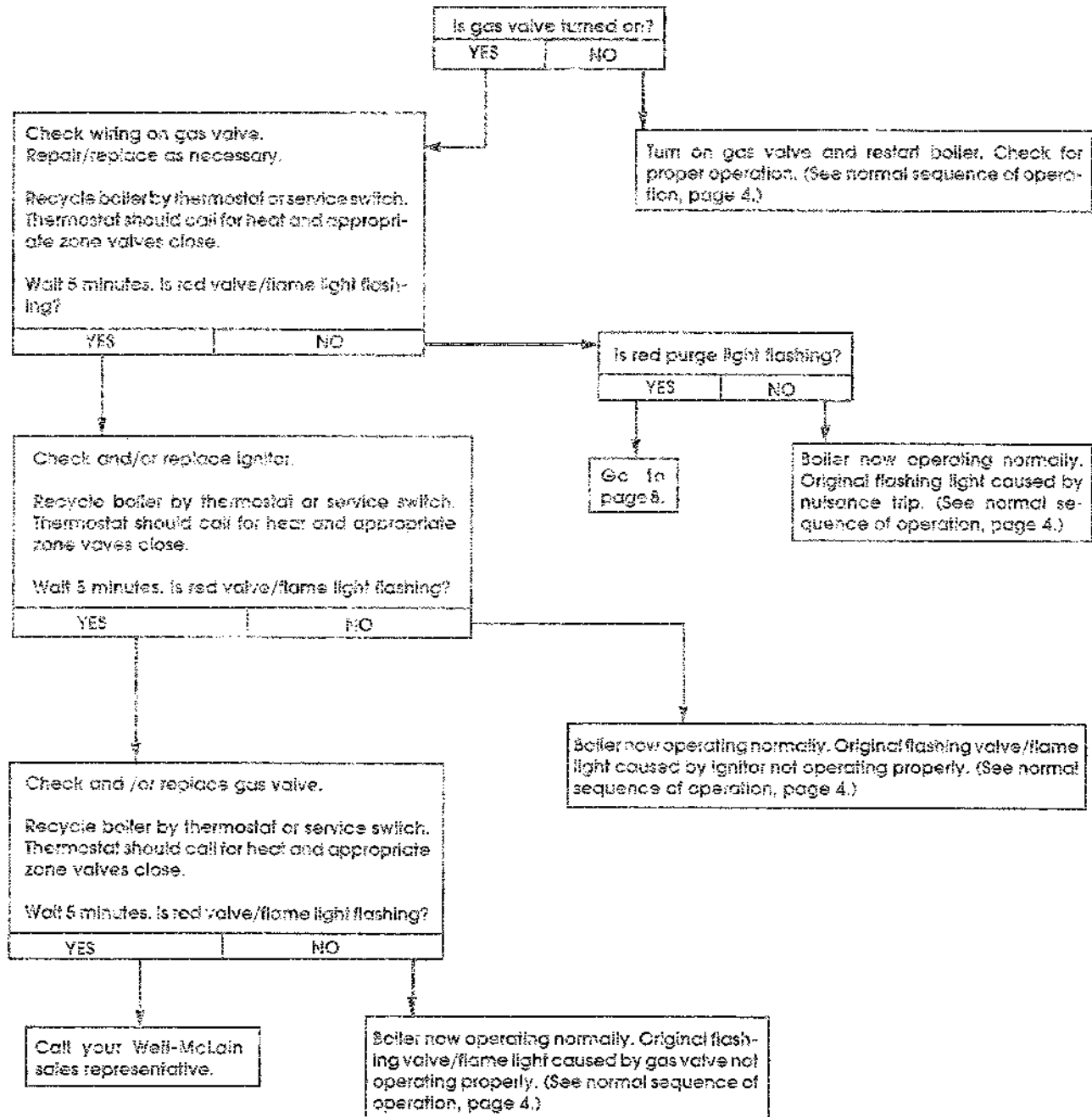
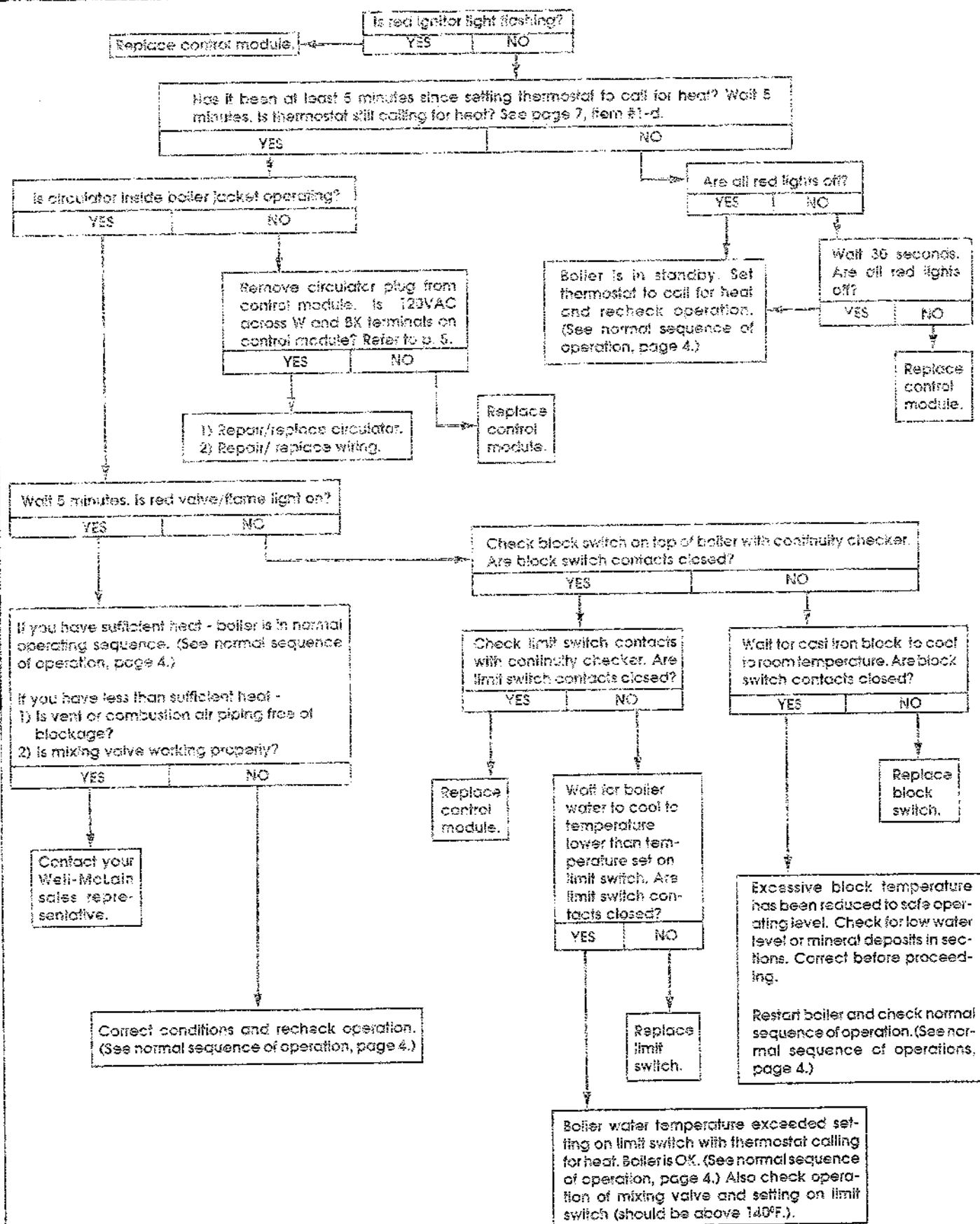


CHART 4 - INSUFFICIENT OR NO HEAT TO SYSTEM



Section C: Parts

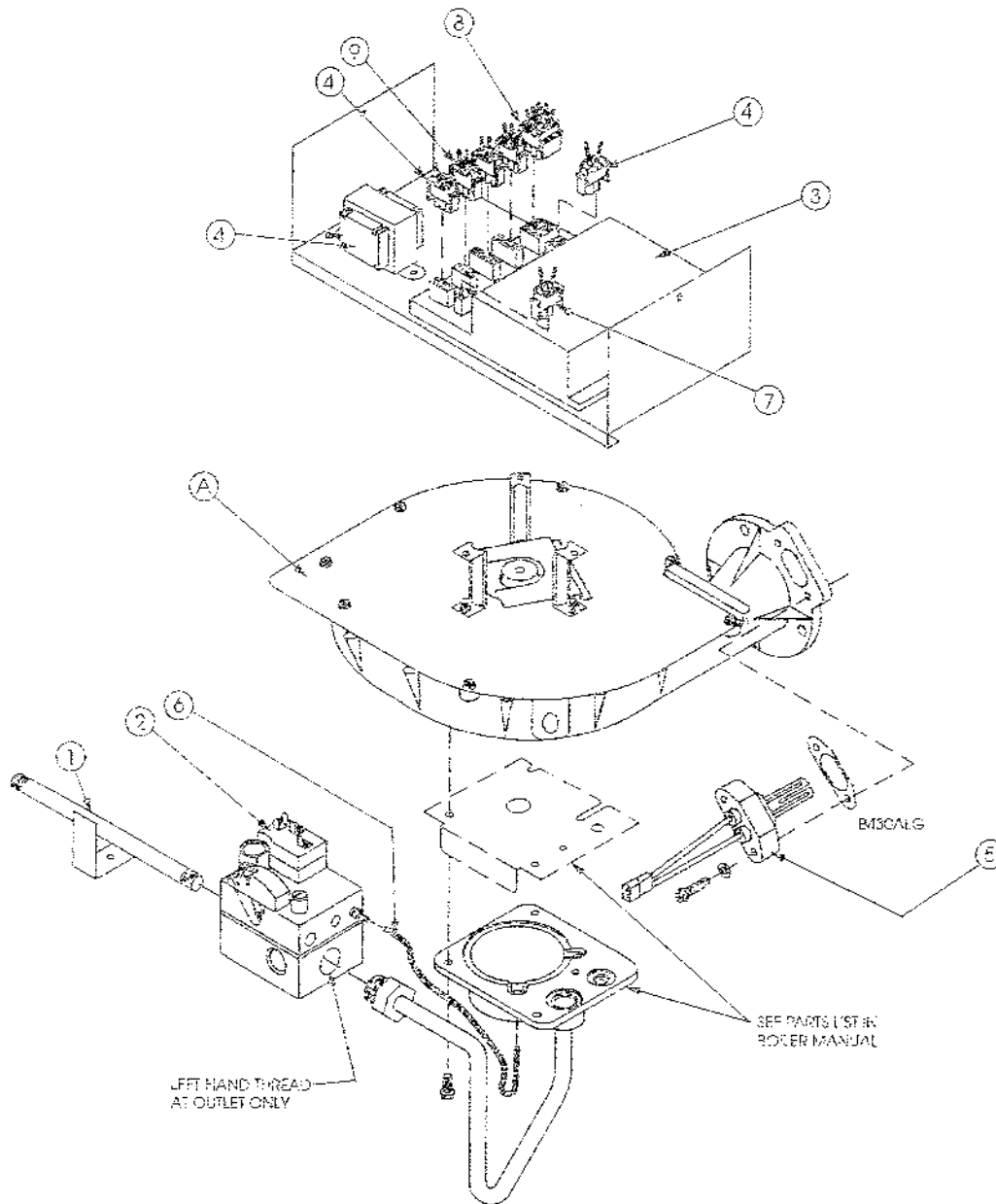


Figure No.	Description	Well-McLain Sales Ref. No.			
		GV-3	GV-4	GV-5	GV-6
1	Gas Supply Manifold w/ Bracket	10C398	10C398	10C398	10C398
2	Gas Valve	10C399	10C399	10C399	10C399
3	Control Module Kit, including: Module; Screws	10C400	10C400	10C400	10C400
4	Transformer	10C401	10C401	10C401	10C401
5	Ignitor Kit, including: Ignitor; Ignitor Gasket ; (2) Ignitor Screws; (2) Ignitor Washers	10C402	10C402	10C402	10C402
6	Gas Valve Tubing to Gas/Air Manifold, Red	10C404	10C404	10C404	10C404
7	Wiring Harness, Control Module to Ignitor	10C405	10C405	10C405	10C405
8	Wiring Harness, Control Module to Controls	10C406	10C406	10C406	10C406
9	Wiring Harness, Control Module to Junction Box	10C407	10C407	10C407	10C407

A

WARNING

Do not disassemble blower housing. A fire or explosion causing severe personal injury or property damage can result. If you suspect a problem, replace blower housing

WEIL-McLAIN

Michigan City, Indiana 46360



A Division of The Marley Company
In Canada: Marley Canadian, Inc., 126 East Dr., Brampton, Ontario L6T 1C2