

XIIa Replacement parts — overview

- o Accessory bag assembly (shipped with boiler)
- o Section assembly (boiler sections, tie rods, base rail legs, blower support bracket, block temperature switch)
- o Jacket assembly (jacket parts)
- o Blower assembly (blower, motor, air inlet hose and fittings, condensate trap parts, igniter, gas valve, gas/air orifice and manifold, burner and gasket)
- o Trim assembly (circulators, piping components, limit control, P/T gauge, relief valve, drain valve)
- o Interior panel (jacket interior panel, transformer, GCM control module, air pressure switch)

Handling ceramic fiber and fiberglass materials

REMOVAL OF COMBUSTION CHAMBER LINING OR BASE PANELS

WARNING

The combustion chamber lining or base insulation panels in this product contain ceramic fiber materials. Ceramic fibers can be converted to cristobalite in very high temperature applications. The International Agency for Research on Cancer (IARC) has concluded, "Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).":

- Avoid breathing dust and contact with skin and eyes.
 - Use NIOSH certified dust respirator (N95). This type of respirator is based on the OSHA requirements for cristobalite at the time this document was written. Other types of respirators may be needed depending on the job site conditions. Current NIOSH recommendations can be found on the NIOSH web site at <http://www.cdc.gov/niosh/homepage.html>. NIOSH approved respirators, manufacturers, and phone numbers are also listed on this web site.
 - Wear long-sleeved, loose fitting clothing, gloves, and eye protection.
- Apply enough water to the combustion chamber lining or base insulation to prevent airborne dust.
- Remove combustion chamber lining or base insulation from the boiler and place it in a plastic bag for disposal.
- Wash potentially contaminated clothes separately from other clothing. Rinse clothes washer thoroughly.

NIOSH stated First Aid.

- Eye: Irrigate immediately
- Breathing: Fresh air.

REMOVAL OF FIBERGLASS WOOL — OR — INSTALLATION OF FIBERGLASS WOOL, COMBUSTION CHAMBER LINING OR BASE PANELS:

WARNING

This product contains fiberglass jacket insulation and ceramic fiber materials in combustion chamber lining or base panels in gas fired products. Airborne fibers from these materials have been listed by the State of California as a possible cause of cancer through inhalation.

- Avoid breathing dust and contact with skin and eyes.
 - Use NIOSH certified dust respirator (N95). This type of respirator is based on the OSHA requirements for fiberglass wool at the time this document was written. Other types of respirators may be needed depending on the job site conditions. Current NIOSH recommendations can be found on the NIOSH web site at <http://www.cdc.gov/niosh/homepage.html>. NIOSH approved respirators, manufacturers, and phone numbers are also listed on this web site.
 - Wear long-sleeved, loose fitting clothing, gloves, and eye protection.
- Operations such as sawing, blowing, tear out, and spraying may generate airborne fiber concentration requiring additional protection.
- Wash potentially contaminated clothes separately from other clothing. Rinse clothes washer thoroughly.

NIOSH stated First Aid.

- Eye: Irrigate immediately
- Breathing: Fresh air.

XIIb Replacement parts — accessory bag

Table 5 The parts below are shipped with the boiler in the accessory bag.

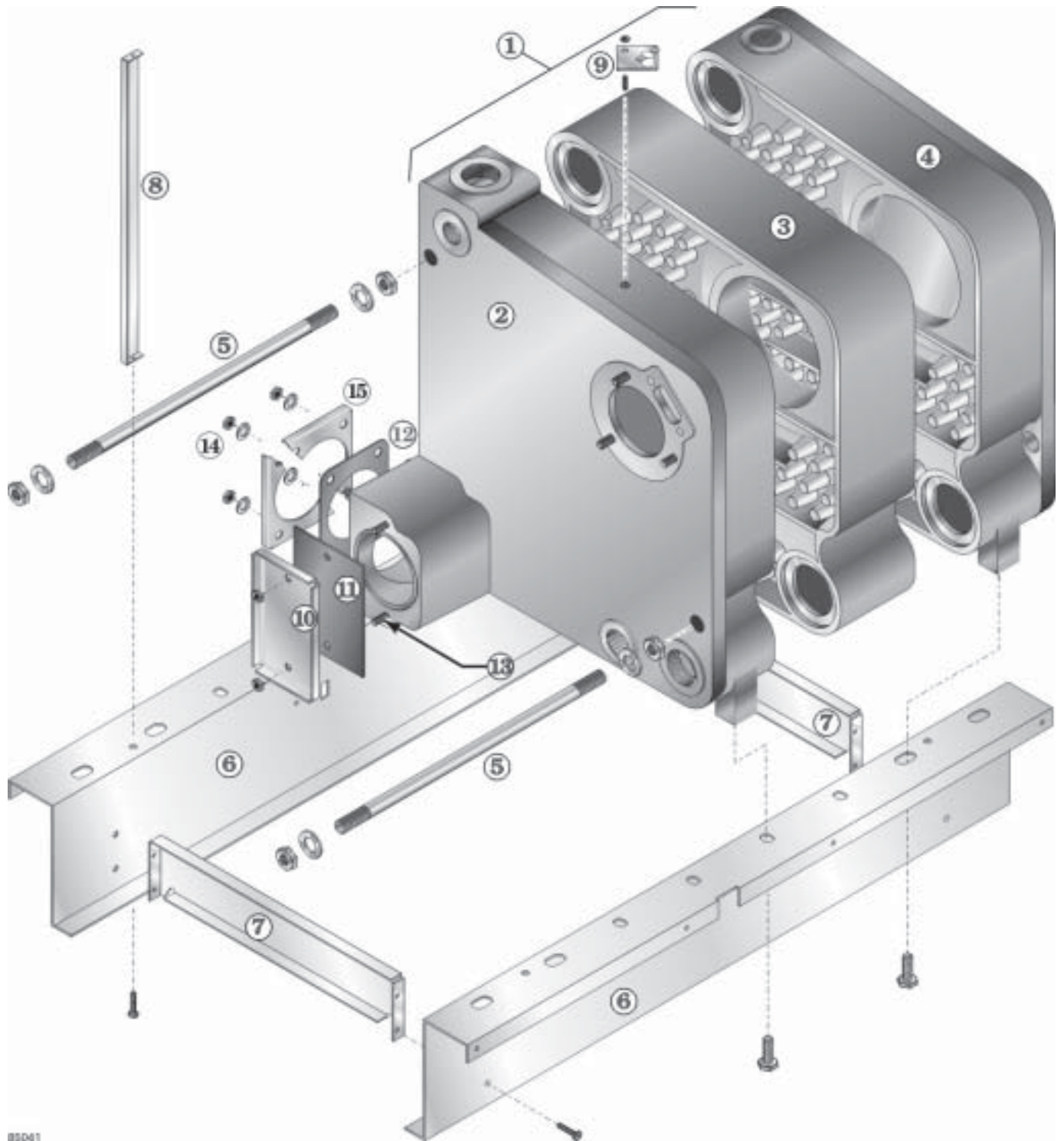
Description	Weil-McLain part number	Quantity	Remarks
Water trim bag assembly #2	542-200-309	1	
Nipple, BK ¾ x 3.00	561-326-405	1	Relief valve thru jacket
Nipple, BK 1 x 3.00	561-326-515	1	
Tee, BK 1 x 1 x ½	561-541-216	1	To mount pressure/temp gauge
Water trim bag assembly #1	542-200-308	1	
Bushing, BK C1 ½ x ¼	560-807-366	1	Tee to gauge
Screw, sheet metal type A pan head phil— 10 x .50 BK Phosphate	562-138-550	4	Jacket back panel
Gauge, pressure/temperature 3 ½" short shank	510-218-047	1	
Valve, relief ¾ 30 PSI Watts ¾ M330-HI 030	511-546-920	1	
Water trim bag assembly #3	542-200-310	1	
Exhaust, tube spacer	560-907-642	2	
Screw, sheet metal type A pan head phil — 10 x .50 BK Phosphate	562-138-550	4	Cap to cap mounting plate
Washer, lock #10 external tooth type A	562-248-680	4	
Screw, sheet metal type A pan head slotted — 10 x 1.25 ZP	562-150-248	8	For intake/exhaust plates
Plastic anchors	563-210-627	8	For #10 screws
Intake/exhaust air, cap plastic	560-907-641	1	
Intake/exhaust air, mounting plate	452-100-160	1	
Intake/exhaust air, backing plate	452-100-163	1	
Hole template	550-108-065	1	
Vent instruction sheet (Vent/Air Intake Termination)	550-141-778	1	(1196)
Drain bracket assembly	542-200-300	1	
Drain bracket	452-100-112	1	
Elbow, street CPVC ½"	560-907-650	1	
Nut, hex with nylon lockseal 5/16"	561-928-447	4	
Screw, hex washer hd, slot 10/32 x 3/8	562-135-710	1	
Trap, hose	562-302-548	1	
Gasket, starter tee	590-317-629	1	
Clamp, hose drain	591-850-071	2	
Label, Accessory bag	550-225-031	1	Insert so text is visible from outside of bag (0299)

XIIC Replacement parts — section assembly

Table 6 Section assembly

Item number	Description	Model	Weil-McLain part number
1	Block assembly, includes: Front section, intermediate section, back section, square cut seals — 2", silicone sealant, tie rods, tie rod nuts, tie rod washers, water tubing male adapters — 1" NPT, water tubing, pump to return, blower flange gasket, igniter, igniter gasket, screws, lock washers, studs, nuts	3 4 5 6	322-200-280 322-200-281 322-200-282 322-200-283 382-200-391
2	Front section Also requires repair parts kit consisting of: Square cut seals — 2", silicone sealant, tie rod nuts, tie rod washers, water tubing, male adapters — 1" NPT, water tubing, pump to return, blower flange gasket, igniter, igniter gasket, screws, studs, nuts, lock washers	All	312-200-150 382-200-301
3	Intermediate section Also requires repair parts kit consisting of: Square cut seals — 2", silicone sealant, tie rod nuts, tie rod washers	All	312-200-110 382-200-305
4	Back section Also requires repair parts kit consisting of: Square cut seals — 2", silicone sealant, tie rod nuts, tie rod washers	All	312-200-130 382-200-305
5	Tie rods	3 4 5 6	560-234-499 560-234-525 560-234-503 560-234-504
6	Base rail legs	3 & 4 5 & 6	452-100-170 452-100-172
7	Base rail brace	All	452-100-080
8	Blower housing support	All	452-100-111
9	Block temperature limit switch	All	510-350-066
10	Inspection port cover	All	560-907-629
11	Inspection port gasket	All	590-317-628
12	Starter tee gasket	All	590-317-629
13	Stud, 5/16" - 18 x 1.25	All	560-340-581
14	Hex nuts (4 each), 5/16" lock washers (4 each), 5/16"	All	550-928-447 562-248-709
15	Reinforcing plate sections (2)	All	699-999-029

Figure 35 Section assembly



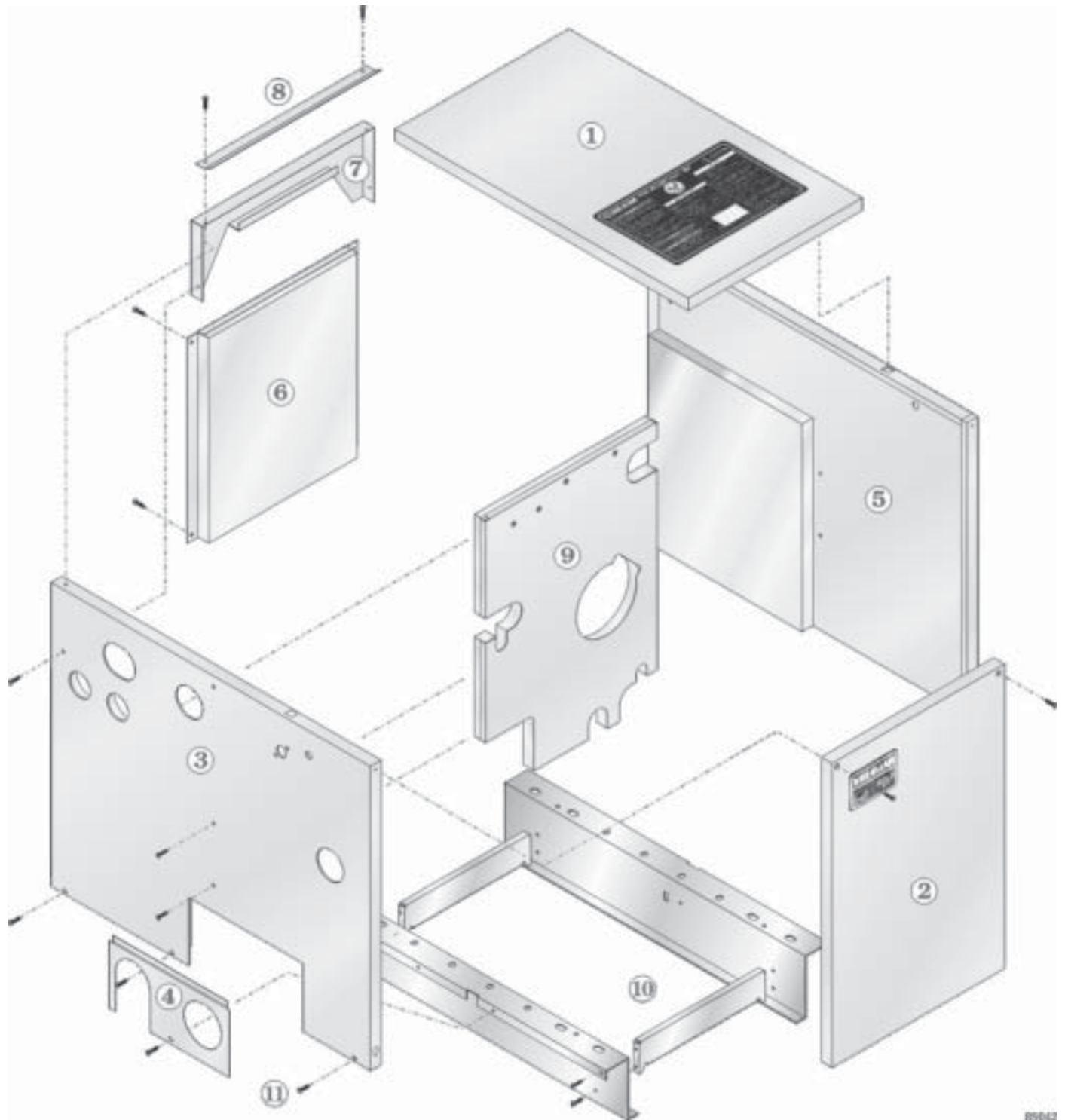
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XIII Replacement parts — jacket assembly

Table 7 Jacket assembly

Item number	Description	Model	Weil-McLain part number
1	Jacket panel, top	3 & 4 5 & 6	422-200-146 422-200-150
2	Jacket panel, front	All	422-200-140
3	Jacket panel , left side	3 & 4 5 & 6	422-200-220 422-200-222
4	Jacket access panel	All	422-200-230
5	Jacket panel, right side	3 & 4 5 & 6	422-200-224 422-200-226
6	Jacket panel, rear	All	422-200-135
7	Top rail brace	All	422-200-232
8	Top rail cross tie	All	422-200-137
9	Jacket panel, interior	All	422-200-228
10	Base rail assembly (see Section assembly on page 84 for details)	---	-----
11	Screw, sheet metal type AB, serated hex washer head Phillips #10 x 3/8" steel black phospate	All	562-150-273

Figure 36 Jacket assembly



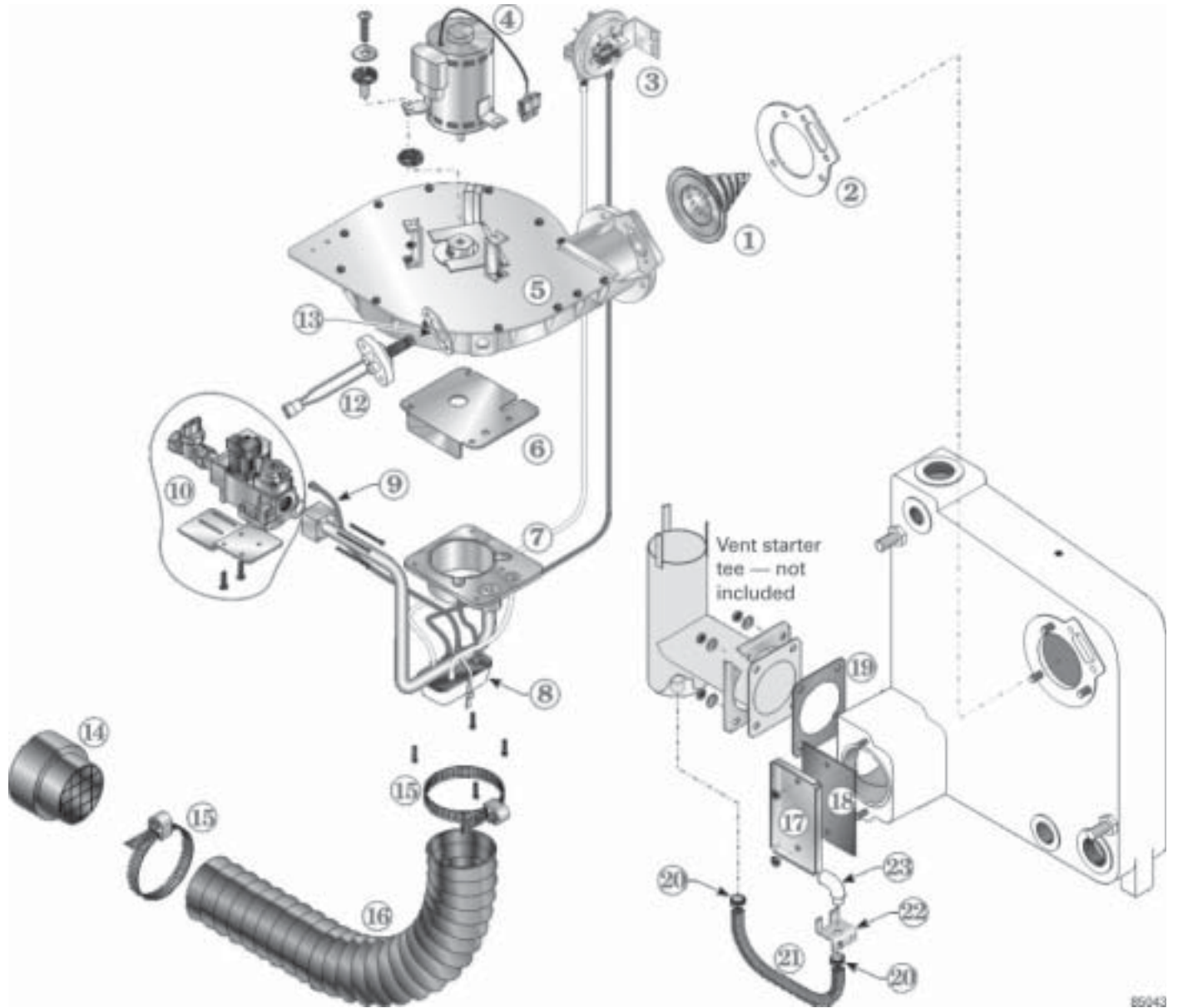
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XIIIe Replacement parts — Blower assembly

Table 8 Blower assembly

Item number	Description	Model	Weil-McLain part number
1	Burner replacement kit, includes: Burner cone and ring assembly, blower flange gasket, igniter, igniter screws, igniter washers, igniter gasket	3 4 5 6	382-200-320 382-200-325 382-200-330 382-200-335
2	Blower flange gasket	All	590-317-610
3	Air pressure switch (0 to 5,500 feet elevation)	All	511-624-520
4	Blower motor replacement kit, includes: Blower motor, motor mount grommets, screws, lock nuts, 9" Allen wrench	All	382-200-345
5	Blower housing assembly replacement kit, includes: Blower housing, observation port window, blower housing cover plate, blower motor mounting brackets, washer hold down bracket, lock nuts, motor mount grommets, blower motor, blower wheel, magnetic washer, silicone sealant, screws, blower flange gasket, igniter, igniter screws, igniter washers, igniter gasket	All	382-200-340
6	Conversion kit, natural to propane , includes Propane orifice plate, label Conversion kit, propane to natural , includes Propane orifice plate, label	3 4 5 6 3 4 5 6	510-811-600 510-811-605 510-811-610 510-811-615 510-811-620 510-811-625 510-811-630 510-811-635
7	Gas/air manifold assembly, includes: Gas/air manifold, gas tubing, washers, screws, and gas valve o-ring	All	382-200-362
8	Condensate trap kit, includes: Condensate trap, hoses	All	382-200-409
9	Gas valve tubing to gas/air manifold, red	All	590-317-647
10	Gas valve kit, complete, includes: Gas valve, gas cock, 1/2" nipple, bracket, screws and o-ring	All	382-200-411
12	Igniter replacement kit (includes gasket)	All	511-330-148
13	Igniter gasket (included in item 12, above)	—	—
14	Inlet air fitting	All	560-907-635
15	Hose clamp, 3"	All	591-850-068
16	Inlet air hose	All	562-302-547
17	Inspection port cover	All	560-907-629
18	Inspection port gasket	All	590-317-628
19	Starter tee gasket	All	590-317-629
20	Drain hose clamp, 5/8"	All	591-850-071
21	Condensate trap hose	All	562-302-548
22	Drain bracket	All	452-100-112
23	Drain ell	All	560-907-650

Figure 37 Blower assembly

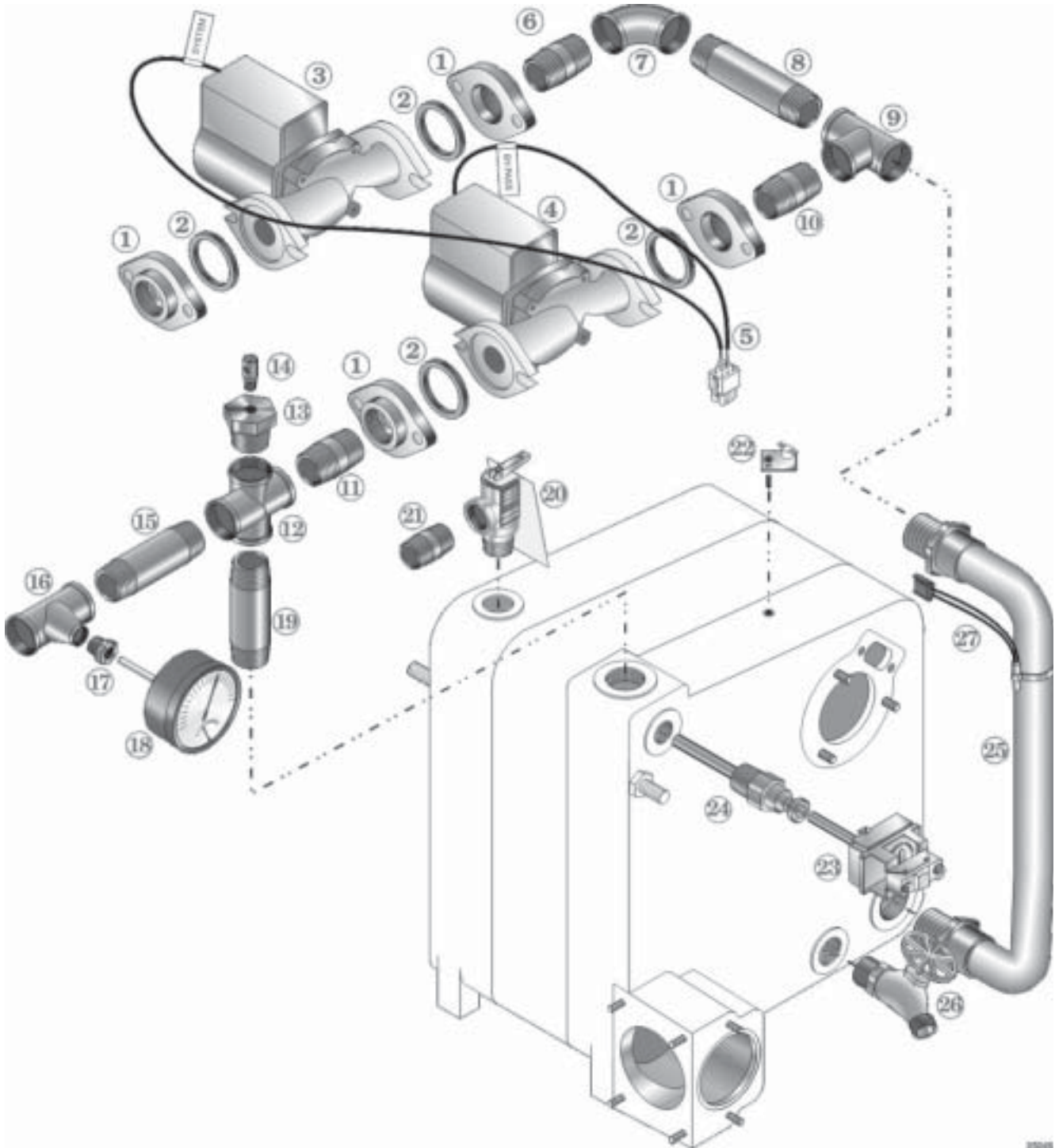


XIIf Replacement parts — trim assembly

Table 9 Trim assembly

Item number	Description	Weil-McLain part number
1	Circulator flange, 1" NPT	563-910-026
2	Circulator gasket, Taco 110-339	590-317-543
3	System circulator, Taco 007F	511-405-113
4	Bypass circulator, Taco 007F	511-405-113
5	Wiring harness, dual circulators to control module	591-391-824
6	Nipple, NPT — 1" x close	561-326-500
7	Ell, 1"	563-115-300
8	Nipple, NPT — 1" x 4 ½"	561-326-528
9	Tee, 1"	561-541-212
10	Nipple, NPT — 1" x close	561-326-500
11	Nipple, NPT — 1" x close	561-326-500
12	Cross, 1"	561-550-000
13	Bushing, 1" x ⅛"	560-807-378
14	Vent coin, ⅛" NPT	510-148-565
15	Nipple, NPT — 1" x 3"	561-326-515
16	Reducing tee, 1" x 1" x ½"	561-541-216
17	Bushing, ½" x ¼"	560-807-366
18	Combination pressure-temperature gauge, 2 ½" short shank	510-218-099
19	Nipple, NPT — 1" x 4"	561-326-527
20	ASME Pressure relief valve, ¾" male inlet, 30 PSIG	511-546-920
21	Nipple, NPT — ¾" x 3"	561-326-405
22	Block temperature limit switch	510-350-066
23	Limit co	
	Control well, ½"	Included with limit
25	Return pipe section	560-742-938
26	Drain valve, ¾"	511-246-392
27	Water temperature sensor and clamp	511-330-089

Figure 38 Trim assembly

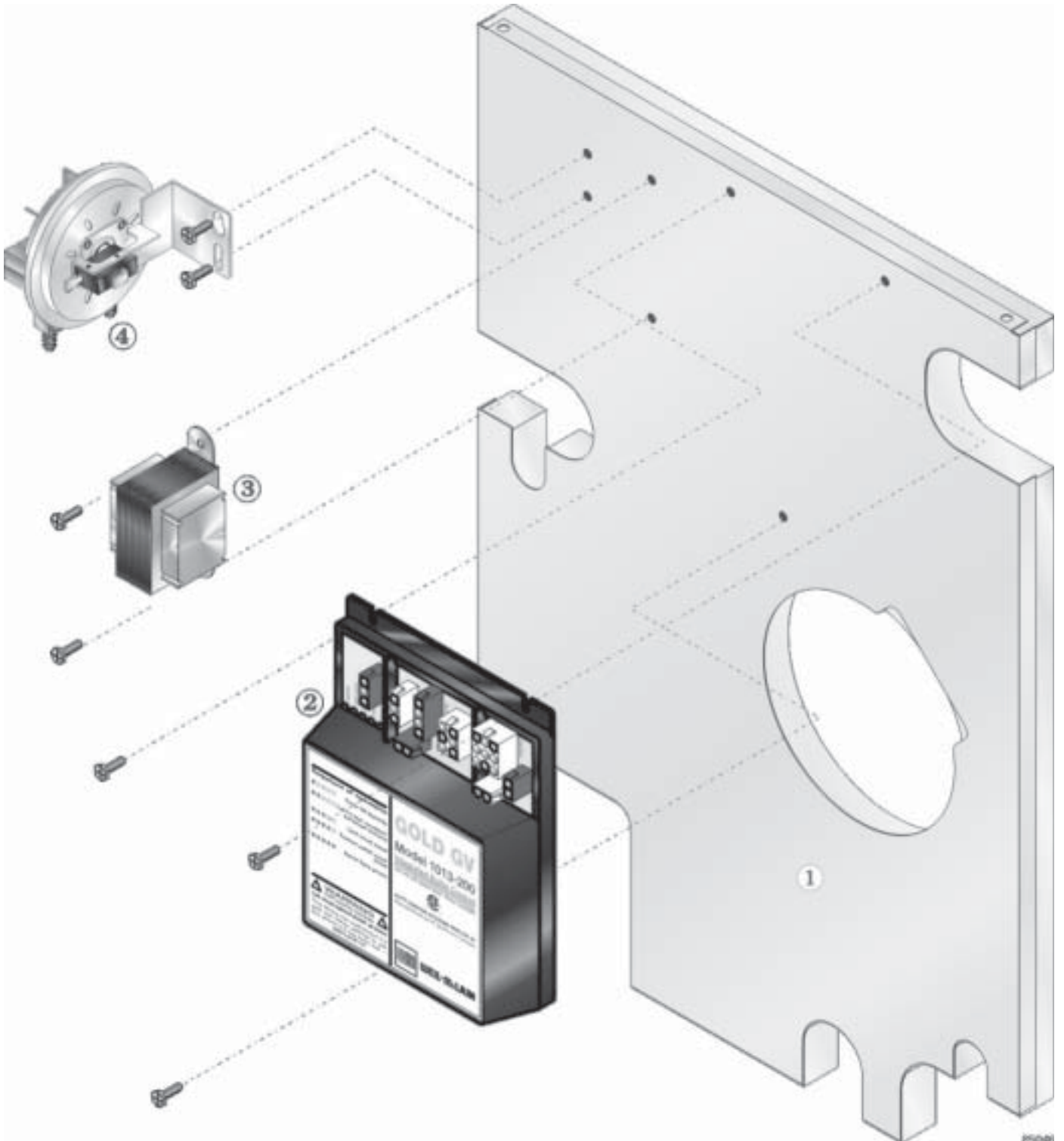


XIIg Replacement parts — interior panel

Table 10 Interior panel

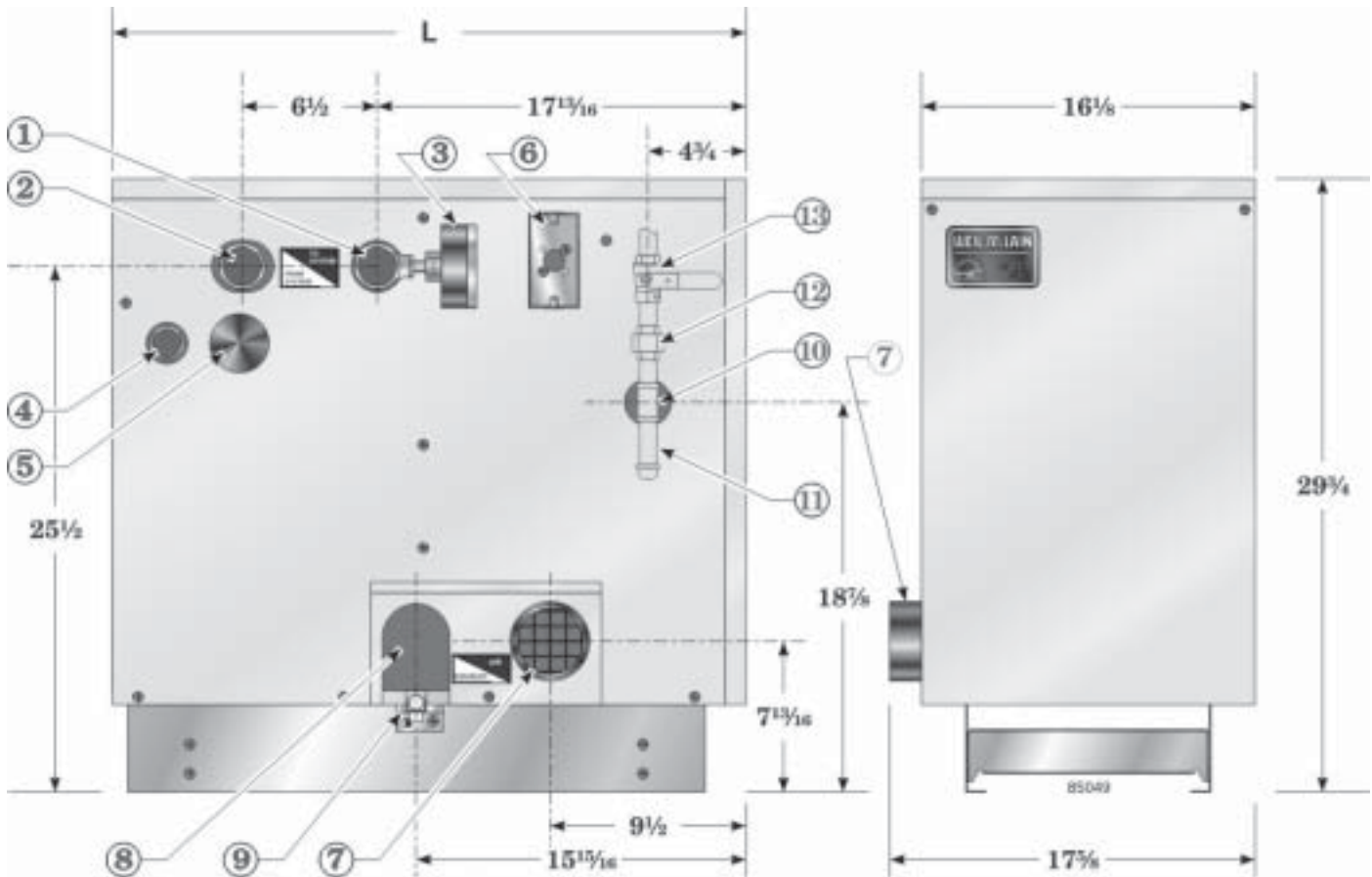
Item number	Description	Weil-McLain part number
1	Interior panel	422-200-228
2	Control module assembly, includes control module and screws	382-200-448
3	Transformer	511-842-370
4	Air pressure switch	511-624-520
5	Wiring harness, control module to junction box (not shown)	591-391-821
6	Wiring harness, control module to hot surface ignitor (not shown)	591-391-819
7	Wiring harness, control module to system and bypass circulators (not shown)	591-391-824
8	Wiring harness, control module to controls (not shown)	591-391-919

Figure 39 Interior panel



XIII Dimensions and ratings

Figure 40 Dimension drawing (see dimension table on opposite page)



Item number	Description
1	1" NPT Supply
2	1" NPT Return
3	Combination pressure-temperature gauge, 2 1/2" short shank
4	3/4" NPT Relief valve outlet
5	Plug dome, 2" black
6	Junction box
7	Inlet air fitting
8	3" Diameter flue outlet
9	1/2" Condensate drain
10	1/2" NPT Gas supply connection (provided by others)
11	Drip leg (provided by others)
12	Union (provided by others)
13	Manual main shutoff gas valve (provided by others)

Table 11 Boiler dimensional data (see Figure 40)

Boiler model	Supply (in. NPT)	Return (in. NPT)	Length L (inches)	Gas connection size (Note 1) (in. NPT)	Crate dimensions (outside measurement, inches)			Approx. shipping weight (pounds)
					Length	Width	Height	
GV-3	1	1	30¾	½	33½	22	36	270
GV-4	1	1	30¾	½	33½	22	36	320
GV-5	1	1	37¾	½	33½	22	43	355
GV-6	1	1	37¾	½	33½	22	43	410

Note 1 Gas piping from meter to boiler to be sized per local utility requirements.

Table 12 Boiler ratings

Boiler model number	CSA Input Btuh	DOE Heating capacity Btuh (Note 1)	Net I=B=R ratings Btuh (Note 2)	DOE Seasonal efficiency (%)	Vent/combustion air diameter (inches)	Boiler water content (gallons)
GV-3	70,000	61,000	53,000	87.5	3	3.3
GV-4	105,000	92,000	80,000	87.3	3	4.2
GV-5	140,000	122,000	106,000	87.2	3	5.1
GV-6	175,000	153,000	133,000	87.0	3	6.0

Notes:

- Based on standard test procedures prescribed by the United States Department of Energy. Ratings also referred to as CSA Output.
- Net I=B=R ratings are based on net installed radiation of sufficient quantity for the requirements of the building and nothing need be added for normal piping and pickup. Ratings are based on a piping and pickup allowance of 1.15. An additional allowance should be made for unusual piping and pickup loads.

Boilers are tested for 50 lbs working pressure. GV boilers are not available for millivolt systems.

GOLD GV Water Boiler — Series 4



Weil-McLain
500 Blaine Street
Michigan City, IN 46360-2388
<http://www.weil-mclain.com>