

### IMPORTANT

1. Always include complete heater model and serial number so that any specification change can be considered for parts shipment. It can save time and expense.
2. Used oil heaters are not approved for sale in California.
3. We reserve the right to substitute functional replacements.
4. Specifications are subject to change without notice.

**REZTOR** *Thomas&Betts*

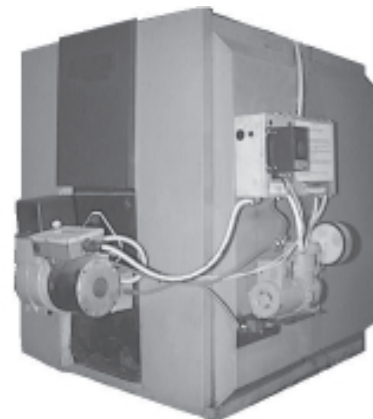
# USED OIL BOILERS

Parts Form RGM 765  
New

APPLIES TO: **Model RAB**

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### REFERENCES:

Installation & Maintenance	<b>Form RGM 465</b>
Liner Kit Instructions	<b>Form RGM CP-W44</b>
Model OT Oil Tank	Contact Distributor

## Rating Plate and Serial No.

### Rating Plate Key:

- A Model No.
- B Volts
- C Phase
- D Hertz
- E Amps
- F Minimum Circuit Ampacity
- G Maximum Unit Fuse
- H Firing Rate (GPH)
- I Input Rate (BTU/HR)
- J Maximum Overfire Pressure (inches W.C.)
- K Flue Outlet Pressure Range (inches W.C.)
- L Front Clearance (inches)
- M Rear Clearance (inches)
- N Side with Electrical Box Clearance (inches)
- O Side without Electrical Box Clearance (inches)
- P Flue Pipe Clearance (inches)

### Serial No. Key

Example:   AZA  140  B  0000    
                  1      2      3      4

- 1 Date of Manufacture (see chart on page 2)
- 2 Size (BTUH Input)
- 3 Boiler Model
- 4 Consecutive Number for Manufacturing

## REZTOR

MERCER, PA. USA 16137

### HOT WATER BOILER

FOR INDUSTRIAL / COMMERCIAL USE ONLY  
FOR USE WITH INTEGRAL GROUP 1 OR 2 PRIMARY  
SAFETY CONTROLS. SUITABLE FOR NO. 2 FUEL AND  
USED OIL RANGING FROM ATF TO SAE 50.

MODEL [   A   ]

### SERIAL NO.

USE COPPER CONDUCTORS ONLY.

[   B   ]VOLTS [   C   ]PHASE [   D   ]HERTZ [   E   ]AMPS

\* MINIMUM CIRCUIT AMPACITY [   F   ] AMPS

\* MAXIMUM UNIT FUSE [   G   ] AMPS

FIRING RATE [   H   ] G.P.H. INPUT [   I   ] BTU/HR.

OUTPUT DEPENDS ON BTU CONTENT OF USED OIL.

MAXIMUM OVERFIRE PRESSURE [   J   ] IN. W.C.

FLUE OUTLET PRESSURE RANGE [   K   ] IN. W.C.

RECOMMENDED CLEARANCES FOR EASE OF SERVICE

FRONT - [   L   ] REAR - [   M   ]

SIDE WITH ELEC BOX - [   N   ]

SIDE OPPOSITE ELEC BOX - [   O   ] FLUE - [   P   ]

FOR ABSOLUTE MINIMUM CLEARANCES, REFER TO  
INSTALLATION MANUAL.

REPLACEMENT NOZZLES MUST BE PURCHASED FROM  
REZTOR.

PATENT 5,058,512

PATENTS PENDING

REFER TO THE BUDERUS RATING PLATE AND INSTAL-  
LATION MANUAL FOR FURTHER INFORMATION.

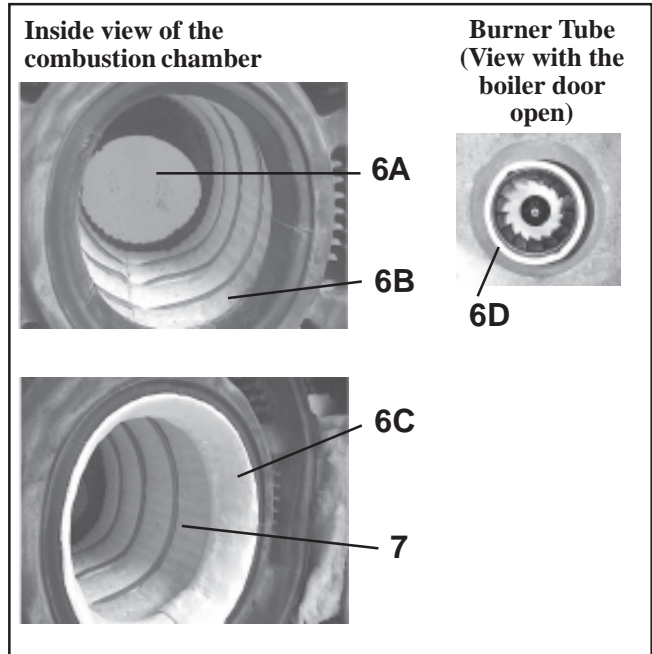
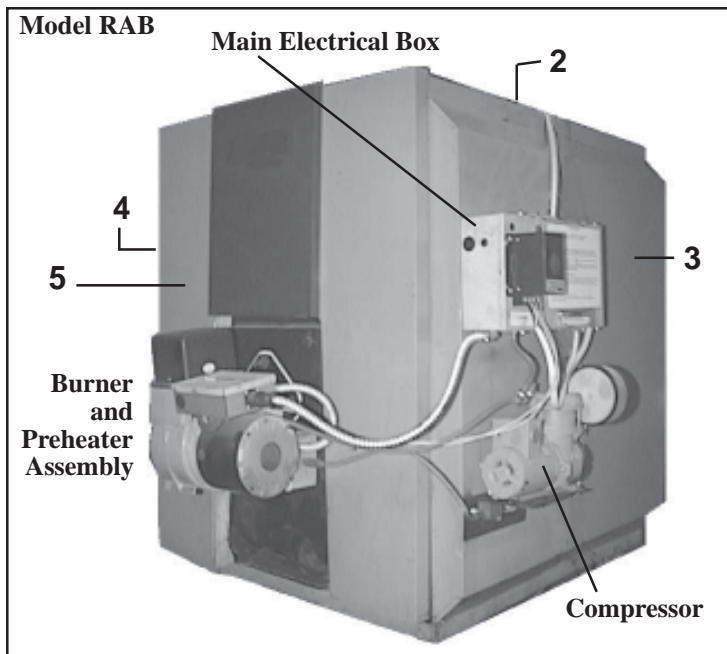
\* DOES NOT INCLUDE FIELD INSTALLED WATER  
CIRCULATING PUMP.

## First Element of the Serial Number - Date of Manufacture

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1998	AXA	AXB	AXC	AXD	AXE	AXF	AXG	AXH	AXI	AXJ	AXK	AXL
1999	AYA	AYB	AYC	AYD	AYE	AYF	AYG	AYH	AYI	AYJ	AYK	AYL
2000	AZA	AZB	AZC	AZD	AZE	AZF	AZG	AZH	AZI	AZJ	AZK	AZL
2001	BAA	BAB	BAC	BAD	BAE	BAF	BAG	BAH	BAI	BAJ	BAK	BAL
2002	BBA	BBB	BBC	BBD	BBE	BBF	BBG	BBH	BBI	BBJ	BBK	BBL
2003	BCA	BCB	BCC	BCD	BCE	BCF	BCG	BCH	BCI	BCJ	BCK	BCL
2004	BDA	BDB	BDC	BDD	BDE	BDF	BDG	BDH	BDI	BDJ	BDK	BDL
2005	BEA	BEB	BEC	BED	BEE	BEF	BEG	BEH	BEI	BEJ	BEK	BEL
2006	BFA	BFB	BFC	BFD	BFE	BFF	BFG	BFH	BFI	BFJ	BFK	BFL
2007	BGA	BGB	BGC	BGD	BGE	BGF	BGG	BGH	BGI	BGJ	BGK	BGL
2008	BHA	BHB	BHC	BHD	BHE	BHF	BHG	BHH	BHI	BHJ	BHK	BHL
2009	BIA	BIB	BIC	BID	BIE	BIF	BIG	BIH	BII	BIJ	BIK	BIL
2010	BJA	BJB	BJC	BJD	BJE	BJF	BJG	BJH	BJI	BJJ	BJK	BJL
2011	BKA	BKB	BKC	BKD	BKE	BKF	BKG	BKH	BKI	BKJ	BKK	BKL
2012	BLA	BLB	BLC	BLD	BLE	BLF	BLG	BLH	BLI	BLJ	BLK	BLL
2013	BMA	BMB	BMC	BMD	BME	BMF	BMG	BMH	BMI	BMJ	BMK	BML
2014	BNA	BNB	BNC	BND	BNE	BNF	BNG	BNH	BNI	BNJ	BNK	BNL
2015	BOA	BOB	BOC	BOD	BOE	BOF	BOG	BOH	BOI	BOJ	BOK	BOL

## Outer Panels, Boiler, and Liner

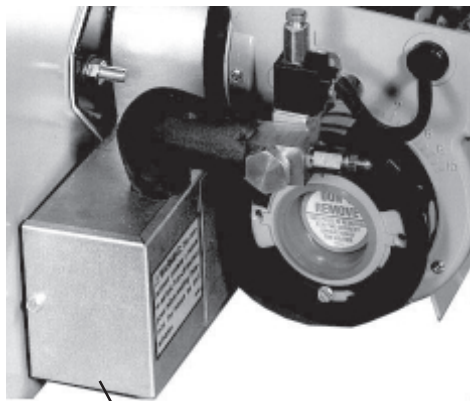
Code	Description	140	235	350	500
1	Boiler Assembly (not illustrated)	175104	175105	175106	175107
2	Top Cover Panel	175116	175120	175123	175127
3	Right Side Cover Panel	175117	175121	175124	175128
4	Left Side Cover Panel	175118	175122	175125	175129
5	Front Cover Panel	175130			
6	Replacement Liner and Burner Tube Insulator Kit	175994		175995	
6A	Combustion Chamber Back Plate Liner	174682			
6B	Combustion Chamber Liner Sleeve	174701		174700	
6C	Combustion Chamber Opening Liner	--		174702	
6D	Burner Tube Insulator	174703			
7	Metal Bands to support liner during hardening	(3)179313			
8	Boiler Door Insulation, Small Piece (not illustrated)	179322 Buderus #5335896, G215		179325 Buderus #5335830, G315	
9	Boiler Door Insulation, Large Piece (not illustrated)	179323 Buderus #5335898, G215		179326 Buderus #5335946, G315	
10	Boiler Front Insulating Ring (not illustrated)	179324 Buderus #5335894, G215		--	



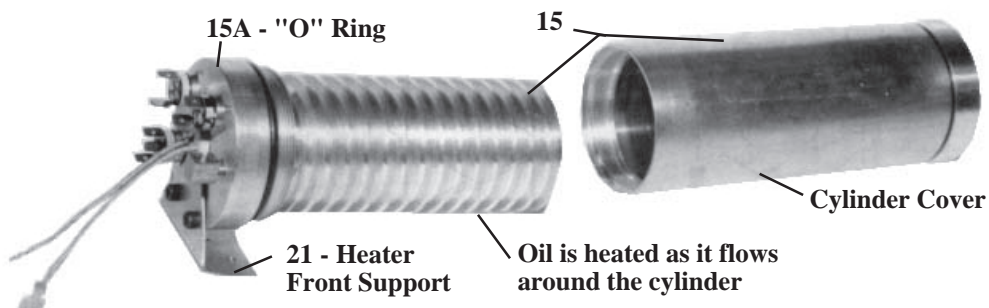
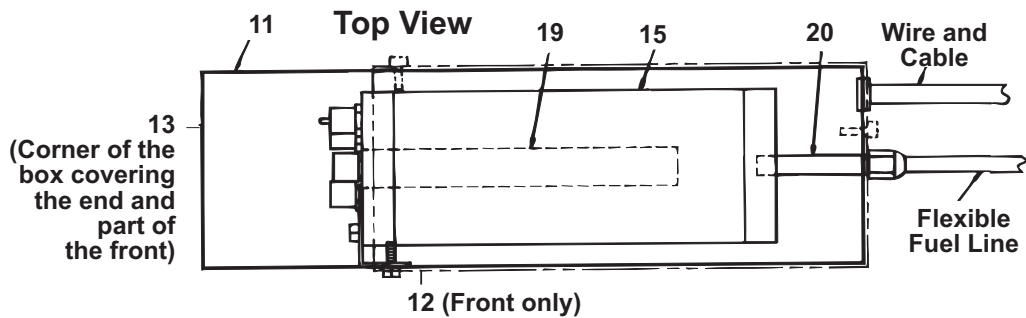
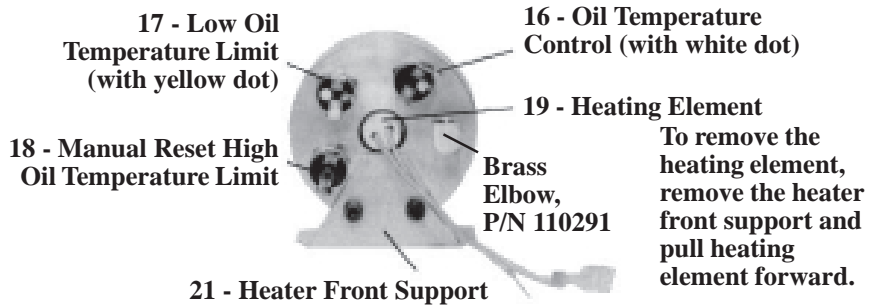
# Fuel Pre-Heater System (U.S. Patent No. 5,080,579)

Code	Description	140/235	350	500
11	Fuel Pre-heater Box (less Codes 12 and 13)		104784	
12	Fuel Pre-heater Box Front		104788	
13	Fuel Pre-heater Box Corner		104789	
14	Band (from heat exchanger box around burner tube) - not illustrated		179313	
15	Oil Primary Heater Assembly (includes 2-piece aluminum cylinder, end cap, and "O" ring, Code 15A)		101916	
15A	Replacement "O" ring for Oil Heater cylinder		132224	
16	Oil Temperature Control, 170°F, Thermodisc #36T31		105318	
17	Low Oil Temperature Limit, 155°F, Thermodisc #S22063		105319	
18	High Oil Temperature Limit, 220°F, Thermodisc #36T36		105320	
19	Heater, Hotwatt #SC75-6	106953 300 Watt/115V	129384 650 Watt/115V	157048 770 Watt/230V
20	Copper/Brass Pipe, 1/8" NPT x 2-1/2" long		107122	
21	Heater Front Support		104787	

## Oil Preheating System (U. S. Patent No. 5,080,579)



Preheater is located in the box below and behind the burner assembly



# Burner and Fuel Lines

Code	Description	140/235	350	500
30	Burner Housing Assembly	121350	130647	157849
30A	Burner Assembly Gasket	103420, Beckett #3416		
30B	Combustion Air Blower Wheel	107027 Beckett #2999	163125 Beckett #2288U	
30C	Flame Cone Assembly	104774	157850	
30D	Burner Motor	41598 Beckett #2-456, 1/7 HP	163127 - 230V Beckett #21173U	
30E	Air Guide, Beckett #31231	147096	--	
31	Burner Tube Insulator (Same as Code 6D, page 2)	174703		
32	Transformer with Gaskets and Electrode/Transformer Connectors	101332 120V	163126 - 230V Beckett #21176U	
32A	Electrode/Transformer Connector only with nuts	(2)137576		
33	Cad Cell Detector and Eye	123195, Honeywell #C554A1794		
34	Manual Reset Limit (flame rollout) Switch, 200°F	112751		
35	Flame Rollout Switch Retrofit Kit - for boilers mfgd before 4/00 without a flame rollout switch	179311	179312	

Code 30B - Combustion Air Wheel



Code 30C - Flame Cone Assembly



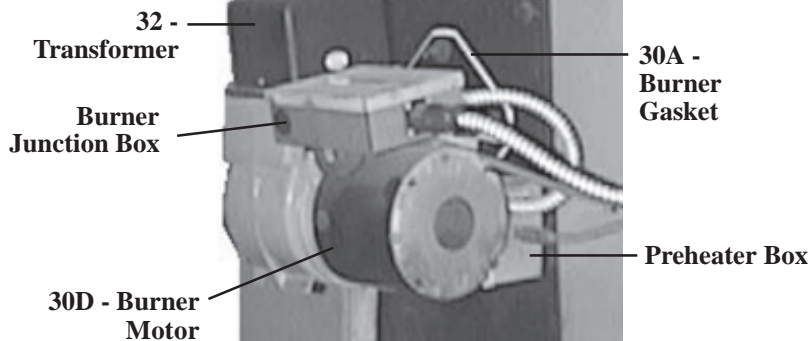
Code 33 - Cad Cell



Code 34 - Flame Rollout Switch



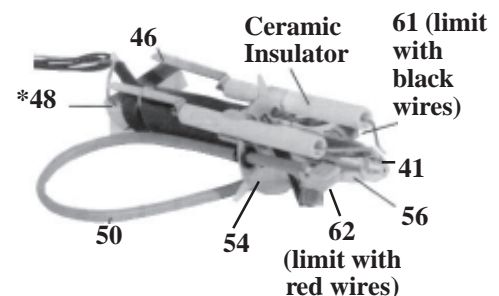
## Burner Assembly



# Burner Fuel Line/Nozzle Assembly

Code	Description	140/235	350	500
40	Fuel Line/Nozzle Assy	174888	174889	174890
<i>Components (Code 40 includes Codes 41 - 62)</i>				
41	Nozzle, Delavan (includes Code 41A)	102997	129382	157041
41A	Nozzle O Ring only, Delavan 31351-3	123399		
42	Left Electrode, Crown Eng 27195LH	104845 (includes nut)		
43	Right Electrode, Crown Eng 27195RH	104846 (includes nut)		
45	Varglas Sleeving #1 x 6" long	90511		
46	Buss Bar, Crown Eng #271968	(2)107213		
47	Heater, 30 watt, Hotwatt	(2)106952, 115V	(2)157049, 230V	
48	Brass Inlet Heater	120287		
49	Ty-Rap, 6" long, T&B#TY-24M	(2)20913		
50	Silicone Rubber Tubing	174879 30" long	174880 34" long	
51	Snap Bushing, Heyco #SB-500-6	(2)29871		
52	Tubing Barbed Fitting, 1/8" IP x 1/4	106396		
53	Brass Street Elbow, 1/8" NPT	110314		
54	Static Plate Assy with electrode clamps	106176		
56	Nozzle Adapter	104766		
57	Machine Screw, Sems 6-32 x 1/4" lg	(4)107119		
58	Set Screw, 1/4-20 x 3/8" long	110942		
59	Foam Rubber Insulation, 3/8" I.D. x 1/2" wall x 4-3/4" lg	107121, Rubatex #R-180-FS		
60	Copper/Brass Pipe 1/8" NPT x 6" lg	106186		
61	Low Oil Temperature Limit	124038, Thermodisc 36T22P		
62	Nozzle Temperature Control	124039, Thermodisc 36T21P		

Code 40 - Fuel Line/Nozzle Assembly



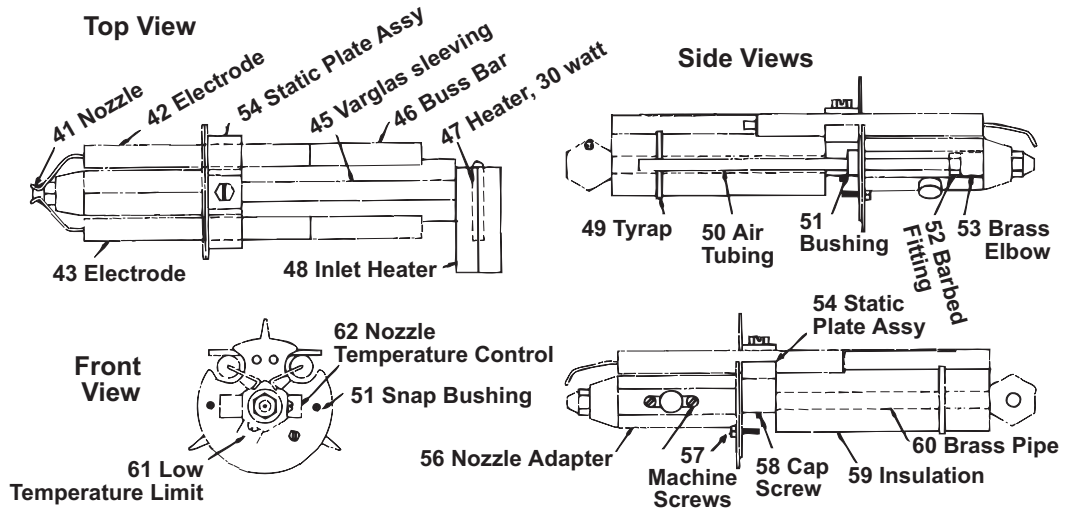
### \*Code 48 - Inlet Heater

Remove the rubber insulation to free the 30 watt heating element (Code 47). When replacing, use insulation to retain new element.

**NOTE: The nozzle adapter (Code 55) also contains a 30 watt heating element (Code 47). To replace that element:**

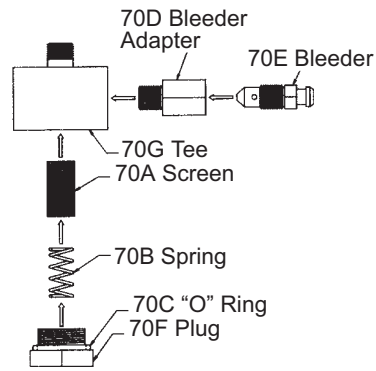
(1) Remove the buss bars. (2) Unscrew the inlet heater and slide the black insulation rearward. Loosen the set screw which retains the static plate and slide rearward. This will expose the heating element.

**Fuel Line/Nozzle  
Assembly Components**

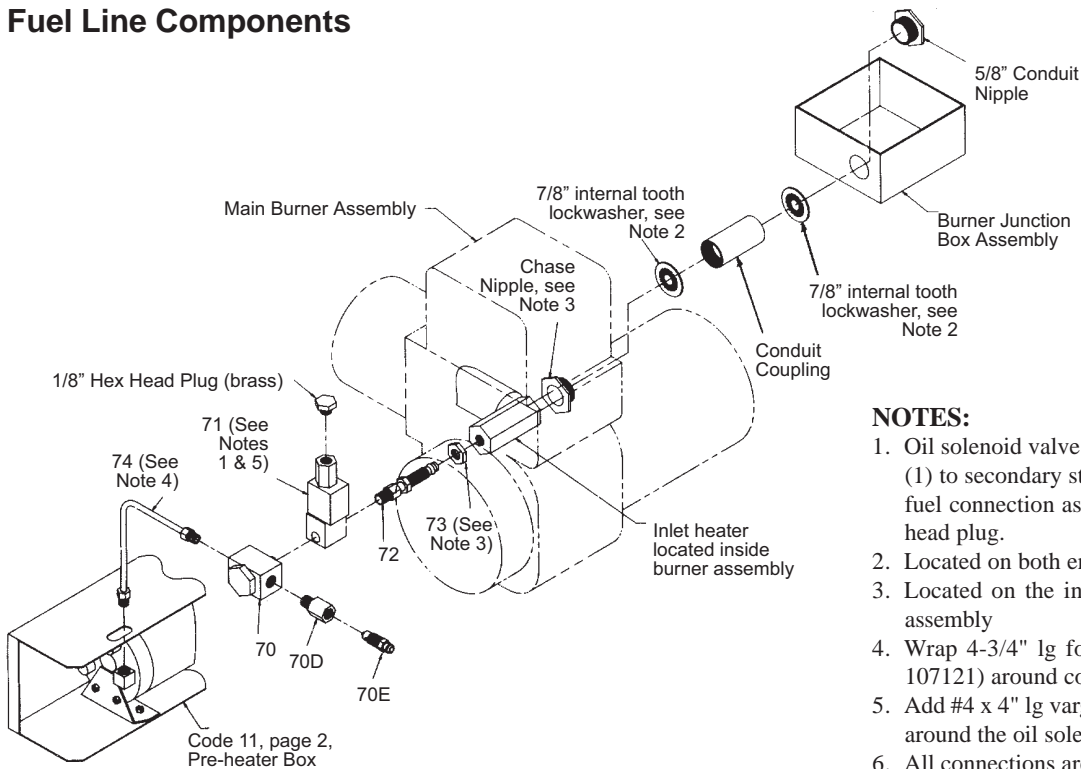


Code	Description	All Sizes
<b>Fuel Line Components</b>		
70	Secondary Strainer Assembly	110233
70A	Screen, 7/16" diameter x 7/8" long	110236
70B	Spring, Associated Spring #CO390-043-0810-M	110235
70C	O-Ring, Size 113, Viton #AS568-113	110237
70D	Bleeder Adapter	113795
70E	Bleeder	113796
70F	Plug	107371
70G	Tee	107341
71	Oil Solenoid Valve, Asco #U8325B7V	110177
72	Fuel Connection Assembly	120288
73	Fuel Connection Nut	104835
74	Copper Tubing Assembly, Yoder #110290	110290
75	Foam rubber Insulation, 3/8" I.D. x 1/2" Wall x 4-3/4" long, (Rubatex #R-180-FS - not illustrated)	107121
76	Flexible Fuel Line, 18"	107164

**Code 70 - Secondary Strainer  
Assembly Showing Components**



**Fuel Line Components**

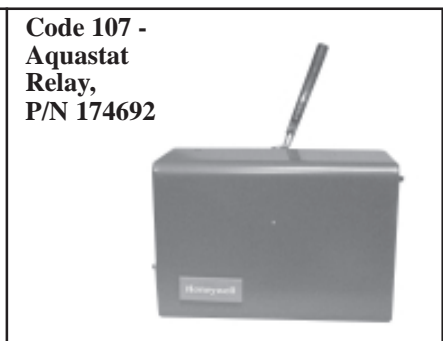
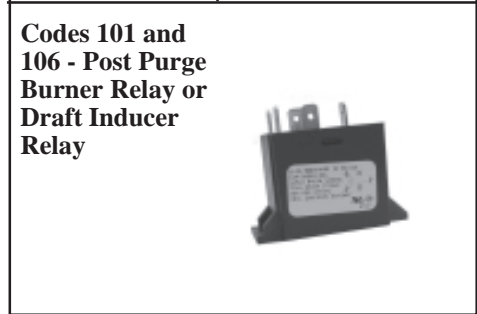
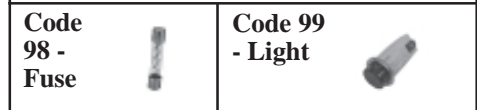
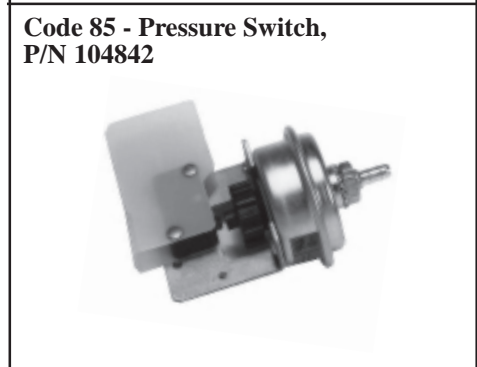
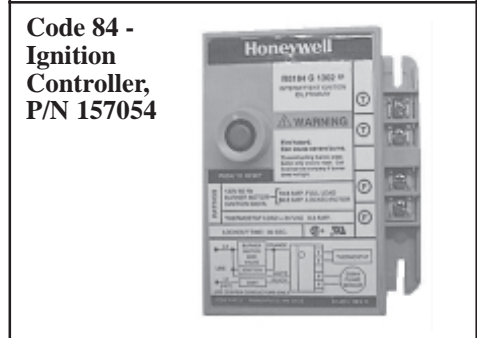
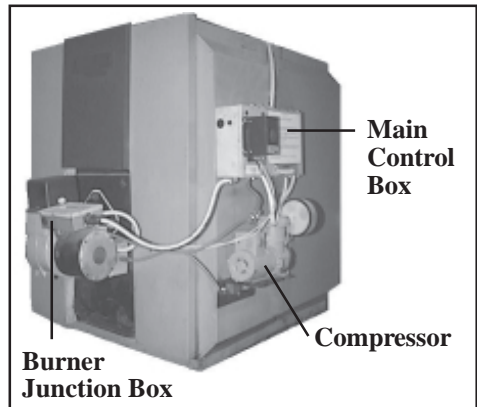


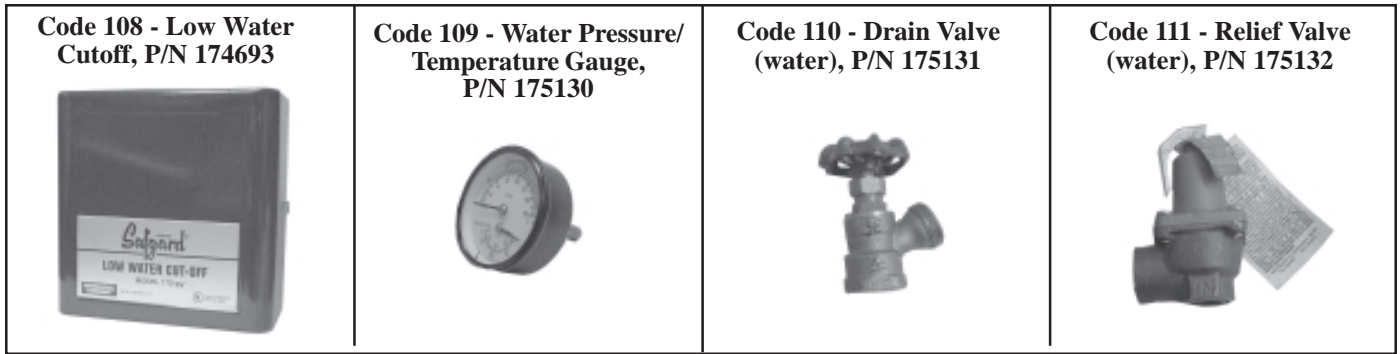
**NOTES:**

1. Oil solenoid valve to be piped as follows: Port (1) to secondary strainer assembly; Port (2) to fuel connection assembly; and Port (3) to hex head plug.
2. Located on both ends of conduit coupling.
3. Located on the inside of the burner housing assembly
4. Wrap 4-3/4" lg foam rubber insulation (P/N 107121) around copper tubing assembly.
5. Add #4 x 4" lg varglass sleeving (P/N 107312) around the oil solenoid valve wires.
6. All connections are to be tight and leak-free.

# Electrical Components

Code	Description	Location	140/235/350	500
			P/N	P/N
80	Main Electrical Control Box	Attached to side of Boiler	104776	157137
81	Electrical Box Fixed Cover		104781	157968
82	Electrical Box Hinged Cover		104780	157969
83	Main Control Switch DPST 20A, Cutler Hammer	Side of Main Control Box	104840 #7630K40	158203 #7599K1
84	Ignition Controller	Front of Main Control Box	157054	
85	Pressure Switch (located behind fixed portion of box cover)	Main Control Box	104842, Tridelta #FS3440-894	
85A	Dampening Orifice for Pressure Switch, 0.028", red		121726	
86	Silicone Rubber Tubing, 6"		148986	
87	Open/Closed Bushing, Heyco #OCB-562		98394	
88	Cable Clamp, 1/4", Heyco #3324		52961	
89	Dart Fastener, TRW #PC47307EVZ001		101798	
90	Ty-Rap, 6" long, T&B #TY-24M		20913	
91	Terminal Block, 1-1/4" long		Main Control Box and Burner Junction Box	144972
92	Terminal Block Marking Strip, 1-1/4" long		21831	
93	Burner Junction Box	On the burner housing	104800	157905
94	Burner Junction Box Cover		104801	158807
95	Hole Plug, Heyco #DP-875	All holes	16452	
96	Internal Tooth Lockwasher, 7/8"	Burner	(2)110240	
97	Strain Relief, Heyco #SR-7W2	Junction Box	(2)16835	
98	Fuse	Main Control Box	121355 - 10 Amp	90335 - 5 Amp
99	Green indicator light, Industrial Devices #105QC5		123460	
100	Ground Wire Assembly		122114	
101	Post Purge Burner Relay, W/R 134-20203-301		102385 - 120V coil	157808 - 230V coil
102	Contact, Furnace #45CG20AF, 25 Amp, 125VCoil		--	157955
103	Time Delay Relay		141675	
104	Transformer, Hevi-Duty SMT #T050, 50VA		--	157952
105	Pump Relay		--	103319
106	Draft Inducer Relay	--	157808	
107	Aquastat Relay	On top of Boiler	174692	
108	Low Water Cutoff		174693	
109	Water Pressure/Temperature Gauge	On back of Boiler	175130	
110	Drain Valve (water)		175131	
111	Relief Valve (water)		175132	
112	Draft Proving Switch	Vent	176300	

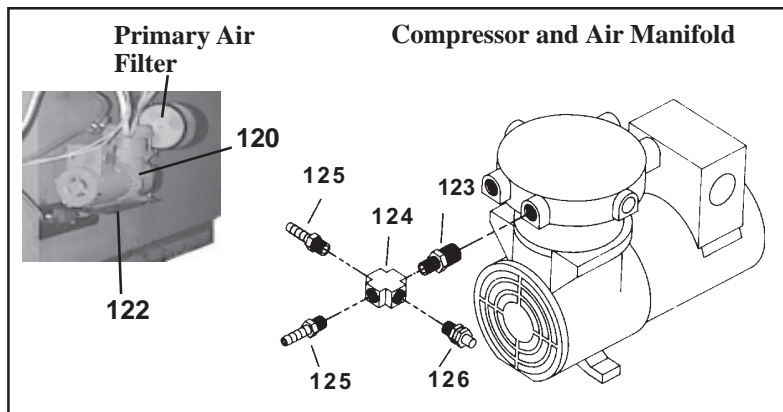
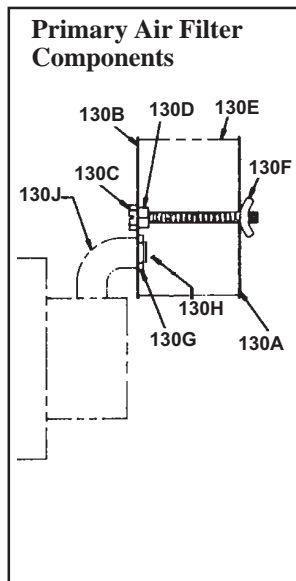




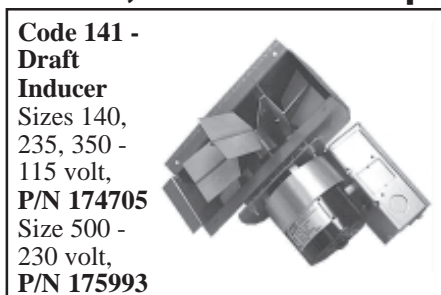
## Compressed Air System

Code	Description	140/235	350	500
120	Air Compressor , Gast #SOA	119636, 115V		157043, 230V
121	Compressor Repair Kit	122876, Gast #K401		
122	Compressor Shelf	174704		
<b>Air Manifold Components</b>				
123	Reducer	126593		
124	Cross	126592		
125	Hose Barb	(2)106396		
126	Air Bleed Orifice	16588, #65	121359, #68	16588, #65

Code	Description	All Sizes
130	Air Filter and Piping Assy	121182
<b>Components:</b>		
130A	Outer Disk	107217
130B	Inner Disk	107218
130C	Hex Head Bolt 1/4-20 x	10653
130D	Hex Nut (Keps) 1/4-	7328
130E	Air Filter, Wix 42374	107216
130F	Wing Nut, 1/4-10	107246
130G	Nut	110628
130H	Hex Bushing 1/4" x 1/8"	87022



## Draft Regulator, Draft Inducer, and Vent Cap



# Remote Pump Assembly and Fuel Supply Line Components

Code	Description	140	235	350	500
<b>150</b>	Remote Pump Assembly (includes 100A-100L)	107123	107124	130651	157855
<b>150A</b>	Pump Enclosure	107207			157909
<b>150B</b>	Pump Cover	107210			
<b>150C</b>	Divider (Electrical Compartment)	107208			157908
<b>150D</b>	Motor Bracket	113440			157907
<b>150E</b>	Gear Motor (P/N 106945, 116159, and 129381 are Merkle-Korff; P/N 157044 is Rex Engineering)	116159 1.0 GPH 115V	106945 1.75 GPH 115V	129381 2.5 GPH 115V	157044 3.57 GPH 230V
<b>151</b>	Replacement Bearing Assembly for Merkle-Korff Gear Motors	149173			--
<b>152</b>	Replacement Capacitor for Gear Motor, GE 3MFD, 370VAC	--			174680
<b>150F</b>	Oil Pump, Suntec #A2RA-7710	107032			
<b>152</b>	Oil Pump Replacement Screen, Suntec #3715747	123450			
<b>153</b>	Replacement Gasket for Pump, Suntec #3779801	123451			
<b>150G</b>	Flexible Coupling, 5/16", Beemer #5802	112042			
<b>150H</b>	In-line Relief Valve, Circle Seal#532B-2MP-50 St @ 50 PSIG	106947			
<b>150J</b>	1/4" Check Valve	175263			
<b>150K</b>	Hour Meter, Redington #711-0109	119983			157687
<b>150L</b>	Hour meter box (not illustrated)	144429			
<b>154</b>	Fuel Filter, Lenz CP-750-100M	96388			
<b>154A</b>	Replacement Canister for Fuel Filter	176535			
<b>155</b>	Vacuum Gauge, NoShok #GV-10	135080			
<b>156</b>	Inlet Manifold	131792			
<b>157</b>	Foot Valve, 2/3" NPT, Valstop #60020	110320			
<b>158</b>	Foot Valve Strainer, #2-1/2N 30 Sump Strainer	136864			

