**Replacement Parts**

**Applies to:** Used-Oil Fired Heater

**Models RA/RAD 110, 140, 150, 235, 250, 350, 500 and RV 225, 325**

---

**Model/Size**

<table>
<thead>
<tr>
<th>Model RA/RAD Sizes 140 and 235</th>
<th>Model RA/RAD Sizes 150 and 250</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA/RAD110</td>
<td>RA/RAD110</td>
</tr>
<tr>
<td>Date of Introduction</td>
<td>Date of Introduction</td>
</tr>
<tr>
<td>UL - 6/90 (APF)</td>
<td>UL - 6/90 (APF)</td>
</tr>
<tr>
<td>Discontinued</td>
<td>Discontinued</td>
</tr>
<tr>
<td>6/92 (ARF)</td>
<td>6/92 (ARF)</td>
</tr>
</tbody>
</table>

**Model RA/RAD Size 350**

- **Date of Introduction**: CSA - 12/93 (ASL)

**Model RA/RAD Size 500**

- **Date of Introduction**: CSA - 7/97 (AWG)

**IMPORTANT**: Effective 1/20/05, Size 500 was changed from a 2 wire w/ground 240V unit to a 3-wire w/ground 240V unit. The cartridge heaters, air compressor, burner, and hour meter were changed from 240V controls to 115V. Select replacement parts carefully.

---

**Index**

- **B**
  - Backflow Sensor 10
  - Bearing Assembly 9
  - Belt 9, 18, 21
  - Belt Guard 18, 20
  - Blower 18, 21
  - Blower Components - RAD 18
  - Blower Components - RV 20
  - Blower Inlet Guard 18
  - Burner Assembly 4
  - Burner Disconnect Cable 10

- **C**
  - Cabinet Parts 14
  - Cad Cell 5
  - Capacitor 9, 21
  - Combustion Chamber/Heat Exchanger Assembly 23

- **D**
  - Dart Fastener, 10
  - Disconnect Switch 10
  - Door Latch Kit 16
  - Draft Regulator 16, 20

- **E**
  - Electrical Control Box 10
  - Inlet Heater Element 6
  - Exhaust Access and Cover 23

- **F**
  - Fan and Limit Controls 12, 13
  - Fan Blade 16
  - Fan Guard 16
  - Fan Motor 16
  - Primary Air Filter 7
  - Flame Cone Assembly 5
  - Flue Restrictor 25
  - Foot Valve 8
  - Foot Valve Strainer 8
  - Cartridge for Fuel Filter 9
  - Fuel Filter 8
  - Fuel Line/Nozzle Assembly 6
  - Fuel Line Components 5
  - Fuse 10

- **G**
  - Door Gasket 23
  - Gasket for Turning Box Door 22
  - Gear Motor 9
  - Ground Wire 10
  - Guard 21

- **H**
  - Hanger Kits 26
  - Replacement Heat Exchanger Assembly 22
  - Heat Exchanger/Combustion Chamber 22, 24
  - Heating Element 3
  - Ignition Controller 4, 5

- **I**
  - Ignition Controller Replacement Kit 4
  - Inlet Heater Block 6

- **L**
  - Green indicator light 10
  - Red Indicator Light 10
  - High Oil Temperature Limit 3
  - High Temperature Limit 13
  - Low Oil Temperature Limit 6
  - Super High Limit Control 13
  - Limit and fan/blower controls 13
  - Limit Controls 12
  - Suction Line Components 8
  - Liner for Turning Box Door 22
  - Vertical Louvers 27

- **M**
  - Manifold 8
  - Blower Motor 18
  - Fan Motor 16
  - Motor Mounting Plate 18
  - Motor (Pump) 9

- **N**
  - Nozzle 6
  - Nozzle Temperature Control 6

- **O**
  - Oil Temperature Control 3

- **P**
  - Pre-Heater System 3
  - Pressure Switch 10
  - Pulley 9, 21
  - Pump 8
  - Pump Assembly 8

- **R**
  - Rating Plate 2
  - REFERENCES 28
  - Fan Time Delay Relay 10
  - Post Purge Burner Relay, 10
  - Time Delay Relay 10
  - Inlet Restrictor 21

- **S**
  - Serial No. 2
  - Sheave 18, 21
  - Heater Stand for Fuel Tank 26
  - Secondary Strainer Assembly 5
  - Swivel Connector Assy 26

- **T**
  - Model OT-250 Bench-Type Fuel Tank 26
  - Temperature Limit 3
  - Thermostat 26
  - Transformer 4, 10

- **V**
  - Vacuum Gauge 8
  - Check Valve 9
  - In-line Relief Valve 9
  - Vent Cap 16, 20
  - Vertical Louvers 27
  - Viewport Cover 16

- **W**
  - Combustion Air Wheel 5
Rating Plate and Serial Number

REZNOR®
MERCER, PA, U.S.A. 16137
MADE IN MEXICO
MULTI-OIL-FIRED UNIT HEATER
CSA CERTIFIED TO UL STANDARD 296A
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 (_____)

SERIAL NO. ARK350A0000 [B] HP
USE COPPER CONDUCTORS ONLY
115 VOLTS 1 PH 60 HZ [C] AMPS
MINIMUM CIRCUIT AMPACITY [D] AMPS
MAXIMUM UNIT FUSE [E] AMPS
FOR USE AT [F] FEET
FIRING RATE [G] G.P.H.
INPUT [H] BTU/HR
OUTPUT DEPENDS ON BTU CONTENT OF USED OIL.
MAXIMUM OVERFIRE PRESSURE [I] IN.W.C.
EXTERNAL STATIC PRESSURE [J] IN.W.C.
FLUE OUTLET PRESSURE RANGE (DRAFT) [K] IN.W.C.
THIS UNIT IS FOR INSTALLATION SUSPENDED FROM A CEILING.
WITH CLEARANCES TO COMBUSTIBLES MATERIALS NO LESS THAN...
TOP - [L]" Bottom - [N]" Sides - [P]" Rear - [M]" Front - [O]" Flue Pipe - [Q]"
IN CANADA, REFERENCE CSA B139-M91 FOR INSTALLATION IN GARAGES, ETC.
IN USA, INSTALL UNIT IN ACCORDANCE WITH THE FOLLOWING STANDARDS;
ANSI/NFPA 409-1990 FOR PARKING STRUCTURES
ANSI/NFPA 88A-1991 FOR AIRCRAFT HANGARS
IN USA, INSTALL UNIT IN ACCORDANCE WITH THE FOLLOWING STANDARDS;
ANSI/NFPA 88A-1991 FOR PARKING STRUCTURES
ANSI/NFPA 88A-1991 FOR REPAIR GARAGES
THIS UNIT [L]" WITH AIR DUCTS.
THIS UNIT IS NOT FOR USE WITH AIR FILTERS.
REPLACEMENT NOZZLES MUST BE PURCHASED FROM REZNOR

Rating Plate Key
A = Model NO.
B = Horsepower
C = Amps
D = Minimum Circuit Ampacity
E = Maximum Unit Fuse
F = Altitude Range (feet)
G = Firing Rate (adjusted for altitude)
H = Input Rate (adjusted for altitude)
I = Maximum Overfire Pressure (" w.c.)
J = External Static Pressure (" w.c.)
K = Flue Outlet Pressure Range (" w.c.)
L = Top Clearance (inches)
M = Rear Clearance (inches)
N = Bottom Clearance (inches)
O = Front Clearance (inches)
P = Side Clearance (inches)
Q = Flue Pipe Clearance (inches)
R = RAD and RV may be used with a discharge duct; RA may not be used with a discharge duct.

Serial No. Decoding - ALL Models Before June, 2015
Sample ARK 350 A 00000

Codes
1 2 3 4
Key: 1 Date of manufacture (See chart below.) 2 Size (BTUH input) 3 A = Fan Model; D = Blower Model 4 Consecutive Number

Serial No. Decoding - ALL Models AFTER June, 2015
Sample BOG 3060 00000

Codes
1 2 3
Key: 1 Date of manufacture (See chart below.) 2 Plant of Manufacture (3060 = Mercer; 3062 = Monterrey) 3 Consecutive number

First Element of the Serial Number - Date of Manufacture

<table>
<thead>
<tr>
<th>Year</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>APA</td>
<td>APB</td>
<td>APC</td>
<td>APD</td>
<td>APE</td>
<td>APF</td>
<td>APG</td>
<td>AHP</td>
<td>API</td>
<td>APJ</td>
<td>APK</td>
<td>APL</td>
</tr>
<tr>
<td>1991</td>
<td>AQA</td>
<td>AQB</td>
<td>AQC</td>
<td>AQL</td>
<td>AQD</td>
<td>AQE</td>
<td>AQF</td>
<td>AQG</td>
<td>AQU</td>
<td>AQJ</td>
<td>AQK</td>
<td>AQL</td>
</tr>
<tr>
<td>1992</td>
<td>ARA</td>
<td>ARB</td>
<td>ARC</td>
<td>ARD</td>
<td>ARE</td>
<td>ARF</td>
<td>ARG</td>
<td>ARR</td>
<td>ARI</td>
<td>ARJ</td>
<td>ARK</td>
<td>ARL</td>
</tr>
<tr>
<td>1993</td>
<td>ASA</td>
<td>ASB</td>
<td>ASC</td>
<td>ASD</td>
<td>ASE</td>
<td>ASF</td>
<td>ASG</td>
<td>ASH</td>
<td>ASI</td>
<td>ASJ</td>
<td>ASK</td>
<td>ASL</td>
</tr>
<tr>
<td>1994</td>
<td>ATA</td>
<td>ATB</td>
<td>ATC</td>
<td>ATD</td>
<td>ATE</td>
<td>ATF</td>
<td>ATG</td>
<td>ATH</td>
<td>ATI</td>
<td>ATJ</td>
<td>ATK</td>
<td>ATL</td>
</tr>
<tr>
<td>1995</td>
<td>AUA</td>
<td>AUB</td>
<td>AUC</td>
<td>AUD</td>
<td>AUE</td>
<td>AUF</td>
<td>AUG</td>
<td>AUI</td>
<td>AUG</td>
<td>AUK</td>
<td>AUL</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>AVA</td>
<td>AVB</td>
<td>AVC</td>
<td>AVD</td>
<td>AVE</td>
<td>AVF</td>
<td>AVG</td>
<td>AVH</td>
<td>AVI</td>
<td>AVJ</td>
<td>AVK</td>
<td>AVL</td>
</tr>
<tr>
<td>1997</td>
<td>AWA</td>
<td>AWB</td>
<td>AWC</td>
<td>AWD</td>
<td>AWE</td>
<td>AWF</td>
<td>AWG</td>
<td>AWH</td>
<td>AWI</td>
<td>AWJ</td>
<td>AWK</td>
<td>AWL</td>
</tr>
<tr>
<td>1998</td>
<td>AXA</td>
<td>AXB</td>
<td>AXC</td>
<td>AXD</td>
<td>AXE</td>
<td>AXF</td>
<td>AXG</td>
<td>AXH</td>
<td>AXI</td>
<td>AXJ</td>
<td>AXK</td>
<td>AXL</td>
</tr>
<tr>
<td>1999</td>
<td>AYA</td>
<td>AYB</td>
<td>AYC</td>
<td>AYD</td>
<td>AYE</td>
<td>AYF</td>
<td>AYG</td>
<td>AYH</td>
<td>AYI</td>
<td>AYJ</td>
<td>AYK</td>
<td>AYL</td>
</tr>
<tr>
<td>2000</td>
<td>AZA</td>
<td>AZB</td>
<td>AZC</td>
<td>AZD</td>
<td>AZE</td>
<td>AZF</td>
<td>AZG</td>
<td>AZH</td>
<td>AZI</td>
<td>AZJ</td>
<td>AZK</td>
<td>AZL</td>
</tr>
<tr>
<td>2001</td>
<td>BAA</td>
<td>BAB</td>
<td>BAC</td>
<td>BAD</td>
<td>BAE</td>
<td>BAF</td>
<td>BAG</td>
<td>BAH</td>
<td>BAI</td>
<td>BAJ</td>
<td>BAK</td>
<td>BAL</td>
</tr>
<tr>
<td>2002</td>
<td>BBA</td>
<td>BBB</td>
<td>BBC</td>
<td>BBD</td>
<td>BEB</td>
<td>BBE</td>
<td>BBF</td>
<td>BBG</td>
<td>BBH</td>
<td>BBI</td>
<td>BBJ</td>
<td>BBL</td>
</tr>
<tr>
<td>2003</td>
<td>BCA</td>
<td>BCB</td>
<td>BCC</td>
<td>BCD</td>
<td>BCE</td>
<td>BCF</td>
<td>BCG</td>
<td>BCH</td>
<td>BCI</td>
<td>BCJ</td>
<td>BCK</td>
<td>BCL</td>
</tr>
<tr>
<td>2004</td>
<td>BDA</td>
<td>BDB</td>
<td>BDC</td>
<td>BDD</td>
<td>BDE</td>
<td>BDF</td>
<td>BDG</td>
<td>BDH</td>
<td>BDI</td>
<td>BDJ</td>
<td>BKD</td>
<td>BDL</td>
</tr>
<tr>
<td>2005</td>
<td>BEA</td>
<td>BEB</td>
<td>BEC</td>
<td>BED</td>
<td>BEF</td>
<td>BEH</td>
<td>BEI</td>
<td>BEJ</td>
<td>BEK</td>
<td>BEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>BFA</td>
<td>BFB</td>
<td>BFC</td>
<td>BFD</td>
<td>BFE</td>
<td>BFF</td>
<td>BFG</td>
<td>BFH</td>
<td>BFI</td>
<td>BFJ</td>
<td>BFK</td>
<td>BFL</td>
</tr>
<tr>
<td>2007</td>
<td>BGA</td>
<td>BGB</td>
<td>BGC</td>
<td>BDG</td>
<td>BGE</td>
<td>BGF</td>
<td>BGG</td>
<td>BGH</td>
<td>BGI</td>
<td>BGG</td>
<td>BGK</td>
<td>BGL</td>
</tr>
<tr>
<td>2008</td>
<td>BHA</td>
<td>BHB</td>
<td>BHC</td>
<td>BDH</td>
<td>BHE</td>
<td>BHF</td>
<td>BHH</td>
<td>BHJ</td>
<td>BHK</td>
<td>BHL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>BIA</td>
<td>BIB</td>
<td>BIC</td>
<td>BID</td>
<td>BIE</td>
<td>BIG</td>
<td>BIH</td>
<td>BIJ</td>
<td>BIK</td>
<td>BIL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>BJA</td>
<td>BJB</td>
<td>BJC</td>
<td>BJD</td>
<td>BJF</td>
<td>BKG</td>
<td>BKH</td>
<td>BKI</td>
<td>BKJ</td>
<td>BKL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>BKA</td>
<td>BKB</td>
<td>BKC</td>
<td>BKD</td>
<td>BKE</td>
<td>BKF</td>
<td>BKG</td>
<td>BKH</td>
<td>BKI</td>
<td>BJK</td>
<td>BKK</td>
<td>BKL</td>
</tr>
<tr>
<td>2012</td>
<td>BLA</td>
<td>BLB</td>
<td>BLC</td>
<td>BLD</td>
<td>BLE</td>
<td>BLF</td>
<td>BLG</td>
<td>BLH</td>
<td>BLJ</td>
<td>BLK</td>
<td>BLM</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>BMA</td>
<td>BMB</td>
<td>BMC</td>
<td>BMD</td>
<td>BME</td>
<td>BMF</td>
<td>BMM</td>
<td>BMI</td>
<td>BMJ</td>
<td>BMK</td>
<td>BML</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>BNA</td>
<td>BNB</td>
<td>BNC</td>
<td>BND</td>
<td>BNE</td>
<td>BNF</td>
<td>BNG</td>
<td>BNH</td>
<td>BNI</td>
<td>BNJ</td>
<td>BNK</td>
<td>BNL</td>
</tr>
<tr>
<td>2015</td>
<td>BOA</td>
<td>BOB</td>
<td>BOC</td>
<td>BOD</td>
<td>BOE</td>
<td>BOF</td>
<td>BOG</td>
<td>BOH</td>
<td>BOI</td>
<td>BOJ</td>
<td>BOK</td>
<td>BOL</td>
</tr>
<tr>
<td>2016</td>
<td>BPA</td>
<td>BPB</td>
<td>BPC</td>
<td>BPD</td>
<td>BPE</td>
<td>BPF</td>
<td>BPG</td>
<td>BPH</td>
<td>BPI</td>
<td>BPJ</td>
<td>BPK</td>
<td>BPL</td>
</tr>
<tr>
<td>2017</td>
<td>BQA</td>
<td>BQB</td>
<td>BQC</td>
<td>BQD</td>
<td>BQE</td>
<td>BQF</td>
<td>BQG</td>
<td>BQH</td>
<td>BQI</td>
<td>BQJ</td>
<td>BQK</td>
<td>BQL</td>
</tr>
</tbody>
</table>

Form P-RA/RAD/RV, P/N 269864R3, Page 2
Fuel Pre-Heater System - All Models

### Fuel Heat Exchanger Assembly Components

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA/RAD</th>
<th>RV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fuel Heat Exchanger Box (less Codes 2 and 3)</td>
<td>104784</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Fuel Heat Exchanger Box Front</td>
<td>104788</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Fuel Heat Exchanger Box Corner</td>
<td>104789</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Band (from heat exchanger box around burner tube) - not shown</td>
<td>179313</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Oil Primary Heater Assembly (includes 2-piece aluminum cylinder, end cap, and &quot;O&quot; ring, Code 5A)</td>
<td>101916</td>
<td></td>
</tr>
<tr>
<td>5A</td>
<td>Replacement &quot;O&quot; ring for Oil Heater cylinder</td>
<td>132224</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Oil Temperature Control, 170°, Honeywell 2455RPV8755002</td>
<td>210761</td>
<td>210762</td>
</tr>
<tr>
<td>7</td>
<td>Low Oil Temperature Limit, 155°, Honeywell 2455RPV8755003</td>
<td>210762</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>High Oil Temperature Limit, 220°, Honeywell 2455RPV8755001</td>
<td>210763</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Heater, Hotwatt #SC75-6</td>
<td>106953</td>
<td>106953</td>
</tr>
<tr>
<td>10</td>
<td>Copper/Brass Pipe, 1/8&quot; NPT x 2-1/2&quot; long</td>
<td>107122</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Heater Front Support</td>
<td>104787</td>
<td></td>
</tr>
</tbody>
</table>

*See IMPORTANT Note on page 1 when selecting parts for RA/RAD 500.

### Oil Pre-heating System

- **7 - Low Oil Temperature Limit (black wire)**
- **6 - Oil Temperature Control (blue wire)**
- **9 - Heating Element**
  - To remove the heating element, remove the heater front support and pull heating element forward.
- **11 - Heater Front Support**
- **8 - Manual Reset High Oil Temperature Limit (yellow wire)**
- **7 (yellow dot)**
- **6 (white dot)**
- **"Old" style limits**
- **Cylinder Cover**
  - Oil is heated as it flows around the cylinder.

**Top View**

1. (Corner of the box covering the end and part of the front)
2. (Front only)
3. 9
4. 5
5. 10
6. Wire and Cable
7. Flexible Fuel Line, P/N 107164
8. 5A - "O" Ring
9. 11 - Heater Front Support
10. 11 - Heater Front Support
12. 2 (Front only)

**Code Description**

1. 110/140/235/150/250
2. 350
3. 500*
4. 225/325

*Code Description*

- RA/RAD RV
- 110/140/235/150/250
- 350
- 500*
- 225/325
## Burner - Models RA, RAD, and RV

### CODE 20 - Complete Replacement Burner Assembly
(Replacement burner assembly is available for these size units with a piston compressor only. Replacement burners are not available for heaters manufactured before 1/93 that have a rotary vane compressor.)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA/RAD</th>
<th>RV</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Burner Housing Assembly only, Beckett (includes Codes 21A, 22, 23, 27, 28)</td>
<td>124981</td>
<td>209189, Model SF-115V</td>
</tr>
<tr>
<td></td>
<td>Model RZ1401</td>
<td>157849, Model SF-230V</td>
<td>202595</td>
</tr>
<tr>
<td>21A</td>
<td>Burner Assy Gasket (gasket between burner assy and heater panel)</td>
<td>111859</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Combustion Air Blower Wheel, Beckett</td>
<td>107027, #2999</td>
<td>163125, #2288U</td>
</tr>
<tr>
<td>23</td>
<td>Flame Cone Assembly</td>
<td>104774</td>
<td>131273</td>
</tr>
<tr>
<td>24</td>
<td>Transformer with Gaskets and Electrode/Transformer Connectors (includes Codes 25A and 25B)</td>
<td>101332, 120V</td>
<td>220627 - 115V, Beckett 2289U</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>220628 - 230V, Beckett 21176U</td>
</tr>
<tr>
<td>25A</td>
<td>Electrode/Transformer Connector only</td>
<td>101332, 120V</td>
<td></td>
</tr>
<tr>
<td>25B</td>
<td>#10 Hex Nut for attaching Connector to Transformer</td>
<td>(2) 137576 (replaces P/N 130347)</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Cad Cell Detector and Eye, Honeywell #C554A1794</td>
<td>124981</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(replaces P/N 101932)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Burner Motor only (for units with piston air compressor only)</td>
<td>41598, Beckett #2-456, 1/7 HP</td>
<td>216341 - 115V, Beckett 2364U</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>163127 - 230V, Beckett 21173U</td>
</tr>
<tr>
<td>28</td>
<td>Air Guide, Beckett #31231</td>
<td>147096</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29A</td>
<td>Ignition Controller</td>
<td>208973, Carlin #42230</td>
<td></td>
</tr>
<tr>
<td>29B</td>
<td>Ignition Controller Replacement Kit (replaces all controller models)</td>
<td></td>
<td>170188</td>
</tr>
</tbody>
</table>

* See IMPORTANT Note on page 1 when selecting parts for RA/RAD 500.

**Model 110 and Model 140-H (high altitude) require nozzle, P/N 107310. Effective 6/05, Model RA/RAD 140 burner has a low fire baffle, P/N 107028. If replacing a burner assembly on a unit manufactured prior to 6/05, remove the low fire baffle.
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.
**Nozzle/Fuel Line Assembly - Models RA/RAD/RV**

**Components (Code 40 includes Codes 41 - 62)**

- **Code 42**: Nozzle/Fuel Line Assembly  
  - 107116  
  - 107117  
  - 130648  
  - 157851  
  - 207450  
  - 107117

**Code 43A**: Nozzle O Ring only, Delavan 31351-3  
  - 123399

**Code 44**: Electrode Assembly Replacement Kit,  
  - 269820, Crown Eng 27195-02 (includes both electrodes)

**Code 45**: Varglas sleeving #1 x 6" long  
  - 90511

**Code 46**: Buss Bar, Crown Eng #271968  
  - (2) 107213

**Code 47**: Inlet Heater Element, Hotwatt  
  - (2) 106952  
  - (2) 106952

**Code 48**: Inlet Heater Block only (Element is Code 47)  
  - 120287

**Code 50**: Silicone Rubber Tubing (air manifold to nozzle & air manifold to pressure switch)  
  - (2) 107118

**Code 51**: Snap Bushing, Heyco #SB-500-6  
  - (2) 29871

**Code 52**: Tubing Barbed Fitting, 1/8" IP x 1/4  
  - 106396

**Code 53**: Brass Street Elbow, 1/8" NPT  
  - 110314

**Code 55**: Static Plate Assy with electrode clamps  
  - 106176

**Code 56**: Nozzle Adapter  
  - 104766

**Code 57**: Machine Screw, Sems 6-32 x 1/4" long  
  - (4) 107119

**Code 58**: Set Screw, 1/4-20 x 3/8" long  
  - 110942

**Code 59**: Foam Rubber Insulation, 3/8" I.D. x 1/2" Wall x 4-3/4" lg  
  - 107121

**Code 60**: Copper/Brass Pipe 1/8" NPT x 6" long  
  - 106186

**Code 61**: Low Oil Temperature Limit  
  - 210764, 145°, Honeywell 2455RBV81170362 (replaces 124038)

**Code 62**: Nozzle Temperature Control  
  - 210765, 160°, Honeywell 2455RBV81170363 (replaces 124039)

*See IMPORTANT Note on page 1 when selecting parts for RA/RAD 500.*

---

**Code 40 - Fuel Line/Nozzle Assembly**

- **43** Nozzle, Delavan (includes O Ring, Code 41A)
- **50** Silicone Rubber Tubing (air manifold to nozzle & air manifold to pressure switch)
- **52** Tubing Barbed Fitting, 1/8" IP x 1/4
- **53** Brass Street Elbow, 1/8" NPT
- **55** Static Plate Assy with electrode clamps
- **56** Nozzle Adapter
- **57** Machine Screw, Sems 6-32 x 1/4" long
- **58** Set Screw, 1/4-20 x 3/8" long
- **59** Foam Rubber Insulation, 3/8" I.D. x 1/2" Wall x 4-3/4" lg
- **60** Copper/Brass Pipe 1/8" NPT x 6" long
- **61** Low Oil Temperature Limit
- **62** Nozzle Temperature Control

---

**Code 48 - Inlet Heater Block**

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

**NOTE:** The nozzle adapter 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.
### Burner Compressed Air System - Models RA/RAD/RV

**Compressed Air System:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA/RAD</th>
<th>RV</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>140/235/350</td>
<td>150/250</td>
<td>500</td>
</tr>
<tr>
<td>119</td>
<td>119/225/350</td>
<td>115V</td>
<td></td>
</tr>
<tr>
<td>225</td>
<td>225/325</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Use a non-Teflon based pipe thread compound on all threaded fittings. All connections are to be airtight and leak free.

#### Compressed Air Manifold for Heaters with Rotary Vane Compressor

(Standard on heaters manufactured prior to 1/93)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA/RAD</th>
<th>RV</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>140/235/350</td>
<td>150/250</td>
<td>500</td>
</tr>
<tr>
<td>119</td>
<td>119/225/350</td>
<td>115V</td>
<td></td>
</tr>
<tr>
<td>225</td>
<td>225/325</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Compressed Air Manifold for Optional Piston Air Compressor

(Appplies to heaters with optional piston compressor manufactured prior to 1/93)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA/RAD</th>
<th>RV</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>140/235/350</td>
<td>150/250</td>
<td>500</td>
</tr>
<tr>
<td>119</td>
<td>119/225/350</td>
<td>115V</td>
<td></td>
</tr>
<tr>
<td>225</td>
<td>225/325</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Components of Primary Air Filter Assy, P/N 255960 - RA/RAD 150/250

- 120A: Primary Air Filter Assy
- 120B: Outer (Rear) Disk
- 120C: Inner (Front) Disk
- 120D: Hex Head Bolt 1/4-20x2" lg
- 120E: Hex Nut (Keps) 1/4-20
- 120F: Air Filter, Wix 42374
- 120G: Wing Nut 1/4-10
- 120H: Nut 110628
- 120J: Hex Bushing 1/4" x 1/8" (on units manufactured beginning 5/95)
- 120K:街头 elbow 90°, 1/4 NPT (used with Rotary Vane Compressor only)
- 120L: 1/8" IP x 1/4" Tubing Barbed Fitting

#### Code 120 - Primary Air Filter Assembly Components

- 120A: Compressor
- 120B: Air Bleed Orifice
- 120C: Street Elbow 90°, 1/4 NPT (used with Rotary Vane Compressor only)
- 120D: 1/8" Street Needle Valve
- 120E: 1/8" IP x 1/4" Tubing Barbed Fitting

Form P-RA/RAD/RV, P/N 269864R3, Page 7
Remote Pump Assembly and Suction Line Components - All Models

NOTE: Depending on date of manufacture, appearance may vary from the photos.

CODE 160 - Remote Pump Assembly

179 Relief Valve 50 psi

180B Check Valve

1/2" Pipe Plug (for priming line)

3/8" O.D. Copper Tubing to Burner

1/4" NPT Connection for fuel line to burner

Remote Pump Assembly

184 Inlet Manifold

181 Fuel Filter

Return Line to Tank (1/8 NPT black iron pipe)

183 Vacuum Gauge (install in upright position)

End must be open

185 Foot Valve

186 Foot Valve Filter

Remote Pump Assembly and Suction Line (line from tank to pump) Components

Code 175 - Pump

Code 175A - Replacement Screen

Code 175B - Replacement Gasket for Pump

Pump

Pump Cover and Hardware

Code 181 - Fuel Filter

Code 184 - Inlet Manifold

Code 185 - Foot Valve

Code 186 - Foot Valve Strainer

Code 183 - Vacuum Gauge

Code 185 - Hour Meter

Two Views of Remote Pump Assembly with Cover Removed (depending on date of manufacture, pump is either controlled by a gear motor or a belt driven motor)

As of 1/20/05, the gear motor is replaced by a pulley motor. See CODE 161 for Replacement Kit.

165 Electrical Box

167 Belt (not shown here)

175 Pump

187 Hour Meter

166 Motor

170 Motor Bracket

173 Bumper

162

Inside of Remote Pump Assembly beginning 1/20/05
<table>
<thead>
<tr>
<th>CODE</th>
<th>Description</th>
<th>RA/RAD</th>
<th>RV</th>
</tr>
</thead>
<tbody>
<tr>
<td>160</td>
<td>Complete Remote Pump Assy with belt driven motor</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-3000 ft (0-914M) elevation</td>
<td>--</td>
<td>209566</td>
</tr>
<tr>
<td></td>
<td>above 3000-7000 ft (above 914-2134M)</td>
<td>--</td>
<td>209567</td>
</tr>
<tr>
<td></td>
<td>above 7000 ft (above 2134M) elevation</td>
<td>--</td>
<td>209570</td>
</tr>
<tr>
<td>161</td>
<td>Replacement Kit to change remote pump assembly from a gear motor to a belt drive motor</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-3000 ft (0-914M) elevation</td>
<td>--</td>
<td>211056</td>
</tr>
<tr>
<td></td>
<td>above 3000-7000 ft (above 914-2134M)</td>
<td>--</td>
<td>211057</td>
</tr>
<tr>
<td></td>
<td>above 7000 ft (above 2134M) elevation</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>162</td>
<td>Pump Enclosure (with belt drive motor)</td>
<td>Replacement parts for a remote pump assembly with a belt driven motor:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>209198</td>
</tr>
<tr>
<td>163</td>
<td>Pump Fixed Cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>209408</td>
</tr>
<tr>
<td>164</td>
<td>Pump Access Cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>209407</td>
</tr>
<tr>
<td>165</td>
<td>Top Divider (electrical box)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>209195</td>
</tr>
<tr>
<td>166</td>
<td>Belt Pump Motor</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>208473 (Replacement Motor Capacitor, 4mfd, P/N 163894)</td>
</tr>
<tr>
<td>167</td>
<td>Belt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>209146</td>
<td>209150</td>
</tr>
<tr>
<td>168</td>
<td>Cooling Fan</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>131600</td>
</tr>
<tr>
<td>169</td>
<td>Pump Pulley</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>209143</td>
<td>234866</td>
</tr>
<tr>
<td>170</td>
<td>Belt Drive Motor Bracket</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>209196</td>
</tr>
<tr>
<td>171</td>
<td>Motor Sheave for CODE 166 Belt Pump Motor</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-3000 ft (0-914M) elevation</td>
<td>--</td>
<td>209134</td>
</tr>
<tr>
<td></td>
<td>above 3000-7000 ft (above 914-2134M)</td>
<td>--</td>
<td>209135</td>
</tr>
<tr>
<td></td>
<td>above 7000 ft (above 2134M) elevation</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>172</td>
<td>Bore Reducer (for remote pump with belt driven motor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>173</td>
<td>Rubber Bumper</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>217024</td>
</tr>
<tr>
<td>174</td>
<td>Replacement Gear Motor for remote pump with gear motor (P/N 131640 &amp; 111654 are Grainger; P/N 106945, 106946, 112707, 116159, 129381, &amp; 202935 are Merkle-Korff; P/N 201950 is Rex Engineering and includes gear motor P/N 157044 and capacitor P/N 174680)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Altitude 0-3000'</td>
<td>106946</td>
<td>116159</td>
</tr>
<tr>
<td></td>
<td>Altitude over 7000'</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>175</td>
<td>Gear Motor Bracket</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Altitude 0-3000'</td>
<td>113440</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Altitude 3000-7000'</td>
<td>N/A</td>
<td>113440</td>
</tr>
<tr>
<td></td>
<td>Altitude over 7000'</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>176A</td>
<td>Replacement Bearing Assembly for Merkle-Korff Gear Motors</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>149173</td>
<td>--</td>
<td>149173</td>
</tr>
<tr>
<td>176B</td>
<td>Replacement Capacitor for Gear Motor, GE 3MFD, 370VAC</td>
<td>N/A</td>
<td>174680</td>
</tr>
<tr>
<td>176C</td>
<td>Replacement Fan Impeller (blue) for some Merkle-Korff Gear Motors, Reznor P/N's 106946, 116159, 112707 only</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>205424</td>
<td>--</td>
<td>205424</td>
</tr>
<tr>
<td>177</td>
<td>Oil Pump, Suntec #2RA-7710</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>107032</td>
<td></td>
</tr>
<tr>
<td>177A</td>
<td>Oil Pump Replacement Screen, Suntec #371577</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>123450</td>
<td></td>
</tr>
<tr>
<td>177B</td>
<td>Replacement Gasket for Pump, Suntec #3779801</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>123451</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>Flexible Coupling, 5/16&quot;, Beemer #5802 (for pump assembly with a gear motor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>112042</td>
<td></td>
</tr>
<tr>
<td>179</td>
<td>In-line Relief Valve, Circle Seal#532B-2MP-50 St @ 50 PSIG</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>106947</td>
<td></td>
</tr>
<tr>
<td>180A</td>
<td>Pump Solenoid Valve (replaced by Code 160B on units mfgd beginning 7/99)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>110177 (replaces 107029)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>180B</td>
<td>Check Valve, Valstop #H141, 1/4&quot; Hardware for replacing 180A with 180B: (1) 1/4&quot; to 1/8&quot; reducer, P/N 126593; (1) 5/16&quot; flat washer, P/N 1087; (1) 9/16&quot; hole plug, P/N 82433</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>175263</td>
<td></td>
<td></td>
</tr>
<tr>
<td>181A</td>
<td>Replacement Cartridge only for Fuel Filter (CODE 181)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>176353</td>
<td></td>
</tr>
<tr>
<td>181B</td>
<td>Replacement O Ring only for Fuel Filter (CODE 181)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>102294</td>
<td></td>
</tr>
<tr>
<td>183</td>
<td>Vacuum Gauge, NoShok #GV-10 (replaces 126595)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>135080</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>Inlet Manifold</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>131792</td>
<td></td>
</tr>
<tr>
<td>185</td>
<td>Foot Valve, 2/3&quot; NPT, Valstop #60020</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>110320</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>Foot Valve Strainer, #2-1/2N 30 Sump Strainer</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>136864</td>
<td></td>
</tr>
<tr>
<td>187</td>
<td>Hour Meter, (On heaters manufactured beginning 1/96, the hour meter is on the remote pump enclosure; prior to 1/96, the hour meter was on the main electrical box - see page 11.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>119983, Redington #711-0109</td>
<td>119983, Redington #711-0109</td>
</tr>
</tbody>
</table>

* See IMPORTANT Note on page 1 when selecting parts for RA/RAD 500.
## Electrical Boxes and Components - Models RA/RAD/RV

<table>
<thead>
<tr>
<th>CODE</th>
<th>Description</th>
<th>Location</th>
<th>RA/RAD 110/140/235/350</th>
<th>RA/RAD 150/250</th>
<th>RA/RAD 500*</th>
<th>RV 225/325</th>
</tr>
</thead>
<tbody>
<tr>
<td>200A</td>
<td>Main Electrical Control Box</td>
<td></td>
<td>104776</td>
<td>234909</td>
<td>157137</td>
<td>202601</td>
</tr>
<tr>
<td>200B</td>
<td>Electrical Control Box Gasket required when using P/N 215773 Time Delay Relay (See CODE 219.)</td>
<td>R/RAD - Burner End; RV - On Top of the Heater</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>215734</td>
</tr>
<tr>
<td>201</td>
<td>Electrical Box Fixed Cover</td>
<td></td>
<td>104781</td>
<td>--</td>
<td>157968</td>
<td>--</td>
</tr>
<tr>
<td>202</td>
<td>Electrical Box Hinged or Removable Cover</td>
<td></td>
<td>104780</td>
<td>220744</td>
<td>157969</td>
<td>202813</td>
</tr>
<tr>
<td>203</td>
<td>Main Control Disconnect Switch, DPST</td>
<td>CODE 200 except RAD500 which is in CODE 204</td>
<td>158203, 20A, 250V (replaces 104840)</td>
<td>158203, 20A, 250V</td>
<td>RAD500 - 158204, 30A, 240V, Bryant #30002</td>
<td>RV225 - 158203, 20A, 250V (replaces 104840)</td>
</tr>
<tr>
<td>204</td>
<td>Main Control Switch Box</td>
<td>Mounted on the end of CODE 200</td>
<td>--</td>
<td>--</td>
<td>RAD - 158205</td>
<td>--</td>
</tr>
<tr>
<td>205</td>
<td>Main Control Switch Box Cover</td>
<td></td>
<td>--</td>
<td>--</td>
<td>RAD - 158206</td>
<td>--</td>
</tr>
<tr>
<td>206</td>
<td>Pressure Switch, Tridelta #FS3440-893 - P/N 104841; Tridelta #FS3440-894 - P/N 104842</td>
<td>Size 110 - 104841; Sizes 140/235/350 -104842</td>
<td>104842</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>206A</td>
<td>Dampingen Orifice for Pressure Switch</td>
<td>CODE 206</td>
<td>121726</td>
<td>--</td>
<td>121355-10MDA</td>
<td>--</td>
</tr>
<tr>
<td>207</td>
<td>Open/Closed Bushing, Heyco #OCB-562</td>
<td>CODE 200</td>
<td>98394</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>208</td>
<td>Cable Clamp, 1/4&quot;, Heyco #3324</td>
<td>CODE 200</td>
<td>52961</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>209</td>
<td>Dart Fastener, TRW #PC47307EVZ-001</td>
<td>CODE 200</td>
<td>101798</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>210</td>
<td>Ty-Rap Cable Tie, 6&quot;, long, T&amp;B #TY-24M</td>
<td>R/RAD - CODE 200; RV - CODE 231</td>
<td>20913</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>211</td>
<td>Fuse, MDU8 (w/Rotary Vane Compressor)</td>
<td>CODE 200</td>
<td>36836</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>212</td>
<td>Fuse</td>
<td>R/RAD - CODE 200; RV - CODE 231</td>
<td>121355-10MDA</td>
<td>60241</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>213</td>
<td>Fuse Holder</td>
<td>R/RAD - CODE 200; RV - CODE 231</td>
<td>121355-10MDA</td>
<td>60241</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>214</td>
<td>Red Indicator Light, Wesco 1050GC1IDI</td>
<td>CODE 200</td>
<td>147346</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>215</td>
<td>Green indicator light, Industrial Devices #1050GC5</td>
<td>R/RAD - CODE 200; RV - CODE 200 &amp; 231</td>
<td>123460</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>216</td>
<td>Ground Wire Assembly</td>
<td>CODE 200</td>
<td>122114</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>217</td>
<td>Post Purge Burner Relay, SPD/ (used prior to 1/20/05)</td>
<td>CODE 200</td>
<td>102385, 120V coil (used on Size 500 after 1/20/05)</td>
<td>263529, 230V coil</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>218</td>
<td>Fan Time Delay Relay (discontinued 5/96)</td>
<td>CODE 200</td>
<td>141675, TI 60704A</td>
<td>--</td>
<td>141675, TI 60704A</td>
<td>--</td>
</tr>
<tr>
<td>219</td>
<td>Time Delay Relay, 120V Coil - NOTE: When replacing P/N 203270 with P/N 215773, electric box gasket CODE 200B is required.</td>
<td>CODE 200</td>
<td>--</td>
<td>215773, 40-50 seconds</td>
<td>--</td>
<td>203270, 30-90 seconds, prior to 4/06** Beginning 4/06**, Size 225, 215773, on 40-50 seconds; Size 325, 221479, on 45 seconds</td>
</tr>
<tr>
<td>220</td>
<td>Connector Receptacle for Backflow Sensor</td>
<td>CODE 200</td>
<td>144424</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>221</td>
<td>Backflow Sensor Limit (see page 16)</td>
<td>R/RAD - On Viewport Bracket, RV - On Burner Door</td>
<td>121275, TOD #36TX46, 275°F</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>222</td>
<td>Backflow Sensor RBM Relay, Products Untld #840-0247180, 120V coil</td>
<td>CODE 200</td>
<td>102385</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>223</td>
<td>Backflow Sensor Cable Assembly</td>
<td>CODE 200</td>
<td>144701</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>224</td>
<td>Backflow Sensor Cable Bracket</td>
<td>Rear of the Unit</td>
<td>144435</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>225</td>
<td>Contactors, 25 Amp, 125VCoil</td>
<td>CODE 200</td>
<td>--</td>
<td>157955 (for both RA/RAD before 1/20/05; RA only beginning 1/20/05)</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>226</td>
<td>Contactors Enclosure</td>
<td>--</td>
<td>--</td>
<td>RV325 - 93917</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>227</td>
<td>Contactors Enclosure Cover</td>
<td>--</td>
<td>--</td>
<td>RV325 - 120302</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>228</td>
<td>Terminal Block, 1-1/4&quot; long</td>
<td>CODES 200 &amp; 231</td>
<td>144972</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>229</td>
<td>Terminal Block Marking Strip, 1-1/4&quot; long</td>
<td>CODES 200 &amp; 231</td>
<td>21831</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>230A</td>
<td>Wire and Cable Assembly (replaces &quot;Quick Disconnect&quot; cable on 110 &amp; 140&quot;) - when replacing the quick connect with CODE 230A, order CODES 231 &amp; 232 also.</td>
<td>Runs from CODE 200 to CODE 231</td>
<td>175635</td>
<td>254006</td>
<td>175636 and 175637</td>
<td>--</td>
</tr>
<tr>
<td>230B</td>
<td>Burner Disconnect Cable</td>
<td>CODE 200</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>230C</td>
<td>Burner Disconnect Cable Receptacle</td>
<td>CODE 231</td>
<td>--</td>
<td>202479</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>231</td>
<td>Burner Junction Box</td>
<td>On the Burner Assembly</td>
<td>174713</td>
<td>223127</td>
<td>174713</td>
<td>202082</td>
</tr>
<tr>
<td>232</td>
<td>Burner Junction Box Cover</td>
<td>CODE 231</td>
<td>174714</td>
<td>223128</td>
<td>174714</td>
<td>202814</td>
</tr>
<tr>
<td>233</td>
<td>Strain Relief Bushing, 7/8&quot;, Heyco #SR-7W2</td>
<td>CODE 231</td>
<td>174715</td>
<td>223128</td>
<td>174714</td>
<td>202814</td>
</tr>
<tr>
<td>234</td>
<td>Blower/Fan Junction BOX</td>
<td>R/RAD - Rear of Heater; RV - Top of Heater</td>
<td>17772, 2xv, T&amp;B #58361-1/2 (2 for RA 350)</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>235</td>
<td>Blower/Fan Junction Box Cover</td>
<td>CODE 231</td>
<td>17800, Steel City #58C1 (2 for RA 350)</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>236</td>
<td>Strain Relief Heyco #SR-6N3-4</td>
<td>CODE 235</td>
<td>105393</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>237</td>
<td>Adapter, Heyco #7572</td>
<td>CODE 325</td>
<td>107165</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>238</td>
<td>Hole Plug, 7/8&quot;, Heyco #DP-875</td>
<td>Various</td>
<td>16452</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>240</td>
<td>Transformer, Hevi-Duty SMT #T050, 50VA</td>
<td>Rear of the Unit</td>
<td>157952 (prior to 1/20/05)</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

*See IMPORTANT Note on page 1 when selecting parts for RA/RAD 500.**Approximate manufacturing date; check the P/N on the control and the wiring diagram on the unit. When replacing P/N 203270 with P/N 215773, CODE 200B, electrical box gasket is required. Loosen box, install gasket, and re-attach box.
Code 200 - Main Electrical Box and Code 231 - Burner Junction Box

Illustration below shows an RA/RAD Size 350. Main electrical box (Code 200) is in this location on RA/RAD Sizes 110, 140 and 235.

RV 225 and 325 - Main Electrical Box is located on the top of the heater.

RA/RAD500 - Code 200, Main Electrical Box

RA/RAD 150/250 - Code 200, Main Electrical Box is in same location as Size 500 right above; Code 231 Burner Junction Box is on the burner.

Location of the hour meter (P/N 119983) on units manufactured prior to 1/96. Beginning 1/96, the hour meter is on the remote pump enclosure (see page 8).

Code 231 - Burner Junction Box

202 (Wiring Diagram is on the inside of the door.)

Code 217 - Burner Junction Box

Code 206 - Pressure Switch

Code 215, P/N 123460, Green Light

Code 222 - Relay

Code 221, P/N 121275, Backflow Sensor Limit

Hole Plug, (4) 16452

Terminal Strip, 96041

Hinge, 20965

Ignition Controller (See page 4.)
Fan and Limit Controls - Models RA/RAD 110/140/235

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>245</td>
<td>Fan and Limit Control Assembly includes fan/blower control, two limit controls and mounting plate</td>
<td>123973 (replaces 104837)</td>
</tr>
<tr>
<td>246</td>
<td>Fan and Limit Control Access Panel</td>
<td>194565</td>
</tr>
</tbody>
</table>

Loosen the access panel (Code 246) on the rear of the heater, and the fan and limit control assembly will be visible. To ensure future safe operation of these controls, when replacement is required, it is necessary to replace the complete assembly (mounting plate with the three controls attached).

Access Code 254 through the discharge louvers

Limit Controls - Models RA/RAD 150/250

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Location</th>
<th>RA350</th>
<th>RAD350</th>
</tr>
</thead>
<tbody>
<tr>
<td>248</td>
<td>Fan Failure Limit Control</td>
<td>100799, 150°F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>249</td>
<td>High Temperature Limit Control</td>
<td>202584, 155°F</td>
<td>211754, 180°F</td>
<td></td>
</tr>
</tbody>
</table>

Fan Failure Limit Location
RA150 (illustrated) - Remove fan/motor assembly to access.
RA250 - Remove fan guard to access.
RAD 150/250 - Limit is easily accessible above the blower.

To access the high temperature limit, remove the spring-mounted louver.

Fan and Limit Controls - Models RA/RAD 350

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Location</th>
<th>RA350</th>
<th>RAD350</th>
</tr>
</thead>
<tbody>
<tr>
<td>252</td>
<td>Fan/Blower Control #60T12</td>
<td>Turning Box End - service by removing outer access panel</td>
<td>146465 (replaces 123953)</td>
<td></td>
</tr>
<tr>
<td>253</td>
<td>Limit Control #60TX21, 120°F</td>
<td>Turning Box End - service by removing outer access panel</td>
<td></td>
<td>45534</td>
</tr>
<tr>
<td>254</td>
<td>Limit Control #60TX21</td>
<td>Mounted on exhaust box; service through discharge louvers</td>
<td>45537 (210°F)</td>
<td>45602 (180°F)</td>
</tr>
</tbody>
</table>

Access Codes 252 and 253 by removing the large outer access door. The controls are "around the side" of the turning box end. (Illustration on the left showing controls has the cabinet removed.)

Access Code 254 through the discharge louvers
Limit and fan/blower controls are sub-assembled on a mounting plate. Plate with controls is P/N 157117. Access the control assembly by removing the access panel (Code 258) underneath the burner service tray.

Fan and Limit Controls - Models RV 225/325

On the top of the heater, loosen the warning plate to access limit controls.

Fan and Limit Controls - Models RA/RAD 500

Limit and fan/blower controls are sub-assembled on a mounting plate. Plate with controls is P/N 157117. Access the control assembly by removing the access panel (Code 258) underneath the burner service tray.

Fan and Limit Controls - Models RV 225/325

- Code 260 - High Temperature Limit Control, TOD 60T11
- Code 261 - Emergency Super High Limit Control, P/N 106845
- Code 262 - Blower Control, P/N 146465

Fan and Limit Controls - Models RA/RAD 500

- Code 255 - Fan/Blower Control #60T12, 175°F
- Code 256 - Limit Control #60TX21
- Code 257 - Emergency Limit Control, TOD #36F26, 350°F
- Code 258 - Fan and Limit Control Access Panel
- Code 259 - Automatic Limit Control #60TX21, 160°F

**Code Description Location RA500 RAD500**

- 255 Fan/Blower Control #60T12, 175°F 157057
- 256 Limit Control #60TX21 45537 (210°F) 45538 (230°F)
- 257 Emergency Limit Control, TOD #36F26, 350°F 106845
- 258 Fan and Limit Control Access Panel 194565
- 259 Automatic Limit Control #60TX21, 160°F 106847

**Code Description RV225 RV325**

- 260 High Temperature Limit 202584, Open 155°F / Close 135°F 202585, Open 170°F / Close 130°F
- 261 Emergency Limit Control 106845
- 262 Blower Control 146465
- 263 Access/Warning Panel 194565

**Code 260 - High Temperature Limit Control, TOD 60T11**

- P/N 202584 (Yellow Label)
- P/N 202585 (Green Label)

**Code 261 - Emergency Super High Limit Control, P/N 106845**

**Code 262 - Blower/Fan Control, P/N 146465**

Used on units manufactured prior to 4/06 (approximate manufacture date; check the unit wiring diagram).
### Cabinet Parts - Models RA/RAD

(Qty required if other than one is shown in parenthesis)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA/RAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>279</td>
<td>Cabinet Top Outer Panel</td>
<td>104741 220734 104742 220735 130062 Left Side - 151959 130063 Right Side - 151960</td>
</tr>
<tr>
<td>280</td>
<td>Cabinet Top Inner Panel or Insulation Retainer (not illustrated)</td>
<td>104738 220881 104739 220882 130638 Burner Side - 151972 Center - 151971 Turning Box Side - 151973</td>
</tr>
<tr>
<td>281</td>
<td>Top Supports - front to back (not illustrated)</td>
<td>-- (2)220880 -- (2)220880 -- (2)151977</td>
</tr>
<tr>
<td>282A</td>
<td>Cabinet Bottom Outer Panel</td>
<td>104741 220674 104742 220675 130062 Right Side - 151918 Left Side - 151919</td>
</tr>
<tr>
<td>282B</td>
<td>Cabinet Btm Assy (includes outer panel 282A, liner 284, &amp; supports 285)</td>
<td>104703 221058 215780 221059 211712 151990</td>
</tr>
<tr>
<td>283</td>
<td>Air Deflector (not illustrated)</td>
<td>-- 220741 215961 220742 -- --</td>
</tr>
<tr>
<td>284</td>
<td>Cabinet Bottom Inner Panel or Liner only (not illustrated)</td>
<td>104738 220676 104739 220677 130609 151983</td>
</tr>
<tr>
<td>285</td>
<td>Heat Exchanger Support (not illustrated - attached with screws to the bottom panel)</td>
<td>Frnt 221057 (2)104736 Rear 223657 (2)104736 Left 130608 151910 Right 130610 Turning Box Side - 157111</td>
</tr>
<tr>
<td>286</td>
<td>Heat Exchanger Clamp (heat exchanger to supports - not illustrated)</td>
<td>-- -- -- -- -- (3)151816</td>
</tr>
<tr>
<td>287</td>
<td>Door Stop (not illustrated - attaches with screws to the bottom panel)</td>
<td>(2)104753 (3)220732 (2)104753 (3)220732 (2)130603 (2)151964</td>
</tr>
<tr>
<td>288A</td>
<td>Top Front Panel</td>
<td>104747 220739 104748 220740 130023 151976</td>
</tr>
<tr>
<td>288B</td>
<td>Bottom Front Panel</td>
<td>104747 220729 104748 220730 130023 151976</td>
</tr>
<tr>
<td>289</td>
<td>Top and Bottom Air Deflectors (behind the top and bottom front panels)</td>
<td>-- -- -- -- -- Top-151965; Btm-151966</td>
</tr>
<tr>
<td>290</td>
<td>Insulated Heat Shield for Front/Back Upper Casing Panel</td>
<td>-- -- -- -- -- (2)130631 --</td>
</tr>
<tr>
<td>291</td>
<td>Front Corner Post</td>
<td>(2)104743 220731 (2)104743 220731 (2)130622 155262 - Right Front</td>
</tr>
<tr>
<td>292</td>
<td>Corner Post for Left Front and Left and Right Rear Corners</td>
<td>-- -- -- -- -- (3)157119</td>
</tr>
<tr>
<td>293</td>
<td>Center Post Assembly (Burner end of heater)</td>
<td>-- -- -- -- -- 157139</td>
</tr>
<tr>
<td>294</td>
<td>Center Post (Turning box end of heater)</td>
<td>-- -- -- -- -- 151967</td>
</tr>
<tr>
<td>295A</td>
<td>Louver Frame with Horizontal Louvers (For optional vertical louver, see page 28.)</td>
<td>(2)94857 -- (2)94851 -- (2)94867 (3)94863</td>
</tr>
<tr>
<td>295B</td>
<td>Horizontal Louvers (Spring mounted, no frame) (For replacement vertical louver, see page 28.)</td>
<td>-- (6)234714 -- (6)221060 -- --</td>
</tr>
<tr>
<td>295C</td>
<td>Compression Springs for Horizontal Louvers 295B</td>
<td>-- (6)195046 -- (6)195046 -- --</td>
</tr>
<tr>
<td>296</td>
<td>Center Louver Frame w/Horizontal Louvers (Size 235 has 3 louver frames)</td>
<td>-- -- (1)104836 -- -- --</td>
</tr>
<tr>
<td>297</td>
<td>Center Louver Support</td>
<td>104758 220728 (2)104759 220728 130634 (2)151820</td>
</tr>
<tr>
<td>298</td>
<td>Outer Exhaust Access Door Assembly including Insulation, Latches &amp; Handle</td>
<td>104754 221052 104754 221052 209770 (half door beginning 12/04); 130628 (full door prior to 12/04) 157124</td>
</tr>
<tr>
<td>299</td>
<td>Outer Flue Panel Assembly with insulation</td>
<td>-- 221133 -- 221133 -- 157692</td>
</tr>
<tr>
<td>300</td>
<td>Flue Panel Support (not illustrated)</td>
<td>-- -- -- -- -- 151962</td>
</tr>
<tr>
<td>301</td>
<td>Burner Panel Assembly including insulation</td>
<td>112222 221062 112222 221062 130624 157691</td>
</tr>
<tr>
<td>302</td>
<td>Burner Panel Support (not illustrated)</td>
<td>-- -- -- -- -- 151962</td>
</tr>
<tr>
<td>303A</td>
<td>Service Tray</td>
<td>mfgd prior to 5/95 104757 221056 104757 221056 130627 --</td>
</tr>
<tr>
<td>303B</td>
<td>Air Compressor Shelf</td>
<td>mfgd beginning 5/95 140866 140866 140867 151979</td>
</tr>
<tr>
<td>304</td>
<td>Outer Cabinet (Combustion Chamber) Door Assy including insulation, latch &amp; handle Size 350 - P/N 194526 beginning 6/02 is for unit with hinged inner door, P/N 130640 prior to 6/02 is for unit with removable inner door.</td>
<td>115155 221053 115155 221053 194926 (beginning 6/02); 130640 (prior to 6/02) 157122</td>
</tr>
<tr>
<td>305</td>
<td>Outer Cabinet (Turning Box) Door Assy including insulation, latch &amp; handle</td>
<td>-- -- -- -- -- 157120</td>
</tr>
</tbody>
</table>

**Model RA/RAD 110/140/235 (Model RA illustrated)**

![Model RA/RAD 110/140/235 Diagram]

**Code 304 - Combustion Chamber Outer Door Panel (Turning Box End) - door latches (Code 306) are not illustrated.**
Model RA235 manufactured prior to 3/92 (Serial No. Code ARC) was equipped with a 1/2 HP motor, P/N 102382. Replace with P/N 137044.

Cabinet Parts and Fan Components - Model RA

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA</th>
</tr>
</thead>
<tbody>
<tr>
<td>320</td>
<td>Fan Panel (includes corner posts on Sizes 110/140/150/235/250)</td>
<td>104744, 254864, 104745</td>
</tr>
<tr>
<td>321A</td>
<td>Fan Guard Mount Assembly</td>
<td>104823</td>
</tr>
<tr>
<td>321B</td>
<td>Fan Guard Box Assembly</td>
<td>--</td>
</tr>
<tr>
<td>322</td>
<td>Fan Guard</td>
<td>104818</td>
</tr>
<tr>
<td>323</td>
<td>Fan Blade (See illustrations below for replacement spacing.)</td>
<td>125564, 17-1/2 29D</td>
</tr>
<tr>
<td>324</td>
<td>Fan Support Assembly, Premier #RC52997-AA</td>
<td>--</td>
</tr>
<tr>
<td>325</td>
<td>Fan Motor</td>
<td>102380, 196824</td>
</tr>
<tr>
<td>326</td>
<td>Fan Motor Capacitor</td>
<td>--</td>
</tr>
<tr>
<td>327</td>
<td>Rear Corner Posts</td>
<td>--</td>
</tr>
<tr>
<td>321A</td>
<td>Fan Guard Assembly</td>
<td>--</td>
</tr>
<tr>
<td>322</td>
<td>Fan Guard</td>
<td>--</td>
</tr>
<tr>
<td>323</td>
<td>Fan Blade, Code 323</td>
<td>195643, 7.5MFD</td>
</tr>
</tbody>
</table>

* Model RA235 manufactured prior to 3/92 (Serial No. Code ARC) was equipped with a 1/2 HP motor, P/N 102382. Replace with P/N 137044.
### Model RA150 - Rear View

![Model RA150 Rear View](image1)

<table>
<thead>
<tr>
<th>Size</th>
<th>Fan Blade, Code 323</th>
<th>Reznor P/N</th>
<th>Set Screw Torque &quot;Lbs&quot;</th>
<th>&quot;A&quot; Hub to Mtr Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>Revcor T1804-34</td>
<td>195680</td>
<td>130±10</td>
<td>2-7/8&quot; (73mm)</td>
</tr>
</tbody>
</table>

### Model RA250 - Rear View

![Model RA250 Rear View](image2)

<table>
<thead>
<tr>
<th>Size</th>
<th>Fan Blade, Code 323</th>
<th>Reznor P/N</th>
<th>Set Screw Torque &quot;Lbs&quot;</th>
<th>&quot;A&quot; Hub to Mtr Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>Lau T1050BG 2428</td>
<td>209122</td>
<td>130±10</td>
<td>1-1/2&quot; (38mm)</td>
</tr>
</tbody>
</table>

### Model RA350 - Rear View

![Model RA350 Rear View](image3)

<table>
<thead>
<tr>
<th>Size</th>
<th>Fan Blade, Code 323</th>
<th>Reznor P/N</th>
<th>Set Screw Torque &quot;Lbs&quot;</th>
<th>&quot;A&quot; Hub to Mtr Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>350</td>
<td>Lau F10 H8.7 22-36</td>
<td>96383</td>
<td>150±15</td>
<td>3-1/2&quot; (89mm)</td>
</tr>
</tbody>
</table>

### Model RA500 - Rear View

![Model RA500 Rear View](image4)

<table>
<thead>
<tr>
<th>Size</th>
<th>Fan Blade, Code 323</th>
<th>Reznor P/N</th>
<th>Set Screw Torque &quot;Lbs&quot;</th>
<th>&quot;A&quot; Hub to Mtr Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>Lau 61058A-2434</td>
<td>157058</td>
<td>150±15</td>
<td>2-1/4&quot; (73mm)</td>
</tr>
</tbody>
</table>
## Cabinet Parts and Blower Components - Model RAD

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>330</td>
<td>Blower Back Panel</td>
<td>110</td>
</tr>
<tr>
<td>331</td>
<td>Corner Post Assy (left rear corner)</td>
<td>107166</td>
</tr>
<tr>
<td>332</td>
<td>Blower Post Assy (right rear corner)</td>
<td>107167</td>
</tr>
<tr>
<td>333</td>
<td>Top Back Filler Panel</td>
<td>104795</td>
</tr>
<tr>
<td>334</td>
<td>Bottom Back Filler Panel</td>
<td>104795</td>
</tr>
<tr>
<td>335</td>
<td>Support Angle Assy (not illustrated)</td>
<td>--</td>
</tr>
<tr>
<td>336</td>
<td>Inlet Duct Flange</td>
<td>--</td>
</tr>
<tr>
<td>337</td>
<td>Blower (including blower housing, wheel, shaft) - Sizes 110/140/150/235/250 also include bearings and motor mounting bracket.</td>
<td>100981, (changed to ball bearing blower effective 3/03)</td>
</tr>
<tr>
<td>338A</td>
<td>Blower Shaft</td>
<td>--</td>
</tr>
<tr>
<td>338B</td>
<td>Blower Bearings</td>
<td>--</td>
</tr>
<tr>
<td>339</td>
<td>Blower Mounting Angle</td>
<td>(2)100889</td>
</tr>
<tr>
<td>340</td>
<td>Blower Sheave, Browning</td>
<td>116402, AL104 x 1&quot;</td>
</tr>
<tr>
<td>341</td>
<td>Blower Motor</td>
<td>31273, 1/2 HP Century #8-159170-01</td>
</tr>
<tr>
<td>342</td>
<td>Motor End Enclosure Base</td>
<td>--</td>
</tr>
<tr>
<td>343</td>
<td>Motor End Enclosure Box</td>
<td>--</td>
</tr>
<tr>
<td>344</td>
<td>Motor Contactor Enclosure</td>
<td>93917/93915</td>
</tr>
<tr>
<td>345</td>
<td>Motor Contactor Overload</td>
<td>--</td>
</tr>
<tr>
<td>346</td>
<td>Motor Contactor</td>
<td>--</td>
</tr>
<tr>
<td>347</td>
<td>Motor Sheave, Browning</td>
<td>7962, 1VL40-5/8&quot; Bore</td>
</tr>
<tr>
<td>348</td>
<td>Motor Mounting Bracket</td>
<td>102533</td>
</tr>
<tr>
<td>349</td>
<td>Motor Adjustment Bracket Assy Pkg</td>
<td>44411</td>
</tr>
<tr>
<td>350</td>
<td>Hardware Bag (rubber feet and hardware)</td>
<td>64940</td>
</tr>
<tr>
<td>351</td>
<td>Motor Mounting Plate</td>
<td>--</td>
</tr>
<tr>
<td>352</td>
<td>Shaft Guard Assembly</td>
<td>--</td>
</tr>
<tr>
<td>352A</td>
<td>Shaft Guard Screen</td>
<td>--</td>
</tr>
<tr>
<td>352B</td>
<td>Shaft Guard Band</td>
<td>--</td>
</tr>
<tr>
<td>352C</td>
<td>Shaft Guard Mounting Angle</td>
<td>--</td>
</tr>
<tr>
<td>353</td>
<td>Belt Guard Assembly</td>
<td>193795</td>
</tr>
<tr>
<td>354</td>
<td>Blower Inlet Guard</td>
<td>102475</td>
</tr>
<tr>
<td>355</td>
<td>Belt (not illustrated), Browning</td>
<td>6187, #4L520</td>
</tr>
<tr>
<td>356</td>
<td>Bearing Bracket (painted)</td>
<td>--</td>
</tr>
<tr>
<td>357</td>
<td>Key 1/4&quot; x 1-1/4&quot;</td>
<td>--</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Model RV225</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>400</td>
<td>Bottom Rail</td>
<td></td>
</tr>
<tr>
<td>401</td>
<td>Exhaust End Bottom Panel</td>
<td>201823</td>
</tr>
<tr>
<td>402</td>
<td>Burner End Bottom Panel</td>
<td>202085</td>
</tr>
<tr>
<td>403</td>
<td>Heat Shield Bottom</td>
<td>197316</td>
</tr>
<tr>
<td>404</td>
<td>Door Stop</td>
<td></td>
</tr>
<tr>
<td>405</td>
<td>Bottom Insulation Panel</td>
<td>202074</td>
</tr>
<tr>
<td>406</td>
<td>Heat Shield Top</td>
<td>201816</td>
</tr>
<tr>
<td>407</td>
<td>Top Insulation Panel</td>
<td>202072</td>
</tr>
<tr>
<td>408</td>
<td>Insulation - 1/2&quot; x 9&quot; x 21&quot;</td>
<td></td>
</tr>
<tr>
<td>409</td>
<td>Burner End Corner Posts</td>
<td>(2) 197315</td>
</tr>
<tr>
<td>410</td>
<td>Exhaust End Corner Post/Rear Panel</td>
<td>201821</td>
</tr>
<tr>
<td>411</td>
<td>Exhaust End Corner Post/Front Panel</td>
<td>203322</td>
</tr>
<tr>
<td>412</td>
<td>Top Panel (Exhaust End)</td>
<td>201824</td>
</tr>
<tr>
<td>413</td>
<td>Top Panel (Burner End)</td>
<td>202083</td>
</tr>
<tr>
<td>414</td>
<td>Heat Exchanger/Combustion Chamber Access Door Assembly</td>
<td>202619</td>
</tr>
<tr>
<td>414A</td>
<td>Handle</td>
<td></td>
</tr>
<tr>
<td>414B</td>
<td>Top Air Deflector</td>
<td>--</td>
</tr>
<tr>
<td>414C</td>
<td>Bottom Air Deflector</td>
<td></td>
</tr>
<tr>
<td>415</td>
<td>Service Tray</td>
<td>197311</td>
</tr>
<tr>
<td>416</td>
<td>Louver Frame Side</td>
<td>(4) 201829</td>
</tr>
<tr>
<td>417</td>
<td>Louver Frame Top and Bottom</td>
<td>(4) 201825</td>
</tr>
<tr>
<td>418</td>
<td>Louver</td>
<td>(6) 201830</td>
</tr>
<tr>
<td>419</td>
<td>Compression Spring (one spring per louver)</td>
<td>(6) 195046</td>
</tr>
<tr>
<td>420</td>
<td>Cover Panel</td>
<td>(2) 201827</td>
</tr>
<tr>
<td>421</td>
<td>Blower (6 holes added for blower mount screws)</td>
<td>202821, DD12x9 (direct drive)</td>
</tr>
<tr>
<td>421A</td>
<td>Replacement Bearings</td>
<td>--</td>
</tr>
<tr>
<td>421B</td>
<td>Replacement Shaft</td>
<td>--</td>
</tr>
<tr>
<td>422</td>
<td>Blower Mount</td>
<td>(2) 202819</td>
</tr>
<tr>
<td>423</td>
<td>Blower Deflector</td>
<td>203840</td>
</tr>
<tr>
<td>424</td>
<td>Motor</td>
<td>201810, 1HP, A. O. Smith #F48S94A13, direct drive motor with capacitor</td>
</tr>
<tr>
<td>425</td>
<td>Capacitor for Direct Drive Motor, 15 µf/440V</td>
<td>205150</td>
</tr>
<tr>
<td>426</td>
<td>Capacitor Clamp</td>
<td>204002</td>
</tr>
<tr>
<td>427</td>
<td>Capacitor Clamp Felt, A.O. Smith #166A729H01</td>
<td>171529, 12&quot; pc.; cut to size</td>
</tr>
<tr>
<td>428</td>
<td>Capacitor Boot, Syntex #M-78</td>
<td>103182</td>
</tr>
<tr>
<td>429</td>
<td>Contact, 25 Amp, 2 Pole, 120V Coil</td>
<td>-</td>
</tr>
<tr>
<td>430A</td>
<td>Contactor Enclosure</td>
<td>-</td>
</tr>
<tr>
<td>430B</td>
<td>Contactor Enclosure Cover</td>
<td>-</td>
</tr>
<tr>
<td>431</td>
<td>Motor Band, Triangle #TR4171</td>
<td>51221</td>
</tr>
<tr>
<td>432</td>
<td>Support Arm, Triangle #TR8053B</td>
<td>(3) 164325</td>
</tr>
<tr>
<td>433</td>
<td>Hex Head Cap Screw 1/4-20x1-1/2&quot; lg</td>
<td>Motor Band Hardware</td>
</tr>
<tr>
<td>434</td>
<td>1/4-20 Hex Nut</td>
<td>7328</td>
</tr>
<tr>
<td>435</td>
<td>Inlet Restrictor</td>
<td>165180</td>
</tr>
<tr>
<td>436</td>
<td>Inlet Restrictor Mounting Bracket</td>
<td>(3) 165182</td>
</tr>
<tr>
<td>437A</td>
<td>Blower Motor Plate Support</td>
<td>-</td>
</tr>
<tr>
<td>437B</td>
<td>Adjustable Motor Base</td>
<td>-</td>
</tr>
<tr>
<td>438</td>
<td>5/16 x 3/4&quot; Lg Hex Head Cap Screw</td>
<td>Motor to Mounting Plate</td>
</tr>
<tr>
<td>439</td>
<td>5/16&quot; Flatwasher</td>
<td>-</td>
</tr>
<tr>
<td>440</td>
<td>Hex Nut 5/16-18 (Keps)</td>
<td>-</td>
</tr>
<tr>
<td>441</td>
<td>1/4-20 x 3/4&quot; Long F-Point Screw</td>
<td>-</td>
</tr>
<tr>
<td>442</td>
<td>Blower Pulley # AK56</td>
<td>-</td>
</tr>
<tr>
<td>443</td>
<td>Motor Sheave # 1VL40</td>
<td>-</td>
</tr>
<tr>
<td>444</td>
<td>Belt # A36</td>
<td>-</td>
</tr>
<tr>
<td>445</td>
<td>Belt Guard</td>
<td>-</td>
</tr>
<tr>
<td>446</td>
<td>Inlet Guard</td>
<td>(2) 102475</td>
</tr>
<tr>
<td>447</td>
<td>Venturion® Logo Label</td>
<td>202475</td>
</tr>
<tr>
<td>448</td>
<td>Draft Regulator, 8&quot;</td>
<td>37866</td>
</tr>
<tr>
<td>449</td>
<td>Vent Cap</td>
<td></td>
</tr>
</tbody>
</table>
Heat Exchanger/Combustion Chamber and Covers - Models RA/RAD

Model RA/RAD 110/140/235

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA/RAD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>110</td>
</tr>
<tr>
<td>450</td>
<td>Complete Heat Exchanger/Combustion Chamber Assembly including doors and limits</td>
<td>203235</td>
</tr>
<tr>
<td>451*</td>
<td>Large Inner Combustion Chamber Door with Insulating Board (turning box end)</td>
<td>6-Hole 126013</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10-Hole 126014</td>
</tr>
<tr>
<td>451A</td>
<td>Insulating Board only</td>
<td>210930 (replaces 132911)</td>
</tr>
<tr>
<td>452</td>
<td>Gasket for Inner Access Door (turning box end)</td>
<td>6-Hole 124064 (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10-Hole 124065 (2)</td>
</tr>
<tr>
<td>453</td>
<td>Inner Exhaust Box Cover</td>
<td>104729</td>
</tr>
<tr>
<td>454</td>
<td>Gasket for Exhaust Box Cover</td>
<td>112224</td>
</tr>
<tr>
<td>455</td>
<td>Exhaust Collar Plate Assembly</td>
<td>104820</td>
</tr>
</tbody>
</table>

*Complete kits are available to replace inner access door (turning box end) for Models RA/RAD 110/140/235. Replacement kit includes a door with a ceramic liner (Code 101A), gasket (Code 102), hardware, and installation instructions -- 6-Hole Replacement Inner Access Door Kit - P/N 126019; 10-Hole Replacement inner Access Door Kit - P/N 126021

Code 450 for Models RA/RAD 110/140/235

Combustion Chamber "Drum"

Heat Exchanger Section

Model RA/RAD 150/250

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA/RAD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>150</td>
</tr>
<tr>
<td>458</td>
<td>Complete Heat Exchanger/Combustion Chamber Assy</td>
<td>221049</td>
</tr>
<tr>
<td>458A</td>
<td>Replacement Heat Exchanger Assembly including Gasket/ Hardware Kit, P/N 259508 (See illustration top of page 23.)</td>
<td>255297</td>
</tr>
<tr>
<td>458B</td>
<td>Turning Box Cover (below the door)</td>
<td>220661</td>
</tr>
<tr>
<td>458C</td>
<td>Turning Box Door Assembly</td>
<td>221048</td>
</tr>
<tr>
<td>458D</td>
<td>Replacement Liner for Turning Box Door</td>
<td>210930</td>
</tr>
<tr>
<td>458E</td>
<td>Gasket for Turning Box Door, Code 458C</td>
<td>157690, 120&quot;</td>
</tr>
<tr>
<td>458F</td>
<td>Exhaust Collar Plate Assembly</td>
<td>221051</td>
</tr>
<tr>
<td>458G</td>
<td>Exhaust Box Cover</td>
<td>220663</td>
</tr>
<tr>
<td>458H</td>
<td>Exhaust Box Cover Gasket</td>
<td>120057, 102&quot;</td>
</tr>
</tbody>
</table>

CODE 458 - Combustion Chamber/Heat Exchanger Assy (includes all items listed including exploded covers)

Models RA/RAD 110/140/235 - Exhaust Box Access Door (below service tray)

Code 453 - Exhaust Box Inner Cover

Code 455 - Exhaust Collar Plate Assembly

Model RA/RAD 110/140/235 manufactured beginning 1/92
Heaters manufactured prior to 1/92 have combustion chamber inner access doors with 6-hole design. Determine the door type by counting the number of nuts and bolts holding the access door.

458C (See top of page 23.)
Code 460A - Replacement Heat Exchanger only with Gasket Strips and Hardware

Replacement Heat Exchanger includes gasket strips that must be attached in the field and hardware. Hardware Kit, P/N 259508 includes (23) Screws, P/N 114687; (7) Bolts, P/N 16246; & (7) Nuts, P/N 7328.

View of Turning Box End with Hinged Door Open on Models RA/RAD 150 and 250 (See Code Descriptions, bottom of page 22.)

Model RA/RAD 350

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA/RAD 350</th>
</tr>
</thead>
<tbody>
<tr>
<td>460A</td>
<td>Complete Heat Exchanger/Combustion Chamber Assy for heaters with a one-piece hinged door, manufactured beginning 10/01 (Serial No. Code BAJ). Replacement assembly includes hinged door.</td>
<td>203237</td>
</tr>
<tr>
<td>460B</td>
<td>Complete Heat Exchanger/Combustion Chamber Assy for heaters without a hinged door, manufactured prior to 10/01 (Serial No. Code BAJ). Replacement assembly includes hinged door.</td>
<td>196878</td>
</tr>
<tr>
<td>461</td>
<td>Woven Ceramic Door Gasket - 136&quot; long</td>
<td>195840</td>
</tr>
<tr>
<td>462A</td>
<td>Door Replacement Kit - replaces 2-piece door with a hinged 1-piece door</td>
<td>196960</td>
</tr>
<tr>
<td>462B</td>
<td>Hinged Door Assembly</td>
<td>194927</td>
</tr>
<tr>
<td>462C</td>
<td>Liner only for Hinged Door</td>
<td>210930</td>
</tr>
<tr>
<td>463A</td>
<td>Gasket for Exhaust Cover - 80&quot;</td>
<td>130618</td>
</tr>
<tr>
<td>463B</td>
<td>Gasket Strip for vertical divider under 2-pc Exhaust Cover - 11&quot;</td>
<td>209772</td>
</tr>
<tr>
<td>464</td>
<td>Exhaust Collar Plate Assy - See illustrations on the right for units manufactured beginning 12/04. For Size 350 units manufactured before 12/04, see illustration below.</td>
<td></td>
</tr>
</tbody>
</table>

Code 460 - Replacement Combustion Chamber/Heat Exchanger Assembly for Models RA/RAD 350 includes a one-piece hinged inner door. Order Code 460A if the heater already has a 1-piece hinged door. Order Code 460B if the heater has a 2-piece removable door.

Models RA/RAD 350 - Exhaust Collar Plate Assy and Gasket on units manufactured prior to 12/04

1-pc cover is no longer available.

If it needs replaced, replace with 2-piece cover, P/N 209434 and 209433 (see above right).

Gasket, P/N 130618, 80"

Code 462, Model RA/RAD 350 Inner Access Replacement Door View with Outer Access Door Removed showing 2-Piece Inner Access Door Panels (on heaters manufactured prior to 10/01)

Models RA/RAD 350 - Exhaust Access and Cover (under the service tray) on units manufactured beginning 12/04 (For older unit, see below left.)

Access Panel, P/N 209770

Exhaust Box Cover, P/N 209433

Exhaust Collar and Plate, P/N 209434

Gasket, Code 463A

462B - If manufactured with hinged door, replacement door including door hinge half and door liner is P/N 194927.
Heat Exchanger/Combustion Chamber and Covers - Model RA/RAD (cont'd)

<table>
<thead>
<tr>
<th>Model RA/RAD 500</th>
<th>Code</th>
<th>Description</th>
<th>RA/RAD 500</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>470</td>
<td>Complete Heat Exchanger/Combustion Chamber Assy</td>
<td>203238</td>
</tr>
<tr>
<td></td>
<td>471</td>
<td>Large Inner Combustion Chamber Door with insulating liner &amp; hinges</td>
<td>157112</td>
</tr>
<tr>
<td></td>
<td>471A</td>
<td>Insulating liner only for Large Inner Combustion Chamber Door</td>
<td>157056</td>
</tr>
<tr>
<td></td>
<td>472</td>
<td>Small Inner Turning Box Door with hinges</td>
<td>157114</td>
</tr>
<tr>
<td></td>
<td>473</td>
<td>Turning Box Door Gasket, 222 inches</td>
<td>157689</td>
</tr>
<tr>
<td></td>
<td>474</td>
<td>Exhaust Box Cover Assembly</td>
<td>157115</td>
</tr>
<tr>
<td></td>
<td>475</td>
<td>Gasket for Exhaust Box, 120 inches</td>
<td>157690</td>
</tr>
<tr>
<td></td>
<td>476</td>
<td>Exhaust Box Removable Panel</td>
<td>151802</td>
</tr>
</tbody>
</table>

Heat Exchanger/Combustion Chamber and Covers - Model RV

<table>
<thead>
<tr>
<th>Code 500 - Heat Exchanger/Combustion Chamber for Model RV</th>
<th>Exhaust End</th>
<th>Side Panels Removed viewing Heat Exchanger/Combustion Chamber Collection Box</th>
<th>Burner End</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exhaust End</td>
<td>Side Panels Removed viewing Heat Exchanger/Combustion Chamber Collection Box</td>
<td>Burner End</td>
</tr>
</tbody>
</table>

Form P-RA/RAD/RV, P/N 269864R3, Page 24
### Heat Exchanger/Combustion Chamber and Covers - Model RV (cont'd)

The flue restrictor illustrated below is the currently manufactured design. It may be used as a replacement for the previously built design shown in the photo.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RV225</th>
<th>RV325</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>Combustion Chamber/Heat Exchanger/Collection Box Welded Assembly</td>
<td>210662</td>
<td>210663</td>
</tr>
<tr>
<td>501</td>
<td>Flue Restrictor Assy</td>
<td>203196</td>
<td></td>
</tr>
<tr>
<td>504</td>
<td>3/8-16x3/4&quot; Brass Bolt Flue Restrictor to Heat Exchanger</td>
<td>202615</td>
<td></td>
</tr>
<tr>
<td>505</td>
<td>3/8&quot; Flat Washer</td>
<td>6593</td>
<td></td>
</tr>
<tr>
<td>506</td>
<td>Collection Box Door Gasket Side</td>
<td>(2) 201989</td>
<td>(2) 201991</td>
</tr>
<tr>
<td>507</td>
<td>Collection Box Door Gasket Top/Bottom</td>
<td>(2) 201990</td>
<td>(2) 201992</td>
</tr>
<tr>
<td>508</td>
<td>Collection Box Door Assembly</td>
<td>203210</td>
<td>203211</td>
</tr>
<tr>
<td>508A</td>
<td>Collection Box Door</td>
<td>197299</td>
<td>201966</td>
</tr>
<tr>
<td>508B</td>
<td>Flue Baffle</td>
<td>203212</td>
<td>203213</td>
</tr>
<tr>
<td>509</td>
<td>5/16&quot; Flat Washer</td>
<td>Hardware</td>
<td>(5) 1087</td>
</tr>
<tr>
<td>510</td>
<td>5/16&quot; Lock Washer</td>
<td>For</td>
<td>(5) 1333</td>
</tr>
<tr>
<td>511</td>
<td>5/16-18 Hex Nut</td>
<td>(5) 115143</td>
<td></td>
</tr>
</tbody>
</table>

**Code Description RV225 RV325**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RV225</th>
<th>RV325</th>
</tr>
</thead>
<tbody>
<tr>
<td>513</td>
<td>Burner Door Frame Gasket</td>
<td>(4) 202068</td>
<td>(4) 202069</td>
</tr>
<tr>
<td>514</td>
<td>Burner Door Mounting Frame Assy</td>
<td>202591</td>
<td>202592</td>
</tr>
<tr>
<td>514A</td>
<td>Door Hinge (Male half)</td>
<td>(2) 157060</td>
<td></td>
</tr>
<tr>
<td>515</td>
<td>5/16x3/4&quot; Long Hex Head Bolt Hinge Hardware</td>
<td>(4) 16247</td>
<td>16247</td>
</tr>
<tr>
<td>516</td>
<td>5/16-18 Hex Head Nuts (Keps)</td>
<td>(4) 6554</td>
<td>6554</td>
</tr>
<tr>
<td>517</td>
<td>Burner Door Assembly (includes Codes 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529)</td>
<td>202057*</td>
<td>202058*</td>
</tr>
<tr>
<td>518</td>
<td>Burner Door Gasket</td>
<td>207506</td>
<td>207507</td>
</tr>
<tr>
<td>520</td>
<td>Burner Door Insulator</td>
<td>201981</td>
<td>201982</td>
</tr>
<tr>
<td>521</td>
<td>1/4-20x7/8&quot; long Screw Hardware to attach insulator to the door</td>
<td>(4) 110984</td>
<td></td>
</tr>
<tr>
<td>522</td>
<td>5/16&quot; x 1-1/4&quot; Fender Washer</td>
<td>(4) 178181</td>
<td></td>
</tr>
<tr>
<td>523</td>
<td>Spiral Spacer</td>
<td>(4) 207518</td>
<td></td>
</tr>
<tr>
<td>524</td>
<td>1/4-20 Nut</td>
<td>(4) 7328</td>
<td></td>
</tr>
<tr>
<td>525</td>
<td>View Port Assembly</td>
<td>104768</td>
<td></td>
</tr>
<tr>
<td>526</td>
<td>Backflow Sensor Assembly (See page 10, CODE 221, for backflow sensor.)</td>
<td>202593</td>
<td></td>
</tr>
<tr>
<td>527</td>
<td>3/8-16 x 3/4&quot; Brass Bolt Burner Door to Door Frame</td>
<td>(2) 202615</td>
<td></td>
</tr>
<tr>
<td>528</td>
<td>3/8&quot; Flatwasher</td>
<td>(2) 6593</td>
<td></td>
</tr>
<tr>
<td>529</td>
<td>Brass Hinge Block for burner doors for units manufactured beginning 5/03</td>
<td>(2) 205409</td>
<td></td>
</tr>
</tbody>
</table>

*A change to the burner door effective 5/03 makes it incompatible as a replacement for units manufactured prior to 5/03. Always check with your distributor and provide a Serial No. when ordering any replacement parts for Model RV burner door.*

---

**Hinged Burner Door Closed**

**Hinged Burner Door Open**
Miscellaneous - Apply to Models as listed

**CODE 540**

**Model OT-250**

**Bench-Type Fuel Tank with assembled Heater Stand (Option ST1)**

**Fuel Tank and Stand - Fuel tank is Reznor Model OT-250; the heater stand package is the same as Option ST-1 for Model OT-250 fuel tank**

Fuel tank may be used with any model or size of heater. Optional stand (Option ST1) may only be used with the Reznor Model OT fuel tank and a Reznor Model RA Size 110, 140, 150, 235 or 250 or Model RV Size 235 or 325. The stand requires field assembly; follow the instructions included with the option package.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>542</td>
<td>Thermostat, 24V - All Models</td>
<td>255350</td>
</tr>
<tr>
<td>543</td>
<td>Touch-up Paint for Heater, 12 oz spray can - All Models</td>
<td>37919</td>
</tr>
<tr>
<td>544</td>
<td>Gasket Adhesive, 20 oz spray can - All Models</td>
<td>112225</td>
</tr>
<tr>
<td>545</td>
<td>Cleaning Brush - for RA/RAD 150, 250, 350 and 500 and all RV Models</td>
<td>134569</td>
</tr>
<tr>
<td></td>
<td>Cleaning Rake - for oblong tubes in RA/RAD Sizes 110, 140, and 235</td>
<td>110565</td>
</tr>
</tbody>
</table>

**Applications:** All sizes of Models RA/RAD manufactured beginning 10/94 and all sizes of Model RV heaters

**NOTE:** Models RA/RAD 350 manufactured prior to 10/94 have 7/16" hanger brackets. A swivel hanger kit is not available for Models RA/RAD 350 with 7/16" hanger brackets.

**CODE 540 - Option ST1, Heater Stand for Model OT-250, Workbench Fuel Tank**

<table>
<thead>
<tr>
<th>Option Package P/N</th>
<th>202829</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components:</td>
<td></td>
</tr>
<tr>
<td>Corner Post, 1-1/2&quot; square tubing, approximately 8 feet long</td>
<td>4 202826</td>
</tr>
<tr>
<td>Tube Bracket Assembly, 2&quot; square tubing</td>
<td>2 202828</td>
</tr>
<tr>
<td>Front and Rear Support Angle 1-1/2&quot; x 1-1/2&quot; x 64&quot; long</td>
<td>2 202827</td>
</tr>
<tr>
<td>Hex Head Cap Screw, 1/2-13 x 3/4&quot;</td>
<td>4 121593</td>
</tr>
<tr>
<td>Flat Washer, 1/2&quot;</td>
<td>4 121595</td>
</tr>
<tr>
<td>Lock Washer, 1/2&quot;</td>
<td>4 111306</td>
</tr>
<tr>
<td>Hex Head Cap Screw, 1/2-13 x 1-1/2&quot;</td>
<td>8 121596</td>
</tr>
<tr>
<td>Jam Nut, 1/2 -13</td>
<td>8 45550</td>
</tr>
<tr>
<td>Angle Stop, 1-1/2x1-1/2x1-1/4&quot; lg w/1(3) 3/8 &amp; (1) 7/32 dia holes</td>
<td>4 202825</td>
</tr>
<tr>
<td>Hex Head Cap Screw, 5/16-18 x 3/4&quot;</td>
<td>4 16247</td>
</tr>
<tr>
<td>Hex Head Nut, 5/16-16</td>
<td>4 1035</td>
</tr>
<tr>
<td>Flat Washer, 5/16&quot;</td>
<td>4 27761</td>
</tr>
<tr>
<td>Lock Washer, 5/16</td>
<td>4 1333</td>
</tr>
<tr>
<td>Angle Stop, 1-1/2x1-1/2x1-1/4&quot; lg w/2(9) 9/32 dia holes - for Model RV</td>
<td>4 202830</td>
</tr>
<tr>
<td>1/4-20 3/4&quot; long F-point Screw - (8) for RV and (4) for RA 150 and 250</td>
<td>8 114687</td>
</tr>
<tr>
<td>Warning Label - All Models and Sizes</td>
<td>2 121734</td>
</tr>
</tbody>
</table>

**Code 541**

**Touchup Paint for Model OT 250 Oil Tank (not included with stand)**

135789

**Code 542 - 24 volt Thermostat**

**Package P/N 134477 for 1/2" hanger rods/brackets includes:**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Description</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Swivel Connector Assy</td>
<td>134476</td>
</tr>
<tr>
<td>4</td>
<td>1/2&quot; Lock Washer</td>
<td>111306</td>
</tr>
</tbody>
</table>

**Applications:** All sizes of Models RA/RAD manufactured beginning 10/94 and all sizes of Model RV heaters

**Code 546 - Hanger Kits (Same as Option CD10)**

**Package P/N 98511 for 3/8" hanger rods/brackets includes:**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Description</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Swivel Connector Assy</td>
<td>17627</td>
</tr>
<tr>
<td>8</td>
<td>3/8&quot; Lock Washer</td>
<td>5197</td>
</tr>
<tr>
<td>8</td>
<td>3/8&quot; Hex Nuts</td>
<td>1438</td>
</tr>
</tbody>
</table>

**Applications:** Models RA/RAD 110/140/235 manufactured prior to 10/94. (Note: Only four of the loose washers and nuts are used.)
### Vertical Louvers (Same as Option CD1)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RA/RAD 110/140</th>
<th>RA/RAD 235</th>
<th>RA/RAD 350</th>
</tr>
</thead>
<tbody>
<tr>
<td>555</td>
<td>Package P/N</td>
<td>121858</td>
<td>121859</td>
<td>144963</td>
</tr>
<tr>
<td>555A</td>
<td>Top and Bottom Members</td>
<td>(2)119859</td>
<td>(2)119860</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Top Left/Btm Right Members</td>
<td>-</td>
<td>-</td>
<td>(2)144432</td>
</tr>
<tr>
<td></td>
<td>Top Right/Btm Left Members</td>
<td>-</td>
<td>-</td>
<td>(2)144433</td>
</tr>
<tr>
<td>555B</td>
<td>Vertical Louvers</td>
<td>(10)95937</td>
<td>(14)95937</td>
<td>(16)95938</td>
</tr>
<tr>
<td>555C</td>
<td>Sheetmetal Screws, 1/2”</td>
<td>(20)11813</td>
<td>(28)11813</td>
<td>(34)11813</td>
</tr>
<tr>
<td>555D</td>
<td>Teks, #10-16 x 1/2” long</td>
<td>(4)37661</td>
<td>(6)37661</td>
<td>(14)37661</td>
</tr>
</tbody>
</table>

#### Code 555 - Vertical Louvers for RA/RAD Sizes 110/140/235

- **Code 555A** - Top and Bottom Members
- **Code 555B** - Vertical Louvers
- **Code 555C** - Sheetmetal Screws
- **Code 555D** - Teks
- **Code 555E** - Louvers
- **Code 555F** - Compression Springs

#### Code 556 - Vertical Louvers for RA/RAD 150/250

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>150</th>
<th>250</th>
</tr>
</thead>
<tbody>
<tr>
<td>556</td>
<td>Option Package P/N</td>
<td>254036</td>
<td>254037</td>
</tr>
<tr>
<td>556A</td>
<td>Louver Top/Bottom</td>
<td>(2) 254032</td>
<td>(2) 254033</td>
</tr>
<tr>
<td>556B</td>
<td>Louver Frame Sides</td>
<td>(2) 203578</td>
<td>(2) 203579</td>
</tr>
<tr>
<td>556C</td>
<td>Louver Post</td>
<td>254035</td>
<td></td>
</tr>
<tr>
<td>556D</td>
<td>Sheetmetal Screws</td>
<td>(22) 11813, #10x1/2” lg</td>
<td></td>
</tr>
<tr>
<td>556E</td>
<td>Louvers</td>
<td>(10) 203583</td>
<td>(14) 203583</td>
</tr>
<tr>
<td>556F</td>
<td>Compression Springs</td>
<td>(10) 195046</td>
<td>(14) 195046</td>
</tr>
</tbody>
</table>

#### Code 557 - Vertical Louvers for RV 225/325

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>RV225</th>
<th>RV325</th>
</tr>
</thead>
<tbody>
<tr>
<td>557</td>
<td>Option Package P/N</td>
<td>203562</td>
<td>203563</td>
</tr>
<tr>
<td>557A</td>
<td>Louver Frame Top/Bottom</td>
<td>(4)203580</td>
<td></td>
</tr>
<tr>
<td>557B</td>
<td>Louver Frame Sides</td>
<td>(4)203578</td>
<td>(4)203579</td>
</tr>
<tr>
<td>557C</td>
<td>Screws, #8-18X3/8” long, AB point, slotted indented serrated hex washer head</td>
<td>(24)195638</td>
<td></td>
</tr>
<tr>
<td>557D</td>
<td>Louvers</td>
<td>(12) 203582</td>
<td>(12) 203583</td>
</tr>
<tr>
<td>557E</td>
<td>Compression Springs</td>
<td>(12) 195046</td>
<td></td>
</tr>
</tbody>
</table>
# REFERENCES

<table>
<thead>
<tr>
<th>References</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited Replacement Parts for Discontinued Models RA/RAD118/230</td>
<td>760-1</td>
</tr>
<tr>
<td>Installation/Maintenance - RA/RAD 140/235</td>
<td>I-RA/D 140/235</td>
</tr>
<tr>
<td>Installation/Maintenance - RA/RAD 150/250</td>
<td>I-RA/D 150/250</td>
</tr>
<tr>
<td>Installation/Maintenance - RA/RAD 350/500</td>
<td>I-RA/D 350/500</td>
</tr>
<tr>
<td>Installation/Maintenance - RV 225/325</td>
<td>I-RV</td>
</tr>
<tr>
<td>Heater Stand for Model OT Oil Tank</td>
<td>I-OIL-HS</td>
</tr>
<tr>
<td>High Altitude Conversion - Size 235</td>
<td>461-HA</td>
</tr>
<tr>
<td>High Altitude Conversion - Size 350</td>
<td>464-HA</td>
</tr>
</tbody>
</table>

Above forms are available at WEBSITE: www.ReznorHeaters.com or through your Reznor Used Oil Distributor.