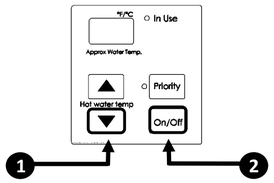
Rinnai®

U334-0783(00)
REU-NP
07000012336787

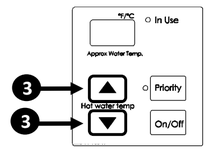
# PERFORMANCE DATA

## To obtain Performance Data:

1. Press and hold the▼(Down) button.
2. While holding the▼(Down) button for 2 seconds, press and hold the “On/Off” button (hold both buttons simultaneously).




3. Use the ▲(Up) and ▼(Down) buttons to scroll to the desired performance information described below.




### Performance Data Table

| # | DATA | UNIT |
|---|---|---|
| 01 | Water Flow Rate | x0.1 gal/min |
| 02 | Outgoing Temperature | °F |
| 03 | Combustion Hours | x100 Hours |
| 04 | Combustion Cycles | See following information |
| 05 | Fan Frequency | Hz |
| 06 | Additional Controllers Connected | See following information |
| 07 | Water Flow Control Position | 0=mid, 1=Open, 2=Closed |
| 08 | Inlet Temperature | °F |
| 09 | Fan Current | x10 mA |
| 10 | Total Bath Fill Amount | gallons |
| 11 | HEX Outlet Temperature | °F |
| 12 | By-Pass Flow Control Position | Degrees of opening |
| 15 | Freeze Protection Temperature *(Indoor Unit Only)* | °F |
| 17 | Freeze Protection Temperature *(Outdoor Unit Only)* | °F |
| 19 | Pump Hours | x100 Hours |
| 20 | Pump Cycles | See following information |
| 21 | Exhaust Temperature | °F |

**04 Combustion Cycles**

**20 Pump Cycles**

| DISPLAY | CYCLE COUNT |
|---|---|
| 000 to 999 | x100 (0 to 99,900) |
| 10- to 99- | x10,000 (100,000 to 990,000) |
| 1-- to 6-- | x1,000,000 (1,000,000 to 6,000,000) |

**06 Controllers Connected**

| CONTROLLER MODEL | CONNECTED | NOT CONNECTED |
|---|---|---|
| MC | _ _1 | _ _0 |
| BC | _1_ | _0_ |
| BSC & BSC2 | 1_ _, 2_ _ (QTY2) | 0_ _ |

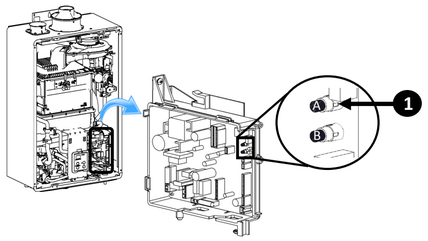
*Default display is 00.*

*_ depends on connection status of another controller.*

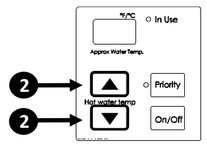
# PARAMETER SETTINGS

## To adjust the parameters:

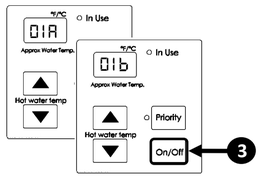
1. Press the “A” button for 1 second.




2. Use the ▲(Up) and ▼(Down) button on the controller to select a setting number (See *Parameter Settings Table*).




3. Once the desired setting number is selected, use the “On/Off” button on the controller to change the selection for the setting number.
Example: Display will change from 01A to 01b for Maximum Temperature setting (as shown below).




4. To exit the parameters, press the “A” button on the PC board for 1 second.

### Parameter Settings Table

Default is **A** for all settings below except 10, 12, 13, and 14 which are factory set.

| SETTING # | SETTING DESCRIPTION | SELECTION | | | |
|---|---|---|---|---|---|
| | | A | b | C | d |
| 01 | Maximum Set Temperature | Residential: 120°F | Residential: 140°F | | |
| 02 | High Altitude (Installation Location) | 0 - 2,000 ft (0 - 610 m) | 2,001 - 5,400 ft (610 - 1,646 m) | 5,401 - 7,700 ft (1,646 - 2,347 m) | 7,701 - 10,200 ft (2,347 - 3,109 m) |
| 03 | Service Soon[1] | Disabled | 0.5 Year | 1 Year | 2 Years |
| 04 | Recirculation Settings | No Recirculation | Recirculation | | |
| | | | Dedicated Mode | Crossover Mode | |
| | | | | Long Loop | Short Loop |
| 05 | Recirculation Mode[2] | Comfort | Economy | | |
| 06 | Control Switch | BMS[3] | Air Handler (AH) | | |
| 07 | Units in Standby (EZ Connect) | 2 | 1 | | |
| 10 | Gas Type (Factory Set) | NG | LPG | | |
| 11 | Maximum Flow Rate[4] | Standard | High | | |
| 12 | Water Heater Model (Factory set values and not adjustable) | Without Pump | With Pump | | |
| 13 | | 199 (3237) | | 160 (2530) | |
| 14 | | Internal (Indoor) | External (Outdoor) | | |

[1] See section “Service Soon, 55” in the Installation and Operation Manual for more information.

[2] Setting 05 is available only if setting 04b, 04C, or 04d is selected.
**Comfort mode** cycles the pump more frequently, ensuring the loop temperature remains higher (but also uses more energy).
**Economy mode** cycles the pump less often, using less energy to maintain the circulation loop temperature.

[3] BMS = Building Management System

[4] Selecting “High” will increase the water flow rate to the maximum capacity.

# ELECTRICAL DIAGNOSTICS

**NOTE:** Wiring diagram is available in manual and on the inside front cover.

### Important Safety Notes

There are a number of (live) tests required when performing electrical diagnostics on this product. Proceed with caution at all times to avoid contact with energized components inside the water heater. Only trained and qualified service technicians should attempt to repair this product. Before checking for resistance readings, disconnect the power source to the unit and isolate the item from the circuit (unplug it).

### Freeze Protection

This unit has freeze protection heaters mounted at different points to protect the water heater from freezing. All of them should display a positive resistance reading.

### Flame Rod

Place one lead of your meter to the flame rod and the other to ground. With the unit running you should read between 5 - 150 VAC. Set your meter to the micro (µ) amp scale and arrange meter leads in line with the flame rod. You should read 1 µ amp or greater for proper flame circuit. In the event of low flame circuit, remove the flame rod and check for carbon or damage.

### Amp Fuses

This unit has two glass fuses located on the PC Board, one inline (10) amp and one (4) amp glass fuse. Remove the fuses and check continuity through it. If you have continuity through each fuse then it is functioning. Otherwise the fuse is blown and must be replaced.

### Thermistors

Check all thermistors by inserting meter leads into each end of the thermistor plug. Set your meter to the 20 K scale and read resistance. Applying heat to the thermistor bulb should decrease the resistance. Applying ice to the thermistor bulb should increase the resistance.
Below are examples of typical temperatures and resistance readings.

| Temperature | Resistance Readings |
|---|---|
| 59°F | 11.4 - 14KΩ |
| 86°F | 6.4 - 7.8KΩ |
| 113°F | 3.6 - 4.5KΩ |
| 140°F | 2.2 - 2.7KΩ |
| 221°F | 0.6 - 0.8KΩ |

### Electrical Circuit Table

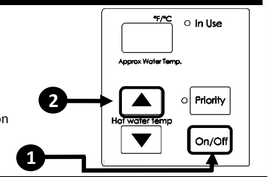
| COMPONENT | WIRE COLOR | VOLTAGE | RESISTANCE | COMPONENT | PCB | |
|---|---|---|---|---|---|---|
| | | | | CONNECTOR | CONNECTOR | PIN |
| Spark Electrode | Red-Black | 11~13VDC* | 34 K ~ 40 K ohms | D2 | D | 12-21 |
| Combustion Fan | Red-Black | 7~48VDC* | N/A | D3 | D | 4-6 |
| | White-Black | 10~12VDC* | N/A | D3 | D | 10-6 |
| | Yellow-Black | 11~13VDC* | N/A | D3 | D | 8-6 |
| Water Flow Control Device | Red-Pink | N/A | 44~52 ohms | D4 | D | 18-20 |
| | White-Blue | | | D4 | D | 16-14 |
| | Grey-Orange | 12~14VDC | N/A | D4 | D | 30-12 |
| Venturi Control Device | Blue-White | N/A | 35~41 ohms | D5 | D | 5-7 |
| | Yellow-Red | | | D5 | D | 11-9 |
| | Black-Red | 12~14 VDC | N/A | D5 | D | 30-12 |
| | Black-Brown | less than 1VDC* | | D5 | D | 30-25 |
| | Black-Grey | less than 1VDC* | | D5 | D | 30-23 |
| By-Pass Flow Control Device | Red-Pink | N/A | 44~52 ohms | D6 | D | 15-13 |
| | White-Blue | | | D6 | D | 17-19 |
| Gas Solenoid Valve | Yellow-Black | 11~13VDC* | 18~22 ohms | D7 | D | 29-27 |
| Outgoing Thermistor | White-White | N/A | See Example | H1 | H | 3-2 |
| | Blue-Blue | | | | | 8-11 |
| Inlet Thermistor | White-White | | | H2 | H | 4-2 |
| Exhaust Thermistor | White-White | | | H3 | H | 2-5 |
| Heat Exchanger Thermistor | White-White | | | H4 | H | 2-6 |
| Freeze Protection Thermistor | Yellow-Black | | | H5 | H | 2-7 |
| Overheat Switch | Black-Black | 11~13 VDC | less than 1 ohm | H6 | H | 28-14 |
| Water Flow Sensor | Black-Red | 11~13 VDC | N/A | H7 | H | 30-12 |
| | Yellow-Black | 4~7 VDC* | | H7 | H | 12-30 |
| Additional Controller(s) | White-White | 10~13 VDC | N/A | K | - | - |

*(* Value to be measured while unit is in operation)*

# DIAGNOSTIC CODES

## To display diagnostic codes:

1. Turn off the water heater by pressing the “On/Off” button.
2. Press and hold the “On/Off” for 2 seconds and then the ▲(Up) button simultaneously.
3. The last 9 maintenance codes display and flash one after the other.
4. To exit diagnostic codes and return the water heater to normal operation, press and hold the “On/Off” button for 2 seconds and then the▲(Up) button simultaneously.
5. Turn on the water heater by pressing the “On/Off” button.




**03 Power interruption during bath fill**

**(Water will not flow when power returns)**
- Turn off all hot water taps. Press ON/OFF twice.

**05 By-Pass Flow Control**
- Measure resistance values of the by-pass flow control (See Electrical Diagnostics).
- Replace By-Pass flow control device.

**10 Air Supply or Exhaust Blockage/Condensate Trap is Full**
- Ensure condensate line is not blocked.
- Ensure internal air filter is clean with no obstructions. (Indoor Only)
- Ensure High Altitude setting. (See Parameter Settings)
- Ensure Combustion air and Exhaust vents are not blocked and approved venting materials are being used. (Indoor Only)
- Ensure vent length is within limits. (Indoor Only)
- Check fan for debris and ensure wheel turns freely.
- Verify check valve is not stuck between fan casing and burner body.

**11 No Ignition (Heater Not Turning On)**
- Check that the gas is turned on at the water heater, meter, or cylinder.
- If the system is propane, make sure that gas is in the tank.
- Ensure gas type and inlet gas pressure are correct.
- Bleed all air from gas lines.
- Check the ground wire for the PC Board.
- Ensure flame rod wire is connected.
- Ensure igniter is operational. (See Electrical Diagnostics)
- Check gas solenoid valves for open or short circuits. (See Electrical Diagnostics)
- Verify gas orifice is correct.

**12 No Flame**
- Check that the gas is turned on at the water heater, gas meter, or cylinder.
- If the system is propane, make sure that gas is in the tank.
- Ensure flame rod wire is connected.
- Ensure gas type and inlet gas pressure is correct.
- Bleed all air from gas lines.

**14 Heat Exchanger Overheat**
- Measure resistance of Overheat Switch. (See Electrical Diagnostics)
- Check heat exchanger surface for hot spots which indicate blockage due to scale build-up.
- Refer to instructions in manual for flushing heat exchanger. Hard water must be treated to prevent scale build up or damage to the heat exchanger.
- Ensure it is not forced Hi setting.

**15 Venturi Control**
- Ensure the Venturi motor is operating correctly. (See Electrical Diagnostics)
- Replace gas valve assembly.
- Clear diagnostic code by resetting the main power supply to the water heater.

**16 High Outgoing Temperature**

**(safety shutdown because water heater is too hot)**
- Confirm fan motor is functioning correctly.
- Replace the gas valve assembly.

**17 Venturi Blockage**
- Ensure Venturi isn't blocked.
- Please call Rinnai technical department.

**19 Electrical Grounding**
- Check all components for electrical short.

**21 Data Transfer Error**
- If the PCB has been replaced, ensure the data transfer process has been completed.

**25 Condensate Pump *(Accessory)***
- Confirm wire connections and harness are good.
- Ensure condensate reservoir is empty and condensate pump is operating.

**32 Outgoing Thermistor**

**33 Heat Exchanger Thermistor**
- Check sensor wiring for damage.
- Measure resistance of sensor. (See Electrical Diagnostics)
- Clean sensor of scale build-up.
- Replace sensor.

**38 Exhaust Thermistor**

**41 Freeze Protection Thermistor**
- Check sensor wiring for damage.
- Measure resistance of sensor. (See Electrical Diagnostics)
- Replace sensor.

**51 Inlet Thermistor**
- Check sensor wiring for damage.
- Measure resistance of sensor. (See Electrical Diagnostics)
- Clean sensor of scale build-up.
- Replace sensor.

**52 Gas Valve**
- Check flame rod and wire for damage.
- Check gas solenoid valve for open or short circuit. (See Electrical Diagnostics)
- Replace gas valve assembly.
- Please call Rinnai technical department.

**54 High Exhaust Gas Temperature**
- Ensure Heat Exchanger fins are clean and not blocked.
- Confirm inlet water temperature is not too high.
- Clear diagnostic code by resetting the main power supply to the water heater.

**61 Combustion Fan**
- Check the motor wire harness for loose or damaged connections.
- Measure resistance of motor wire harness. (See Electrical Diagnostics)
- Ensure the combustion fan spins freely.

**63 Recirculation Low Flow**
- Ensure bypass plug is removed and bypass filter is installed. (COV Mode)
- Ensure both the inlet water filter and bypass filter are clean and free of debris.
- Ensure Parameter setting are correctly set for recirculation mode.
- Ensure Pump supply voltage.
- Ensure air is removed from the recirculation line.

**65 Water Flow Control**
- Measure resistance values of the water flow control (See Electrical Diagnostics)
- The water flow control valve has failed to close during the bath fill function. Immediately turn off the water and discontinue the bath fill function. Contact a licensed professional to service the appliance.

**70 PC Board**
- Replace PC Board

**71 Solenoid Valve Circuit**
- Ensure dip switch on PC board is in the OFF position.
- Ensure gas control wire is not loose or damaged.
- Ensure heater circuit is not grounded.
- Replace PC Board.

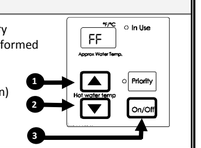
**72 Flame Rod**
- Check flame rod and wire for damage.
- Verify HEX is not leaking.

**55 (SS) Service Soon (Flush Heat Exchanger)**
- **55** is a time-based service indicator set during installation. See section “3.12 Parameter Settings” for additional details on setting and changing the **55** indicator.
- **55** indicates that it is time for service. The heat exchanger should be flushed to prevent damage (refer to section “5.3 Flushing the Heat Exchanger” for more information). **Hard water must be treated to prevent scale build-up or damage to the heat exchanger.**
- To reset the **55** code, push the **On/Off** button on the temperature controller 5 times in 5 seconds.

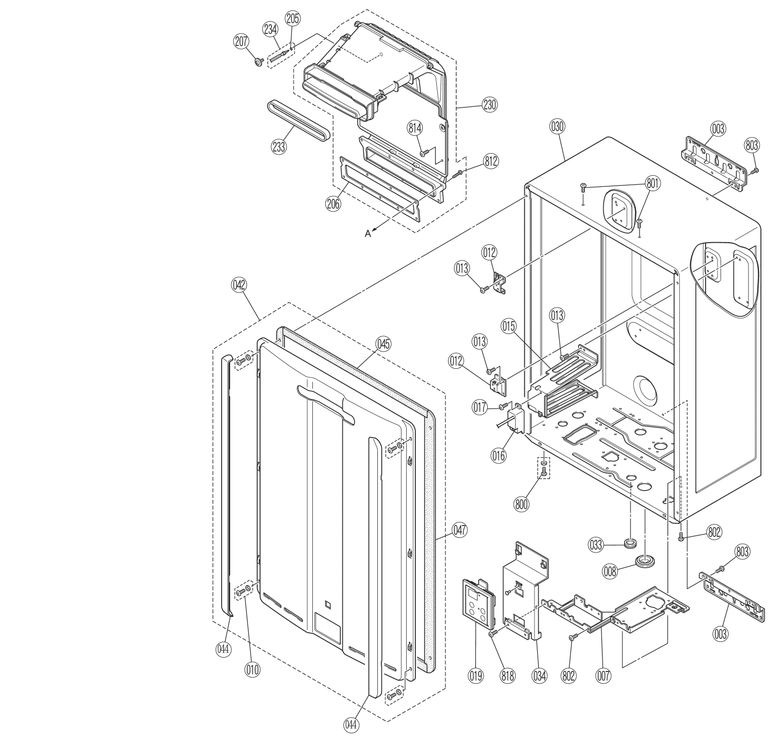
**NO CODE - Nothing happens when water flow is activated**
- Verify you have at least the minimum flow rate required to fire unit.
- Measure the resistance of the water flow control sensor. (See Electrical Diagnostics)
- Clean inlet water supply filter.
- On new installations ensure hot and cold water lines are not reversed.

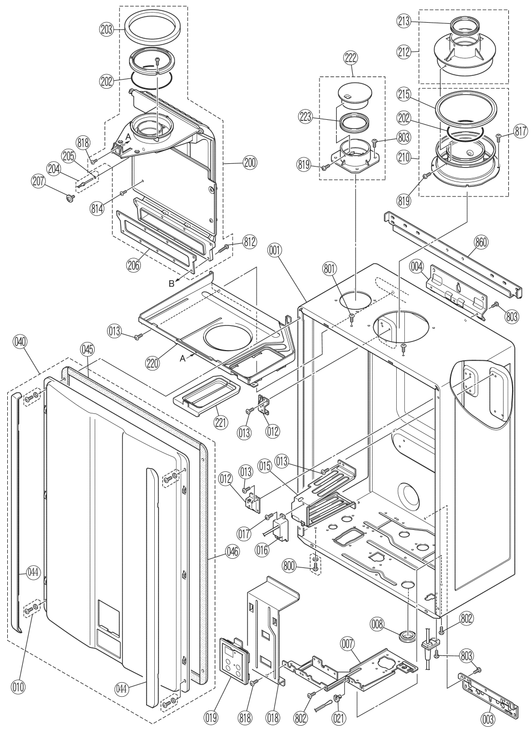
**5E Cascade Diagnostic Display (Commercial units only)**
- With cascade connections, display will flash between “5E” and the selected set temperature when an error code is displayed on any secondary unit .

**FF Maintenance Indicator**
- Placeholder in Diagnostic code history indicating that a service provider performed maintenance or service.
- Enter this code after performing service by pressing ▲(Up) , ▼(Down) and On/Off simultaneously.
- FF is visible on the monitor.



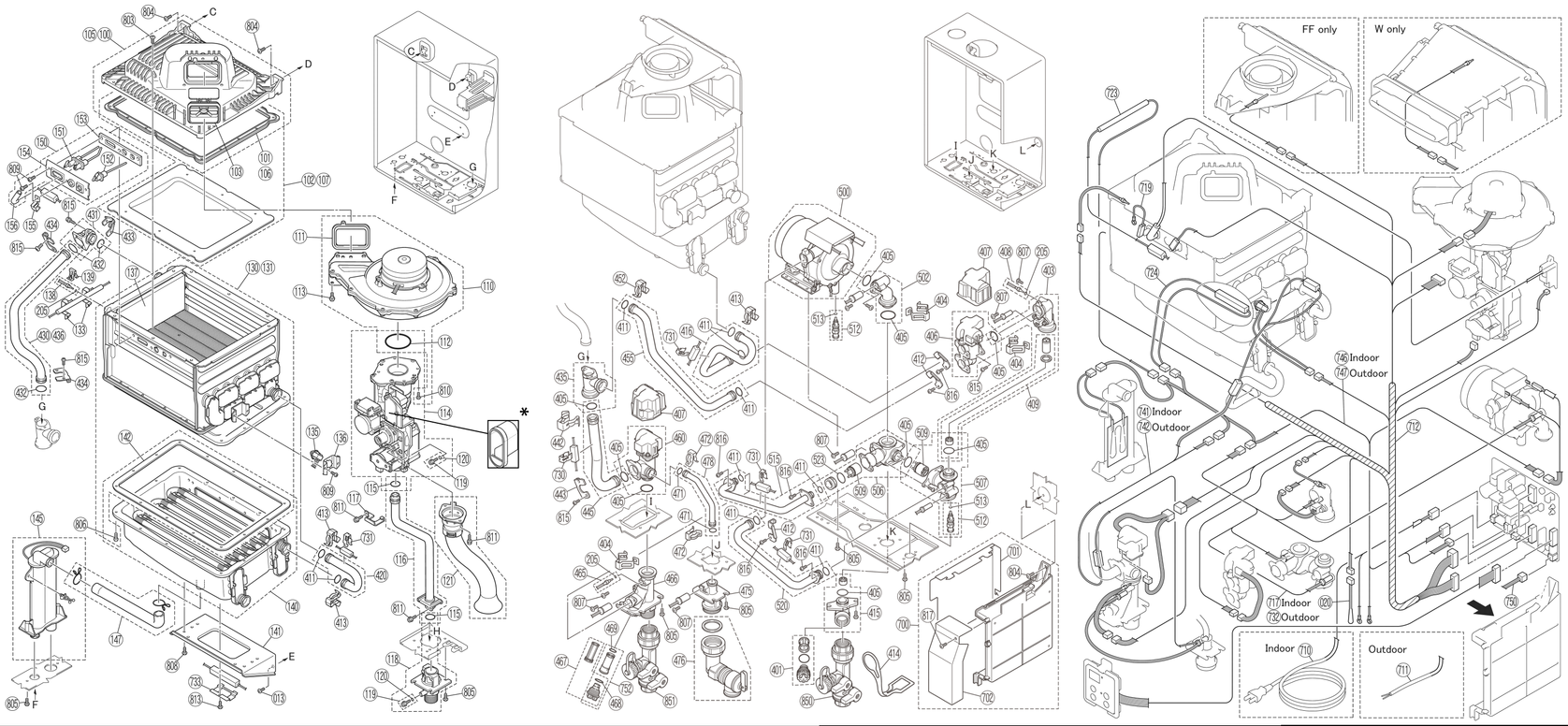

100000507





*

| Gas Conversion Kits | |
|---|---|
| RUR199i | 103000076 |
| RUR199e | 103000077 |
| RUR160i | 103000080 |
| RUR160e | 103000081 |




| ITEM | DESCRIPTION | PART NUMBER | RUR199i | RUR199e | RUR160i | RUR160e |
|---|---|---|---|---|---|---|
| 001 | Cabinet Body FF | 109000629 | 1 | | 1 | |
| 003 | Lower Wall Mount Bracket | 109000281 | 1 | 2 | 1 | 2 |
| 004 | Upper Wall Mount Bracket | 109000594 | 1 | | 1 | |
| 007 | Connection Reinforcement Plate | 109000595 | 1 | 1 | 1 | 1 |
| 008 | Rubber Bushing | 109000634 | 1 | 1 | 1 | 1 |
| 010 | Residential Screw and Washer | 106000645 | 4 | 4 | 4 | 4 |
| 012 | Combustion Chamber Support Plate | 109000597 | 2 | 2 | 2 | 2 |
| 013 | Truss Screw | 109000598 | 14 | 12 | 14 | 12 |
| 015 | Igniter Bracket | 109000599 | 1 | 1 | 1 | 1 |
| 016 | Igniter Assembly | 105000230 | 1 | 1 | 1 | 1 |
| 017 | Grounding Screw | CP-80452 | 1 | 1 | 1 | 1 |
| 018 | Controller Bracket FF | 109000600 | 1 | | 1 | |
| 019 | Controller | 105000144 | 1 | 1 | 1 | 1 |
| 020 | Thermistor Sensor | 105000261 | 1 | 1 | 1 | 1 |
| 021 | TH Packing | 109000490 | 1 | 1 | 1 | 1 |
| 030 | Cabinet Body W | 109000630 | | 1 | | 1 |
| 033 | Rubber Bush-A | CF79-41020-A | | 1 | | 1 |
| 034 | Controller Bracket W | 109000603 | | 1 | | 1 |
| 040 | Front Cover Panel Assembly FF | 109000631 | 1 | | 1 | |
| 042 | Front Cover Panel Assembly W | 109000632 | | 1 | | 1 |
| 044 | Screw Cover | 035-2145000 | 2 | 2 | 2 | 2 |
| 045 | Front Panel Packing-Top | 109000120 | 2 | 2 | 2 | 2 |
| 046 | Front Panel Packing-Side W | 109000608 | 2 | | 2 | |
| 047 | Gasket - Side, RC98HPi, RC98HPe | 109000121 | | 2 | | 2 |
| 100 | Burner Assembly-Large | 106000121 | 1 | 1 | | |
| 101 | Burner Gasket-Large | 109000609 | 1 | 1 | | |
| 102 | Burner Plate Assembly-Large | 106000122 | 1 | 1 | | |
| 103 | Combustion Check Valve Assembly | 106000123 | 1 | 1 | 1 | 1 |
| 105 | Burner Assembly-Small | 106000124 | | | 1 | 1 |
| 106 | Burner Gasket-Small | 109000610 | | | 1 | 1 |
| 107 | Burner Plate Assembly-Small | 106000116 | | | 1 | 1 |
| 110 | Combustion Fan Assembly | 108000089 | 1 | 1 | 1 | 1 |
| 111 | Fan Mounting Packing | 109000611 | 1 | 1 | 1 | 1 |
| 112 | O-Ring | 109000612 | 1 | 1 | 1 | 1 |
| 113 | Hexagon Head Screw | ZQAA0514UK | 3 | 3 | 3 | 3 |
| 114 | Gas Valve Assembly With Orifice | 106000125 | 1 | 1 | 1 | 1 |
| 115 | O-Ring | 109000252 | 2 | 2 | 2 | 2 |
| 116 | Gas Connection Pipe | 106000126 | 1 | 1 | 1 | 1 |
| 117 | Gas Tube Bracket | 109000635 | 1 | 1 | 1 | 1 |
| 118 | Inlet Gas Supply Connection | 106000127 | 1 | 1 | 1 | 1 |
| 119 | Inlet Gas Test Port Screw | C10D-5 | 1 | 1 | 1 | 1 |
| 120 | O-Ring | M10B-13-4 | 1 | 1 | 1 | 1 |
| 121 | Noise Filter | 106000120 | 1 | 1 | 1 | 1 |
| 130 | Heat Exchanger Assembly-Large | 107000286 | 1 | 1 | | |
| 131 | Heat Exchanger Assembly-Small | 107000264 | | | 1 | 1 |
| 133 | Heater Bracket | 109000613 | 2 | 2 | 2 | 2 |
| 135 | Over Heat Sensor (OHS) | 105000231 | 1 | 1 | 1 | 1 |
| 136 | OHS Bracket | 109000614 | 1 | 1 | 1 | 1 |
| 137 | Heat Exchanger Insulator | 107000265 | 1 | 1 | 1 | 1 |
| 138 | Thermistor | 105000262 | 1 | 1 | 1 | 1 |
| 139 | Clip | 105000090 | 1 | 1 | 1 | 1 |
| 140 | Secondary Heat Exchanger | 107000287 | 1 | 1 | 1 | 1 |
| 141 | Secondary Heat Exchanger Bracket | 109000615 | 1 | 1 | 1 | 1 |
| 142 | Secondary Heat Exchanger Gasket | 109000616 | 1 | 1 | 1 | 1 |
| 145 | Condensate Trap | 107000288 | 1 | 1 | 1 | 1 |
| 147 | Condensate Drain tube | 107000289 | 1 | 1 | 1 | 1 |
| 150 | Electrode/Flame Rod Assembly | 105000251 | 1 | 1 | 1 | 1 |
| 151 | Electrode | 105000233 | 1 | 1 | 1 | 1 |
| 152 | Flame Rod | 105000234 | 1 | 1 | 1 | 1 |
| 153 | Electrode Packing | 109000617 | 1 | 1 | 1 | 1 |
| 154 | Electrode Plate | 109000618 | 1 | 1 | 1 | 1 |
| 155 | Electrode Heater Bracket | 109000619 | 1 | 1 | 1 | 1 |
| 156 | Electrode Sleeve | 109000620 | 1 | 1 | 1 | 1 |
| 200 | Exhaust Duct Assembly FF | 108000090 | 1 | | 1 | |
| 202 | O-Ring | 108000018 | 1 | | 1 | |
| 203 | Exhaust Duct Packing | 109000621 | 1 | | 1 | |
| 204 | Thermistor | 105000252 | 1 | | 1 | |
| 205 | O-Ring | 107000323 | 4 | 4 | 4 | 4 |
| 206 | Exhaust Packing | 109000646 | 1 | 1 | 1 | 1 |
| 207 | Thermistor Screw | 109000622 | 1 | 1 | 1 | 1 |
| 210 | Flue Connection Assembly | 108000091 | 1 | | 1 | |
| 212 | Exhaust Pipe Connection Port - 2" | 108000084 | 1 | | 1 | |
| 213 | Exhaust Gasket - 2 inch | 109000623 | 1 | | 1 | |
| 215 | Air supply pipe seal ring | 108000093 | 1 | | 1 | |
| 220 | Air supply box | 108000085 | 1 | | 1 | |
| 221 | Air supply filter | 108000086 | 1 | | 1 | |
| 222 | Air Supply Connection | 108000092 | 1 | | 1 | |
| 223 | Air Supply Gasket - 2 inch | 109000624 | 1 | | 1 | |
| 230 | Exhaust Duct Assembly W | 109000093 | | 1 | | 1 |
| 233 | Front Exhaust Seal W | 108000094 | | 1 | | 1 |
| 234 | Thermistor | 105000263 | | 1 | | 1 |
| 401 | Water Supply Filter Plug Assembly | 107000317 | 1 | 1 | 1 | 1 |
| 403 | Water Flow Sensor Assembly | 107000290 | 1 | 1 | 1 | 1 |
| 404 | Clip | 109000636 | 3 | 3 | 3 | 3 |
| 405 | O-Ring | 107000324 | 9 | 9 | 9 | 9 |
| 406 | Bypass Servo Assembly | 107000270 | 1 | 1 | 1 | 1 |
| 407 | Cover | 107000093 | 2 | 2 | 2 | 2 |
| 408 | Inlet Water Thermistor | 107000318 | 1 | 1 | 1 | 1 |
| 409 | Flow Turbine Assembly | 107000319 | 1 | 1 | 1 | 1 |
| 411 | O-Ring | M10B-2-14 | 8 | 8 | 8 | 8 |
| 412 | Retention Clip | AH69-310 | 2 | 2 | 2 | 2 |
| 413 | Clip | 109000244 | 3 | 3 | 3 | 3 |
| 414 | Plug Band | 109000018 | 1 | 1 | 1 | 1 |
| 415 | 3/4 Water Supply Connection Port B | H73-501-2 | 1 | 1 | 1 | 1 |
| 416 | Water Supply Connection Pipe (pair) | 107000291 | 1 | 1 | 1 | 1 |
| 420 | Secondary Connecting Pipe Assembly | 107000292 | 1 | 1 | 1 | 1 |
| 430 | Connection Pipe Assembly-Large | 107000293 | 1 | 1 | | |
| 431 | Heat Exchanger Pipe Connection | 107000294 | 1 | 1 | 1 | 1 |
| 432 | O-Ring | 107000325 | 3 | 3 | 3 | 3 |
| 433 | Pipe Bracket | 109000653 | 1 | 1 | 1 | 1 |
| 434 | Retention Clip | 109000496 | 2 | 2 | 2 | 2 |
| 435 | Hot Water Connection Fitting | 107000275 | 1 | 1 | 1 | 1 |
| 436 | Connection Pipe Assembly-Small | 107000295 | | | 1 | 1 |
| 442 | Clip | 109000638 | 1 | 1 | 1 | 1 |
| 443 | Retention Clip | U211-322X01 | 1 | 1 | 1 | 1 |
| 445 | Hot Water Supply Connection Pipe (pair) | 107000296 | 1 | 1 | 1 | 1 |
| 452 | Clip | 109000639 | 1 | 1 | 1 | 1 |
| 455 | Bypass Tube (set) - P | 107000297 | 1 | 1 | 1 | 1 |
| 460 | Hot Water Servo Valve Assembly | 107000298 | 1 | 1 | 1 | 1 |
| 465 | Thermistor | 105000108 | 1 | 1 | 1 | 1 |
| 466 | Hot Water Supply Connection Port | 107000299 | 1 | 1 | 1 | 1 |
| 467 | Seal Plug | 109000453 | 1 | 1 | 1 | 1 |
| 468 | O-Ring | 109000456 | 1 | 1 | 1 | 1 |
| 469 | O-Ring | 109000454 | 1 | 1 | 1 | 1 |
| 471 | O-Ring | 107000326 | 4 | 4 | 4 | 4 |
| 472 | Clip | 109000278 | 2 | 2 | 2 | 2 |
| 475 | Pressure Relief Valve Connection | 107000300 | 1 | 1 | 1 | 1 |
| 476 | Pressure Relief Valve Assembly | 107000283 | 1 | 1 | 1 | 1 |
| 478 | Relief Pipe Assembly | 107000301 | 1 | 1 | 1 | 1 |
| 500 | Circulation Pump Assembly | 107000302 | 1 | 1 | 1 | 1 |
| 502 | Pump Connection Elbow | 107000303 | 1 | 1 | 1 | 1 |
| 506 | Circular Joint Connection w/Check Valve | 107000304 | 1 | 1 | 1 | 1 |
| 507 | Water Supply Connection w/Check Valve | 107000305 | 1 | 1 | 1 | 1 |
| 509 | Check valve | 107000321 | 2 | 2 | 2 | 2 |
| 512 | Drain | 107000322 | 2 | 2 | 2 | 2 |
| 513 | O-Ring | 109000182 | 2 | 2 | 2 | 2 |
| 515 | Internal Circulation Pipe Assembly | 107000306 | 1 | 1 | 1 | 1 |
| 520 | Pump Outlet Connection Pipe Assembly | 107000307 | 1 | 1 | 1 | 1 |
| 523 | O-Ring | 109000644 | 1 | 1 | 1 | 1 |
| 700 | PC Board Assembly | 105000253 | 1 | 1 | 1 | 1 |
| 701 | PCB Electrical Cover | 109000626 | 1 | 1 | 1 | 1 |
| 702 | PCB EC Cover | 109000627 | 1 | 1 | 1 | 1 |
| 710 | Power Cord Assembly FF | 105000238 | 1 | | 1 | |
| 711 | Power Cord Assembly W | 105000239 | | 1 | | 1 |
| 712 | Sensor Harness | 105000240 | 1 | 1 | 1 | 1 |
| 717 | Ceramic Valve heater | 109000647 | 1 | | 1 | |
| 719 | Igniter Ground Harness | 105000243 | 1 | 1 | 1 | 1 |
| 723 | HEX Freeze Protection Heater Assembly | 105000246 | 1 | 1 | 1 | 1 |
| 724 | Sec. HEX Freeze Protection Heater Assy | 105000247 | 1 | 1 | 1 | 1 |
| 730 | Heater Clip A | AU124-618X01 | 1 | 1 | 1 | 1 |
| 731 | Heater Clip C | U250-625 | 3 | 4 | 3 | 4 |
| 732 | Freeze Protection Heater Clip | 105000255 | | 1 | | 1 |
| 733 | Freeze Protection Heater Bracket | 109000647 | 1 | 1 | 1 | 1 |
| 741 | Freeze Protection heater (set) -2 | 105000256 | 1 | | 1 | |
| 742 | Freeze Protection heater (set) -3 | 105000257 | | 1 | | 1 |
| 746 | Heater Harness-2 | 105000258 | 1 | | 1 | |
| 747 | Heater Harness -3 | 105000259 | | 1 | | 1 |
| 750 | Remote Control Harness | 105000249 | 1 | 1 | 1 | 1 |
| 752 | Bypass Filter, RUR98i/e | 109000451 | 1 | 1 | 1 | 1 |
| 800 | Screw | ZFDB0408UD | 4 | 4 | 4 | 4 |
| 801 | Screw | CP-30583 | 2 | 2 | 2 | 2 |
| 802 | Screw | ZBA0408UK | 3 | 3 | 3 | 3 |
| 803 | Screw | 109000640 | 18 | 13 | 18 | 13 |
| 804 | Screw | 109000648 | 3 | 3 | 3 | 3 |
| 805 | Screw | 109000178 | 16 | 16 | 16 | 16 |
| 806 | Screw | 109000649 | 42 | 42 | 42 | 42 |
| 807 | Screw | U217-449 | 5 | 5 | 5 | 5 |
| 808 | Screw | ZFAB0406SZ | 4 | 4 | 4 | 4 |
| 809 | Screw | 109000641 | 5 | 5 | 5 | 5 |
| 810 | Screw | 109000642 | 4 | 4 | 4 | 4 |
| 811 | Screw | 108000021 | 4 | 4 | 4 | 4 |
| 812 | Screw | 109000650 | 9 | 9 | 9 | 9 |
| 813 | Screw | ZAD0408UK | 1 | 1 | 1 | 1 |
| 814 | Screw | 109000651 | 4 | 4 | 4 | 4 |
| 815 | Screw | ZHAA0412UK | 8 | 8 | 8 | 8 |
| 816 | Screw | CP-20883-410UK | 2 | 2 | 2 | 2 |
| 817 | Screw | ZFDB0410SZ | 5 | 5 | 5 | 5 |
| 818 | Screw | 109000643 | 1 | 2 | 1 | 2 |
| 819 | Screw | 109000652 | 2 | | 2 | |
| 850 | Cold Isolation Valve | 107000284 | 1 | 1 | 1 | 1 |
| 851 | Hot Isolation Valve | 107000285 | 1 | 1 | 1 | 1 |
| 860 | Wall Bracket | 109000628 | 1 | | 1 | |