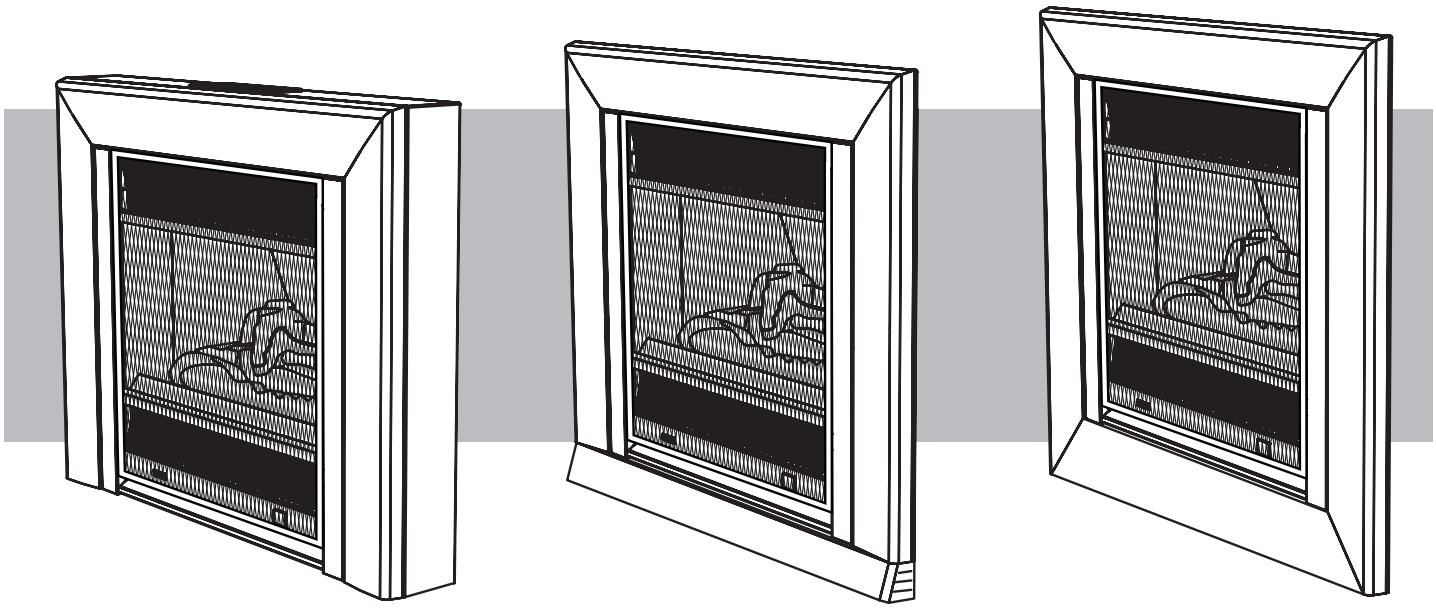
Rinnai

Reflection

Flamefire Space Heater
SERVICE MANUAL

MODELS: IB300ETR / IB300



This appliance shall be installed in accordance with:

- **Manufacturer's Installation Instructions**
- **Current AS/NZS 3000, AS/NZS 3500 & AS/NZS 5601**
- **Local Regulations and Municipal Building Codes**

This appliance must be serviced and repaired by an Authorised Person.

The Australian Gas Association
All Rinnai gas products are A.G.A. certified.

N10378

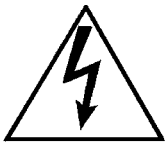
Certified System ™
Quality ISO 9001
SAI GLOBAL

Produced by Technical Services Department

2012 - Issue 1

Key to Warning Symbols

Failure to comply with the following instructions may result in serious personal injury or damage to the appliance.



Be careful of possible electric shock. Wiring inside this appliance may potentially be at 240 Volts.

Read Fault Diagnosis and Wiring Diagram carefully to avoid incorrect wiring

Please follow instructions carefully to ensure safe and appropriate service. After completing the service and confirming that there are no gas leaks or incorrect wiring, test operation of unit according to the Customer Operating Instructions. After confirming normal operation, explain what was serviced to the customer and operation principles if necessary.

This manual has been compiled by Rinnai Australia Customer Technical Services. While many individuals have contributed to this publication, it will be successful only if you - the reader and customer - find it useful. We would like to extend an invitation to users of this manual to make contact with us, as your feedback and suggestions are valuable resources for us to include as improvements. Rinnai are constantly working toward supplying improved appliances as well as information, and specifications may be subject to alteration at any time.

SM Reflection Flame Fire
Issue N^{o}1

TABLE OF CONTENTS

REGULATORY INFORMATION

This appliance must be installed by an Authorised person. The installation of gas and electricity must conform to local regulations.

The installation must also comply with the instructions supplied by Rinnai.

Your Reflection Flame Fire Space Heater has been approved by the Australian Gas Association. The AGA. Approval Number is shown on Data plate.

GLOSSARY OF TERMS AND SYMBOLS

This glossary of terms and symbols is provided to assist you in understanding some of the language used throughout this manual.

dB(A)	-	sound pressure level in decibels, “A” range
DC	-	direct current
AC	-	alternating current
Hz	-	Hertz
IC	-	integrated circuit
kcal/h	-	kilocalorie per hour
kPa	-	kilo pascals
LED	-	light emitting diode
mA	-	milliamps
MJ/h	-	megajoule per hour
mm	-	millimetres
OHS	-	overheat switch
PCB	-	printed circuit board
CPU	-	central processing unit
POT	-	potentiometer
rpm	-	revolutions per minute
SV	-	solenoid valve
ø	-	diameter
$\Delta^\circ C$	-	temperature rise above ambient
POV	-	modulating valve
TH	-	thermistor
CO	-	carbon monoxide

INTRODUCTION

The Rinnai Reflection IB300ETR and IB300 share the same general design layout differing only in operation type (Electronic Timer Remote or manual push button) and installation type (masonry, wall or elevated installations).

Reflection flame fire is available in choice of 3 colours: Pearlescent Black, Dark Bronze or Champagne Silver to suit any decor. Optional stainless steel side-trims.

FEATURES

- **Electronic thermostat:**
  Set 'n' forget operation with digital temperature display to accurately maintain room temperature.
- **2-Speed fan:**
  Automatically changes speed based on an electronic temperature sensor.
- **Electronic ignition:**
  Simple one-touch operation without standby pilot.
- **Dual programmable timers:**
  Separate morning and evening timers offer fully automatic operation.
- **Remote control:**
  With On/Off and temperature control.
- **Flame function:**
  Overrides the thermostat and maintains a constant flame picture even if the room is warm.
- **"Auto-Off" function:**
  Completely shuts-off the main burner when the room reaches the set temperature.

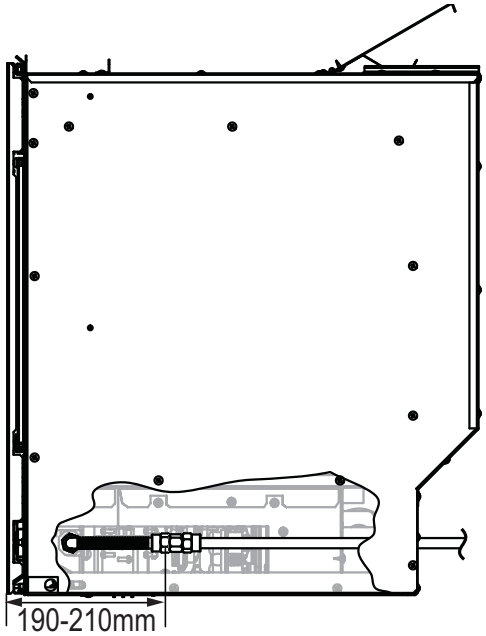
SPECIFICATIONS

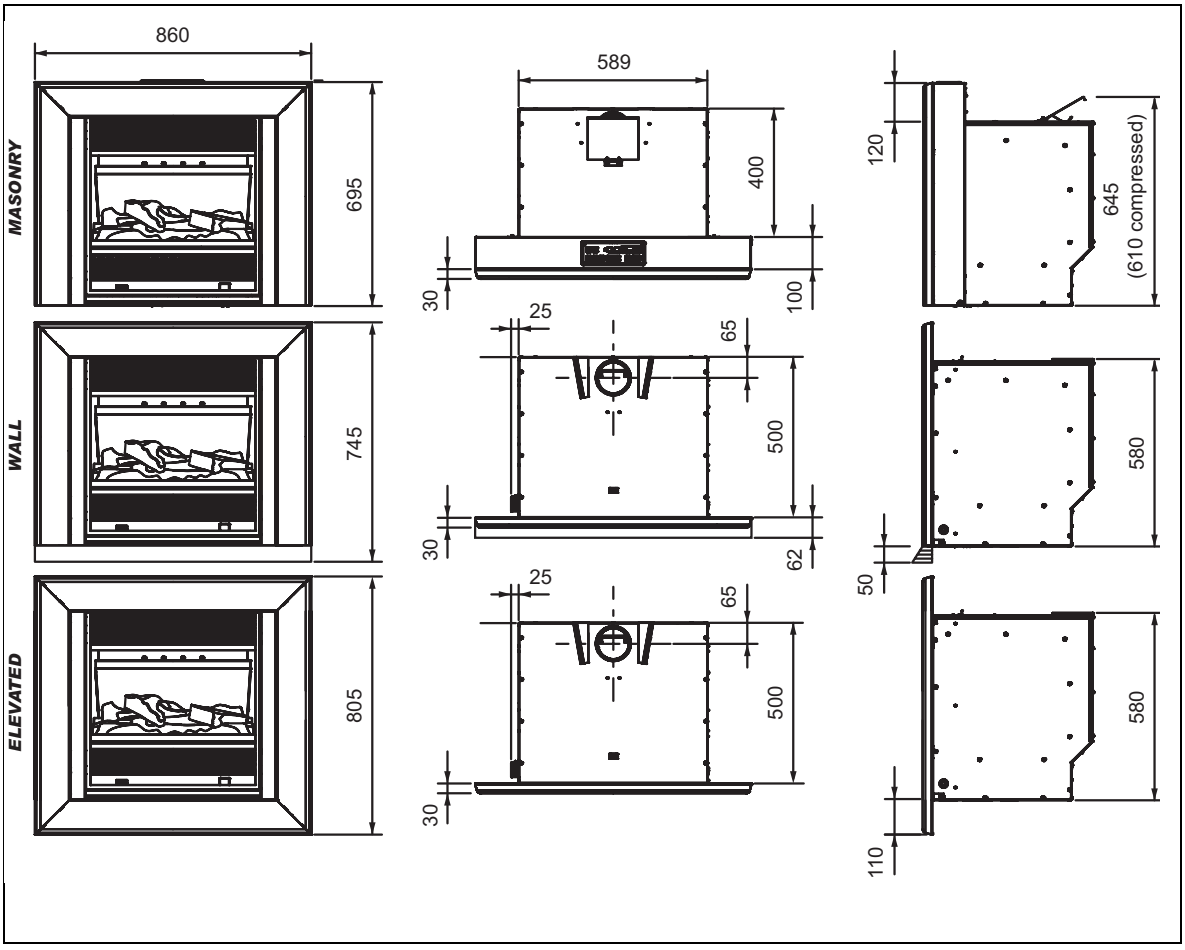
PRODUCT SPECIFICATIONS

Models:	IB300ETR / IB300 - Reflection Flame Fire		
General description:	Rinnai ETR / Manual Inbuilt Radiant / Convector, glass fronted, ceramic log space heaters with forced convection and natural draught flue system.		
Gas input rate:		Natural Gas	Propane
	High:	30 MJ/hr	30 MJ/hr
	Low:	11 MJ/hr	11 MJ/hr
Burner pressure:	High:	0.95 kPa	2.00 kPa
	Low:	0.35 kPa	0.72 kPa
Data plate:	Inside the unit on base panel in the front		
Weight:	60 kg (65kg packed)		
Solenoid Valve:	Direct single seated valve type.		
Electrical Consumption:	High: 60W Low: 35W		
Power supply:	240V 50 Hz. 1.5 m flexible cord with 3 pin plug, located at lower RH front corner of unit (when viewed from front). If hard wiring is required consult a licensed electrician.		
Combustion method	Yellow bunsen flame		
Combustion system:	Naturally Aspirated Ported Steel Burner		
Gas connection:	1/2” BSPT male thread with limited flexibility stainless steel pipe, located at lower RH front corner of unit (when viewed from front).		
Burners:	Ceramic log and ember bed		
Warm air discharge:	Top air louvre discharge		
Timer:	24 hour Digital Dual Timer		
Convection Fan:	Tangential 2 speed, Hi / Lo / OFF, power rating 60 Watts		
Control Panel:	Top Panel Centre Location ON/OFF Button Timer Set Timer 1, Timer 2 Temp Button Up, Button Down Flame Function Child Lock Override AM / PM Digital Clock Display	Wall Mounted 2 m from appliance.	
Ignition system:	Continuous spark electronic ignition to Intermittent Pilot x 2		
Operation:	Soft touch buttons and infra red remote control to light pilot and burners, front panel location (bottom right).		
Safety devices:	Flame Rod, Type Pilot x 2, Hi-Limit Switch, Overheat Thermistor, Thermal Fuse, Electrical Fuse, PCB controlled Fan OFF Delay, Room Overheat OFF at 10 minutes > 40°C. Flue blockage thermistor		
Flue terminal: (Rigid Flue Kit P/N FLFVA5FLEX)	Natural draft round top discharge flue Inner - 100 mm Diameter	Outer - 145 mm Diameter	
Flue requirement:	A minimum vertical flue length of 3.6 m is required. A minimum of 1.2 m of vertical flue is required before any bends or offsets. A maximum of two 45° bends may be used.		

DIMENSIONS

(Note: All Dimensions are in mm)



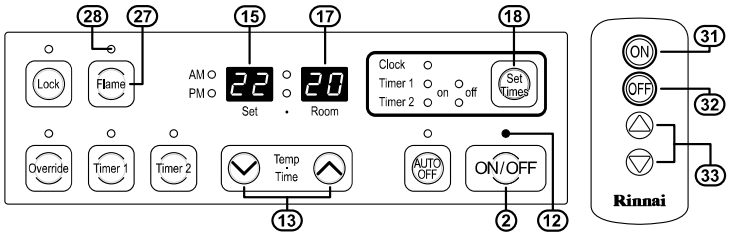


HOW TO OPERATE (ETR MODEL)

TO TURN THE HEATER ON

Before you begin, ensure that both Gas and Power are connected to the appliance.

To turn the appliance on press either the ON/OFF button (2) or the ON button (31).



When pressed the appliance will begin to operate in the following factory preset manner:

- The default set temperature will be 22° C (15).
- The current room temperature will be displayed (17).
- The On/Combustion indicator (12) will illuminate Green (steady). Ignition will take 5 ~ 10 seconds. The On/Combustion indicator will change to Red (steady) after proper ignition has been achieved to signify the correct burner operation.

NOTE

At start up fan operation is delayed approximately 4 minutes to avoid cold air drafts.

When using the appliance for the first time or after long periods of disuse, ignition may not occur the first time it is operated as there may be air in the gas supply pipes. If ignition does not occur after approximately 30-seconds the unit will cease operation automatically. If this occurs press either the ON/OFF button (2) twice or press the OFF button (32) and then the ON button (31) to restart.

The unit may make noises after ignition/extinction. This is due to expansion and contraction of the heater components and is normal.

The heater will not immediately ignite if the ON/OFF button (2) or the ON button (31) are pressed straight after extinction. After approximately 20 seconds has passed, the heater will automatically go into ignition mode.

TO ADJUST SET TEMPERATURE

The set temperature may be raised or lowered by pressing the Up and Down buttons (13) or (33).

The following "SET" temperatures can be selected.

- 'L' for continuous combustion on lowest burner setting, without thermostatic control.
- Thermostatic control between 16º C to 26º C in 1º C steps
- 'H' for continuous combustion on highest burner setting, without thermostatic control.

The room temperature will display temperatures between 1º C to 30º C.

Once the temperature is set it will be stored in the microcomputers memory, if the temperature is not adjusted further it will be available as the initial setting when the appliance is next used.

NOTE

Rooms may not arrive at the "SET" temperature due to the size and construction of the room, location of the appliance or external temperatures.

If the appliance does not ignite then the pre-set temperature may already be higher than the actual room temperature.

USING THE FLAME FUNCTION

This function will automatically override the thermostat and set the heater to a default Medium High heat setting for full visual flame effect. To operate the Flame function, simply press the Flame button (27). The Flame function indicator will illuminate (28) when the Flame function is in use.

TO TURN THE HEATER OFF

To turn the heater off while it is in operation press either the ON/OFF button (2) or the OFF button (32).

The On/Combustion indicator (12) will go out.

NOTE

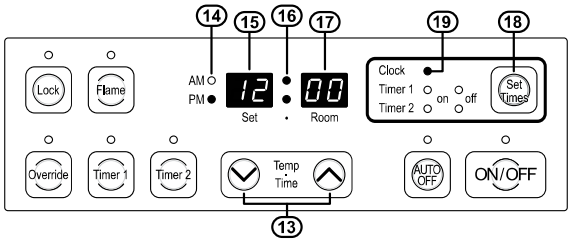
After the On/Combustion indicator (12) has gone out, the appliance fan will continue to cycle for several minutes. This is to lower the temperature within the appliance and is normal. DO NOT disconnect the power during this time.

TIMER OPERATION (ETR MODEL)

CLOCK AND DUAL TIMERS

The setting of the Clock and programming of the Timers is done via the Set Times button (18). Each press of this button will cycle the appliance through the available clock setting and timer programming modes that are available.

SETTING THE CLOCK



One press of the Set Times button (18) selects the clock setting mode, allowing the current time to be adjusted. When in this mode the 'Clock' indicator (19) flashes.

The factory default clock time is PM 12:00.

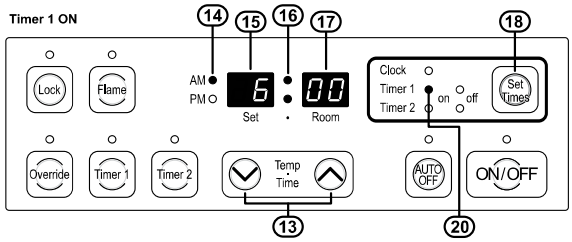
Press the Up or Down buttons (13) to adjust the clock to the desired time.

Pressing and holding either the Up or Down buttons (13) will scroll digits, at first by minute (17) intervals and then by hour (15) intervals. When adjusting the time ensure that the correct AM or PM (14) setting is observed.

NOTE

To lock in the new clock time and exit the Clock and Timer setting mode without altering the Timer 1 or Timer 2 settings press the Set Times button (18) five times.

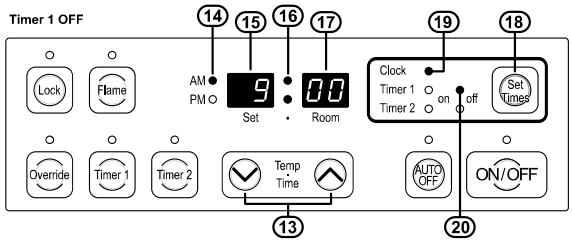
PROGRAMMING TIMER 1



Two presses of the Set Times button (18) selects the Timer 1 'On' programming mode which allows adjustment of the time when the heater switches On (or starts). When in this mode the Timer 1 on indicator (20) flashes.

The factory default Timer 1 'On' time is AM 06:00. Press the Up or Down buttons (13) to adjust the Timer 1 'On' time.

Pressing and holding either the Up or Down buttons (13) will scroll digits, at first by minute (17) intervals and then by hours (15) intervals. Be careful to ensure that the correct AM or PM (14) setting is observed.



Three presses of the Set Times button (18) selects the Timer 1 'Off' programming mode which allows adjustment of the time when the heater switches 'Off' (or stops). When in this mode the Timer 1 off indicator (20) flashes.

The factory default Timer 1 'Off' time is AM 09:00. Press the Up or Down buttons (13) to adjust the Timer 1 'Off' time.

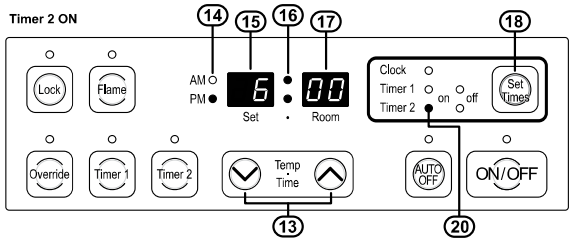
Pressing and holding either the Up or Down buttons (13) will scroll digits, at first by minute (17) intervals and then by hour (15) intervals. Be careful to ensure that the correct AM or PM (14) setting is observed.

NOTE

To lock in the new Timer 1 on and off timer program and to exit the Clock setting and Timer programming mode without altering the Timer 2 settings press the Set Times button (18) three times.

TIMER OPERATION (ETR MODEL)

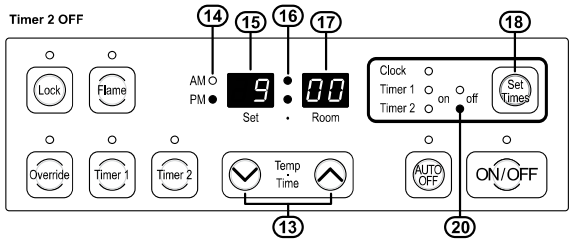
PROGRAMMING TIMER 2



Four presses of the Set Times button (18) selects the Timer 2 'On' programming mode which allows adjustment of the time when the heater switches On (or starts). When in this mode the Timer 2 on indicator (20) flashes.

The factory default Timer 2 'On' time is AM 06:00. Press the Up or Down buttons (13) to adjust the Timer 2 'On' time.

Pressing and holding either the Up or Down buttons (13) will scroll digits, at first by minute (17) intervals and then by hours (15) intervals. Be careful to ensure that the correct AM or PM (14) setting is observed.



Five presses of the Set Times button (18) selects the Timer 2 'Off' programming mode which allows adjustment of the time when the heater switches 'Off' (or stops). When in this mode the Timer 2 off indicator (20) flashes.

The factory default Timer 2 'Off' time is AM 09:00. Press the Up or Down buttons (13) to adjust the Timer 2 'Off' time.

Pressing and holding either the Up or Down buttons (13) will scroll digits, at first by minute (17) intervals and then by hours (15) intervals. Be careful to ensure that the correct AM or PM (14) setting is observed.

A **sixth** press of the Set Times button (18) will return the appliance back to normal operation.

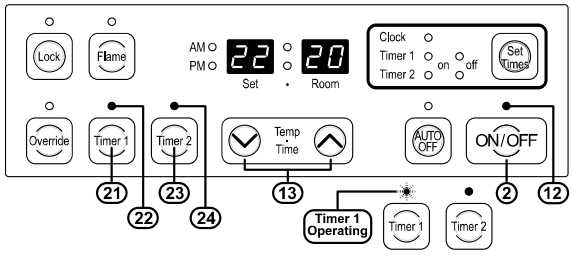
OPERATING TIMERS

Turn the appliance on by pressing the ON/OFF button (2)**.** Set the desired temperature or select the flame function.

NOTE

Timer 1 and Timer 2 may be operated together or individually.

The heater will continue to operate under control of the timers until timer operation is cancelled.



To select operation by Timer 1 press the Timer 1 button (21). The Timer 1 indicator (22) will illuminate steady to show that the heater is waiting for the programmed 'On' time to be reached.

To select operation by Timer 2 press the Timer 2 button (23). The Timer 2 indicator (24) will illuminate steady to show that the heater is waiting for the programmed 'On' time to be reached.

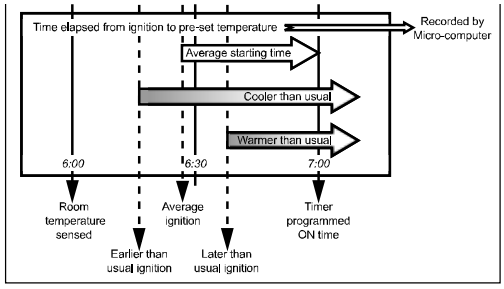
The heater automatically turns itself on once the 'On' time of the selected timer(s) is reached and the associated Timer indicator (22) or (24) will flash while the heater is operating under timer control.

When the 'off' time of the selected timer is reached the heater will automatically turn off and the Timer indicator will illuminate steady to indicate the heater is waiting for the next programmed timer cycle to begin.

To cancel timer(s) operation press the associated timer button(s). The indicator will go out to signify that the heater is now under manual control.

TIMER OPERATION (ETR MODEL)

PREHEAT



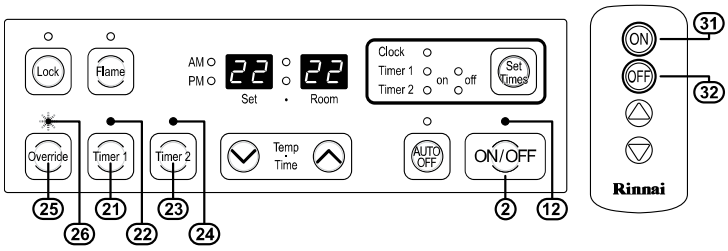
This function operates automatically in conjunction with the Timers. When a Timer is selected, the heater may operate anywhere within an hour prior to the programmed starting time of a Timer.

This function is called Pre-heat since it ensures the room reaches the desired temperature by the On Time programmed into the Timer(s). The room temperature is sensed one hour before the programmed On Time.

The temperature differential at the time of sensing the room temperature combined with the data from previous operation governs how long before the programmed On time the micro-computer will operate the heater and ignite the burner.

USING THE OVERRIDE FUNCTION

This function is used to manually override the current operation of the heater. For example: if the heater is between the finishing and starting times of a timer program and the Override button is selected, then the heater will begin to operate and heat the room.



The heater must be between the finishing and starting times of a timer program for the Override to function to work. Either of the Timer indicators (22) or (24) will be illuminated and the Combustion indicator (12) is illuminated green when this is the case. If the Override button (25) is pressed the Override indicator (26) will flash to show that the heater is now operating in override mode. The heater will now start and full manual control will now be available.

To cancel override and to return to Timer operation press the Override button (25) again. The Override indicator (26) will go out and the and Combustion indicator (12) will be illuminated green to confirm that timer operation has been restored and that the heater is awaiting a timer operation to begin. If the Override button (25) is not pressed the heater will remain on until the next programmed Off time setting is reached.

NOTE

If the ON/OFF button (2) or the OFF button (32) on the remote control are pressed the heater will be turned off and the timer programs will not operate.

USING THE AUTO OFF

The Auto Off function is useful in situations when the room temperature keeps rising even when the heater is on the lowest heat setting.

Auto Off Function 'OFF'

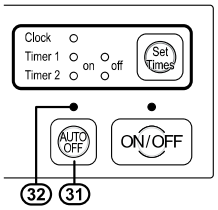
When the room temperature reaches the preset temperature with the Auto Off function 'OFF', the heater continues to operate with the front burner on low to provide a flame picture with minimal heat output. In some cases this may still cause the room to become warmer than desired.

Auto Off Function 'ON'

When the room temperature reaches the preset temperature with the Auto Off function 'ON' all main burners will extinguish after a 90 second delay, resulting in pilot burner operation only. Burners will re-ignite as required to maintain the set temperature.

To switch the Auto Off function 'ON', press the Auto Off button (31) once. The AUTO OFF indicator (32) will illuminate to confirm that the function has been selected.

To switch the Auto Off function 'OFF', press the Auto Off button (31) again. The AUTO OFF indicator (32) will go out to confirm that the heater is operating under thermostatic control.



LOCK AND SAFETY DEVICES (ETR MODEL)

USING THE LOCK FUNCTION

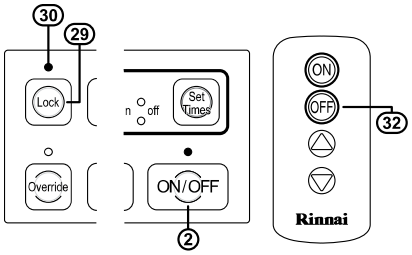
The Lock function is designed to prevent, accidental operations and small children from altering the heater settings.

To Activate the Lock

To activate the Lock function press the Lock button (29). The function is activated immediately and the Lock indicator (30) will be illuminated.

To Deactivate the Lock

To deactivate the Lock function press the Lock button (29) and hold for 3 seconds. The Lock indicator (30) will go out to show that the Lock function is no longer active. The Lock function can be deactivated at any time in this manner.



NOTE

If the Lock function is activated whilst the heater is in operation or in Timer mode, all controls other than the ability to switch the appliance OFF with the ON/Off (2) or OFF (32) buttons will be locked until the Lock is deactivated. Timer operations will not be affected and will continue to operate as programmed.

If the lock function is activated whilst the appliance is in the off position, all controls will be locked until the Lock function is de-activated.

If the appliance is switched off whilst the Lock function is activated, all controls will be locked until the Lock function is de-activated.

Lock programming (activated or de-activated) is stored in the appliance memory. Unplugging the appliance from the power supply has no effect on Lock programming.

SAFETY DEVICES

Over heat switches

When the heater gets too hot during operation (for example when the lower Air Intake Grille is blocked) these devices turn the gas off automatically and allow the heater to restart when cooled down.

Electrical fuse

The electrical circuits are protected by a fuse.

Flame failure sensing system

This device automatically cuts off the gas supply to the heater in the event of a flame failure.

Power failure

In the event of a power failure or power cut, the gas valves will automatically close.

Thermal Fuse

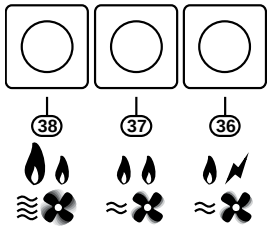
When the heater gets too hot, this device cuts the electrical power supply and turns the gas supply off. To reset this device requires a service call.

HOW TO OPERATE (MANUAL MODEL)

TO TURN THE HEATER ON (IGNITION)

Before you begin, ensure that both Gas and Power are connected to the appliance.

The buttons from right to left are the 'Ignition' (36), 'Low' (37) and 'High' (38). The buttons can only be pressed 'ON' in sequence from right to left and 'OFF' in sequence from left to right.

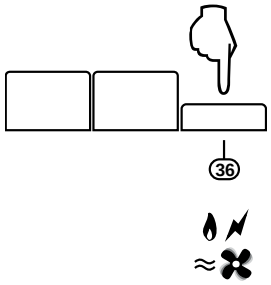


NOTE

At start up fan operation is delayed approximately 4 minutes to avoid cold air drafts.

The unit may make noises after ignition/extinction. This is due to expansion and contraction of the heater components and is normal.

Press and hold the 'Ignition' button (36) so that the electronic sparker can be seen or heard. When you observe that the front burner has been ignited continue to hold the button down for up to a further 15 seconds to fully establish the flame. The spark is continuous as long as the button is held in. When released the button will remain in the 'ON' position and the spark will cease.

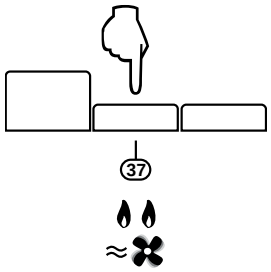


NOTE

When using the appliance for the first time or after long periods of disuse, ignition may not occur the first time it is operated as there may be air in the gas supply pipes.

If the front burner fails to remain alight, push the button again to return it to the 'OFF' position, wait 30 seconds, then repeat the above ignition procedure. (The ignition button must be in the "OFF" position before attempting re-ignition).

With only the 'Ignition' (36) button 'ON' the pilot and the front burner are ignited and the fan speed is set to low.



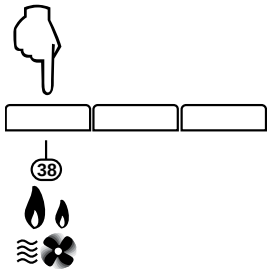
TO ADJUST THE TEMPERATURE

Use the remaining two buttons 'Low' (37) and 'High' (38) to vary both the burner and the fan settings as follows:

With the 'Low' (37) button 'ON' the main burner is also ignited, the fan speed remains set to low.

With the 'High' (38) button 'ON' the main burner is set to high and the fan speed is now also set to high.

There is no need to press and hold the 'Low' (37) and 'High' (38) buttons for 15 seconds when increasing or decreasing the heat.



TO TURN THE HEATER OFF

Press and release the buttons in order from left to right until all 3 buttons are in the "OFF" position.

NOTE

The appliance fan will continue to cycle for several minutes. This is to lower the temperature within the appliance and is normal. DO NOT disconnect the power during this time.

USING THE APPLIANCE DURING A POWER OUTAGE

During a power outage whilst the heater is operating the convection fan will cease operation even though the burners will continue to operate as normal. Until power is restored it is recommended that only the 'Low' setting is used as the appliance is protected by overheat switches which may cut out if used on the 'High' setting.

If the heater is turned off during a power outage it cannot be turned back on until power is restored.

CARE AND MAINTENANCE

Your heater needs very little maintenance, but the following information will help you to keep it looking good and working efficiently.

IMPORTANT

Unplug before cleaning.

All parts of the heater can be cleaned using a soft, damp cloth.

DO NOT use solvents to clean any parts.

DO NOT spray aerosols in the vicinity of the heater whilst in operation.

DO NOT place articles on or against this heater.

DO NOT store flammable materials near this heater.

DO NOT attempt to clean the heater while the appliance is hot or operating.

GENERAL OPERATION CHARACTERISTICS

Before asking for a service call please check the following table as these characteristics are part of the normal operation of the appliance and do not indicate a fault.

CHARACTERISTIC	EXPLANATION
At ignition:	
Warm air does not start when the burner lights.	The room fan air is started automatically after a short delay. This is to allow the heat exchanger to warm up, helping to avoid cold draughts.
Smoke or strange smells are produced on the first up operation after installation.	This is caused by grease, oil or dust on the heat exchanger. This will stop after a short time.
Sharp clicking noises at ignition, or when the unit thermostat modulates to a lower or higher setting, or shuts down.	This is simply expansion and contraction noise from the heat exchanger.
During combustion:	
Clunking noise when the thermostat operates	This is the sound of the solenoid gas valves opening and closing to regulate the gas flow.
When the appliance is turned off:	
Convection fan continues to run after turning off.	This is to remove residual heat from the heat exchanger and stops once the appliance cools.
Timer(s):	
Timer(s) do not operate at set time.	Timer(s) may either be inactivated or incorrectly programmed. Please confirm Timer(s) are set correctly. See page 8 for correct Timer(s) operation.
Timer operates for a short period and then cuts out.	Room temperature may be higher than the set temperature. Increase set temperature if desired. Cancel the Auto Off function.

SERVICE

Rinnai recommend that this appliance and installation be inspected and serviced every 2 years or more frequently.

If the power supply cord or any other component of the heater are damaged, they must be replaced by Rinnai or a suitably qualified person.

Any service or repair work should only be carried out by an authorised person. Rinnai has service and spare parts departments nationally. See back cover for contact details.

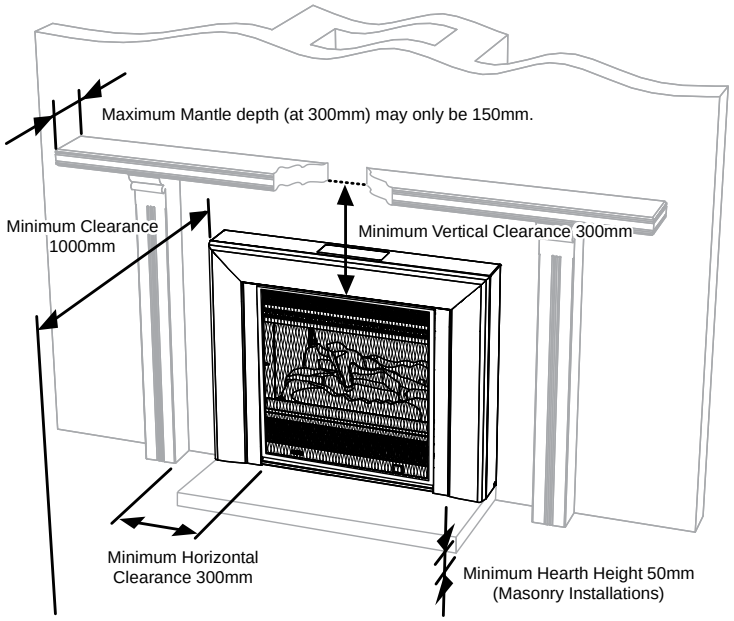
NOTE

Service calls for general cleaning, maintenance and wear and tear are not necessarily covered under the warranty. Service calls of this nature may be chargeable.
Faults caused by insufficient gas supply, gas quality, installation errors or operation errors are not covered by the Rinnai warranty. Refer to Warranty Card for details.

INSTALLATION GENERAL

When positioning the heater, the main points governing the location are:

- Flue connection and terminal to comply with AS/NZS 5601.
- Warm air distribution.
- Ensure that the area in which the appliance is installed has adequate fixed ventilation, this fixed ventilation must be provided as per AS/NZS 5601.
- The heater **MUST NOT** be installed where curtains or other combustible materials could come into contact with it. In some cases, curtains may need restraining.
- For masonry installations the heater must be mounted on a hearth that is not less than 50mm thick and at least the width and depth of the heater.



- A gas appliance **MUST NOT** be connected to a chimney flue serving a separate solid fuel burning appliance.
- Before installing the heater, inspect the chimney, flue piping and/or solid fuel burning fire place and remove any combustible materials.
- The heater is **NOT** designed to be directly built into bookcases, shelves or any combustible opening. A zero clearance kit is available for installations into a combustible enclosure.
- Mantles and surrounds can be added to complement the design provided that they conform to the clearances shown above.

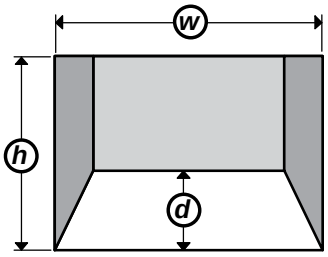
  The minimum clearance from the dress guard edge is 300mm. The depth of the mantle/surrounds at the minimum clearance may not exceed 150mm. An additional 100mm of clearance is required for every extra 50mm of mantle depth, i.e. for a 200mm deep mantle the clearance is 400mm.

ENCLOSURE TYPES AND REQUIREMENTS

The Rinnai Reflection can be installed into either an existing Masonry fireplace or when a zero clearance box is used into a decorative fireplace that is constructed from combustible materials such as wood or plaster.

The heater must be positioned on a flat and level surface that allows free movement of the appliance.

Enclosure Dimensions			
Install Type	Masonry	Wall / Elevated	
		Zero Box	Enclosure
ⓦ Width	600 ~ 790	690	700
ⓗ Height	620 ~ 675	730	735
ⓓ Depth	410 (min)	550	550 (min)
All the above dimensions are in millimetres. Minimum = (min).			



NOTE

When installing an elevated model a four sided fascia is used. Ensure that allowances are made for the dimensions of the fascia and that the zero clearance box is fully supported.

The recommended height for such installations is between 300mm to 400mm from the floor to the bottom of the Zero Clearance Box.

INSTALLATION GENERAL

UNPACKING THE APPLIANCE

If the heater is damaged, do not install heater and contact your supplier for advice.

Check that the correct model components have been supplied as follows:

Install Type	Masonry Spacer	Control Panel	Heater Engine	Fascia
Masonry ETR	With Control Panel		ETR	Masonry Fascia
Masonry Manual	Without Control Panel		Manual	
Wall ETR		Wall Mounted	ETR	Wall Fascia
Wall Manual			Manual	
Elevated ETR		Wall Mounted	ETR	Elevated Fascia
Elevated Manual			Manual	

The flexible gas connection and remote control (ETR model only) are packed with heater engine.

GAS SUPPLY

IMPORTANT

Confirm correct gas type (see labels located on top or rear panels). Refer to local gas authority for confirmation of gas type if you are in doubt.

Gas pipe sizing must consider the gas input to this appliance as well as all other gas appliances in the premises. The gas meter and regulator must be specified for the total gas rate. A suitable sizing chart such as the one in AS/NZS 5601 should be used.

Location

The gas supply (consumer piping) terminates inside the heater and enters the appliance from the rear.

Mark the vertical and horizontal location of the gas supply (consumer piping) form the centre-line ① of the heater enclosure. Mark the depth of gas supply (consumer piping) from the front of the enclosure opening ⑤.

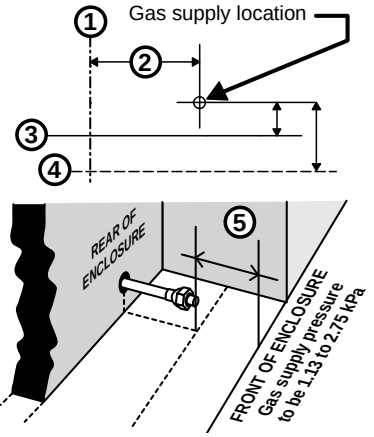
② 265 mm to right of centre-line

③ 60 mm from base of enclosure

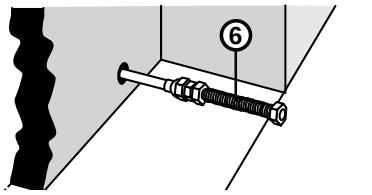
④ 110 mm from base of zero clearance box

⑤ Masonry Models, 110mm (ETR) or 185 mm (Manual)

⑤ Wall / Elevated Models, 210mm (ETR) or 285 mm (Manual)



Once the gas supply has been terminated to the above requirements the supplied flexible gas connection ⑥ may then be fitted.

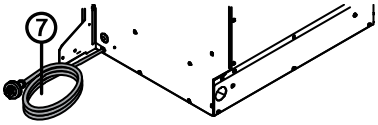


Purging Gas Supply

Debris such as swarf, filings, etc. must be purged from the gas supply, failure to do so may cause damage to the gas control valve.

ELECTRICAL SUPPLY

The heater engine is fitted with a 1.5 m power cord and three pin plug ⑦ which is located at the front, lower right side of the appliance.



Masonry Installations

Rinnai recommend the heater be plugged into a 240V, 10A earthed power point. This power point **MUST NOT** be located above the heater. Alternatively the appliance can be direct wired if the power supply is to be concealed.

Wall / Elevated Installations

Rinnai recommend the heater be direct wired via an isolated 240V,10A power connection.

IMPORTANT

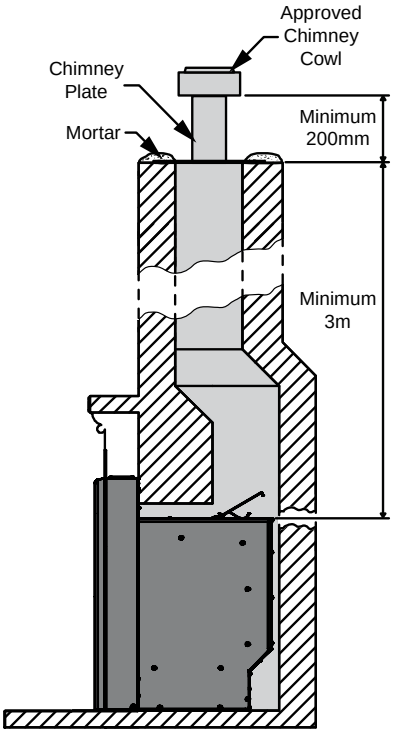
A qualified electrician will need to be consulted where a direct wired installation is required, any such installation must comply with the requirements of AS/NZS 5601, AS/NZS 3000 and any other relevant local regulations.

INSTALLATION MASONRY FIREPLACE

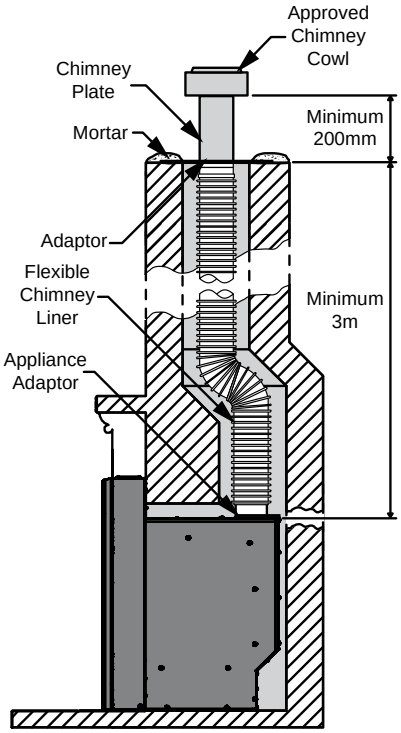
Two masonry flue installation options are available. These are Open Chimney and Lined Chimney.

An 'Open Chimney' installation uses the natural draft properties of a sound chimney along with the addition of an approved chimney plate and cowl to provide the flueing for the heater.

A 'Lined Chimney' installation is used when the existing chimney condition is inadequate for an Open Chimney' installation and uses a Rinnai Flexiliner (flexible) flue system, chimney plate and cowl to provide the flueing for the heater.



Open Chimney Installation



Lined Chimney Installation

OPEN INSTALLATION METHOD

The chimney must be physically checked first and must meet the following set of criteria along with local regulations. Failure to meet these criteria will not only void the product warranty but may affect the performance of the heater.

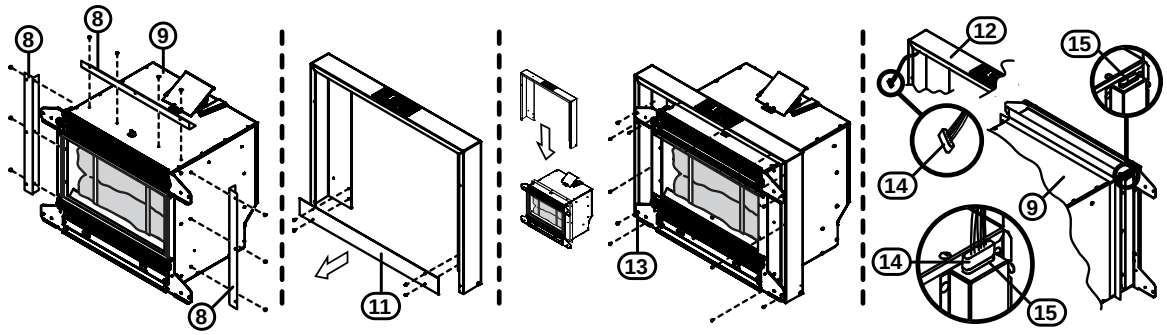
Chimney Criteria For Open Installation

- All loose/broken bricks must be replaced or repaired ensuring the chimney is of sound construction and does not leak.
- Any under floor air supply to the fireplace must be completely sealed off to prevent secondary air draw.
- Total chimney height **MUST NOT** be less than 3 metres and flue cowl must terminate above the chimney in accordance with AS/NZS 5601.
- The chimney must be swept clean and be free of soot and creosote that may have built up if previously used for a solid fuel fire.
- The hearth surface must be flat and level to support the entire heater. If the heater is not properly supported noise and vibration may result.

NOTE

In a masonry fireplace, use a slurry of sand and cement to level the base as required.

INSTALLATION MASONRY FIREPLACE



Sealing Plate Assembly

Fit the top and side sealing plates (8) to the heater engine (9) with screws provided.

Spacer Assembly

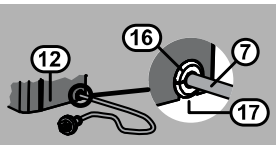
Unscrew the spacer finishing plate (11) from the spacer (12) (do not discard).

Connect the spacer (12) to both the heater engine support brackets (13) and the sealing plate (8).

Locate the control panel plug (14) and connect this to the polarized socket (15) that is located behind the upper left support bracket of the heater engine (9).

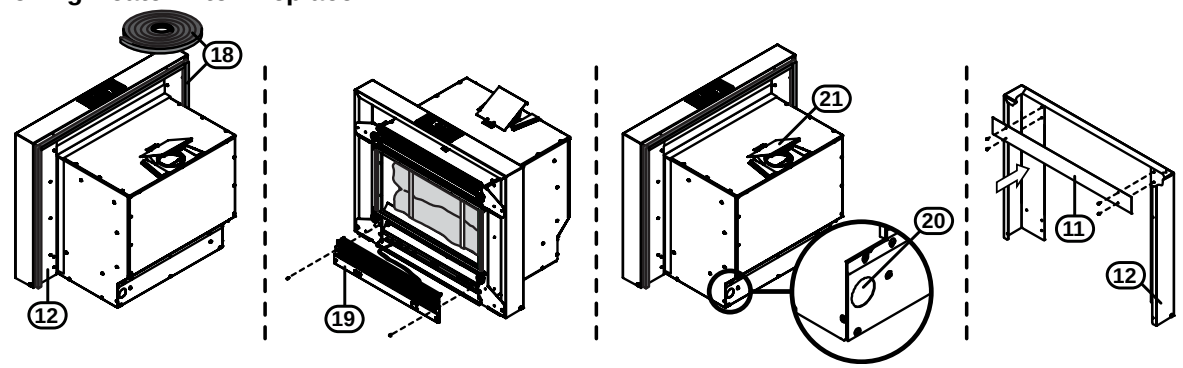
IMPORTANT

If the supplied plug and power cord (7) are to be used with an external power point then the power cord will need to be fitted with the supplied grommet (16) and fitted into the slot provided (17) on the bottom rear right of the spacer (12).



If the heater is to be direct wired, allowances for this type of installation must be taken into account at this point. A qualified electrician will need to be consulted where a direct wired installation is required. Any such installation must comply with the requirements of AS/NZS 5601, AS/NZS 3000 and any other relevant local regulations.

Moving Heater Into Fireplace



Stick the supplied foam sealing strip (18) to rear face of the spacer (12). The strip is intended to form a seal between the heater and the fireplace. If an adequate seal cannot be formed then another means of sealing must then be used. (e.g. non combustible insulation).

Place the heater assembly in front of the fireplace enclosure. Unscrew the room lower Air Intake Grille (19) from the heater engine (keeping the wiring attached) removal of this grille will allow the gas supply (6) to freely penetrate the appliance as it is pushed into the enclosure.

Carefully move the appliance into the enclose and ensure that the gas supply (6) feeds into the rear access hole (20). Care must also be taken to avoid damaging to the loose room lower Air Intake Grille (19) while positioning the appliance.

Care must also be taken to ensure that the debris diverter (21) remains in the lowered position as the heater is put into place.

IMPORTANT

The springs of the debris diverter (21) can be compressed to fit under the lintel. Caution must be taken to ensure that the debris diverter does not spring backwards to expose the flue terminal when the heater is in the final position.

INSTALLATION MASONRY FIREPLACE

Securing Heater To Fireplace

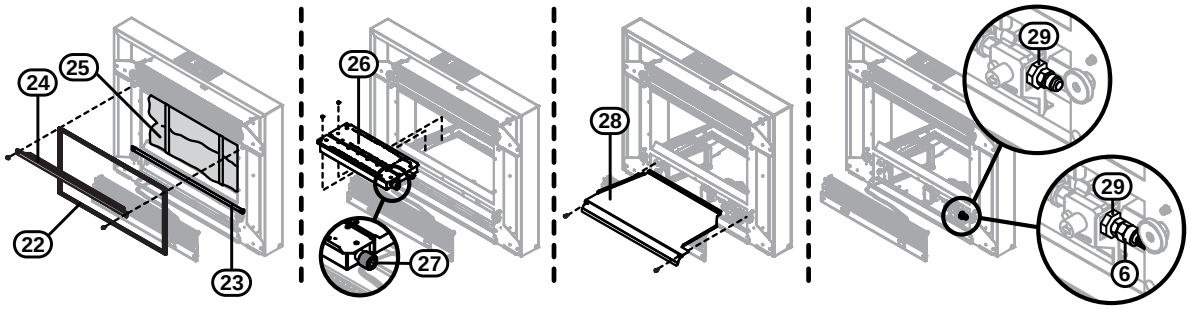
Use approved fasteners to affix the appliance to the face of the fireplace.

Attach the finishing plate (11) to the spacer (12) using screws and holes provided.

Connecting Gas to the Heater

WARNING **240 VOLTS, RISK OF ELECTRICAL SHOCK! Isolate the electricity supply before removing any panels.**

To gain access to the gas connection some disassembly is required as follows:



Remove the combustion chamber glass (22) from the appliance by first loosening the lower retaining bracket (23), then remove both the top retaining bracket (24) and glass together.

Remove logset packaging (25) from the combustion chamber.

Remove both front and rear (26) burners from the combustion chamber.

IMPORTANT **For natural gas appliances an aeration sleeve (27) is attached to the venturi of the front burner. Care must be taken when removing and refitting this burner to ensure that the aeration sleeve is not dislodged.**

Remove the Burner Tray (28).

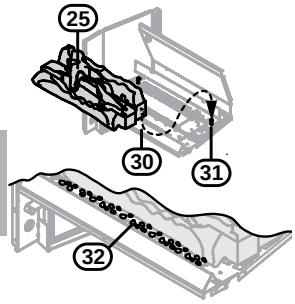
Connect the flexible gas connection (6) to the gas control valve (29) located on the lower right front of the appliance.

CAUTION **Use a soapy solution to test all gas connections. If a leak is present bubbles will form at the leak point. When finished remove any residue with a rag. Prevent any soapy solution from coming into contact with the electrical components.**

Refit the Burner Tray (28) and both the front and rear (26) burners.

Logset Installation

Unpack logset (25) from shipping material. Carefully place the logset into combustion chamber and position the logset location holes (30) over the positioning pegs (31).



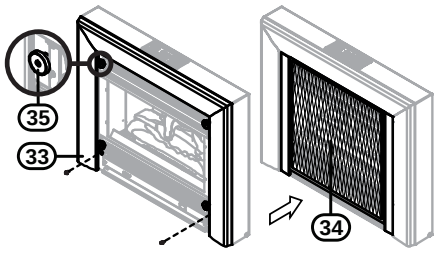
IMPORTANT **Take care to avoid contact with the side panels of the combustion chamber when inserting the logset.**

Carefully place (DO NOT POUR) granules (32) on the front burner only. Care must be taken to avoid pushing any of the granules under the logset.

Finalising Heater Installation

Refit combustion chamber glass (22) to the appliance ensuring that the joint in the glass sealing tape is at the bottom.

Refit the room lower Air Intake Grille (19).



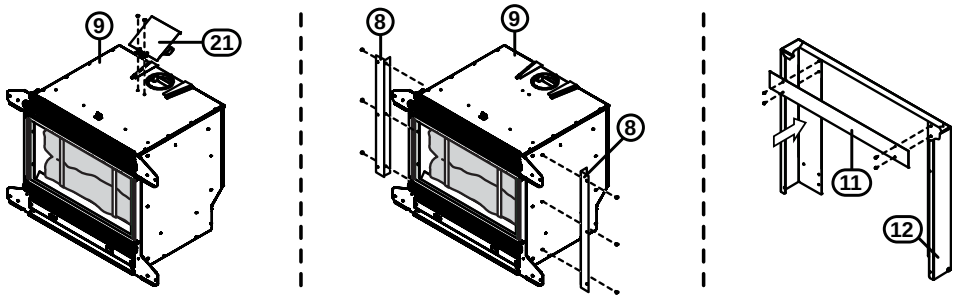
Fascia and Dress Guard Installation

Fit fascia panel (33) with screws provided and fit dress guard (34) via the four securing magnets (35).

INSTALLATION MASONRY FIREPLACE

LINED INSTALLATION METHOD

Installing the heater in a lined chimney is essentially the same as that of an open chimney, except that provision for the connection of a Flexiliner flue must taken into account.



Pre-Assembly

Remove and discard the debris diverter (21) from the heater engine.

Seal Assembly

Fit the two side sealing plates (8) to the heater engine (9) with screws provided (there is no need to fit the top sealing plate to the appliance, this part may be discarded).

Spacer Assembly

Refer to “Spacer Assembly” on page 17.

Flue Installation.

Install the flexiliner flue kit (FLEXLINER01) in accordance with the installation instructions that are provided with the flue kit.

Moving Heater Into Fireplace

Refer to “Moving Heater Into Fireplace” on page 17.

Flue Connection

Connect the flue to the appliance in accordance with the installation instructions that are provided with the flue kit.

After the flue has been connected to the heater, attach the finishing plate (11) to the spacer (12) using screws and holes provided.

Securing Heater To Fireplace

Refer to “Securing Heater To Fireplace” on page 18.

Connecting Gas to the Heater

Refer to “Connecting Gas to the Heater” on page 18.

Logset Installation

Refer to “Logset Installation” on page 18.

Finalising Heater Installation

Refer to “Finalising Heater Installation” on page 18.

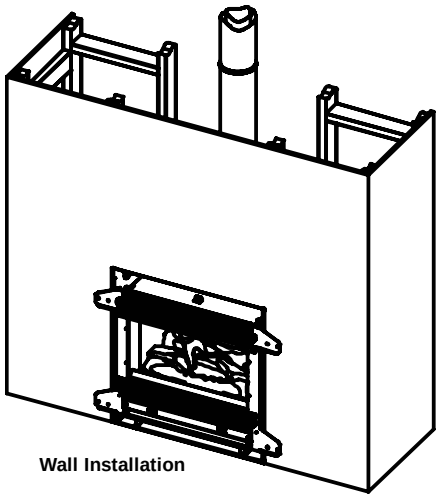
Fascia and Dress Guard Installation

Refer to “Fascia and Dress Guard Installation” on page 18.

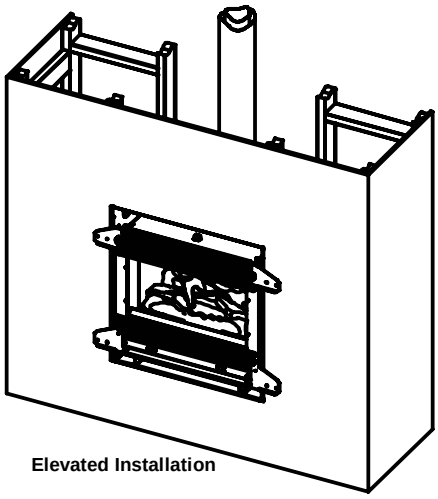
INSTALLATION DECORATIVE FIREPLACE

INSTALLATION METHOD

Two decorative fireplace options are available. These are Wall (installed at ground level) and Elevated (installed in an elevated location). ETR models are provided with a remotely wired wall mounted control panel.

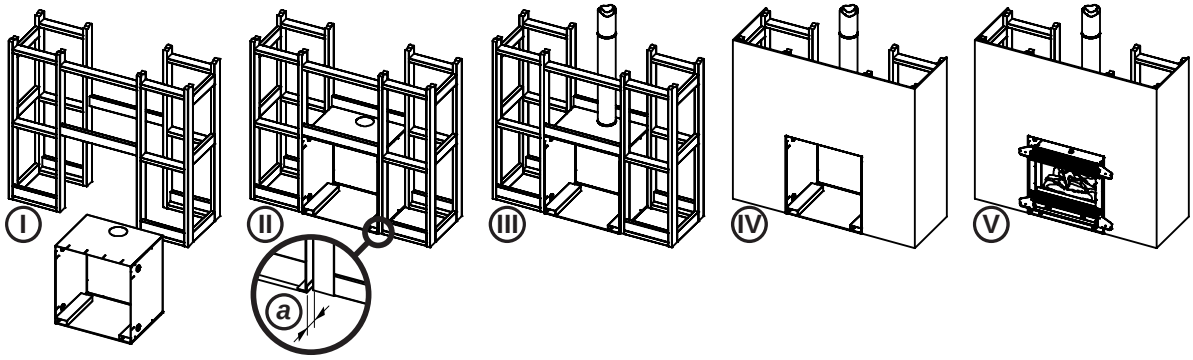


Wall Installation



Elevated Installation

Decorative Fireplace Installation Overview



Ⓘ Construct a frame in accordance with the “Enclosure Types and Requirements” on page 15.

Assemble zero clearance box in accordance with Assembly & Installation instructions provided.

Make provisions for both the Gas and Electrical supplies. See the sections “Gas Supply” and “Electrical Supply” on page 17.

Ⓘⓘ Install zero clearance box into frame making allowance ⓐ for the wall covering material depth (plaster is approximately 12mm). For detailed installation instructions refer to the Assembly & Installation instructions provided with the zero clearance box.

NOTE **Combustible materials can be placed hard up against the zero clearance box surface.**

Ⓘⓘⓘ Install the Rinnai rigid flue system components in accordance with the ‘Flueing Installation Manual For Rinnai Flamefire Heaters’ that are provided with the flue kit.

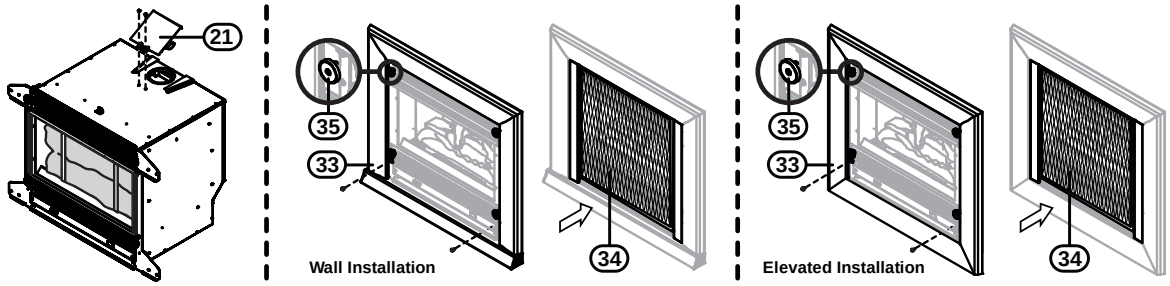
Run the control panel extension cable from the zero clearance box to the desired control panel location, ensure that 250mm of the extension cable remains inside the zero clearance box for connecting to the heater.

IMPORTANT **Only Rinnai rigid flue system components can be used in decorative fire place installation. Flexi-liner flue systems CAN NOT BE USED!**

Ⓘⓥ Apply wall covering material, ensure that access to the control panel extension cable is provided.

Ⓥ Commence heater installation.

INSTALLATION DECORATIVE FIREPLACE



Pre-Assembly

Remove and discard the debris diverter (21) from the heater engine.

Moving Heater Into Decorative Fireplace (Zero Clearance Box)

Refer to “Moving Heater Into Fireplace” on page 17.

Flue Connection

Connect the flue in accordance with the installation instructions that are provided with the flue kit.

Securing Heater To Fireplace

Refer to “Securing Heater To Fireplace” on page 18.

Connecting Gas to the Heater

Refer to “Securing Heater To Fireplace” on page 18.

Logset Installation

Refer to “Logset Installation” on page 18.

Finalising Heater Installation

Refer to “Finalising Heater Installation” on page 18.

Fascia and Dress Guard Installation

Refer to “Fascia and Dress Guard Installation” on page 18.

WALL MOUNTED CONTROL PANEL

The wall and elevated models of the ETR Reflection heater come with a wall mounted control panel.

In the control panel packaging are the following items:

- Control Panel
- Mounting Box
- Anchoring Springs
- 3 metre Extension Cable

CONTROL PANEL INSTALLATION

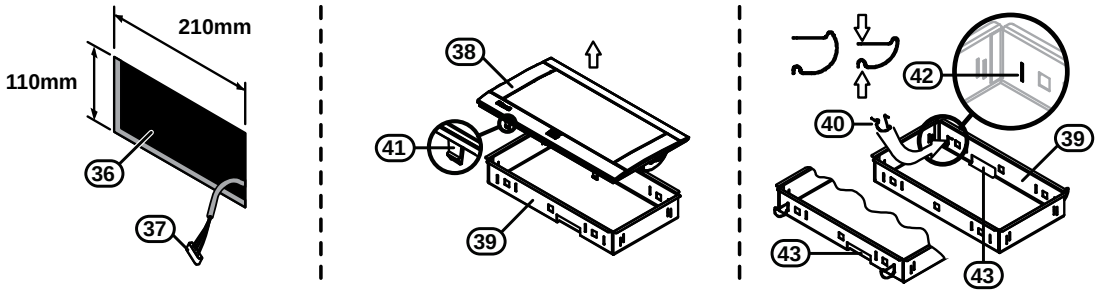
NOTE

If the control panel is to be installed before the heater, ensure that a 250mm length of cable is left inside the zero clearance box for connection to the appliance.

For installations where the length of the provided extension cable is insufficient, an optional 8 metre extension cable may be purchased separately.

Avoid co-locating or cable tying the control cable to other electrical cabling.

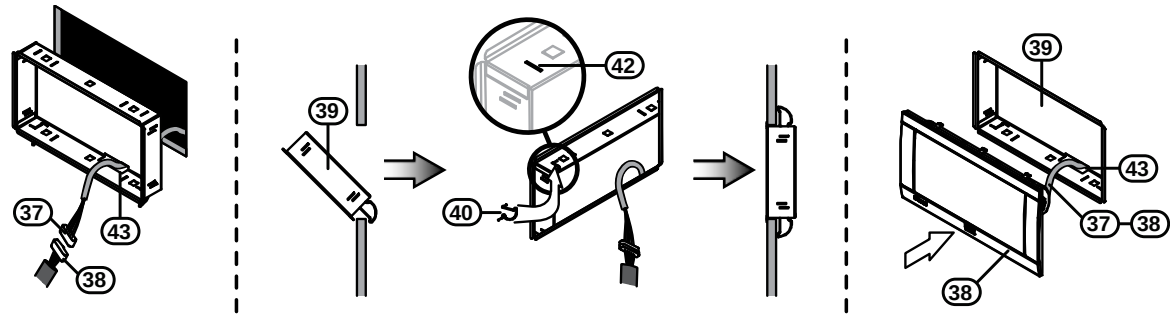
Cabling and location must comply with the requirements of AS/NZS 5601, AS/NZS 3000 and any other relevant local regulations.



Prepare an opening (36) 210mm wide by 110mm high at the desired control panel location and pull the extension cable (37) through this opening.

The control panel (38) and the mounting box (39) are assembled when packed and the hollow wall anchoring springs (40) are taped inside the mounting box. Separate the control panel from the mounting box by disengaging the five plastic securing tabs (41).

Working from the inside bottom of the mounting box, (noting that the cable access hole (43) faces downwards when installed) squeeze two anchoring springs (40) into the slots (42) provided. If an obstruction in the opening prevents the use of these slots, two of the side slots can be used as an alternative.



Pass the extension cable (socket) (37) through the cable access hole (43) and connect this to the polarised control panel cable (plug) (38).

Insert the mounting box (39) into the opening bottom first, working from the inside top of the mounting box. Squeeze the remaining two anchoring springs (40) into the slots (42) provided. If an obstruction in the opening prevents the use of these slots, two of the side slots can be used as an alternative.

Re-assemble the control panel (38) and mounting box (39), carefully feeding any excess extension or control cable (37) / (38) back through the cable access hole (43).

FLUEING

Please refer to the separate Flueing Instructions manual which is supplied with the Flame Fire Flueing Components.

COMMISSIONING AND TESTING

1. Confirm Burner (Test Point) Pressure

a. Turn OFF and disconnect the 240 V electric power supply connection.

b. Turn ON the gas supply.

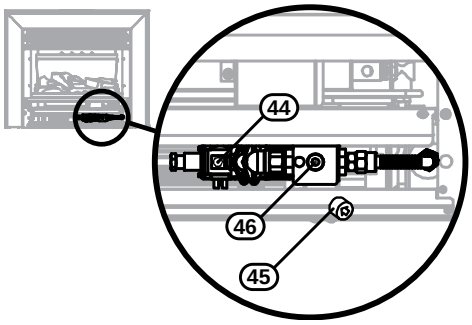
c. Remove the lower Air Intake Grille and Dress Guard.

d. Refer to the Data Plate for applicable burner (test point) pressures.

e. Remove the test point screw (44) from the gas valve and attach manometer to the test point.

f. Turn ON the electric supply, light the heater, turn to the HIGH setting and check test point pressure.

g. If the test point pressure requires adjustment, remove the regulator pressure adjustment cover plate (45) and adjust the pressure by turning the adjustment screw (46), clockwise to increase pressure, counter clockwise to decrease pressure (see diagram below).



h. After pressure checking & adjustment, turn OFF the appliance, remove manometer, re-insert the test point screw and replace pressure adjustment cover plate. Turn ON appliance and check for gas leaks at test point screw.

i. Turn the appliance 'on' and 'off' a number of times to confirm correct operation.

NOTE

If the heater is not operating correctly refer to Trouble Shooting before contacting Rinnai.

During the initial burning in period of approximately 2 hours, some smoke and smell may be experienced. During this period the heater should be operated on High and the space being heated should be well ventilated. It may take up to 2 hours of operation for the logs to achieve their full flame pattern and glow.

j. Replace room return lower Air Intake Grille.

NOTE

Burner aerations are factory set and must not be adjusted.

2. Check Flue Operation

It is the responsibility of the installer to check there is correct 'flue draw', that is, that all flue gases are exhausted to the outside atmosphere and that there is no spillage of combustion gases into the room under normal operating conditions. Refer to ""TESTING FLUE DRAW" on page 25" for test method.

NOTE

FOR MASONRY FIREPLACE INSTALLATIONS OF THE 'OPEN CHIMNEY' TYPE:
The heater is designed to be compatible with the vast majority of masonry fireplaces and be installed in an 'open chimney' manner, if the chimney is sound and does not leak. However, mansonry fireplace designs vary widely and in a minority of masonry installations of the 'open chimney' type, conversion to a 'lined chimney' installation using a Rinnai Flexliner (flexible) flue system may be required to achieve adequate flue draw.

3. Advise Customer

Ensure the customer understands the operating instructions and the operation of the appliance. Advise the customer that during the initial burning in period of approximately 2 hours, some smoke and smell may be experienced. During this period the heater should be operated on High and the space being heated should be well ventilated.

COMMISSIONING AND TESTING

INSTALLATION AND COMMISSIONING CHECKLIST

- Complete the Installation Check list and the installer details.
- Instruct customer on Reflection Flame Fire Space Heater operation.

WARNING

Ensure the Customer understands that:

- **No part of this appliance should be permanently removed.**
- **Paper or other material must not be burnt in this appliance.**
- **Young children and the infirm should be supervised at all times.**

TESTING FLUE DRAW

The Rinnai Reflection Flame Fire is a natural draft gas appliance (excepting balanced flue models) have a down draft diverter fitted to the unit to prevent products of combustion being pushed into the combustion chamber during times of a down draft condition. In order that these flue products do not contaminate the combustion process, the appliance is designed to 'divert' the flue products away from the combustion chamber and be relieved into the room via separate ducting within the appliance.

Carbon Monoxide Spillage

Even if a flue draws correctly, should a heat exchanger be cracked or damaged and the combustion process of an appliance is not correct, it can be possible for CO to be released into the room when the appliance is operating.

This applies particularly to old appliances. Testing for CO content near convection air outlet is to be done with an appropriate CO detector.

As part of any general service, an inspection of the condition of the heat exchanger as well as ensuring a properly cleaned burner and correct combustion is essential to the continued safe and efficient operation of any gas space heater.

General Inspection:

While carrying out a routine service on a heater, it is important to check that the entire installation is still safe.

Many heaters installed in the field are often a 2nd or 3rd generation of the original installation that may have occurred way back in the 1960's.

It has been quite a common practice to change the heater for a new model, but leave the original gas cowl installed on top of the chimney or flue. Over time these old flue cowls have rusted and even collapsed, or the design of the old cowl was not as efficient as a current approved gas cowl.

In such cases, Rinnai strongly advises that the old cowl should be changed for a current approved model. The general condition of flue pipes and their connections must also be checked.

Likewise, appliances should be checked to see if they are still properly sealed and secured to the fireplace, or indeed the fireplace is still in a sound condition.

Method of testing the IB300ETR / IB300 Reflection Flame Fire:

The IB300ETR / IB300 Reflection Flame Fire models have a down draft diverter fitted to the appliance to prevent products of combustion being pushed down into the combustion chamber when there is a downdraft event.

Use the following method to test for CO emission levels:

- Ensure heater is turned OFF.
- Ensure that the front/back doors and all windows are closed.
- Take CO background reading BEFORE turning on appliance. Record reading obtained.
- Operate appliance for AT LEAST ten minutes to allow unit and flue to reach correct operational temperature. Isolate appliance and contact Technical Authority. With the use of a carbon monoxide tester, check CO levels (Refer to Diagram 1).
- Operate all extraction fans that are present in the house ie. kitchen rangehood, bathroom/toilet extraction fan, etc.

- Take CO reading. A reading no higher than that of the background reading is acceptable.
- If a reading higher than that of the background reading is obtained, check for correct flue draw with the use of a smoke match (Refer to Diagram 1). If not okay, then it MUST be investigated further to determine the cause. ie cracked heat exchanger or other damaged to appliance.

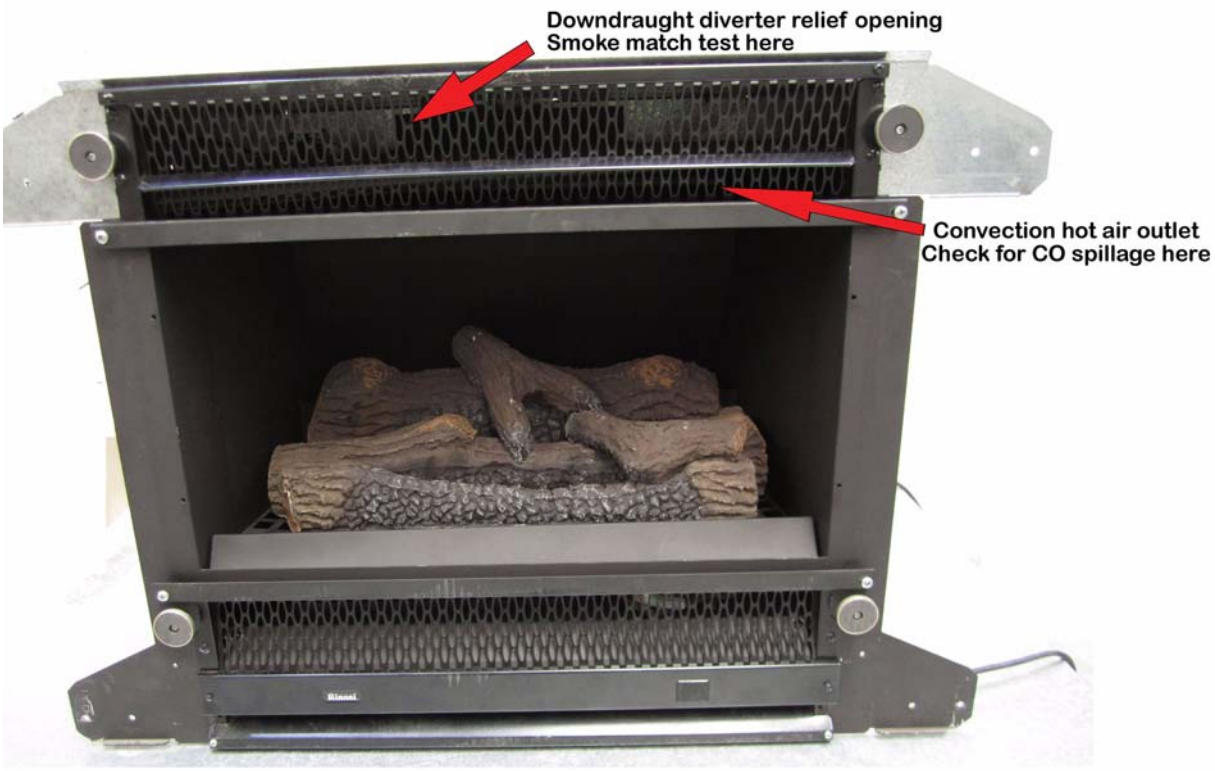


Diagram 1.

ADJUSTMENTS

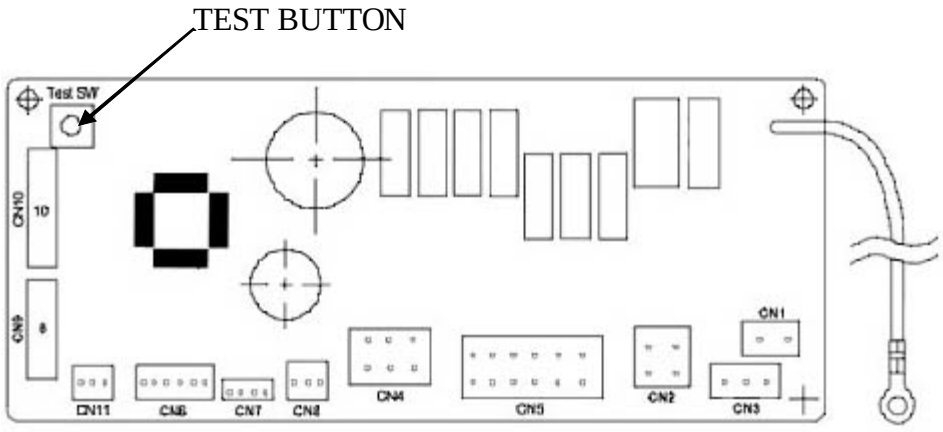
NOTE

- **Pilots and aeration parts are fixed and non-adjustable.**
- **Ignition (spark gap) comes pre-set and no adjustment is required.**

COMMISSIONING AND TESTING

PCB Configuration

1. Ensure that the appliance is powered up but in standby mode.
2. Press the red test button on the PCB (top front corner for inbuilt heater, top left corner for freestanding) for about 1 second. The LED will display a code at each stage to verify settings. Use the "∧" and "∨" on the control panel to change the settings at each stage and use the test button to move to the next stage.



There are three settings that can be changed:

a. Country of use:
- AU for Australia, New Zealand and Europe (°C)
- US for America (°F)

b. Appliance type:
- IB for inbuilt
- FS for freestanding

c. Gas type:
- LP for LPG/Propane
- 13 for Natural gas

3. Pressing the test button again will return the display to --:-- or the current time & save the settings.

The test button can also be used to step through each of the burner settings:

1. Make sure the burners are alight.
2. Press the red test button (the heater will drop to pilot only).
3. Use the " ∧ " and " ∨ " buttons on the control panel to step through the heat settings (pilot, low, med/low, med/high, high).
4. Press the ON/OFF button to return the heater to normal operation.
5. Set Gas pressure as per the following:
    a. Remove the test point screw and place manometer on test point.
    b. Start heater and ensure that it is set to high (all burners going).
    c. Check for correct pressure (refer data plate).
    d. If pressure needs adjusting then remove regulator cap and adjust pressure till correct.
    e. Reinstall regulator cap.
    f. Remove manometer and reinstall test point.
    g. Replace covers/louvers and close door/s.

DISMANTLING FOR SERVICE

NOTE: Before proceeding with dismantling, be sure to follow the CAUTION instructions before each explanation.

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply.

All work should be carried out by qualified service technician

Unless otherwise stated, re-assembly is the reverse of dismantling.

DISMANTLING FOR SERVICE

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

1) Removal of Front Panel

a. Remove Dress Guard by lifting bottom section forward and up (Refer to Image 1).

Place Dress Guard away from heater in a safe place.

IMAGE 1

b. Remove Lower Air Intake Grille by removing 2 x screws, one either side of Grille (Refer to Image 2).

IMAGE 2

c. Remove 2 x screws at Upper Air Discharge Grille (Refer to Image 3).

Move Upper Air Discharge Grille away from heater approximately 150mm.

IMAGE 3

DISMANTLING FOR SERVICE

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

d. Disconnect Remote Control Receiver Cable from Lower Air Discharge Grille by depressing lugs and lifting receiver away from grille. (Refer to Image 4).

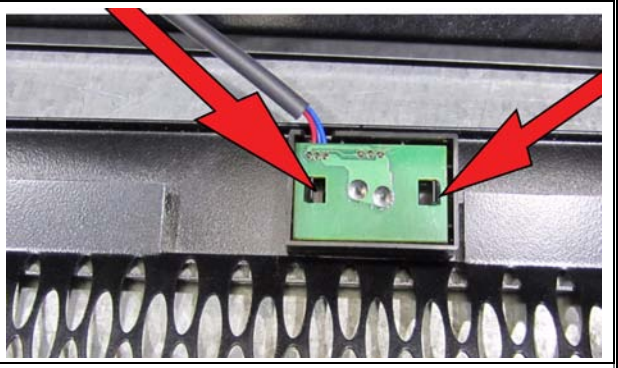


IMAGE 4

2) Removal of Combustion Chamber Glass

a. Remove Front Panel (Refer to Step 1).

b. Loosen 2 x M5 screws from Bottom Glass Retainer.

c. Remove 2 x M5 screws from Top Glass Retainer (Refer to Image 5). Lift off Top Retaining Bracket.

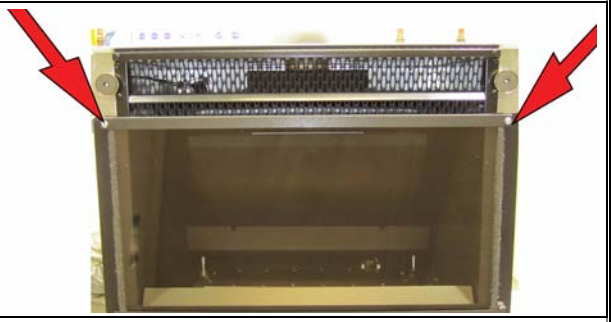


IMAGE 5

d. Lift Combustion Chamber Glass out of Bottom Glass Retainer and place away from heater in a safe location.
NOTE: Take care not to damage seal on glass.

3) Removal of Front Burner

a. Remove Front Panel (Refer to Step 1) and Combustion Chamber Glass (Refer to Step 2).

b. Remove Log Set by lifting up and out. Take care not to damage Log Set.

c. Carefully remove Granules from on top of Front Burner.

d. Remove 1 x retaining screw on left hand side of Burner (Refer to Image 6).

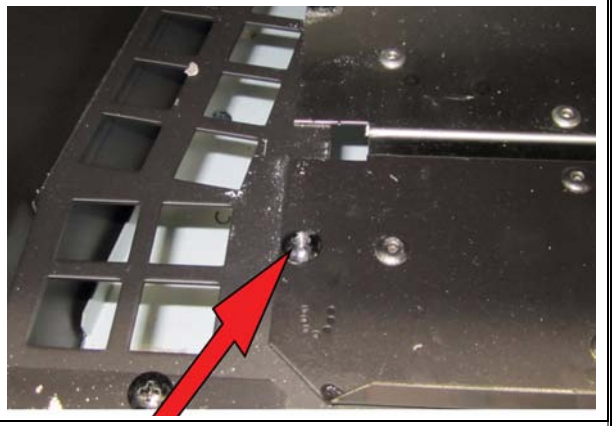


IMAGE 6

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

e. Slide Burner to the left side to clear the Injector.

NOTES:

- Ensure you do not drop aeration sleeve when removing Burner.
- Front Burner has full sleeve with one notch for NG burners.
- LPG Burner does not have aeration sleeve.

4) Removal of Rear Burner

a. Remove Front Panel (Refer to Step 1), Combustion Chamber Glass (Refer to Step 2) and Log Set (Refer to Step 3b).

b. Remove retaining screw left hand side of the Rear Burner (Refer to Image 7).

c. Slide Burner to the left side to slide if off from Injector. Lift Burner up and out.

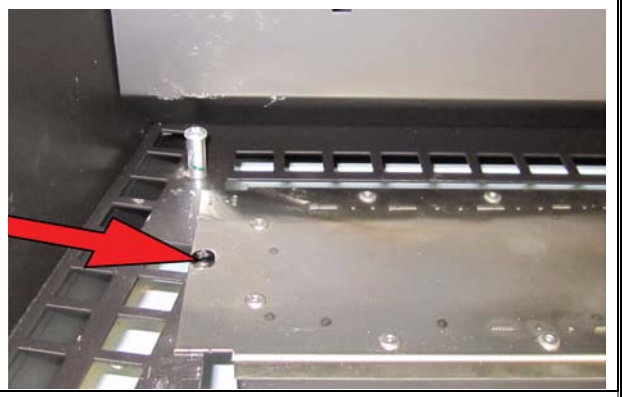


IMAGE 7

5) Removal of Front Pilot/Pilot Injector

a. Remove Front Panel (Refer to Step 1), Combustion Chamber Glass (Refer to Step 2) and Log Set (Refer to Step 3b).

b. Remove 1 x screw from left side of Top Cover Plate (Refer to Image 8).

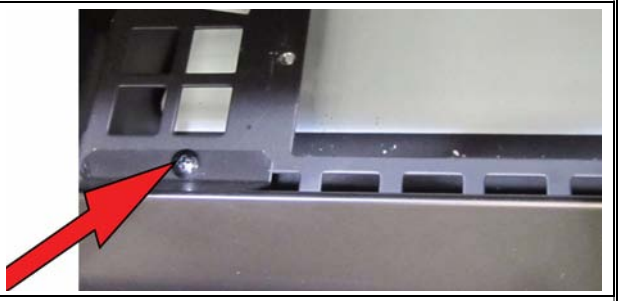


IMAGE 8

c. Remove Pilot Head by lifting up. (Refer to Image 9).

d. Remove Pilot Injector by unscrewing using 5/32 Allen Key.

e. Pilot Injector can be cleaned or replaced.

f. Follow same procedure for removal of Rear Pilot Assembly.

NOTE: Pilot Head has locating slot to ensure proper assembled location.

IMAGE 9

DISMANTLING FOR SERVICE

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

6) Removal of Burner Tray

a. Remove FP x 1. Remote short rear flame rod sensor. See Step 3 & Step 4.

NOTE: Be careful not to catch wires on Panel Fan Partition Lower while sliding forwards and during reassembly.

b. Remove 2 x screws from Burner Tray Cover Plate (Refer to Image 10).

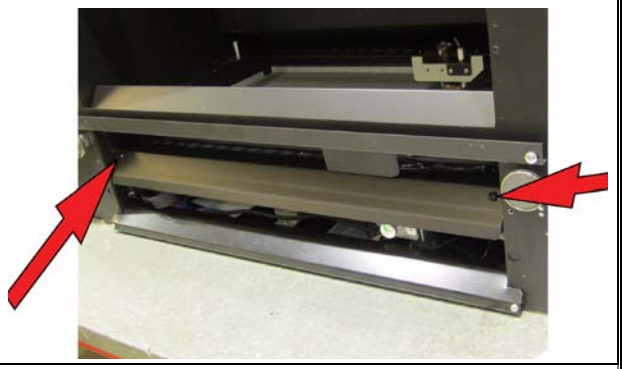


IMAGE 10

b. Remove 2 x screws either side of Panel Fan Partition Lower.

c. Slide out Burner Tray (Refer to Image 11).

NOTE: During re-assemble make sure panel for partition trim is correctly located to ensure no disturbance of conbustion air via convection fan.

d. When refitting you will need to remove burner first, and only replace burner when air shield is fitted back.

IMAGE 11

7) PCB Removal

a. Disconnect wires plugged into PCB, 10 plugs in total.

b. Remove 1 x screw on left side of PCB (Refer to Image 12).

IMAGE 12

c. Unscrew nut on earthing wire.

d. Tilt left hand side of PCB forwards, slide PCB to left to remove unit from locating grooves.

e. Remove PCB housing, 2 x screws (Refer to Image 13).

IMAGE 13

DISMANTLING FOR SERVICE

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

8) Removal of Transformer

a. Disconnect wiring between Transformer and PCB.

b. Remove 2 x screws and lift transformer out (Refer to Image 14).

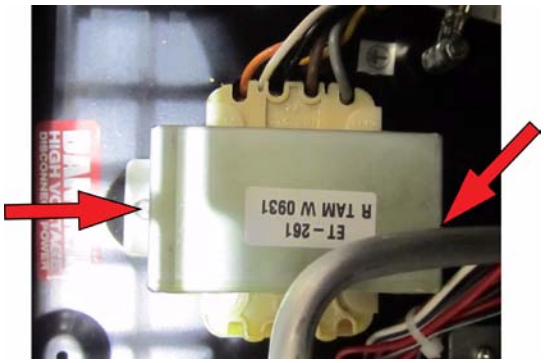


IMAGE 14

9) Removal of Overheat Thermistor/ Thermal Fuse/Flue Blockage Thermistor

NOTE: Heater must be removed from chimney or Zero Clearance Box to gain access to Overheat Thermistor/Thermal Fuse Assembly.

a. Remove 11 x screws from top panel (Refer to Image 15).

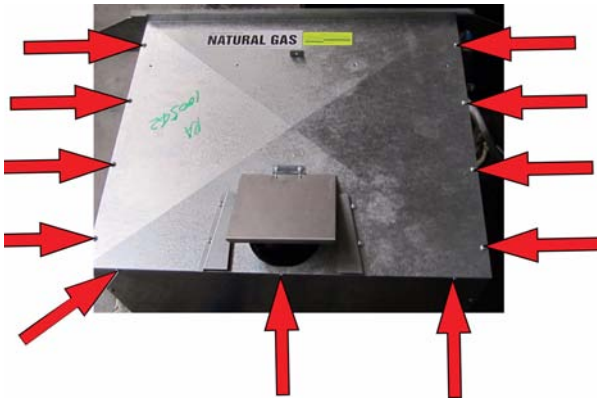


IMAGE 15

b. Remove back panel, 12 x screws (Refer to Image 16).

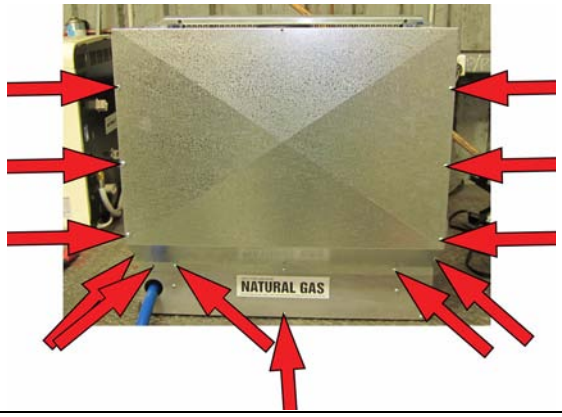


IMAGE 16

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

c. Remove Thermal Fuse from top (1 x screw) and Overheat Thermistor from back (1 x screw) (Refer to Image 17).

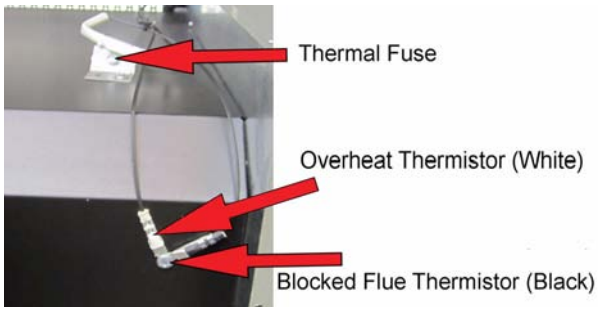


IMAGE 17

10) Removal of Fan

a. Remove Front Panel (Refer to Step 1), Combustion Chamber Glass (Refer to Step 2), Front and rear burners. (Refer to Steps 3 & 4), Burner Tray (Refer to Step 6) and PCB (Refer to Step 7).

b. Remove 4 x screws from Fan Mount Brackets, two on the left hand side (Refer to Image 18A) & two on the right hand side (Refer Image 18B).

NOTE: Using a 300mm length Phillips screwdriver will provide better access to mounting screws.

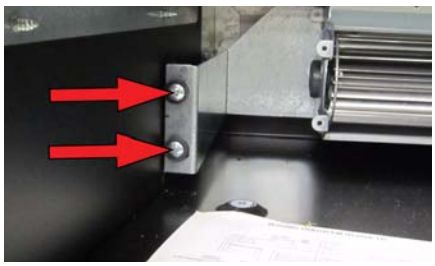


IMAGE 18A

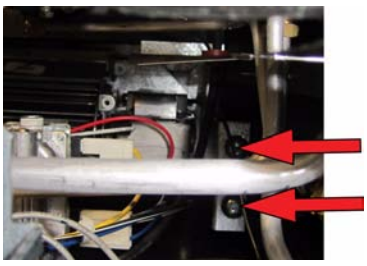


IMAGE 18B

c. Remove Fan by gently tilting Fan Assembly and swing to the left, guiding outwards.

NOTE: Take care not to damage fan blade as fan is manoeuvred past Gas Valve.

d. Note position of wire connectors before disconnecting from Fan Motor. Refit wires in same position.

e. Remove 3 wires connected to Fan Motor (Refer to Image 19).

f. Remove and replace complete Fan.

NOTE: Be careful to ensure no damage is done to fan blades during removal.

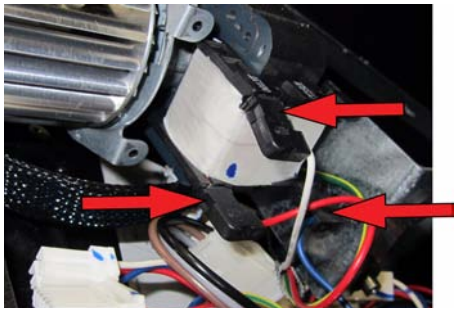


IMAGE 19

DISMANTLING FOR SERVICE

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

11) Removal of Gas Valve and Pilot Assembly

a. Isolate and disconnect gas supply.

b. Remove wiring to central timer. (Refer to Image 20).

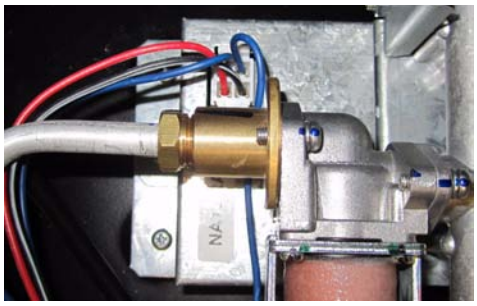


IMAGE 20

c. Slide back Sleeve Electrode on Ignitor. Remove nut on Ignitor and nut on Flame Rod (Refer to Image 21).

d. Remove Pilot Head by lifting upwards to clear retaining clip.

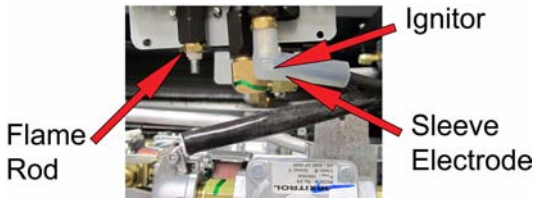


IMAGE 21

e. Remove 2 x Pilot Bracket Screws at each of Front and Rear Pilot Brackets. (Refer to Image 22).

IMAGE 22

f. Remove 3 x screws securing Injector Assembly to body (Refer to Image 23).

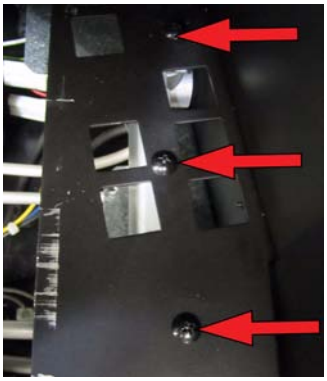


IMAGE 23

DISMANTLING FOR SERVICE

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

g. Remove 4 x screws on Gas Valve Mounting Plate (Refer to Image 24).

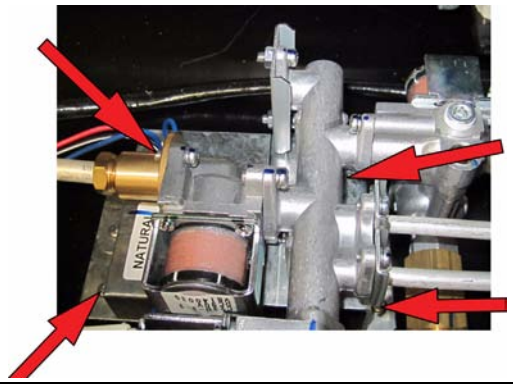


IMAGE 24

h. Remove wiring attached to Gas Valves, 5 connectors in total (Refer to Image 25).

- Carefully note wire colour combination on the Gas Valve, taking care to ensure that correct wires are replaced in correct position.
- Disconnect Pilot Tubes and Gas Supply Tubes (Refer Image 25).
- Gas Valve Assembly can now be carefully removed.

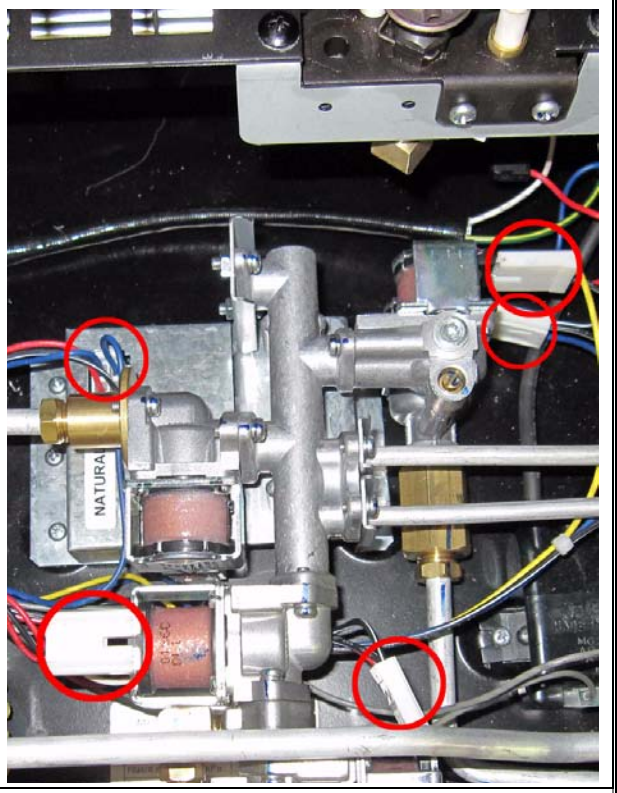


IMAGE 25

DISMANTLING FOR SERVICE

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

12) Removal of Heat Exchanger

a. Isolate and disconnect gas supply.
b. Disconnect flue.
c. Remove appliance from enclosure.
d. Remove Combustion Glass assembely (Refer to Step 2) (Image 5).
e. Remove Log Set (Refer to Step 3b).
f. Remove 11 x screws from Panel Fan Partition Lower (Refer to Image 15).
g. Remove Panel Fan Partition Lower, 12 x screws (Refer to Image 16).
h. Remove 14 x screws on RHS panel (Refer to Image 26).

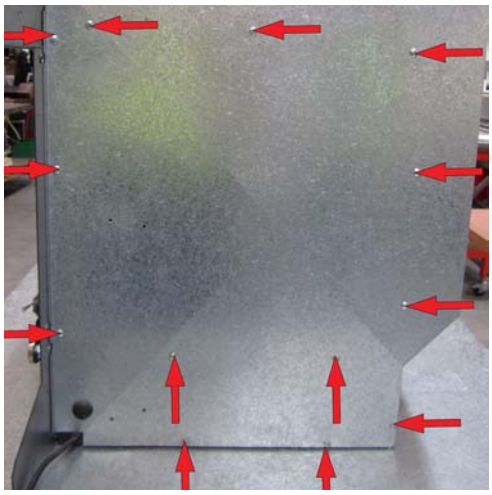


IMAGE 26

i. Remove 3 x screws securing cable cover on LHS of appliance (Refer to Image 27A) and cable cover connector by depressing 2 x lugs on connector and pushing down, then undoing cable clips on wiring (Refer to Image 27B).

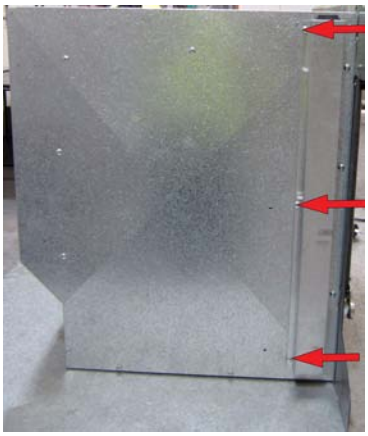


IMAGE 27A

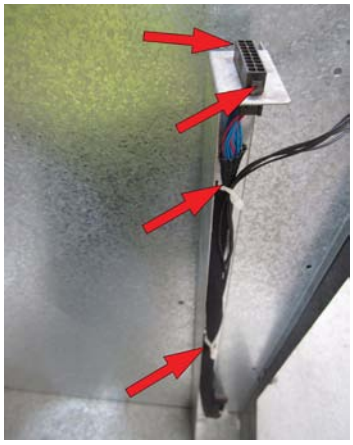


IMAGE 27B

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

j. Remove 12 x screws on RHS panel (Refer to Image 28).

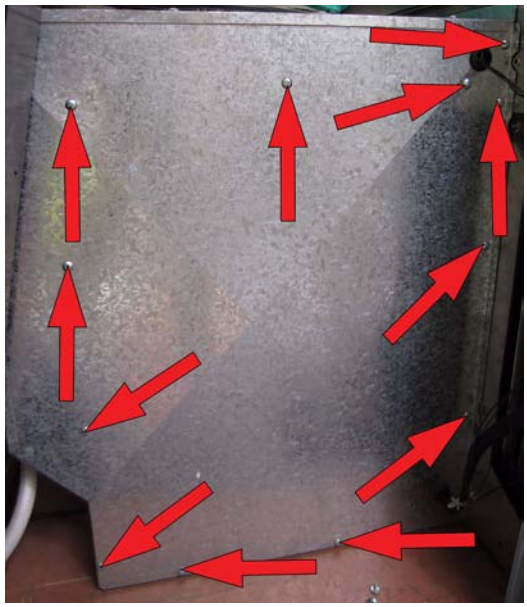


IMAGE 28

k. Remove Thermal Fuse from top (1 x screw) and Overheat Thermistor / Blocked Flue Thermistor from back (1 x screw) (Refer to Image 17).

l. Remove Down Draft Diverter, 15 x screws (Refer to Image 29).

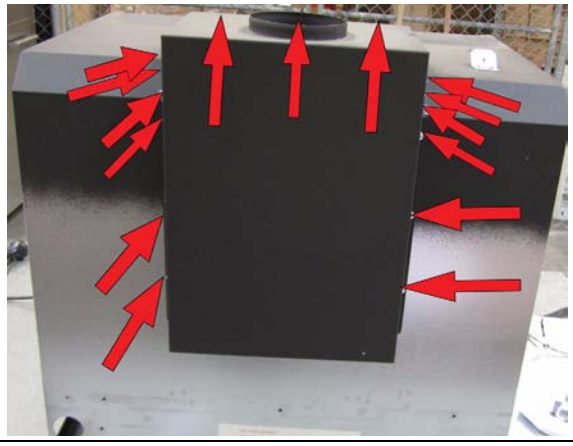


IMAGE 29

DISMANTLING FOR SERVICE

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

m. Remove 5 x screws from Inner Rear Panel (Refer to Image 30).

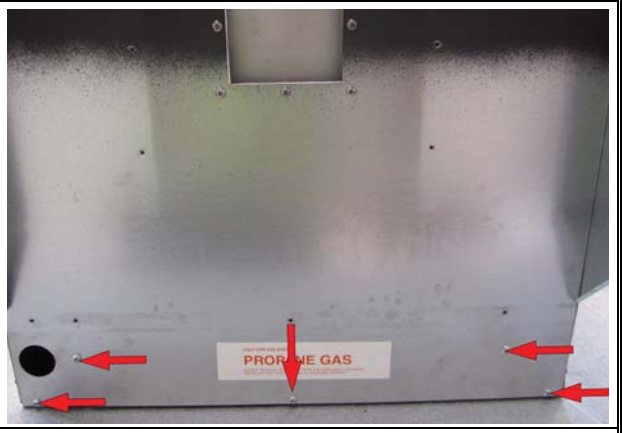


IMAGE 30

n. Remove 8 x screws on Inner Rear Panel (Refer to Image 31).

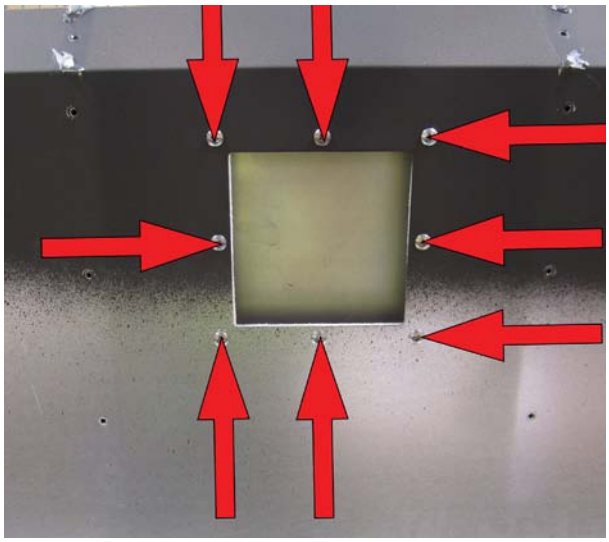


IMAGE 31

DISMANTLING FOR SERVICE

DO NOT MODIFY THIS APPLIANCE.

CAUTION

240 Volt exposure. Isolate the electrical supply to the appliance and reconfirm with the volt stick / neon screwdriver or multimeter. Disconnect gas supply. All work should be carried out by qualified service technician.

o. Remove 2 x screws from Panel Fan Partition Trim, one either side of appliance (Refer to Images 32A & 32B).

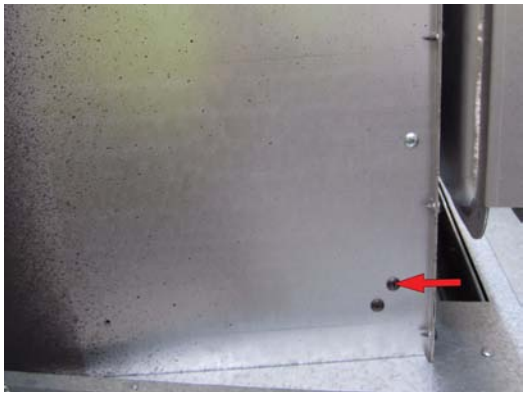


IMAGE 32A

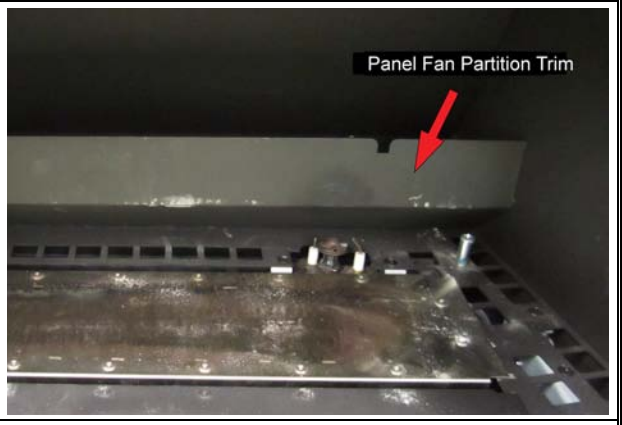


IMAGE 32B

p. Remove 2 x screws on face of Panel Fan Partition Lower (Refer to Image 33A) and 4 x screws, two on either side of heat shield (Refer to Image 33B).

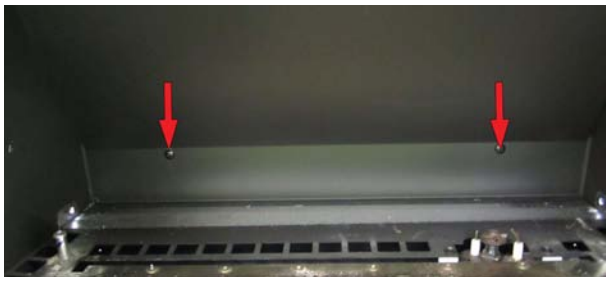


IMAGE 33A

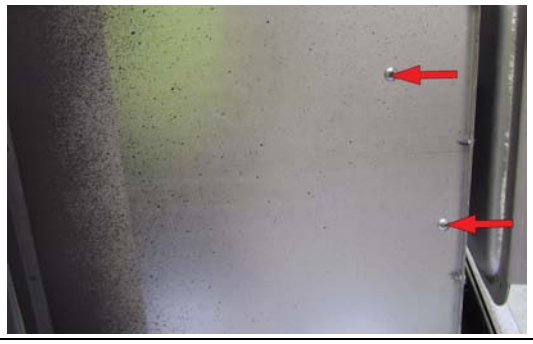


IMAGE 33B

q. Remove 10 x screws securing Heat Exchanger (Refer to Image 34).

NOTE: Any damage to seals should be replaced.

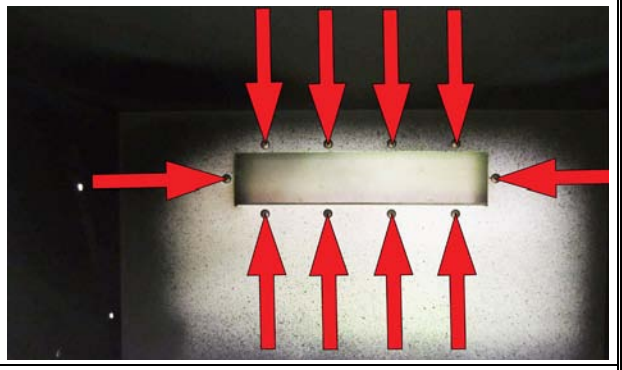


IMAGE 34

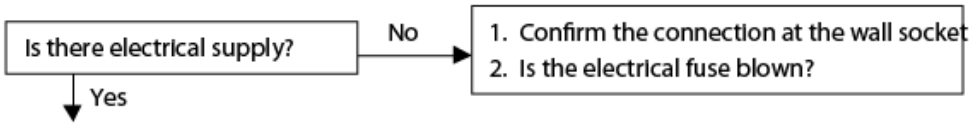
TROUBLE SHOOTING GUIDE

FAULT ANALYSIS / FAULT FINDING

Note: Before carrying out resistance checks, disconnect power

A. After pressing the Heater ON/OFF button

i. The sequence does not continue
ii. There is no spark (approx. 15-sec. after attempted operation)
iii. The solenoid valves do not open
iv. The convection fan does not begin to rotate after 4 minutes



i. The sequence does not continue
1. Broken wiring or loose pin connectors (open circuit)
2. Faulty ON/OFF button ..... (error code "70")
3. Faulty PCB
4. Faulty Control Panel
5. Faulty Overheat Switch ..... (error code "14")
6. Thermal Fuse has melted ..... (error code "99")
7. Solenoid Valve Circuit driver error ..... (error code "71")
8. Flame rod current was over 0.2 mA while pre-purging ..... (error code "72")

ii. There is no spark (error code "11")
1. Loose power cord (broken wiring or loose pin connectors)
2. Leaks due to broken electrodes etc (no constant sound)
3. Insufficient spark gap (spark electrode gap should be 3.5 $\pm$0.5mm)
4. Faulty sparker
5. Faulty PCB

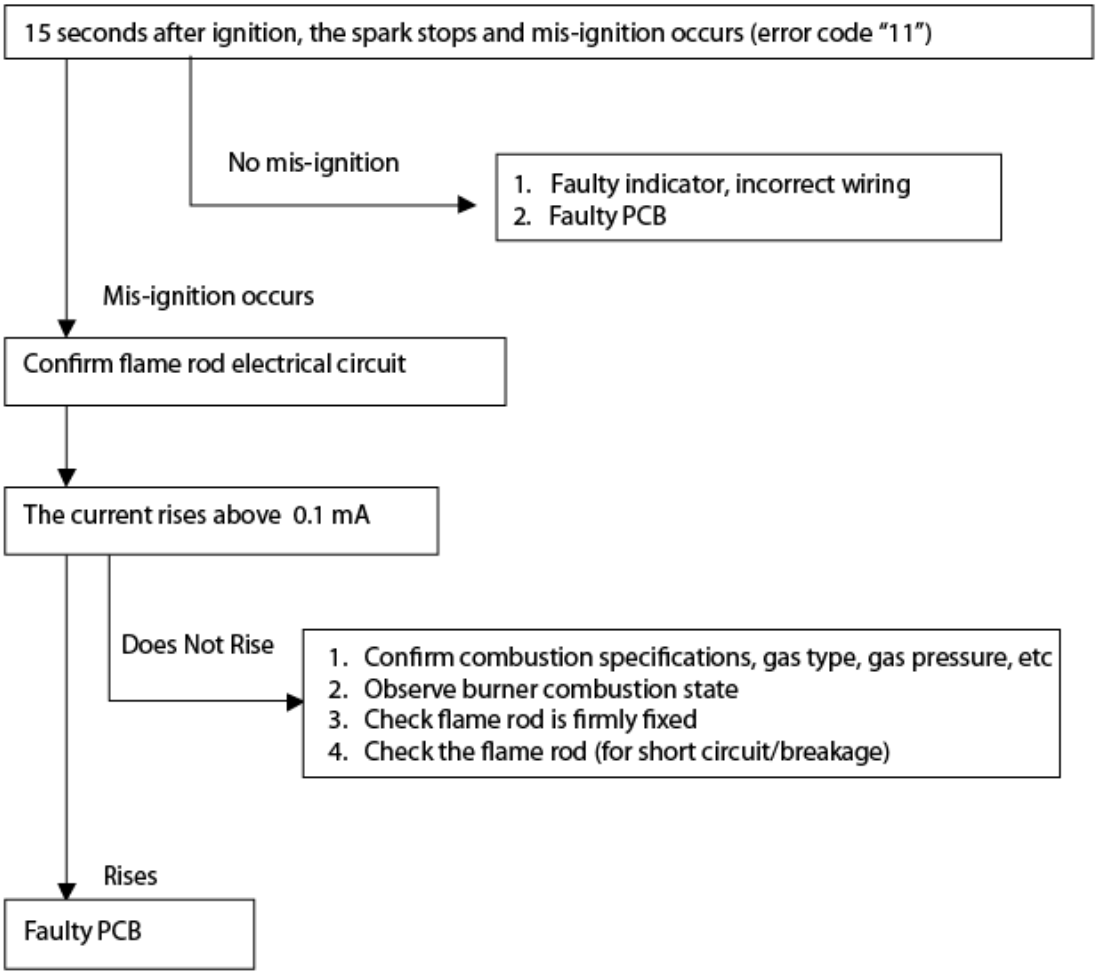
iii. The solenoid valves do not open (error code "11")
1. Broken wiring or loose pin connectors
2. Solenoid coil wiring is broken or shorted
3. Faulty sparker (cannot detect spark)
4. Faulty PCB (Solenoid valve power is less than DC90V)

iv. The convection fan does not begin to rotate after 4 minutes
1. An obstruction in the convection fan is preventing the fan from rotating
2. Open circuit or bad connection in motor circuit
3. Faulty PCB

B. After repeated efforts to operate the appliance, it will not ignite (Error code "11")

1. Air within gas pipe- not completely purged
2. Abnormal (primary) gas pressure
3. Incorrect gas type
4. Bent gas pipe
5. Abnormal sparker
6. Injector blockage or incorrect specification (MN, Governor test pressure, etc)

C. There is an ignition sound, however the combustion indicator does not illuminate



D. The flame fails during normal operation (sudden extinction)

1. Power failure. Commence operation after power re-instalment ..... (error code "00")
2. Safety device has activated ..... (error code "14" or "99")
   - Room temperature has been detected as being above 40°C for 10 minutes ..... (error code "16")
   - Overheat switch activated by fan lock ..... (error code "14")
   - Blocked flue outlet ..... (error code "99")
   - Bent gas pipe ..... (error code "12")
   - Gas pressure abnormally low
   - Clearances around the appliance are insufficient ..... (refer to section 5. Installation)
   - Obstructions in front of appliance ..... (error code "14")
   - Defective fan ..... (error code "14")
   - Check connectors and lead wire connections are correct

3. Safety devices are activated
   - Flame failure occurs between 30 minutes to 1 hour after ignition (error code "12")
   - Check gas supply
   - Confirm flame rod electrical circuit
   - Check that the electrical current is stable and is above the value in the table below

Measure the circuit current when Hi/Lo combustion is steady (all gases common)

During steady Hi/Lo combustion	> 1.0 µA

Not Stable

1. Confirm governor test pressure, restrictor, injector, etc
2. Faulty flame rod and/or burner

Faulty PCB

4. Reverse Flame (with large noise) and flame falls
   1. Obstructions in the flue outlet
   2. Obstructions in the burner
   3. Abnormal combustion specifications and gas pressures

5. Flame failure approx. 1- 3 minutes after ignition (error code "12")
   - Flame rod current is above 1.0 µA

Yes → Faulty PCB

No →
1. Abnormal governor test pressure
2. Flame rod short circuit

ERROR CODES

Error Code	Cause	Comments	Check
11	Ignition Failure	Flame current does not reach 0.1*u*A within the given time, after solenoid valve opens.	Check gas is on. Check sparker* Check solenoids*
12	Flame Failure	Flame rod current remains below 0.1*u*A for 3 seconds during normal operation.	Check gas supply. Check flame rod* Check flame rod lead*
14	Overheat	High-limit temperature thermistor or thermal fuse has activated.	Check fuse for open circuit Check thermistor values*
16	Room overheat	Room temperature is sensed as being above 40 for longer than 10 minutes.	Lower room temperature to less than 40°C
31	Room temperature Sensor faulty	Room temperature thermistor open circuit.	Check thermistor values*
31	Room temperature thermistor short	Room temperature thermistor wire trapped, touching bare metal.	Check thermistor values*
32	High-limit Sensor faulty	High-limit thermistor open circuit for over 2 seconds.	Check thermistor values*
33	Overheat temperature Sensor faulty	High-limit thermistor open circuit for over 2 seconds	Check thermistor values*
70	Faulty ON/OFF switch	ON/OFF switch on continuously for more than 15 seconds.	Change control panel
71	Faulty Solenoids	Solenoid valve(s) (SV1~ SV6) signal and response signal are different.	Check solenoid values*
72	Faulty Flame rod	Flame rod current should not go below 0.1*u*A within 20 seconds of starting.	Check flame rod circuit* Replace PCB
73	Communication error	Data transfer between CPU and E^2PROM	Turn heater OFF, then ON again
99	Flue block	Check around flue terminal	Service Call
- : -	Power failure	When power failure is sensed operation stops.	Turn heater OFF, then ON again

* See Section 12 page 19 for Diagnostic Points

E2 PROM

This E2 PROM function allows the following to be checked.

* When the unit is OFF, press the " ∧ " and " ∨ " buttons simultaneously for at least 2.5 seconds to display the following at 1.9 second intervals in this order.

1. Error History (displays the five most recent error codes).
2. Total Combustion Time H (counts the alight time - from ignition to extinction).
3. Number of Operation L (counts the number ignition detections).

* When the unit is OFF, press the " ∧ " and " ∨ " buttons simultaneously for at least 2.5 seconds to reset Error History.

E2PROM Continued

E2PROM data will not be erased during a power failure. Below is a list of recorded data.

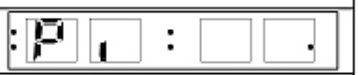
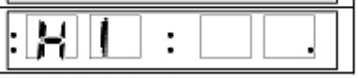
• Model	• Gas type
• Clock	• Timer
• Lock function	• AUTO-OFF function
• Set temperature	• Error History (15)
• Estimated combustion time	• Estimated number of operations
• Room Thermistor temperature correction data for Freestanding Flame Fire	
• Room Thermistor temperature correction data for Inbuilt Flame Fire	

Resetting

While the unit is OFF, press **"∧", "∨"** buttons and "LOCK" buttons simulataneously for 0.5 seconds. The digital display displays "88:88" for 0.5 seconds when the data is deleted completly.

Test Mode

To select test mode, press the "TEST" switch on the PCB while the appliance is operating. Each time the **"∧"** or **"∨"** buttons is pressed, the display will change to the following modes:

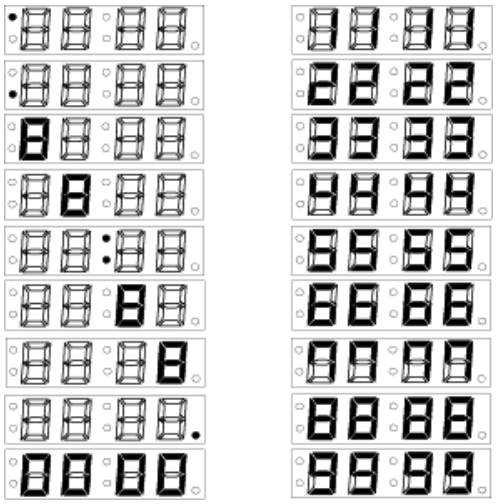
Combustion	Illuminated Indicators
Pilot	
Lo	
Med(Lo)	
Med(Hi)	
Hi	

Control Panel Indicators Test Mode

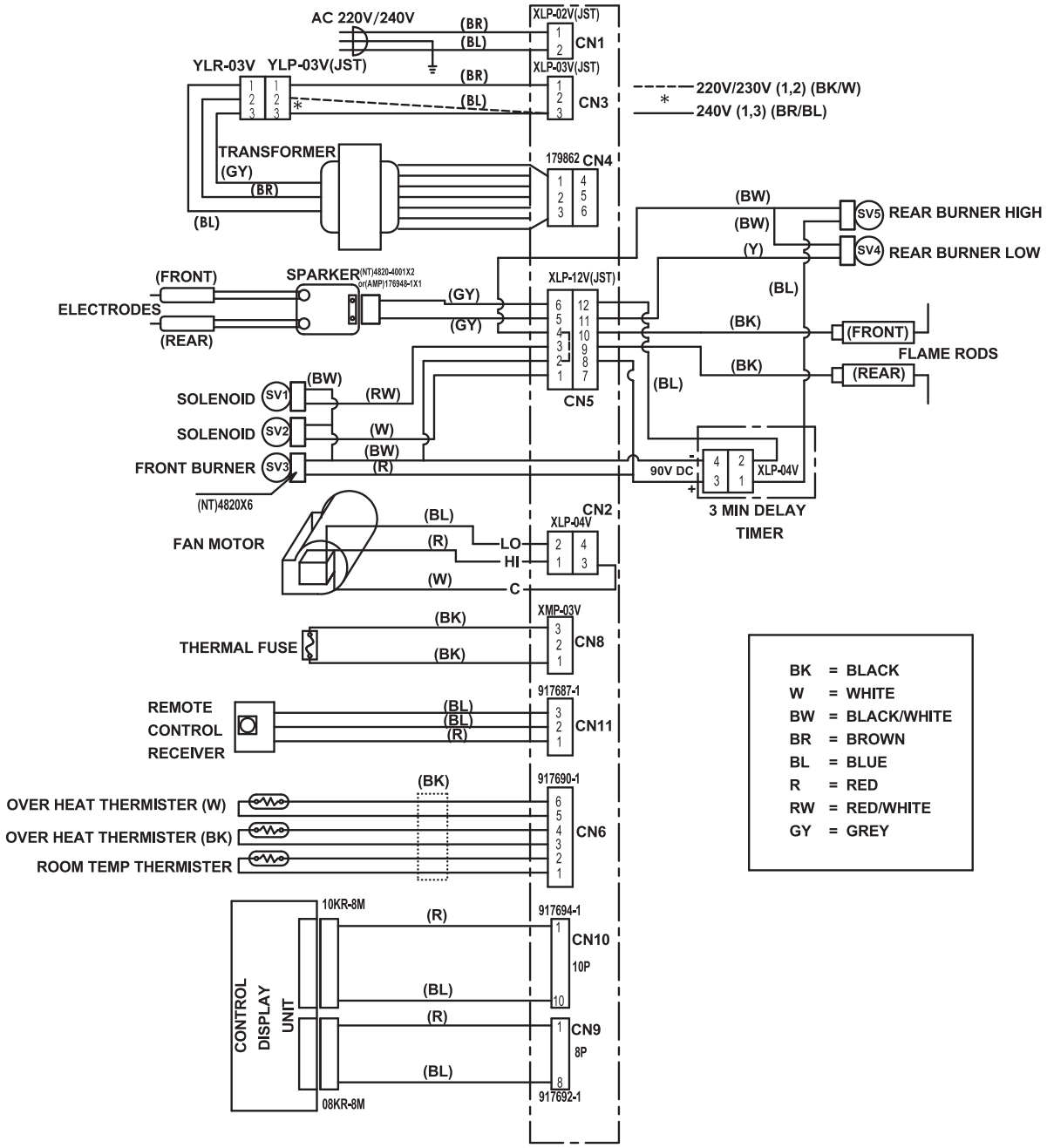
Control Panel Indicators Test Mode

To test the control panel indicators, do the following:

- With the unit ON, press the "TEST" button on the PCB followed by pressing the "LOCK" button on the control panel. The control panel indicators will be consecutively displayed for 0.3 seconds earch (see example).
- To turn the test mode to OFF, press the "ON/OFF" button on the control panel.



WIRING DIAGRAM



If the supply cord is damaged or requires replacing, it must be replaced by the manufacturer or the manufacturer's agent or similarly qualified person in order to avoid a hazard. The supply cord must only be replaced with a genuine Rinnai spare part.

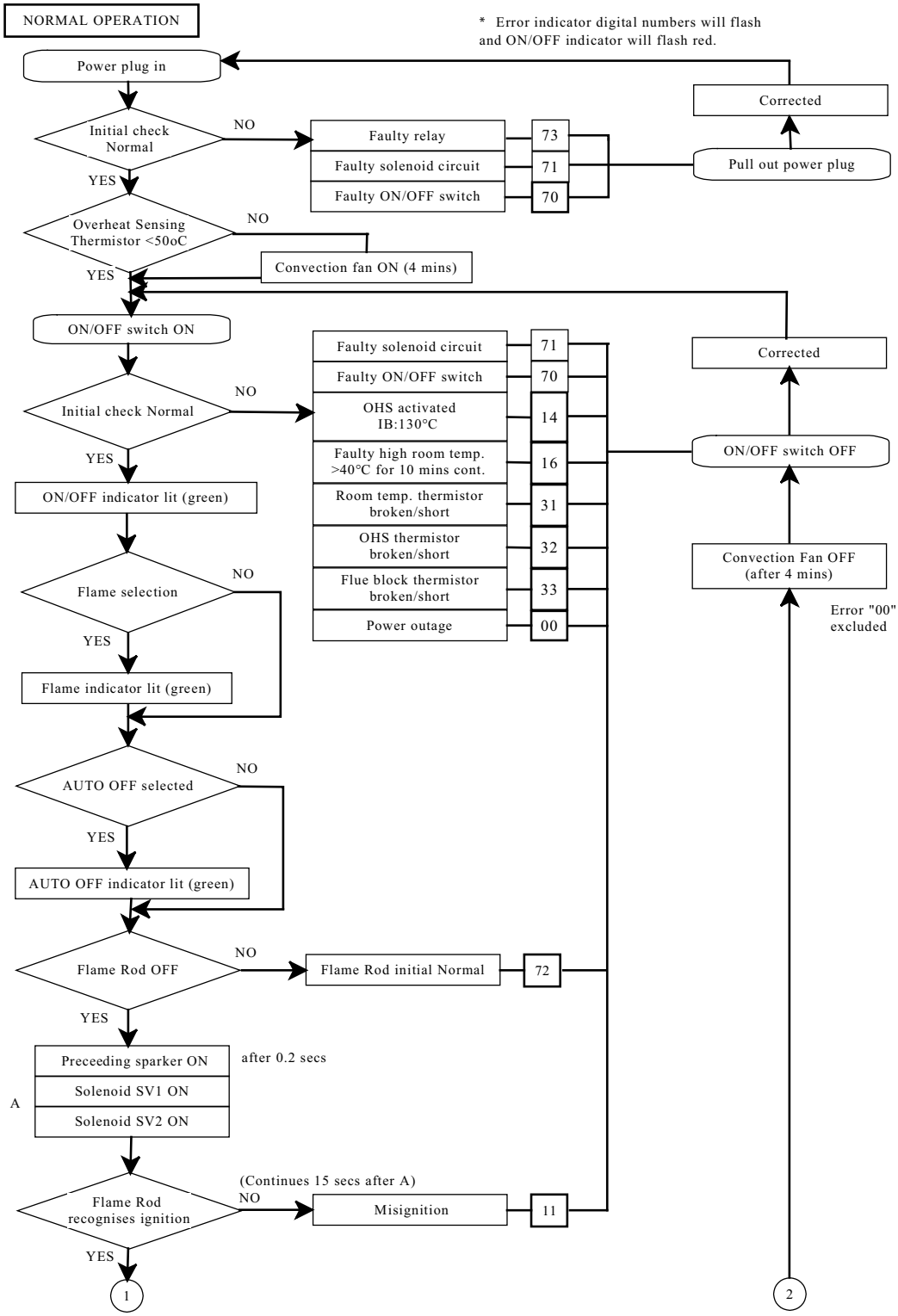
DIAGNOSTIC POINTS

WARNING:			
Circuit (Refer to Wiring Diagram)	**Wire Colour**	**Measurement Valve**	**Part**
CN1	Brown-Blue	AC 216V-264V	Power Cord
CN6	Black-Black	80 - 90 KΩ	Overheat Thermistor
CN6	Black-Black	80 - 90 KΩ	Flue Block Thermistor
CN8	Black-Black	<1Ω	Thermal Fuse
CN6	Black-Black	20°C:35-40 KΩ, 31°C, 25-30KΩ	Room Temp. Thermistor
CN5	Black-FR	DC > 1μA	Flame Rod 1
CN5	Black-FR	DC > 1μA	Flame Rod 2
CN5	Grey-Grey	AC 78-100V	Sparker
CN5	Black/White-Red/ White	DC 78~100V; 1.8-2.0 KΩ	SV1
CN5	Black/White-White	DC 78~100V; 1.8-2.0 KΩ	SV2
CN5	Black/White-Red	DC 78~100V; 1.8-2.0 KΩ	SV3
CN5	Black/White-Yellow	DC 78~100V; 1.8-2.0 KΩ	SV4
CN5	Black/White-Blue	DC 78~100V; 1.8-2.0 KΩ	SV5
CN2	White-Red	AC 220~240V	Fan Motor

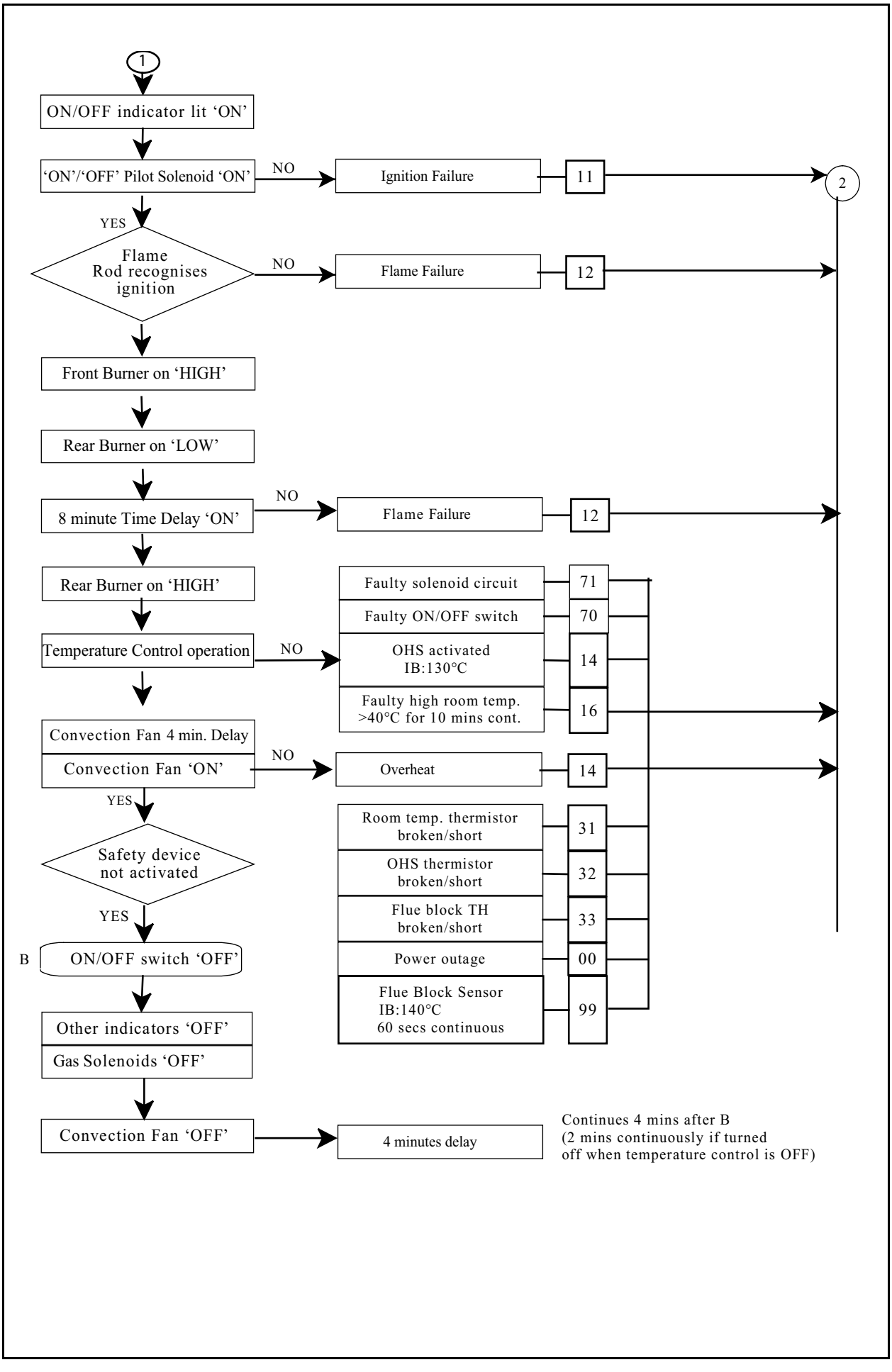
Transformer Terminal Voltages / Coil Resistances

Circuit (Refer to Wiring Diagram)	Wire Colour	Measurement Valve
CN4	Orange-White	AC 90~110V; 10~25Ω
CN4	Blue-Yellow	AC180~200V; 80~100Ω
CN4	Blue-Red	AC 10~15V; 0.1-2Ω
CN4	Yellow-Red	AC 190~220V; 80~100Ω
CN3	Black-Grey	AC 230~240V; 40-60Ω

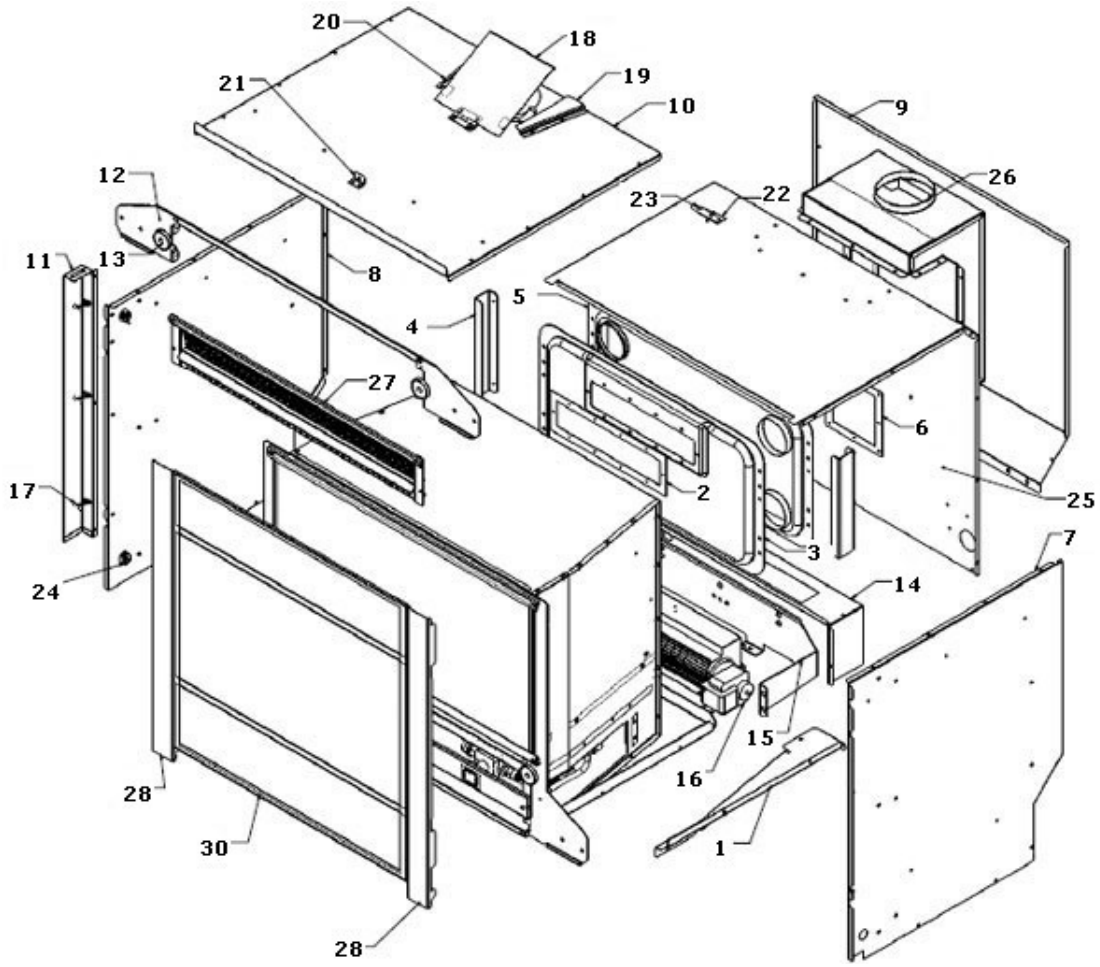
OPERATIONAL FLOW CHART



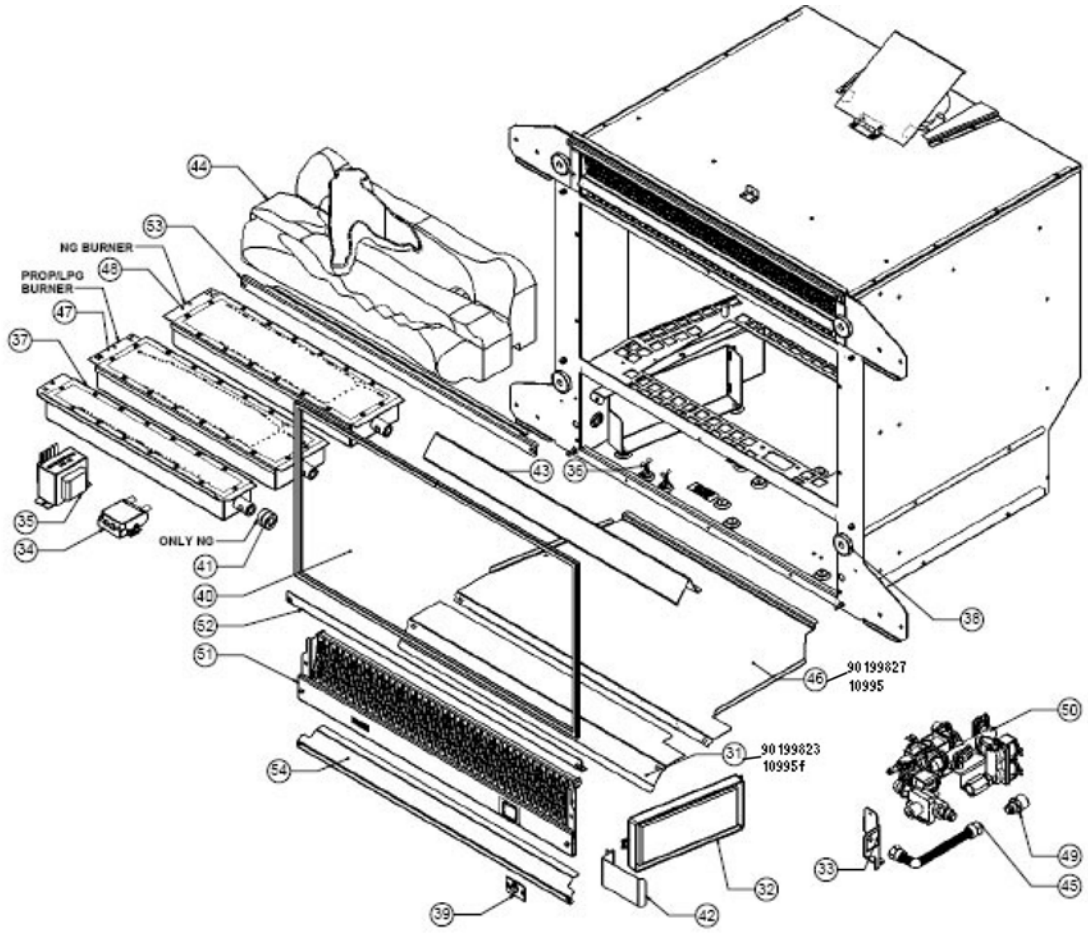
OPERATIONAL FLOW CHART



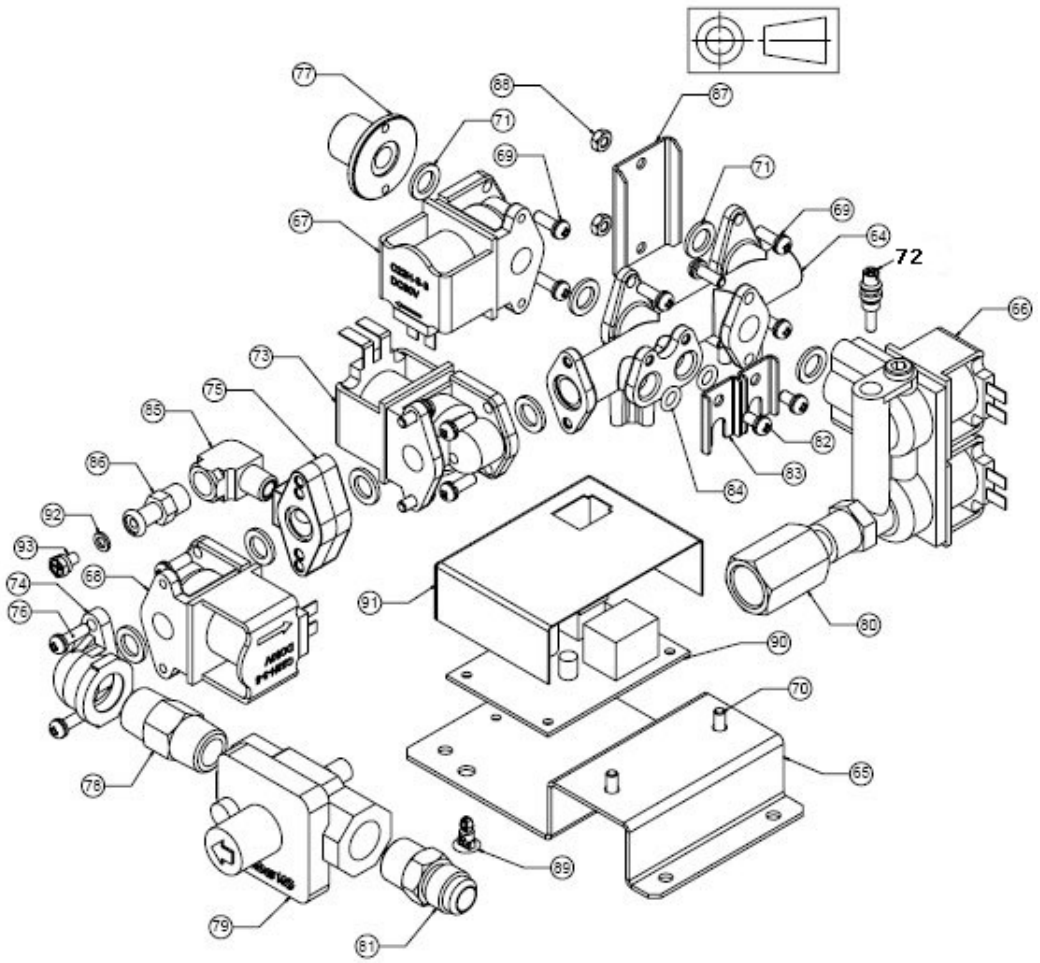
EXPLODED DIAGRAMS



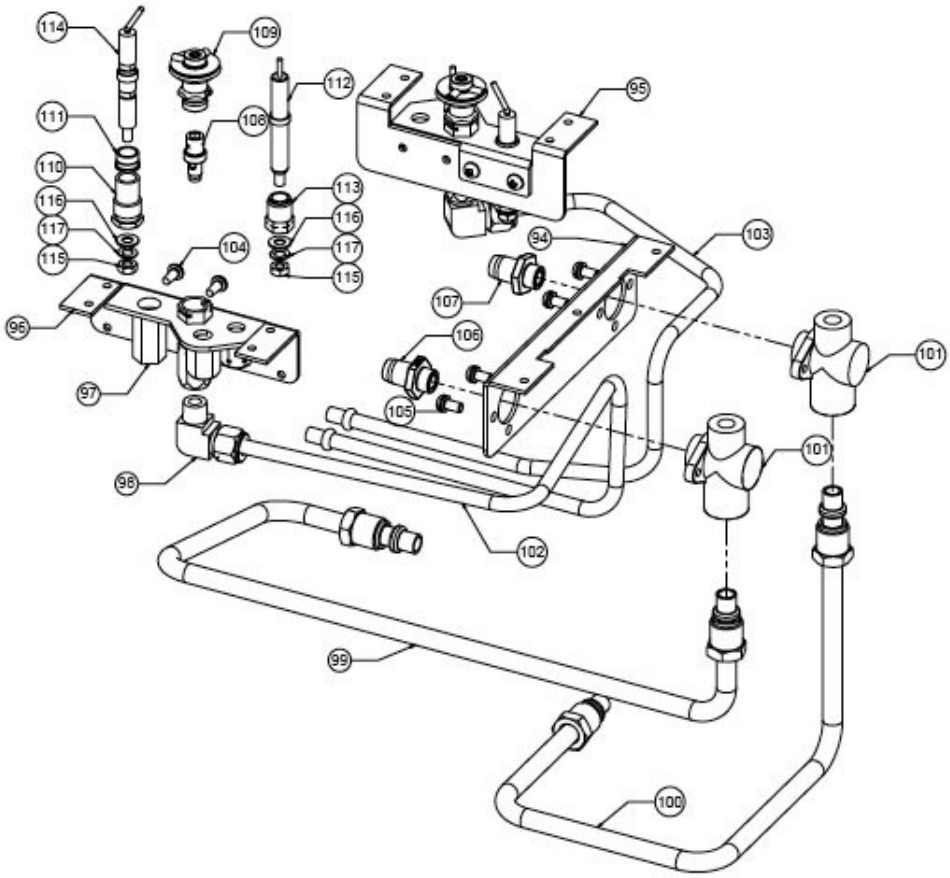
EXPLODED DIAGRAMS



EXPLODED DIAGRAMS



EXPLODED DIAGRAMS



PARTS LIST

Effective: 24/07/12
Supercedes: 06/03/11
V4

REFLECTION - IB300ETR/IB300

ITEM	DESCRIPTION	RA CODE	RNZ CODE	QTY	Comments
1	INFILL PANEL RH IB300		10895	1	
2	GASKET HEAT EX RECTANGLE IB300		10925	1	
3	HEAT EXCHANGER FRONT IB300		10890	1	
4	HEAT EXCHANGER BRACKET IB300		10893	2	
5	HEAT EXCHANGER REAR IB300		10891	1	
6	GASKET HEAT EX SQUARE IB300		10926	1	
7	PANEL OUTER RH IB300		10902	1	
8	PANEL OUTER LH IB300		10901	1	
9	PANEL OUTER REAR IB300 IB35		10903	1	
10	PANEL REAR TOP IB300		10904	1	
11	CABLE COVER IB300		10916	1	
12	PANEL TOP TRIM ASSY IB300		10906	1	
13	MAGNET PANEL SIDE FS FF 99	90184003	7136	2	
14	FAN SHROUD IB300		10918	1	
15	PANEL FAN MTG IB300		10956	1	
16	FAN NCB LL60x300R12/16-0	90193392	10100x1	1	
17	CABLE CLIP REH241		6698	3	
18	FLUE GUARD ASSY IB		7274	1	
19	FLUE SPIGOT GUIDE RH	90198482	7241R	1	
20	FLUE SPIGOT GUIDE LH	90198474	7241L	1	
21	BRKT FLEXI IB300		10976	1	
22	BRKT THERMAL FUSE IB300		10991	1	
23	FUSE THERMAL ETR FF	90188020	7553	1	
24	INSULATING BUSH STD 22-PLB19		10657	2	
25	PANEL FAN PARTITION IB300		10914F	1	
26	FLUE SPIGOT ASSY BLK IB300		10900F	1	
27	AIR DISCHARGE ASSY GALAXY		10907GL	1	
28	TRIM KIT REFLECTION BLK (STD)		R2765GL	1	
30	DRESSGUARD IB300ETR		10922B	1	
31	PANEL FAN PARTITION TRIM		10905F	1	
32	PCB MAIN ETR FF	90187980	7544	1	
33	REGULATOR SUPPORT IB35ETR		7614	1	
34	SPARKER ETR FF	90188046	7542	1	
35	TRANS ETR FF	90187972	7543	1	
36	CLIP THERMISTER CP-90125-2-B		7554	2	
37	BURNER FRONT US ASSY PAINTED		7924	1	
38	MAGNET PANEL SIDE FS FF 99	90184003	7136	2	
39	SENSOR REMOTE ETR FF	90188004	7536	1	
40	GLASS ASSEMBLY IB30 IB300		10861	1	
41	SLEEVE AERATION 18.5mm FF	90189267	7295	1	
42	FRONT PILOT SHIELD IB300 BLK		10924F	1	
43	PANEL BURNER DIVERTER IB300		10917F	1	
44	LOG SET & GRANULES	90182180	7044	1	
45	FLEXITUBE KIT	90187261	4988	1	
46	PANEL FAN PART LOWR IB300		10995	1	
47	BURNER MAIN LP IB300ETR	90182152	10998	1	LP
48	BURNER MAIN NG FF	90182150	4970	1	NG
49	REDUCING FLARE 3/8X1/2BF480608		5074	1	
50	GAS CONT ASSY REPL IB300ETR LP		10863	1	
50	GAS CONT ASSY REPL IB300ETR NG		10864	1	
51	AIR INLET REPL ASS IB300ETR GL		10862GL	1	
52	GLASS RET LOWER IB300 BLACK		10909B	1	
53	RETAINER GLASS TOP IB300	90199976	10910B	1	
54	TRIM FRONT LOWER IB300		10912GL	1	
64	MANIFOLD ETR		7454	1	
65	GAS MANIFOLD MTG BRKT IB300ETR		10915	1	
66	SOLENOID DOUBLE ASSY FF	90187774	7560	1	
67	SOLENOID ETR FF	90187956	7558	1	
68	SOLENOID FF	90187931	7555	1	

Effective: 24/07/12
Supercedes: 06/03/11
V4

REFLECTION - IB300ETR/IB300

ITEM	DESCRIPTION	RA CODE	RNZ CODE	QTY	Comments
69	SCREW M4 X 12 MACH C/W WASHER		9070	14	
70	SCREW M4 X 10 PHPMZ SPRINGWASH		9068	2	
71	PACKING SOLENOID ETR	90195553	6121	8	
72	BYPASS ORIFICE MID BURNER LP	90188202	7533	1	
72	BYPASS ORIFICE MID BURNER NG	90188244	7529	1	
73	SOLENOID ETR FF	90189135	7557	1	
74	MANIFOLD ELBOW ETR		7456	1	
75	MANIFOLD ADAPTOR ETR		7455	1	
76	SCREW M4 X 14 PHPMZ SPRINGWASH		9160	2	
77	MANIFOLD TUBE ADAPTOR ETR		7974	1	
78	HEX NIPPLE 3/8 IN X 1.5 IN		7523	1	
79	REGULATOR LP ETR FF	90187964	7633	1	LP
79	REGULATOR NG ETR FF	90187782	7632	1	NG
80	UNION BODY USA		7973	1	
81	FLARE MALE CONN. BF480606		7031	1	
82	SCREW M4 X 8 PHPMZ SPRINGWASH		9064	6	
83	GAS TUBE RETAINER		6313	2	
84	O RING PILOT IB35 ETR	90187873	6308	1	
85	ELBOW 1/8 IN M & F		7452	1	
86	PRESS. TEST POINT		9992	1	
87	PLATE BLANKING IB300ETR		10939	1	
88	NUT HEX M4	90189341	9186	6	
89	PCB SPACER 05-PCY06		10428	3	
90	PCB DELAY IB300 5100 0211 01A		10972	1	
91	PANEL PCB COVER IB300ETR		10987	1	
92	PRESS. TEST POINT PACKING		9995	1	
93	PRESS. TEST POINT SCREW		9994	1	
94	INJECTOR BLOCK BRKT FRONT MKII		7950	1	
95	PILOT BRACKET REAR ETR USA		7985	1	
96	PILOT BRACKET FRONT CONV PILOT		7904	1	
97	PILOT BODY TOP CONVERTIBLE		7870	2	
98	ELBOW 6mmx1/8 BSPT BFM690602		7986	2	
99	TUBE GAS SUPPLY A ETR FS35	90187907	7931	1	
100	TUBE GAS SUPPLY B IBETR		7932	1	
101	INJECTOR BLOCK A+B		7952	2	
102	TUBE PILOT IBETR FRONT		7945	1	
103	TUBE REAR PILOT IB300ETR		10960	1	
104	SCREW 8 X 3/8 PHPSZ		9148	4	
105	SCREW M4 X 8 PHPMZ SPRINGWASH		9064	6	
106	INJ BRAY 120 FF	90188194	7175	1	LP
106	INJ BRAY 260 FF	90188198	7338	1	NG
107	INJ BRAY 200 FF	90183856	7183	1	LP
107	INJ BRAY 560 FF	90188196	7337	1	NG
108	INJ PILOT LP 750 1000	90199956	7873	2	LP
108	INJ PILOT NG 1000	90199787	7872	2	NG
109	PILOT HEAD 1000	90199803	7871	2	
110	ELECTRODE NUT ETR		7900	2	
111	SPACER ELECTRODE PILOT		7902	2	
112	ELECTRODE 1000	90199746	7875	2	
113	ELECTRODE NUT (S.I.T)		7876	2	
114	FLAME ROD FF 1000	90187790	7520	2	
115	NUT HEX M4	90189341	9186	6	
116	WASHER FLAT M4 ZP		9231	4	
117	WASHER SPRING	90189333	9233	4	
X	ELEC CORD 750 IB300ETR	90199972	6766	1	
X	FUSE THERMAL ETR FF	90188020	7553	1	
X	HARNESS FLAME ROD IB35ETR	90199951	10962	1	
X	LEAD HIGH TENSION USE 90189440	90169385	7205	1	
X	REMOTE 308 406 506 516 556/7	90175555	7541	1	

Effective: 24/07/12
Supercedes: 06/03/11
V4

REFLECTION - IB300ETR/IB300

ITEM	DESCRIPTION	RA CODE	RNZ CODE	QTY	Comments
X	SLEEVE ELECTRODE FF	90189325	7564	1	
X	THERMISTOR ETR FF	90188012	7549	1	
X	HARNESS XFORM ETR NZ230V Blk/W		7631	1	
X	HARNESS MVL FAN TWO SP W EARTH		10300	1	
X	HARNESS MAIN IB300ETR		10929	1	
X	CONTROL HARNESS ENGINE IB300		10930	1	
	ZERO CLEARANCE BOX		**R2785**		
	CONTROL PANEL ETR IN-WALL		**R2791**		
	HARNESS CONTROL 8 M		**R2792**		
	HARNESS CONTROL 2 M		**R2793**		

Rinnai

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Rinnai has a Service and Spare Parts network with personnel who are fully trained and equipped to give the best service on your Rinnai appliance. If your appliance requires service, please call our National Service Line. Rinnai recommends that this appliance be serviced every 2 years.

Internet: www.rinnai.com.au E-mail: enquiry@rinnai.com.au

National Help Lines

Spare Parts & Technical Info
Tel: 1300 555 545*
Fax: 1300 300 141*
Cost of a local call Higher from mobile or public phones.