BLUE SEAL®

G1100 GAS CONVECTION OVEN

SERVICE MANUAL

turbofan

Revision 4/F3576

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⚠ **WARNING:** **ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.**

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CONTENTS

This manual is designed to take a more in depth look at the G1100 gas convection oven for the purpose of making the unit more understandable to service people.

There are settings explained in this manual that should never require to be adjusted, but for completeness and those special cases where these settings are required to change, this manual gives a full explanation as to how, and what effects will result.

IMPORTANT: MAKING ALTERATIONS MAY VOID WARRANTIES AND APPROVALS.

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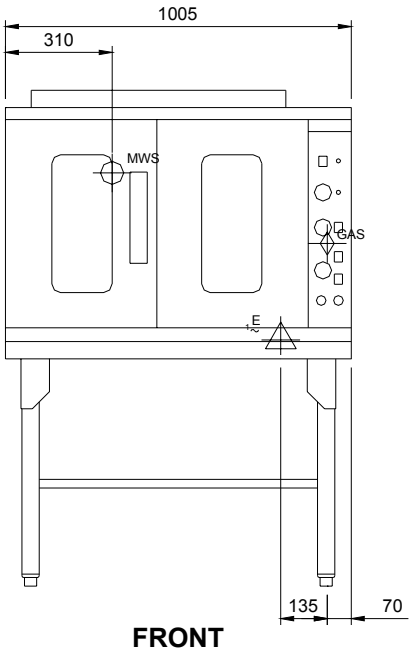
1. SPECIFICATIONS

MODEL: G1100



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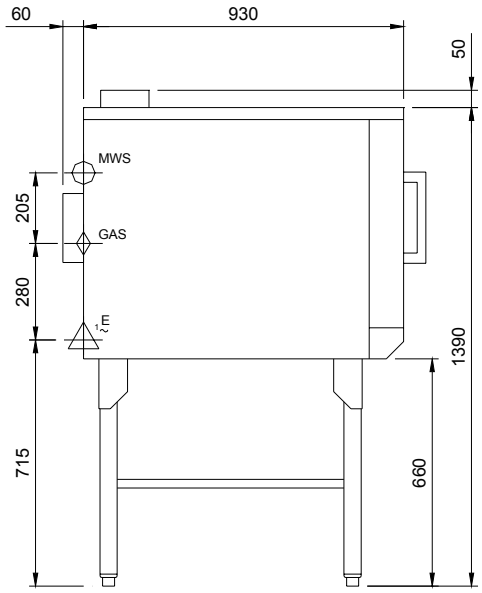

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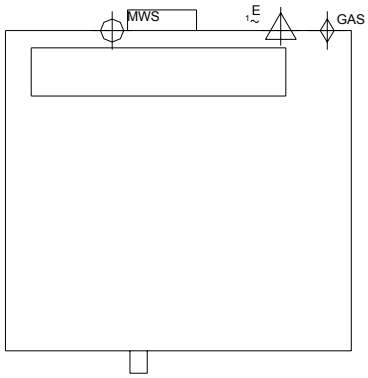

PLAN

LEGEND

E - Electrical connection entry point

MWS - Water entry - ¾" BSP hose connection

GAS - Gas connection entry point

Dimensions shown in millimetres.

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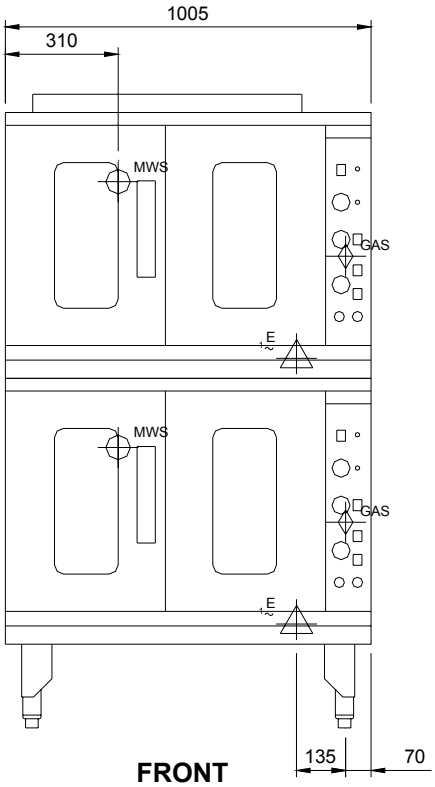
MODEL: G1100-2



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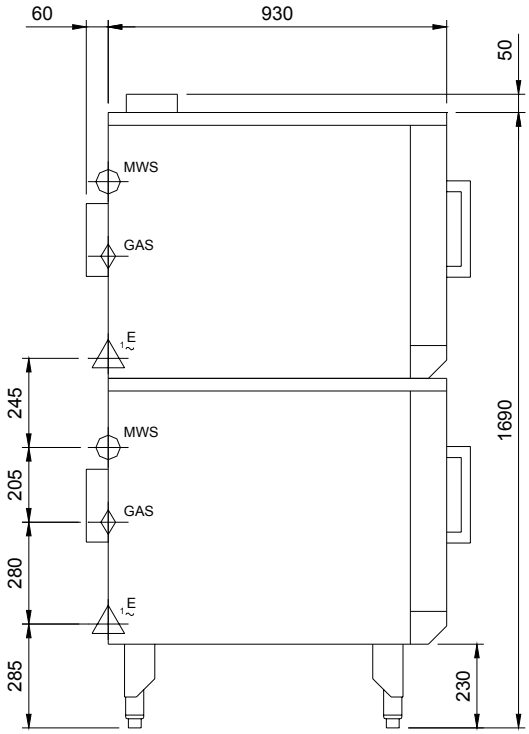

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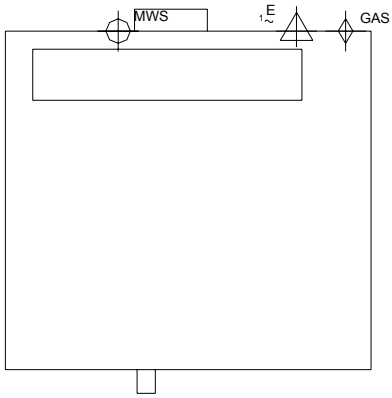

PLAN

LEGEND

- Electrical connection entry point
- Water entry - ¾" BSP hose connection
- Gas connection entry point

Dimensions shown in millimetres.

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LOCATION

This oven must be installed in an area of adequate air supply. The following minimum clearances for air openings, servicing, operation and installation are to be adhered to:

Rear	100 mm
Left-hand side	100 mm
Right-hand side	300 mm
Top	1200 mm

OVEN INTERNAL DIMENSIONS

Width	730 mm
Height	490 mm
Depth	600 mm
Oven Volume	0.21 m³

OVEN RACK SIZE

Width	710 mm
Depth:	520 mm

GAS SUPPLY SPECIFICATION OPTIONS

	Natural	LPG
Input Rating	73 MJ/hr 69 000 Btu/hr 20.3 kW	73 MJ/Hr 69 000 Btu/hr 20.3 kW
Gas Rate	1.90 m³/hr	1.40 kg/hr
Inlet Pressure	1.13 kPa 4.5”w.c.	2.75 kPa 11.0”w.c.
Burner Pressure	**(From S/N 275353)**	
	0.90 kPa 3.6” w.c.	2.50 kPa 10.0” w.c.
	(Up To S/N 275352)	
	0.89 kPa 3.6” w.c.	2.65 kPa 10.6” w.c.

GAS CONNECTION SPECIFICATIONS

$^{3}/_{4}$” BSP female

MAIN BURNER INJECTOR ORIFICE SIZE

LPG	1.20 mm
Natural	1.90 mm

PILOT BURNER INJECTOR ORIFICE SIZE

LPG	0.70 mm
Natural	1.10 mm

ELECTRICAL SUPPLY SPECIFICATION OPTIONS

230-240 V AC, 50 Hz, 2.1 A, 1P+N+E
220 V AC, 60Hz, 2.1 A, 1P+N+E

ELECTRICAL PLUG SPECIFICATION REQUIREMENTS

Australia	AS 2124, 10 Amp, 3 pin
New Zealand	AS 2124, 10 Amp, 3 pin
Other Countries	Type to meet country standards

WATER SUPPLY CONNECTION

Max Pressure	550 kPa / 5.5 bar / 80 psi
Min Pressure	100 kPa / 1.0 bar / 15 psi

AUTOMATIC IGNITION CONTROL

Lock-out condition after burner ignition failure. No re-ignition attempt.

Units from S/N 205337: 1 re-ignition attempt in the event of flame loss during burner operation. Lock-out condition if re-ignition failure.

NOTE: Refer to Appendix B for further ignition control specifications.

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2. INSTALLATION

⚠ WARNING: THIS APPLIANCE MUST BE GROUNDED.

⚠ WARNING: ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.

This appliance must be installed in accordance with national installation codes and in accordance with relevant national / local codes covering gas and fire safety.

AUSTRALIA - AG601 – 1992, Gas Installation Code.

NEW ZEALAND – NZS5261, Installation of Burning Appliances and Equipment.

Installations must be carried out by authorised persons only. Failure to install equipment to the relevant codes and manufacturers specifications in this section will void warranty.

This oven must be electrically grounded in accordance with local codes.

BEFORE CONNECTION TO POWER AND GAS SUPPLY

Unpack and check unit for damage and report any damage to the carrier and dealer. Report any deficiencies to your dealer.

Fitting legs

Tilt the oven over on one side and fit both the front and rear legs to the side now off the ground. Fit them into the base frame under the chassis base and secure to the base with the bolts, spring washers and flat washers provided. Lift up the other side of the oven, fit legs, bolts and washers, but do not tighten yet. Position leg tray (flat side facing up) between legs and secure with the 4 screws provided, then tighten all leg bolts. Level the oven by adjusting the feet.

NOTE: Double units have no leg tray.

Stacking the ovens (Double units only)

Lay the top unit on its side and fit the spacers provided to the base of the oven.
Lift the top unit onto the bottom unit and secure around the spacer panel flanges with self-tapping screws provided. Fit chimneys over the duct assembly of the bottom unit. Screw in place and pull down chimney surrounds onto the duct assembly. Level the oven by adjusting the feet. (Refer to appendix A for more detailed stacking instructions).

LOCATION

This oven must be installed in an area of adequate air supply. The following minimum clearances for air openings, servicing, operation and installation are to be adhered to:

Rear	100mm / 4”
Left-hand side	100mm / 4”
Right-hand side	300mm / 12”
Top	1200mm / 48”

NOTE: 300mm is required at the right hand side of the oven to allow access to the circuitry and gas connections. If space is limited then a minimum of 100mm (4”) clearance should be allowed for, provided that the oven can be moved to gain access.

A minimum of 1.2 metres or 4 feet clearance must be maintained above the appliance to any shelves or ceilings.

Position the oven in its allocated working position. Use a spirit level to ensure the oven is level from side to side and front to back. (If this is not carried out, uneven cooking could occur). The feet/legs used with bench or floor mounting or provided with stands are adjustable and will require adjusting in levelling the unit. It should be positioned so the operating panel and oven shelves are easily reachable for loading and unloading.

GAS CONNECTION

It is important that adequately sized piping run directly to the connection joint on the oven, with as few tees and elbows as possible to give maximum supply volume.

An accessible shut off valve must be fitted on the supply line before the connection joint and pressure regulator/appliance.

A suitable jointing compound which resists the breakdown action of LPG must be used on every gas line connection.

For a double unit, all gas connections must be made separately.

Check all connections for leakage. **Do not use a flame**.

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Units manufactured from S/N 275353.

The gas valve has a regulator incorporated that is adjustable for Natural and LPG/ Propane gas's operating pressures.

The operating pressures should be adjusted to achieve the required settings, refer rating plate.

A pressure test point is found on the gas valve. Access by removing side access panels (refer 6.2.3).

Unscrew the regulator screw cap to access the regulator adjustment screw. With the burners on, adjust the regulator spring setting until the correct operating pressure is obtained (refer 6.4.1).

Units manufactured up to S/N 275352.

The ¾" inlet/outlet gas regulator supplied only with ovens for use Natural Gas must be installed on the ¾" dia. inlet tube at the rear of the oven.

Ovens for use on LPG do not have a regulator supplied, as the pressure is controlled by a supply regulator at the supply tank. Refer to the rating plate for correct operating pressures.

The gas solenoid should be checked separately by testing the immediate connection on its outlet side. Where a leak occurs within the solenoid valve, it should be replaced before finalisation of instalment.

ELECTRICAL CONNECTION

G1100 convection ovens are supplied with pre-fitted cords. Ensure unit is fitted with the correct cord and plug for the installation (refer specifications section).

Should changing of the cord be necessary, gain access to the electrical connection terminal block and strain relief by removing the right hand access panel (six screws).

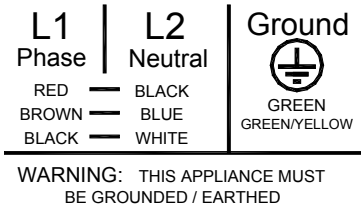

Figure 2.1

WATER CONNECTION

A cold water supply should be fitted to the water inlet which is located at the rear of the unit.

To access the water solenoid, undo the 4 screws securing the water access cover panel, and remove the panel.

Fit ½" (13mm) flexible hose to the solenoid and secure with a hose clamp. Turn on the water supply to check for leaks. It may be necessary to hold the water injection button in for a few seconds to remove air from the system after initial instalment.

> ! **IMPORTANT:** MAXIMUM INLET WATER PRESSURE IS 550 kPa / 80 psi.

BEFORE USE

Operate the oven for about 1 hour at 200°C to remove any fumes or odours which may be present.

RATING PLATE LOCATION

The rating plate for the G1100 convection oven is located at the top left of the right hand side panel.

Figure 2.2

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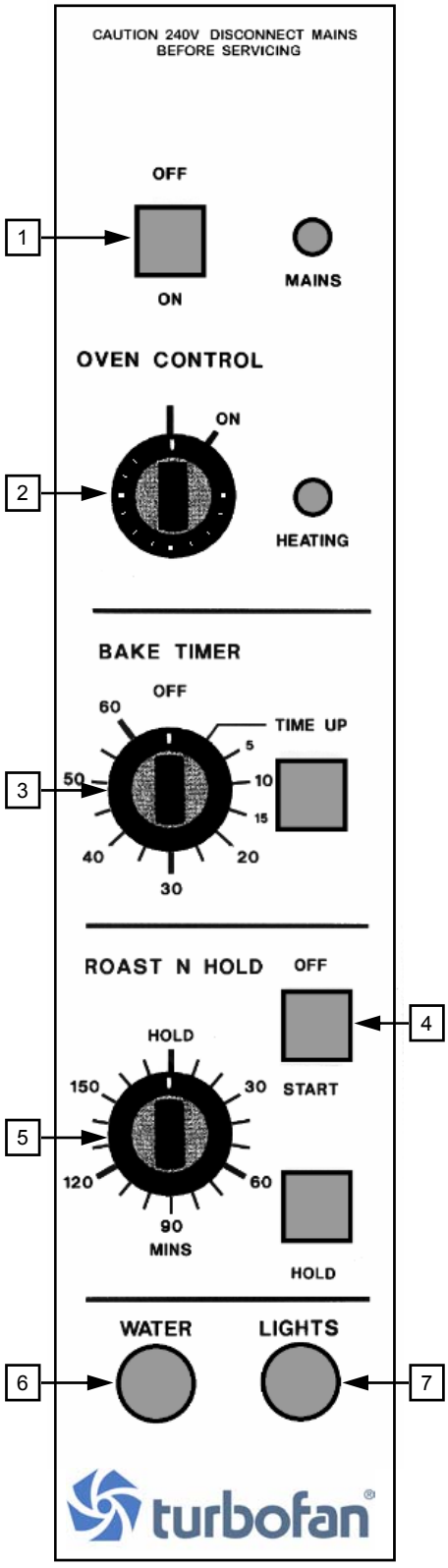
3. OPERATION

NOTE: A full user's operation manual is supplied with the product and can be used for further referencing of installation, operation and service.

3.1 DESCRIPTION OF CONTROLS



1. **POWER SWITCH**
   Turn on to switch power on or off (indicator illuminates when power is on).

2. **THERMOSTAT**
   Temperature range 50 - 320°C.
   Indicator illuminates when burner is cycling ON to maintain set temperature.

3. **BAKE TIMER**
   1 Hour bake timer.
   (Indicator illuminates when "time up" (0) reached, and buzzer sounds).

4. **ROAST N HOLD SWITCH**
   Turn on to activate 'ROAST N HOLD' function (Switch illuminates when ON).

5. **ROAST TIMER**
   3 Hour roast timer.
   (Indicator illuminates when "time up" (0) reached, and product held at 75°C).

6. **STEAM SWITCH**
   Push switch to activate water injection (Water injects into oven while the button is depressed).

7. **LIGHT SWITCH**
   Push switch to activate lights.
   (Lights illuminate while button depressed).

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3.2 EXPLANATION OF CONTROL SYSTEM

The G1100 Turbofan convection oven features multi-function operator controls for which a correct understanding of their operation is required before carrying out any service or fault repair work. The control device functions are explained as follows:

A power switch on the control panel isolates all to the controls of the oven. With the power switch Off all functions of the oven are inoperable.

With the power switch On (indicator illuminated) power is directly supplied to the 60 minute bake timer, steam (water injection) switch, light switch, and the temperature control circuit. The oven circulation fan will operate only when the thermostat is turned on and the oven door is closed. The control panel light switch will turn the oven lights on when the door is closed only when the light switch is held in. With the thermostat switched on, the oven lights will come on automatically when the door is opened, as this is controlled by the door microswitch.

The 60 minute timer is a mechanical timer and can therefore be operated with the oven's power switch On or Off. However, only with the oven's power switch On will the switch contacts of the 60 minute timer turn on the time-up buzzer and illuminate the time-up indicator on the control panel. The buzzer and time-up indicator provide indication that the time setting has run down to zero and at this point will remain On continuously until the 60 minute timer has been manually set back to the Off (vertical) position. The 60 minute timer does not control any other part of the oven's operating system as this timer is independent of the temperature control and heating system.

The steam (water injection) switch on the control panel can be operated whenever the power switch is On. The switch is momentary like the light switch and when depressed, will operate the electric solenoid valve at the rear of the oven and inject water across the oven fan from the flat spray (vertical) nozzle positioned at the rear of the oven. Releasing the steam button will close the solenoid valve. This feature is used to instantaneously add steam into the oven.

The temperature control of this oven is with a capillary type thermostat which can be set to a required cooking temperature.

The thermostat switch has a separate switch body assembled onto the front from the shaft assembly and when the thermostat is set to a cooking temperature, the switch contacts turn on the oven fan. The switch is closed (fan on) whenever the thermostat is not in the Off (vertical) position. The control panel indicator light to the right of the thermostat knob cycles On and Off with the thermostat to indicate when the gas burners are on and the oven is heating.

The burners are automatically controlled by the main oven thermostat or hold thermostat, via an automatic ignition and valve control device, which operates a gas solenoid valve to provide gas to the burners as required to maintain the set thermostat temperature.

On the thermostat calling for heat, the thermostat will switch power to the ignition control. The ignition control will then power the gas control valve to open the solenoid and provide gas to the burners. At the same time the ignition control will generate a high voltage ignition spark sequence conveyed to the ignition electrodes through a high tension ignition cable. The spark and earth ignition electrodes will spark across the end gap between these two to ignite the burners.

On successful ignition of the burners the third electrode (a flame rectification rod) will be in the burner flame. This provides the ignition control with confirmation that the burners are lit by establishing a micro-amp current from the electrode to earth through the flame due to combustion flames being ionised and therefore able to conduct minute electrical currents. The flame electrode is connected to the ignition control with an insulated wire.

If this ignition sequence occurs correctly the spark sequence will be stopped and the burners will continue to operate until the thermostat switches off and shuts down the ignition control and consequently closes the gas solenoid valve.

Should the ignition control not sense the burner flame within a fixed ignition / spark sequence period, the ignition control will lock-out and turn off the gas solenoid valve. Lock-out condition requires the oven thermostat to be switched off before operation can be restarted.

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Units from S/N 205337: If the ignition control loses the burner flame during an on period, a re-ignition attempt will be started automatically. If this is unsuccessful the ignition will go to lock-out mode.

The G1100 Turbofan convection oven features a Roast-and-Hold system which can be used to automatically set the oven to a fixed holding temperature at the end of a timed cooking period. When the Roast-and-Hold switch is turned On the switch will illuminate and switch the power from the thermostat to the 3 hour roast timer.

If the roast timer is in the Hold (vertical) position the timer switch contacts will be in their normally closed position and supply power directly to the Hold thermostat located behind the control panel. The Hold thermostat is factory set to 75°C (167°F) and will supply power to the ignition and gas burner as required to maintain its preset temperature.

The thermostat heating light will also cycle On/Off as the Hold thermostat maintains temperature.

In the Roast-and Hold mode the 3 hour timer can be set to a selected roasting time. During this time period the normally open switch contacts of the timer are closed. The timer has two change over switches and in this position one is used to supply power to its timing motor and the other is used to switch power directly to the main oven thermostat. During the 3 hour timer run-down period the oven temperature will be controlled by the main oven thermostat to the set temperature and operate as previously described.

When the 3 hour timer has run down and reached the Hold position the two switch contacts change over to their normally closed position which isolates power from the timer motor and the oven thermostat. It also switches power back to the oven hold thermostat. At this point the temperature control is now maintained by the hold thermostat as previously described. To cancel the hold circuit the Roast-and-Hold switch is turned Off. This removes power from the 3 hour timer and restores the feed to the main oven thermostat. The Hold indicator light below the 3 Hour timer will illuminate whenever the oven is operating in hold mode (Roast ‘n Hold selected, and 3 Hour timer at zero position).

The factory preset hold thermostat can be adjusted as required to change the holding temperature if necessary. Refer Service section for this procedure.

The Troubleshooting Guide (Section 5) should be used to identify any incorrect oven operation. On correct identification of the operating fault the Troubleshooting Guide will make reference to the corrective action required, or refer to the Fault Diagnosis section and/or Service section to assist in correction of the fault.

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4. MAINTENANCE

WARNING: ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.

4.1 CLEANING

WARNING: ALWAYS TURN THE POWER SUPPLY OFF BEFORE CLEANING.

IMPORTANT: THIS UNIT IS NOT WATER PROOF.
DO NOT USE A WATER JET SPRAY TO CLEAN INTERIOR OR EXTERIOR OF THIS UNIT.

EXTERIOR

Clean with a good quality stainless steel cleaning compound. Harsh abrasive cleaners may damage the surface.

Do not use oven cleaners or caustic solutions to clean the control panel as these cleaners will damage plastic components.

INTERIOR

Ensure that the oven chamber is cool. Do not use wire brushes, steel wool or other abrasive materials. Clean the oven regularly with a good quality oven cleaner. Take care not to damage the fan which has been factory balanced.

SIDE RACKS

Remove all oven racks. Remove the side racks by lifting out of the rack support brackets.

LAMP GLASS

To remove glasses, unscrew anti-clockwise. To replace, screw in clockwise.

IMPORTANT: ENSURE THAT LAMP GLASS IS NOT OVER TIGHTENED.

NEVER OPERATE OVEN WITH LAMP GLASSES REMOVED

OVEN DOOR GLASS

Clean with conventional glass cleaners.

4.2 ROUTINE PROCEDURES

The following procedures should be carried out at least once a year.

Door chain
Adjust if required and check for wear.

Door catch
Ensure that catch is adjusted such that the door closes properly.

Water nozzle
Check for liming in the water nozzle.

HT Lead / Electrode
Check for deterioration.

Operating pressure check
Check that the operating pressure of the unit is correct to that stamped on the rating plate. Check for leaks in the gas piping connections.

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5. TROUBLE SHOOTING

⚠ **WARNING: ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.**

FAULT	POSSIBLE CAUSE	REMEDY
THE OVEN DOES NOT OPERATE / START	The mains isolating switch on the wall, circuit breaker or fuses are "off" at the power board.	Turn on.
	The power switch on the oven is off.	Turn on switch. Power indicator will illuminate.
	Incorrect electrical supply. **(Refer fault diagnosis 6.1.1)**	Ensure electrical supply correct.
	Power switch on unit faulty. **(Refer fault diagnosis 6.1.1)**	Replace. **(Refer service section 6.3.1)**
NO HEAT / BURNER NOT WORKING	Gas supply not turned on.	Turn on gas supply
	Incorrect gas pressure setting for burner.	Set correct pressure. **(Refer adjustment section 6.4.1)**
	Burner ignition spark faulty. **(Refer fault diagnosis 6.1.2)**	**(Refer fault diagnosis 6.1.2)**
	Burner flame not being sensed. **(Refer fault diagnosis 6.1.2)**	**(Refer fault diagnosis 6.1.2)**
	Ignition / burner control box faulty. **(Refer fault diagnosis 6.1.2)**	Replace. **(Refer service section 6.3.17)**
	Gas valve faulty. **(Refer fault diagnosis 6.1.2)**	Replace. **(Refer service section 6.3.18)**
	No power to thermostat. **(Refer fault diagnosis 6.1.2)**	Identify fault and correct.
	Thermostat faulty. **(Refer fault diagnosis 6.1.2)**	Replace. **(Refer service section 6.3.5)**
MAIN BURNERS WILL NOT LIGHT	Wrong size or blocked injector.	Replace / clean injector. **(Refer service section 6.3.16)**
	Small pilot flame.	Correct fault.
	Faulty gas control.	Replace gas control. **(Refer service section 6.3.18)**
	Incorrect supply pressure.	Check supply correct pressure.

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FAULT	POSSIBLE CAUSE	REMEDY
BURNER DOES NOT BURN CORRECTLY (ROARS / LIGHTS BACK /INCORRECT COLOUR)	Incorrect supply pressure. Burner aeration incorrect. Incorrect size or blocked injector. Burner faulty.	Check supply pressure. Adjust burner aeration slide. **(Refer service section 6.4.3)** Check injector size and clean or replace if necessary. **(Refer service section 6.3.16)** Replace burner. **(Refer service section 6.3.15)**
PILOT FLAME YELLOW / LAZY	Gas pressure incorrect. Restriction in pilot injector or aeration.	Check gas supply pressure. **(Refer specifications section)** Clean or replace as required. **(Refer service section 6.3.14)**
PILOT GOES OUT WHEN MAIN BURNER COMES ON	Incorrect gas pressure.	Check supply / adjust pressure. **(Refer specifications section)**
FAN DOESN'T OPERATE	Thermostat not on. *(Fan only operates when the thermostat is on).* Door not closed. *(Fan only operates when the door is closed).* Door microswitch out of adjustment. **(Refer fault diagnosis 6.1.3)** Door microswitch faulty. **(Refer fault diagnosis 6.1.3)** Thermostat fan switch faulty. **(Refer fault diagnosis 6.1.3)** Fan motor faulty. **(Refer fault diagnosis 6.1.3)** Wiring.	Turn thermostat on. Close door. Adjust microswitch. **(Refer service section 6.4.7)** Replace microswitch. **(Refer service section 6.3.22** Replace thermostat. **(Refer service section 6.3.5)** Replace. **(Refer service section 6.3.11)** Check and tighten any loose wiring.
OVEN LIGHT NOT ILLUMINATING	Blown bulb. Light switch faulty. **(Refer fault diagnosis 6.1.4)**	Replace. **(Refer service section 6.3.10)** Replace. **(Refer service section 6.3.2)**

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FAULT	POSSIBLE CAUSE	REMEDY
NO WATER INJECTION / STEAM	Water not turned on. Oven water nozzle blocked. Fault with water valve. **(Refer fault diagnosis 6.1.5)** Steam switch faulty. **(Refer fault diagnosis 6.1.5)**	Turn water on at water supply. Remove, clean or replace. **(Refer service section 6.3.19)** Service or replace as required. **(Refer service section 6.3.20, 6.3.21)** Replace. **(Refer service section 6.3.2)**
CONTINUOUS WATER OUT OF OVEN WATER NOZZLE	With oven on only—Electrical fault. **(Refer fault diagnosis 6.1.6)** With oven on or off—Fault with water valve. **(Refer fault diagnosis 6.1.6)**	Correct electrical fault. Service or replace as required. **(Refer service section 6.3.20, 6.3.21)**
60 MINUTE TIMER WILL NOT TIME DOWN 60 MINUTE TIMER INACCURATE BELOW 20 MINUTES 60 MINUTE TIMER NO TIME UP BUZZER	Timer faulty. Timer not set correctly. Zero (time up) position not set correctly. Buzzer faulty. **(Refer fault diagnosis 6.1.7)** Timer not switching on buzzer. **(Refer fault diagnosis 6.1.7)**	Replace. **(Refer service section 6.3.6)** For timer settings below 20 minutes, always rotate past 20 minutes, then back to desired time. Adjust zero (time up) position. **(Refer service section 6.4.6)** Replace. **(Refer service section 6.3.8)** Replace. **(Refer service section 6.3.7)**
60 MINUTE TIMER NO TIME UP INDICATOR	Timer not switching on buzzer / indicator. **(Refer fault diagnosis 6.1.7)** Indicator faulty. **(Refer fault diagnosis 6.1.8)**	Replace. **(Refer service section 6.3.7)** Replace. **(Refer service section 6.3.3)**
NO TEMPERATURE CONTROL (TEMPERATURE OVERRUN)	Thermostat faulty. **(Refer fault diagnosis 6.1.9)**	Replace. **(Refer service section 6.3.5)**

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FAULT	POSSIBLE CAUSE	REMEDY
SLOW RECOVERY	Oven in 'Roast 'n Hold' mode.	Switch off 'Roast 'n Hold'.
	Overloading of oven.	Reduce oven loading.
	Fan not working.	Check fan operation.
	Thermostat out of calibration. **(Refer fault diagnosis 6.1.10)**	Correct calibration. **(Refer service section 6.4.4)**
	Low gas pressure.	Check and adjust if necessary.
	Blocked burner orifice.	Clean. **(Refer service section 6.3.16)**
	Incorrect gas type.	Check appliance gas type.
NO THERMOSTAT HEATING INDICATOR	Indicator faulty. **(Refer fault diagnosis 6.1.11)**	Replace. **(Refer service section 6.3.4)**
ROAST TIMER (180 MINUTE) WILL NOT TIME DOWN	Roast 'n' Hold switch not switched on.	Turn on switch. Switch will illuminate.
	No power to timer / timer faulty. **(Refer fault diagnosis 6.1.12)**	Correct electrical fault / replace timer. **(Refer service section 6.3.7)**
	'Roast 'n Hold' switch faulty. **(Refer fault diagnosis 6.1.12)**	Replace. **(Refer service section 6.3.1)**
NO HOLD INDICATOR	Faulty indicator. **(Refer fault diagnosis 6.1.13)**	Replace. **(Refer service section 6.3.3)**
	Faulty timer. **(Refer fault diagnosis 6.1.13)**	Replace. **(Refer service section 6.3.7)**
HOLDING TEMPERATURE INCORRECT	Hold thermostat set temperature incorrect.	Adjust to correct temperature. **(Refer service section 6.4.5)**
	Hold thermostat faulty. **(Refer fault diagnosis 6.1.14)**	Replace. **(Refer service section 6.3.9)**
DOORS DO NOT CLOSE	Tray in way of door.	Correctly position tray in rack.
	Door catch setting incorrect.	Adjust. **(Refer service section 6.4.2)**
	Door chain setting incorrect.	Adjust. **(Refer service section 6.4.1)**

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6. SERVICE PROCEDURES

⚠ **WARNING:** **ENSURE POWER SUPPLY IS SWITCHED OFF BEFORE SERVICING.**

⚠ **WARNING:** **ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.**

SECTION **PAGE NO.**

⚠ **WARNING:** **ALWAYS CHECK/TEST FOR GAS LEAKS AFTER SERVICE REPAIRS ON THE GAS SYSTEM.**

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⚠ **WARNING:** **ALWAYS CHECK/TEST FOR GAS LEAKS AFTER SERVICE REPAIRS ON THE GAS SYSTEM.**

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6.1 FAULT DIAGNOSIS

6.1.1 OVEN DOES NOT OPERATE / START

Incorrect electrical supply

Check that the voltage across phase and neutral (L1 and L2) terminals of terminal block is the voltage as stated on the unit's electrical rating plate.

If incorrect, check electrical connection of supply wiring and / or check electrical supply.

Power switch faulty

With switch on, check voltage at terminal 1 of switch. If there is no voltage, check for fault in wiring. Check voltage at terminal 2. If there is no voltage then the switch is faulty - replace.

6.1.2 NO HEAT/BURNER NOT WORKING

Burner ignition spark not working

A faulty spark system is one that does not light the burner at all. If the burner is being lit temporarily, but fails to stay alight, then the problem is in the flame sensing, not spark ignition. Refer "Burner flame not being sensed" (following).

Firstly determine if spark is being generated. Gain access to the oven burners (refer 6.2.6). **Turn off the gas supply**, and with electrical supply turned on, turn the thermostat on to initiate a heating cycle. Look for spark generation at the end of the electrodes located above the right hand burner. A correctly functioning ignition system should show sparking visible across spark and earth rod ends. If spark is not seen at electrode ends, or sparking is erratic, this indicates that there is a high voltage short/breakdown between the ignition box and electrode ends.

Possible causes to investigate are as follows, inspect and correct as necessary:

- Spark gap too large (see the following section).
- Cracked spark rod ceramic, or carbon build-up.
- HT leads to spark electrode and earth broken/deteriorated.
- HT leads between ignition electrodes and ignition control box broken/deteriorated.
- No spark from ignition box, refer ignition box faulty.

Spark gap setting

With spark electrode assembly removed, inspect spark rod and earth electrode settings, and spark gap settings.

Between SPARK and EARTH (centre) 3-5mm

Between EARTH and main burner 7-10mm

Between SENSOR and EARTH 10-12mm

Between SENSOR and main burner 7-10mm

NOTE: Use drill bits to gauge spark gap settings

With spark system correctly checked, re-check operation.

Burner flame not being sensed

The flame sensing electrode requires correct positioning in the burner flame. Incorrect gas pressures, types, injector sizes, etc will affect correct operation of flame sensing system. Ensure that these are checked and correct before carrying out further investigation. Also, an incorrectly earthed/grounded appliance will cause faults with the flame sensing system. Always ensure a correct earth/ground connection on the appliance connection and supply.

If the flame rod is touching the burner then there is a short circuit to earth, and this will cause the ignition control to not sense the flame correctly. This fault would normally be indicated by a burner that fails to stay alight during operation, or during an ignition attempt the sparking continues after the burner is lit. The flame rod should be adjusted to be clear of the burner by 7-10mm.

Always inspect the connection lead from the flame rod to the ignition box for deterioration, bad connections, or insulation breakdown.

Ignition box faulty

The direct spark ignition control boxes used on G1100's are operated from direct voltage supply from the thermostat / hold thermostat circuit.

Correct ignition box operation should result in ignition box commencing spark at ignition electrodes and opening gas valve to ignite burners, then maintain burner on after successful ignition.

If no spark generated or heard, check that ignition box has correct supply voltage (when thermostat in ON).

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Check correct supply voltage on ignition box wires connecting to terminal 1 of the hold thermostat, and a control panel neutral wire. This confirms that the thermostat circuit is supplying the correct voltage to the ignition box connection wires. To confirm actual voltage to ignition box, the 6-way connector on the ignition box requires removal to check actual voltage in ends of 6 way connector for these two wires.

If voltage is ok, but no spark is generated, check that all wiring at ignition box has good connections.

Ensure that the ignition box has earth/ground connection, and that appliance has earth/ ground at supply, and supply is earthed.

If all connections are ok, and no ignition sequence operating, then ignition box is faulty - replace.

If ignition box generates spark, but burner doesn't ignite, or if burner ignites but doesn't stay alight, firstly check correct electrode assembly operation. Refer fault diagnosis 6.1.2 - Burner Ignition Spark Not Working.

If all checks are correct, but burner fails to stay alight then ignition box is faulty - replace.

NOTE: Correct flame sensing current can be checked by inserting a multi-meter capable of measuring micro-amps in series with flame rectification rod connection to ignition box. With power off, disconnect flame rectification rod connection to ignition box and connect multimeter between flame rectification rod lead and ignition box terminal. Turn on power and thermostat. With burner running a current of no less than that specified below should be read.

All Models	1.0 micro Amps

If no current reading, or less than specified, re-check electrode settings, gas pressure, gas type etc, and if still not correct, ignition box requires replacement.

Gas valve faulty

In all cases it must first be established that the gas supply is on, and that the supply pressure is correct (refer to specifications section)

If pressure is correct then with thermostat turned on check voltage at connections to the gas valve solenoid.

If voltage is correct when thermostat is on, and gas valve is not opening, then the gas valve is faulty - replace.

If voltage is incorrect, check wiring and connections to ignition box and refer to ignition box fault diagnosis.

No power to thermostat

Check voltage to terminal 1 on oven thermostat. If there is no voltage then check voltage through terminal 2 and 3 on roast n hold switch. If there is no voltage to terminal 2 then check wiring. If there is voltage to terminal 2, but no voltage to terminal 3 (and the roast n hold switch is not turned on) then switch is faulty—replace.

Thermostat faulty

Set thermostat to 200°C. Check the voltage out of terminal 2 on the thermostat. If there is no voltage then the thermostat is faulty—replace.

If the voltage is correct and the heating light is on then check all wiring to ignition box.

6.1.3 FAN DOESN'T OPERATE

Fan motor faulty

Check the supply voltage across motor terminals. If there is no voltage then check the electrical connections of wiring.

If voltage is correct then check the oven fan for free rotation. Remove any obstruction.

If fan is free to spin and the voltage at motor terminals is correct, then the motor is faulty—replace.

Fan switch faulty

Check that the thermostat has power to terminal 5 on switch body on the front of the thermostat when power switch is ON. If no voltage check wiring. Check that terminal P5 has power switched to it when the thermostat is turned on. If no power to P5 then switch is faulty and thermostat complete with switch needs to be replaced.

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Microswitch faulty / out of adjustment

Remove the right hand side panel to allow access to the microswitch. With the thermostat switched on and door closed, check voltage to terminal com of microswitch. If no voltage check wiring to thermostat.

If voltage correct then check voltage at terminal n.c. If no voltage then manually activate microswitch by bending the activator arm. If microswitch cannot be activated then it is faulty - replace. If the microswitch can be manually activated then it should be adjusted.

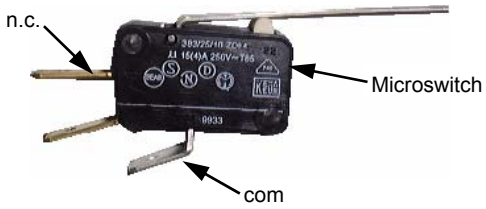

Figure 6.1.1

6.1.4 OVEN LIGHTS NOT ILLUMINATING

Light switch faulty

Check voltage to the left hand terminal of the switch. If there is no voltage, then check wiring.

With switch depressed, check voltage at right hand terminal. If there is no voltage, then replace the switch.

If voltage is correct, then check wiring to light.

NOTE: Alternately, perform a continuity test across the terminals with the light switch depressed.

6.1.5 NO WATER INJECTION / STEAM

Steam switch faulty

Check voltage to the left hand terminal of the switch. If there is no voltage, then check wiring.

With switch depressed, check voltage at right hand terminal. If there is no voltage, then replace the switch.

If voltage is correct, then check wiring to the solenoid.

NOTE: Alternately, perform a continuity test across the terminals with the steam switch depressed.

Fault with water valve

Check voltage supply across the water valve solenoid coil with the steam switch depressed. If there is no power supply then check the control panel steam switch.

If power supply to the coil is correct, disconnect wiring to coil and check the resistance of the coil windings.

Correct coil resistance: 2500 ohms

NOTE: If open circuit / high resistance, then the coil is faulty—replace.

If coil resistance is correct, rewire and listen for an audible solenoid click when the steam switch is depressed.

If solenoid can be heard functioning, and oven water nozzle is not blocked, then remove water solenoid and fittings and check for blockages.

6.1.6 CONTINUOUS WATER OUT OF OVEN WATER NOZZLE

Water solenoid electrical fault

With control panel steam switch not depressed, check for power supply across solenoid coil. If there is power to the coil, then check wiring and steam switch (refer 6.1.7).

6.1.7 60 MINUTE TIMER NO TIME UP BUZZER

Buzzer faulty

With timer in 'zero' position, check the buzzer at side of control panel (inside) for voltage across terminals. If voltage is correct then buzzer is faulty—replace.

If there is no voltage, then check wiring..

Timer not switching on buzzer

With timer in zero position, check voltage to top connection (terminal one) and bottom connection (terminal two) of timer. If there is no voltage at terminal one then check wiring.

If no voltage at terminal two then timer is faulty—replace.

NOTE: Timer will continue to run approximately three minutes below zero. Buzzer and time up indicator will continue until the timer is manually switched off (to vertical position).

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6.1.8 60 MINUTE TIMER NO TIME UP INDICATOR

Indicator faulty

With the timer in the zero position, check for voltage across the indicator light. If correct, then the indicator light is faulty—replace.

If there is no voltage then check wiring.

6.1.9 NO TEMPERATURE CONTROL (TEMPERATURE OVERRUN)

Thermostat faulty

Set thermostat to 50°C. Check voltage at terminal 2 on the thermostat. As the oven heats up, the thermostat contacts should open, cutting power to terminal 2 of the thermostat. If not then the thermostat is faulty - replace.

6.1.10 SLOW RECOVERY

Thermostat out of calibration

Place an accurate digital thermometer probe in centre of oven. Set thermostat to 180°C. Close the oven door and allow oven thermostat to cycle on and off twice. Record oven centre temperature for the next thermostat on and off cycle. The thermostat should cycle on and off between 165°C and 195°C when set to the above temperature. If oven temperature is outside these ranges, then the thermostat requires recalibration.

NOTE: Thermostat cycling span should be ±15°C

6.1.11 NO THERMOSTAT HEATING INDICATOR

Indicator faulty

Check the voltage across the indicator terminals. If the voltage is correct then the indicator is faulty—replace.

If there is no voltage then check wiring.

6.1.12 ROAST TIMER (180 MINUTE) WILL NOT TIME DOWN

No power to timer

Check the voltage at terminal 5 on underside of the 180 minute timer.

Check that one lead of timer motor is connected to terminal five of timer and the other lead is connected to neutral of 'Roast 'n Hold' switch.

If voltage at terminal 5 is correct and wiring is correct then the timer motor is faulty—replace timer.

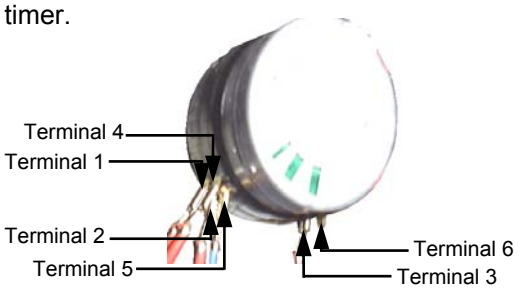

Figure 6.1.2

If there is no power at terminal 5, check for power supply at terminal 4 of timer. If there is voltage at terminal 4 and not at terminal 5 with timer set, then timer switch is faulty—replace timer. If terminal 4 voltage is correct, check wiring to roast n hold switch.

'Roast 'n Hold' switch faulty

Check if the switch latches. If the switch does not latch then the switch is faulty—replace.

With the switch latched, check voltage to terminal 2. If there is no voltage then check for fault in wiring.

Check voltage to terminal 1. If there is no voltage then switch is faulty—replace.

NOTE: When the switch is latched, it should illuminate if operating correctly.

6.1.13 NO HOLD INDICATOR

Indicator faulty

Check the voltage across the indicator terminals. If the voltage is correct then the indicator is faulty—replace.

If there is no voltage then check wiring.

Timer faulty

NOTE: Timer in 'HOLD' position (vertical) and 'Roast n Hold' switch on (illuminated).

Check the voltage at terminal 3 of timer, with

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6.1.14 HOLDING TEMPERATURE INCORRECT

Hold thermostat faulty

With the power switch on and illuminated, 'Roast 'n Hold' switch on and illuminated, and the roast (180 minute) timer set to hold, check that the hold indicator is illuminated.

With a cold oven (ie room temperature) check that the oven burners are on. If burners are not operating, check the voltage at terminal 2 of the hold thermostat. If there is no voltage then check wiring.

If the voltage is correct, and the thermostat is adjusted above oven temperature, then check for output voltage at terminal 1 (bottom) of hold thermostat. If there is no voltage then the thermostat is faulty—replace.

6.2 ACCESS

6.2.1 CONTROL PANEL

1) Undo the screw on the left hand side of the control panel.

Figure 6.2.1

2) The control panel can now hinge open along its right hand edge.

6.2.2 FAN BAFFLE

1) Open the oven doors and remove all racks and trays from the oven.
2) Remove the four baffle securing screws from the rear of the oven.

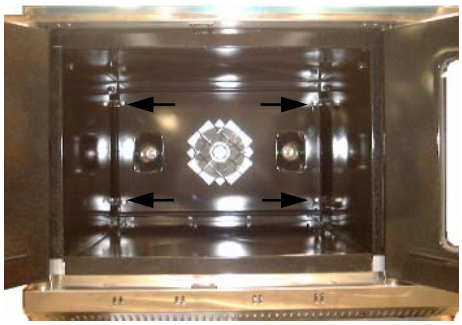

Figure 6.2.2

3) Withdraw the baffle from the oven.

6.2.3 RIGHT HAND ACCESS PANEL

1) Undo the six screws securing the access panel to the right hand side panel, and remove.

Figure 6.2.3

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6.2.4 RIGHT HAND SIDE PANEL

1) Remove the four screws along the top, four screws along the bottom, and the four screws from the rear of the right hand side panel.

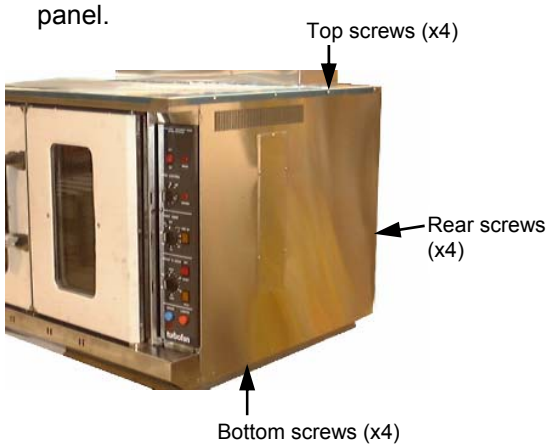

Figure 6.2.4

2) Remove the panel.

6.2.5 BOTTOM LINTEL

1) Open the oven doors.
2) Remove the screws from the ends of the bottom lintel (one each end).
3) Remove the two screws from the top of the lintel, and remove the bottom door catch (2 screws).

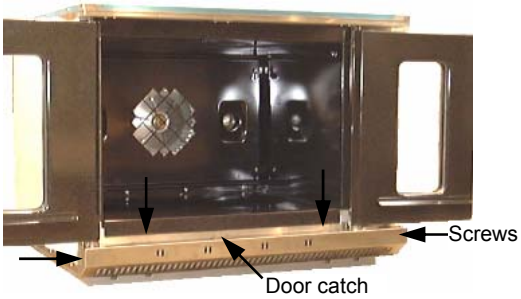

Figure 6.2.5

4) Remove the bottom lintel from the oven.

6.2.6 ACCESS TO BURNERS

1) Remove all trays and racks from the oven,
2) Remove the fan baffle (refer 6.2.2).
3) Undo the four screws at the bottom rear of the oven securing the oven base.

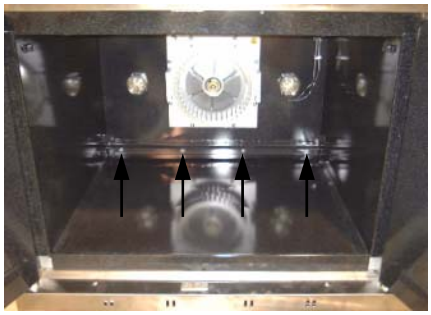

Figure 6.2.6

4) Slide the oven base out of the oven.
5) Loosen the screw securing each of the clamp plates to the oven tiles.

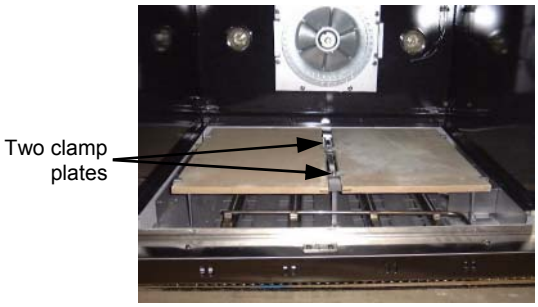

Figure 6.2.7

6) Rotate the clamp plates and remove the two tiles from the oven.

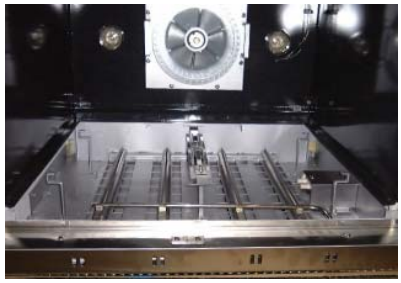

Figure 6.2.8

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6.2.7 CONTROL PANEL—REAR

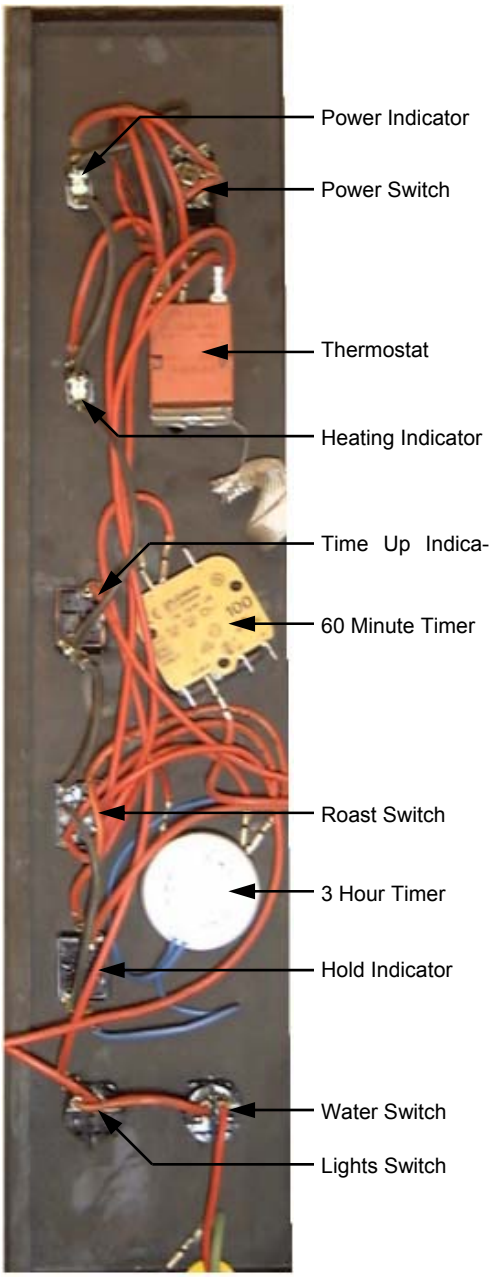

Figure 6.2.9

6.3 REPLACEMENT

6.3.1 POWER / ROAST SWITCHES

1) Open the control panel (refer 6.2.1).
2) Disconnect the wires from the faulty switch.
3) Press in the locking tabs at top and bottom of the switch and from rear push switch through front of control panel.

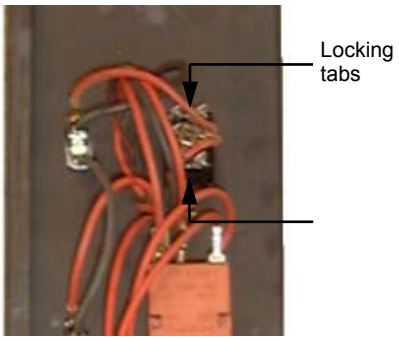

Figure 6.3.1

4) Replace and reassemble in reverse order.

6.3.2 LIGHTS / WATER SWITCHES

1) Open the control panel (refer 6.2.1).
2) Disconnect the wires from the faulty switch.
3) Press in the locking tabs at top and bottom of the switch and from rear push switch through front of control panel.

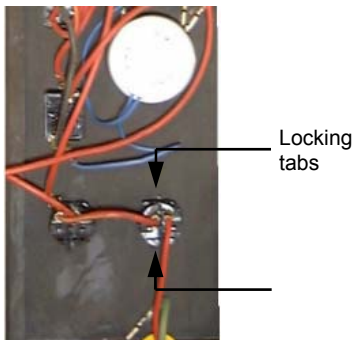

Figure 6.3.2

4) Replace and reassemble in reverse order.

6.3.3 TIME UP / ROAST INDICATORS

1) Open the control panel (refer 6.2.1).
2) Disconnect the wires from the faulty indicator.

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3) Press in the locking tabs at top and bottom of the indicator and from rear push indicator through front of control panel.

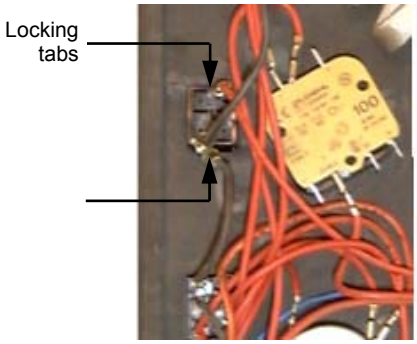

Figure 6.3.3

4) Replace and reassemble in reverse order.

6.3.4 POWER / HEATING INDICATORS

1) Open the control panel (refer 6.2.1).
2) Disconnect the wires from the faulty indicator.
3) Press in the locking tabs at sides of the indicator and from rear push indicator through front of control panel.

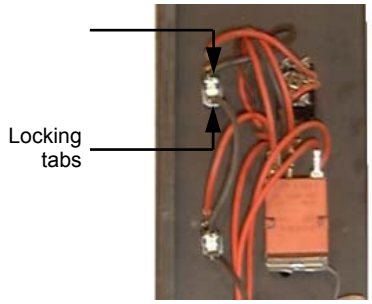

Figure 6.3.4

4) Replace and reassemble in reverse order.

6.3.5 THERMOSTAT

1) Open control panel (refer 6.2.1).
2) Remove thermostat knob and unscrew the nut securing the thermostat to the control panel.

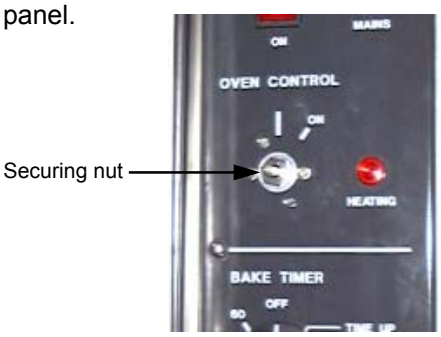

Figure 6.3.5

3) Remove fan baffle from inside oven (refer 6.2.2).
4) Unclip thermostat sensing bulb from its mounts and feed back through rear of oven.

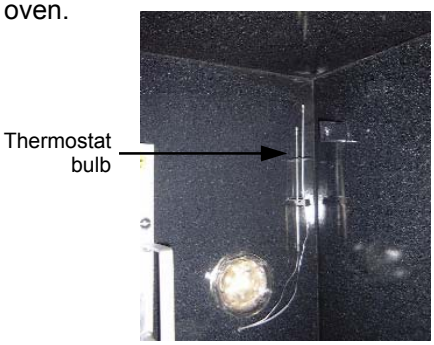

Figure 6.3.6

5) Remove thermostat from oven.
6) Transfer wires to new thermostat. Reassemble with new thermostat in reverse order.

6.3.6 60 MINUTE TIMER

1) Open the control panel (refer 6.2.1).
2) Remove the knob from the timer.
3) Unscrew both screws from the front of the control panel and remove the timer from the rear of the control panel.

Figure 6.3.7

4) Transfer wires to the new timer and reassemble in reverse order.

6.3.7 3 HOUR TIMER

1) Open the control panel (refer 6.2.1).
2) Remove the knob from the timer.
3) Unscrew the locking nut on the front of the timer and remove the timer from the rear of the control panel.

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Figure 6.3.8

4) Transfer wires to the new timer and reassemble in reverse order.

6.3.8 BUZZER

1) Remove R/H side panel (refer 6.2.4).
2) Disconnect wires from buzzer (secured to insulation panel).
3) Remove two screws securing the buzzer to its mounting bracket.

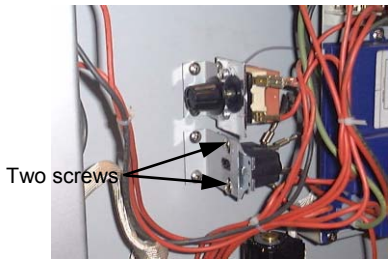

Figure 6.3.9

4) Replace buzzer and re-assemble in reverse order.

6.3.9 HOLD THERMOSTAT

1) Open control panel (refer 6.2.1), and remove right hand side panel.
2) Remove the hold thermostat knob by pulling away from bracket.
3) Undo the two screws securing the hold thermostat to the bracket.

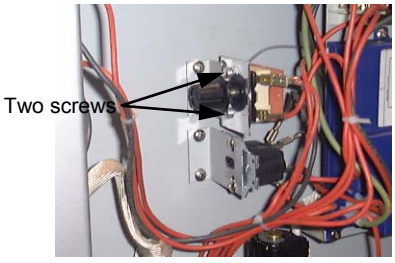

Figure 6.3.10

4) Remove fan baffle from inside oven (refer 6.2.2).
5) Unclip thermostat sensing bulb from its mounts and feed back through rear of oven.

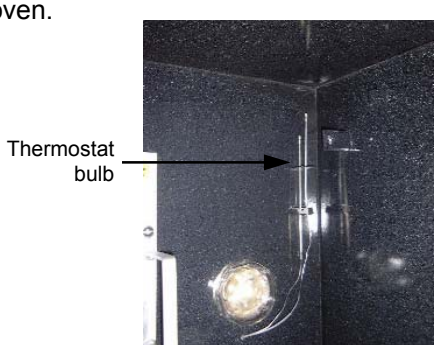

Figure 6.3.11

6) Remove thermostat from oven.
7) Transfer wires to new thermostat and reassemble with in reverse order.

6.3.10 OVEN LIGHTS

1) Remove the fan baffle (refer 6.2.2).
2) Unscrew the glass cover (anti-clockwise).

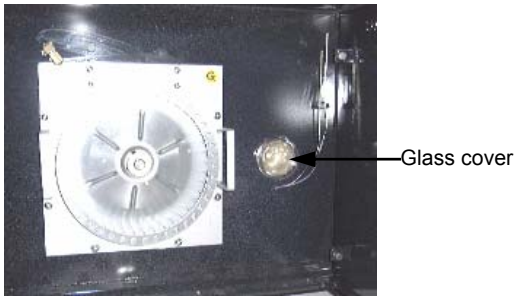

Figure 6.3.12

3) Replace the bulb (40 watt miniature Edison screw).

6.3.11 FAN / MOTOR

1) Remove the fan baffle (refer 6.2.2).
2) Remove the eight screws securing the fan and motor mounting plate situated at the oven rear.

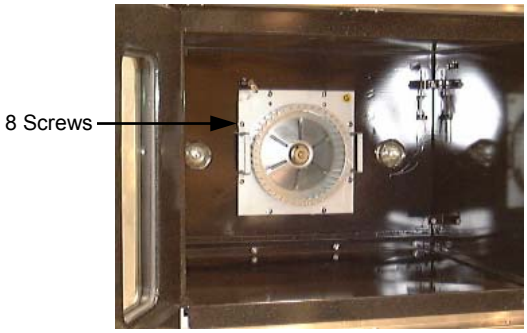

Figure 6.3.13

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3) Pull the fan and motor assembly into the oven as pictured below, and disconnect the wiring. The fan motor unit can now be removed from the oven.

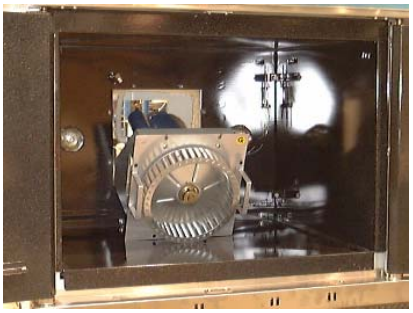

Figure 6.3.14

4) Slacken the two socket head grub screws spaced at 90° on the fan boss.

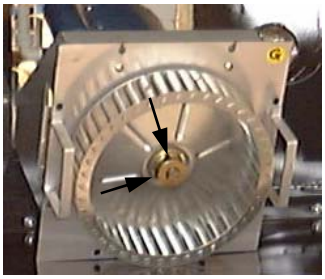

Figure 6.3.15

5) Remove the fan from the motor shaft.

NOTE: Use of a fan puller is recommended for removal of the oven fan.

6) Re-assemble in the reverse order.

NOTE: No lubrication of either the fan or motor is required as they are both self lubricating.

6.3.12 IGNITION ELECTRODES

1) Gain access to the oven burners (refer 6.2.6).
2) Remove the screw holding the electrode positioning bracket to the housing on the inside of the oven.

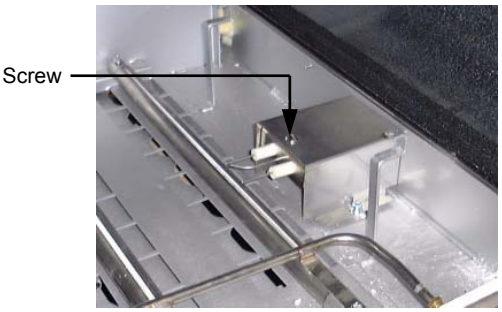

Figure 6.3.16

3) Remove the oven right hand side panel (refer 6.2.4).
4) Remove the two screws securing the electrode mounting bracket to the right hand insulation panel.

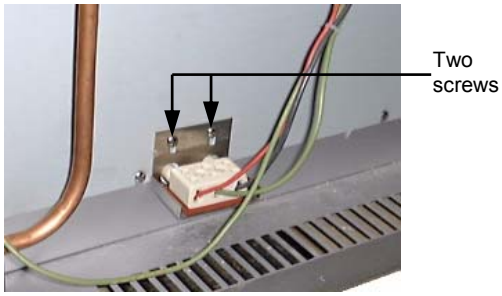

Figure 6.3.17

5) Transfer the wires to the new electrode assembly and reassemble in reverse order.

NOTE: Ensure to correctly set electrode gapping when installing new electrodes and test before fully re-assembling oven.

Between SPARK and EARTH (centre) 3-5mm

Between EARTH and main burner 7-10mm

Between SENSOR and EARTH 10-12mm

Between SENSOR and main burner 7-10mm

6.3.13 PILOT BURNER

1) Gain access to the oven burners (refer 6.2.6).
2) Remove the four screws securing the pilot burner to the main burner aeration slide.

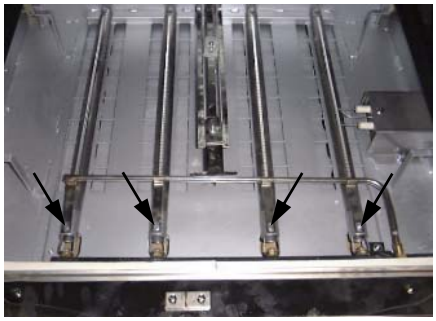

Figure 6.3.18

3) Slide the pilot burner off the pilot injector.
4) Replace pilot burner and reassemble in reverse order.

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6.3.14 PILOT BURNER INJECTOR

1) Remove the pilot burner (refer 6.3.13).
2) Unscrew the pilot burner injector.

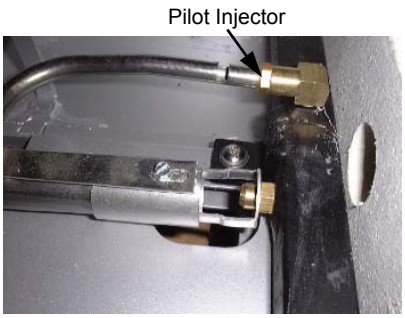

Figure 6.3.19

3) Clean or replace, and reassemble in reverse order.

6.3.15 MAIN BURNER

1) Gain access to the oven burners (refer 6.2.6).
2) Remove the four screws securing the pilot burner to the main burner aeration slide.

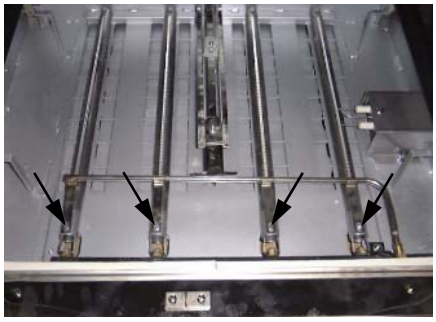

Figure 6.3.20

3) Slide the pilot burner off the pilot injector and remove the pilot burner.
4) Remove the nut securing the rear of the burner.

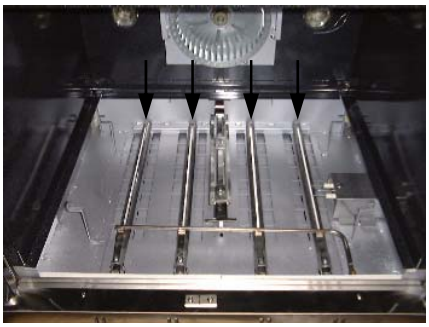

Figure 6.3.21

5) Remove the burner by lifting at the rear and sliding off the main burner injector.
6) Replace and reassemble in reverse order.

6.3.16 MAIN BURNER INJECTOR

1) Remove the main burner (refer 6.3.15).
2) Unscrew the burner injector.

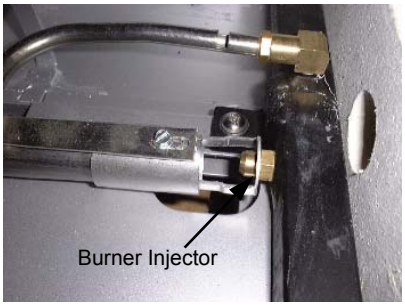

Figure 6.3.22

3) Clean or replace, and reassemble in reverse order.

6.3.17 IGNITION CONTROL BOX

1) Remove the side service panel from the RH side panel (refer 6.2.3).
2) Remove wiring plug from the ignition control box.
3) Undo the three screws securing the ignition box to the mounting panel.

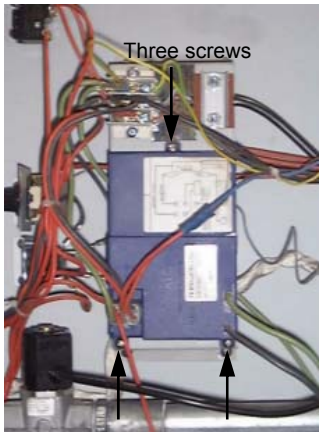

Figure 6.3.23

4) Replace and reassemble in reverse order, ensuring all wires are correctly fitted.

6.3.18 GAS SOLENOID VALVE

Units Manufactured from S/N 275353.

1) Remove right hand side panel (refer 6.2.4).
2) Remove wiring plug from valve (refer figure 6.3.24).
3) Remove flexi-tube from bottom of valve.

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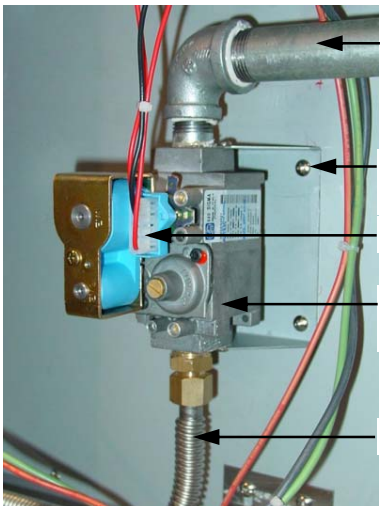

Figure 6.3.24

4) Disconnect gas supply at rear of oven, remove saddle clamp holding the gas inlet pipe (two screws).
5) Remove the four screws securing valve bracket to oven, remove valve and inlet pipe from the oven.
6) Unscrew gas inlet pipe and elbow from the valve. Remove the four screws (two top and bottom) securing the valve to the bracket, remove valve.
7) Fit new valve to the bracket and re-assemble in reverse order.
8) Leak test all new connections.

Units Manufactured up to S/N 275353

1) Remove right hand side panel (refer 6.2.4).
2) Disconnect the two wires leading to the gas solenoid.
3) Disconnect main gas supply pipe from copper connection line to manifold.

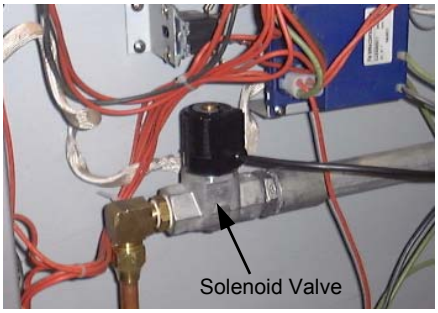

Figure 6.3.25

4) Loosen pipe clamp at rear of oven and remove main supply pipe assy.
5) On work bench undo gas solenoid valve from assembly and replace.
6) Refit and reconnect solenoid wires using reverse procedure.
7) Leak test all new connections.

6.3.19 WATER INJECTION NOZZLE

1) Remove the fan baffle (refer 6.2.2).
2) Unscrew the water injection nozzle.
3) Clean or replace nozzle, and reassemble in reverse order.

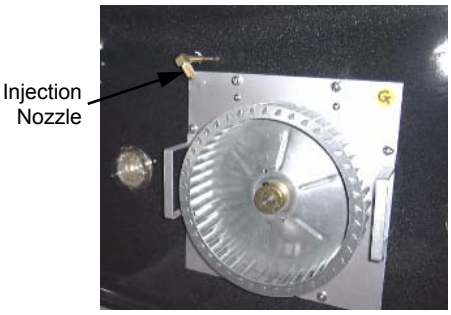

Figure 6.3.26

6.3.20 WATER SOLENOID VALVE

1) Ensure water supply is turned off.
2) Remove the water injection nozzle from inside the oven (refer 6.3.19).
3) Remove the water solenoid access panel at the rear of the oven (4 screws).

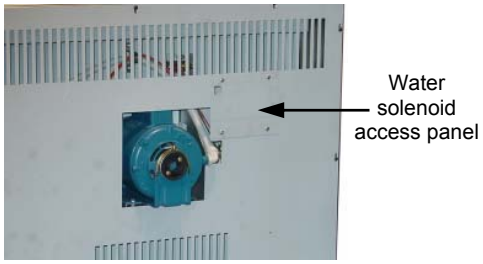

Figure 6.3.27

4) Remove the wires from the solenoid, and disconnect the mains water connection.
5) Remove the two screws securing the solenoid bracket to the oven rear, and remove the valve assembly.

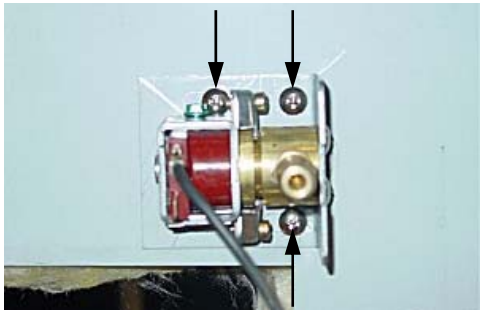

Figure 6.3.28

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6) On a suitable work surface, remove the brass piping connections (½" spanner) and two screws (on bracket) and extract the solenoid.

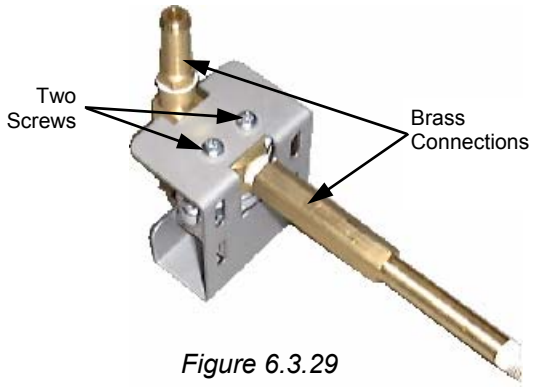

Figure 6.3.29

7) Secure new solenoid with screws and reassemble. Check that flow direction as marked on valve is correct.

6.3.21 WATER SOLENOID CLEANING

1) Remove water solenoid (refer 6.3.20).
2) Remove the two screws securing the bracket to the solenoid.

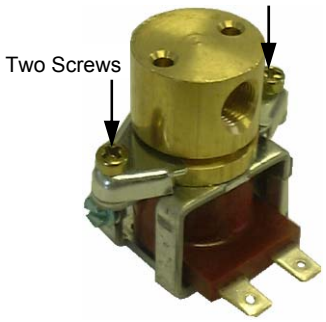

Figure 6.3.30

3) Remove the valve assembly.
4) Clean the valve assembly, removing all dirt and grime from the valve seat.
5) Reassemble the valve assembly and solenoid.

Figure 6.3.31

6.3.22 DOOR MICROSWITCH

1) Remove the right hand side panel (refer 6.2.4).
2) Remove the two screws securing the microswitch bracket to the insulation panel.

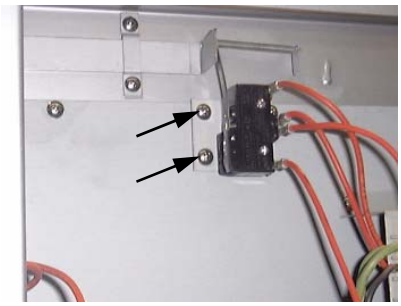

Figure 6.3.32

3) Undo the two screws securing the microswitch to the microswitch bracket.
4) Replace and reassemble in reverse order.
5) Adjust microswitch (refer 6.4.7)

6.3.23 DOOR GLASS

1) Open the oven doors.
2) Remove the screws on the sides, top and bottom edges of the door with the broken glass.

NOTE: If it is the left hand door, remove the extra screws and ball catches.

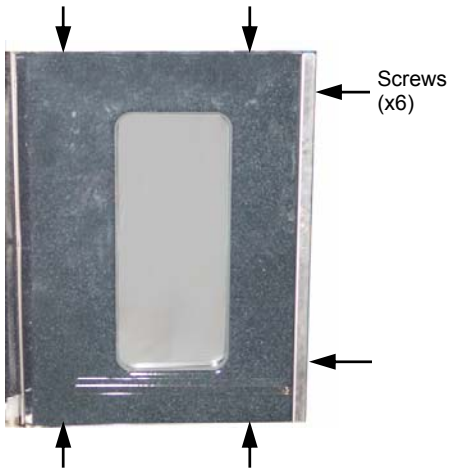

Figure 6.3.33

3) Remove the two screws on the door front.
4) Lift off the door outer, making sure that glass spacer and undamaged glass pane do not fall out.
5) Remove all glass fragments, the glass spacer and the undamaged pane.

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NOTE: The seals on the door inner and outer must be replaced with new ones if damaged.

6) Replace the broken pane and refit both clean panes either side of the spacer.

7) Reassemble in reverse order.

6.3.24 DOOR BALL CATCH

1) Open oven door.

2) Loosen the locknut securing the ball catch, and unscrew the ball catch.

Figure 6.3.34

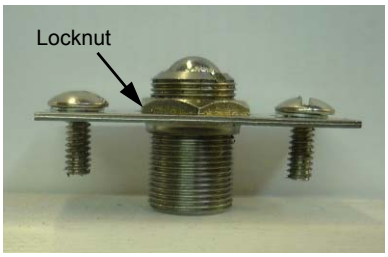

Figure 6.3.35

4) Replace and reassemble in reverse order.

NOTE: The door striker plates should also be checked for wear and replaced if necessary.

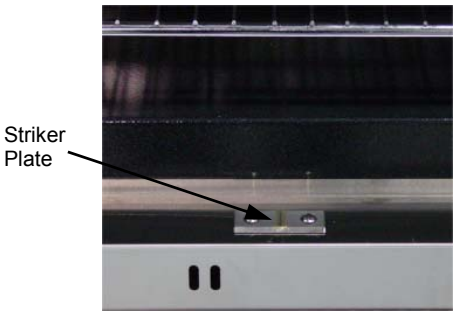

Figure 6.3.36

6.3.25 DOOR LINKAGE CHAIN ASSEMBLY

1) Remove the bottom lintel from the oven (refer 6.2.5).

2) Undo both turnbuckles from the door chain assembly.

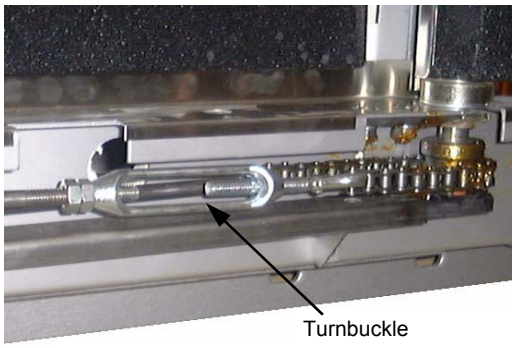

Figure 6.3.37

3) Remove the door chain assembly and replace the broken component.

4) Reassemble in reverse order.

5) Adjust chain such that the oven doors close correctly (refer 6.4.1)

6.3.26 DOOR ASSEMBLY

1) Remove the bottom lintel (refer section 6.2.5).

2) **Right hand door removal only:**

Remove the top lid.

Remove the microswitch actuator pin from the door pin.

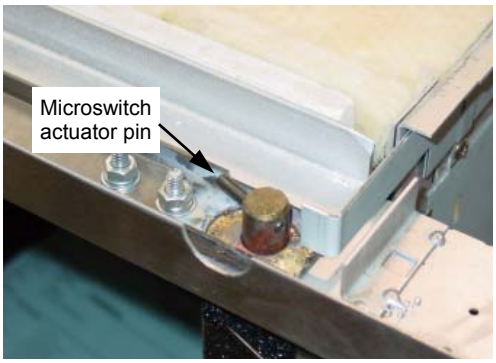

Figure 6.3.38

3) Undo both turnbuckles from the door chain assembly.

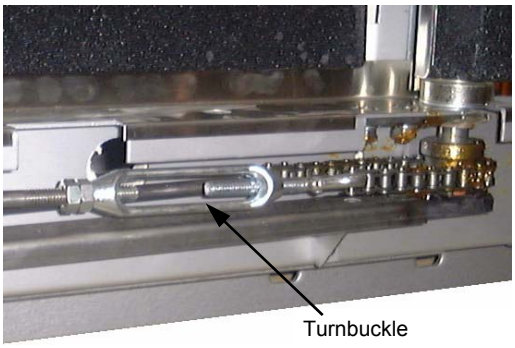

Figure 6.3.39

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4) Remove the door chain assemblies.

5) Remove the bottom bearing channel support brackets (two screws each) to allow the bottom bearing channel to be removed.

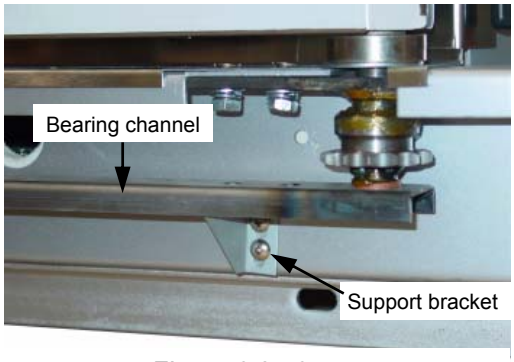

Figure 6.3.40

6) Undo the two screws securing the bottom pivot plate.

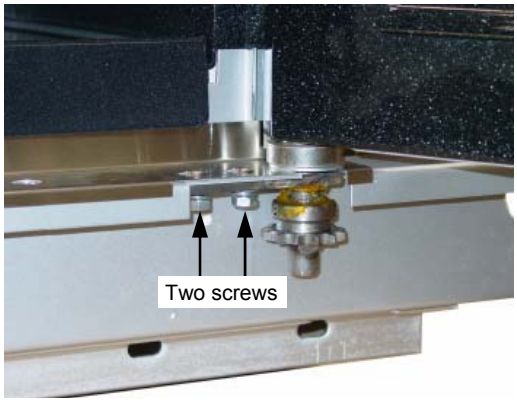

Figure 6.3.41

7) Remove the door assembly from the oven, replace, and reassemble in reverse order.

8) After fitting the new door, the door chain and ball catch will have to be adjusted to ensure that the doors close correctly.

   Refer to sections 6.4.1 and 6.4.2 for these procedures.

6.3.27 TOP BEARING CHANNEL

1) Remove the top lid.

2) Remove the microswitch actuator pin from the right hand door pin.

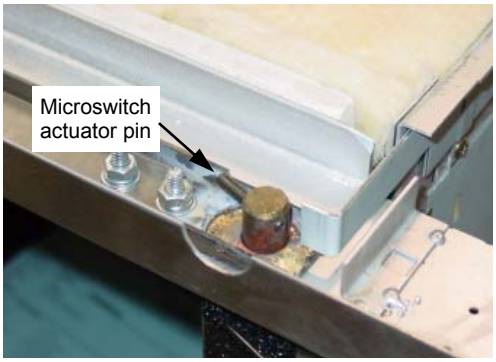

Figure 6.3.42

3) Remove the four bolts securing the top bearing channel to the oven, and remove the bearing channel.

4) Replace and reassemble in reverse order.

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6.4 ADJUSTMENT / CALIBRATION

6.4.1 GAS PRESSURE

Units manufactured from S/N 275353.

NOTE: The operating pressures should be adjusted to achieve the following required settings on both gas valves.

Natural Gas	0.90 kPa (3.6." w.c)
LP / Propane Gas	2.50 kPa (10.0" w.c)

1) Remove right hand side panel (refer 6.2.4).
2) Unscrew the pressure test point screw at the bottom of the gas valve and connect pressure meter.

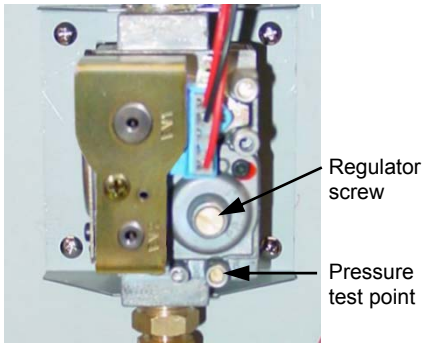

Figure 6.4.1

3) Unscrew the regulator screw cap to access the regulator adjustment screw. With the burners on, adjust the regulator spring setting until the correct operating pressure is obtained. This regulator is adjustable for Natural and LPG/Propane gas's operating pressures.

NOTE: Always set gas pressure with burners on. Turning the regulator screw clockwise increases the gas pressure.

4) Refit the slotted caps, disconnect pressure meters and refit screws, refit side panel.

6.4.2 DOOR CHAIN

1) Remove the bottom lintel (refer 6.2.5).
2) Loosen the two locknuts on each of the turnbuckles.

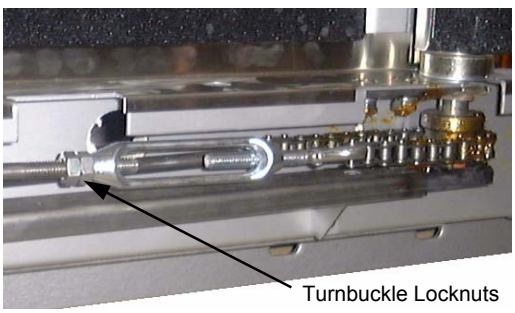

Figure 6.4.2

3) Adjust the turnbuckles such that the right hand door closes slightly ahead of the left hand door.

   To make the left hand door close earlier, tighten the left hand turnbuckle, and loosen the right hand turnbuckle.

   To make the right hand door close earlier, tighten the right hand turnbuckle, and loosen the left hand turnbuckle.
4) Tighten the locknuts.
5) Replace bottom lintel.

6.4.3 DOOR BALL CATCH

1) Loosen the ball catch locknut by one turn.
2) Use the adjusting tool provided with the oven to rotate the ball catch clockwise or anti-clockwise, moving it into and out of the door respectively.
3) Tighten the locknut to secure the new adjustment.

Figure 6.4.3

6.4.4 BURNER AERATION

1) Gain access to the oven burners (refer 6.2.6).
2) With the main burners on, adjust the primary air shutters at the front of each burner until optimum flame condition is established.

NOTE: Ideally flame should be blue/green in colour, exhibit no yellow tipping and no lifting off burner ports.

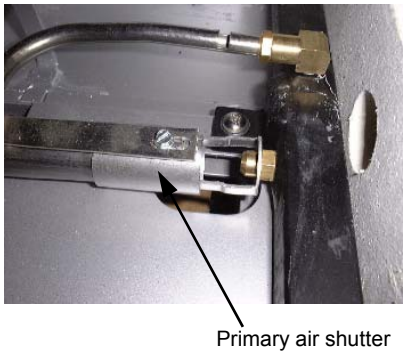

Figure 6.4.4

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6.4.5 THERMOSTAT CALIBRATION

IMPORTANT: IF THE OVEN TEMPERATURE NEEDS TO BE INCREASED, ENSURE THAT THE THERMOSTAT IS IN THE 'OFF' POSITION BEFORE CARRYING OUT ADJUSTMENT.
IF OVEN TEMPERATURE NEEDS TO BE DECREASED, ENSURE THERMOSTAT IS IN THE MAXIMUM TEMPERATURE POSITION BEFORE CARRYING OUT ANY ADJUSTMENT.

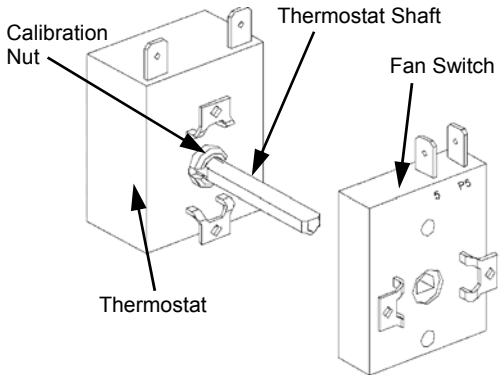

Figure 6.4.5

1) Turn off power.
2) Remove thermostat knob by pulling it firmly away from control panel.
3) Open control panel (refer 6.2.1). Remove the nut securing the thermostat to the control panel.

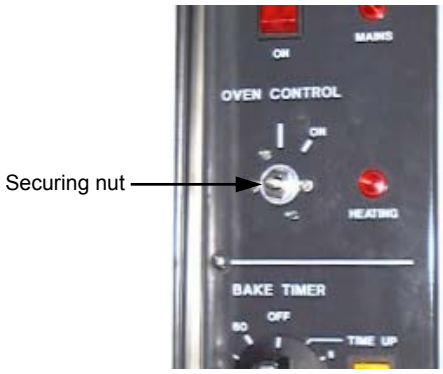

Figure 6.4.6

4) The thermostat can now be removed.
5) Carefully remove two screws holding fan switch to thermostat.

HINT: Tape fan switch assembly together before removal to prevent it from springing apart.

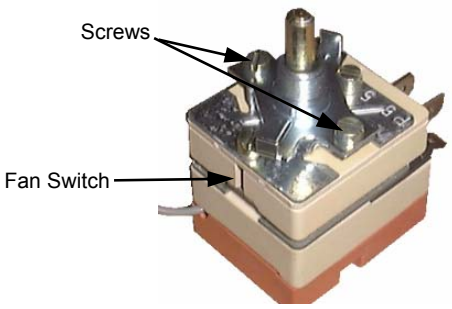

Figure 6.4.7

6) Adjust the calibration nut located at the base of the thermostat shaft.

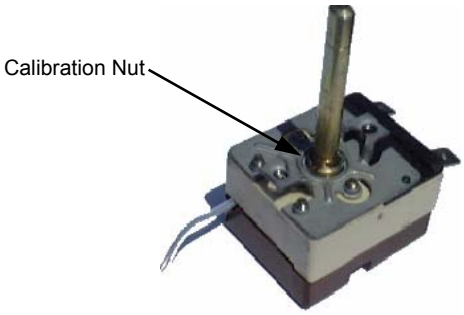

Figure 6.4.8

To increase oven temperature, turn calibration nut anticlockwise.

To decrease oven temperature, turn calibration nut clockwise.

Adjustment of the calibration nut by 1° angular will alter oven temperature by approximately 2°C (3.6°F).

7) Reassemble fan switch onto thermostat and fit assembly back onto control panel.
8) Turn on power and then recheck oven thermostat calibration.
9) Repeat procedure if necessary.

NOTE: Thermostat cycling span should be ±15°C or 27°F.

6.4.6 HOLD TEMPERATURE ADJUSTMENT

1) Open control panel (refer 6.2.1)
2) The hold temperature of the oven can be adjusted by turning the hold thermostat dial to the desired hold temperature.

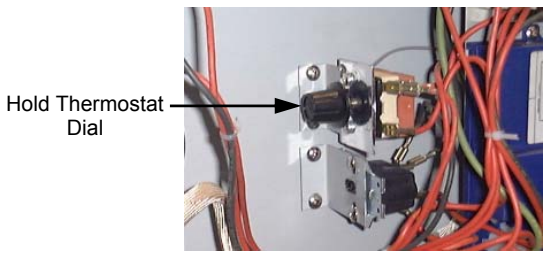

Figure 6.4.9

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6.4.7 60 MINUTE TIMER ZERO POSITION ADJUSTMENT

1) Remove 60 minute timer knob by pulling it firmly away from control panel.
2) Open control panel (refer 6.2.1). Loosen two screws on control panel holding 60 minute timer.

Figure 6.4.10

3) The timer can now be rotated as required to ensure that the buzzer sounds at the zero position.

6.4.8 DOOR MICROSWITCH ADJUSTMENT

1) Remove the right hand side panel (refer 6.2.4).
2) Bend the microswitch actuator arm such that the microswitch closes when the door is closed.

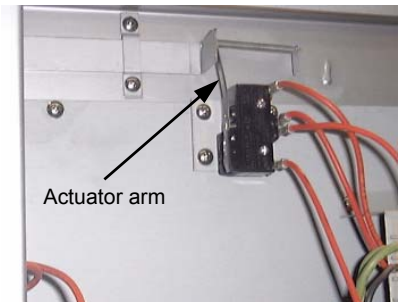

Figure 6.4.11

3) Replace right hand side panel.

6.4.9 GAS TYPE CONVERSION

1) Remove main burner injectors (refer 6.3.16), and replace with correct size injectors.

LPG	1.20 mm
Natural	1.90 mm

2) Remove pilot injector (refer 6.3.14), and replace with correct injector.

LPG	0.70 mm
Natural	1.10 mm

3) Relight burners and check flame size and stability. Adjust aeration if required (refer 6.4.1).

NOTE:

To S/N: 275352

Natural gas units have a gas regulator fitted to the unit. LPG / Propane units are regulated at the gas supply.

Set test point pressure to:

LPG	2.65 kPa
Natural	0.89 kPa

From S/N: 275353

All units have a gas regulator incorporated in the unit.

- Remove the four screws along the top, four screws along the bottom, and the four screws from the rear of the right hand side panel.
- Remove the panel.
- Unscrew the pressure test point screw at the bottom of the gas valve and connect pressure meter.
- Unscrew the regulator screw cap to access the regulator adjustment screw. With the burners on, adjust the regulator spring setting until the correct operating pressure is obtained. This regulator is adjustable for Natural and LPG/Propane gas operating pressures.

LPG/Propane	2.50 kPa
Natural	0.90 kPa

- Refit the slotted cap, disconnect pressure meter and refit screws, refit side panel.

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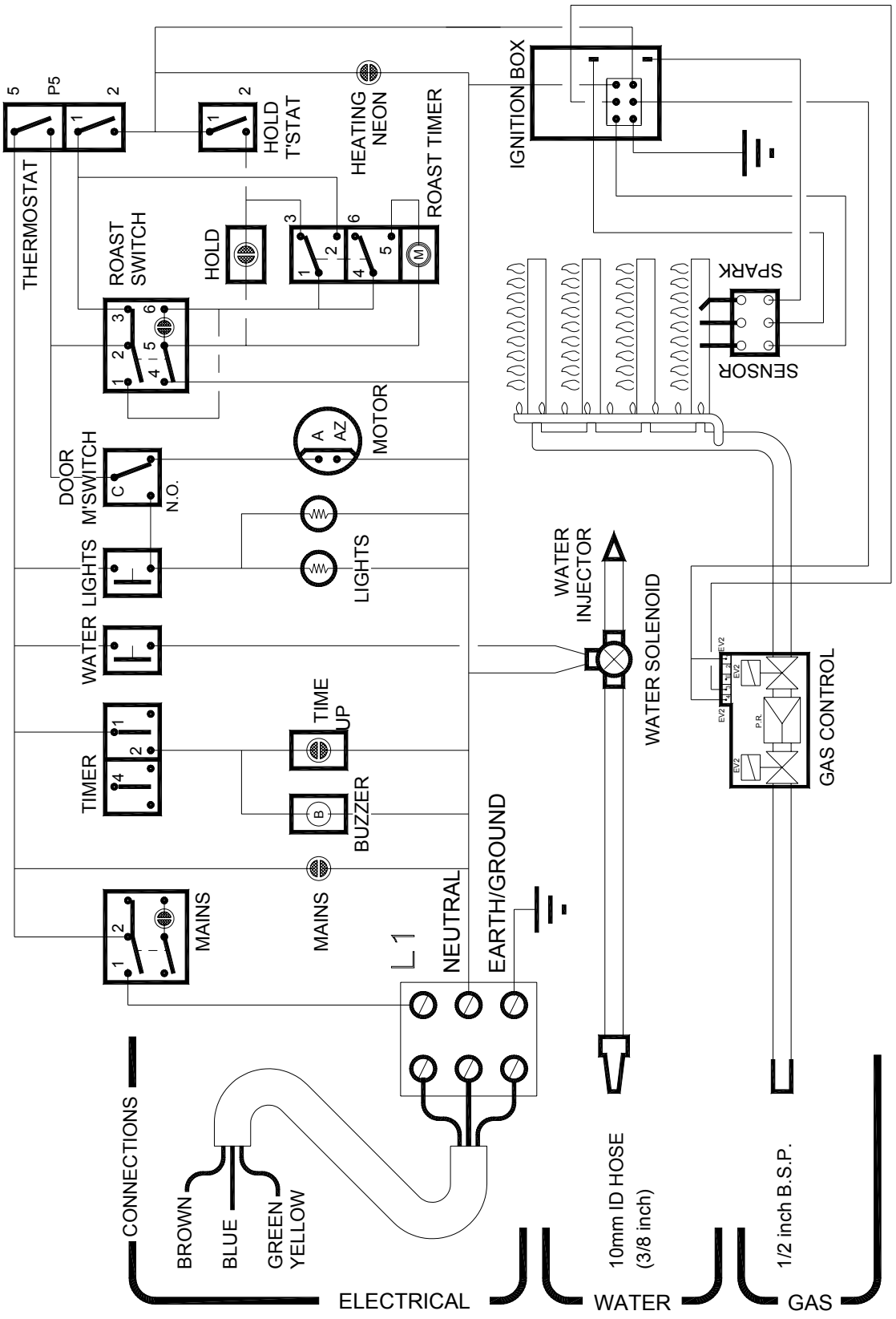
7. CIRCUIT SCHEMATIC

From Serial Number 275353



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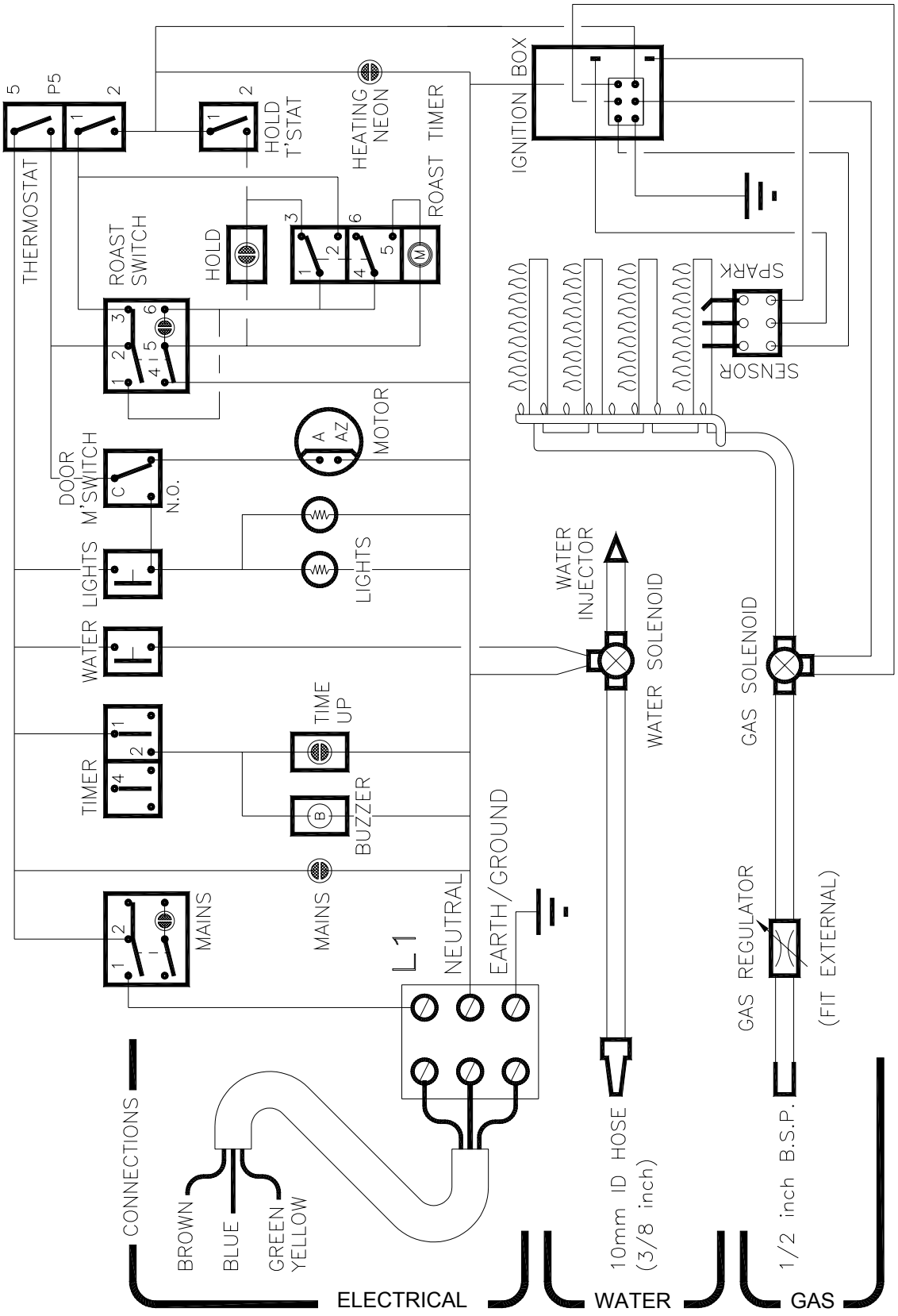
Up To Serial Number 275352



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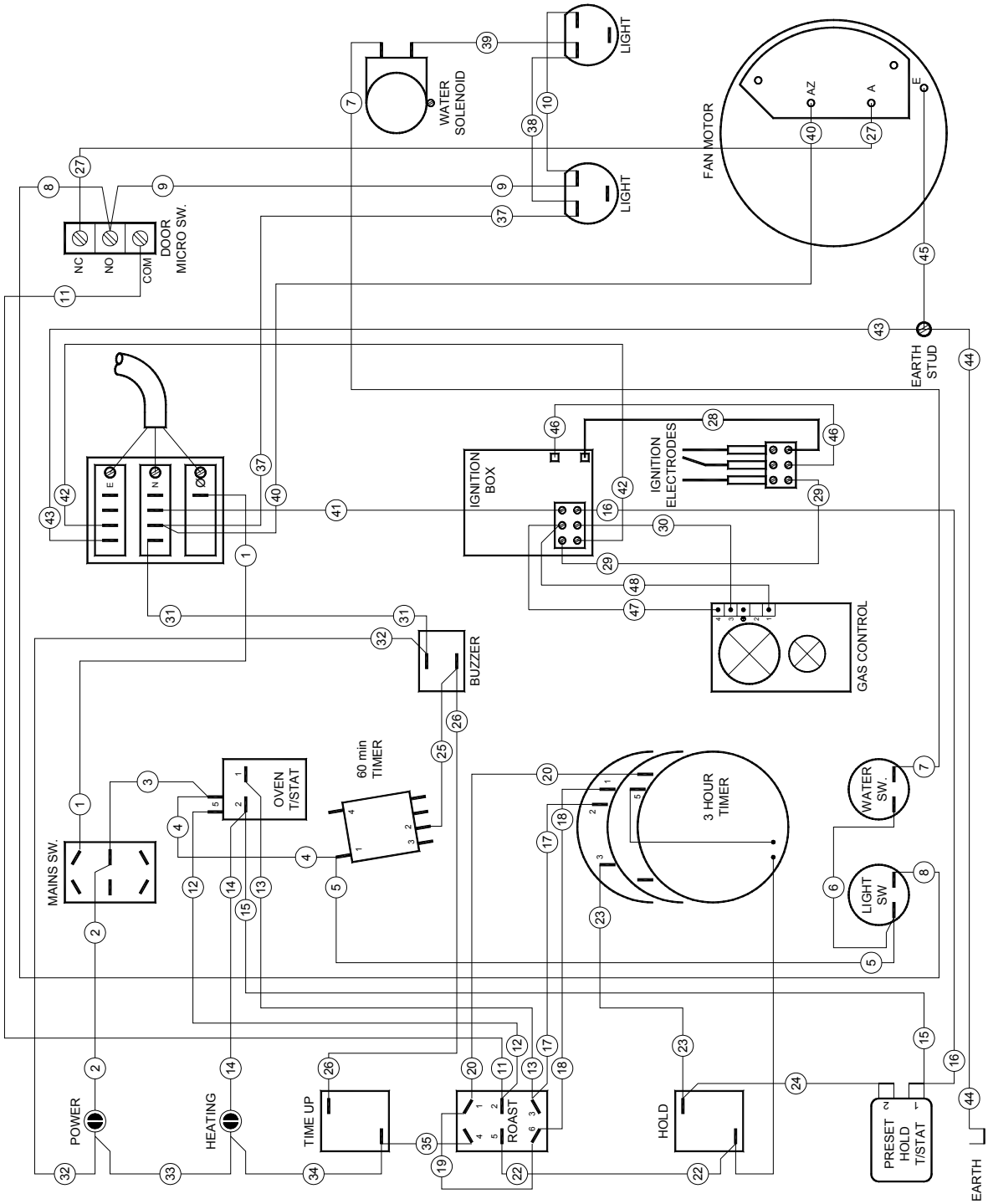
8. ELECTRICAL WIRING DIAGRAM

From Serial Number 275353



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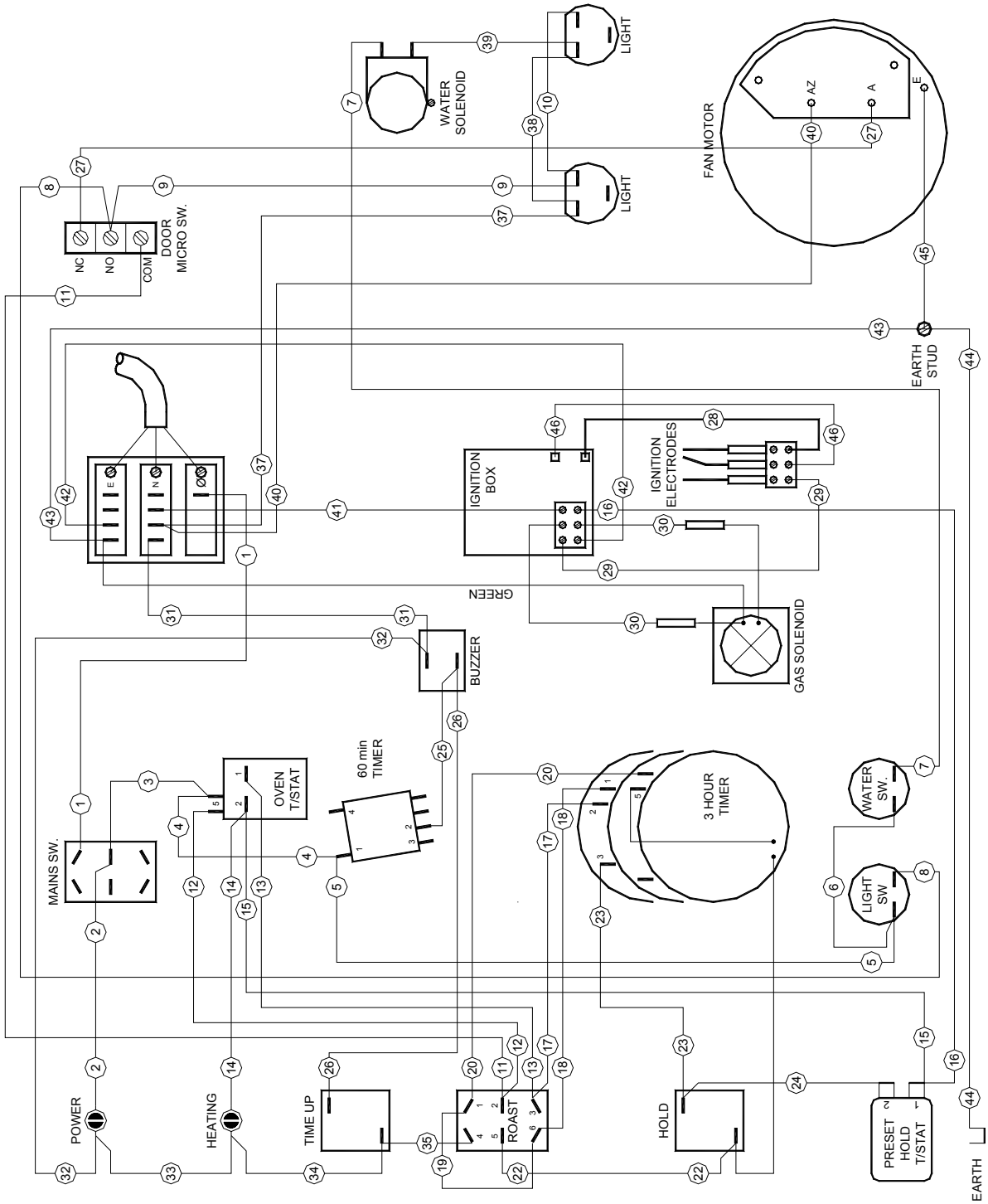
Up To Serial Number 275352



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9. SPARE PARTS

ELECTRICAL

013521	Oven Lamp Bulb
003002	Oven Lamp Glass
017960	Fan
010148	Motor 50Hz
025762	Motor 60Hz
011987	Oven Thermostat
015563	Thermostat Knob
011760	60 Minute Timer
015560	60 Minute Timer Knob
011419	3 Hour Timer - 50Hz
011983	3 Hour Timer - 60Hz
015567	3 Hour Timer Knob
013542	Indicator Light (yellow)
013543	Roast Switch
012895	Water Switch
013891	Light Switch
013528	Indicator Light
017928	Microswitch
011794	Buzzer
018223	Pre-set Hold Thermostat
012781	Water Solenoid Valve

GAS COMPONENTS

012185	Main Burner
032120	Main Injector 1.20mm - LPG
032190	Main Injector 1.90mm - Natural Gas
011907	Pilot Burner
033070	Pilot Injector 0.7mm - LPG
033110	Pilot Injector 1.1mm - Natural Gas
022594	Gas Control 50Hz **(From S/N 275353)**
SA1710	Gas Control 60Hz **(From S/N 275353)**
019454	Gas Solenoid Valve **(Up to S/N 275352)**
014983	Ignition Box
SA1310	Ignition Electrode Assembly
011853	Regulator **(Up to S/N 275352)**

OVEN

011036	Oven Base - without Drain Hole
017824	Oven Rack
017822	LH Oven Rack Support
017823	RH Oven Rack Support
004069	Fan Baffle
017961	Phial Guard
013555	Ceramic Tile
016800	Fan Puller (spares only)

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DOORS

002137	Glass Pane
090200	Door Glass Seal
011005	Ball Catch
011786	Ball Catch Adjuster
018789	Ball Catch Plate
018081	Handle End Cap
018131	Handle
014011	Linkage Rod
014012	Turnbuckle - with Hook
017966	Chain
010254	Striker Plate

GENERAL

016393	Double Stacking Kit
020477	Castor Kit

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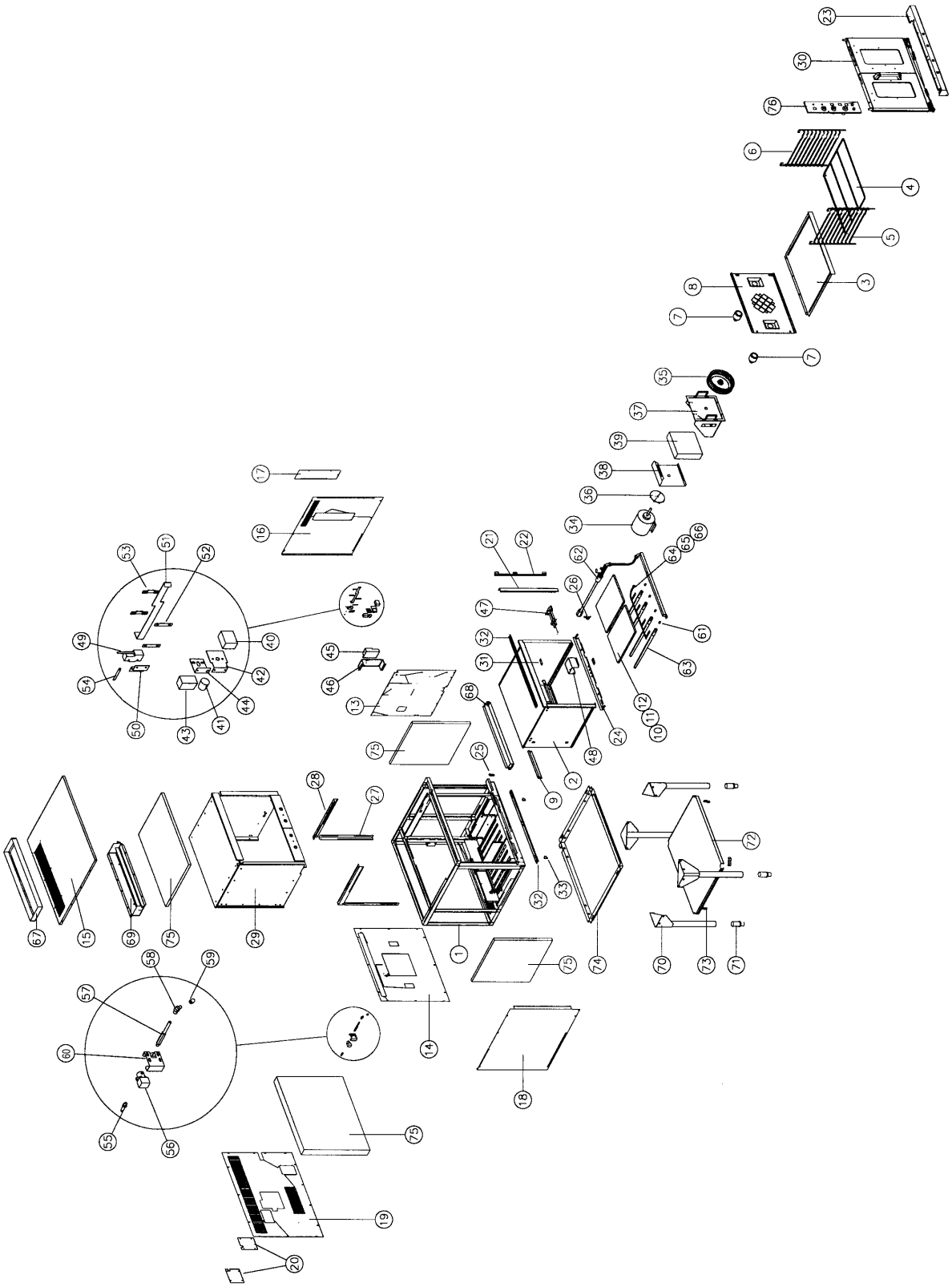
10. PARTS DIAGRAMS

10.1 MAIN ASSEMBLY



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Pos	Part No.	Description
1	004065	CHASSIS
2	004067	OVEN
3	004068	OVEN BASE
4	017824	OVEN RACK
5	017822	SIDE RACK - L.H
6	017823	SIDE RACK - R.H
7	013520	OVEN LIGHT ASSEMBLY
	003002	LIGHT GLASS
	003434	SILK GASKET
	013521	LAMP 40W
8	004069	FAN BAFFLE
	013618	SECURING SCREWS **(NOT ILLUSTRATED)**
9	012577	OVEN CLAMP BRACKET
10	013555	OVEN TILE
11	013575	TILE SUPPORT CHANNEL
12	013562	CLAMP PLATE
13	013707	SIDE INSULATION PANEL
14	010991	REAR INSULATION PANEL
15	012229	TOP COVER
16	017958	SIDE PANEL - R.H
17	017968	SERVICE PANEL
18	017959	SIDE PANEL - L.H
19	017967	BACK PANEL
20	012205	TERMINAL COVER PANEL
21	017978	OVEN SHROUD - R.H
22	014640	CONTROL PANEL SECURING BRACKET
23	011810	BOTTOM SHROUD
24	011811	SPILLAGE PLATE
25	010653	PIVOT BRACKET ASSEMBLY
26	010023	SADDLE CLAMP
27	011018	REAR INSULATION BRACKET
28	011019	TOP INSULATION BRACKET
29	015140	INSULATION ASSEMBLY
30	----------	DOOR ASSEMBLY **(SEE SECTION 10.3)**
31	010254	STRIKER PLATE
32	013933	BEARING CHANNEL
33	013889	CHANNEL SUPPORT BRACKET
34	010148	MOTOR 50Hz
	025762	MOTOR 60Hz
35	017960	FAN WHEEL
36	010147	COOLING DISC
37	004072	MOTOR MOUNTING BRACKET
38	010190	INSULATION PANEL
39	----------	INSULATION
40	018223	HOLD THERMOSTAT
41	018224	HOLD THERMOSTAT KNOB
42	017859	HOLD THERMOSTAT BRACKET
43	011794	BUZZER
44	014032	MOUNTING BRACKET
45	014983	IGNITION BOX
46	011182	IGNITION BOX SUPPORT
47	SA1310	IGNITION ASSEMBLY **(SEE SECTION 10.4)**
48	011610	IGNITION CHANNEL
49	017928	MICROSWITCH
50	017630	SUPPORT BRACKET
51	017633	MICROSWITCH LEVER
52	017632	LEVER SPACER
53	017631	LEVER GUIDE
54	017629	MICROSWITCH SPRING

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55	012782	HOSE CONNECTOR
56	012781	WATER SOLENOID
57	012784	SOLENOID EXTENSION
58	011634	ELBOW
59	012785	INJECTOR
60	019208	WATER SOLENOID MOUNTING BRACKET
61	032120	INJECTOR Ø1.20 - LPG
	032190	INJECTOR Ø1.90 - NATURAL GAS
62	012873	INLET PIPE **(FROM S/N 275353)**
	014662	ELBOW **(FROM S/N 275353)**
	017553	SOCKET ¾" BSP BRASS HEX **(FROM S/N 275353)**
	013235	NIPPLE 1½" BSP x 40mm GALV **(FROM S/N 275353)**
	022594	GAS CONTROL 50Hz **(FROM S/N 275353)**
	SA1710	GAS CONTROL 60Hz **(FROM S/N 275353)**
	014408	MALE CONNECTOR ½" TUBE **(FROM S/N 275353)**
	025970	GAS CONTROL BRACKET **(FROM S/N 275353)**
	004095	MANIFOLD **(FROM S/N 275353)**
	022845	TUBE FLEXIBLE **(FROM S/N 275353)**
	012520	PIPING ASSEMBLY **(UP TO S/N 275352)**
	019454	GAS SOLENOID VALVE **(UP TO S/N 275352)**
	011834	REDUCING CONNECTOR **(UP TO S/N 275352)**
	012519	SOCKET ¾" BSP **(UP TO S/N 275352)**
	017553	SOCKET ¾" BSP BRASS HEX **(UP TO S/N 275352)**
	011747	ELBOW 3/8" X ½" MALE **(UP TO S/N 275352)**
	011002	CONE NUT **(UP TO S/N 275352)**
	011634	ELBOW **(UP TO S/N 275352)**
	011740	LOCK NUT **(UP TO S/N 275352)**
	004095	MANIFOLD **(UP TO S/N 275352)**
63	012185	MAIN BURNER
64	011907	PILOT RUNNER TUBE
65	011634	ELBOW
66	033070	PILOT INJECTOR Ø0.70 - LPG
	033110	PILOT INJECTOR Ø1.10 - NATURAL GAS
67	017557	VENT CHIMNEY
68	012215	COWLING
69	012219	DUCT TOP
70	017410	LEG
71	010990	FOOT - ADJUSTABLE
72	013455	LEG TRAY
73	013708	LEG TRAY BRACKET
74	004469	BASE FRAME
75	----------	INSULATION
76	----------	CONTROL PANEL ASSEMBLY **(SEE SECTION 10.2)**
77	011853	REGULATOR - **(NATURAL GAS ONLY) (NOT ILLUSTRATED)**

GAS TYPE CONVERSION KITS

Model	Serial Numbers		Conversion Kit		
	From	To	→ LPG	→ Butane	→ Natural
G1100	275353	→	26309	26310	26308
	←	275352	12461	On request	12516

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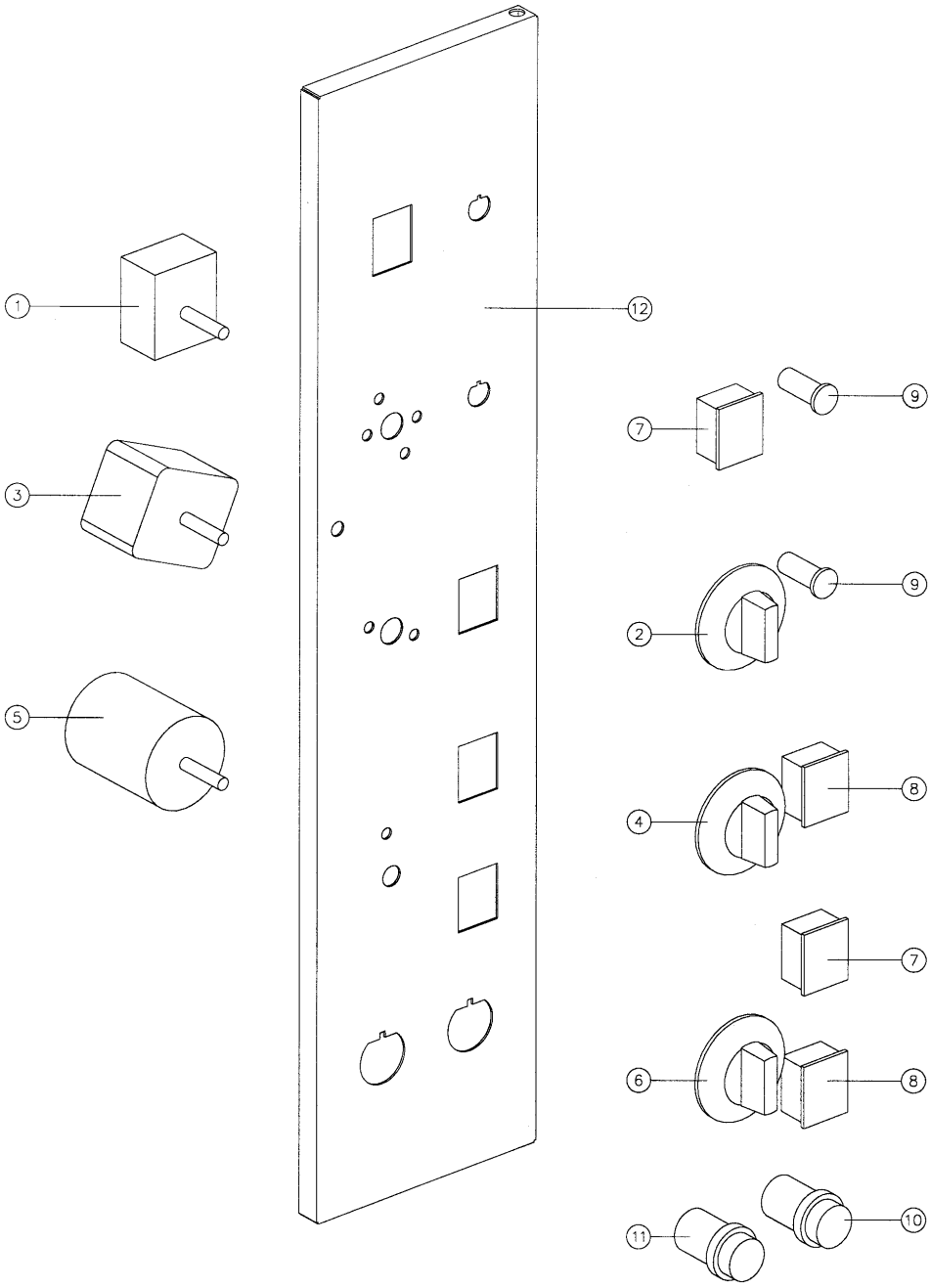
10.2 CONTROL PANEL ASSEMBLY



Pos	Part No.	Description
1	011987	THERMOSTAT 50-320 ºC
2	015563	THERMOSTAT KNOB 50-320 ºC
3	011760	TIMER - 1 Hr
4	015560	TIMER KNOB - 1 Hr
5	011419	TIMER - 3 Hr **(240V 50 Hz)**
	011983	TIMER - 3 Hr **(220V 60 Hz)**
6	015567	TIMER KNOB - 3 Hr
7	013543	START SWITCH
8	013542	INDICATOR LIGHT
9	013528	PILOT LIGHT
10	013891	LIGHT SWITCH **(ORANGE BUTTON)**
11	012895	WATER SWITCH **(BLUE BUTTON)**
12	004654	CONTROL PANEL

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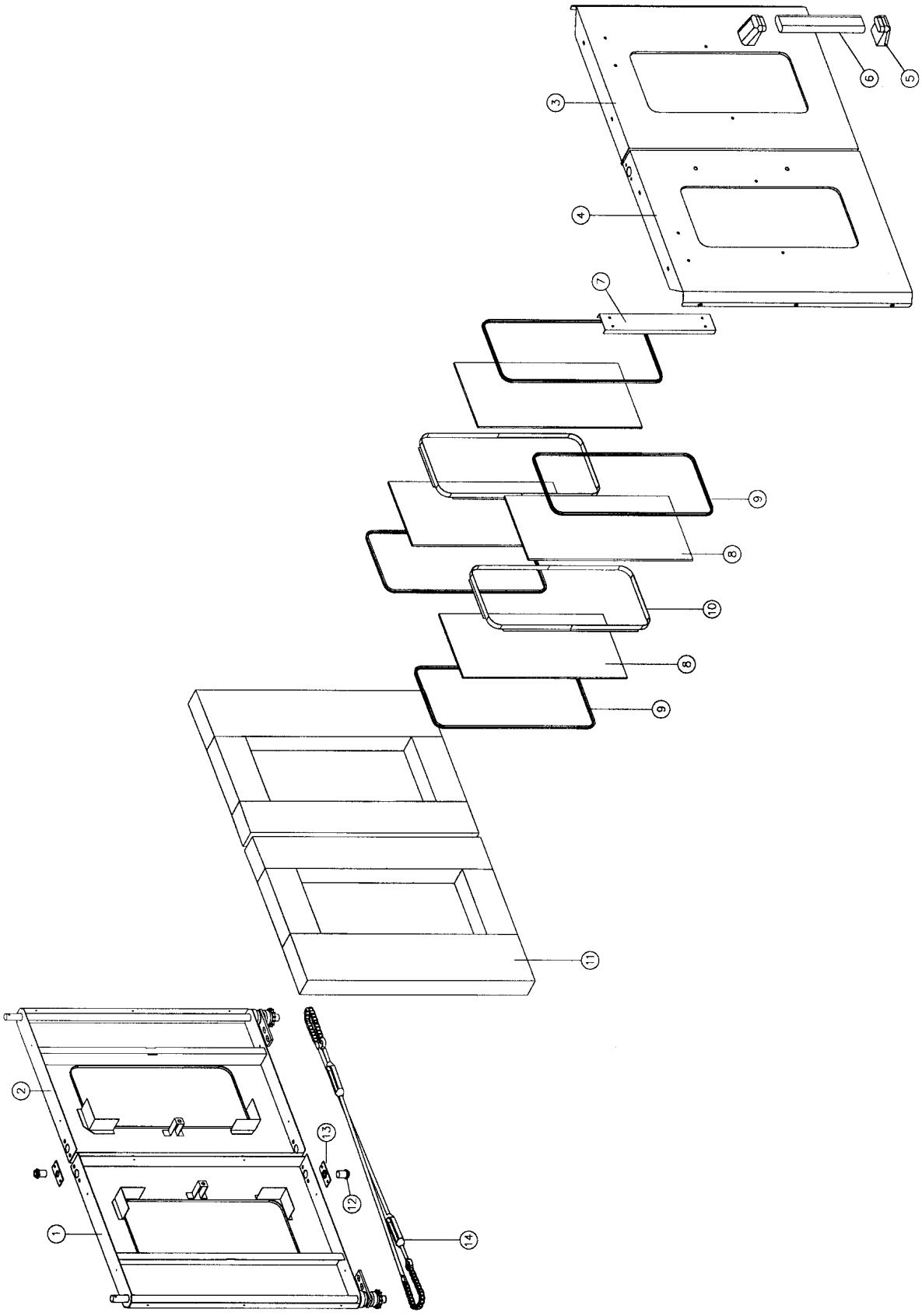
10.3 DOOR ASSEMBLY



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Pos	Part No.	Description
1	004070	DOOR INNER - L.H
2	004071	DOOR INNER - R.H
3	010627	DOOR OUTER - R.H
4	010626	DOOR OUTER - L.H
5	018081	HANDLE END CAP
6	018131	HANDLE
7	018138	HANDLE STIFFENER
8	002137	GLASS
9	---------	GLASS SEAL
10	004287	GLASS SPACER
11	----------	INSULATION
12	011005	BALL CATCH & LOCKNUT
13	018789	BALL CATCH PLATE
14	014138	DOOR ADJUSTING ROD ASSEMBLY
	017966	CHAIN (24 LINKS AT 3/8” PITCHING)
	010145	CHAIN LINK
	014012	TURNBUCKLE
	014011	CHAIN ADJUSTING ROD

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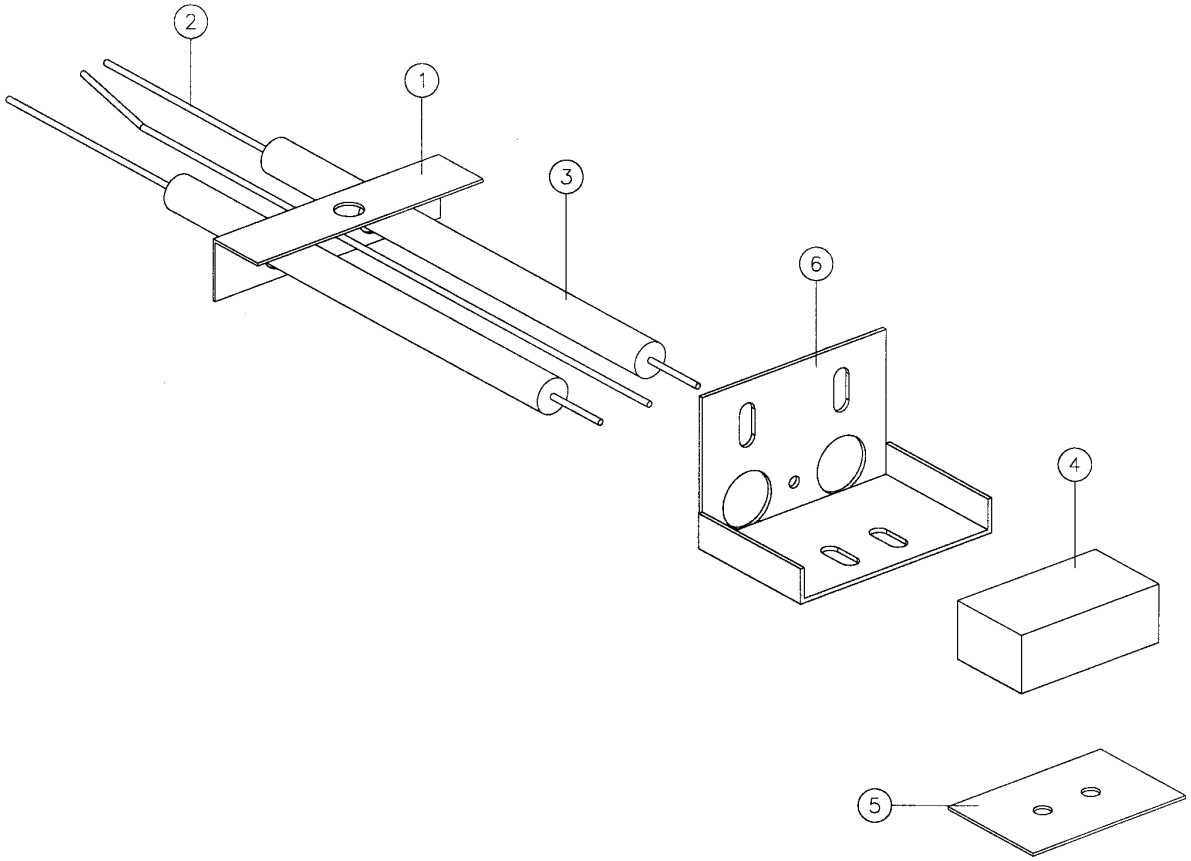
10.4 IGNITION ELECTRODE ASSEMBLY



Pos	Part No.	Description
	SA1310	IGNITION ASSEMBLY
1	011588	IGNITION CRADLE
2	011611	SPARK / EARTH / SENSOR ROD
3	011578	ELECTRODE INSULATION
4	017964	TERMINAL BLOCK
5	011587	TERMINAL BLOCK INSULATION
6	011586	TERMINAL BLOCK BRACKET
	SA1310	IGNITION ELECTRODE ASSEMBLY **(INCLUDES ALL ABOVE)**

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11. SERVICE CONTACTS

AUSTRALIA

VICTORIA - MOFFAT PTY
HEAD OFFICE AND MAIN WAREHOUSE
740 Springvale Road
Mulgrave VIC 3170
Spare Parts Department

Tel (03) 9518 3888
Fax (03) 9518 3838
Free Call 1800 337 963
Fax (03) 9518 3895

NEW SOUTH WALES - MOFFAT PTY
Unit 8/142 James Ruse Drive
Rosehill NSW 2142
Spare Parts

Tel (02) 8833 4111

Free Call 1800 337 963
Fax (03) 9518 3895

QUEENSLAND - MOFFAT PTY
30 Prosperity Place
Geebung QLD 4034
Spare Parts

Tel (07) 3630 8600

Free Call 1800 337 963
Fax (03) 9518 3895

SOUTH AUSTRALIA - MOFFAT PTY
28 Greenhill Rd
Wayville SA 5034
Spare Parts

Tel (08) 8274 2116

Free Call 1800 337 963
Fax (03) 9518 3895

WESTERN AUSTRALIA - MOFFAT PTY
PO Box 689
Joondalup Business Centre WA 6027
Spare Parts

Tel (08) 9305 8855

Free Call 1800 337 963
Fax (03) 9518 3895

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CANADA

Lessard Agencies Limited
PO Box 97
Stn "D"
Toronto, ONT M6P 3J5

Tel (416) 766 2764
Fax (416) 760 0394
Free Call 1 888 537 7273

NEW ZEALAND

CHRISTCHURCH - MOFFAT LTD
16 Osborne St
PO Box 10-001
Christchurch
Spare Parts

Tel (03) 389 1007
Fax (03) 389 1276

Free Call 0800 MOFFAT
(0800 66 33 28)
Fax (03) 381 3616

AUCKLAND - MOFFAT LTD
4 Waipuna Road
Mt Wellington
Auckland
Spare Parts

Tel (09) 574 3150
Fax (09) 574 3159

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UNITED STATES OF AMERICA

MOFFAT INC.
3765 Champion Blvd
Winston-Salem
NC27115

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Fax 336 661 9546

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APPENDIX A. DOUBLE STACKING INSTRUCTIONS

Double Stacking Kit - part number 016393

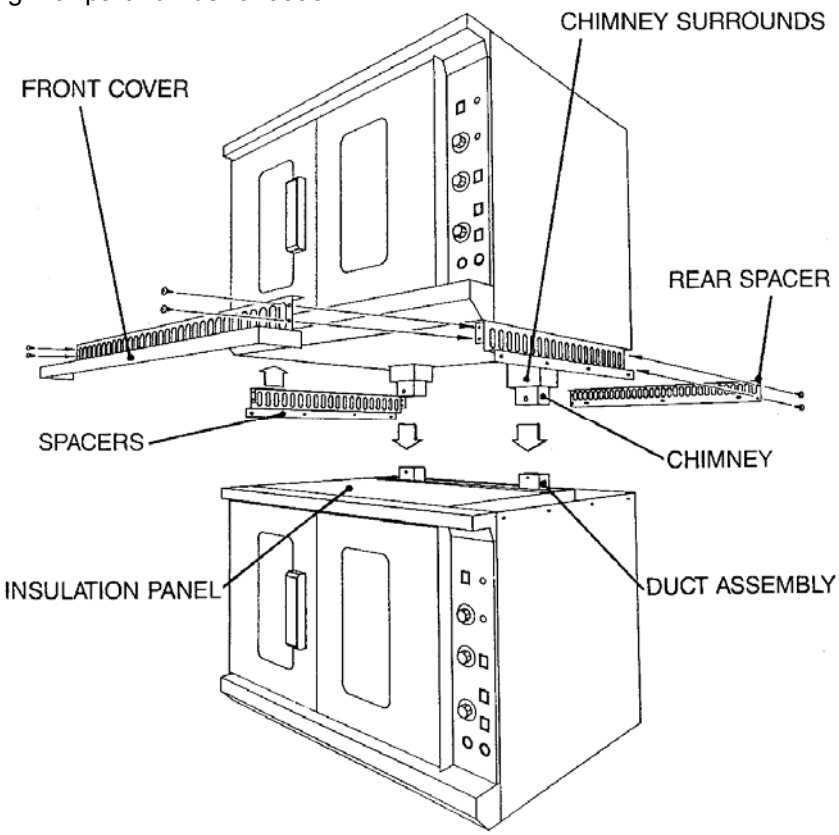

Figure A.1

1) Remove the stainless steel top cover from the unit which is to become the bottom unit.
2) Screw into place the insulation panel over the fibre insulation (folded edge forward), locating the rear slots of the panel with the holes in the chassis member.
3) Drill two additional holes through the side members to locate with the remaining two holes in the insulation panel.
4) Locate and attach duct assembly onto top of the bottom unit's flue.
5) Unbolt the four legs of the base unit and replace with the short legs supplied.
6) Remove the legs and leg frame from the G1100 top unit.
7) Remove the back panel from the top unit.
8) Cut out slots in base panel of top unit for chimney (refer figure A.2).
9) Insert and attach chimney assemblies with 2 screws each.
10) Fit side spacers and front cover to bottom of top unit.
11) Stack the units, ensuring chimney and duct are aligned and spacers line up with holes in sides of bottom unit, and secure with screws provided.
12) Attach rear spacer and re-fit the back panel on the top unit

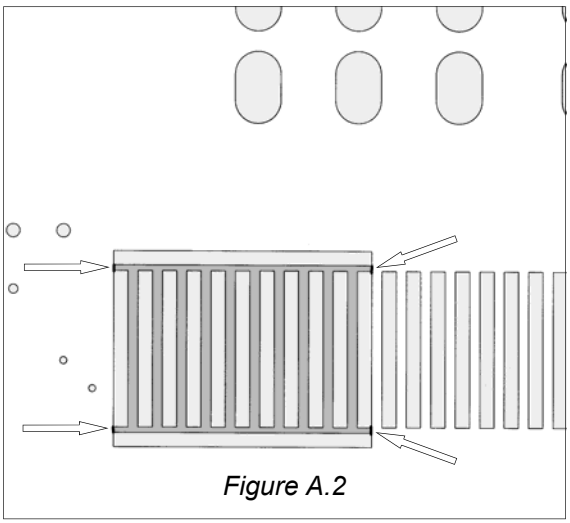

Figure A.2

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APPENDIX B. IGNITION BOX SPECIFICATIONS

Make	Scarico / Ispracontrols
Type	33100211 / 33000211
Case Colour	Blue
Voltage	220-240 Vac
Ignition Trial Period	7 Seconds
Pre-purge	0 seconds
Ignition Retries	None
Re-ignition Attempts	None (33100211) / 1 (33000211)
Spark Rate	4 Hz
Spark Voltage	10 kV
Lockout Indicator	None
Minimum Flame Current	1.0 µA

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