



# **G24 SERIES GAS-OPERATED COUNTER GRIDDLE**

## **Installation, Operation and Service Manual**

This manual is updated as new information and models are released. Visit our website for the latest manual.



Model G24-24GFSD

# IMPORTANT INFORMATION

**WARNING:**

**This product contains chemicals known to the state of California to cause cancer and/or birth defects or other reproductive harm. Installation and servicing of this product could expose you to airborne particles of glass wool/ceramic fibers. Inhalation of airborne particles of glass wool/ceramic fibers is known to the state of California to cause cancer. Operation of this product could expose you to carbon monoxide if not adjusted properly. Inhalation of carbon monoxide is known to the state of California to cause birth defects or other reproductive harm.**

## Keep appliance area free and clear of combustibles.

**FOR YOUR SAFETY:  
DO NOT STORE OR USE GASOLINE  
OR OTHER FLAMMABLE VAPORS OR  
LIQUIDS IN THE VICINITY OF  
THIS OR ANY OTHER  
APPLIANCE**

**WARNING:  
IMPROPER INSTALLATION, ADJUSTMENT,  
ALTERATION, SERVICE OR MAINTENANCE  
CAN CAUSE PROPERTY DAMAGE, INJURY,  
OR DEATH. READ THE INSTALLATION,  
OPERATING AND MAINTENANCE  
INSTRUCTIONS THOROUGHLY  
BEFORE INSTALLING OR  
SERVICING THIS EQUIPMENT**

PLEASE READ ALL SECTIONS OF THIS MANUAL AND RETAIN FOR FUTURE REFERENCE.

THIS PRODUCT HAS BEEN CERTIFIED AS COMMERCIAL COOKING EQUIPMENT AND MUST BE INSTALLED BY PROFESSIONAL PERSONNEL AS SPECIFIED.

For Your Safety:

Post in a prominent location, instructions to be followed in the event the user smells gas. This information shall be obtained by consulting your local gas supplier.

Users are cautioned that maintenance and repairs must be performed by a Garland authorized service agent using genuine Garland replacement parts. Garland will have no obligation with respect to any product that has been improperly installed, adjusted, operated or not maintained in accordance with national and local codes or installation instructions provided with the product, or any product that has its serial number defaced, obliterated or removed, or which has been modified or repaired using unauthorized parts or by unauthorized service agents.

For a list of authorized service agents, please refer to the Garland web site at <http://www.garland-group.com>.

The information contained herein, (including design and parts specifications), may be superseded and is subject to change without notice.

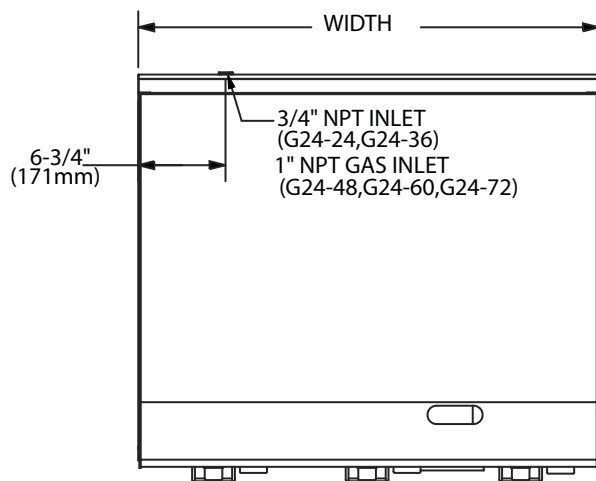
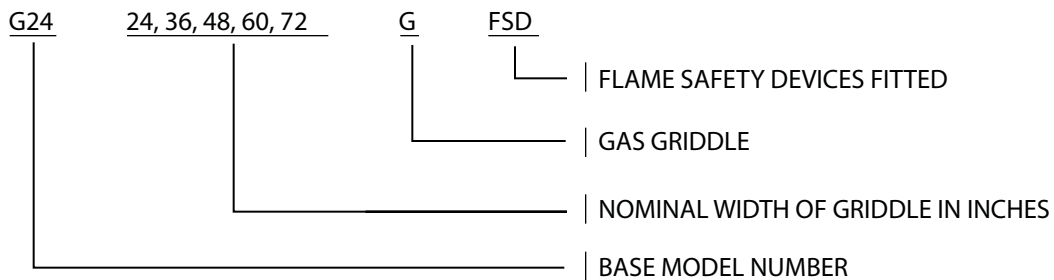
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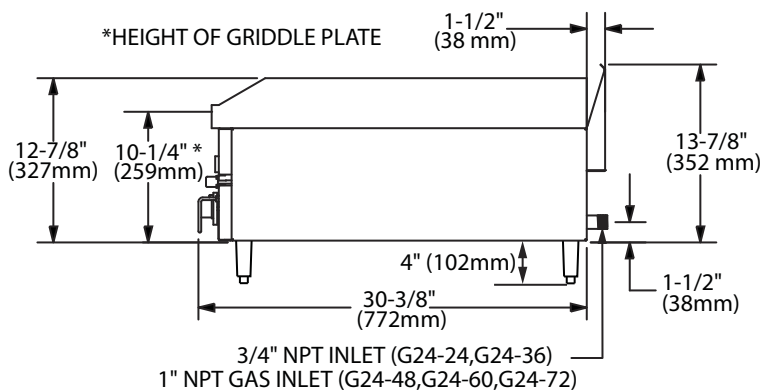
# MODEL DESIGNATION

MODEL	DESCRIPTION
G24-24GFSD	610 mm wide x 324 mm high, heavy duty counter top griddle.
G24-36GFSD	914 mm wide x 324 mm high, heavy duty counter top griddle.
G24-48GFSD	1219 mm wide x 324 mm high, heavy duty counter top griddle.
G24-60GFSD	1524 mm wide x 324 mm high, heavy duty counter top griddle.
G24-72GFSD	1829 mm wide x 324 mm high, heavy duty counter top griddle.

## SUFFIX DEFINITIONS:



Model	Width
G24-24GFSD	24" (610mm)
G24-36GFSD	36" (914mm)
G24-48GFSD	48" (1219mm)
G24-60GFSD	60" (1524mm)
G24-72GFSD	72" (1829mm)



# TECHNICAL SPECIFICATIONS

**Table A: Exterior Dimensions**

MODELS	HEIGHT		WIDTH		DEPTH		WEIGHT	
	mm	Ins	mm	Ins	mm	Ins	Kg	Lb.
G24-24GFSD	324	12.75	610	24	781	30.75	109	240
G24-36GFSD	324	12.75	914	36	781	30.75	159	350
G24-48GFSD	324	12.75	1219	48	781	30.75	227	500
G24-60GFSD	324	12.75	1524	60	781	30.75	272	600
G24-72GFSD	324	12.75	1829	72	781	30.75	318	700

**Table B: Gas Flow Rate Per Model**

MODELS	NATURAL GAS ( m <sup>3</sup> /h )		PROPANE GAS (kg/h )
	G20 @ 20mbar	G25 @ 25 mbar	G31 @ 37/50 mbar
G24-24GFSD	1.9	1.97	1.4
G24-36GFSD	2.86	2.96	2.09
G24-48GFSD	3.81	3.94	2.8
G24-60GFSD	4.76	4.92	3.49
G24-72GFSD	5.71	5.91	4.19

**Table C: Nominal Heat Input (Net) Per Model**

MODELS	(G20 @ 20 mbar ) NATURAL GAS ( G25 @ 25 mbar ) NATURAL GAS			(G31 @ 37/50 mbar ) PROPANE		
	Nominal Heat Input (G20 / G25)			Nominal Heat Input		
	kW	BTU/HR	MJ/HR	kW	BTU/HR	MJ/HR
G24-24GFSD	18 / 16	61,400/54,600	64.8/57.6	18	61,400	64.8
G24-36GFSD	27 / 24	92,150/81,900	97.2/86.4	27	92,150	97.2
G24-48GFSD	36 / 32	122,850/109,200	129.6/115.2	36	122,850	129.6
G24-60GFSD	45 / 40	153,500/136,500	161.9/144.0	45	153,500	161.9
G24-72GFSD	54 / 48	184,250/163,750	194.4/172.7	54	184,250	194.4

# TECHNICAL SPECIFICATIONS continued

**Table D: Injector Size**

MODEL/ SECTION	G20/G25 @ 20/25 mbar (NATURAL)		G31 @ 37mbar (PROPANE)		G31 @ 50 mbar (PROPANE)	
	Injector Size		Injector Size		Injector Size	
	I.D. #	mm	I.D. #	mm	I.D. #	mm
All	43	2.3	53	1.5	54	1.4

NOTE: The pressure must be measured at the pressure test nipple located on the main manifold pipe with all burners lit.

**Table E: Setting Pressure For “Min” Tap Position**

MODELS	2ND Family, Group H		3RD Family, Group 3P	
	(G20 @ 20 mbar) NATURAL GAS		(G31 @ 37/50 mbar) PROPANE	
	mbar	“ W.C.	mbar	“ W.C.
ALL	1.25	0.5	2.49	1

**Table F: Aeration Shutter Setting / Pilot Flame Length**

MODELS	2ND Family, Groups H,L & E.		3RD Family, Group 3P		Pilot Flame Length	
	( G20/G25 @ 20/25 mbar) NATURAL GAS		( G31 @ 37/50 mbar ) PROPANE			
	mm	Ins.	mm	Ins.	mm	Ins.
ALL	19	0.75	27	1.062	12.5	0.5

**Table G: Australia Only – Injector Size, NGC And Pressure**

MODELS	NATURAL GAS			PROPANE GAS		
	Inj. Dia mm	MJ/H	Gas Pressure (kPa)	Inj. Dia. mm	MJ/H	Gas Pressure (kPa)
G24-24GSFD	2.85	63.3	1.0	1.7	63.3	2.49
G24-36GFSD	2.85	95.0	1.0	1.7	95.0	2.49
G24-48GFSD	2.85	126.6	1.0	1.7	126.6	2.49
G24-60GFSD	2.85	158.3	1.0	1.7	158.3	2.49
G24-72GFSD	2.85	189.9	1.0	1.7	189.9	2.49

# INTRODUCTION

**IMPORTANT:** The following instructions should be read carefully as the manufacturer cannot be held responsible for any damage to property, persons or animals caused by incorrect installation or operation of the appliance.

You have purchased the finest commercial cooking equipment available. Like any other fine, precision built piece of equipment it should be given regular care and maintenance.

Your new equipment must be installed and adjusted by a competent person in accordance with the law. Failure to install appliances correctly could lead to prosecution. It is in your own interests and that of safety to ensure that the law is complied with.

Your Garland dealer is well qualified to provide this service. Periodic inspections by your dealer or qualified service company are recommended to check temperatures, burner adjustments and to ensure that moving parts are operative. Whenever possible avoid overheating idle equipment as this is the primary cause for increased service cost.

**“Regular maintenance ensures peak performance.”**

## Uncrating

1. Check crate for possible damage sustained during transit. Carefully remove unit from crate and again check for damage. Any damage to the appliance must be reported to the carrier immediately.
2. The wires for retaining the burners & other packing material must be removed from unit. Any protective material covering stainless steel parts must also be removed.
3. The type of gas and the supply pressure that the equipment was set up for at the factory is noted on the data plate and on the packaging. This type of gas supply must be used.
4. Do not remove permanently affixed labels, warnings or data plates from the appliance, for this may invalidate the manufacturer's warranty.

## Product Application

Griddle tops are designed to have food cooked directly on the surface. Do not put pots or pans on the griddle surface. This will scratch or nick the surface and result in improper cooking or sticking of the product. Never salt food over a griddle since this will build up gummy residue making it difficult to clean.

Avoid hitting the surface of the griddle with the edge of a spatula since this will cause nicks. The most frequently used temperature are 149°C to 177°C (300°F to 350°F). After one firing the griddle plate will discolor. This is normal and will not affect the performance.

**NOTE:** Many parts of the griddle are made from raw steel, i.e., the griddle plate and can react with moisture forming surface rust. This is normal and is not considered a defect. Clean with a stainless steel or fiber pad. A light coating of salt free oil may be applied to prevent further rusting.

## Optional Extras

- Counter Stand.
- Legs.

## Rating Plate

The rating plate is readily accessible, located behind the grease drawer. It contains all of the pertinent information required by the installer.

In the event you have any questions concerning the installation use care or service of this or any other Garland product, write or call our Product Service Department. When corresponding with the factory or your equipment dealer regarding service problems or replacement parts, be sure to refer to the particular unit by the correct model number, including prefix and suffix letter and numbers and serial number. The rating plate affixed to the unit contains this information.

For proper operation, the fuel information on the rating plate of your new equipment must match you fuel supply.

# INSTALLATION

## Statutory Regulations

The installation of this appliance must be carried out by a competent person and in accordance with the relevant regulations, standards, codes of practice and the related publications of the Country of destination. Failure to install appliances correctly can lead to prosecution. It is in your own interests and that of safety to insure that there is compliance with the law.

## Australia Specific Clause

This appliance must be installed in accordance with the manufacturers instructions, local gas fitting regulations and requirements of AS 5601 / AG 601 installation code. All burner adjustments and settings should be made by a qualified gas technician.

## Siting

The base on which the unit is to be sited must be firm, smooth and capable of adequately supporting the weight of the appliance and any ancillary equipment. ( Refer to table A for weight specifications ). Once in position check that the unit is level, both front to back and side to side. Adjust if necessary using the leveling feet on the four corners of the legs fitted. Any openings in the wall behind or beside the appliance must be sealed.

## Clearances

The space in which the appliance is to be sited must include the minimum installation clearances to combustible surfaces.

<b>Minimum Installation Clearances To Adjacent Combustible Walls - All Models</b>	
Sides	6" (152mm)
Back	6" (152mm)

<b>Type Of Floor Or Base</b>
Non Combustible or Combustible with 2" (51mm) legs

## Ventilation Air

The area in which the appliance is installed must be adequately ventilated to provide air for combustion, removal of products of combustion, etc. The use of a mechanical extract system should be considered.

The following notes are intended to give general guidance. For detailed recommendations, refer to the applicable code(s) in the Country of destination.

Note 1: The room containing the appliance is required to have a permanent air vent. The minimum effective area of the vent is related to the maximum rated heat input of the appliance and shall be 4.5 cm<sup>2</sup> per kW in excess of 7 kW.

Note 2: Air vents should be of such a size to compensate for the effects of any extract fan in the premises.

## Gas Connection

The gas pipe connection is made at the left hand side of the equipment. The size of the pipe work supplying the appliance must not be less than the inlet connection which is ISO 7/R 3/4". After installation, the complete pipe work must be checked for soundness.

## Gas Supply

The local gas region should be consulted at the installation planning stage in order to establish the availability of an adequate supply of gas and to ensure that the meter is adequate for the required flow rate. The pipe work from the meter to the appliances must be of an appropriate size. Where a number of appliances are installed in a battery, no more than five should be served by any one supply pipe.

All fixed ( non mobile ) appliances MUST be fitted with a manual gas cock upstream of the appliance to provide a means of isolation for servicing or cleaning purposes. A union or similar means of disconnection must be provided between the gas cock and the appliance.

A manually operable valve must be fitted to the gas supply to the kitchen to enable it to be isolated in an emergency. Wherever practical, this shall be located either outside the kitchen or near to an exit in a readily accessible position.



# INSTALLATION continued

Where it is not practical to do this, an automatic isolation valve system shall be fitted which can be operated from a readily accessible position near to the exit.

At locations where the manual isolation valve is fitted or the automatic system can be reset a notice **MUST** be fitted stating: "ALL DOWNSTREAM BURNER AND PILOT VALVES MUST BE TURNED OFF PRIOR TO ATTEMPTING TO RESTORE THE SUPPLY. AFTER EXTENDED SHUT OFF, PURGE BEFORE RESTORING GAS."

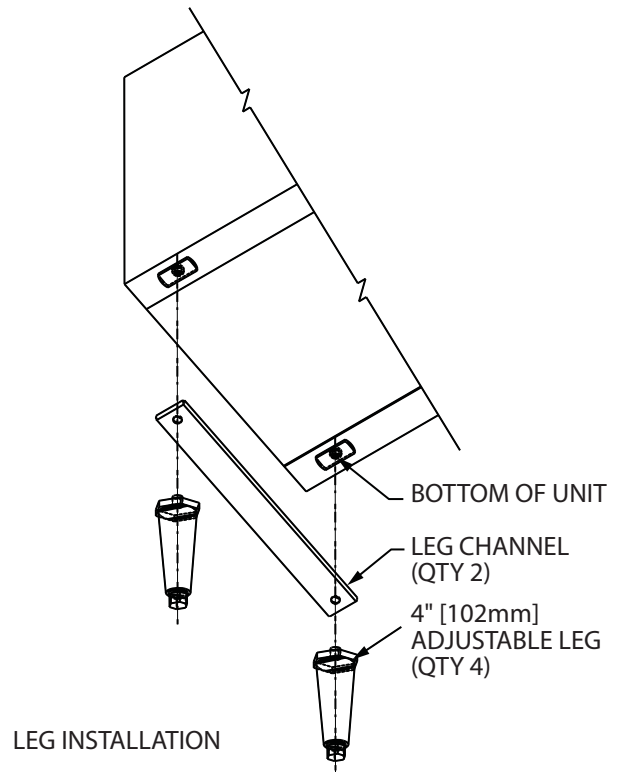
## Installation Procedure

1. Carefully remove unit from carton. All packing material must be removed from the unit. On stainless steel units, the protective material covering the stainless steel must be removed immediately after unit is installed.
2. Place the appliance in the required position and level by means of the leveling feet.
3. Connect the gas supply pipe work to the appliance. The connection is made to the rear left hand side of the appliance.

A gas isolation cock must be fitted in the supply to the appliance. The gas isolation cock must be sited in a position which is easily accessible to the user.

## Leg Installation

The leg channel is located on the package base. This channel must be installed when using the legs.



## Installation Of Counter Stands (Optional)

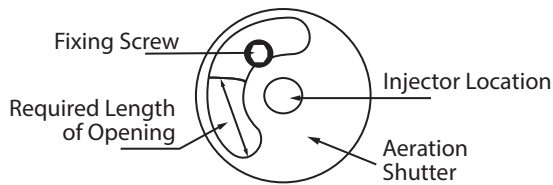
1. Assemble and level the counter stand as illustrated in the instructions found in the counter stand carton.
2. Remove and discard the levelling bolts on the unit to be installed on the stand.
3. Place the unit in the desired position on the counter stand, securing with the fasteners provided with the counter stand.

# COMMISSIONING

The whole of the gas installation, including the meter, should be inspected, purged and tested for soundness in accordance with the codes of the Country of destination.

1. Ensure that all controls are in the "●" position and turn on the main gas supply.
2. Remove the grease drawer & upper & lower fascia panels and connect a U-gauge manometer to the pressure test point on the main manifold. Operate the main burners in accordance with the instructions given in the *Operation Instructions*.
3. Check that the supply pressure is correct. If necessary, adjust the supply pressure to give the required setting.

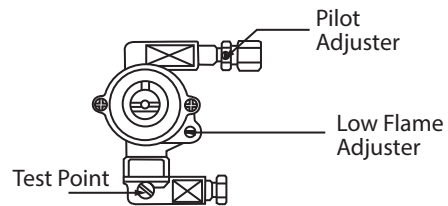
## Burner Adjustments



## Minimum Flame Setting

1. Set gas tap to low "▲" position.
2. Connect a U-gauge manometer to the pressure test nipple located downstream of the gas tap.
3. With a screw driver, turn the adjuster on the tap body clockwise to reduce or counter-clockwise to increase pressure. Set pressure to correspond with Table E.

When all the settings have been checked, remove the U-gauge manometer, replace the pressure test point screw and the front panels.

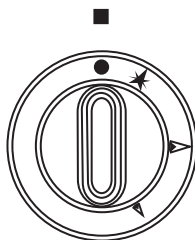


Tell the user of the location of the gas isolation cock for use in an emergency.

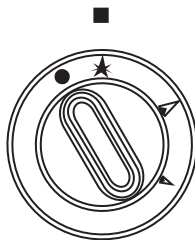
Leave this Manual with the user or purchaser.

# OPERATION INSTRUCTIONS

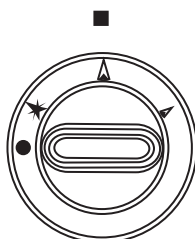
## Operating Controls



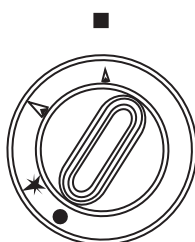
OFF



IGNITION



FULL FLAME



LOW FLAME

## Lighting The Griddle

**NOTE:** Ensure the gas supply to the appliance is turned "ON". During the initial ignition cycle, air must be purged from the gas line and thus it may take one or two minutes for the pilot burner to ignite.

1. Push in the tap and turn it counter-clockwise to the ignition position "★".
2. Holding the tap fully in, light the pilot with a match or taper.
3. When the pilot is lit, continue to hold the tap fully in for 20 seconds, then release it. If the pilot goes out, wait for five (5) minutes then repeat from step 1.
4. When the pilot is established, push the tap in and turn it counter-clockwise to the full flame "▲" position.
5. For low flame or simmer, push the tap in and turn it counter-clockwise to the low flame "▲" position.
6. To shut the burner off, turn the dial to the "●" symbol and the safety device will disengage within 60 seconds.

## Safety

It is the responsibility of the supervisor or equivalent person to ensure that users of this equipment wear suitable protective clothing and to draw attention to the fact that some parts will by necessity become very hot and will cause burns if touched accidentally.

# ROUTINE MAINTENANCE & CLEANING

## General Cleaning

### Painted Finishes

Establish a regular cleaning schedule. Any spills should be wiped off immediately. The unit should be allowed to cool down before cleaning any surfaces. Wipe exposed cleanable surfaces when cool with a mild detergent and hot water. Stubborn residue spots may be removed with a scouring pad. Dry thoroughly with a clean cloth.

### Stainless Steel

Stainless steel should be cleaned using a mild detergent, a soft cloth and hot water. If it is necessary to use a non-metallic scouring pad, always rub in the direction of the grain in the metal to prevent scratching. Wash a small area at a time and rinse the washed area with a clean sponge dipped into a disinfectant and wipe dry with a soft cloth before it can dry.

Use only stainless steel or, wood or plastic tools to scrape off heavy deposits of grease or oil. Do not use ordinary steel scrapers or knives as particles of iron may become embedded and rust. NEVER USE STEEL WOOL.

### Griddle Seasoning

Remove all factory applied protective material by washing with hot water, mild detergent or soap solution.

Apply a thin coat of cooking oil to the griddle surface, about one ounce per square foot of griddle surface. Spread over the entire griddle surface with a cloth to create a thin film. Wipe off any excess oil with a cloth.

Heat the griddle slowly for 15 to 20 minutes, then wipe away the oil. Repeat the procedure 2 to 3 times until the griddle has a slick mirror like finish. Do this until you have reached the desired cooking temperature.

**IMPORTANT:** Do not attain a high griddle temperature (232°C/450°F) during the "break-in" period.

**NOTE:** Steel griddle surface will tone (blue discoloration) from the heat. This toning will not diminish function or operation and is not a defect.

## Griddle Cleaning

To produce evenly cooked, browned griddle products, keep the griddle free from carbonized grease. Carbonized grease on the surface hinders the transfer of the heat from the griddle surface to the food product. This results in uneven browning and loss of cooking efficiency and worst of all, carbonized grease tends to cling to grilled foods, giving them a highly unsatisfactory and unappetizing appearance. To keep the griddle clean and operating at peak performance, follow these simple instructions.

**After each use:** Clean griddle thoroughly with grill scraper or spatula. Wipe off any excess debris left from the cooking process.

**Once a day:** Clean griddle surface with a grill brick and grill pad. Remove the grease container and clean thoroughly, in the same manner as any ordinary cooking utensil.

**Once a week:** Clean the griddle surface thoroughly. If necessary, use a grill stone or grill pad over the griddle surface. Rub with the grain of the metal while still warm. A detergent may be used on the surface to help clean it, but care must be taken to be sure it is thoroughly removed. After removing the detergent, the surface plate should be covered with a thin film of oil to prevent rusting. To remove discolorations use a non-abrasive cleaner. Before re-using, the griddle must be reseasoned. Keep the griddle drain tube to the grease container clean at all times.

**CAUTION:** This griddle plate is steel, but the surface is relatively soft and can be scored or dented by the careless use of a spatula. Be careful not to dent, scratch, or gouge the plate surface as this will cause food to stick in those areas. Note that since this is a steel griddle, if a light coating of oil is not always present, rust will develop on the exposed and uncoated areas.

# MAINTENANCE & SERVICING INSTRUCTIONS

To ensure efficient and safe operation of the appliance it is recommended that servicing be carried out by a competent person at regular intervals, the frequency of which will vary, depending on the installation conditions and usage. Usually once per year is adequate.

## **WARNING:**

Turn off the gas supply to the appliance at the service cock before commencing any servicing work.

## **IMPORTANT:**

Test for gas soundness on completion of any servicing work.

## **Gas Taps**

Re-greasing of the taps is not recommended. If the tap spindles become seized or difficult to turn, refer to the *Replacement of parts* section in this manual.

## **Main Burners - Cleaning**

1. Lift off the griddle plate. (Use caution. This will require assistance due to the weight of the griddle).
2. Lift the rear of the burner and slide backwards off the injector.
3. Clean the burners with a stiff scrubbing brush.
4. Shake well to remove any debris from the inside of the burner.
5. Reassemble in the reverse order.

## **Pilot Burners - Cleaning**

1. Remove the main burners. (Refer to the section titled "Main Burners - Cleaning").
2. Disconnect the pilot gas supply pipe from the pilot jet.
3. Remove the pilot jet.
4. Clean by blowing through or washing. Do not use a wire to clear the pilot jet.
5. Reassemble in the reverse order.

## **Miscellaneous**

1. Check for loose fasteners. Tighten as necessary.
2. Wipe exposed cleanable surfaces with a mild detergent and hot water. Stubborn residue may be removed with a lightweight non-metallic scouring pad. Stainless steel areas should be washed with a mild detergent, hot water and a soft cloth. If necessary to use a non-metallic scouring pad always rub in the direction of the grain in the metal to prevent scratching. NEVER USE STEEL WOOL.
3. Check the operation of all thermocouples and flame safety devices by lighting the pilots individually and then blowing them out. Listen for the flame failure valve clicking closed. This action must occur within 60 seconds of extinguishing the pilot.
4. Clean out grease drawer and wash thoroughly in hot soapy water. Dry thoroughly.

# REPLACEMENT OF PARTS

## **WARNING:**

Turn off the gas supply to the appliance at the service cock before commencing any servicing work.

## **IMPORTANT:**

Test for gas soundness on completion of any servicing work.

## **Gas Taps**

1. Pull the control knob off each tap and remove the grease drawer and the upper & lower fascia panels.
2. Disconnect the thermocouple connection at the rear of the gas tap.
3. Disconnect the pilot and main burner tubing connections at the gas tap.

## REPLACEMENT OF PARTS continued

4. Break the compression nut at the inlet of the gas tap and replace the tap.
5. Reassemble in the reverse order.

### Pilot Burner/Thermocouple/Spark Electrode

1. Remove the main burner following the procedure given under *Maintenance & Servicing*.
2. Remove the grease drawer & upper & lower fascia panels to access the multifunctional control.
3. Disconnect the thermocouple connection at the rear of the gas tap.
4. Disconnect the pilot tube connection/thermocouple connection at the gas tap.

5. Remove the two (2) screws that secure the pilot mounting bracket to aeration pan and remove the pilot burner/thermocouple or electrode as appropriate.
6. Replace the faulty component and reassemble in the reverse order.

### Piezo Ignitor

1. Pull the control knob off each gas tap on the unit.
2. Remove the lower fascia panel.
3. Remove the wire lead from the piezo ignitor & remove the ignitor from the panel.
4. Replace with new ignitor & reassemble in the reverse order.

## CONVERSION INSTRUCTIONS

Servicing must be carried out by a competent person in accordance with the law.

### **WARNING:**

Turn off the gas supply to the appliance at the service cock before commencing any servicing work.

### **IMPORTANT:**

Test for gas soundness on completion of any servicing work.

1. Ensure that all of the parts necessary to make the conversion have been supplied as follows:
  - a. Injector fittings ( One required for each main burner )
  - b. Pilot injector fittings ( One required per pilot burner )
  - c. Gas adjustment label ( One required per unit )
  - d. Data plate ( One required per unit )

If any of the required parts are missing, contact your Garland dealer before attempting to carry out the conversion

**NOTE:** Conversion kits supplied for G31 gas will contain redundant fittings and markings covering both 37 mbar & 50 mbar gas supplies.

2. Remove the burners following the instructions given in this manual.
3. Replace each injector fitting with the new fitting that is supplied.

**NOTE:** Before doing so, refer to Table D (Table G for Australian Models) in this manual to ensure that the correct injector has been supplied for the gas supply being converted to.

4. Replace each pilot injector fitting with the new fitting supplied.

**NOTE:** There are two sizes of pilot injectors identified as follows

- a. # 32 (2nd family gases) Natural Gas
- b. # 23 (3rd family gases) Propane

Ensure that you have the correct pilot injector before replacing.

Upon completion of all the above operations, follow the section in the manual on "Commissioning" and ensure that the setting pressure and all burner flame settings are adjusted accordingly.

## FAULT FINDING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Burner flame too large. Burner flame soft - yellow tip.	Incorrect setting pressure or injector.	Check setting pressure and injector.
	Insufficient primary air.	Check primary aeration for blockage.
Delayed Ignition	Pilot burner flame too small.	Check pilot flame adjustment.
	Burner ports blocked	Clean blocked burner ports.
	Incorrect setting pressure.	Check setting pressure.
Pilot burner will not ignite	Pilot orifice blocked.	Clean pilot jet.
	Pilot adjusting screw closed.	Open pilot adjuster.
Pilot Keeps Extinguishing.	Pilot flame too small.	Check pilot.
	Loose thermocouple connection.	Tighten connection.
	Faulty thermocouple.	Replace thermocouple.
	Faulty flame safety device.	Replace flame safety device.
Low millivolt output on open circuit test.	Pilot flame too small	Adjust pilot flame length.
	Defective thermocouple.	Replace thermocouple.
Millivolt output high in open circuit test but low in closed circuit test.	Faulty flame safety device	Replace flame safety tap
Millivolt output high on closed circuit test but flame safety tap will not stay open.	Faulty flame safety device	Replace flame safety tap.

## SAFETY CONCERNS

It is essential that the instructions in the booklet be strictly followed for the safe and economically operation of the equipment. If it is known or suspected that a fault exists on the appliance then it must not be used until the fault has been rectified by a competent person.



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