

Gas Cooktops

Models

GC600
GC600W
GC600F
GC600WF
GC600WFC
GC600QJET

GC900
GC900WFC
GC9002WFC
GC900QJET
GC9002QJET

GC36
GC36WAC



PRODUCTS

Brand Fisher & Paykel, Shacklock, Unbranded

Model	Series	Code
GC600	1	84494, 87344, 87362, 87408
GC600F	1	87364, 87388
GC600W	1	84495, 84496, 87333, 87363, 87369, 87410
GC600WF	1	84502, 84504, 87350, 87365, 87381, 87382
GC600WFC	1	84506, 87332, 87366, 89040, 89041
GC900WFC	1	84510, 87334, 87390, 89042
GC9002WFC	2	87674, 87676
GC600Q JET	1	87640, 87666
GC900Q JET	1	87640, 87666
GC9002Q JET	2	87675, 87677, 88263, 88264
GC36WAC	1	88253

For Australia

Fisher & Paykel Customer Services
PO Box 798
19 Enterprise Street
Cleveland, Queensland 4163
Australia

Tel: (07) 3826 9122
Fax: (07) 3826 9164
Email: parts@fp.com.au
A.C.N. 003 335 171

For New Zealand

Fisher & Paykel Customer Care
PO Box 14-917
Panmure
Auckland
New Zealand

Tel: 0800 37 2273
Fax: (09) 273 0656
Email: Customer.Care@fp.co.nz

For USA/Canada

Fisher & Paykel Customer Care
27 Hubble
Irvine, CA 92618
Laguna Hills, CA 92653
USA

TOLL FREE 1-888-936 7872
Fax (949) 790 8913
www.usa.fisherpaykel.com

For United Kingdom

Fisher & Paykel Limited
Broxell Close
Wedgnock Industrial Estate
Warwick CV34 6QF
England

Tel: +44 1926 626 700
Fax: +44 1926 626 701

For Republic of Ireland

C&F Quadrant
Quadrant House
Chapelizod
Dublin 20
Ireland

Tel: 01626 5711/4917
Fax: 01 626 7863/3251

For Singapore

Fisher & Paykel (S) Pte Ltd
150 Ubi Avenue 4
#02-00, Sunlight Building
Singapore 408825

Tel (+65) 547 0100
Fax (+65) 547 0123

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1.0 SPECIFICATIONS

1.1 Product Dimensions

	GC600 Series	GC900 Series	GC9002/GC36 Series
Length	578mm	860mm	914mm (36")
Width	511mm	511mm	533mm (21")
Depth below bench	40mm	40mm	40mm (1 ⁵ / ₈ ")

1.2 Model Explanation

GC = Gas Cooktop

600 = 600mm wide

900 = 900 mm wide

9002 = 900mm wide, Series 2

F = Flame Failure

W = Woprk

C = Cast Iron Pan Supports

Q = Quantum sub-brand

JET = Quantum Model Name

GC36WAC = 36" Gas Cooktop for USA With Auto Reignition and Griddle Burner

1.3 Bench Cut-Out Dimensions

	GC600 Series	GC900 Series	GC9002/GC36 Series
Length	560mm	842mm	842mm (33 ³ / ₁₆ ")
Width	490mm	490mm	490mm (19 ³ / ₈ ")
Depth for clearance	45mm	45mm	45mm (1 ³ / ₄ ")

Clearances (USA Only)

- Minimum horizontal distances from side and back of appliance to adjacent vertical combustible walls (extending a minimum of 18" (457mm) from above the top panel) must be 4" (100mm) from the left side wall, 1" (25mm) from the right side wall and 2¹/₂" (64mm) from the rear wall.
- Minimum horizontal distance from front edge of counter to front side of appliance 2¹/₂" (64mm). Where this reduces the distance between the back edge of the appliance and the adjacent wall to less than 2¹/₂" (64mm), this wall must be of a non combustible material.
- Minimum clearance to combustible surface centred above cooking surface 30" (762mm).
- Minimum horizontal distance between overhead cabinets installed on either side of this appliance 36" (914mm).
- Maximum depth of overhead cupboards, 13" (330mm).
- These distances shall be from the outermost edge of the top panel.

1.4 Burners GC600 Series

	Australia/NZ				GB/IE			
	NG (1kPa) MJ/h	Orifice Size	LPG (2.75kPa) MJ/h	Orifice Size	NG (I _{2H}) (20mbar) kW	Orifice Size	LPG (I ₃₊) (28-30/37mbar) kW	Orifice Size
Auxiliary Front Right	3.7	0.85	4.1	0.55	1.0	0.75	0.8	0.45
Semi Rapid Rear Left & Right	6.1	1.1	6.4	0.7	2.2	1.1	2.2	0.75
Wok Front Left	15	1.8	15	1.05	3.4	1.35	2.8	0.85
Rapid Front Left	11.3	1.5	11.3	0.92				

GC900 / GC9002 / GC36

	Australia/NZ GC900 / GC9002				GB/IE GC9002				USA/Canada GC36			
	NG (1kPa) MJ/h	Orifice Size	LPG (2.75kPa) MJ/h	Orifice Size	NG (I _{2H}) (20mbar) kW	Orifice Size	LPG (I ₃₊) (28-30/37 mbar) kW	Orifice Size	NG 4" BTU	Orifice Size	LP 11" BTU	Orifice Size
Auxiliary / Simmer Front Right	3.7	0.85	3.7	0.55	1.2	0.75	1.0	0.55	4000	0.85	3500	0.55
Semi Rapid Rear Left & Right	7.9	1.3 *	7.9	0.8 *	2.2	1.1	2.2	0.75	8000	1.3*	8000	0.8*
Left Front / Wok	15	1.8	15	1.05	4.2	1.55	3.9	1.0	13,000	1.8	13,000	1.05
Centre / Skillet	10	1.45	10	0.85	2.8	1.25	2.2	0.75	9,500	1.45	9500	0.85

*1.3 / 0.8 orifices replace 1.1 / 0.7 orifices.

These are available from spare parts and replace the previous size.

Note: Kits of high altitude orifices are available for USA/Canada (these are also suitable for Aus/NZ 900/9002 models). NG Part No. 530463 LPG Part No. 530464
These orifices should be used at approximately 6000ft or above.

1.5 Controls

GC600/GC600W/GC600F	4 x Standard Gas Valves P/N 530029
GC600WF/GC600WFC/GC600QJET	4 x Flame Failure Valves P/N 530302
GC900WFC/GC9002/GC900QJET/GC9002QJET	5 x Flame Failure Valves P/N 530302
GC36	5 x Standard Gas Valves P/N 530029

1.6 Electrical

600 Series

Mains Powered Ignition System - 220/240V 0.6VA Part No. 530032

900 Series

Mains Powered Ignition System - 220/240V 0.6VA Part No. 530033

GC36 Series

Mains Powered Auto Reignition System 120V 60Hz 2VA Part No. 530308

1.7 Total Gas Rating (MJ/h / kw / BTU)

	Aus/NZ, NG		GB/IE, NG		USA, NG	Aus/NZ, LPG		GB/IE, LPG		USA, LP
	MJ/h	kW	MJ/h	kW	BTU	MJ/h	kW	MJ/h	kW	BTU
GC600/GC600F	27.2	7.6			-	28.2	7.8			-
GC600W/WF/WFC/ GC600QJET	30.9	8.6	31.7	8.8	-	31.9	8.9	28.8	8	-
GC900/9002 Series Jet 9/GC36	44.5	12.4	45.4	12.6	42,500	44.5	12.4	41.4	11.0	42,000

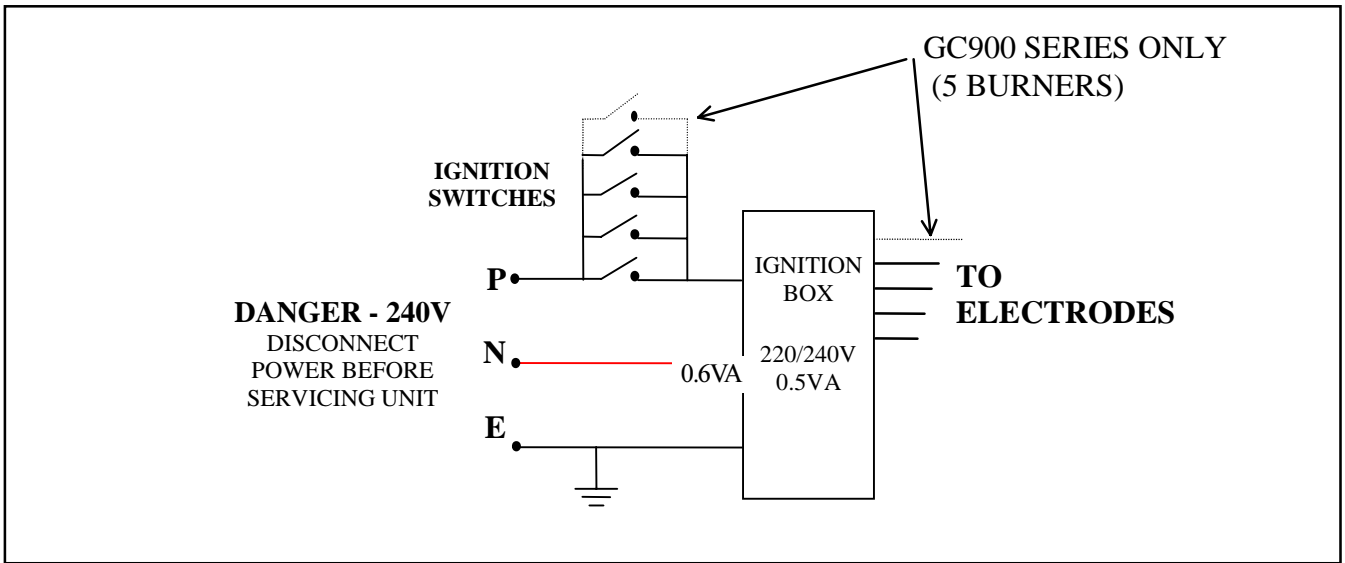
Serial and model numbers are located on the underside of the product. An extra label is provided to the installer in Aus/NZ to be placed in a convenient place.

1.8 General Warning

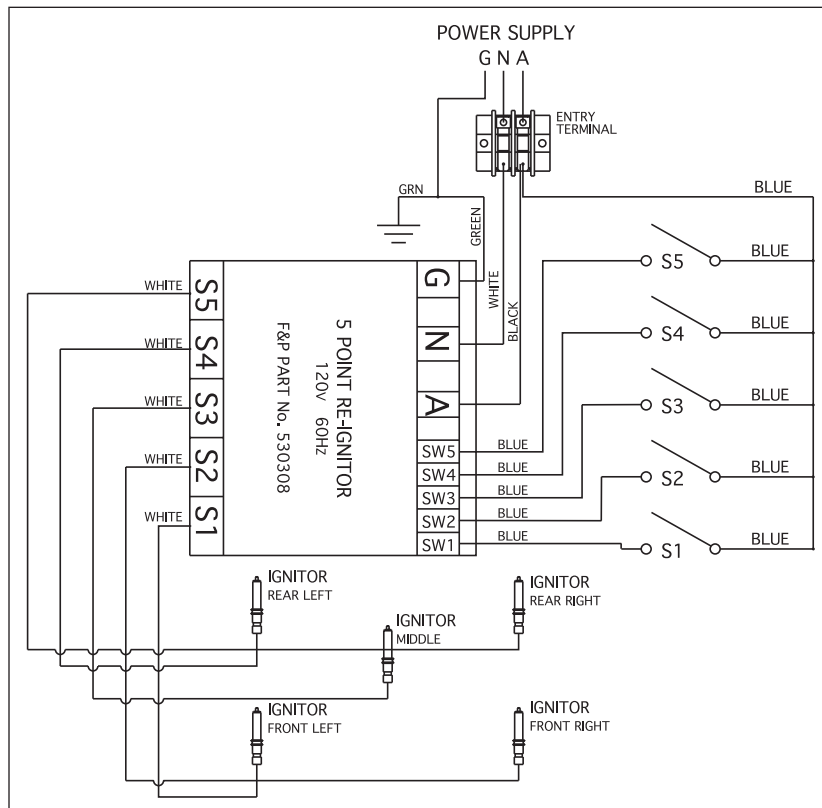
Gas products can only be installed and serviced by qualified Gas Service Persons.

2.0 WIRING DIAGRAM

Schematic Wiring Diagram for GC600, GC900 & GC9002 Series Gas Cooktops Ignition Circuit



Schematic Wiring Diagram for GC36 Gas Cooktops Ignition Circuit (USA & Canada Only)



3.0 REPLACEMENT OF BURNER ORIFICE & LOW SETTING

3.1 Minimum Setting or Turn Down

Note: This is not possible in the UK and Ireland as the gascocks have been sealed.

This has been set at the factory but can be checked after the correct pressure has been reached.

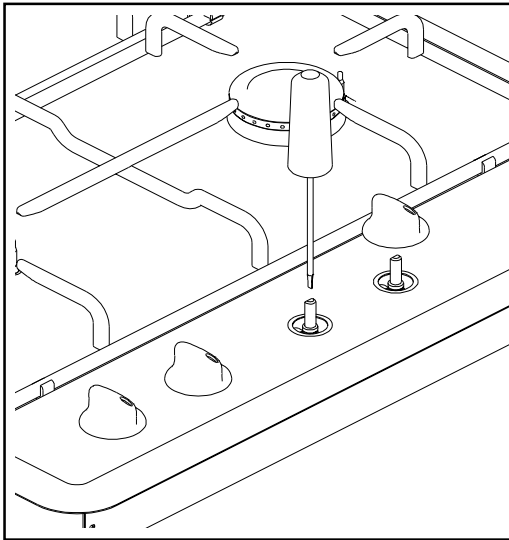
To adjust for minimum setting, if needed. You will need a 2.5 diameter x 45mm ($\frac{7}{64}$ " diameter x $1\frac{3}{4}$ ") screwdriver. (In the USA, this screwdriver is available as Part No. FB200467.)

3.1.1 Remove the knobs.

3.1.2 Ignite the burner and set the knob to its minimum position.

3.1.3 Rotate the turn down screw (down the hole in the valve spindle). Rotate slowly until a minimum regular flame is achieved. (The flame will diminish when the screw is turned clockwise and increase when turned anti-clockwise).

3.1.4 When the setting is right check regulation by quickly rotating the knob from the maximum to the minimum delivery position. The flame must not go out. Replace the knob.



This picture may not exactly represent all cooktops.

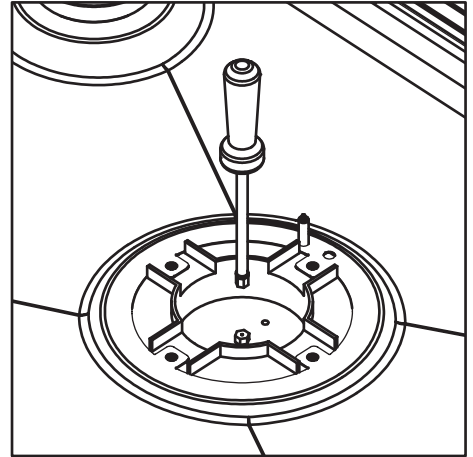
3.2 Conversion to Different Gas Type

Note: For the UK/Ireland, the products must not be converted between gases. The gas taps have been sealed.

Burners can be used with NG or LPG types of gas, provided that the injector orifice appropriate for the gas delivered are installed. Use a 7mm ($\frac{9}{32}$ ") box spanner to remove the orifice.

To change the injector orifice:-

- 3.2.1 Turn off the mains supply.
- 3.2.2 Ensure all gas cocks are turned off.
- 3.2.3 Remove all burner heads.
- 3.2.4 Unscrew the injector orifice using a 7mm socket and replace them with the correct ones. (Size numbers stamped on side or the top.) e.g:- 70 = 0.70mm
- 3.2.5 Reset minimum setting (see 3.1).

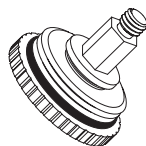


The label supplied with the orifices can be placed over the existing gas type label to indicate the change.

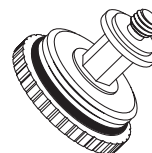
Note: Kits of high altitude orifices are available for USA/Canada (these are also suitable for Aus/NZ 900/9002 models). NG Part No. 530463 LP Part No. 530464
These orifices should be used at approximately 6000 feet and above.

3.2.6 To Change the Gas Pressure (4"NG, 11"LP): (USA/Canada Only)

1. Unscrew the cap from the regulator.
2. Check the orientation of the plastic conversion plug, and if necessary, unscrew, turn over and screw back in (wide section away from cap for LP and against cap for NG - see diagram below for appropriate orientation).
3. Replace regulator cap.
4. Test gas pressure (test point provision on side of regulator). When converting the regulator for different settings, the function of the regulator must be checked at a pressure at least 1"WC (249Pa) above the specified manifold pressure.



NG



LPG

4.0 REMOVAL OF HOB TOP

4.1 How to Remove Hob Top

- 4.1.1** Lift off trivets and burner heads.
- 4.1.2** Pull off knobs.
- 4.1.3** On 600 Series Flame Failure models unscrew the nut securing each flame failure probe M7 ($9/32$ ") box socket.
- 4.1.4** Remove the two screws holding each burner. (To prevent damaging the screw head use a No. 1 Philips screwdriver.)
- 4.1.5** Lift off hob top hinging from the back. NB: The edge on stainless models can be sharp. (The electrodes unplug from the ignition box if you want to get the hob out of the way. They go back in any order). Disconnect the earth wire from hob terminal.
- 4.1.6** If you need to change the 600 Series hob, the electrodes may be removed by unlatching the locating springs.
- 4.1.7** To replace, reverse the procedure.

5.0 REMOVAL OF COOKTOP FROM BENCH/COUNTERTOP

It is probably easiest to service the internal components (gas valves, electronics) by removing the hob top rather than removing the product from the bench/countertop (see Section 4).

5.1 To Remove the Product from the Bench/Countertop

5.1.1 Disconnect the electrical supply.

5.1.2 Turn off gas supply and disconnect.

5.1.3 Loosen the clamping brackets at the front/sides (underneath).

5.1.4 Lift product out.

6.0 REPLACEMENT & SERVICING OF ELECTRONIC IGNITION

6.1 To Replace an Electrode

- 6.1.1 Disconnect from power.
- 6.1.2 Remove the product top panel - (see Section 4).
- 6.1.3 Unlatch the appropriate locating spring and remove the electrode. Replace
- 6.1.4 Reassemble in reverse order.

6.2 To Replace Ignition Box

- 6.2.1 Disconnect from power.
- 6.2.2 Remove the product top panel - (see Section 4).
- 6.2.3 Unplug the electrodes and the multiway plug from the ignition box.
- 6.2.4 Replace the box. the ightion box is held down by double sided foam tape.
- 6.2.5 For the auto reignition box.
Electrode wires must be plugged into correct terminals. Terminal Numbers on the ignition box correspond to:
 - #1: Front left burner
 - #2: Front right burner
 - #3: Middle burner
 - #4: Rear left burner
 - #5: Rear right burner
- 6.2.6 Reassemble in reverse order.

6.3 To Replace the Microswitch Loom (GC600, GC600W and GC36 Only)

- 6.3.1 Disconnect from power.
- 6.3.2 Remove the hob top - (see Section 4).
- 6.3.3 Remove the circlips from each gas cock to free the microswitch assembly. Lift off microswitch assembly and replace.
- 6.3.4 Reassemble in reverse order.

7.0 REPLACEMENT & SERVICING OF FLAME FAILURE (Refer also Section 9 - Problem Solving)

7.1 To Test Flame Failure

- 7.1.1** Ensure thermocouple is held in the flame even if the hob is removed.
- 7.1.2** Ignite the burner, hold the knob down for five seconds. Release. Burner should stay alight.
- 7.1.3** Turn down to low and blow out. After about 10-15s, the flame failure should stop the flow of gas. (You should hear a click).
- 7.1.4** If 7.1.2 or 7.1.3 are not met (see Section 9 - Problem Solving).

7.2 To Replace a Thermocouple

- 7.2.1** Remove the hob (see Section 4).
- 7.2.2** Unscrew (small hex, 8 AF) from end of gas valve and replace.
- 7.2.3** Test thermocouple works before replacing hob.

8.0 GAS VALVES

8.1 To Change a Gas Valve

8.1.1 Turn off gas supply and electricity.

8.1.2 Remove the hob top (see Section 4).

8.1.3 Disconnect ignition switch wires. For non Flame Failure models, remove the circlip from each gascock to free the microswitch assembly. Lift off microswitches.

8.1.4 Disconnect male $\frac{1}{2}$ " nut on rear of unit to gas supply.

8.1.5 Undo nuts holding aluminium tubes to gas valve.

8.1.6 Remove a screw holding manifold to basepan.

8.1.7 Lift out manifold, remove screws holding valve to manifold bracket.

8.1.8 Change gas cocks.

8.1.9 Replace in reverse order. Leak test with soapy water. Reconnect ignition switch wires (replace microswitch for non Flame Failure models).

Note: Remember to test the gas valve outlet with the valve turned on.

8.1.10 Check turn down setting (see Section 5).

8.1.11 Replace hob.

8.2 To Re-Grease Gas Valves

8.2.1 Remove product top panel.

8.2.2 Remove circlips from each gas valve to free the microswitch assembly. Lift off microswitches.

8.2.3 Unscrew the two Philips screws on the top of the gas valve.

8.2.4 Gently lift out the valve cone, clean with solvent.

8.2.5 Re-grease with high temperature grease. (e.g. ROCOL HT, Otimol HT2EP, Ragasine Moly LM). Replace.

8.2.6 Move it around, remove excess grease, remove and check holes in the core or body are not blocked, replace.

8.2.7 Open and close a couple of times.

8.2.8 Check for leaks with leak detection fluid e.g. Rocol Leak Detection spray) and re-assemble in reverse order.

9.0 PROBLEM SOLVING (excluding Auto Reignition)

9.1 Gas Doesn't Light - No Spark (See also Section 6)

Check source of mains supply.

- 9.1.1 Check electrodes/burners are clean (use rubbing Alcohol and an old tooth brush).
- 9.1.2 Check that spark gap is not too wide (burners sitting right).
- 9.1.3 If only one or two burners are getting a spark, swap over high tension ignition leads at the ignition box. If burners which were igniting before are no longer getting a spark, fault is in the box. If burners which were igniting before are still igniting after changing leads, fault is in the ignition lead/electrode.
- 9.1.4 Check continuity from the box to the electrode and from the burner or earthing point to the earth connection on the box.
- 9.1.5 Check that high tension leads are not coiled, or lying on the basepan, as this may result in a loss of voltage to the electrode. (Use correct length leads and locate in correct position.)

9.2 Gas Doesn't Light - Spark but no Ignition

- 9.2.1 Check gas supply (including output pressure of regulator).
- 9.2.2 Check if any burners light (with match).
- 9.2.3 Check spark gap (set to approximately 3mm).
- 9.2.4 Check spark earthing to correct position on burner.
- 9.2.5 Check that high tension leads have not been coiled, as this may result in a loss of voltage and a spark of insufficient energy to ignite the gas. (Use correct length high tension leads and locate correctly.)

9.3 Flame Doesn't Stay When Gas Valve is Released (See also Section 7)

- 9.3.1 Remove knob and retry without the knob.
There have also been instances of the clamping brackets being overtightened and distorting the panel enough to allow the knob to bottom out.
- 9.3.2 Check the flame envelopes the tip of the thermocouple.
Check the thermocouple tip is free from carbon or other deposits.
Check the thermocouple for any physical damage e.g. kinks, corrosion at the tip.
Check the thermocouple nut is tight on the gas valve to ensure electrical contact.

9.3.3 Test Thermocouple

Turn off gas and electrical supply.

Remove the hob top but replace the burner head on the afflicted burner.

Disconnect the thermocouple from the gas valve.

Set your multimeter onto DC millivolts.

Attach with alligator clips to outer copper sheath (+) and the aluminium lump on the end (-).

Turn on gas, light burner (you will have to keep holding the knob down).

Hold the thermocouple tip in the flame and observe the meter. If no reading, - replace the thermocouple. If it reads approximately greater than 20mV it's working OK - replace the gas valve. (Could check by swapping a coil/magnet from one of the other valves.)

10.0 PROBLEM SOLVING AUTO REIGNITION

10.1 Gas Doesn't Light - No Spark

Check source of mains supply.

Check spark gap is not too wide (burners sitting correctly).

Check electrodes/burners are clean (use rubbing alcohol and an old toothbrush).

Check continuity from the box to the electrode and from the burner or earthing point to the earth connection on the box.

Check the high tension leads are not coiled, as this may result in a loss of voltage to the electrode. (Use correct length leads and locate in correct position.) Check for damage to wire insulation and that the leads are not against parts that will heat up during operation.

10.2 Gas Doesn't Light - Spark but no Ignition

Check the cooktop and regulator are set up for the correct gas type and pressure (factory set for NG).

Check location of ignitors and make sure spark gap is not too wide.

Check the burner components including the burner cap are sitting correctly.

Check electrodes/burners are clean (use rubbing alcohol and an old toothbrush).

Check the high tensions leads have not been coiled, as this may result in a loss of voltage and a spark of insufficient energy to ignite the gas. (Use correct length leads and locate in correct position.)

10.3 Sparking Continuously after Ignition

Check electrodes are clean (use rubbing alcohol and an old toothbrush).

Check the cooktop is correctly earthed (lack of earthing will cause a problem).

Check the polarity of the electrical supply is correct to the ignition box.

Check the cooktop and regulator are set up for the correct gas type and pressure (factory set for NG).

10.3.1 Determine the Problem Burners

1. Turn all burners off.
2. Turn on one burner at a time to check which are OK and which continue sparking after ignition. With each you should check the high position, the low position and the behaviour with a large pot, before turning it off and moving on to the next burner.
3. If the problems occurs with the rear (semi rapid) burners, check that they have the 'hooked' electrode. Part No. 536 486.

4. If the problem occurs with the front right, simmer burner
Check that there is enough gas coming through the 'electrode' port at the rear of the burner skirt, to maintain a stable flame. Try adjusting the low setting.
5. If the problem occurs with the front left 'triple ring' burner. Install a new electrode, (Part No. 531603). Check that the ceramic body has not been damaged.
6. Check each burner lights and doesn't continue sparking.

10.4 Flame Goes Out on Low Setting

Check the cooktop and regulator are set up for the correct gas type and pressure (factory set for NG).

Check the burners low setting is correct (see Section 3.1).

10.5 Flame is Distorted or Large and Yellow

Check the cooktop and Regulator are set up for the correct gas type and pressure (factory set for NG).

Check the burner components including the burner cap are sitting correctly.