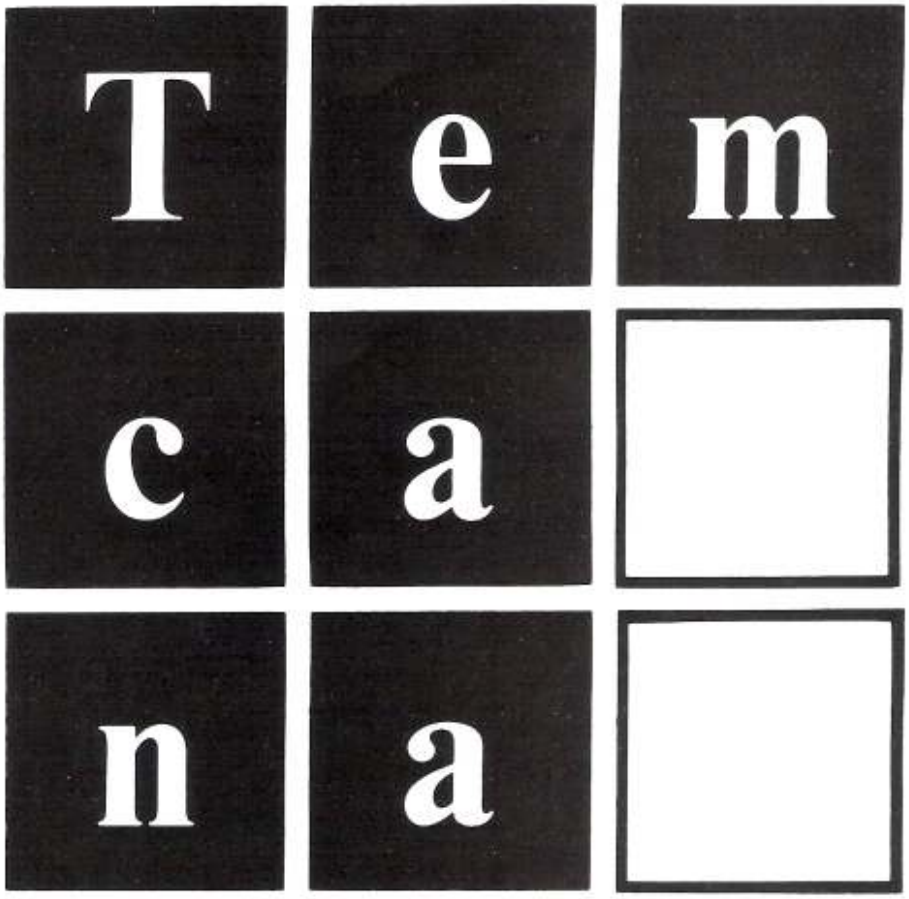

Temcana 8C (G.C. No. 35 935 58)
Temcana 8C/EM (G.C. No. 35 935 57)
Temcana 16C (G.C. No. 35 935 62)
Temcana 16C/EM (G.C. No. 35 935 61)
Balanced flued convector heaters

Installation and Servicing Instructions

Please leave these instructions adjacent to the gas meter or with the site engineer.

Vulcana Gas Appliances Limited
Bridge Road,
Haywards Heath,
West Sussex, RH16 1TX
Tel: 0444 415871

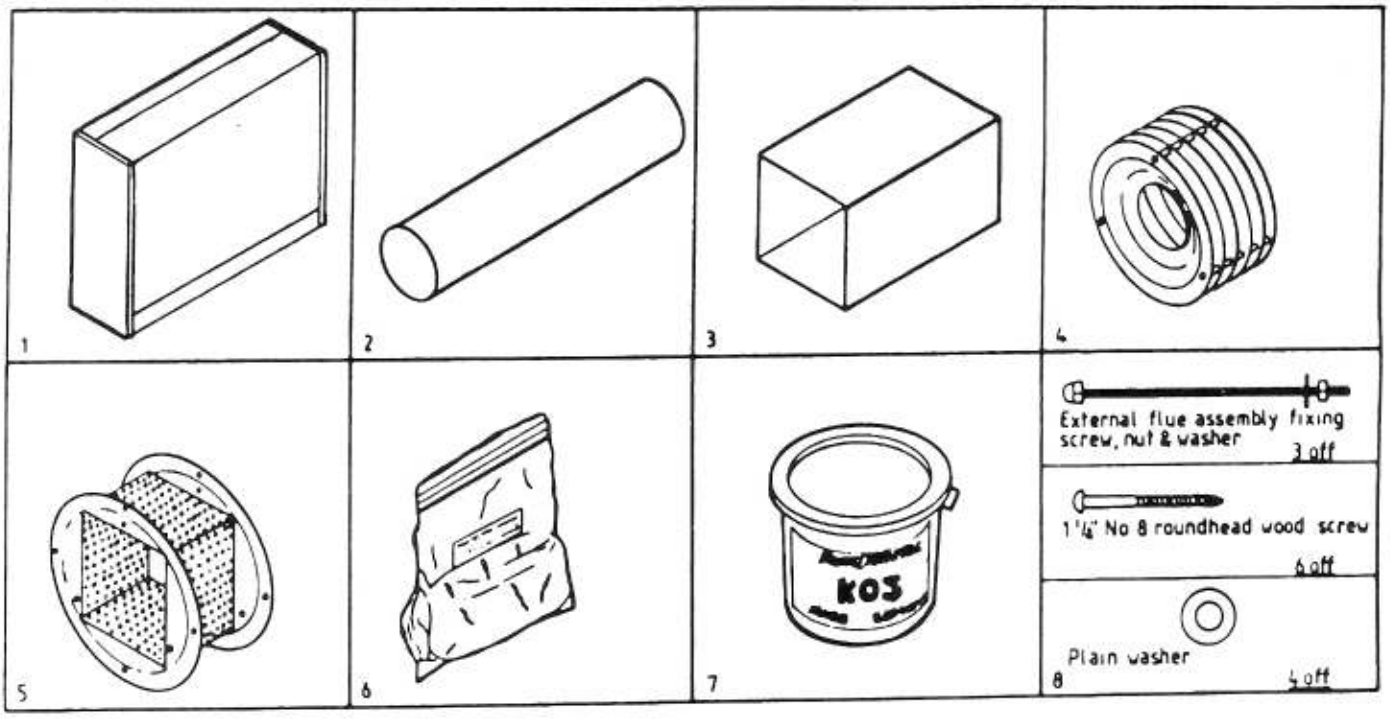

Fig. 1

IMPORTANT
This appliance is for use on natural gas or propane as indicated on the data badge. It is tested and certificated by British Gas for use on natural gas only.

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1.0 REFERENCE DOCUMENTS

This appliance must be installed by a competent person, in accordance with:–

Gas Safety (Installation and Use) Regulations 1984
B.S. 5440: PART 1: 1978
B.S. 6891: 1988
B.S. 5871: 1980
Local Building Regulations
IEE Wiring Regulations
Health and Safety at Work etc. Act: 1984
Any local gas region or local authority requirements must also be taken into account.

2.0 WARRANTY

Warranty will be invalidated if the appliance is not installed and adjusted according to the foregoing requirements and the following instructions.

4.0 TECHNICAL DATA

(A) Natural gas	**Temcana 16C**
Main Burner Injector dia.	2.2 mm
Burner Pressure	13.0 mbar (5.2 in.wg)
Heat Input	14.32 kW (48 860 Btu/h)
Heat Output	11.14 kW (38 000 Btu/h)

(B) Propane	**Temcana 16C**
Main Burner Injector dia.	1.3 mm
Burner Pressure	35 mbar (14 in.wg)
Heat Input	14.32 kW (48 860 Btu/h)
Heat Output	11.14 kW (38 000 Btu/h)

3.0 CONTENTS LIST

The appliance is despatched as an assembled heater unit, with the flue components separately boxed.

Identify the various components from Figure 1 and check to ensure that they are complete and undamaged.

1. Heater Unit
2. Flue Tube } Wall thickness
3. Air Duct } 50mm (2in) to 355mm (14in)
4. External Flue Assembly } flue
5. External Air Inlet Assembly } terminal
6. Putty
7. Fire Cement
8. Accessories Pack

*Long flue sets for wall thicknesses up to 635mm (25in) are available at extra cost.

4.0 TECHNICAL DATA

(A) Natural gas

	Temcana 8C
Main Burner injector dia.	2.7mm
Burner Pressure	9.4mbar (3.8in.wg)
Heat Input	9.08kW(31 000Btu/h)
Heat Output	7.32kW(25 000Btu/h)

(B) Propane

	Temcana 8C
Main Burner injector dia.	1.5mm
Burner Pressure	35mbar (14in.wg)
Heat Input	9.08kW(31 000Btu/h)
Heat Output	7.32kW(25 000Btu/h)

5.0 SITING THE HEATER

(a) When selecting the site for the heater, it is essential to ensure that the flue terminal will also be sited correctly externally (see 6.0 Terminal Position).

(b) Generally, the best position for the heater is mid-way along a wall of the room that the heater is to serve. This gives the best circulation effect.

(c) Care must be taken to ensure that no door can be swung in front of the heater.

(d) The heater must not be fitted where long curtains can be closed over it. The hem of any curtain must finish at least 635mm (25in) above the top of the heater cabinet.

5.1 Minimum Clearance

The following minimum clearances are required to gain access to the control compartment and to allow the removal of components during servicing:–

Left hand side: 150mm (6in)
Right hand side: 450mm (18in)
Top: 50mm (2in) with a maximum projection of 50mm (2in)

If a shelf is to be fitted above the heater, it must be a minimum of 635mm (25in) above the heater cabinet.

6.0 TERMINAL POSITION

6.1 Siting

(a) The terminal must be positioned such that the products of combustion can disperse freely at all times.

(b) The base of the terminal must be a minimum of 300mm (12in) above the external ground level.

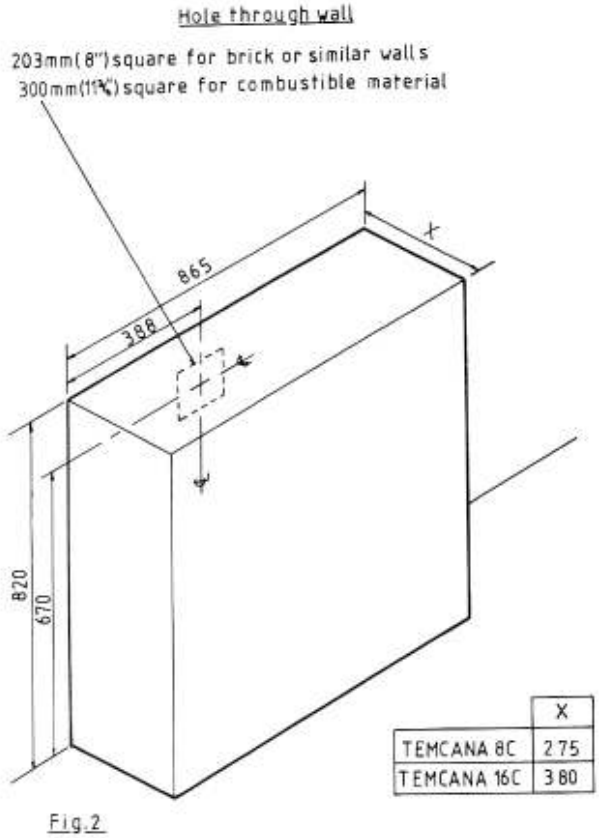
(c) The terminal should not be installed in a position that will allow the products of combustion to feed back into adjacent doors or windows. Where the terminal is wholly or partly beneath any opening (that is to say any part of a window capable of being opened, or any ventilator, inlet to a ventilation system or similar openings) ensure that no part of the terminal flue outlet is within 300mm (12in) measured vertically to the bottom of that opening.

(d) If a terminal is fitted within 850mm (34in) of a plastic gutter, an aluminium shield 1.5m (5ft) long should be fitted to the underside of the gutter, immediately above the terminal position.

(e) Where the terminal outlet is less than 2m (6ft 6in) above the level of any ground, balcony, flat roof or space to which any person has access and which adjoins the wall to which the terminal is fitted, the terminal must be protected by a guard of durable material. (A wire guard for this purpose is available at extra cost).

6.2 Balanced Flue Terminal Position Guide

Terminal Position		Recommended Minimum Clearance
(i)	Directly below an openable window or other opening e.g. air brick	300mm (12in)
(ii)	Below guttering (see also note 6.1d above) horizontal soil pipes or drain pipes	300mm (12in)
(iii)	Below eaves	300mm (12in)
(iv)	Below balconies	600mm (24in)
(v)	From vertical drain pipes or soil pipes	75mm (3in)
(vi)	From internal or external corners	600mm (24in)
(vii)	Above ground or balcony level	300mm (12in)
(viii)	From a surface or a terminal facing the terminal	600mm (24in)



	X
TEMCANA 8C	275
TEMCANA 16C	380

Fig.2

7.0 INSTALLATION

7.1 Remove the heater case:–

(a) Remove and discard the transit screw situated approximately 20mm (¾in) above the 'key hole' slot in the rear panel.

(b) Remove and retain the screw situated adjacent to the gas inlet connection at the lower right hand side of the heater.

(c) Carefully lift the left hand side of the case and disengage the mushroom headed screw from the 'key hole' slot.

(d) Pull the bottom of the case forward to clear the gas inlet bracket, then lift the case clear of its location at the top of the rear panel.

(e) Store the case in a safe place until installation is completed.

7.2 Using the dimensions shown in Figure 2, mark the position for the hole through the wall.

7.3 Cut a 203mm (8in) square hole as neatly as possible, right through the wall. If the wall is constructed of combustible material, the hole must be increased to 300mm (11¾in) square, and a wall liner inserted. (Available at extra cost).

7.4 Place the heat exchanger assembly in its correct position relative to the 'hole through the wall'.

7.5 Mark the positions for the four fixing screws.

7.6 Remove the heat exchanger assembly from the wall and drill and plug the wall to take the four 1½in × No. 8 woodscrews provided.

7.7 Replace the heater in position and secure it to the wall using the four 1½in × No. 8 woodscrews.

7.8 From outside the building, insert the air duct (Fig. 1 item 3) through the hole, and locate it onto the square spigot at the rear of the heater. Push the air duct fully onto the spigot.

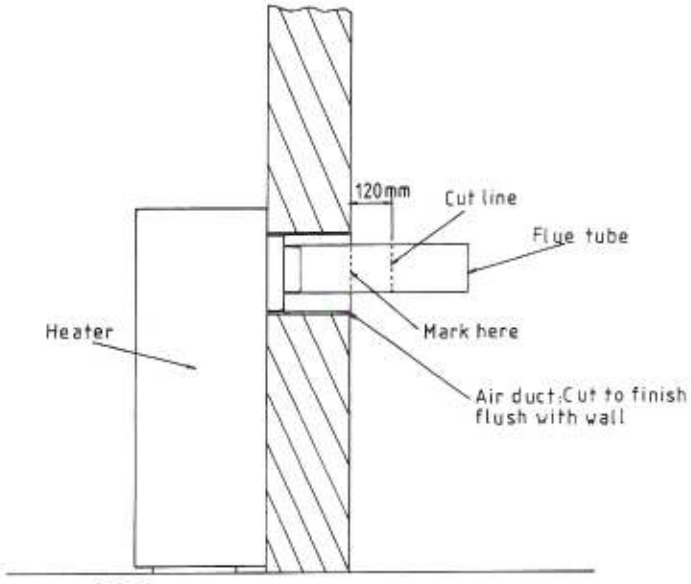


Fig.3

7.9 Whilst holding the duct square and level, mark it for correct length, i.e. to finish flush with the outside wall surface (see Figure 3).

7.10 Remove the air duct and cut it to the correct length. Make sure that it is cut square, and remove any rough edges.

7.11 Apply fire cement (Fig. 1 item 7) to the inside surface of one end of the air duct.

7.12 Re-insert the air duct, and push the end with the fire cement firmly onto the square spigot on the rear of the heater.

7.13 Place the external air inlet assembly (Fig. 1 item 5) into position ensuring that the spigot of the assembly enters the air duct, and that the word UP is at the top.

7.14 Mark the position for the four fixing screws and remove the assembly.

7.15 For brick or similar walls, drill and plug the wall in the marked positions to take the four 1½in × No. 8 woodscrews provided.

7.16 Generously fill with putty (Fig. 1 item 6) the groove in the wall fixing plate of the air inlet assembly.

7.17 Place the air inlet assembly into position as in 7.13 above. Where a wall liner has been fitted, it will be necessary to insert a wall plate between the wall and the wall fixing plate of the air inlet assembly (available at extra cost). Apply putty to the plate before inserting, to effect a weatherproof seal between the plate and the wall.

7.18 Secure the assembly to the wall with the four 1½in × No. 8 woodscrews and washers provided.

7.19 Ensure that the gap between the air duct and the square spigot at the rear of the heater is completely sealed. If necessary, force additional fire cement into any unfilled space, then smooth off.

7.20 Insert the flue tube (Fig. 1 item 2) through the hole and push it firmly onto the round spigot at the rear of the heater.

7.21 Mark the position of the outside wall surface onto the flue tube (see Fig. 3).

7.22 Remove the flue tube and mark a further position 120mm (4¾in) from the previous mark i.e. so that the flue tube will protrude 120mm (4¾in) outside the building when cut.

7.23 Cut the flue tube to the correct length; make sure that it is cut square, and remove any rough edges.

7.24 Apply fire cement to the inside surface of one end of the flue tube.

7.25 Re-insert the flue tube through the hole and push the end with the fire cement firmly onto the flue spigot. Smooth out excess fire cement and ensure that the gap is completely sealed.

7.26 Fit the external flue assembly (Fig. 1 item 4) to the external air inlet assembly and ensure that the round spigot fully enters the flue tube before securing with the three screws, nuts and washers provided.

7.27 If a terminal guard is to be fitted (see 6.1e) it must be fitted to the wall with the longest dimension vertical, and with equi-distant clearances between the left and right hand sides and the top and bottom, of the terminal and the guard.

8.0 GAS CONNECTION

(a) The gas connection is Rp½ (½ in B.S.P. internal).

(b) It is situated at the lower right hand side of the heater.

(c) When connecting the gas supply to the heater, it is essential that a union service tap is incorporated in

an accessible position adjacent to the heater. (For propane supplies, this tap must be of the spring loaded type).

(d) The installation serving the heater should be in accordance with BS 6891: 1988.

(e) On completion, pressure test and purge the gas installation in accordance with BS 6891: 1988.

9.0 ELECTRICAL (Temcana 8C/EM and 16C/EM only)

Important – This appliance must be earthed

(a) All external wiring to the appliance must be in accordance with I.E.E. wiring regulations and any local regulations which apply.

(b) The electrical supply required is 240V 50Hz fused at 3A.

(c) The coding of the input mains supply is:–

EARTH	– GREEN AND YELLOW
LIVE	– BROWN
NEUTRAL	– BLUE

(d) Fit the cable gland to the gas/electrical inlet bracket with the securing nut on the inside.

(e) Connect the electrical supply, via the cable gland, to the terminal block using 24/0.2mm cable to BS 6500.

(f) Tighten the cable gland after connection and after ensuring that there is no surplus cable between the terminal block and the cable gland.

(g) The method of connection to the electricity supply must facilitate complete isolation and should preferably be made via a fused double-pole isolator having a contact separation of at least 3mm in all poles and supplying the appliance only. Alternatively, connection may be made via a fused three pin plug and unswitched socket, both complying with the requirements of BS1363. Clock contacts or other mains switching devices should switch the live (Brown) wire.

10.0 COMMISSIONING AND TESTING

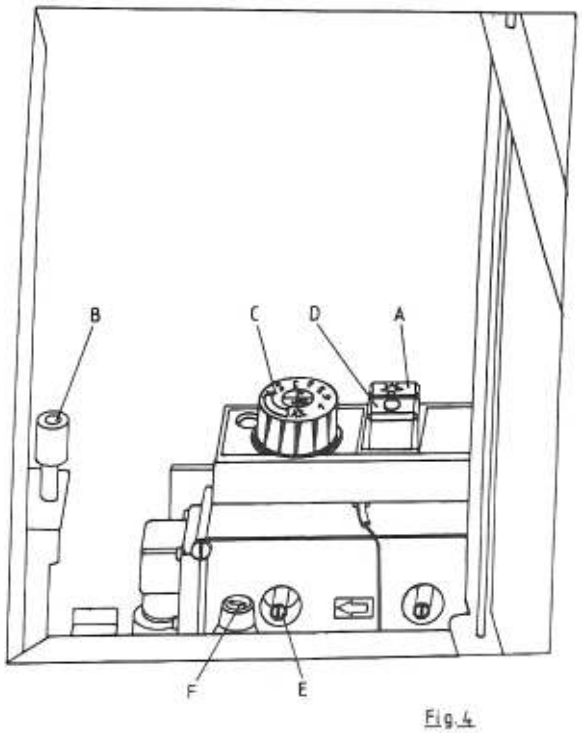


Fig.4

10.1 Initial Lighting (see Fig.4)

(a) Ensure that the electrical supply to the heater is switched off (EM models only).

(b) Turn on the gas supply at the union service tap in the supply.

(c) Remove the burner pressure test point sealing screw (E) and attach a suitable pressure gauge.

(d) Turn the thermostat knob 'C' to the pilot only position, i.e. clockwise as far as it will go.

(e) Push in button 'A' firmly taking care not to depress button 'D'.

(f) Keep button 'A' fully depressed and at the same time push in igniter button 'B' and release.

(g) Whilst continuing to push in button 'A', check to see if the pilot is alight by looking through the pilot window.

(h) If the pilot is not alight, repeat (f) until it does light.

(i) Once the pilot is alight, hold in button 'A' for a further 10-15 seconds.

(j) Release button 'A' and the pilot should remain alight. If it does not, repeat (e) (f) (g) (h) and (i), but this time keep button 'A' held in for a little longer.

(k) On EM models, switch on the electrical supply to the heater, and ensure that the clock, if fitted, is set to an ON period.

(l) Turn the thermostat knob 'C' to its maximum setting, i.e. fully anti-clockwise, and ensure that the main burner ignites smoothly from the pilot.

10.2 Testing and Adjusting

(a) With the heater operating, test for gas soundness around all pipework, including internal pipework and gas carrying components. Use a suitable soap solution or leak detection fluid.

(b) Check that the burner pressure is correct (see 4.0 Technical Data). If adjustment is required, remove the grey plastic cap 'F' from the control valve to expose the pressure adjuster, and turn the pressure adjuster (clockwise to increase). Replace the grey plastic cap after adjustment.

(c) Turn thermostat knob 'C' to the pilot only position.

(d) Switch off the electrical supply to the heater (EM models only).

(e) Remove the pressure gauge and replace the burner pressure test point sealing screw, ensuring that it is gas tight.

10.3 Pilot Adjustment

The pilot flame length should be such that it just envelopes the thermocouple (Approx. 20mm (¾in)). If pilot adjustment is required, proceed as follows:–

(a) Pull off the thermostat knob.

(b) The pilot adjuster screw is located adjacent to the plastic cover outer securing screw.

(c) Turn the adjuster screw clockwise to decrease the length of the pilot flame.

(d) Replace the thermostat knob.

10.4 Completion

Replace the case:–

(a) Position the case so that the top edge of the back plate engages inside the top rear of the case and is central.

(b) Lift the left hand side of the case and engage the mushroom headed screw in the case into the 'key hole' slot in the back plate.
(c) Ensure that the right hand side of the case fits outside the gas/electrical inlet bracket.
(d) Replace the screw securing the case to the gas/electrical inlet bracket.

11.0 INSTRUCTIONS TO USER

Instruct the user in the operation of the heater and hand over the User Instructions.

Advise the user that for the continued safe and efficient operation of the heater, it is important that annual servicing is carried out.

12.0 SERVICING INSTRUCTIONS

IMPORTANT – ISOLATE THE GAS AND ELECTRICAL SUPPLIES TO THE HEATER BEFORE CARRYING OUT ANY SERVICING.

Upon completion of servicing ensure that:–

(a) The heater is tested for gas soundness using a suitable soap solution or leak detection fluid.
(b) The burner pressure is correct (see data badge).

12.1 General Access For Servicing

Before any servicing can be carried out, the case must be removed:–

(a) Remove the screw situated adjacent to the gas inlet connection at the lower right hand side of the heater.
(b) Carefully lift the left hand side of the case and disengage the mushroom headed screw from the 'key hole' slot.
(c) Pull the bottom of the case forward to clear the gas inlet bracket, then lift the case clear of its location at the top of the rear panel.

12.2 To Remove the Thermocouple

(a) Gain general access as in 12.1 above.
(b) Remove the cable tie securing the thermocouple lead to the pilot tube.
(c) Disconnect the thermocouple at the control valve and the pilot, and remove the thermocouple.

12.3 To Remove the Spark Electrode

(a) Gain general access as in 12.1 above.
(b) Disconnect and withdraw the thermocouple from the pilot assembly.
(c) Pull off the spark lead from the spark electrode.
(d) Disconnect and withdraw the spark electrode from the pilot assembly.

12.4 To Remove the Main Burner Assembly

(a) Gain general access as in 12.1 above.
(b) Disconnect and remove the main burner supply tube.
(c) Remove the thermocouple as in 12.2 above.
(d) Pull off the spark lead from the spark electrode.
(e) Disconnect and remove the pilot supply tube from the pilot assembly and the gas control valve.
(f) Remove the four wing nuts securing the burner flange to the heat exchanger.
(g) Remove the burner assembly complete, taking care not to damage the gasket.
N.B. Should the gasket be damaged, a new one must be fitted when re-fitting the burner assembly.

12.5 To Remove the Pilot Assembly

(a) Remove the main burner assembly as in 12.4 above.
(b) Remove the two screws securing the pilot assembly to the burner flange and remove the pilot assembly.

12.6 To Remove the Main Burner Injector(s)

(a) Gain general access as in 12.1 above.
(b) Disconnect and remove the main burner supply tube.
(c) Unscrew and remove the cross over pilot injector supply tube and the main burner manifold (Temcana 16C & 16C/EM only).
(d) Unscrew and remove the main burner injector holder(s).
(e) Unscrew and remove the main burner injector(s).

IMPORTANT

The orifice of a gas injector is machined to precision limits. Do not clean with a hard sharp object that could damage or enlarge the orifice.

12.7 To Remove the Solenoid Valve Coil (Temcana 8C/EM and 16C/EM only)

(a) Gain general access as in 12.1 above.
(b) Pull off the live and neutral supply connectors and disconnect the earth wire, from the solenoid valve.
(c) Remove the four screws securing the coil to the solenoid valve body.
(d) Carefully remove the coil from the body, taking care not to drop the plunger and spring.

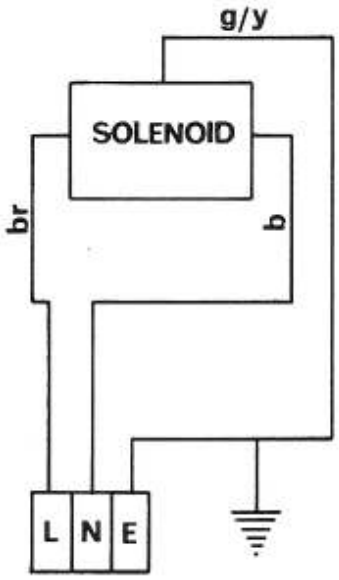
Reassembling Notes

When reassembling, ensure that:–

(i) The spring is correctly fitted into the top of the plunger before fitting the plunger into the coil.
(ii) The coil is correctly positioned on the body, i.e. so that the electrical connectors are facing downward.
(iii) The rubber 'O' ring is correctly positioned in the valve body (flat side down) before tightening the four securing screws.

12.8 To Remove the Gas Control Valve

(a) Gain general access as in 12.1 above.
(b) Pull off the line and neutral connectors, and disconnect the earth wire, from the solenoid valve coil. (EM model only).
(c) Disconnect and remove the main burner gas supply tube.



(d) Disconnect the pilot supply tube and the thermocouple from the gas control valve.
(e) Release the thermostat phial from its bracket by 'springing', the top arm of the bracket upwards whilst gently pulling out the phial.
(f) Disconnect the inlet gas supply tubing at the gas control valve.
(g) Remove the two screws securing the gas control valve to the heater inner right hand side panel, and remove the valve.

Reassembling Note

When fitting a new gas control valve, the fittings at the inlet and outlet must be transferred from the old valve (including the solenoid valve if the heater is an EM model).

12.9 To Remove The Piezo Igniter

(a) Gain general access as in 12.1 above.
(b) Pull off the igniter cable from the piezo igniter.
(c) Remove the two nuts and screws securing the piezo igniter to the gas control valve mounting panel and remove the igniter.

12.10 To Remove The Cross Over Pilot Injector (Temcana 16C and 16C/EM only)

(a) Gain general access as in 12.1 above.
(b) Disconnect and remove the cross over pilot supply tube.
(c) Unscrew and remove the cross over pilot injector, taking care not to lose the washer.

12.11 To Remove The Cross Over Pilot (Temcana 16C and 16C/EM only)

(a) Remove the main burner assembly as in 12.4 above.
(b) Remove the two nuts securing the cross over pilot to the main burner, and remove the cross over pilot.