CG2 Automatic Gas Burner

Installation
Maintenance
Spares

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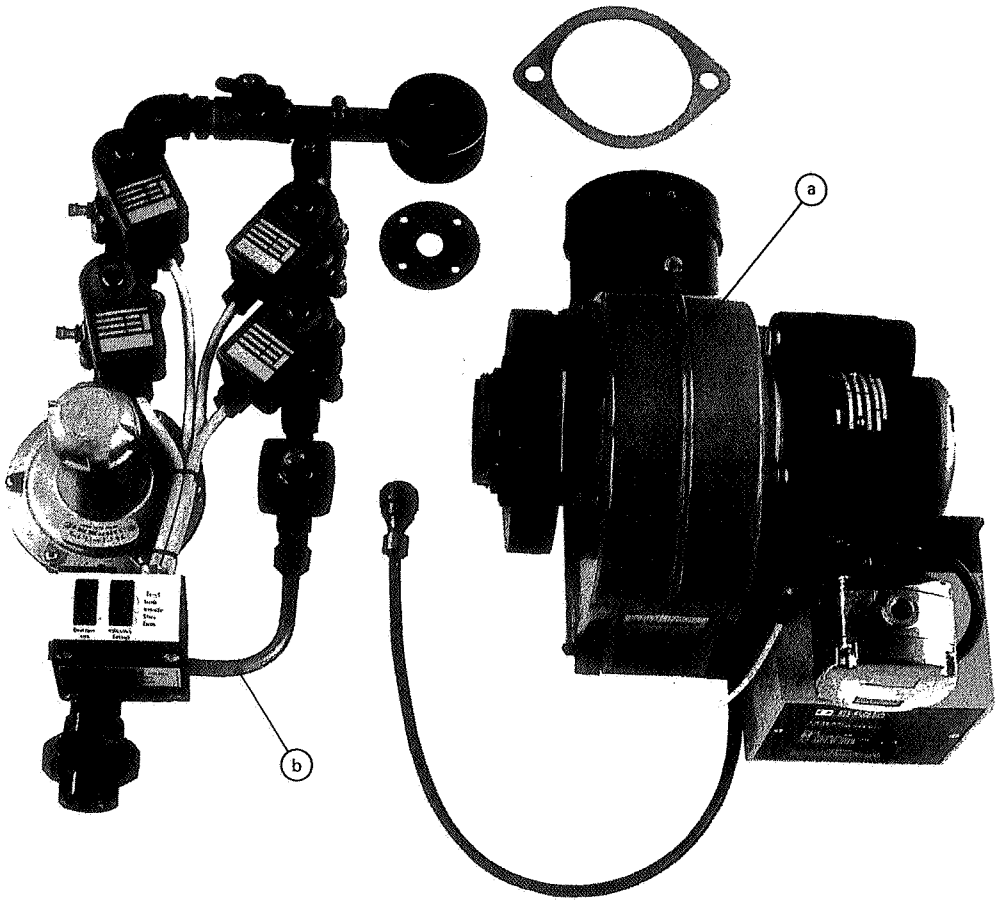


FIG.1 Partly assembled two unit package

1 INTRODUCTION

The CG2 burner is supplied for ON/OFF operation and for use with single phase electric supply only.

The operating sequence begins with an air pre-purge followed by a pilot gas flame followed by the main flame, then to the 'OFF' position when the appliance has reached its operating temperature/pressure.

1.1 GENERAL

This manual is structured to enable the user to proceed from the delivery of the burner to its commissioning and use.

The conditions to be fulfilled and the controls and adjustments to be used are dealt with in the sequence that should be followed for the correct assembly, installation and use. Pre-commissioning (Dry Run) and Live Run are described and the location of neccessary controls and adjustments to undertake these runs are illustrated and supported by appropriate tabular matter and graphs.

Routine Maintenance, Fault Finding, Spare Parts identification and Wiring Diagrams complete the manual; literature on proprietary components is available on request.

1.2 SAFETY

Before attempting to assemble, install or commission the CG2 burner, it is essential that the following instructions are carefully read and understood. It is also recommended that such work is carried out only by experienced and qualified gas burner commissioning engineers.

1.3 DESPATCH FOR TRANSIT

To safeguard against damage, the CG2 burner may be despatched in partly assembled form. (See Fig.1).

(a) Burner body, control package and multi-pin plug.
(b) Gas train with valves, and gas pressure governors.

2 BURNER

Check and identify that the serial number and specification number on the burner and gas valve train are compatible.

Check that the burner size is appropriate for the appliance rating. (Refer to Fig.2).

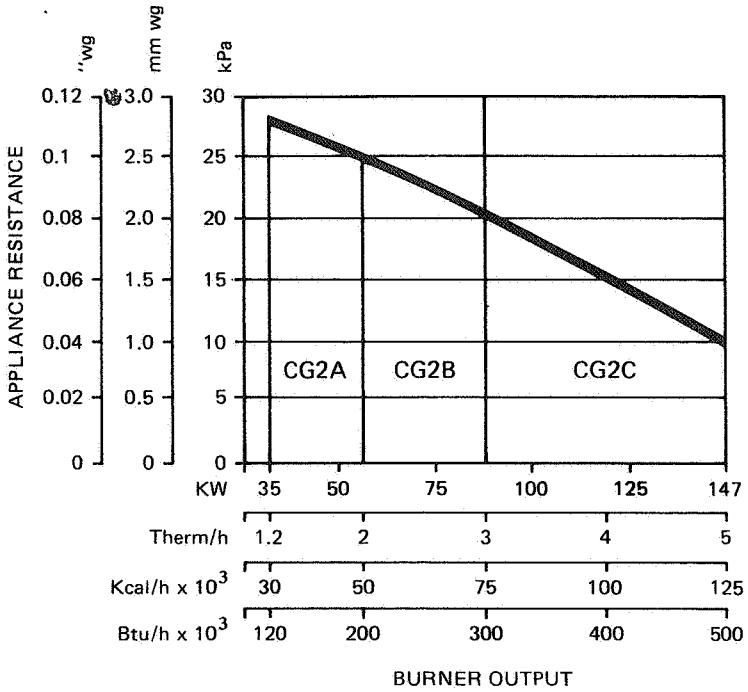


FIG.2 Burner selection table

2.1 ASSEMBLY

Fit the gas valve train to the burner body with the 4 cap head screws using the sealing gasket provided. (See Fig.3).

Connect the multi-pin plug from the burner to the socket located on the terminal box at the rear of the gas valve train. (See Fig.4).

The burner is now completely assembled and ready for fitting to the appliance.

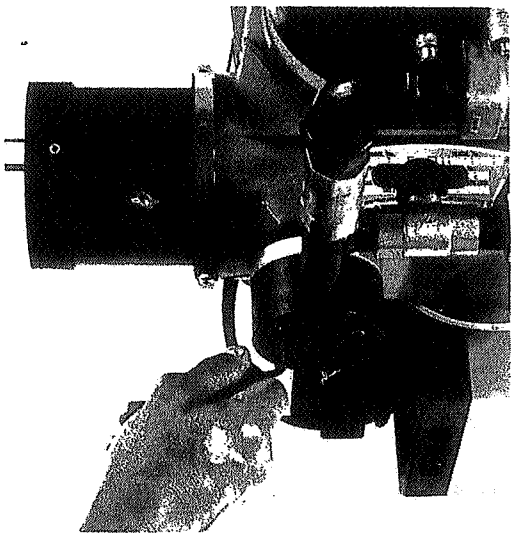


FIG.3 Fitting of gas valve train

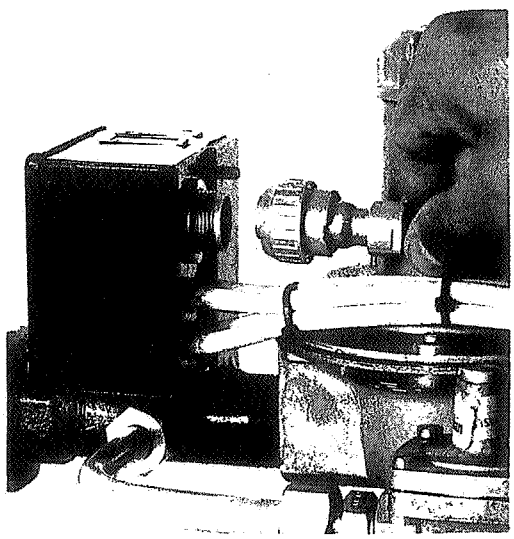


FIG.4 Multi-pin plug/socket connection on terminal box

2.2 FITTING TO APPLIANCE

If the burner is to be fitted to a new packaged unit with over pressure conditions, refer to the manufacturers recommendations.

If the burner is to be used with an existing appliance, the chimney, flues, passageways and heat transfer surfaces must be cleaned. Prepare burner mounting plate (See Fig.5). Ensure that the joint between the appliance and the burner is effectively sealed by using the gasket provided.

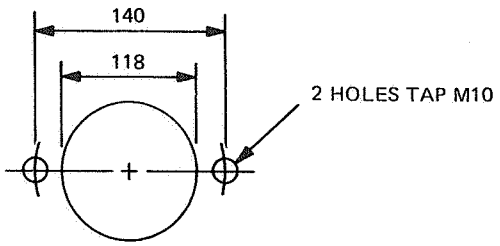


FIG.5 Boiler frontplate drilling

2.2.1 Flue and Chimney Requirements

The top of the Chimney/Flue should be above all roofs within a radius of 10 metres.

Ensure that the flue pipe from the appliance does not protrude into the chimney beyond the wall thickness.

If more than one appliance is connected to a common flue/chimney, ensure that the cross section of the flue/chimney is adequate for the total volume of flue gases from all the appliances.

Reference should be made to local authority and other regulations governing such installations.

2.2.2 Combustion Chamber Conditions

When the burner is fitted to an appliance designed to work under balanced or negative combustion chamber conditions, the over fire draught must not exceed 0.025 kPa (0.1 inches w.g., 0.25 mBar, 2.5 mm w.g.).

Should the over fire draught exceed this figure, then steps should be taken to reduce it to this level.

2.2.3 Plant Room Ventilation

An adequate dust free supply of fresh air is required for the burner at both high and low level in accordance with the appropriate standards.

3 INSTALLATION

3.1 SERVICES

3.1.1 Gas Supply

The piped gas supply to the burner must be constructed and installed to comply with local conditions and appropriate Codes and Standards. All pipework must be firmly supported. It should be of sufficient size to satisfy the pressure/volume requirements of the burner to ensure its operation.

3.1.2 Electrical Power Supply

Connect the appropriate electricity supply to the burner observing all applicable Codes and Standards. Refer to specific burner wiring diagram included in the manual, burner Instruction Pack (attached to the burner) or the Appliance Manufacturers Handbook. Connect external auxiliary control circuits by reference to the appropriate wiring diagram.

THE BURNER IS NOW READY FOR COMMISSIONING.

Before proceeding further, check that the appliance is in a proper state to be fired. (For instance, is there water in the boiler?).

Recheck that both gas and electrical supplies to the burner are TURNED OFF.

3.2 PRE-COMMISSIONING (Dry Run)

Ensure that the pilot and main manual gas valves are closed. With gas supply to the burner TURNED OFF, pressure test the valve train using air or an INERT gas and check that there are no leaks.

If, during the check, leaks are found, then these must be remedied before proceeding further.

When the valve train is found to be leak proof, proceed with the burner pilot and main manual gas valves closed.

Set appliance control and limit instruments to "Call for Heat" condition. Switch on electrical supply to the burner. Check rotation of burner motor which should be *clockwise* viewed from air inlet side of the burner. If the direction of rotation is wrong see Fault Finding, 8.6 for procedure to correct it.

Depending on the control box fitted, the burner will go through its operating sequence

(a) immediately, if it has been switched off during its normal sequence of operation.
(b) on pressing the 'Reset' button if the burner is at LOCKOUT.

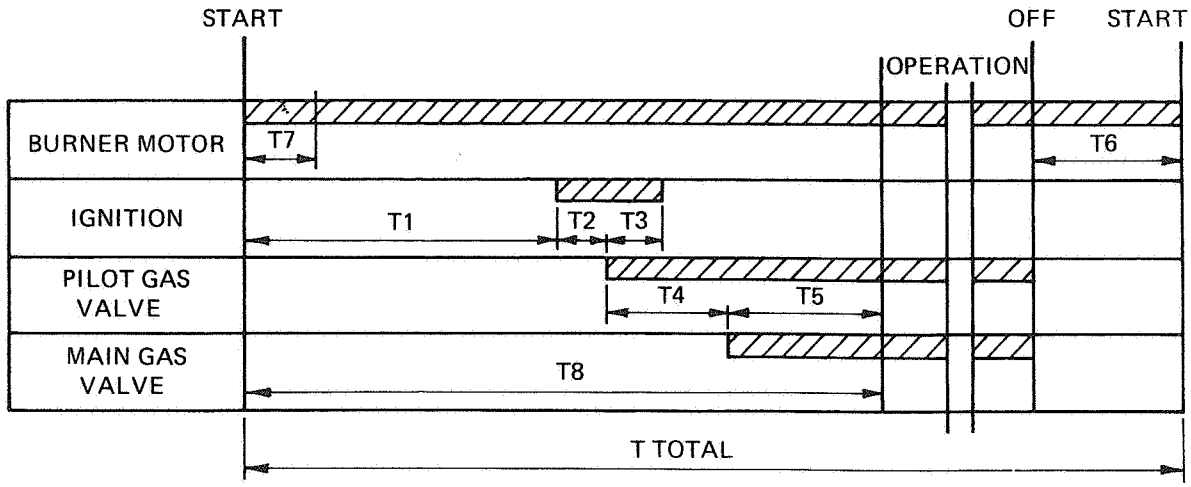
Check that ignition spark is present. For actual time refer to Sequence Diagram. (See Fig.6).

At this stage if the burner continually purges or locks out without ignition spark, the air pressure switch requires adjustment. (See Fault Finding, 8.2).

3.2 Cont'd Ignition spark ceases and burner goes to Lockout.

SAFETY LOCKOUT PROVED.

Switch off electrical supply at mains isolator.



TIME	CONTROL TYPE						DESIGNATION
	TMG 740-1	TTG 760		LFL 1.335	LFL 1.635	FW46 A21	
T1	47	30		45	75	40	Pre-purge.
T2	3	1		5	5	3	Pre-ignition.
T3	5	5		2.5	2.5	4	Lockout.
T4	10	30		12.5	12.5	19	Delay pilot-main flame
T5	10	—		12.5	12.5	22	Delay between main flame low & main flame high (H/L burners only).
T6	10	—		15	15	36	Post-purge.
T7	8	5		10	10	5	Air pressure switch inter-lock.
T8	70	66		75	105	84	Total start time.
T Total	80	66		90	120	80	Total cycle time of control.

FIG.6 Sequence diagram and table

3.3 BURNER AIR CONTROLS AND ADJUSTMENTS

3.3.1 Air Controls

The air control is a rotary disc located on the left side of the burner viewed from the rear. Its purpose is to regulate the volume of combustion air flowing through the burner. (See Fig.11). To increase the flow of combustion air turn the rotary disc *anti-clockwise* viewed from the left hand side of the burner.

To decrease the flow of combustion air, turn the rotary disc *clockwise* viewed from the same side.

3.3.2 Air Diffuser

The air diffuser is fitted to the front end of the inner assembly of the burner and located within the flame tube. (See Fig.7).

The function of the air diffuser is to control the volume of combustion air and create a pressure drop over the burner head to ensure good fuel/air mixing.

3.3.3 CG2, Size A only

This burner is fitted with an additional air swirler located within the burner flame tube. (See Fig.8).

Its function is to restrict air flow through the burner at low firing rates and assist in the flame stability.

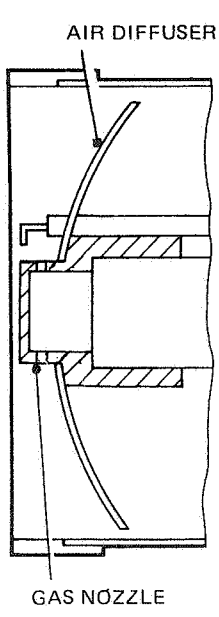


FIG.7 Burner head arrangement

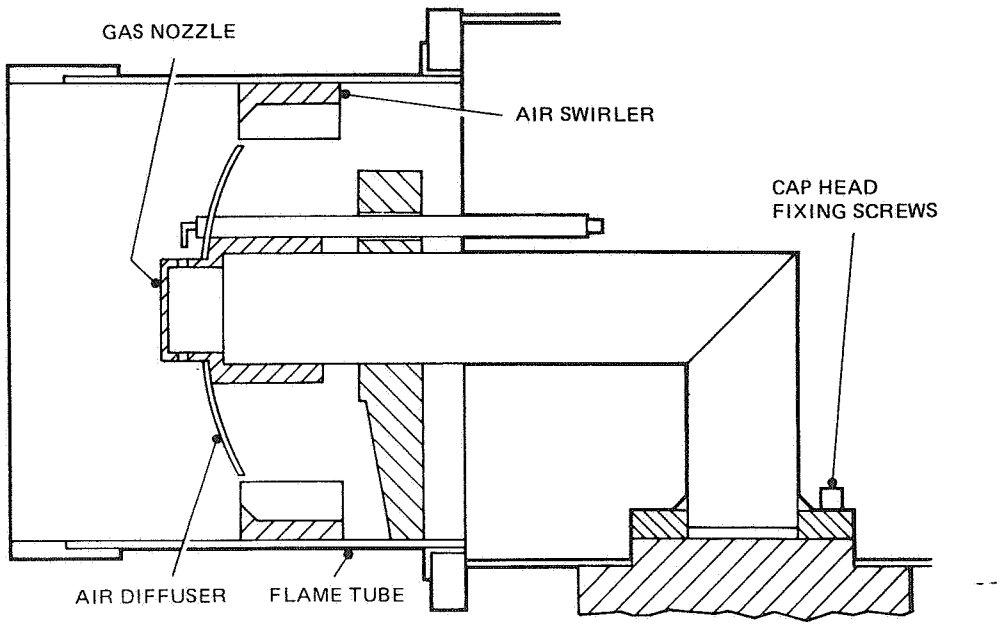


FIG.8 Swirler head arrangement

3.3.4 Air Pressure Switch

The air pressure switch is required to prove that there is adequate air flow through the burner during the pre-purge, ignition and operating cycle.

Air flow failure at any time during the pre-purge, ignition and operation of the burner will cause a safety shut-down.

3.4 BURNER GAS COMPONENTS

3.4.1 Gas Nozzle

The 5 or 8 hole gas nozzle (depending on burner model size) is fitted to the front end of the inner assembly of the burner and located in the flame tube.

3.4.1 Cont'd The holes in the gas nozzle are of a size to suit the output of the particular burner model. Refer to table (See Fig.9).

MODEL SIZE	FUEL TYPE	GAS NOZZLE SIZE	AIR DIFFUSER SIZE	AIR SWIRLER CONE
CG2 A	Towns	8 holes x 5.6 dia.	70 dia. x 1.6 holes	92 inside dia.
	Natural	8 holes x 2.4 dia.	70 dia. x 1.6 holes	92 inside dia.
	L.P.G.	8 holes x 1.6 dia.	70 dia. x 2.4 holes	92 inside dia.
CG2 B	Towns	8 holes x 6.4 dia.	92 dia. x 1.6 holes	not fitted
	Natural	8 holes x 3.2 dia.	92 dia. x 2.4 holes	not fitted
	L.P.G.	8 holes x 2.0 dia.	92 dia. x 2.4 holes	not fitted
CG2 C	Towns	not offered		
	Natural	5 holes x 5.2 dia.	82.5 dia. x 2.4 holes	not fitted
	L.P.G.	8 holes x 2.4 dia.	82.5 dia. x 2.4 holes	not fitted

FIG.9 Gas nozzle, air diffuser and air swirler cone details (All dimensions in mm)

3.4.2 Gas Valve Train

The gas valve train includes pilot and main gas safety shut-off valves, pilot and main manual gas valves and pilot and main gas pressure governors. (See Fig.10).

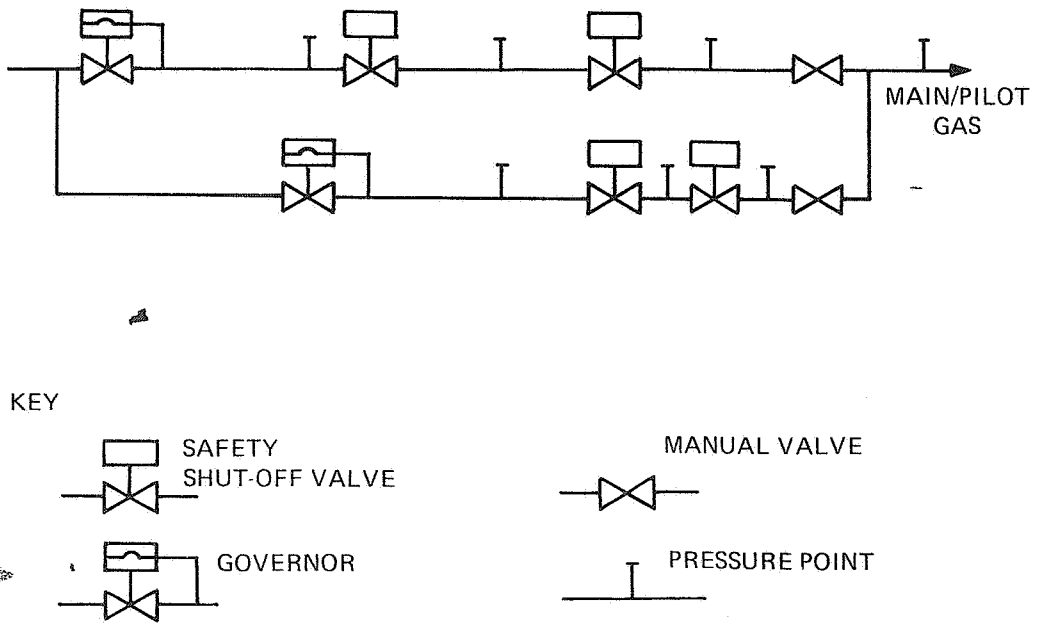


FIG.10 Burner with basic standard gas valve train

4 PRE-FIRING CHECK AND INITIAL SETTING

Check that gas and electrical supplies to the burner are TURNED OFF.

4.1 AIR CONTROL

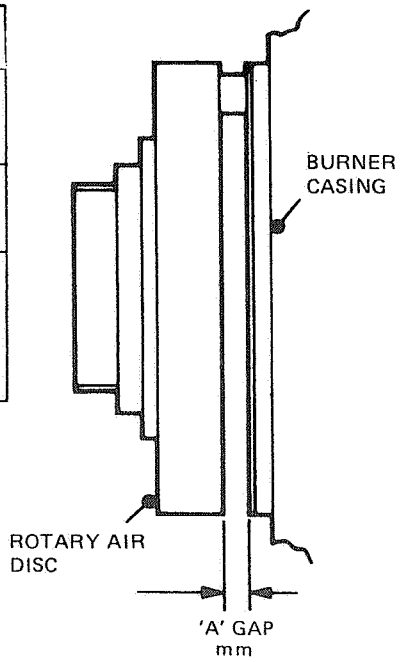
Unlock the rotary disc (See Fig.11) and set it to the position shown in the initial setting table for the burner rating (See Fig.12). It should now be locked again.

FIG.11 Locking/Unlocking the rotary disc

NOTE: The initial settings are for general guidance at this stage. Certain final adjustments may be required later to suit appliance requirements and variable site conditions.

Model	kW	therm/h	kcal/h	Btu/h	'A' Gap mm
A	35	1.2	30,000	120,000	4
	43.96	1.5	37,500	150,000	5
	58.62	2.0	50,000	200,000	7
B	61.55	2.1	52,500	210,000	4
	73.27	2.5	62,500	250,000	4.5
	87.93	3.0	75,000	300,000	5
C	90.86	3.1	77,500	310,000	4
	102.58	3.5	87,500	350,000	5
	117.24	4.0	100,000	400,000	8
	131.89	4.5	112,500	450,000	12
	146.55	5.0	125,000	500,000	17

FIG.12 Initial setting table



4.2 PILOT GAS PRESSURE GOVERNOR

Remove the metal cap from the top of the pilot governor. With a screwdriver, turn the adjusting screw fully *clockwise* to give maximum gas flow rate.

4.3 MAIN GAS PRESSURE GOVERNOR

Remove the metal cap from the top of the main governor. With a screwdriver, turn the adjusting screw fully *anti-clockwise* to give minimum gas flow rate.

5 LIVE RUN

Turn on main gas supply to the burner.

Purge air from burner gas lines through test nipples (ensure Plant Room is adequately ventilated).

5.1 TESTING PILOT FLAME

Open pilot manual gas valve ONLY.

Remove cover from terminal box on gas train and disconnect test link. (See Fig.13).

Replace cover of terminal box.

Switch on the burner at mains isolator.

Burner motor will run, ignition spark will be established, pilot gas valves will open.

For timing refer to Sequence Diagram (See Fig.6) on page 9.

With pilot flame established, flame detection probe or U.V. cell will take over. Burner will operate continuously on pilot flame.

Switch off electrical supply at the mains isolator.

Remove cover from terminal box on the gas valve train and re-connect test link.

Replace cover on terminal box.

FIG.13 Test link in terminal box

5.2 TESTING MAIN FLAME

Open main manual gas valve.

Switch on electrical supply to burner.

Allow burner to establish main flame.

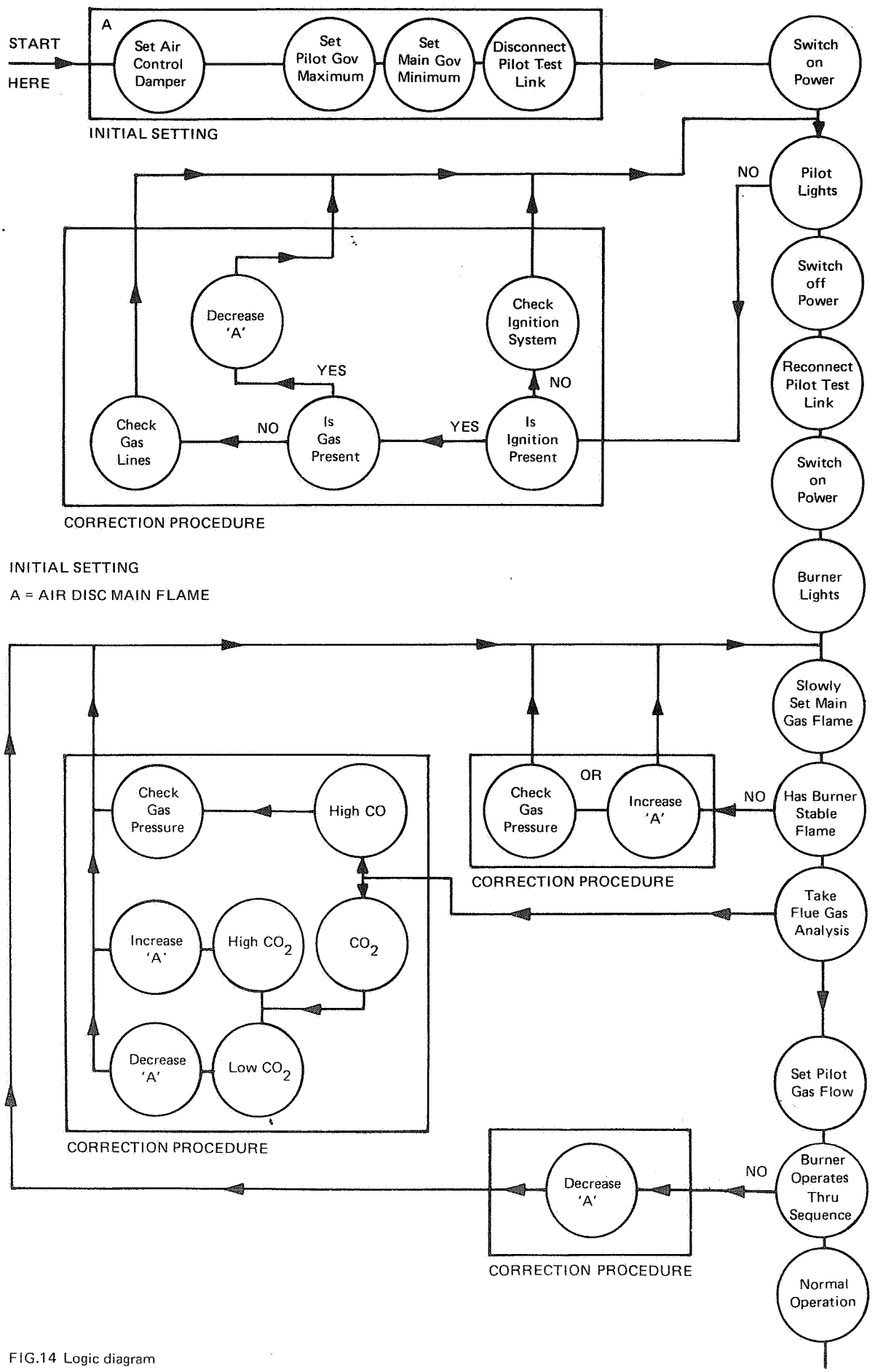


FIG.14 Logic diagram

5.3 MAIN GAS PRESSURE GOVERNOR

With a screwdriver, turn adjusting screw slowly *clockwise* to increase gas volume through the burner to the rate required by the appliance rating.

Check gas flow rate at the meter or with other suitable and approved instruments.

Ensure that other appliances served by the same meter are not in use at the time that the flow tests are being carried out.

With the gas flow rate for main flame set and the burner running with stable flame, the flue gases can now be checked for CO_2, CO and O_2 with suitable combustion testing instruments. At this stage of the commissioning, the ratio of CO:CO_2 should not exceed 0.02.

Example:

For a CO_2 of 9.5% then the CO must be less than 0.19% by volume.

(1900 parts per million) (ppm).

If the combustion is unacceptable or the ratio is exceeded, various operational adjustments may be made while the burner is running on main flame.

Refer to Logic Diagram and proceed accordingly. (See Fig.14).

IMPORTANT: After each adjustment, gas flow rate and flue gas analyses should be re-checked.

5.4 PILOT GAS RATE

Turn off electrical supply to burner.

Remove cover from terminal box on the gas valve train.

Disconnect test link and replace cover.

Turn on electrical supply to burner.

Pilot gas rate can now be adjusted by turning the adjusting screw in the pilot gas pressure governor *anti-clockwise*.

Gas start rate should not exceed 25% Stoichiometric gas rate for the proved air flow at the time of ignition.

Applying the CO_2 figure obtained from the flue gas analysis of main flame to Fig.15 will establish the maximum pilot rate.

Example:

9% CO_2 requires a metered pilot gas rate of 32% of main flame gas rate.

5.4
Cont'd

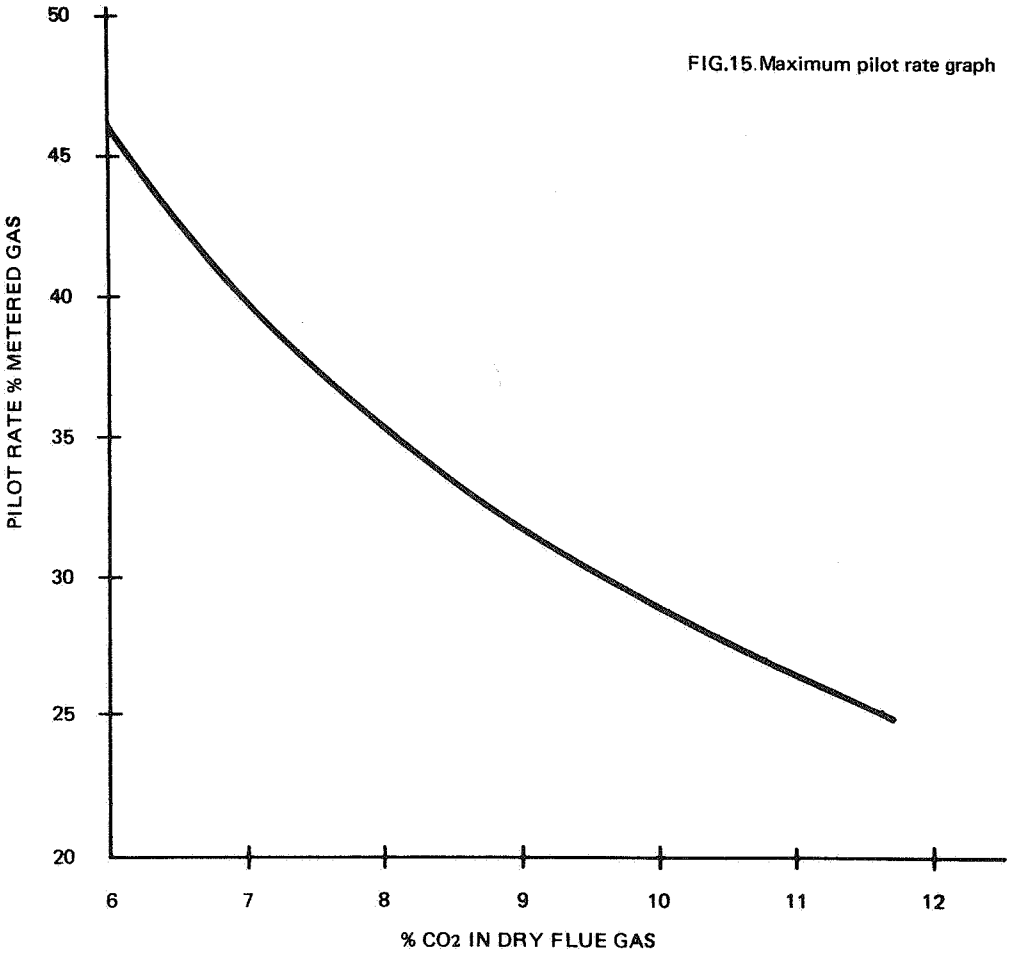


FIG.15.Maximum pilot rate graph

5.5 AIR PRESSURE SWITCH SETTING

5.5.1 Air Pressure Switch Screw Type (See Figs.16a and 16b).

Pre May 1979 burners

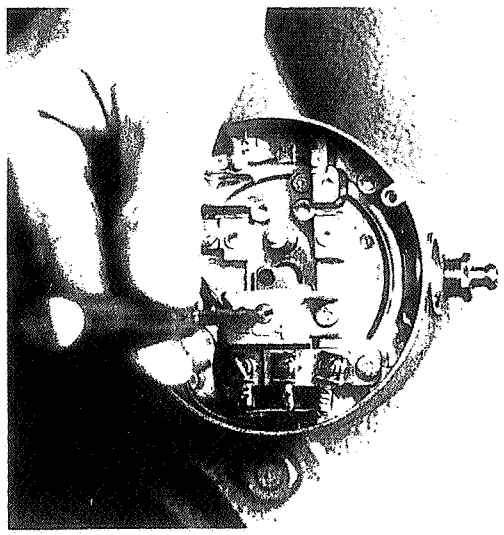


FIG.16a Air pressure switch adjustment, Pre-May 1979

Turn Off electrical supply.

Remove cover of air pressure switch.

Turn On electrical supply to burner.

Allow burner to cycle to main flame.

5.5.1 Cont'd

Post May 1979

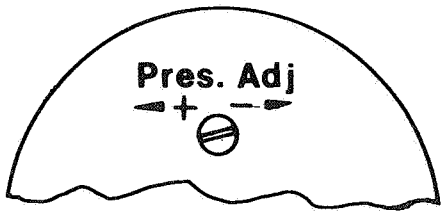


FIG.16b Air pressure switch adjustment, Post-May 1979

The setting of air pressure switches must be carried out using an insulated screwdriver through the hole in the cover of the unit as shown.

Pre & Post May 1979 burners

Slowly turn adjusting screw with screwdriver *anti-clockwise* towards "+" sign until the flame is extinguished.

Depending on the type of control box fitted the burner will either:—

(a) Go to lockout

With an electrical screwdriver turn the screw one full turn *clockwise* and reset burner lockout. The burner will then continue through its cycle until either the pilot flame is established or burner goes to lockout. If the burner goes to lockout repeat the procedure once per burner cycle until pilot flame is established.

Allow the burner to cycle to main flame and then turn the adjusting screw a further two turns *clockwise*. Switch off burner and replace cover.

or (b) Continue to cycle

With an electrical screwdriver turn the adjusting screw one full turn *clockwise*. Allow the burner to cycle until the motor is de-energised. Motor re-energises. If the pilot flame is not established after pre-purge period (See Sequence Diagram Fig.6), turn the adjusting screw a further one full turn *clockwise.* Continue this procedure once per burner cycle until pilot flame is established. Allow the burner to continue the cycle to main flame then turn the adjusting screw two full turns *clockwise*. Switch off burner and replace cover.

5.5.2 Air Pressure Switch Dial Type

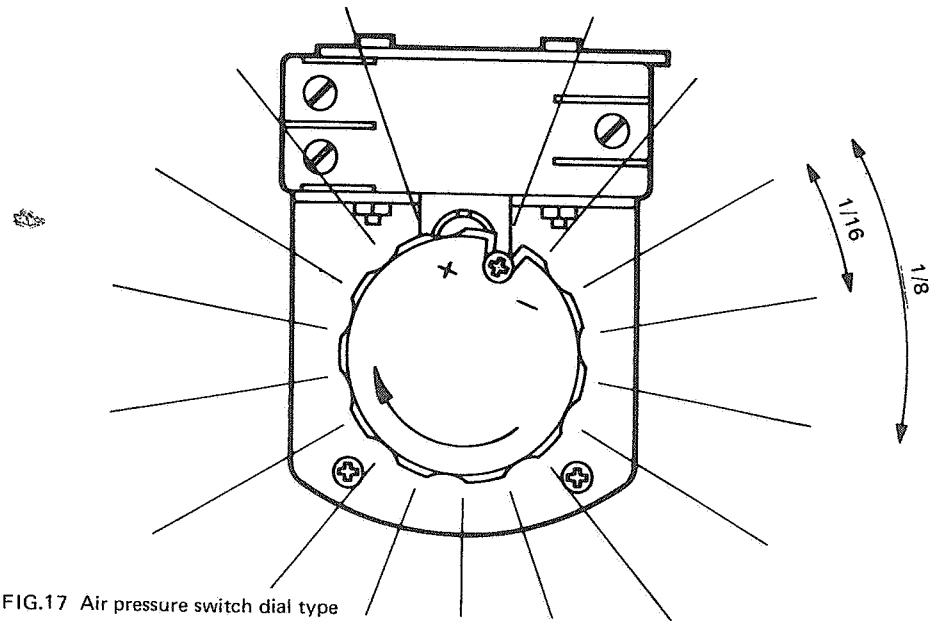


FIG.17 Air pressure switch dial type

5.5.2 Cont'd Turn Off electrical supply to burner.

Remove pressure switch cover.

Turn On electrical supply to burner.

In making adjustments (a) or (b) below care should be taken to avoid contact with exposed electrical terminals.

Allow burner to cycle to main flame.

Slowly turn adjusting dial *anti-clockwise* towards "+" sign until the flame is extinguished.

Depending on the type of control box fitted the burner will either:–

(a) Go to lockout

Turn the dial 20° *clockwise* (1/16 of a turn) and reset burner lockout. The burner will then continue through its cycle until either the pilot flame is established or burner goes to its lockout position. If the burner goes to lockout repeat the procedure once per burner cycle until pilot flame is established. Allow the burner to cycle to main flame and then turn the adjusting dial a further 40° (1/8 of a turn) *clockwise.*

Switch off burner and replace cover.

or (b) Continue to cycle

Turn the dial 20° *clockwise* (1/16 of a turn). Allow the burner to cycle until the motor is de-energised. Motor re-energises. If the pilot flame is not established after pre-purge period (See Sequence Diagram Fig.6) turn the dial a further 20° *clockwise* (1/16 of a turn). Continue this procedure once per burner cycle until pilot flame is established. Allow the burner to continue the cycle to main flame then turn the dial 40° *clockwise* (1/8 of a turn). Switch off burner and replace cover.

Check that all covers to components have been replaced and locking devices are properly secured, in particular the rotary air adjustment disc. (See Fig.11).

Check that appliance control instruments are set to safe limits.

COMMISSIONING IS NOW COMPLETE.

Switch on electrical supply.

Burner will now operate until switched off:–

(a) by controlling instruments of the appliance.
(b) manually.
(c) by power failure. Upon restoration of power, burner will re-start automatically and follow sequence through post purge, stop and re-start.

6 ROUTINE SAFETY CHECKS

TO BE CARRIED OUT ONLY BY QUALIFIED AND EXPERIENCED PERSONNEL

Check that the Plant Room is well ventilated at all times.

Frequently inspect air inlet of the burner and ensure there are no obstructions to air flow.

6.1 FLAME DETECTION SYSTEMS

There are two systems available and these should be checked as follows:

6.1.1 Flame Probe (Flame Rectification Rod)

Turn off electrical supply at the mains isolator. Open burner at the hinged assembly. (See Fig.18). Remove connecting lead from probe.

Close hinge and secure. Switch on electrical supply to burner.

Check that the burner locks out at the end of the ignition cycle.

Switch off electrical supply. Open burner hinged assembly and reconnect probe lead. Close hinge and secure. Switch on electrical supply. Reset lock out.

6.1.2 U.V. (Ultra Violet) Cell

Turn off electrical supply at the burner. Taking care not to touch the glass with fingers, remove U.V. cell from burner and cover quartz glass envelope to exclude any light. (See Fig.19).

Switch on electrical supply. Check that the burner locks out at end of the ignition cycle.

Switch off electrical supply to the burner. Replace U.V. cell.

Switch on electrical supply to the burner. Reset lock out.

FIG.18 Burner hinged assembly shown in open position

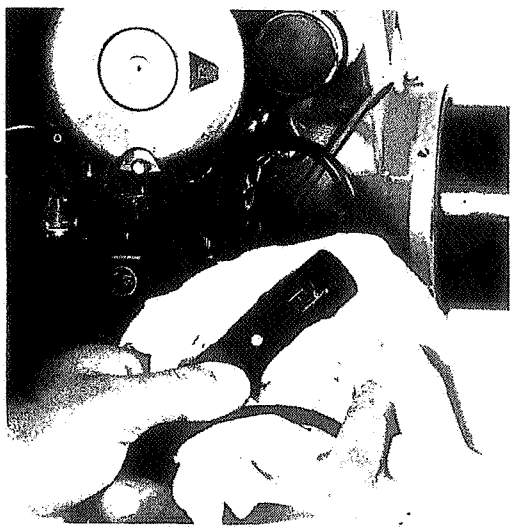


FIG.19 Removal of U.V. cell from burner

7 ROUTINE MAINTENANCE

SWITCH OFF ELECTRICAL SUPPLY TO THE BURNER.

7.1 COMBUSTION AIR FAN

Clean blades regularly with stiff brush. Access obtained through hinged assembly. (See Fig.20).

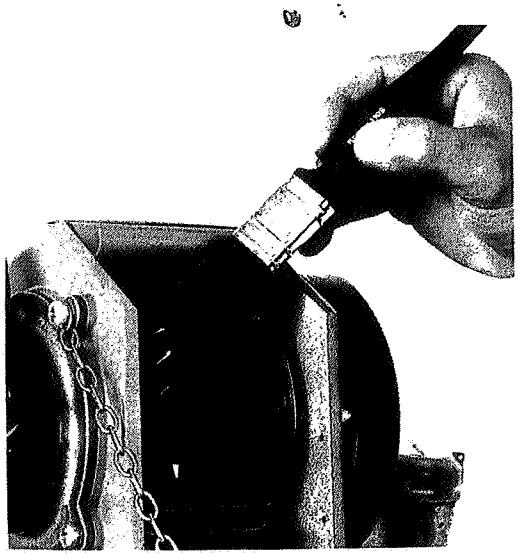


FIG.20 Cleaning combustion air fan

7.2 INNER ASSEMBLY

To remove the burner inner assembly, first open the hinged assembly. (See Fig.18).

Disconnect ignition electrode lead. In addition, disconnect probe lead, or remove U.V. cell.

Referring to Fig.7 and 8 remove three cap head screws securing the inner assembly gas pipe to the inside of the burner body. Carefully withdraw the inner assembly from the burner body. (See Fig.21).

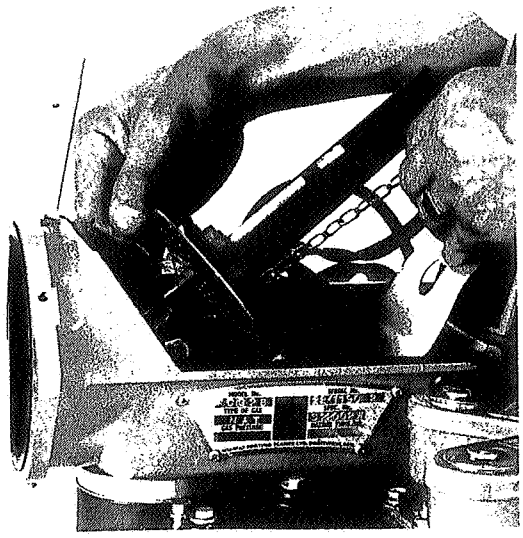


FIG.21 Removal of inner assembly.

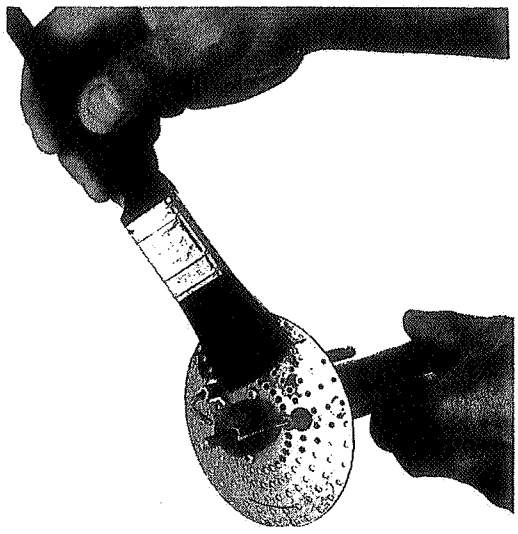


FIG.22 Cleaning of air diffuser and gas nozzle

7.2.1 Air Diffuser and Gas Nozzle

Clean using a stiff brush. (See Fig.22).

7.2.2 Ignition Electrode and Probe

Clean and check that they are not cracked or worn. Renew if necessary. (See Fig.23).

Check settings of ignition electrode and probe. Reset, if necessary, to dimensions shown in Fig.24

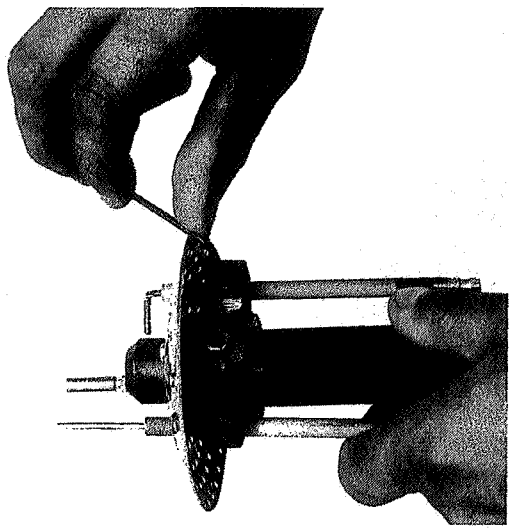


FIG.23 Ignition electrode and probe

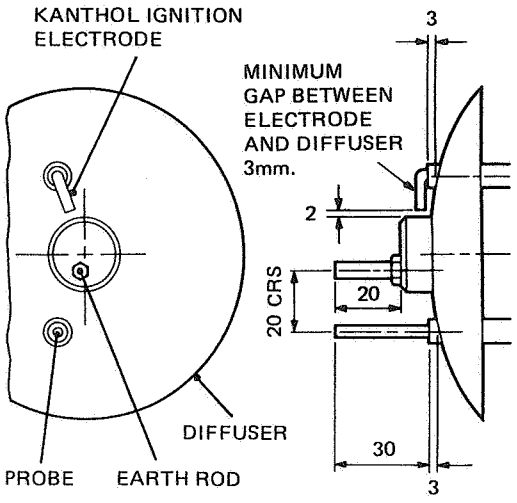


FIG.24 Electrode and probe setting

7.2.3 U.V. Cell

Clean with a dry, clean cloth. Do not touch the quartz glass envelope of the cell with fingers. Replace U.V. cell making sure it faces the direction of the flame.

Replace all covers and secure all fittings. Burner is now ready for operation.

SWITCH ON BURNER.

8 FAULT FINDING

Any modification to the installation or component settings resulting from actions suggested below may require the re-establishment of the various settings as indicated earlier in this manual.

8.1 BURNER MOTOR FAILS TO START

Check electrical supply is available and burner is correctly wired.

Check all fuses for continuity and size.

Check that all control instruments are "calling for heat".

Check that the control box is not locked out. (e.g. signal lamp may be faulty.)

If the control box is locked out press reset button. Check that the air pressure switch is in the "start" position.

The following procedure will assist in this check. Switch off electrical supply.

Remove the plug-in assembly from control box base.

Using a suitable instrument, check for continuity between the following terminals:—

Satronic TMG740	Terminals 16 & 17
Landis & Gyr LFL	Terminals 5 & 12
Elesta FW46	Terminals 6 & 19

If there is no continuity between terminals, turn setting screw/dial on the air pressure switch fully *clockwise* to '0' or '–'.

Check again between appropriate terminals for continuity. If this condition is fulfilled the air pressure switch is in order.

However if no continuity is obtained, the air pressure switch is faulty and must be renewed.

8.2 FAN AND CONTROL BOX RUN CONTINUOUSLY AND BURNER FAILS TO START

Air pressure switch stuck in "start" position.

Turn the air pressure switch setting screw/dial slowly *anti-clockwise* towards "+" until the burner continues through the normal sequencing programme.

Failure of the burner to continue through the normal sequencing programme on reaching the fully *anti-clockwise* setting may be caused by:—

(a) Excessive draught condition through burner and appliance.
(b) Wrong direction of rotation of burner motor (refer to section 8.6).

If the air pressure switch is faulty it must be renewed

8.3 FAN STARTS AND BURNER GOES TO LOCK-OUT

Symptom	Possible Reason	Remedy
No ignition	Air pressure switch. Electrode setting incorrect. Cracked electrode porcelain. HT lead disconnected/damaged. Transformer faulty.	See 8.2, para 2. Re-set. Re-new. Re-connect/re-new. Re-new.
No flame	Gas supply interrupted. Gas pressure too low. Pilot valves fail to open. Pilot manual shut-off valve closed.	See 3.1.1. Check coils and associated wiring. Open.

8.4 STARTING FLAME FAILURE

If the pilot flame is not properly established, the safety circuit of the sequence controller will cause Lock Out in one second.

The cause may be insufficient signal to the flame detection device which can be either flame probe or U.V. cell.

IMPORTANT: Check that the control box and flame detection devices are compatible.

Type of Device	Possible Reason	Remedy
Probe (F.R.R.)	Probe wrongly positioned. Bad earth continuity. } Faulty wiring. Transformer.	Re-position (See Fig.24) Electrical test required. Crossed primary polarity.
U.V. cell	Glass envelope dirty. Cell wrongly positioned. Faulty unit. Faulty wiring.	Clean the glass. Should face towards flame. Renew. Crossed polarity.

8.5 BURNER RUNS AND FAILS TO ESTABLISH MAIN FLAME

Symptom	Possible Reason	Remedy
No Main Flame	Gas pressure/volume too low. Main flame gas valves fail to open. Test link disconnected. Main manual gas valve closed.	See 3.1.1. Check coils & associated wiring. Re-connect. Open.

8.6 INCORRECT ROTATION OF BURNER MOTOR

If there is incorrect rotation of burner motor, the motor should be renewed.

9 SPARE PARTS IDENTIFICATION

Separate illustrated lists, containing an Item Number, Description and Code Number, are included in this Section for the CG2 burner.

The variations on a component are included and care must be taken when making any reference to a component to use the correct Description and Code Number.

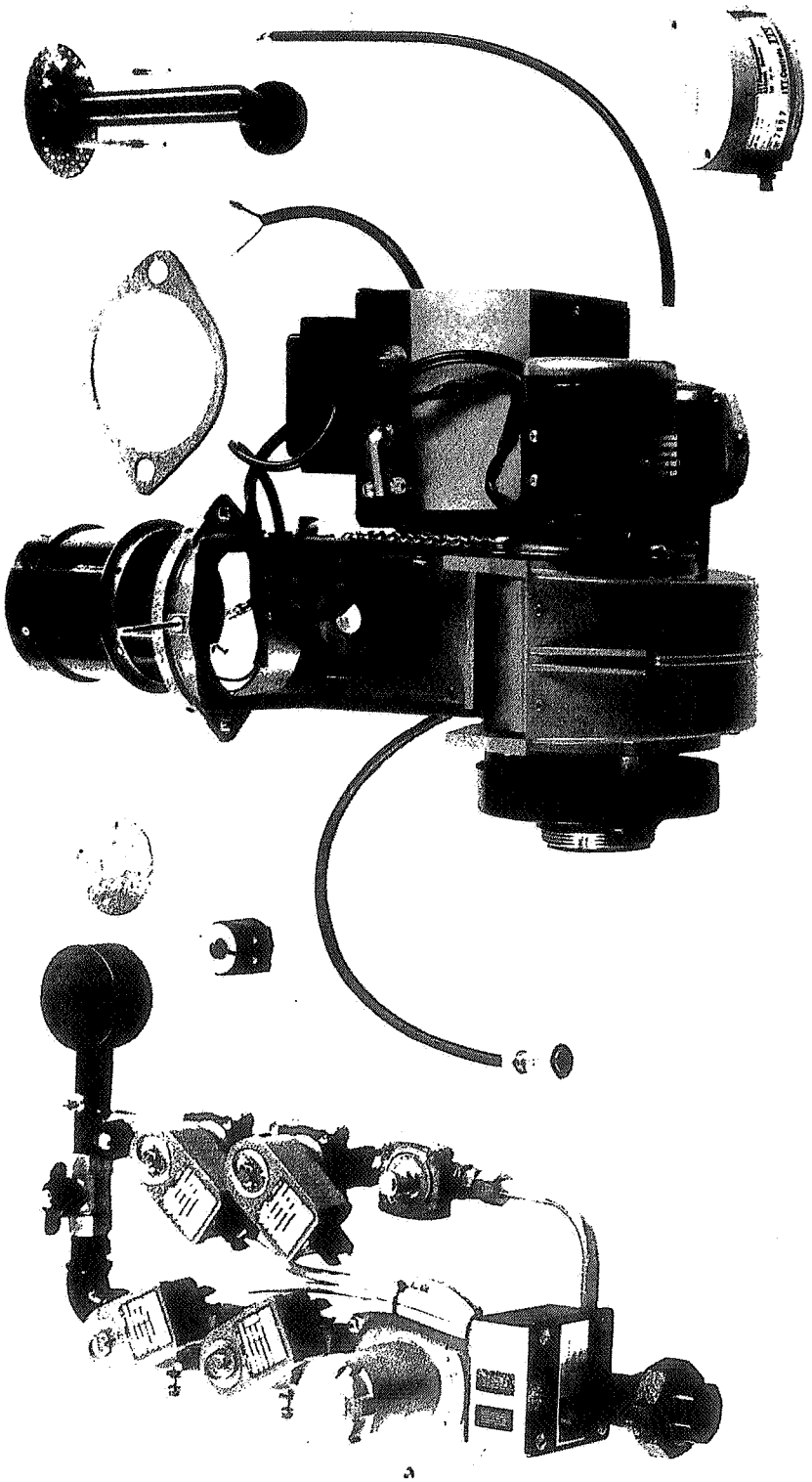
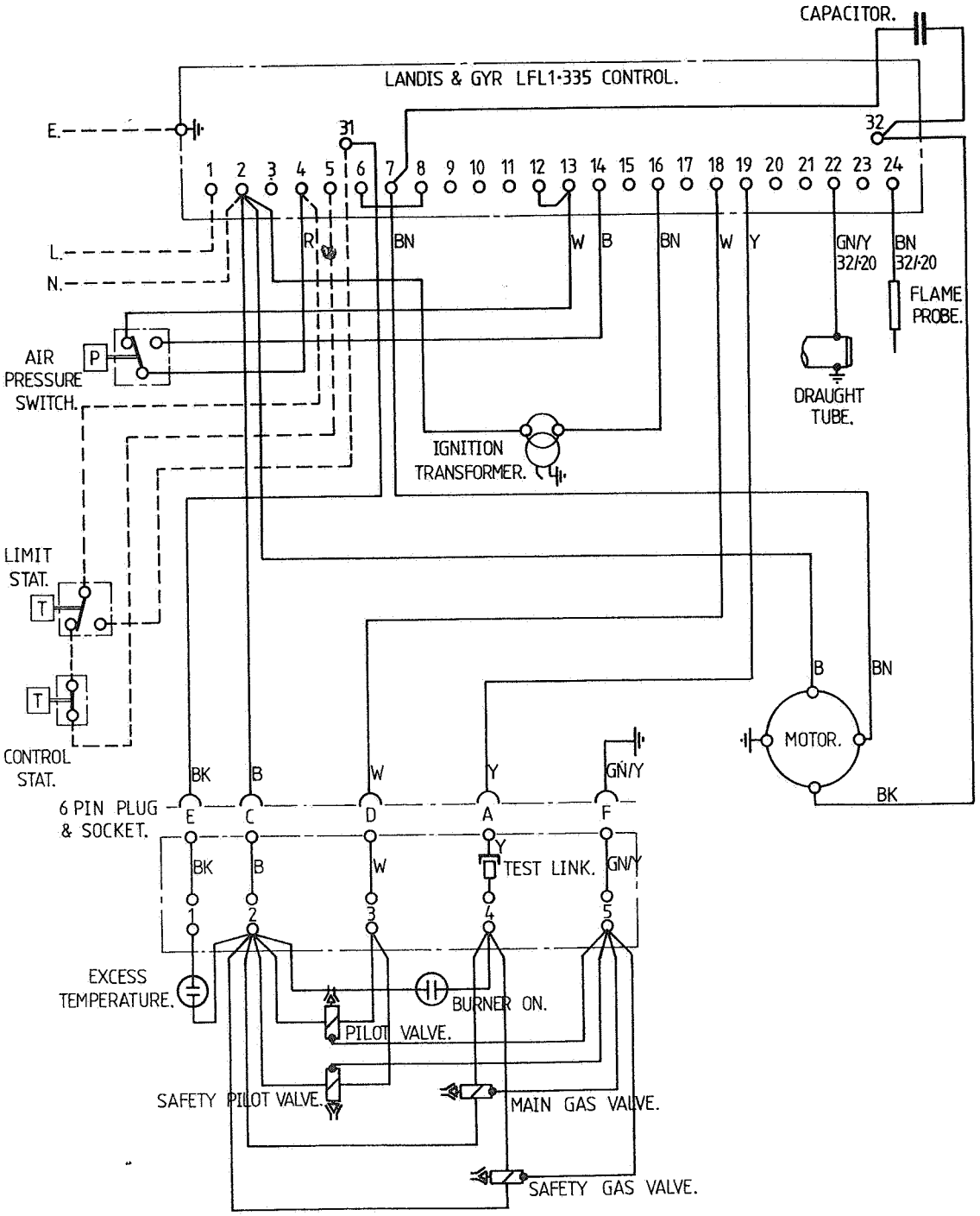


FIG.25 CG2 Burner

9.1 PARTS LIST

ITEM	DESCRIPTION	CODE NO.
1A	Main Governor, 1"BSP Jeavons J48	EO6-025J
2A	Diaphragm Set to Suit Item 1A	
1B	Main Governor, 1"BSP Donkin 226X	EO6-035L
2B	Diaphragm Set to Suit Item 1B	
3	Main Gas Valves Dewraswitch ¾" BSP	EO1-070E
4	Pilot Gas Valves Dewraswitch ½" SBP	EO1-089W
5	Pilot Governor $\frac{3}{8}$" BSP	EO6-030T
6	Diaphragm Set to Suit Item 5	
7	Solenoid Coil Dewraswitch ½" & ¾" BSP	
8	Gas Train Gasket	G09-059X
9 *	Draught Tube complete (with swirler when required 'A' size only)	
10	Transformer P72600Q	CO2-021Z
11	Burner Flange Gasket	G09-008V
12	Flame Probe Cable	
13	U.V. Cell Satronic UVZ721	C31-024Q
	U.V. Cell Elesta FW141D	C31-022N
	U.V. Cell L & G QRA2	C31-010W
14	Probe	P22-033R
15	Probe Earth Rod	M25-536D
16 *	Gas Nozzle	
17 *	Diffuser	
18	Electrode	P22-034J
19	H.T. Cable	
20	Air Pressure Switch Actu LDK/2P	C50-044K
21	Air Pressure Switch DSP-01V	C50-045L
22	Fuse, 5 amp Bulgin F129	B02-049R
23	Control Box, Satronic TMG 740	C21—067Z
	Control Box, Elesta FW46 A21	C21—055V
	Control Box, L & G LFL 1.335	C21—101Z
	Control Box, L & G LFL 1.635	C21—105Y
	Control Box, Satronic TTG 760 model 45	C21—103T
24	Motor 0.2 HP 220 Volt — Ranco	AO2—019X
25	Fan Impellor	DO5—004Z

Note: Items marked * require burner specification & Serial Numbers to be quoted when ordering spares.



CG2 with Landis & Gyr LFLI Control

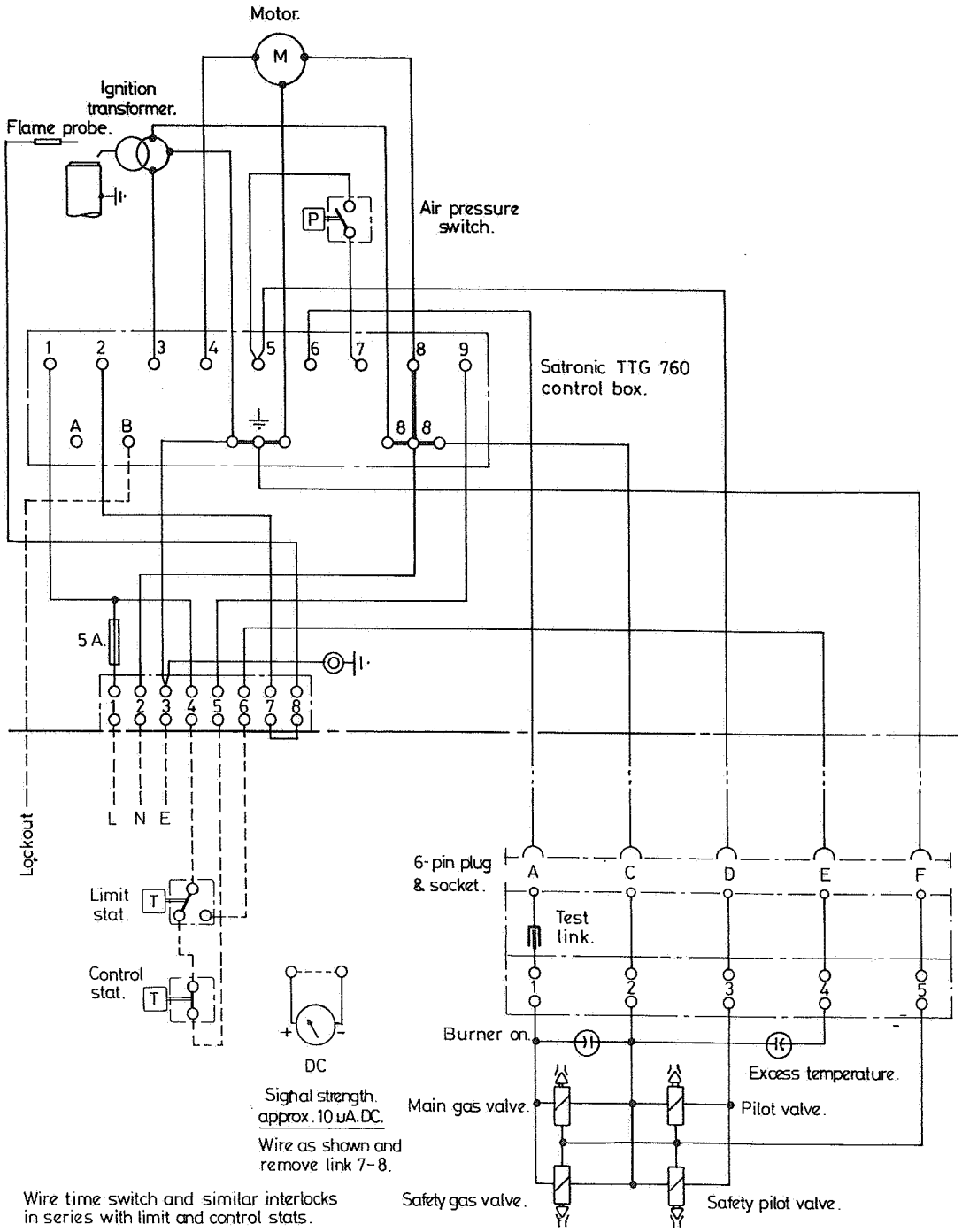


FIG. 27 CG2 with Satronic TTG 760 Control

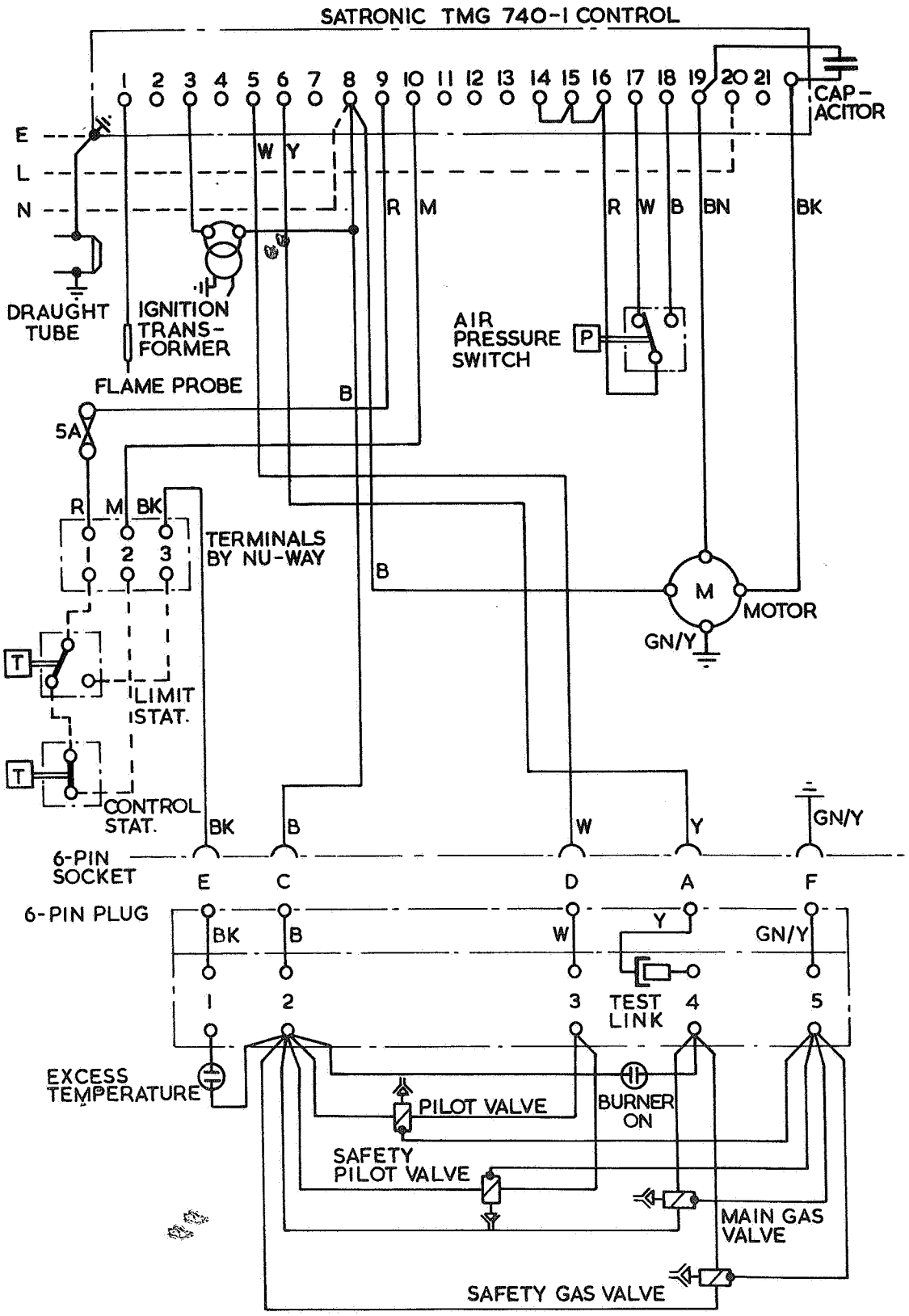


FIG. 28 CG2 with Satronic TMG 740-1 Control

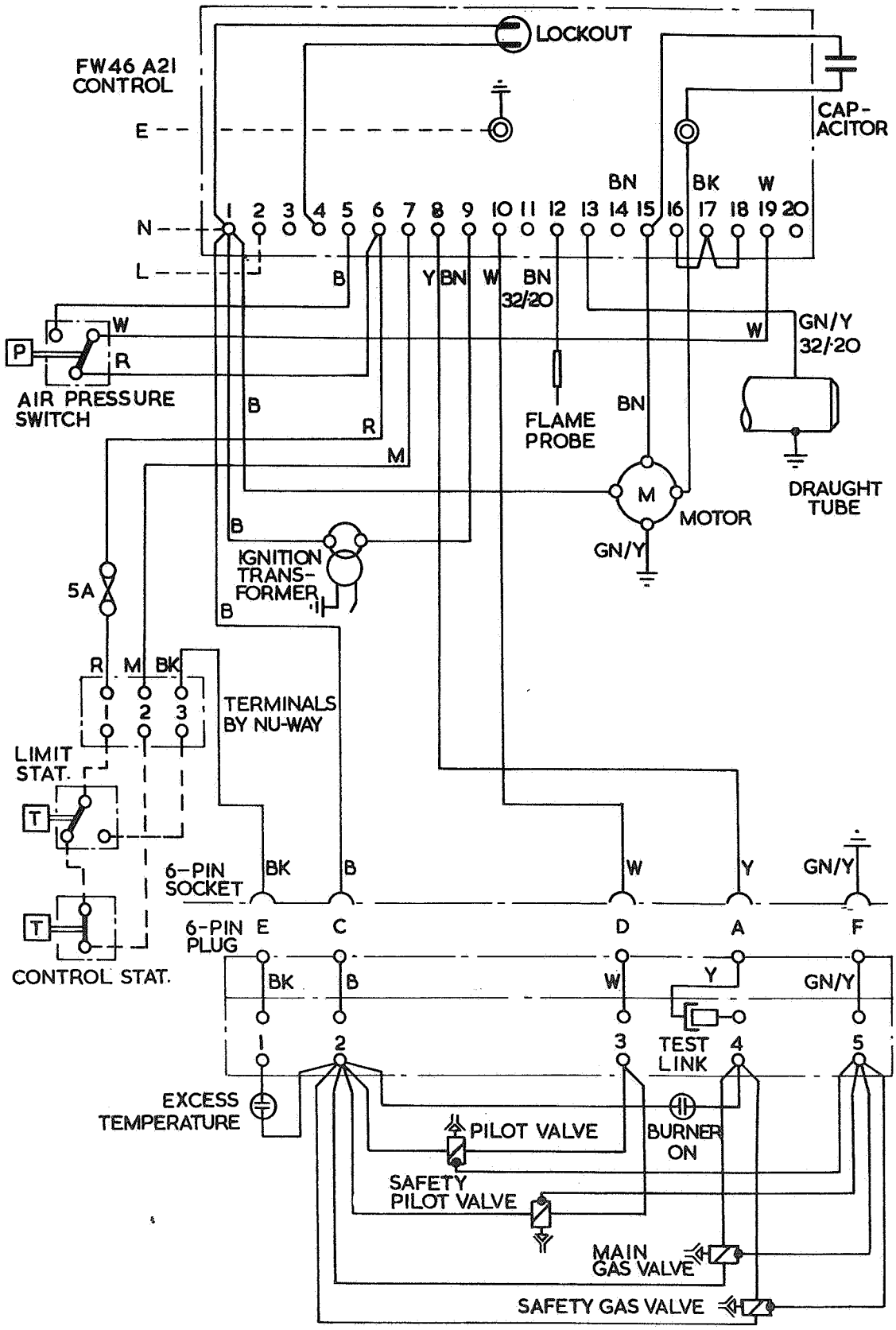


FIG.29 CG2 with Elesta FW46 A21 Control