

Trianco

OIL

TRO 80 WALL MOUNTED COMBI

USER INSTRUCTIONS

The TRO 80 WM COMBI is a packaged wall mounted boiler incorporating a water to water heat exchanger capable of converting the total boiler output to domestic hot water at mains pressure. An automatic three-way valve diverts the boiler's output to either the heating system or domestic hot water, with priority always being given to the latter.

The boiler is fully automatic in operation, and requires little attention other than the setting of the thermostat, the time-switch and room thermostat (if fitted). To ensure that the boiler always operates efficiently, it should be serviced at regular intervals, at least once a year on a contract basis. Further information on this is given under "Boiler Care".

To Fire The Boiler

Before firing the boiler, ensure that the system is full of water, there is fuel in the storage tank, and all the valves are open.

1. Check that the time switch is ON and the room thermostat is calling for heat.
2. Set the boiler thermostat knob to Position 6.
3. Switch on the electricity supply to the Boiler. Switch the on/off switch to on and the burner will fire.
4. The boiler will now operate automatically, cycling "ON" and "OFF" according to heat demand.

To Stop The Burner

The burner may be stopped by turning the thermostat to a lower setting or to the OFF position.

However, if the boiler is to be off for a long time it is recommended that the mains supply to the boiler is switched off or the time switch is switched to the OFF position.

Boiler Thermostat Setting

To ensure maximum hot water output is always available, it is necessary to leave the thermostat knob set to position 6.

This temperature setting will also be available for central heating to provide the full boiler output for the coldest weather conditions.

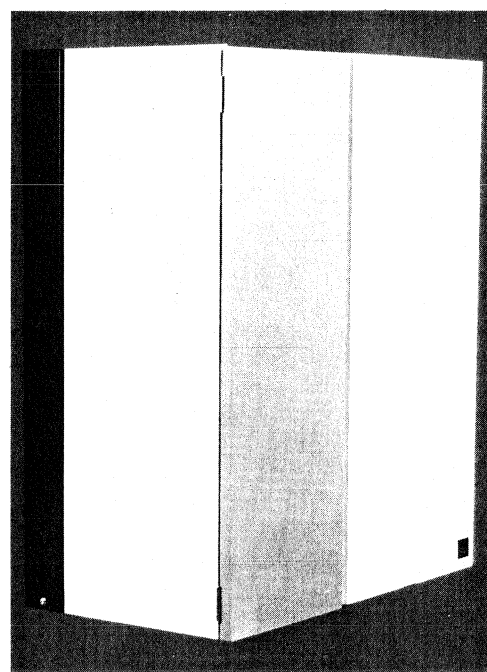
The heating system should be controlled by a room thermostat, thermostatic radiator valves and zone valves, where necessary.

Time Switch

To ensure availability of domestic hot water at any time of day, it is necessary to set the Time Switch to the "ALL DAY" position. This ensures the boiler is always kept hot and is in a state of readiness.

Central heating can be programmed in the normal way, to meet individual requirements, but it should be remembered that domestic hot water availability will be determined by the first ON and last OFF period of the central heating programme.

Should domestic hot water be required throughout the day and night, then the hot water control on Time Switch must be set to "24 HOURS or CONTINUOUS".



TRO 80 WM COMBI

Room Thermostat

The room Thermostat should not be positioned above a source of heat eg. radiator or fire, or exposed to the sun as this will cause the central heating to switch off before the room is up to temperature.

Follow the manufacturers instructions for best position for thermostat.

Frost Precautions

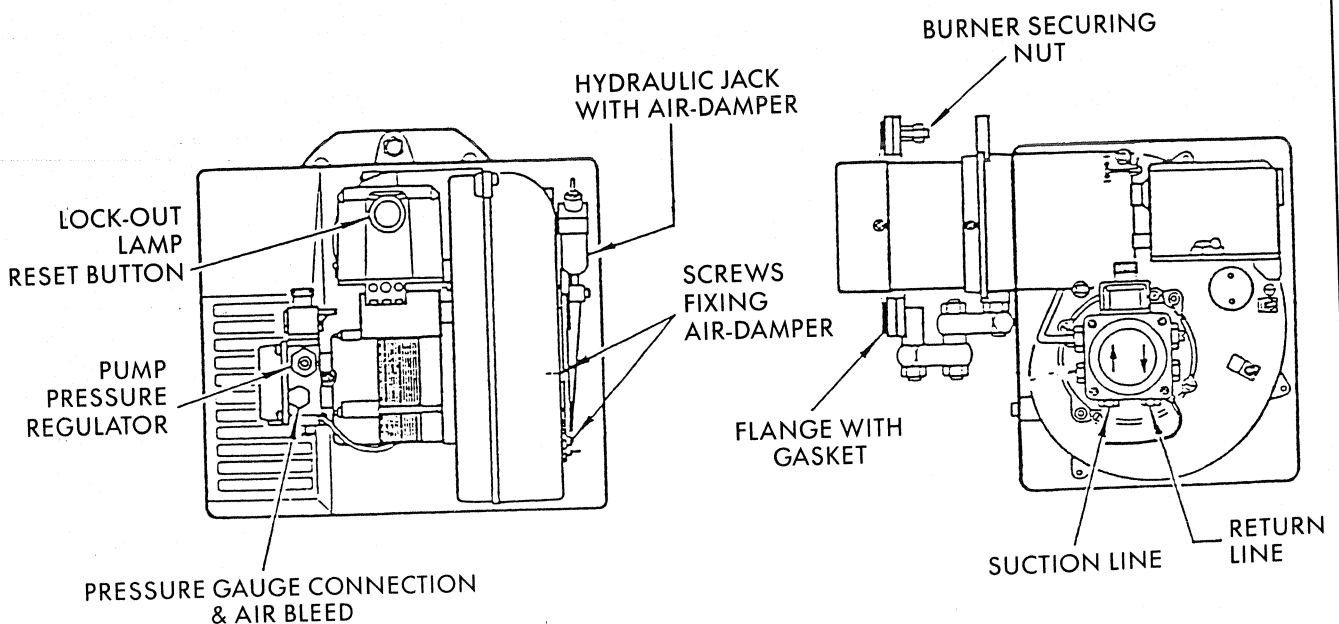
If the boiler and central heating system is shut down for many hours in very cold weather, the water may be in danger of freezing and therefore it is advisable to protect the installation with a frost thermostat.

Where the system is not protected, the boiler should be left switched on and the room thermostat set to low setting eg. 7°C (45°C) to prevent the building temperature falling too low.

(continued on page four).

TECHNICAL DATA

Heat Output	23.4 kW (80,000 Btu/h) to heating system or D.H.W.
Pressure Jet Oil Burner	Riello G5
Maximum Firing Rate	47 ml/min. Kerosene 28 sec.
Maximum Boiler Pressure	2.5 bar (36 p.s.i.)
Water Connections	22mm central heating flow and return 15mm cold water feed and supply.
Water Content	18.5 litres (4 gal)
Flue Connection	for 5 in. dia. flue
Domestic Hot Water Heat Exchanger	For direct mains operation — 9.6 litres/min × 35°C. rise (2.1 gal/min. × 63°F. rise) C/W three-way valve and switch Grundfoss 3 speed Selectric Mk. 2
Circulating Pump	10 litre. (factory set at 0.5 bar)
Expansion Vessel	½" B.S.P. (set at 3 bar)
Safety Valve	Control 50°C to 86°C. Limit 100°C cut off (Manual reset)
Thermostats	Stove enamelled white grey door.
Casing	Glass fibre panels inside casing provide thermal and acoustic insulation.
Insulation	137kg. complete (300lb).
Weight	Range 0-4 bar
Pressure Gauge	Burner LOCK-OUT
Indicator Lights	



BURNER DETAILS

RIELLO BURNER-MECTRON G5

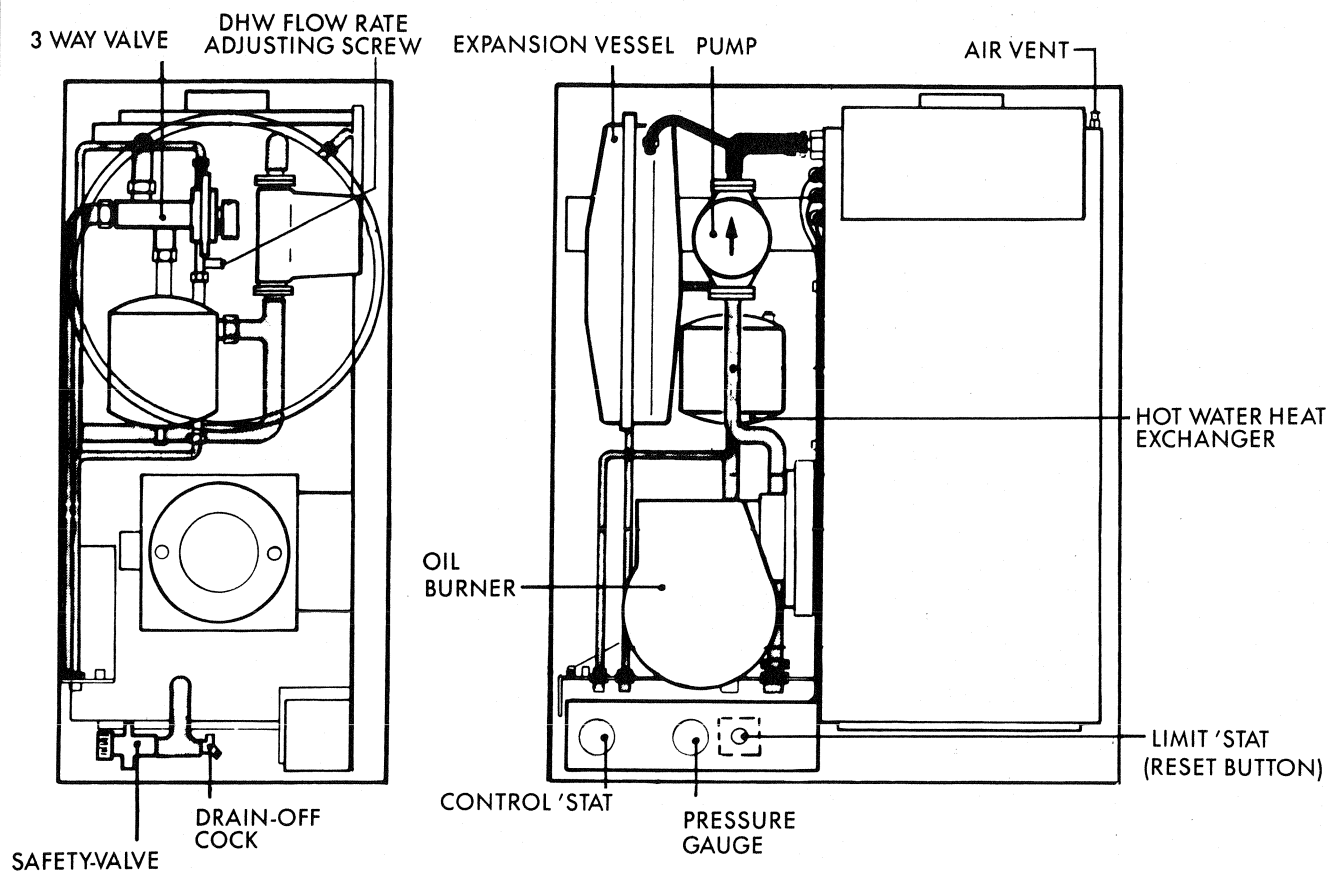


Fig. 1 **OPERATIONAL FEATURES**

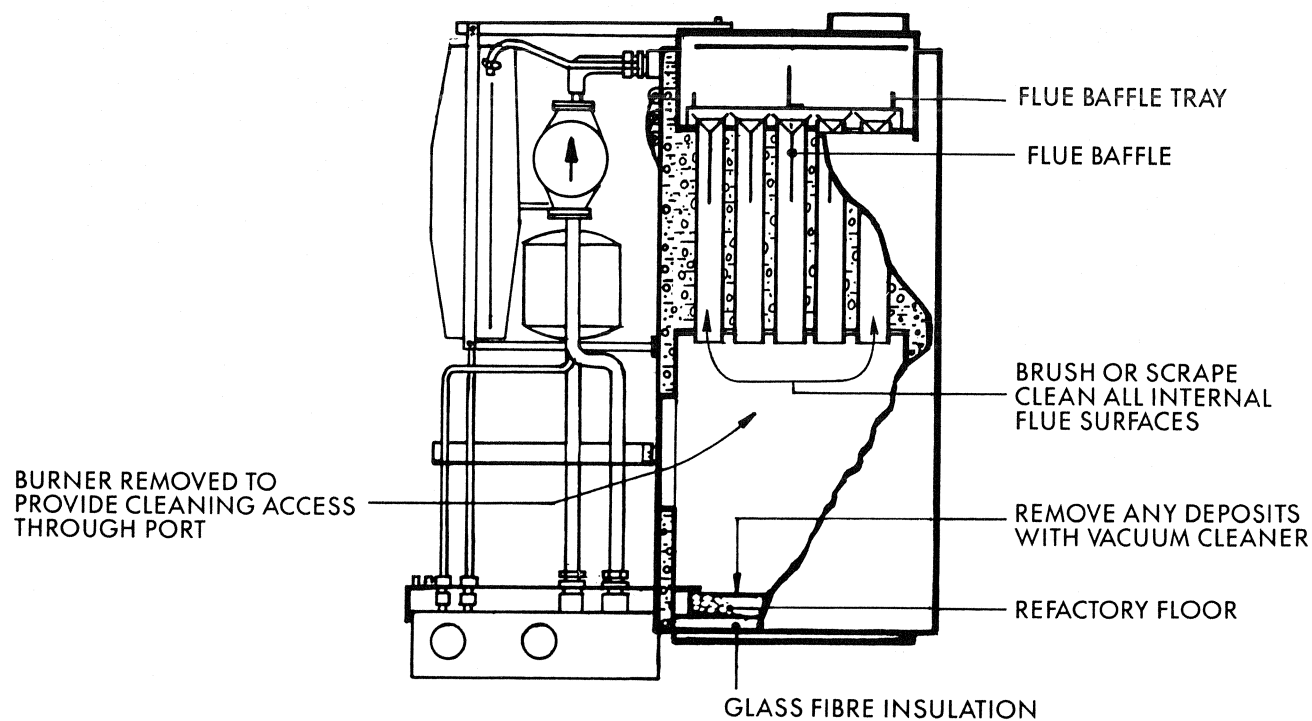


Fig. 2 **FLUE CLEANING**

PARTS LIST

ITEM	DESCRIPTION	PART No.
1	BOILER BODY W.U.	29110
	BURNER DOOR ASS/Y	29430
3	INSULATION	26759
4	Ø 16 GLASS FIBRE ROPE	98175
7	BURNER ASS/Y	RIELLO G5
8	BAFFEL TRAY W.U.	29131
	BAFFLE DOOR ASS/Y	26680
12	Ø 12.5 GLASS FIBRE ROPE	98184
20	BAFFLE PLATE (5 OFF)	29135
24	EXPANSION VESSEL	29451
31	DOMESTIC HEAT EXCHANGER	26773
34	HYDRAULIC 3-WAY VALVE ASS/Y	26774 / 28151
	DIAPHRAM	26765
	MICRO SWITCH	26782
36	SAFETY VALVE	26775
	CONTROL BOX ASS/Y	29043
44	BOILER STAT	37170
45	LIMIT STAT	29296
46	SWITCH	96352
47	COMBINED PRES/TEMP GAUGE AND BUSH	26776
55	BACK SURROUND	26810
58	OUTER CASING ASS/Y COMPLETE	29030
59	STRIKE	95192
	DOOR CASING ASS/Y	29020
60	DOOR CASING	26688
62	LATCH	95163
68	GRUNDFOSS PUMP	26224

If the system is shut down for a long period during very cold weather it is advisable to completely drain the system. Draining and filling should be done by a qualified installer.

Frequent draining, especially in hard water areas should be avoided as this may lead to scaling of the boiler water-ways.

Oil

The recommended fuel is 28 sec Kerosene (BS 2869 1983 Class C2).

Domestic Hot Water Notes

- (a) Care must be taken when drawing off water from the taps as the initial flow could be very hot. Thereafter the water will run at a lower temperature.
- (b) To ensure a comfortable temperature for showering, a thermostatically controlled shower should be used which has a fast acting valve such as the "Aqualisa" (or equivalent).
- (c) As the flow of water to the hot and cold taps comes from the same mains supply, it may not be possible to use all taps at the same time.
- (d) All taps, showers and mixing valves used with this appliance must be suitable for operation at mains water pressure.

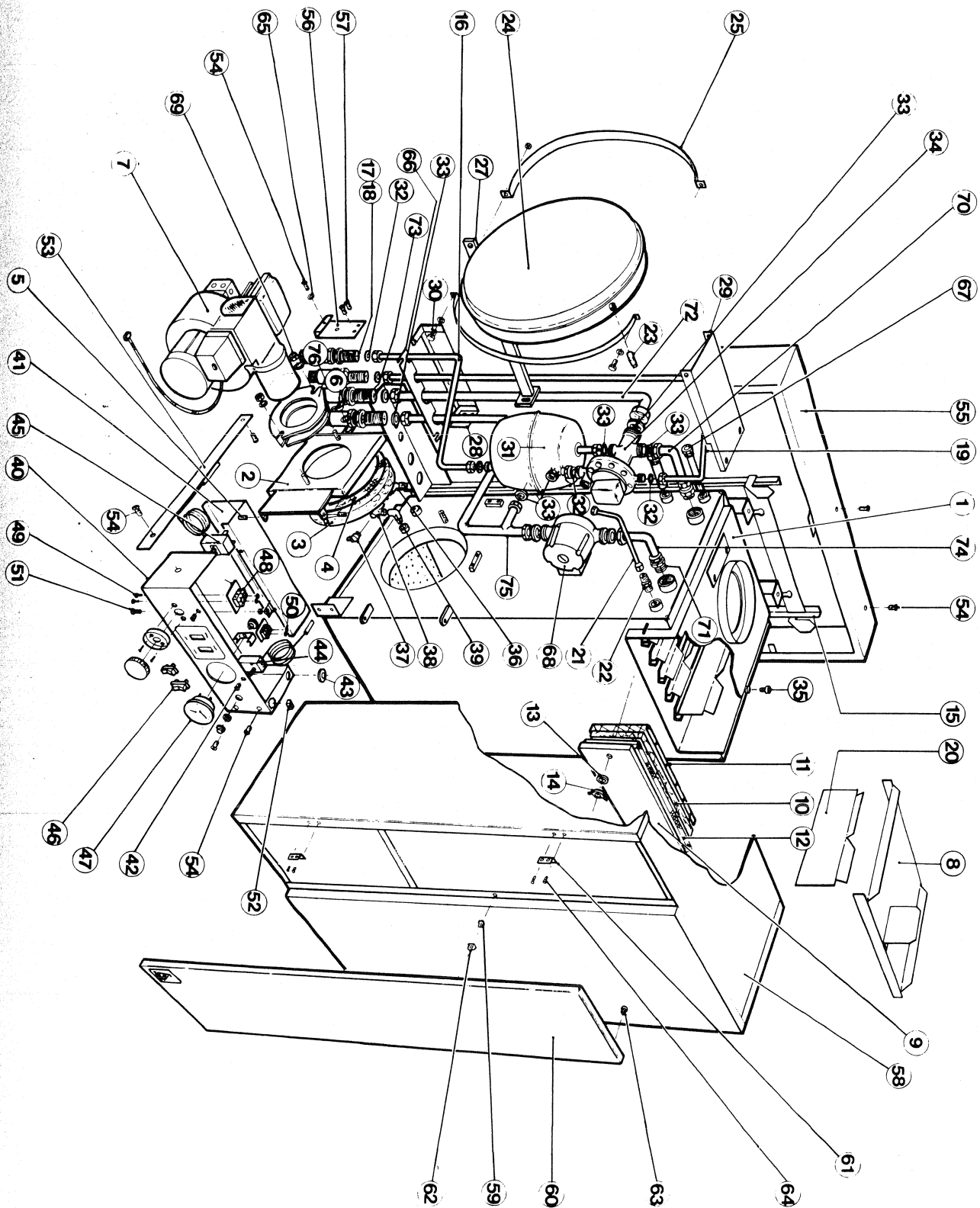


Fig. 3 TRO 80 W/H COMBI

SIMPLE FAULT FINDING

If the boiler fails to light for no apparent reason, make the following checks before calling a service engineer:

1. Check for failure in the electrical supply eg. power cut.
2. Check for blown fuse. If a fuse has blown and on replacement blows again, switch off the mains electricity supply and call a service engineer.
3. Check that there is sufficient oil in the tank and that the oil valve is open.
4. Check for burner lock-out — RED light ON. Press the control-box reset button and the burner should fire.
5. Check for excess water temperature — press limit thermostat reset button on control-panel (remove cap).

Note: It will not be possible to reset the limit thermostat until the water temperature has fallen approximately 20°C. On resumption of firing check operation of control thermostat; this could be faulty.

If after carrying out the above tests the burner still fails to fire, call your service engineer.

Note:

If the boiler has been off as a result of a power failure it will be necessary to reset any time controls to the correct time after the electrical power is restored.

SERVICING THE BOILER

To maintain the high thermal efficiency of the boiler it should be given a regular skilled service at least once a year. It is suggested that a service contract be arranged with the installer or fuel supplier. If the boiler is used to provide hot water all the year round as well as central heating in the winter, the best time for its annual service is just before the start of the winter heating season.

Boiler Care (see Fig. 2)

Baffle and Flueway cleaning may, by arrangement, be part of the annual service. The procedure for this operation is as follows:

1. Switch off the mains electricity supply to boiler.
2. Remove the casing.
3. Remove the flue-cover.
4. Lift out the flue baffle tray and baffle plates (5 off).
5. Hinge the burner-door open complete with burner and service in accordance with Burner manufacturer's Servicing Instructions.
6. Brush all deposits from flue-ways and fire-box surfaces.
7. Remove all deposits from the boiler refractory floor using a vacuum cleaner nozzle through the burner-door opening.
8. Check for any deposits in the flue, brush out as necessary.

9. Re-assemble parts ensuring that the flue baffles are correctly located and the flue cover and burner door are tightly sealed.
10. The casing of the boiler requires only an occasional wipe over with a damp cloth to retain its finish.

FAULT FINDING CHART

FAULT	POSSIBLE CAUSE	ACTION
THE BURNER WILL NOT START WHEN THE LOCK-OUT RESET BUTTON IS PUSHED.	The fuse has blown.	Fit new fuse (5 amp.) to boiler.
	Thermostat or other controls.	Wait until boiler water temperature drops, or raise thermostat setting.
	No current through motor or transformer.	Control box faulty — replace. Light on photo-cell — check cell position.
BURNER STOPS AND STARTS WITHOUT FLAME WHEN RESET BUTTON IS PUSHED.	The burner is not getting oil. Air in oil line, shut-off valve closed.	Check oil tank is full, clean oil filter, vent oil line and pump, check oil shut-off valve is open, check fire valve.
	Ignition fault.	Check electrodes are clean and correctly set. Check H.T. leads for breaks or burns.
	Nozzle fault.	Change nozzle.
	Pump fault.	Check with gauge that pressure is correct.
	Coupling between fan or motor and pump is broken or slipping.	Fit new coupling.
	Solenoid valve not operating.	Check power supply to coil; if faulty change Solenoid valve coil. If fault persists, change oil pump.
BURNER STARTS BUT FAILS TO ESTABLISH FLAME	Dirty photo-cell.	Clean photo-cell, use soft dry rag.
	Faulty photo-cell.	Change photo-cell.
	Faulty control box.	Change control box.
FLAME BURNS ONE SIDED.	Nozzle partially blocked or damaged.	Replace nozzle.
DOMESTIC WATER NOT HOT ENOUGH.	Incoming mains water temperature very low.	Screw in Flow Rate Screw a few turns to slow the flow and allow water to heat up.

Note: If the boiler has been off as a result of a power failure it will be necessary to reset any time switches after power has been restored.

If after carrying out above checks the burner still fails to fire call your service engineer.



TRIANCO REDFYRE LIMITED

Thornccliffe, Chapeltown, Sheffield S30 4PZ

Tel: Sheffield (0114) 257 2300

Fax: (0114) 245 3021



By appointment to H. M. Queen Elizabeth
The Queen Mother
Manufacturers of Domestic Boilers

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