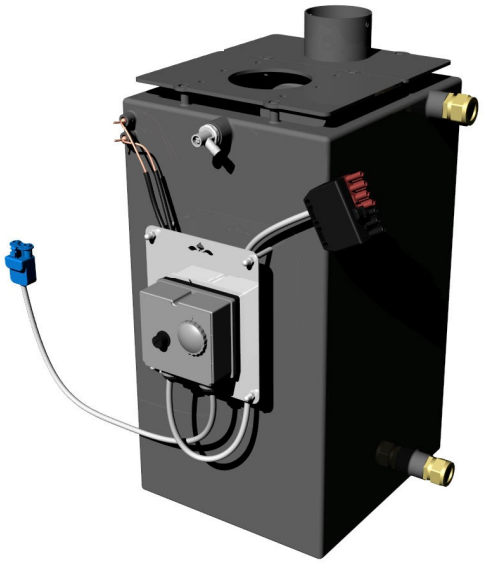
INFORMATION SHEET

Upgrade Minor 1 Burner to Max Burner
Pt No 77-01-424

Issue Ref 0004 27-11-17

The Mk1 230VAC PJ auto boiler can be upgraded to utilise the new Ecoflam Max Burner recently introduced on current boiler production.



Equipment Required:-

1. Ecoflam Max Burner with pre-fitted .4 x 45S nozzle.	Pt No77-01-425-B
2. Modified control panel assembly.	Pt No87-01-900-90MCP
3. New boiler front top plate plus burner mtg flange.	Pt No 87-01-900-7ASSMAX
4. New boiler rear top plate.	Pt No 87-01-900-8ASSMAX
5. New handbook showing new wiring details.	Pt No 87-01-900-LIT-D
6. New Serial No plate pre fitted to control panel.	Pt No PRINT-SERIAL-001
7. 6 x M10 flat nuts and washers.	Pt No 77-01-057

8. Small diameter flue brush for cleaning the flue system. PT NO H1159
9. Plenty of tissue paper and plastic bags to wipe up and dispose of any oil spillage.

Before carrying out any work make sure that the burner is totally isolated from the 230VAC supply and cannot be inadvertently turn on whilst you are working. Make sure that the oil supply is turned off in such a way as to prevent any oil spillage when the flexible oil feed lines are removed from the burner.
Do not work on 230V AC systems in damp or wet conditions.
Make sure that the electrical supply is protected by a suitable RCD device.

Procedure:-

(During the upgrade you will be asked to make sure that the boiler, flue ways and exhaust system have been thoroughly cleaned and de sooted. This is very important)

1. To remove the existing control panel.

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Disconnect it from the burner by removing the multipin output plug on the burner and then disconnect the multi-pin input plug from the electrical input supply plug.
Remove the two thermostat sensing phials from the top left hand corner of the boiler body which are secured by two split pins.
Undo the fasteners holding the control panel on to the boiler body and remove the whole assembly from the boiler.

2. Remove the existing Burner.

Disconnect the oil feed pipes to the burner making sure that the oil supply is isolated to avoid any oil spillage.
Remove the existing burner by undoing the front horizontal grub screw and then rotating the burner and lift it up and out of the boiler.

3. Remove the existing boiler front top plate.

Undo the 4 x M10 dome head fasteners and then remove the existing boiler top plate.
Beneath the top plate is the top insulation board which should be carefully lifted up and out.
After removing the top board remove the primary baffle half way down the boiler as this baffle is now, no longer required.
Note that the primary baffle is secured in position via a stainless carrier plate which should also be removed.
After removing the primary baffle and carrier, use a torch look down into the boiler and make sure that the base of the boiler is clean and there is no soot build up.

3a. Remove the existing boiler rear top plate.

Undo the 2 x m10 fasteners and remove the existing boiler top rear plate.
Remove the existing baffles which are fitted beneath the rear top plate and clean out the internals making sure that there is no soot or debris in the base of the boiler.

3b. Using a suitable small diameter flue brush.

Make sure that the exhaust system is clean and free from blockages.

3c. Replace the rear baffles and then re fit the new boiler rear top plate 87-01-900-8ASSMAX.

4. Fit the new burner top plate Pt No 87-01-900-8ASSMAX.

Re fit the existing top board and then fit the new boiler top plate.

4a. Do not use the old m10 dome head nuts.

Replace the original M10 dome head nuts with the new M10 flat nuts and washers.

5. Fit the new burner Pt No 77-01-429.

As can be seen the new burner drops into the new top plate and is secured by a single fastener on to its mounting flange, if the burner does not slide easily into the boiler it may be due to slight miss alignment of the insulation board which can be rasped out as required.
Note that if the old dome head nuts are used they will prevent the burner dropping down to its correct position.

6. Re Connect the flexible oil lines.

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7. Re fit the new control panel.

Re fit the new control panel and then plug the out put lead from the new control panel into the burner, do not fit the input plug yet as the input lives need to be re arranged as per the wiring diagram FIG 1.

(Note that if there are any dimensional discrepancies on the mounting holes of the burner control panel it may be necessary to re drill and reposition the holes to suit the old fasteners.)

8. Remove the old multipin plug and replace it with the new three pin plug.

Note that the old burner required both a permanent live and a switched live, the new burner does not.

All that is required is the switched live, a neutral and an earth.

Rewire the new input plug.

To connect the multipin plug to the burner first remove the Red Outer Plastic burner cover which is held in place by two fasteners.

Connect the multipin plug to the burner and refit the red plastic cover.

9. Ignite the Boiler

At this stage, with flexible oil feed pipes reconnected, turn the oil on and make sure that there are no oil leaks, if there are no oil leaks, turn the boiler on.

Turn the stat up to 65 and the burner should attempt to fire.

Note that it may take a few attempts for the burner to ignite as there may be air locks in the flexi fuel lines.

Note that if the burner locks out during the start-up you will see the reset button on the burner control unit glow red, re set it via one press.

Note that when the reset button has been pressed the illuminating red light will go out.

If you are unhappy with any stage of this procedure turn the mains power off and the burner will stop.

After the burner has fired and settled down into steady combustion go to the boiler exhaust terminal and check that the flue gas emissions are clean and there is no sign of light or dark smoke being emitted from the terminal, if there is, increase the air by half of 1 division until the flue gas emissions are clean, check that the CO2 is 10.5% and the CO is less than 50 ppm.

(Note that air control is via a 4mm allan head adjuster to the right hand side of the burner on the top face of the black plastic air inlet snorkel.)

Finally check that there are no oil drips or weeps from any of the pre disturbed connections.

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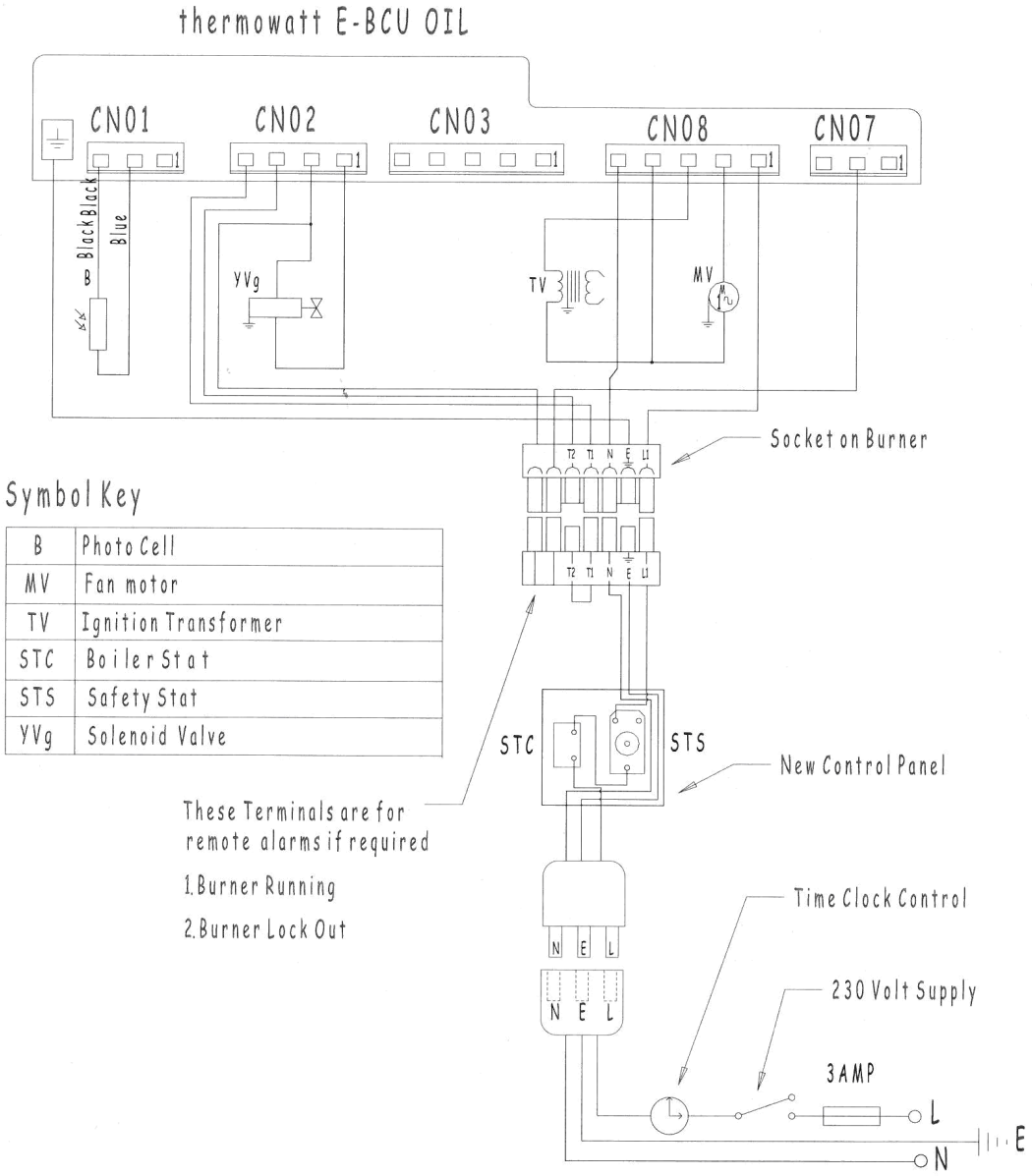
FIG 1SCHEMATIC WIRING DIAGRAM



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10. Kit Part List.

	Minor 1 to Max Burner Upgrade Kit		10/12/2013
ITEM	DESCRIPTION	QTY	PT NO
	COMPLETE KIT COMPONENT LIST		
1.1	NEW STYLE MAX BURNER ASSEMBLY WITH THERMOWATT CONTROL	1	77-01-419
1.2	MODIFIED CONTROL PANEL ASSEMBLY	1	87-01-900-90MCP
1.3	NEW BOILER FRONT TOP PLATE ASSEMBLY WITH NEW BURNER FLANGE FITTED	1	87-01-900-7ASSMAX
1-4	NEW BOILER REAR TOP PLATE ASSEMBLY	1	87-01-900-8ASSMAX
1.5	NEW HANDBOOK SHOWING NEW WIRING DETAILS	1	87-01-900-90ASS
1.6	NEW SERIAL NUMBER PLATE	1	87-01-900-PKIT
1.7	M10 FLAT NUTS AND WASHERS	4	

11. Cost. £490 plus vat.
Del £15 plus vat. UK mainland.