

# Grant Vortex Eco

External Wall Hung Condensing Oil Boiler Range

## User Instructions



**For use with Kerosene only.**

**After installing the boiler leave these instructions with the User.**

### **Service Log**

It is recommended that the boiler should be regularly serviced, at least once a year, and the details entered in the Boiler Handbook by the service engineer.

# Contents

Introduction	4	Overheat Thermostat	6
About your Boiler	4	Remote Programmer	6
Boiler Controls	4	Ventilation	6
Lighting your Boiler	4	Flue Terminal	6
If your Boiler Fails to Light	5	Frost Protection	6
Turning off your Boiler	5	Cleaning and Servicing	6
About your Fuel	5	Failure of Electricity Supply	6
General Notes and Care of your System	5	Electricity Supply	6
Boiler Thermostat	5	Sealed Central Heating System	6
Burner Lock-out Indicator and Reset Button	5		

# User Instructions

## Introduction

This manual is intended to guide users of the GRANT VORTEX Eco External Condensing Oil Boiler range to help you get the most from your boiler system. A separate manual is supplied for use by installation and maintenance engineers.

The following special text formats are used in this manual for the purposes listed below:



## WARNING

Warning of possible human injury as a consequence of not following the instructions in the warning.



## NOTE

Note text. Used for emphasis or information not directly concerned with the surrounding text but of importance to the reader.

## About your Boiler

The boiler will provide domestic hot water and central heating and is fully automatic once switched on. The boiler has a 'mains on' neon, see Figure 3, which lights when the boiler is switched on, but does not necessarily indicate the burner is firing.

If your model is controlled by a remote programmer (external to the Grant system) and a room thermostat, it will provide hot water and central heating during the periods as set on the programmer, when either the room thermostat and/or the hot water thermostat are calling.

## Boiler Controls

1. To access the controls, open the front panel by turning the knob at the bottom anticlockwise and pulling it open from the bottom edge, sliding it out from under the top flange as shown in Figure 1.

Figure 2 shows the boiler with the front panel removed.

The controls are shown in Figure 3.

## Lighting your Boiler

The lighting procedure is:

1. Ensure that there is sufficient fuel, of the correct type, in the supply tank and all fuel supply valves are open. The water supply is on. The electricity supply to the boiler is off. The boiler On/Off switch is set to OFF. The room thermostat (if fitted) is at the desired setting. The boiler thermostat is set to the required setting.
2. Switch on the electricity supply to the boiler.
3. Set the On/Off switch to ON, with the remote programmer (CH or HW) also ON.
4. The boiler will now light automatically.
5. Set the HW and CH functions to TIMED. The boiler will now operate during the 'on' periods set on the programmer.



**Figure 1:** Boiler front panel in closed position



**Figure 2:** Boiler with front panel removed



**Figure 3:** Boiler control panel

## If your Boiler Fails to Light

Make the following checks:

1. Check that the boiler On/Off switch is ON.
2. Check that the programmer is working and is in an 'on' period.
3. Check that all thermostats are set to the desired setting and are calling for heat.
4. Check if the burner 'Lock-out' button has tripped. If it has, locate the lockout reset button on the burner. See Figure 4.
5. Press the Reset button on the burner. If the burner fails to light and goes to 'Lock-out' again, check that you have sufficient fuel in the storage tank and that the fuel supply valve is open.
6. Check that the fire valve in the oil supply line has not tripped.
7. Ensure that a fuse has not blown or that the electricity supply has not failed.
8. Check to see if the overheat thermostat has operated. See the section Overheat thermostat.

If the burner still fails to light after carrying out these checks then a fault exists. Switch off the electricity supply to the boiler and contact your Service engineer.

## Turning off your Boiler

**For short periods:** Set the On/Off to OFF.

To restart, simply set the switch to ON.

**For long periods:** Set the On/Off switch to OFF and switch off the electricity supply to the boiler. If required, the fuel supply valve may be closed and the water and electricity supplies turned off at the mains.

To restart, refer to the full lighting instructions given in the Section 'Lighting your Boiler'.

## About your Fuel

Grant Vortex Eco External boilers operate only on Class C2 Kerosene to BS 2869:1998.

You should always quote this type of fuel when ordering from your supplier.

Do not wait until the fuel runs out before you order some more. Sludge in the bottom of the tank may be drawn into the fuel lines. If it is possible, switch off the boiler when the new supply is delivered and leave the fuel to settle for an hour before restarting the boiler.

## General Notes and Care of your System

### Boiler Thermostat

This control allows adjustment of the temperature of the water leaving the boiler to heat the radiators and domestic hot water.



## NOTE

**If you have a cylinder thermostat on your hot water cylinder, this will control the temperature of your domestic hot water. The boiler thermostat setting must be equal to or above the cylinder thermostat setting to enable the cylinder thermostat to control the domestic hot water system.**

### Burner Lock-out Indicator and Reset Button

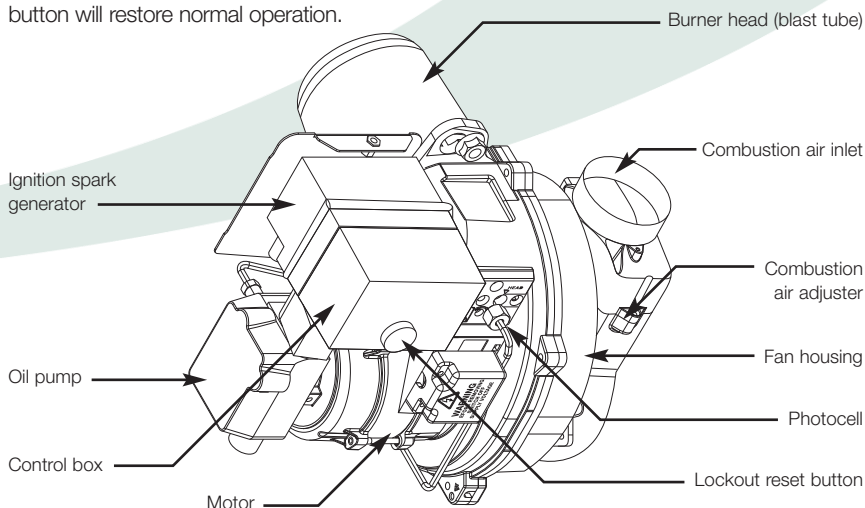
If there is a burner malfunction, a built-in safety circuit switches the burner off and the 'Lock-out' button on the burner will be triggered. Usually such malfunctions are short lived and pressing the reset button will restore normal operation.

Figure 4 shows the position of the lockout reset button on the burner, along with the other main burner components.

Make the following checks:

1. Check that the boiler On/Off switch is ON.
2. Check that the programmer is working and is in an 'on' period.
3. Check that all thermostats are set to the desired setting and are calling for heat.
4. Check if the burner 'Lock-out' button has tripped. If it has, locate the lockout reset button on the burner. See Figure 4.
5. Press the Reset button on the burner. If the burner fails to light and goes to 'Lock-out' again, check that you have sufficient fuel in the storage tank and that the fuel supply valve is open.
6. Check that the fire valve in the oil supply line has not tripped.
7. Ensure that a fuse has not blown or that the electricity supply has not failed.
8. Check to see if the overheat thermostat has operated (see the Section Overheat Thermostat).

If the burner still fails to light after carrying out these checks then a fault exists or the fuel supply is low. If you have sufficient fuel, switch off the electricity supply to the boiler and contact your Service engineer.



**Figure 4:** Burner fuel pump

# User Instructions

## Overheat Thermostat

Your boiler is fitted with a safety overheat thermostat which will automatically switch off the boiler in the case of a control malfunction causing overheating. If your boiler goes off and you try to light it but nothing happens, and the Lockout Reset button on the burner has not triggered, the overheat thermostat has probably operated. The boiler will not light until the thermostat is reset. To reset, unscrew the small plastic cap marked Reset (see Figure 3), press the button then replace the cap.

If this condition continually repeats, contact your Service engineer.

## Remote Programmer

Refer to the instructions supplied with your particular system programmer.

## Ventilation

**Do not** attempt to 'box in' the boiler or build a compartment around it before consulting you Installer.

**Do not** place any combustible material around or on the boiler or flue pipe.

## Flue Terminal

The flue terminal **must not** be obstructed or damaged.

In severe conditions check that the terminal does not become blocked by snow.

## Frost Protection

Your Installer may have fitted a frost thermostat. If not, and you are likely to be away for a short time, leave the boiler on with the boiler thermostat set at a low setting. For longer periods the boiler and system should be drained.

Contact your Service engineer for draining and filling the system.

## NOTE

For Vortex modules we recommend that a combined antifreeze and corrosion inhibitor be used in the primary water system.

## Cleaning and Servicing

Lightly wipe over the case with a damp cloth and a little detergent. **Do not** use abrasive pads or cleaners.

You must have your boiler serviced at least once a year to ensure safe and efficient operation. Contact your Service engineer for further details.

## Failure of Electricity Supply

If the electricity supply fails, the boiler will not operate. It should relight automatically when the supply is restored.

If a remote programmer is connected, it may retain the time settings for some time and may not have to be reset to the correct time of day when the supply is restored. Refer to the instructions supplied with your programmer for further details.. It is recommended that you check the time settings after a power failure has occurred.

## Electricity Supply

The boiler requires a 230/240 V ~ 50 Hz supply. It must be protected by a 5 Amp fuse.



## WARNING

The electricity connections to the boiler must be earthed.

## Sealed Central Heating System

If your boiler is operating on a sealed heating system, the installer will have adjusted the pressure in the system and should have told you (or set it on the pressure gauge) the system pressure when cold. This is normally between 0.5 and 1.0 bar, which will increase slightly when hot). If the pressure (when cold) is below the set pressure mentioned above, you can repressurise the system. If this is frequently required, ask your Installer or Service engineer to check the heating system for leaks and to check the expansion vessel air charge.

The boiler or system will be fitted with an automatic air vent to remove air from the system. Any air trapped in the radiators should be removed by venting the radiators using the vent screw at the top of each radiator. Only vent a radiator if the top is cool and the bottom is hot.

Excessive venting will reduce the system pressure, so only vent when necessary and check the system pressure as mentioned above. Re-pressurise the system if necessary.

**The sealed system is fitted with a safety valve to release excess pressure. If water or steam is emitted from the end of the safety valve discharge pipe, switch off the boiler and contact your Installer or Service engineer.**





**Figure 5:** Arrow showing water refill valve with cap

To re-pressurise the system by adding water:

1. Only add water to the system when it is cold and the boiler is off. Do not overfill.
2. Check that the fill point valve is closed as shown by the large arrow in Figure 5.
3. Remove the cap shown with a suitable spanner.
4. Ensure that the flexible filling loop supplied with the boiler is connected and that the double check shut off valve connecting it to the water supply is closed. (A valve is open when the operating lever is in line with the valve, and closed when it is at right angles to it).
5. Open the fill point valve shown in Figure 5.
6. Gradually open the double check valve from the water supply until water is heard to flow.
7. When the white needle of the pressure gauge is between 0.5 and 1 bar, close the valve.
8. Vent each radiator in turn, starting with the lowest one in the system, to remove air.
9. Continue to fill the system until the pressure gauge indicates between 0.5 and 1.0 bar. Close the fill point valve.
10. Repeat steps 6 and 7 as required.
11. Close the fill point and double check valves either side of the filling loop and disconnect the loop.
12. Refit the cap to the fill point valve shown by the large arrow in Figure 5.

Complies with EC Low voltage  
Electromagnetic compatibility and  
Boiler efficiency Directives.





**EFFICIENT HEATING SOLUTIONS**

**GRANT ENGINEERING (UK) LIMITED**

Hopton House, Hopton Industrial Estate, Devizes, Wiltshire SN10 2EU

Tel: 01380 736920 Fax: 01380 736991

Email: [sales@grantuk.com](mailto:sales@grantuk.com) [www.grantuk.com](http://www.grantuk.com)

This manual is accurate at the date of printing but will be superseded and should be disregarded if specifications and/or appearances are changed in the interests of continued product improvement.

All goods sold are subject to our official Conditions of Sale, a copy of which may be obtained on application.

© Grant Engineering (UK) Limited 2006. No part of this manual may be reproduced by any means without prior written consent.