

express

ARI 8 REGULAR

OPEN VENTED CONDENSING BOILER

USER INSTRUCTIONS

TO BE GIVEN TO THE USER

CE
0086
EC 87/BP/35

G.C. Appliance No. 41-260-15

1

INTRODUCTION

The **WW Express Boilers AR18 Regular** is a high efficiency condensing, fully automatic, wall mounted gas appliance for use with natural gas.

The appliance incorporates a microprocessor based, fully modulating pre-mix gas control system with direct burner ignition.

The **AR18 Regular** provides central heating at outputs between 5.9 kW (20,100 BTU/h) and 19.3 kW (65,900 BTU/h).

Heat output is controlled according to demand by the fully modulating pre-mix burner control.

The appliance incorporates frost protection. However this is not operational when the main switch on the appliance is in the off position, or the electrical supply to the appliance is isolated.

Gas Consumer Council

The Gas Consumer Council (GCC) is an independent organization which protects the interests of gas users. If you need advice, you will find the telephone number in your local directory under 'Gas'.

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SAFETY

Read these user manual instructions or the user label (fitted on the decorative front panel) carefully before attempting to operate the appliance. Comply with all applicable warnings. Do not interfere with any sealed components and use the appliance only in accordance with these instructions.

2.1

CURRENT GAS SAFETY (INSTALLATION AND USE) REGULATIONS OR THE RULES IN FORCE.

It is the law that all gas appliances are installed by a competent person in accordance with the above regulations. Failure to install appliances correctly could lead to prosecution. It is in your own interest, and that of safety, to ensure that the law is complied with.

If the appliance is damaged, turn off the appliance and consult a CORGI registered installer.

If it is known or suspected that a fault exists on the appliance it **MUST NOT** be used until the fault has been rectified by a competent person.

2.2

ELECTRICAL SUPPLY

This appliance must be earthed.

Supply: 230V ~ 50Hz fused at 3A.

The method of connection to the mains supply must facilitate complete isolation of the appliance. Either a 3A fused three pin plug and unswitched shuttered socket outlet, or a 3A fused double pole switch having a 3 mm contact separation in both poles, serving only the boiler (and its external controls), may be used.

2.3

CLEARANCES AND VENTILATION

It is not necessary to have a purpose provided air vent in the room or internal space in which a room-sealed appliance is installed.

Cupboard or compartment ventilation is not necessary for a room-sealed appliance providing that the minimum clearances are maintained.

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BOILER LOGBOOK

A Logbook is supplied with your appliance and is situated at the rear of the installation and service manual. This Logbook should be completed by your installer to verify that the correct installation and commissioning procedure was followed.

Failure to complete the Logbook may result in difficulties should a problem arise with your appliance during the guarantee period.

This Logbook forms part of the industry's Benchmark code of practice for the installation, commissioning and servicing of central heating systems. All CORGI Registered Installers carry a CORGI ID card and have a registration number. Both should be recorded in your Logbook. You can check your installer is CORGI registered by calling CORGI on 01256 37230.

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OPERATING INSTRUCTIONS

Refer to Fig. 1

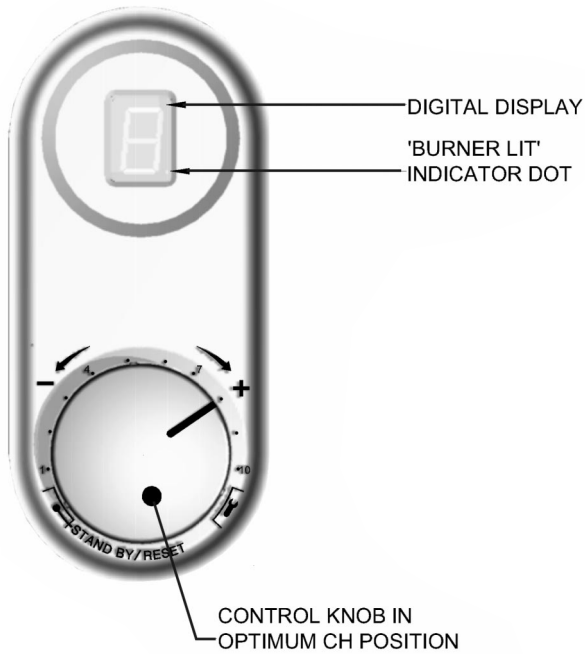
4.1

TO LIGHT THE BOILER

- 1) Switch on the electrical supply
- 2) Turn the CH control knob to the midpoint between minimum and maximum setting. The display changes from 'G' to 'H'
- 3) Ensure that all secondary controls, e.g. programmer, room thermostat are calling for heat
- 4) The display changes to 'H'. When the burner has lit there will be a small dot appearing in the bottom right corner of the display
- 5) If the burner fails to light the fan will stop. Initially this may be due to air in the gas supply. The boiler will automatically have five attempts at ignition. After the five attempts it may be necessary to RESET the boiler by turning the control knob to the RESET/STANDBY position and back to 'ON' within TWO seconds, then repeat (2).

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FASCIA PANEL



4.3

TO TURN THE BOILER OFF

For short or long periods

Switch the programmer and/or room thermostat switch to the **OFF** position.

Note: The appliance is fitted with a frost protection device. In the event of very cold conditions, the pump may operate and the boiler light for a few minutes to protect the appliance and system from potential frost damage. This can only function if the gas and electricity supplies are maintained and the control knob on the appliance is set to the STAND-BY position.

This function automatically operates the boiler when the heating system water reaches temperatures below 5°C.

If either the gas or electricity services is to be isolated during a period when frost is likely, the water circuits must be drained.

4.4

BOILER OVERHEAT THERMOSTAT

The appliance is fitted with two thermistors located on the flow and return pipes. In the event of overheating, the boiler will shut down and the display will show '1'. Allow the boiler to cool, then briefly turn the control knob to RESET/STAND-BY position and then back to 'ON' within TWO seconds.

If the fault persists, consult a CORGI registered installer.

4.5

DIAGNOSTIC DIGITAL DISPLAY

Should the boiler fail for any reason the digital display will show a flashing error code and the boiler will enter a lockout condition.

For faultfinding, refer to the diagnostic chart shown below, together with the notes given in sections 8.3, 8.4 and 8.5 of the boilers installation and service manual.

To RESET the boiler turn the control knob fully anti-clockwise to the RESET/STANDBY position and then back to 'ON' within TWO seconds.



Note:- When a room thermostat is fitted, the central heating control knob simply controls the rate at which the boiler will achieve the required temperature. See figure 1 for 'Optimum' setting.

4.2

CONTROL OF WATER TEMPERATURE

CH: Adjustable via the CH temperature control knob to give radiator temperatures of between 30°C and 80°C. To operate the boiler more efficiently it is recommended to set the CH temperature about half way (between '+' and '!'). Please check with your installer the size of your radiators.

During periods of no central heating requirement, this control should be set to the Standby position.

Note: If the display shows a flashing 'H' the boiler is in service mode and the boiler will fire continuously at minimum input.

This setting is for the convenience of the Service Engineer ONLY.

RESET LOCK-OUT CODES

DIGITAL CODE	FAULT/EFFECT	REASON
1	Overheated appliance	Water temperature greater than 105 °C
2	Water flow failure or Differential check faulty/ Flame for a short period only	Sensor temperature differential incorrect
3	No gas or Lockout flame signal/ No flame, Lockout after 5 ignition attempts	Low gas pressure. No flame signal on ignition, or loss of signal during operation
4	Flue gas sensor/No flame	Flue gas temperature greater than 95 °C

BLOCKING CODES

DIGITAL CODE	FAULT/EFFECT	REASON
5	Defective sensor/No flame	Defective flow, return or flue sensor
6	Defective gas valve/ Flame continues after demand ends	5 sec flame signal after burner is switched off
7	Defective fan/No flame	Missing or Erroneous RPM signal
F	PCB error/No flame	Internal error
b	Activate BCC/No flame	New BCC
C	Safety system failure/No flame	Failure of internal self checking system
E	BCC error/No flame	Incorrect /missing BCC

DIGITAL CODE	FAULT/EFFECT	REASON
h	No flame	Faulty connector
□	Differential check faulty/Flame for 15 seconds	Water flow rate too low
P	Error in power supply/No flame	Low mains voltage
	No light indication	Defective power supply

NOTE: RPM SIGNAL - FAN SPEED SIGNAL IN REVOLUTIONS PER MINUTE
 BCC - BOILER CHIP CARD (A SMALL MICROCHIP THAT PUSH FITS ONTO THE CONTROL PCB AND ALTERS OPERATING PARAMETERS)
 (ONLY FITTED TO CERTAIN MODELS)

FAULT CODES 1-4 CAN BE RESET BY FOLLOWING THE PROCEDURE IN SECTION 4.5. HOWEVER, IF ANY OTHER FAULT CODE IS SHOWING PLEASE CONTACT YOUR INSTALLER OR THE WW EXPRESS BOILERS SERVICE HELPLINE: 01926 834834.

5 GENERAL CARE

The front panel, being a powder coated white finish should be cleaned with a damp cloth and mild detergent. Do not use abrasive cleaners.

6 ROUTINE SERVICING

To ensure continued efficient operation of the appliance, it is recommended that it is checked and serviced as necessary at regular intervals. The frequency of servicing will depend upon the particular installation conditions and usage but in general once a year should be adequate. It is law that any service work must be carried out by a competent person such as British Gas or other CORGI registered personnel.

7 WARNING

If a gas leak is suspected or exists, turn the gas OFF at the incoming mains (adjacent to the meter). Do not operate any electrical switches. Do not operate any electrical appliances. Open all windows and doors. Do not smoke. Extinguish all naked lights. Phone the Transco 24 hour emergency number immediately on 0800 111 999. (Do not call from a mobile phone).

The boiler is fitted with a condensate trap. The condensate drain point must not be modified or blocked (see section 4.6 of the installation manual).

8 PLUME FROM TERMINAL

Like all condensing boilers this appliance will produce a plume of condensation from the flue terminal. This is due to the high efficiency and hence low flue gas temperature of the boiler. It is normal and not a fault indication.

express

Manufactured for William Wilson by Halstead Boilers Limited.

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 Enquiries Line: 01224 877522. Service Helpline: 01926 834834.

benchmark
 The code of practice for the installation,
 commissioning & servicing of central heating systems

*Halstead Boilers is continuously improving its products and may therefore change specifications without prior notice.
 The statutory rights of the consumer are not affected.*

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SERVICE HELPLINE: 01926 834834