

BENSON GUHA/C WARM AIR HEATER NEW FAN CONTROL/LIMIT STAT RETROFIT NATURAL GAS (G20 I₂H), PROPANE GAS (G31 I₃P)



WARNINGS

Benson equipment must be installed and maintained in accordance with the relevant provisions of the Gas Safety (Installations and Use) Regulations 1998 for gas fired products. Due account should also be taken of any obligations arising from the Health and Safety at Works Act 1974 or relevant codes of practice. In addition the installation must be carried out in accordance with the current IEE wiring regulations (BS 7671), BS 6896 (Industrial & Commercial) and any other relevant British Standards and Codes of Practice by a qualified installer. All external wiring MUST comply with the current IEE wiring regulations.

The original Honeywell fan control/overheat limit thermostat is no longer available for the GUH range of warm air suspended unit heaters.

This bulletin describes the parts required and method of fitting a replacement fan control and overheat limit thermostat to these heaters.

The functions of the original Honeywell controller will now operate from two separate components, a 110° C limit thermostat and a fan control thermostat housed within an enclosure. The new components fit into the original Honeywell sensing tube hole.

WARNING: DISCONNECT BOTH ELECTRICAL AND GAS SUPPLIES BEFORE CARRYING OUT ANY WORK ON THIS HEATER.

For GUH 50-480 a replacement fan control/limit thermostat kit part no. **20-45-590** will be required comprising of:

- 1 off fan control/limit thermostat housing
- 1 off overheat thermostat
- 1 off fan control thermostat
- 6 off M5 x 12mm self tappers
- 5 off loose female insulated crimp terminals
- 1 off gasket

Notes:

There are 2 off original fan/limit stats used on GUH205 - 480 c/w piezo ignition and GUH400 - 480 c/w autospark ignition.

There is a secondary high temperature stat wired in series with this replacement fan control/limit stat on GUH480 c/w piezo ignition and GUH205 - 480 c/w autospark ignition only.

Procedure

1: Remove original Honeywell fan control/limit stat:

Remove single retaining screw securing the lid of the original fan/limit stat as shown.



Disconnect the five cables by releasing the quick connectors with a screwdriver as shown.

Note: The earth cable ring crimp will need to be cut off and discarded.



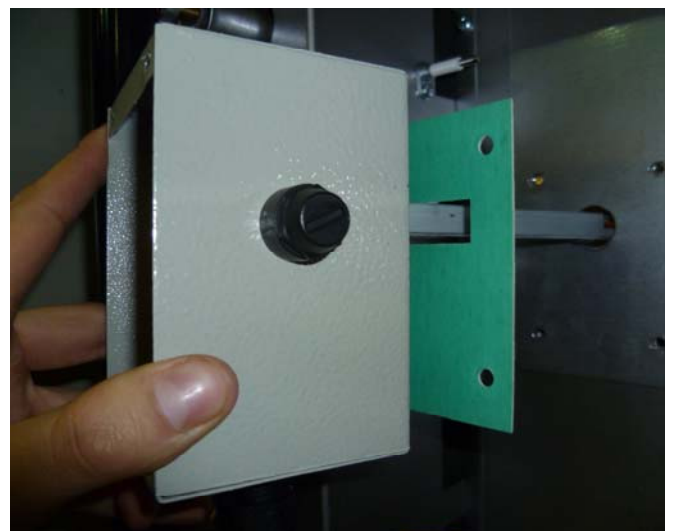
Unscrew and withdraw cable gland (save for later), then remove fixing screws then remove unit from heater.



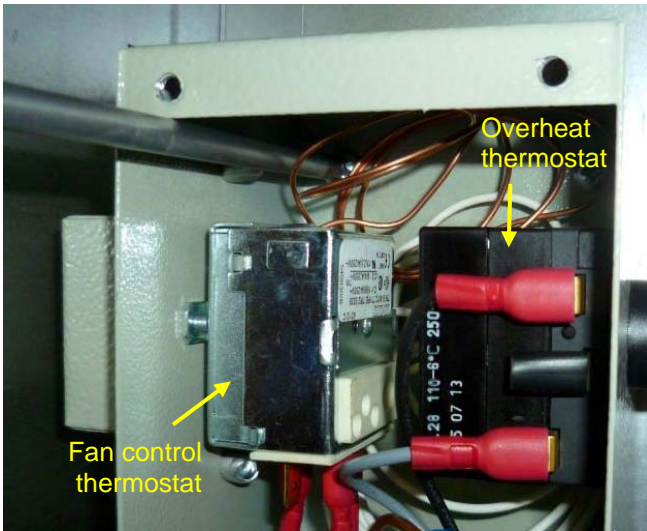
2: Fit replacement fan control/limit stat assembly.

Slide gasket over sensing tube as shown.

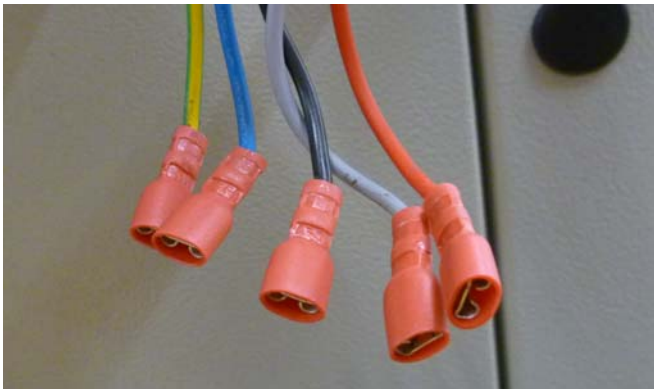
Fit assembly into original hole.



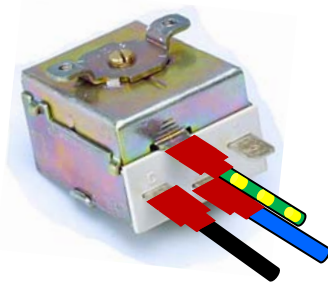
Fix in position using the original holes.



Fit the supplied female spade crimps to the original cables. (cable colours may vary to those shown), refit cables through original cable gland and fix.



Connect the female spade connectors to the correct Fan control terminals noting the cable colours from the heater terminals listed below.



Fan control thermostat wiring connections.
(cable colours may vary to those shown)

GUH50-165 c/w piezo ignition plus GUH 50-325 c/w autospark ignition.

Heater **terminal 5** to fan control **terminal C**
Fan control **terminal 2** to heater **terminal 9**
Heater earth to fan control earth terminal

GUH205-325 c/w piezo ignition. (* two fan stats)

***Fan stat 1**
Heater **terminal 4** to fan control **terminal C**
Fan control **terminal 2** to heater **terminal 5**
Heater earth to fan control earth terminal

***Fan stat 2**
Heater **terminal 5** to fan control **terminal C**
Fan control **terminal 2** to heater **terminal 9**
Heater earth to fan control earth terminal

GUH400-480 c/w piezo ignition or autospark ignition (two heater modules).**

****Unit 1**

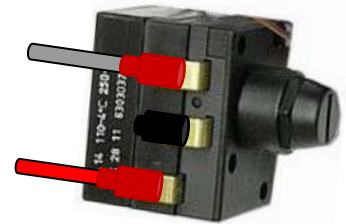
Heater 12 way **terminal 5** to fan control **terminal C**
Fan control **terminal 2** to heater 12 way **terminal 9**
Heater earth to fan control earth terminal

****Unit 2**

Heater 7 way **terminal 1** to fan control **terminal C**
Fan control **terminal 2** to heater 7 way **terminal 7**
Heater earth to fan control earth terminal

Connect the female spade connectors to the correct overheath thermostat terminals noting the cable colours from the heater terminals listed below.

Overheat thermostat wiring connections
(cable colours may vary to those shown)



GUH50-165 c/w piezo ignition or autospark ignition.

Heater **terminal 7** to overheath stat **terminal 1**
Overheath stat **terminal 2** to heater **terminal 12**

GUH 205-325 c/w autospark ignition.

Heater **terminal 7** to overheath stat **terminal 1**
Overheath stat **terminal 2** to secondary limit stat

GUH205-325 c/w piezo ignition. (* two limit stats)

***Limit stat 1**

Heater **terminal 7** to overheath stat **terminal 1**
Overheath stat **terminal 2** to heater **terminal 11**

***Limit stat 2**

Heater **terminal 11** to overheath stat **terminal 1**
Overheath stat **terminal 2** to heater **terminal 12**

GUH400 c/w piezo ignition or autospark ignition (two heater modules).**

****Unit 1**

Heater **terminal 7** to overheath stat **terminal 1**
Overheath stat **terminal 2** to heater **terminal 12**

****Unit 2**

Heater **terminal 5** to overheath stat **terminal 1**
Overheath stat **terminal 2** to heater **terminal 6**

GUH480 c/w piezo ignition or autospark ignition (two heater modules).**

****Unit 1**

Heater **terminal 7** to overheath stat **terminal 1**
Overheath stat **terminal 2** to secondary limit stat, unit 1

****Unit 2**

Heater **terminal 5** to overheath stat **terminal 1**
Overheath stat **terminal 2** to secondary limit stat, unit 2

Check continuity on each cable rewired to ensure correct termination.

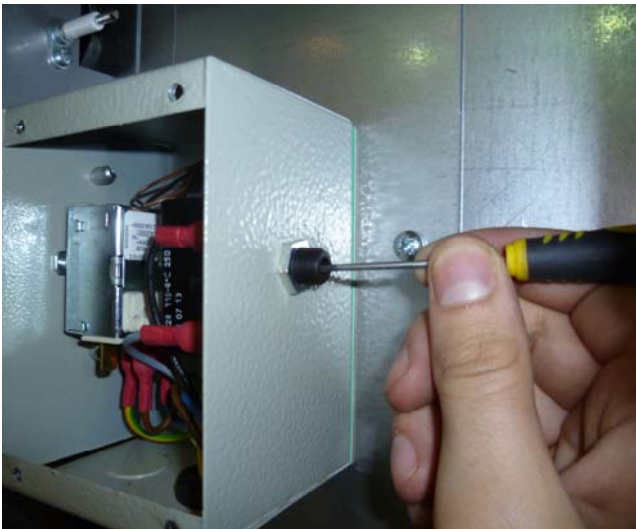
Fit lid to box using 4 screws provided



Upon completion the heater should be tested for correct operation of the fan control and overheat limit.

4: Overheat thermostat reset:

In the event of the overheat thermostat tripping, once the cause has been remedied, it can be reset by removing the protective screw cap, then pushing in the green button as shown below.



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