



NORTHERNGASHEATING

so comfortable, so affordable

Customer Handbook



Congratulations on your purchase of a brand new central heating system **FROM NORTHERN GAS...**

Central heating is the most efficient and popular way to heat your home and, to get the best from your new system, it's important that you understand how to control your heating, regulate your hot water and use energy saving measures. The manufacture's instruction for the various components of your installation are at the back of this folder, but this section gives you tips on how to get the best from your system as well as solving simple problems and pointing you in the right direction if you need further help.

You can find additional information on our web site www.northerngasheating.com or by calling us on 08707 664070.

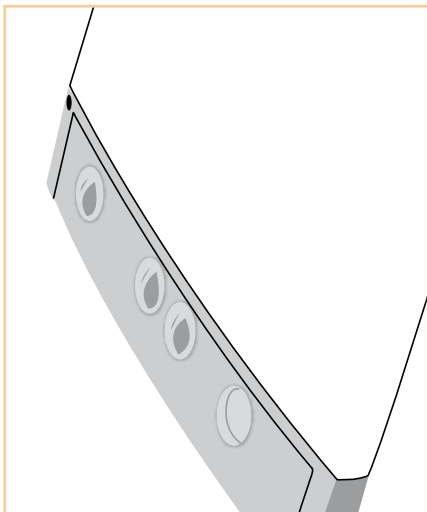
General Heating Care

There are some simple steps you can take to maximise your boiler's performance and ensure the efficient use of your heating system and its components. We suggest that you familiarise yourself with the temperature controls and pressure gauge. Arranging an annual service of your boiler and knowing how to keep it clean are also important first steps.

Northern Gas Heating offers a wide variety of control options, ranging from easy-to-operate mechanical devices to much more sophisticated digital and wireless radio frequency programmers. The key word is flexibility: whatever your lifestyle, there's a choice of controls to match your needs.

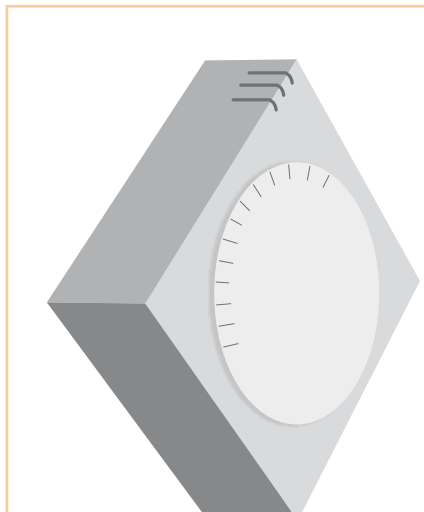
Why are effective controls so important? Apart from the very desirable benefits outlined above, controls enable you to minimise energy consumption by reducing temperature levels – but without any sacrifice in comfort. For example, if your room thermostat is set to 21°C (a typical temperature setting) and you reduce it to 20°C, your heating energy consumption can be cut by 6-10%. The more sophisticated the controls you choose, the more precisely you can set temperature and time settings. And by timing your heating and hot water periods in tune with your lifestyle, you can reduce wasteful overheating.

Temperature Controls



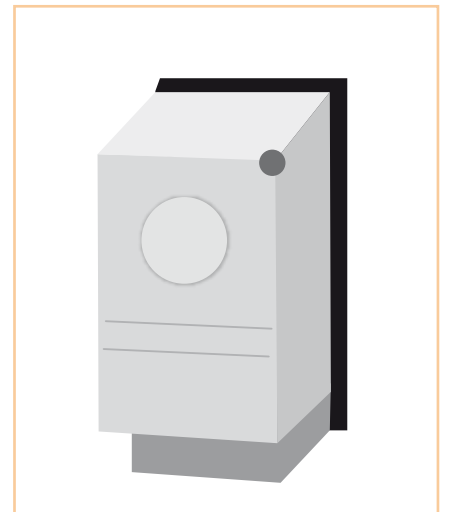
Boiler Thermostat

You can find this on the boiler itself. It controls the temperature of the hot water flowing around the pipes to the radiators. Correct setting: HIGH in the winter. LOW in the summer.



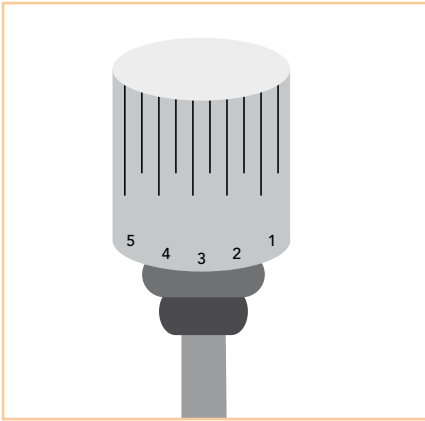
Room Thermostat

This will be in the hallway or living room. It controls the temperature of the whole home, based on the room it is in.
Correct setting: 21°C for pensioners and families with young children.
Between 18 to 21°C for everyone else. Note - turning up the room thermostat will not heat up the room faster but it will make the room warmer.



Cylinder Thermostat

This will be on the hot water tank. It controls the temperature of the hot water coming out of the taps. Correct setting: 60°C or 140°F.



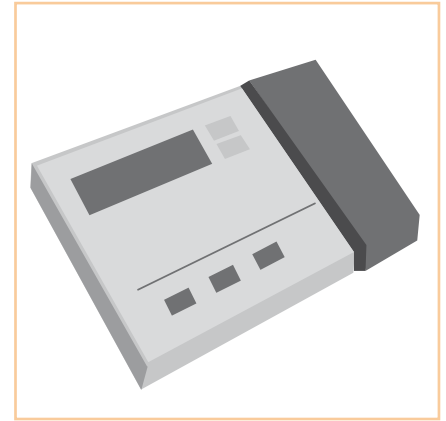
Radiator Thermostat

You can find one of these on each radiator. It allows you to have different temperatures in each room. Correct setting: Start off at a middle setting and turn it down a notch if too warm and up a notch if too cool. If the radiators go cool, and the room is warm, this is normal and means the thermostat is doing its job.

Typically the numbers on the dial represent the following average room temperatures (shown in Celsius):

- | | |
|----------------|------------------|
| 1 = 10 degrees | 4 = 18 degrees |
| 2 = 13 degrees | 5 = 21 degrees |
| 3 = 16 degrees | 6 = 23.5 degrees |

So, for example, if a radiator goes off when the setting is at 4 on the thermostat, it means that the room temperature has reached 18 degrees.



Programmer

This can control the time you want the heating and hot water to switch on and off. Make sure it is set to suit your lifestyle rather than ruling your life!

Set it to come on half an hour before you get up or come in, and switch off half an hour before you go out or go to bed. You can also set it to come on and go off twice a day.

Going on Holiday?

Summer

Turn the system off at the programmer. All you have to do is switch the heating on when you get back.

Winter

In cold weather, you should set the programmer to heat only.

Then turn the room thermostat to a low setting, about 8°C/45°F, or turn the radiator valves to the lowest setting but not 'off'. Leave the programmer or time switch on 'constant' so the thermostats control the system.

Servicing

Gas appliances need regular servicing to ensure that they are working efficiently and safely. A regular service is not only essential to maintain the manufacturer warranty on your boiler but it will also prolong the life of your system and help to keep you and your family safe from carbon monoxide poisoning.

The easiest way to ensure that your system is serviced regularly is to organise a Northern Gas Heating 5 year service plan, which takes the stress out of arranging a service every year. We will contact you at the same time every year to arrange your annual service and keep your system in tiptop condition.

For details contact us on 08707 664070 or at www.northerngasheating.com

A Northern Gas Heating annual boiler service and safety inspection covers the following:

- Flue ways and terminals
- Ventilation provision
- Gas pressure and heat input
- All safety devices
- The following boiler components:
 - Heat exchangers
 - Burners
 - Combustion fan
 - Seals (gas and water)
 - Ignition systems
- Performance test (on all boilers with a suitable test point or accessible flue terminal)
- All visible pipe work and controls
- All radiators
- Expansion tank (and vessel) plus associated components
- Advice on using your present controls more efficiently

Common Heating Complaints and their Solutions

A number of central heating problems are relatively simple matters, which can be dealt with by yourself without the need for an engineer's intervention.

Below we have listed common boiler and radiator faults with simple solutions, which you should try before calling for assistance.

A. RADIATORS AND PIPE-WORK

1. Problem: The top of the radiator is cold and the bottom is hot.

Solution: The radiator needs to be 'bled', as air has entered the central heating system and become trapped. The air will rise to the top of the radiator, forming a pocket that will stop the hot water from reaching that part. To effectively bleed the radiator, firstly turn off the heating system, in order that no more air is drawn in. Now, armed with a cloth beneath, use a radiator key (or screwdriver if necessary) to slacken the air bleed valve (located at one end toward the top of the radiator). Turn the bleed key a half turn anti-clockwise, which will release the air (there will be a hissing sound). As soon as water (which can be both hot and dirty, so use the cloth) begins to flow, close the air bleed valve by turning it a half turn clockwise. Do not over tighten the bleed valve.

Note that radiators should not require frequent bleeding. If they do, there is an underlying problem with air entering the system, and this should be attended to by a Northern Gas Heating engineer.

2. Problem: The top of the radiator is hot and the bottom is cold.

Solution: The most permanent remedy to this problem is a procedure called a 'power flush'; a cleansing process implemented by a pump, which forcibly cleans the central heating system using water and/or chemicals at high velocity but low pressure. This allows for the removal of black iron oxide sludge and ferrous oxide sediment (magnetite), which build up in the bottom of the radiator, preventing it from properly reaching temperature. Other indications of excessive magnetite are noisy boiler pumps, sticking valves, poor warm-up times, intermittent radiator warm-up and boiler over-heating.

3. Problem: My radiator is cold, but when I bleed it no water comes out.

Solution: This situation can be caused by an airlock, and will most almost certainly be the case if the pipe leading to the radiator itself is hot. Try turning all the other radiators in the house off using the radiator valves, and then try bleeding the problematic radiator again. Alternatively, the problem may be caused by the internal pin in the TRV (which regulates water flow) having become stuck down in the 'closed' position. To bring about a 'quick-fix' to this situation, remove the TRV head by unscrewing it, and pull the pin gently upwards with a pair of pliers. Invariably though, this problem will ultimately necessitate the fitting of a new TRV.

4. Problem: Can radiators be painted, and what impact will this have on their performance?

Solution: It is best to paint radiators in 'radiator enamel', which is far less likely to discolour with heat over time. Most new radiators already come with a gloss white finish. Painting will have very little effect on performance, as most heat is actually created by convection rather than radiation.

5. Problem: Certain hot water taps do not work initially.

Solution: This usually happens first thing in the morning, and is caused by an airlock: air bubbles rising from the cylinder trapped at the top outlet. Remove the airlock by opening a bath tap. The system will then work until it has had a dormant time for the air bubbles to achieve another 'airlock'. The underlying problem could be poor pipe-work layout within the property or the pipe-work not being vented correctly where the hot water outlet comes off the top of the cylinder.

6. Problem: Can I paint copper pipes?

Solution: Yes, you can. However, bare or new copper should first be lightly abraded with emery cloth or wire wool, and then wiped with white spirit in order to remove any preservative or grease.

7. Problem: I have creaking and rattling sounds in my wall/floor pipe-work.

Solution: As water gets hotter, pipes expand. As the water cools, the pipes will contract. If the pipes are tightly fitting in the wall or floor, they will start to creak as they expand or contract. The pipes will need to be 'lagged' in order to prevent this. It may be that the pipes are sitting so tight there is no room for any movement. If under floor pipes rattle, it may be the case that they have not been 'clipped' down properly, and are moving too freely during the expansion/contraction process.

B. BOILERS

1. Problem: There's no heating or hot water

Solution: These checks may help you fix the problem:

- Check your power supply is working and a fuse hasn't blown
- Check the gas hasn't been turned off or you have enough oil in your tank
- Check your thermostats and control switches are turned on
- Check the pump is running
- Check the pilot light is lit, your boiler manual will tell you how to relight it

If none of this works, you'll need to call a NGH heating engineer

2. Problem: My hot water is far too hot.

Solution: With a combination boiler, there is usually a hot water temperature setting. Adjust this as necessary. For normal or 'conventional' systems comprising a hot water cylinder, there is normally a 'cylinder stat' mounted on the side, which should be preset to 55 – 65 degrees.

3. Problem: My boiler pilot light has gone out. How do I re-ignite it?

Solution: On most modern boilers, the pilot light will come on automatically when the boiler detects a 'call for heat' from a room thermostat or hot water thermostat. If this does not happen, then a Northern Gas CORGI engineer will need to be called. Older types of boilers will have a 'permanent' pilot light. This may go out for a number of reasons, such as an interruption in the supply, a draught, or a fault with the boiler itself. Before calling professional help, it is worth attempting to re-light the pilot following the instructions issued with the appliance. If these are unavailable, the manufacturer will have usually printed lighting instructions on the inside of the door.

4. Problem: There is a constant 'humming' sound in my pipe-work.

Solution: A constant humming in the pipes is usually attributable to the boiler pump. Fitting anti-vibration brackets may be necessary to reduce the noise. Also, check that the speed of the pump has not been set too high (this is the job of a Northern Gas CORGI engineer). A final possible cause of pipe humming is the volume of water that they carry around the system: your existing pipes may be too small for the amount needed.

5. Problem: How do I top up a sealed system boiler?

The boiler pressure should be at 1 to 1.5 bar, which will need topping up manually by the filling loop. This is usually under the boiler and may have one or two taps, both of which need to be open, on it and should be a flexible pipe. Fill to 1 to 1.5 bar, then bleed all the radiators and finally refill to 1 to 1.5 bar. Close all taps.

6. Problem: How do I top up a combi boiler?

Combination boilers - or "combi" boilers as they are more commonly known - sometimes stop working due to a drop in pressure. In most cases this is easily rectified and will take seconds.

The filling loop must not be connected to the boiler permanently as it only used to top up the boiler if pressure has dropped.

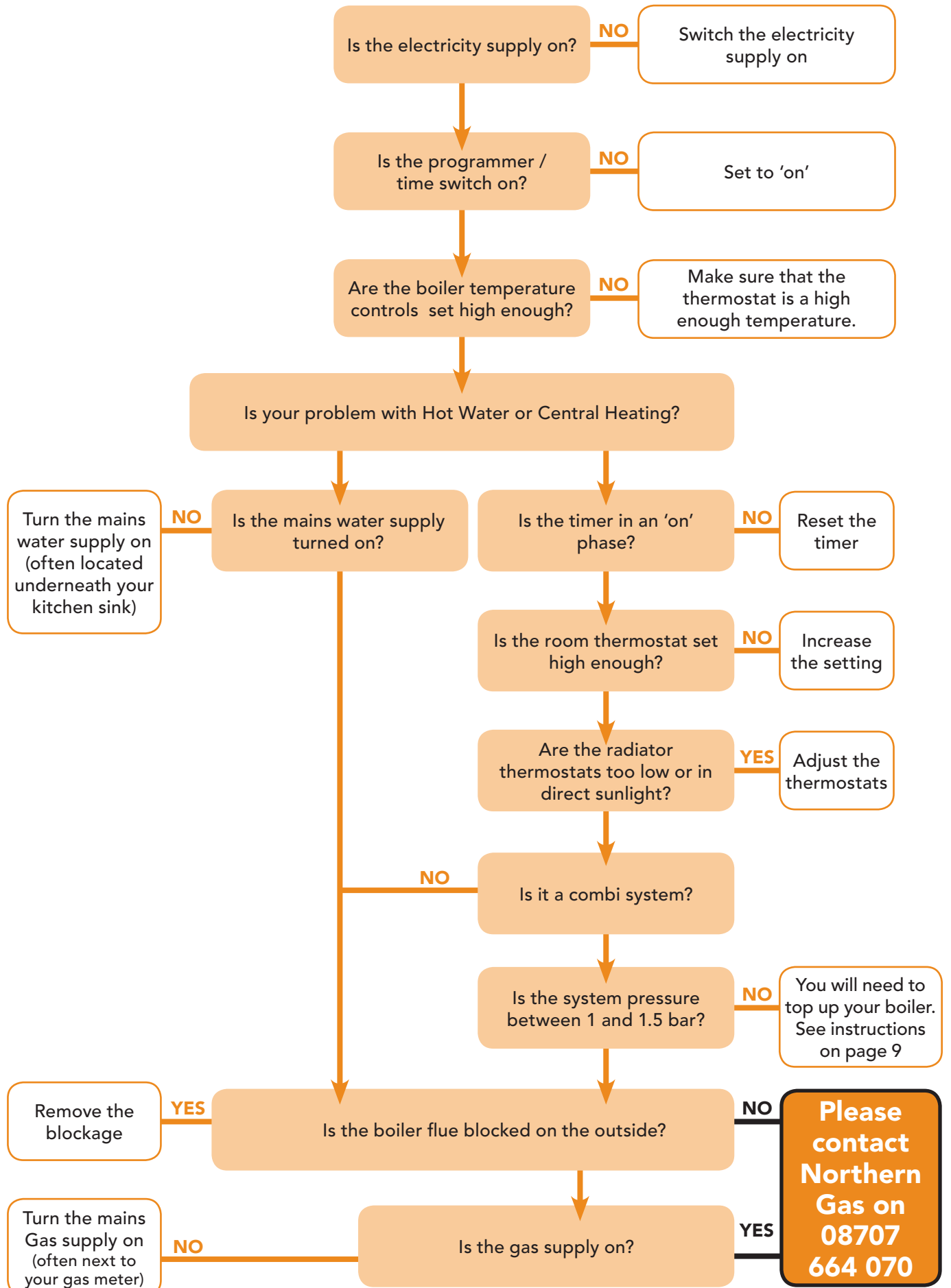
There are two dials, one of which is the pressure dial and the other, the temperature. Below the boiler is a filling loop, which comprises of a flexible pipe, a handle and a double check valve. The double check valve prevents water from the central heating being sucked back into the cold water supply for the house.

The pressure dial should have a red line on it to signify the minimum pressure required for the boiler to work. This dial will increase in pressure when the combi is heating water, so ensure that the central heating part is off and that no hot water is being drawn. If there is no red line then check the manual for the combi as putting too much pressure in the boiler will cause the blow off valve to blow, which will be vented outside of the property.

Most boilers require just over 1 to 1.5 bar of pressure when switched off.

If the pressure is below the minimum required for your boiler then slowly open the valve on the filling loop, this normally has a handle attached but a flat head screwdriver may be needed. Turn the handle or screwdriver anti-clockwise. You should hear the water moving into the combi. Keep an eye on the pressure dial and when it reaches the correct pressure turn the valve off! You can now use your boiler as normal.

CENTRAL HEATING FAULT FLOW CHART



I CAN SMELL GAS

Check to see if the gas has been left on, or if a pilot light has gone out. Turn the gas supply off at the meter immediately and open the doors and windows. Call Transco on 0800 111 999 but do not use a phone near the gas leak and do not use a mobile phone at all. If the leak is on the customer side of the meter (pipe-work or equipment), Transco will advise that a CORGI registered operative is contacted to expedite repairs. Meter leaks will be attended to whilst on site. In the meantime, do not turn on or off any electrical appliances including electrical intercoms and entry systems. Do not use matches, naked flames or smoke. Ensure you are safe at all times.



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