

HEATING TACKLING FAULTS

Different makes and models of boiler have different controls, so keep your boiler operating instructions in a handy place in case of trouble. Many faults have simple solutions, which you should be able to do yourself – but if in doubt, call in an engineer.

Noisy system

Hissing/banging

- The water level in the system might be low. Turn off boiler and pump, and examine the feed-and-expansion cistern in the loft; if it's empty, check that the ball valve is not jammed closed and that the water supply has not been turned off or supply pipe frozen. If you can identify and fix the cause yourself, you can then top up the system water level again, following the boiler operating instructions.
- Substantial deposits of scale can build up in the system in hard-water areas – call an engineer to clean it out. They may decide to fit a hard water filter to stop it happening again.
- It could mean that your boiler thermostat is faulty – call an engineer.
- If you have a solid-fuel system, it could be that the chimney is blocked – try sweeping it (see page 141).
- In a solid-fuel system, noises could indicate that the pump is not working. You can check this yourself, using the boiler operating instructions. Shut down the boiler; check that the pump is turned on and the impeller running by feeling the casing for vibration; if the switch is set to on, but the pump is not running, turn off the power at the mains and check that none of the wiring connections has come loose. If the pump is running, but the outlet pipe is cool, open the bleed valve to release trapped air. If the problem persists, call an engineer.

Creaking from pipework

- This could be caused by hot pipes expanding and rubbing against floor/wall structure or other pipes. Widen pipe notches in joists (but don't deepen them, as this will weaken the joists); clip unsupported pipe runs; and pack insulation around and between pipes.

Humming in pipes

- It could be that the pump speed is too high or that your pipes are too narrow for the system flow – call an engineer.

Rushing sound in pipes

- Probably caused by air or gas bubbles in the system. Bleed the radiators (see page 330); if the problem persists, call an engineer.

Boiler not working

- Check if the pilot light is extinguished. If it is, re-light it in accordance with the boiler manufacturer's instructions.
- It may be that the temperature setting on the roomstat or boiler thermostat is too low. Check and reset as necessary.
- The system timer/programmer may be incorrectly set or faulty. Check and reset the timer/programmer, as necessary. If the problem persists, call an engineer.
- Overheating caused by the pump shutting down may have caused the thermostat to shut down the boiler too. Confirm the pump is running and restart the boiler. If the problem persists, call an engineer.

Cold radiators

All radiators cold when boiler running

- This could mean that your pump is not working: see under Hissing/banging, left.
- It may be that your pump thermostat/timer is incorrectly set or faulty. Check and reset, if necessary. If the thermostat/timer is set correctly, turn off the power and check wiring connections, following the operating instructions. If the problem persists, call an engineer.

Some radiators cold

- First you should check if the zone valve thermostat/timer is incorrectly set or faulty; reset it, if necessary. If set correctly, switch off the power and check the wiring connections, using the operating instructions. If the problem persists, call an engineer.
- The zone valve itself may be faulty, or the system may need 'balancing'. Call an engineer.

Single radiator cold

- It may simply be that the radiator's manual control valve is turned off – if so, open it.
- The thermostatic radiator valve could be incorrectly set or faulty. Check and reset, if necessary. If the valve is set correctly but the radiator still doesn't work, try replacing it (see page 330).
- You may have an incorrectly set lockshield valve (see page 327). Open the manual valve fully, then remove the plastic cap from the lockshield valve and use an adjustable spanner to open the valve until the radiator warms up. Next time you have the system serviced, ask the engineer to balance the radiator.
- Heavy corrosion deposits may be blocking the inlet and outlet. Remove the radiator and flush out or replace it, as necessary; add corrosion inhibitor to the system (see opposite).

Top of radiator cold

- This means there is air trapped. Open the bleed valve so that air can escape (see page 330); if the problem persists, call an engineer.

Centre and bottom of radiator cold

- Corrosion is probably restricting the water flow. Remove the radiator and flush out or replace it, as necessary; add corrosion inhibitor to the system (see opposite).

- There may be a problem with the electricity supply. Check some other electrical circuits and if there is a power cut, wait for power to be restored. If a fuse has blown, repair it.
- With combination boilers, it's possible that the water pressure is at an incorrect level. Refer to the operating instructions for the correct figure and check the boiler pressure gauge; if it is too low, you may be able to top up the system at the mains water filling point; otherwise, call an engineer.

Overflow in the roof dripping

- The water level in the feed-and-expansion cistern may be too high, due to a leaking ball valve float or an incorrectly adjusted or faulty ball valve. Turn off the water supply and empty the cistern to below the level of the valve; examine the float and replace, if necessary. Bend the float arm or adjust the valve stop, if necessary. If the float arm/valve is adjusted correctly, fit a new washer to the valve; if the valve is in poor condition, fit a new valve (see page 299).

Preventing the system from freezing up

If you go away during the winter and turn off the heating, a severe drop in temperature could cause the water in the system to freeze and burst the pipes, even if they have been lagged. To prevent this you can take one or more of the following steps:

- With gas- and oil-fired systems, turn the roomstat down to its minimum setting so that the heating will come on when the temperature falls.
- If you regularly go away in the winter, have a frost thermostat fitted; this will switch the system on when the temperature drops to freezing and off again when it rises.
- Pipes that are particularly susceptible to freezing may be wrapped with trace heat tape. This is used in conjunction with a frost thermostat; when the temperature drops low enough, the thermostat switches on the tape, which heats the pipe.

Draining and refilling the system

All wet central heating systems will be provided with at least one draincock to allow the system to be emptied for maintenance or repairs. Usually, this will be in the return pipe close to the boiler. However, where a solid ground floor prevents pipes from being run below it, the pipes will drop down from the ceiling void to supply ground-floor radiators. These sections of pipework will remain full of water when the system is drained from the boiler draincock and will have their own draincocks, allowing them to be emptied separately.

When refilling the system, make sure all draincocks and radiator bleed valves are closed before restoring the water supply to the feed-and-expansion cistern in the loft. As water flows into the system, air will become trapped in the radiators, so bleed each by opening the bleed valve about half a turn, starting at the bottom of the house and working upwards (see page 330). Before turning the pump back on, bleed this too.



Before draining the system, switch off the boiler, but allow the pump to run for ten minutes to cool the water. Then turn off the pump and close the stop valve in the pipe supplying the feed-and-expansion cistern. If there is no valve, place a batten across the top of the cistern and tie the ball valve arm to it to prevent the valve from opening. Push one end of a hose on to the outlet of the draincock. Run the hose to an outdoor drain.

Leaks

- Leaks could be caused by loose pipe connections. Shut down the boiler and pump; tighten leaking compression fittings, but no more than a quarter-turn; if the problem persists, or soldered joints leak, drain the system (see below) and remake the joints completely (see pages 308–9).
- A pipe may be damaged. Shut down the boiler and pump, drain the system (see below) and replace the damaged section of pipe (see page 306–9).
- If a corroded radiator is leaking, replace the radiator and add corrosion inhibitor to the system (see below).

Adding corrosion inhibitor

Corrosion inhibitor should be added to a system when it is installed, but it can also be added later if required. Make sure you buy a product compatible with the materials your boiler, pipes and radiators are made of; if in doubt, get expert advice. With an older installation, it is a good idea to flush the system first to remove any build-up of corrosion sludge, which can eventually cause the pump to fail. Turn off the heating and allow the water to cool, then drain the system completely (see below). Refill and drain again. Carry on in this way until the water runs clear. Partially fill the system, pour the correct quantity of corrosion inhibitor into the feed-and-expansion cistern (5 litres should be enough for most domestic systems, but check the manufacturer's instructions) and allow the system to fill completely. Turning the boiler and pump back on will cause the corrosion inhibitor to be mixed thoroughly with the water.

Alternatively, you could use a product designed to be injected from a cartridge straight into one of the radiators. This removes the need to drain down the system.

project essentials

- adjustable spanner
- batten, if required
- hosepipe
- radiator bleed key



Use an adjustable spanner to open the draincock, but do not remove the square valve shank completely. When the feed-and-expansion cistern has emptied, work down through the house, opening radiator bleed valves to release any remaining water trapped in the radiators.