

HOW TO REDUCE BOILER NOISE



What causes boiler noise?

Boiler noise is usually the result of limescale deposition within the heat exchanger of a boiler. This condition is worsened if magnetite is also present in the system, as this combines with the limescale to form a much harder deposit. Other sediment-forming debris such as sand and brick dust entering the system during installation can also become part of the hardened deposit. Local water conditions also play an important part, particularly the scale-forming solids dissolved in the supply water.

Boiler noise is directly related to the rapid condensation or implosion of steam in water. Localised boiling develops on the surface of the deposit, and small steam bubbles are created that make a rattling noise as they leave the surface and travel around the system.

What should be done?

When installed into existing systems, new boilers can become excessively fouled soon afterwards by oxide sludge present in the system water. Replacing a boiler can disturb soft sludge and loosen sediment in other parts of the system, causing these contaminants to be transported by the system water and re-deposited in the new heat exchanger.

The same phenomenon can occur as a result of circulator replacement if flow rates change. The risk of sediment and sludge deposition in new boilers can be avoided by cleaning the system as part of the installation process. Guidance on correct cleaning and treatment can be found in BS 7593:2006 Code of Practice for Treatment of Water in Domestic Hot Water Central Heating Systems.



Fernox DS40 System Cleaner selectively dissolves scale deposits without attacking the metals commonly found in central heating systems. However this acid-based cleaner should only be used in new installations or in systems less than 10 years old.

Older systems that have been untreated for periods of time may have existing leaks that

are temporarily plugged with corrosion debris. Installations with a history of radiator corrosion failures should not be acid cleansed, as other radiators are likely to have deep corrosion pits or complete perforations.

Older installations can be substantially improved, however, by dispersing the sludge with **Fernox Cleaner F3** or **Fernox**

Fernox Powerflushing Cleaner F5, followed by powerflushing with plain water.

After removing all soft sludge from older installations, separate boiler de-scaling may be helpful to resolve the problem. In order to do this, all the radiators should be isolated after which the system can be descaled over a period of time - up to 24 hours.

This process should be followed by rinsing with plain water and neutralising to passivate the surfaces within the system. **Fernox DS40 System Cleaner** and **Fernox System Neutraliser** can be used in this process. After cleaning, the entire system should be re-treated using **Fernox Protector F1** to eliminate the causes of boiler noise.



FERNOX RECOMMENDS: Fernox Cleaner F3; Fernox Powerflushing Cleaner F5; Fernox DS40 System Cleaner; Fernox System Neutraliser; Fernox Protector F1.