

HOW TO CLEAN A HEATING SYSTEM



Why should systems be cleaned?

Systems should be cleaned when commissioning a new system or installing a new boiler within an existing system. The purpose of cleaning and flushing is to protect against mineral oil contamination, particularly in low temperature hot water central heating systems, by removing harmful flux residues and installation debris which cause corrosion. Cleaning existing systems to remove black sludge (iron oxide) and limescale improves circulation and reduces fuel wastage and boiler noise.

What should be done?



New domestic systems
Fernox Cleaner F3 or **Fernox Powerflushing Cleaner F5** should be added before commissioning the system. Simply circulate Fernox Cleaner F3 or Fernox Powerflushing Cleaner F5 for at least one hour when the boiler is switched on, after which the system should be drained and thoroughly flushed until the water runs clear.

Existing domestic systems
Ideally the system should be powerflushed to remove any existing treatment, sludge and contaminant. Fernox Cleaner F3 or Cleaner F5 should be added to system water and circulated hot



for at least one hour after which the system must be drained and flushed until the water runs clear. The cleaning time can be extended to up to one week for systems which suffer from hardened iron oxides and limescale.

For both new and existing systems, a **Fernox TDS Meter** should be used to ensure efficient flushing by comparing the readings of the system water and mains water. The system is thoroughly flushed if the readings are within 10% of each other. Alternatively, the **Fernox Cleaner F3/F5 Test Kit** can be used to determine the level of cleaner residues remaining in the system.



Protecting new and existing systems
In accordance with Part L of the Building Regulations, after cleaning with Fernox Cleaner F3 or Fernox Powerflushing Cleaner F5, add **Fernox Protector F1** with the final fill water for long-term protection against corrosion and limescale.

All Fernox Protector / Inhibitor products are compatible with commonly used metals in central heating systems, including aluminium, and are suitable for use with plastic pipework. For continued protection, check Protector / Inhibitor levels annually using the **Fernox Protector Test Kit** or the



Fernox System Health Check postal service and top up product level as required.

Protecting against mineral oil contamination
Hot water central heating systems can become contaminated by the mineral oils used to protect steel components i.e. radiators from corrosion during the manufacturing process and before installation. If the oil is not removed, rubber parts within thermostatic radiator valves, motorised valves and other fittings can become swollen, resulting in component failure. Oil can also cause pump seizure where the bearings become fouled.



FERNOX RECOMMENDS: Fernox Cleaner F3; Fernox Powerflushing Cleaner F5; Fernox TDS Meter; Fernox Cleaner F3/F5 Test Kit; Fernox Protector F1; Fernox Protector Test Kit.