L.H. COOK PLUMBING & HEATING LTD FACTSHEET LHC-FS019

Intermittent faults, lubricity and luminosity problems

Version 1.2 July 2019

Intermittent faults due to their very nature can be very difficult to diagnose. There are many things that can cause a boiler to lockout apart from a genuine problem, interruptions or fluctuations in the electricity supply, excessive winds or even calm days in some cases; then there's luminosity. European directives call for fuel supplies to contain very little sulphur; this has a twofold effect on burners using Kerosene. Due to the lack of sulphur in Kerosene the flame characteristics have changed; flames are starting to have a bluish tinge about them, where previously they were a very clean and a bright yellow. The photoelectric cell or magic eye does not accept a blue flame due to the fact the ignition is blue/purple and if it saw the ignition the burner would breakdown due to false light. Occasionally flames may have an increased amount of blue about them and the photocell won't accept this which may result in more frequent ignition periods and start-ups as well as causing Intermittent faults. Although "Blue Flame" burners are now available they use a different technology to detect the flame which is not available on standard yellow flame burners.

Lack of sulphur has also caused a problem with lubrication of fuel pumps. Fuel pumps can start to run at high temperatures and on occasion can vaporise the fuel within the pumps body. This causes cavitation of the pump, even higher temperatures, even less lubrication which can cause the pump to seize intermittently, or damage seals or have tight spots within the gears which can lead to failure of components and intermittent faults. Lubricity additives are available but may affect the combustion of a pressure jet burner and should not be used if an AGA style cooker or room heater with a natural draught vapourising or pot burner is connected to the same Oil tank.

If you experience regular intermittent faults you should take note of external weather conditions, any strange noises the appliance may be making prior to or after the fault or any smells that may be present that are not normally there; all of this helps to build a picture of the possibilities that are causing the problem if it cannot be easily identified.