

L.H. COOK PLUMBING & HEATING LTD FACTSHEET LHC-FS028

Flue gas leak and Temporary conversion to open flue boiler

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If your room sealed/balanced flue boiler has been diagnosed as having an internal flue gas leak you need to contact an Installer to rectify this problem, or if you are a tenant you must contact your landlord or letting agent to inform them.

Internal flue gas leaks can be caused if the internal seals breakdown or welding on the flue degrades. (Although not a flue gas leak, if the flue terminates in a position where the products of combustion become trapped around the flue terminal or the flue terminal faces directly into prevailing winds; they can give the same symptoms of an internal flue gas leak).

When any of these things happen "spent" flue gases (products of combustion) are being drawn back into the boiler's own air supply. This can alter the emissions of the boiler causing erratic combustion and may lead to smoking problems and intermittent lockouts as well as increased fuel consumption. The "spent" flue gases can be hot, and as well as containing carbon monoxide and other noxious gases, also contain acidic moisture. This can cause damage to burner and electrical components.

Previous advice if the leak was seen to be causing damage or potential problems, the boiler may have been temporarily converted into an open flue or low-level discharge boiler instead of a room sealed balanced flue boiler: If your boiler used an air hose or snorkel it may have been removed from the flue system and blocked and possibly been sealed with a foil tape to try to prevent any fumes entering the room through the pipe. If your boiler uses an air box, or a room sealed casing; then this could have been left off. In either case the boiler is no longer room sealed and therefore fumes or smells may become evident in certain wind conditions or when the burner shuts down. **This should only ever be a temporary solution to the problem as it is deemed a Potential Safety Risk to use the appliance if it is no longer room sealed, as products of Combustion including Carbon Monoxide and other noxious gases may enter the property. As the boiler is no longer room sealed, if there is no air brick temporary ventilation must be used e.g. keeping a window open in the room. A carbon monoxide alarm should also be used, and an installer contacted to carry out the repair or replacement of the flue and any other remedial work that may be required at the earliest possible convenience.**

OFTEC NOW STATE THAT THE ABOVE INFORMATION IS NOT ACCEPTABLE AND THAT THE APPLIANCE SHOULD BE CLASSED A SAFETY RISK AND SHOULD NOT BE USED UNTIL THE PROBLEM HAS BEEN RECTIFIED AND IF THE PROPERTY IS RENTED, THAT WE MUST INFORM BOTH THE LANDLORD AND TENANT AND A WARNING STICKER SHOULD BE PUT ON THE APPLIANCE STATING IT IS A SAFETY RISK. IF NO FUMES OR SMELLS ARE NOTICIBLE THEN THIS COULD BE CLASSED AS A POTENTIAL SAFETY RISK, IF FUMES OR SMELLS ARE NOTICIBLE, THEN THIS IS CLASSED AS AN IMMEDIATE SAFETY RISK, EITHER WAY, THE APPLIANCE NEEDS URGENT ATTENTION.

Room sealed balanced flue boilers draw their air for combustion from outside through part of the flue system, and therefore do not require an air brick to supply combustion air to the appliance. They cope better in windy conditions and are less likely to smell and are generally quieter when running.

Open flue or low/high level discharge boilers are not room sealed, they draw their combustion air from the room and therefore require a dedicated air brick. They are more prone to back pressure and downdraft problems and can smell and allow fumes back into the room in certain wind conditions and upon shut down of the burner and are generally noisier when running.

If the problem has been caused by degradation of the flue seals, it could be caused by the high flue gas temperatures associated with sludge or scale in the boiler and system. If this is the case your boiler and system may require power flushing (see FACTSHEET 28). If sludge or scale has not been removed, then the boiler will continue to produce high flue gas temperatures and the flue seal can degrade again quite quickly.

If the appliance is a condensing boiler and the issues caused are due to slow dispersal of the condensate plume; then a plume management kit may be available to rectify the problem.

It is the owner/householders responsibility to ensure their system is compliant and safe.