

HEATBASE Ltd FACTSHEET 13

Flue gas leak and Temporary conversion to open flue boiler

Version 3 August 2016

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 boilers 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. If the leak is seen to be causing damage or potential problems, your 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 uses an air hose or snorkel it may have been removed from the flue system and blocked to try to prevent any fumes entering the room through the pipe, and possibly been sealed with a foil tape. If your boiler uses an air box, or a room sealed casing; then this could have been left off but we have no means of blocking the air supply. In either case the boiler is no longer room sealed and therefore fumes or smells may become evident in certain wind conditions. **This should only be a temporary solution to the problem.** 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 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.

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.

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.

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 15). 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.