

## Firepits UK Ltd - Troubleshooting Guide

Please read the operating instructions in the manual to ensure you are following the correct lighting procedure.

### **Pilot Won't Light..**

There are only three reasons for a pilot not to light.

#### **No Gas - Ensure there is gas getting to the burner.**

Note: For newly installed burners, it can take some considerable time to purge all the air out of the pipework before gas reached the burner. Turn the control lever to the spark position then push and hold in. Place your ear just above the pilot cage, you should hear a faint hiss. Initially this is air and can take several minutes before gas starts to come through, depending on the distance to the gas supply. If you cannot hear a hiss, either the gas supply is blocked or switched off, or the pilot is blocked.

If you can hear a hiss, move your head away from the pilot and keep trying the piezo ignitor every 10 seconds. Once all the air is out of the pipe, it should light.

#### **No Ignition Source**

Either the piezo is not sparking, or has a weak spark, or the button is sticking. If the piezo button pushes in but does not spring back out, squirt some WD40 onto the button while pressing in a few times. This should free it. A weak spark can be caused by wet conditions. Again WD40 on the button will improve that.

If the button works but there is no visible spark at the pilot, it could be the piezo lead became dislodged or broken during installation either at the pilot end under the burner, or at the piezo end inside the control box. If the piezo lead is broken, you can order a replacement from us. Try lighting with a lighter.

#### **Blocked Pilot Jet**

For newly installed burners this is unlikely. However if gas is present at the burner, but nothing comes out of the pilot, then it could be blocked. To unblock the pilot it means disconnecting the pilot gas hose, and reconnecting with a gas tight joint. If you are not confident to do this, please consult a gas engineer.

Remove the lava rock and carefully lift the burner tray to an upright position. The smaller flexible gas pipe will need to be removed using two spanners, as the pilot jet rotates. Remove the gas pipe, and blow through the pilot from underneath. The jet is very small so it's quite hard, but you should hear it hissing. This should clear any blockage. Reassemble the gas pipe to the pilot again using two spanners. Ensure a gas tight joint. It might be best to see if the pilot will light while the burner tray is still upright. You can then test for leaks using a suitable leak detection fluid around the pilot joint. If it works, turn the burner off, and place the tray back into place and recover with lava rock.

### **Pilot lights ok, but goes out when control lever is released..**

There is only one reason for this, a broken thermocouple.

Once the pilot is lit, continue to hold the control lever in for another 10 seconds then release. This allows the pilot flame to heat the thermocouple inside the pilot cage, this in turn sends a signal back to the main valve. If the pilot flame goes out when the lever is released then the thermocouple is not hot enough or is faulty. Relight and hold in for a bit longer to heat the thermocouple. Make sure there is a flame coming from the pilot hitting the thermocouple. If it still goes out, then the thermocouple could be faulty.

We test every burner in our workshop to ensure the thermocouple works as expected. We are also very careful during assembly and packing to ensure the thermocouple copper lead remains intact. Unfortunately sometime this thin copper lead can become kinked or broken during installation. Often it does not break completely, it just kinks at either the pilot end, or the valve end. (Note: It is supposed to be flat at the valve end, to allow assembly of the split nut) If the thermocouple is broken you can order a replacement from us

### **Pilot lights and stays on, but main burner won't light..**

For newly installed burner this is unlikely. Once the thermocouple sends a signal back to the main valve telling it there is a flame present, the main burner should light.

For existing installations, there could be water in the burner tubes, or main gas pipe between the burner and the control box. We recommend covering the burner when it's not being used to keep the rain out. Sometimes the main burner will light and you will hear the gas bubbling through the water. This is fine, and the water will evaporate quickly once the burner heats up. In extreme cases if the burner has been left uncovered all winter, there could be too much water in the main gas pipe and this will stop the gas from getting through. You have two choices. Cover the burner so no more rain enters the burner, and allow it to dry out. This could take some considerable time. Or remove the water by disconnecting the main burner gas hose under the burner. If you are not confident to do this, please consult a gas engineer.

Remove the lava rock and carefully lift the burner tray to an upright position. The larger flexible gas pipe will need to be removed using two spanners. Hold the centre boss nearest the burner tray still, and rotate the nut attached to the flexible hose. Remove the gas pipe and lower down to empty the water. Reassemble the gas pipe to the centre boss again using two spanners. Ensure a gas tight joint. It might be best to see if the burner will light while the burner tray is still upright. You can then test for leaks using a suitable leak detection fluid around the joint. If it works, turn the burner off, and place the tray back into place and recover with lava rock.

### **Main burner lights but shuts off after 20 to 60 seconds..**

This is caused by the thermocouple cooling slightly, thus telling the main valve to shut off.

Sometime once the main burner is lit, the gas pressure to the small pilot flame reduces, making the flame shrink just enough to allow the thermocouple to cool down. To keep the thermocouple nice and hot, move some of the lava rock around between the thermocouple and the closest main gas jet. Allowing the main burner flames to hit the thermocouple should keep it hot enough.

### **Main burner lights but shuts off after 10 to 20 minutes..**

There are two totally different reasons this can happen.

Either, the thermocouple was kinked during installation but not completely broken. This allows it to work for a while until the heat from the burner causes it to fail, which then cuts the gas off. You might be able to relight the burner, but it won't last as long, until eventually it won't stay lit at all. You can order a replacement thermocouple from us.

Or, there is not enough air being drawn up from under the burner, to keep the pilot flame lit. It can shrink back or go out, thus allowing the thermocouple to cool, and shutting off the burner. This is mainly down to bad pit design. The burner needs air (oxygen) to mix with the gas in order to burn. All firepits need ventilation holes to allow air to enter under the burner. If ventilation is not adequate, it might be enough initially, but as the burner gets hotter, it needs more air to keep going. Eventually it is starved of air, combustion is reduced, the thermocouple cools, and the burner is shut down. Allowing more ventilation under the burner will help.

Another issue related to the above also applies. Sometime customers have placed additional lava rock on top of the burner. It should be only one layer deep, and should not cover the pilot cage. With more lava rock, the air flow being drawn up from under the burner is reduced, again causing combustion problems.

### **Burner overheats..**

You'll only be aware of this if the burner fails completely.

If you cover the burner in a thick layer of lava rock, and cover the pilot cage, the pilot itself can fail. It overheats and can break underneath the burner tray. You may not see anything from above, but it could be cracked and leaking gas under the tray, which could be highly dangerous. This overheating can also melt the piezo lead under the burner tray causing it to short out and no longer make a spark.

The burner can work quite safely even for prolonged periods, providing the instructions in our installation manual are followed closely. You might think a bigger pile of lava rocks look nice, but you are basically modifying the product beyond its original design parameters, which could cause it to fail with dangerous consequences.