

BOILER FAN BEARINGS REPLACEMENT

Our bearings are of the 'HIGH SPEED ELECTRIC MOTOR' grade and are more suitable for the boiler fan motors than any other types of average quality bearings. Please make sure you purchase your bearings of this grade.



This [626ZZ] bearings replacement kit contains two bearings to fit 6mm rotor shaft. This is the standard shaft size for most of the boiler brands: [Alpha](#), [Ariston](#), [Baxi](#), [Glowworm](#), [Halstead](#), [Heatline](#), [Ideal](#), [Potterton](#), [Worcester](#), and most of the other brands . Please check your boiler fan shaft size before you place your order.

Have you had a noisy boiler fan or even the boiler completely stopped working? Around 90% of the faulty boiler problem is caused by the jammed or burnt out fan bearings. So it is highly likely that all you need is a pair of replacement bearings for your boiler fan.

If the problem is caused by the faulty bearings then our 'Boiler Fan Bearings Replacement Kit' is the right solution for you. Please call a Gas Safe registered engineer to check your boiler fan.

If your boiler fan has been noisy before it died out then it is most likely that the bearings are seized up.

Once the boiler fan has been taken off the boiler body by your engineer, check if the fan spins freely. If there is any resistance when you try to turn the fan then the bearings are jammed and need replacement.

Changing the bearings is simple and easy and does not need special tools. Below are the general procedures for replacing both bearings. An Ideal Classic boiler fan is shown in the pictures but other models are very similar.



Check the size of the fan shaft. Most of the fan shafts are of 6 mm diameter and our **[626ZZ]** bearings fit them perfectly. See **Figure 1**. Contact us if you need different sized bearings.

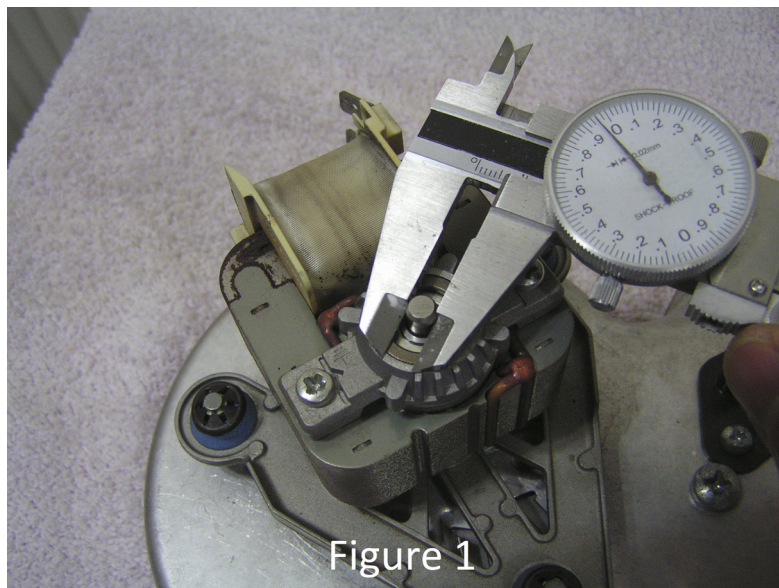
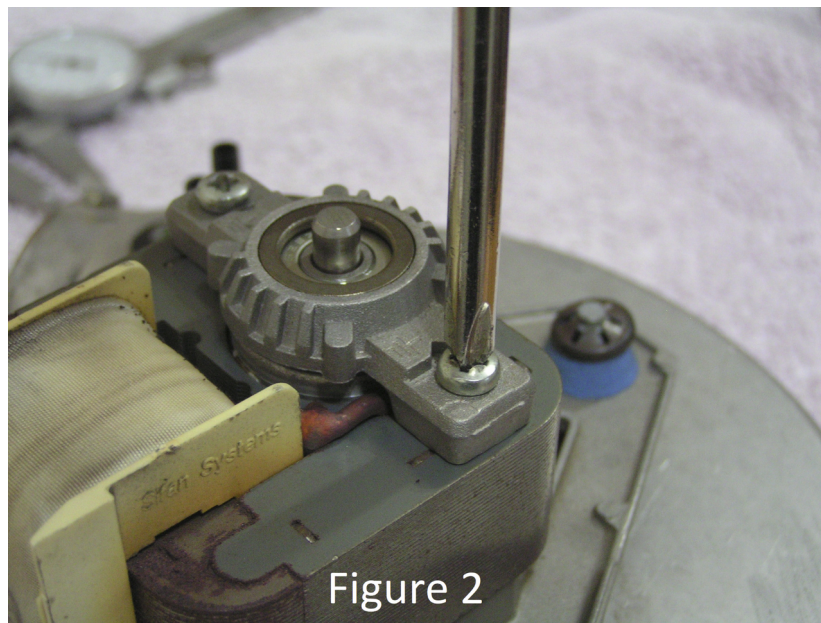


Figure 1

Unscrew two bolts. The nuts will fall out at the bottom. Keep the bolts and nuts in a safe place and they will be used later. See **Figure 2**.



Access to the top bearing. Step by step, as shown in **Figure 3**, lift the bearing guard, bearing holder (similar to a bowl but without bottom), positioning spring, and the motor magnet.



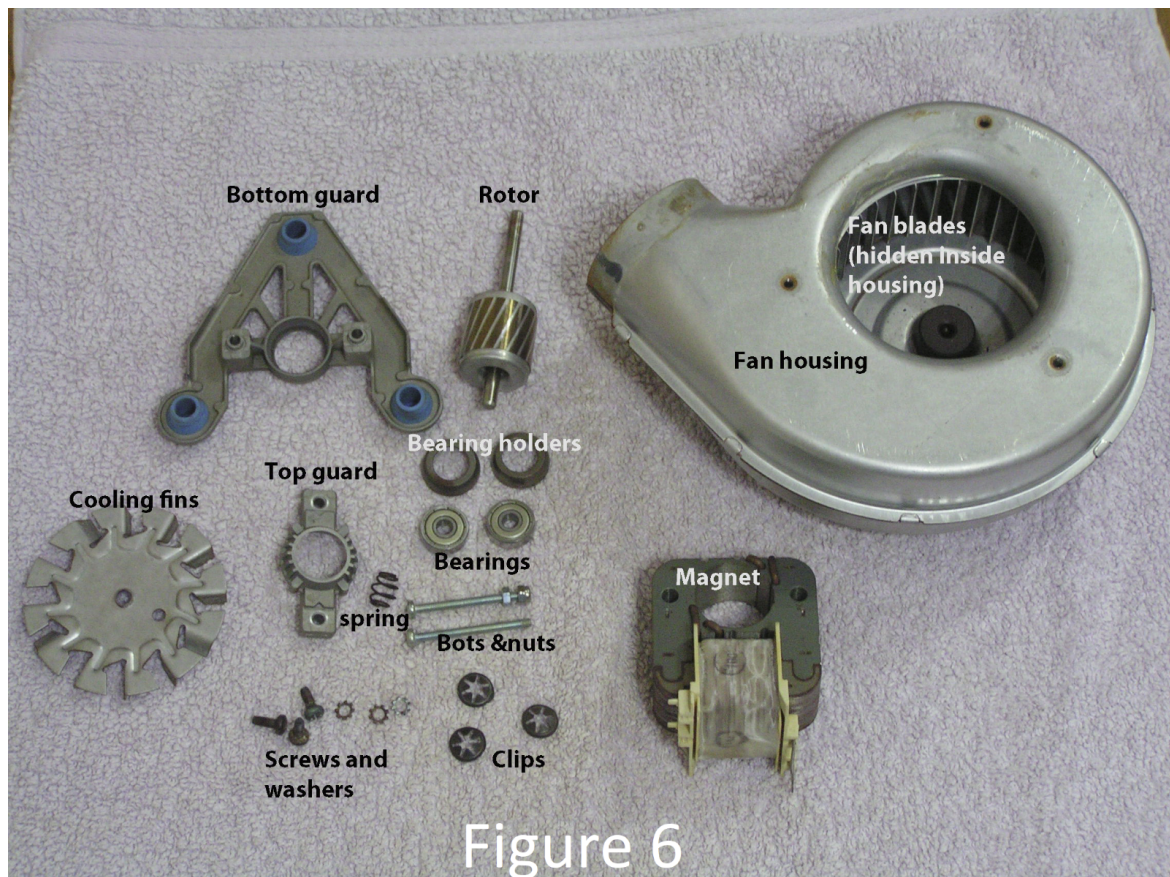
Access to the bottom bearing. Again step by step, as shown in **Figure 4**, take off three clips with a pair of pliers, unscrew the fan blades with an Allen key, take the rotor unit off the fan blades (may need some efforts), take the cooling fins off the shaft, take the bottom bearing guard off the shaft, and the bearing holder.



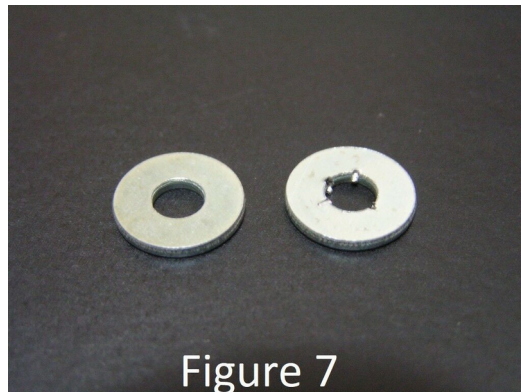
Replace both bearings and re-assemble. Gently tap the bearings out of the holders and replace with the new ones. Assemble in sequence the bottom bearing with holder, spring, and the top bearing with holder back onto the shaft, then put the bottom bearing guard in position, then the motor magnet, then the top bearing guard. Place and tighten two bolts with nuts and make sure both guards fit neatly to the magnet. Put back the cooling fins and then put the now assembled motor unit back onto the fan housing and tighten the fan blades on to the shaft using the same Allen key. Finally put three clips back to fix the motor unit onto the housing. See **Figure 5**.



Figure 6 shows all the parts of the fan unit. Three screws and washers are used to fix the fan in the boiler.



1. Q: The cooling fins are a bit loose when fitted onto the shaft. Is there a way of making it a tighter fit? A: Just using a flat head screw driver and a hammer you can punch some notches on one or both sides of the bore. This will make the bore a bit smaller and a tighter fit. **Figure 7** shows schematically the notches on one side of a metal washer. And the one with the notches has a smaller ID than the one without.



2. Q: The bearings seem to be of a tighter fit (or a more loose fit) comparing to the faulty ones I have just taken off the fan motor. Is this a problem? A: All machined parts will have some size tolerances so when fitting the new bearings on to the motor shaft you may feel a different tightness. Since the bottom bearing is resting against the rim of the rotor and the top bearing kept in position by the spring, so whether the bearings have a tight fit, or a fairly loose fit, does not affect the fan performance. The spinning shaft, along with the cooling fins and the fan blades, is pinned in position by the tight fit of the rotor on the shaft. If the bearings are fairly loose and you prefer them to be tighter then there are many ways of overcoming this and you may Google search the internet and find the most suitable ways.

Here are some of the easiest methods: (A) Use a Loctite bearing retainer compound such as Loctite 680, 609, 660, or even Loctite 638. These are industrial standard products to lock loose fit cylindrical parts together. (B) Use a centre punch (pointed punch) and a hammer to go around the shaft making (pricking) an even pattern of dots (say three or four to start with). These dots will rise up and make the shaft size a bit 'bigger' and hence a tighter fit. Other types of metal punches or even a knurling tool will also do the job nicely. (C) Since these bearings do not bear any side load it is also safe to use nail varnish, correction fluid, or even PVA (wood or paper) glue to fill up the gap by drawing some parallel lines on the motor shaft. Trial fit the bearings after the varnish dries up. Apply more coats if needed until the bearings neatly fit on to the shaft. **Figure 8** shows that the shaft is being coated with the 'white' correction fluid. The thickness of one coat is about 0.05mm.



