

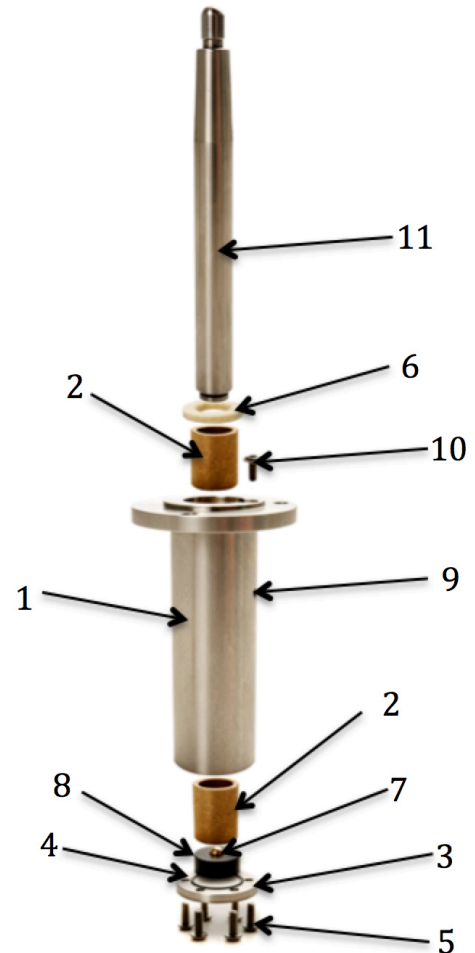
SMD ACOUSTICS BEARING GARRARD 301 & 401



Thank you for purchasing the SMD Acoustics bearing upgrade for the Garrard 301/401. The bearing is a precision made component and should give many years of trouble free service provided these simple instructions are followed.

The Bearing Assembly comprises of the following components: -

1. Bearing Housing
2. 2 x Oilite bushes
3. Base Plate
4. O Ring Seal
5. 6 x M3 Screws (Base Plate Fixings)
6. Felt oil ring
7. 5mm Ball (phosphor bronze)
8. Bearing Cup
9. M3 Plug (Note 1)
10. M3 Oil Screw
11. Spindle (Note 2)



The bearing assembly features an extremely rigid housing machined from solid stainless steel bar giving the advantage that it does not flex and move like a cast aluminium bearing housings.

The housing is fitted with 2 Oilite bushes that are honed for an extremely accurate fit with the SMD Acoustics spindle, matched spindles are precision ground to ± 3 microns. Oilite bushes are selected because they are porous and absorb oil which is a very important feature when running a spindle in a shaft that has very little clearance as a layer of oil can not easily get between the shaft and the bush hence an "oiled" bush is vital to spindle and bush life.

The spindle rides on a high quality phosphor bronze ball that wears in preference to the spindle, the ball is sat in a bearing cup. It is rare but possible if the spindle is drawn fully upwards and then inverted for the ball to come out of the bearing cup. If this happens it is very obvious as the spindle and platter will ride way too high as the ball will be on top of the bearing cup rather than in it. This cannot happen in normal use but it is possible during shipping or careless fitting. If this does happen the ball can be relocated by removing the base plate and refitting the ball in its cup and then refitting the base plate.

The bearing features an oil delivery system to keep the Oilite bushes lubricated and prevent them drying out. The bearing comes pre lubricated from the factory but the following procedure should be followed: The felt washer should be removed and then the M3 screw under the felt washer should be unscrewed and just a few drops of oil added. The oil will work its way down to the bottom bush and keep it sufficiently "oiled" allow time for air to come out.

The screw should now be refitted (don't be tempted to overload the oil delivery system with oil as this could create hydraulic pressure in the bearing when the screw is refitted) a couple of drops of oil can be added every 12 -24 months and this should be quite sufficient. When refitting the oil plug screw a small amount of oil may spill into the rim but that is OK because this rim should have a few drops of oil applied into it to keep the top bush lubricated, the felt washer is now refitted (it's a good idea to keep this moist with oil), again this should be checked periodically to ensure the bushes do not dry out.

Beware that only the recommended clean oil is used because even a very small particle of grit could cause the spindle to bind in the bushes.

Notes:

- 1) The small M3 Plug on the side of the bearing should not be removed. This is held in place by thread lock to prevent oil seepage.
- 2) The spindle in the Garrard 301 is longer than the 401 and the bearing cup in the 301 is not as deep as the 401 bearing cup other than that the bearings are the same and these instructions cover both types of bearing.

Fitting Instructions

Stage 1:

Remove the turntable platter and then remove your original bearing from the Garrard by unfastening the 3 screws and nuts that retain the bearing housing, once done the bearing can be removed from the chassis. Note these fasteners should be retained for fixing the new bearing into the chassis.

Stage 2: (only if you intend to use your spindle)

Remove the thrust plate and thrust pad assembly from the original bearing housing (take care as oil may be contained in the bearing housing) and then remove the spindle by withdrawing it through the bottom of the original housing. The spindle should be examined for any signs of wear around in the vicinity of the bushes and the flat area at the bottom of the spindle. If there is evidence of wear contact your dealer who will be able to advise and if necessary supply a replacement spindle.

Stage 3: (only if you intend to use your spindle)

The spindle should be wiped clean of any old oil residue and then fitted into the new bearing housing by inserting it in the bottom of the housing (after removal of the base plate, bearing cup and bearing if fitted). Note the circlip on the bottom of the spindle, this is to ensure the spindle does not come out when the platter is removed.

Stage 4 (only if you intend to use your spindle)

The ball bearing should be placed into the hole in the new bearing cup, a small amount of grease should be applied to the hole before fitting the bearing to ensure the bearing does not fall out during the remaining assembly process and to provide an initial degree of lubrication, a smear may be added to the bottom of the bearing cup to aid assembly (it will stick to the base plate). The o ring oil seal should be carefully positioned into the groove on the base plate before fitting with the 6 – M3 Screws, again a small amount of grease may help.

Stage 5

Now its time to fit the new bearing into the turntable by using the screws and nuts you removed earlier. Refit the platter. A period of 24 – 48 hours of running in will be required to get optimum performance from your product but it will immediately be a noticeable upgrade on the standard bearing.