



INSTALLING BOTTOM BRACKETS LIKE A BOSS

This document will provide a step by step on how to press a bottom bracket without crushing the bearings in the process. It will also give some valuable tips on how to avoid creaking.



Grease is your friend. Use a lot of it! The best stuff we have found is Morgan Blue Aqua Proof Paste.



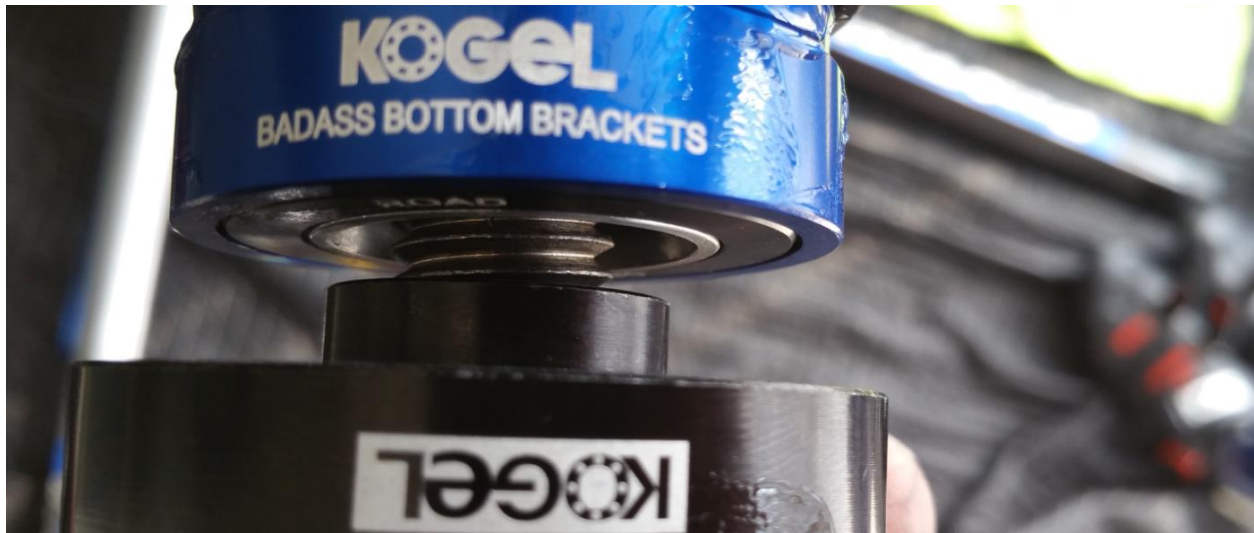
It is (sometimes) available through Kogel Bearings. Use any other marine grade grease if you cannot get your hands on this magical product. Remember: the stickier the better for installations.



Start by cleaning out your bottom bracket shell and applying a thick layer of grease to the contact area. Again, do not skimp on this. More is better. It will prevent the grease from washing out easily if you ride in the rain.



Repeat the same for the bearing cups. Thick layer of grease. We will wipe off the excess later.



Note how this drift fits exactly in the bearing opening and is all flat from there, it only touches the bearing cup. The number one goal when pressing a bottom bracket is to avoid putting pressure on the inner race. That would crush the balls into the races and leave them pitted a.k.a. ready to meet Mr. Trashcan.





Here is a fancy new tool we developed. The Frame Guide on the right side of this photo centers the bearing press in the frame, while we press the cups one at a time.





This is the most critical step of pressing the cup. Tighten the press until the cup touches the frame, do not give an extra twist on the press handles for 'extra snug'. You just destroyed your bearing races.

Note how the grease squirts out from underneath the flange of the cup: the top picture shows the grease sitting inside the width of the cup. As soon as the cup gets close to the frame, it squirts out. You're done! Back off!



Install the second cup by hand, just slide it into place. This is a good moment to check on the inside of the bottom bracket shell to see if everything lines up well. No cables and Di2 wires flopping around? Sleeves nicely tucked in place? It's all good.



Time to press in the second cup. Note how both bearing drifts only touch the blue cup. At no point is there any contact with the bearings. Watch for the grease squirting out at the shoulder of the cup and stop yourself from the 'giving it some extra love'.





More grease! Put it both on the crank spindle and inside the bearing opening. Spread it with your finger or a brush. A big advantage of using grease over retaining compound, is that it wipes off with a rag when you're done. Use too much rather than not enough. This is also a good moment to clean the backside of your chain rings, unlike what we have done here.



Pro tip: radial ball bearings, as are used in most bottom brackets, are designed to run without any side load. Zero. None. Tighten the plastic adjustment bolt on your Shimano cranks or the adjustable dial between the arm and bearing on most Sram BB30 cranks to the point where you feel pressure starts to build up. Then back it out again to the point where it is impossible to move the crank laterally but the pressure is gone. Your bearings will thank you and you will ride up those hills a little bit faster.



Torque wrenches are amazing tools. Use 'em.

The tools used in this manual are:

- Park Tool HHP2 headset press
- Kogel Bearings bearing drifts and frame guide (which will be available in August 2015)
- Park Tool TW5 Torque wrench
- Cyclus Tools Holl II crank bolt tool
- Morgan Blue Aqua Proof Paste