

White Industries Bottom Bracket Installation

Tools required: Park HCW-5 (bottom bracket lock ring tool) or hook spanner, Park BBT22/BBT32 (bottom bracket cup tool) or Shimano TL-UN52/UN74-S (bottom bracket cup tool), adjustable wrench, soft-faced mallet, grease.

Assembly

1. Make sure that the threads in your bottom bracket are clean and greased (Fig.1 and 2).
NOTE: It may be necessary to chase the bottom bracket threads and have each side of the bottom bracket faced in order to insure that the bottom bracket can be installed and adjusted properly. Your local bike shop has the tools to do this if you don't.



Fig.1 BB threads clean and ready for install.



Fig.2 Greased threads.

Grease the threads of each bottom bracket cup. Grab the drive side cup: this is the cup with a machined shoulder that is part of the cup (Fig.3). To install, thread the drive side cup in a counter clockwise direction into the drive side of your frame's bottom bracket shell (Fig.4). Thread the cup into the bottom bracket shell until the machined shoulder contacts the shell. Once the cup's shoulder contacts the shell, you can tighten about another 1/8-1/4 turn and you're finished with that side. Don't over-tighten the cup, there's no need....trust us on this.

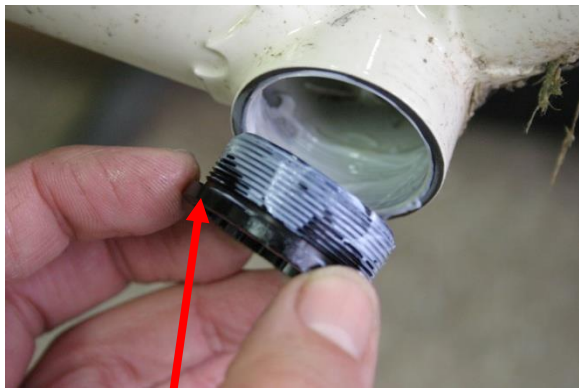


Fig.3 Machined shoulder of drive side cup.

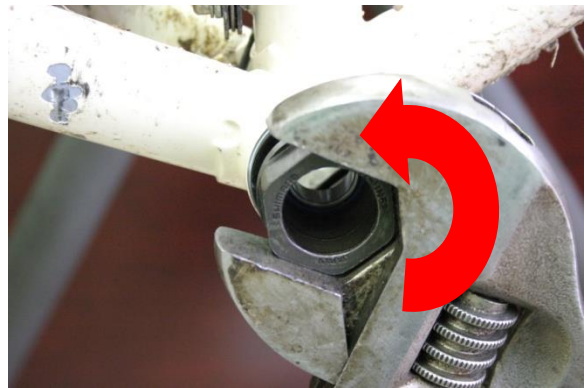


Fig.4 Tighten counter-clockwise.

2. Slide the spindle from the non-drive side through the bottom bracket shell and the drive side bearing/cup assembly so that the spindle's shoulder is snug up against the bearing (Fig.5). You can give the spindle a couple of gentle taps with a soft-faced mallet to make sure that it is fully seated against the bearing (Fig.6).



Fig.5 Inserting spindle.



Fig.6 Gently tapping spindle into place.

3. The non-drive side cup is the cup with the silver adjustable lock ring. Remove the lock ring from the cup. Thread the cup in a clockwise direction until the bearing is snug up against the bottom bracket spindle; do this gently (Fig.7). Just as the cup gets difficult to turn and it feels like the bearing is binding **STOP** and back the cup off about an 1/8 of a turn. Thread the lock ring onto the cup in a clockwise direction. The flat side of the lock ring should rest against the bottom bracket shell, with the beveled side facing outward (Fig.8). Use the bottom bracket lock ring tool to tighten lock ring against the bottom bracket shell, while preventing the cup from rotating with the bottom bracket cup tool (Fig.9). If you allow the cup to rotate as you tighten the lock ring, two things can happen: 1) the cup will not be locked in place and may come loose while riding and 2) you may preload the bearing too much, ruining it after only a moderate amount of use.



Fig.7 Tighten non-drive side cup, clockwise.

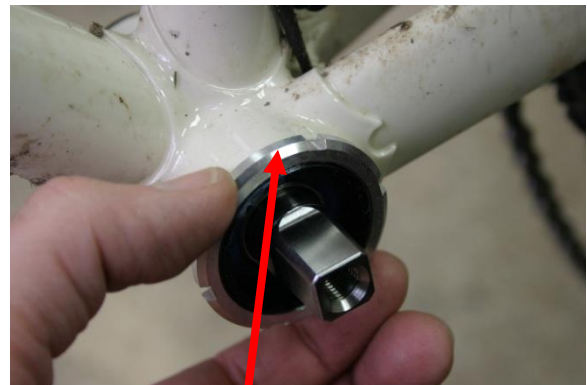


Fig.8 Beveled edge faces outward.



Fig.9 Hold cup while lock ring is tightened.

4. Spin the bottom bracket spindle with your hand. You may feel some slight drag from the seals, but the spindle should rotate very smoothly. If you feel any binding/roughness or excessive drag, then the non-drive side cup is too tight and must be adjusted. Try and push the spindle from side to side with the palms of your hands (Fig.10), if you detect any movement from left to right then the bearings may not be fully seated against the shoulders in the spindle and the non-drive side cup may need to be tightened. Grasp the ends of the spindle with your hands and try to move the spindle forward and backward (Fig.11), if you detect any play then the non-drive side cup will need to be tightened.



Fig.10 Checking for lateral play.



Fig.11 Checking for play.

Eliminate as much play as you can while allowing the spindle to spin freely and smoothly. If the bottom bracket is adjusted too tight and ridden, the bearings will be ruined very quickly. If you do not feel confident in your ability to install and setup the bottom bracket properly, please take it and your bike to your local bike shop and have a mechanic do the installation for you.

5. Now you can install your White Industries crank arms. Use steel crank arm bolts, these are not included with your bottom bracket, tighten to 30 ft. lbs., or to crank manufacturers recommended torque specification. Remember to grease the bolts. Ride your bike.