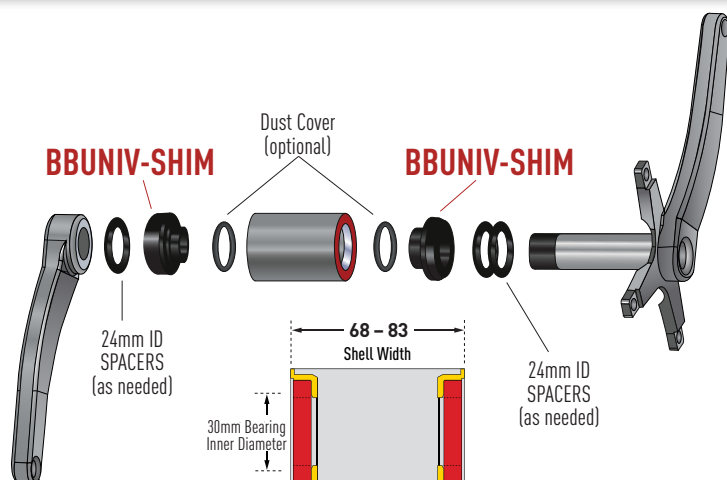


# TECHNICAL NOTES: BBUNIV-SHIM ADAPTERS

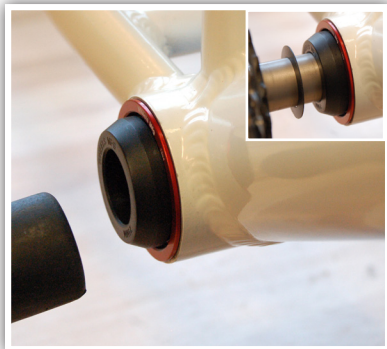


## Recommended tools:

- Plastic or rubber mallet
- Grease
- 5mm Allen Wrench
- Torque Wrench

## BBUNIV-SHIM PART LIST

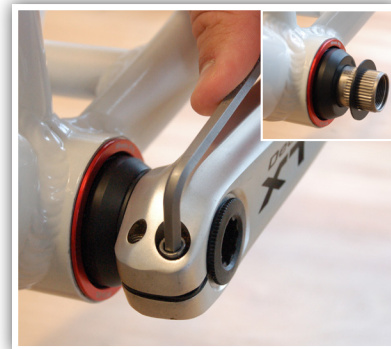
Part #	Description	QTY Included
BBUNIV-SHIM	BB30/PF30 24MM CRANK SPINDLE SHIMS	2
BB-24MM-0.5	0.5MM SPACER FOR 24MM BB SPINDLE	4
BB-24MM-1.0	1.0MM SPACER FOR 24MM BB SPINDLE	2
BB-24MM-2.5	2.5MM SPACER FOR 24MM BB SPINDLE	1
BB30-30MM-1.0	1.0MM SPACER FOR 30MM BBUNIV ADAPTER	2
BB30-30MM-1.8	1.8MM SPACER FOR 30MM BBUNIV ADAPTER	2
BB30-30MM-2.5	2.5MM SPACER FOR 30MM BBUNIV ADAPTER	2



1. Insert the right side adapter into BB30 or PF30 Bottom bracket by hand. Note: BB30 and PF30 dust covers can be removed from the system or left in place. If you choose to use them with the BBUNIV-SHIM, place them between the bearing and the adapters on both sides. Right side spacers (24mm I.D.) fit on the BB spindle between the right side adapter and the right crank arm.



2. Insert the left side adapter. Spacers can be placed on either side to center cranks in bottom bracket.



3. Install the crank. If there is side-to-side play, you may need 24 mm spacer(s) on the outside and/or additional 30 mm spacer(s) installed on the inside of the adapter. Tighten to manufacturer's specification. Crank should spin freely.

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