

BBP-AOS

Bottom Bracket Bearing Extractor Add-On Set

The BBP-AOS is used in conjunction with the BBP-1.2 Bottom Bracket Bearing Press Kit to extract press fit bottom bracket adaptors (aka bottom bracket cups) from "thru-spindle" type systems. "Thru-spindle" bottom bracket systems use a spindle that removes from the frame shell while the bearings remain in place. The BBP-AOS can be also used to remove and install the cartridge bearing in press fit and threaded bottom bracket adapters.

Removing Bottom Bracket Cups/Adapters from Press Fit Frames

1. Measure outside diameter of the flange on the bottom bracket adapter (Figure 1). Choose the extractor cup slightly larger than diameter of flange. See Table 1. Measure the bearing inside diameter. Choose the expanding collet and collet push rod that most closely corresponds to the inside diameter. See Table 2.
2. Slide the smaller flange of the collet into the bearing. The lip of the collet is slightly larger than the bearing inside diameter. Push the collet evenly and forcefully into the bearing so the lip is seated on the opposite side of the bearing.
3. Remove the backplate #2283 from the shaft of the BBP-1.2 press tool.
4. Install the closed end of the extractor cup onto the shaft. Open end will face bottom bracket.
5. Slide the press tool through the bottom bracket.
6. Slide the smaller end of the collet push rod over the shaft and fully seat it against the collet.
7. Install the backplate onto the shaft at the nearest slot to the collet push rod (Figure 2).
8. Hold shaft and turn the handle of the press tool until extractor cup, collet push rod, expanding collet and bearing are in contact. Check alignment of tool on bearing.
9. Insert an 8 mm hex tool into the end of the shaft and turn the handle of press tool clockwise until the bearing adapter is removed.
10. Disassemble the tool. The expanding collet will be inside bearing. Fixture bearing so small end of collet can be driven down squarely and evenly out of bearing. For example, support bearing with a smaller extractor cup while tapping squarely on the expanding collet with a mallet.
11. Repeat process on the other side.
12. Install new bottom bracket using BBP-1.2 Bottom Bracket Bearing Press Set.

Note: In certain situations, only the cartridge bearing may be removed instead of the bearing adapter. If the press fit between frame and bearing adapter is greater than between the cartridge bearing and adapter, the weaker bond will tend to release first. In these cases it is necessary to find other means to remove the bearing adapter, such as tapping it out from the backside.

Removing and Installing Cartridge Bearings in Bottom Bracket Adapters

By fixturing and pushing against the bearing adapter and not the frame, the extractor cups will pull the cartridge bearing out of the bearing adapter. Not all bottom brackets, however, are designed to accept replacement cartridge bearings. It is the responsibility of the mechanic to determine if the bottom bracket can accept replacement cartridge bearings. If in doubt contact the bottom bracket manufacturer.

Note: Always remove and then install the bearing on one side before proceeding to remove and install the bearing on the other side.

Procedure to Remove Cartridge Bearings from Bearing Adapters

1. Measure the outside diameter of the bearing being removed (Figure 3). Select the extractor cup that is slightly larger than the bearing and will push against the bearing adapter. See Table 1.
2. Measure the bearing inside diameter. Choose the expanding collet and collet push rod that most closely corresponds to the inside diameter. See Table 2.
3. Slide the smaller flange of the collet into the bearing. The lip of the collet is slightly larger than the bearing inside diameter. Push the collet evenly and forcefully into the bearing so the lip is seated on the opposite side of the bearing race.
4. Remove the backplate #2283 from the shaft of the BBP-1.2 press tool.

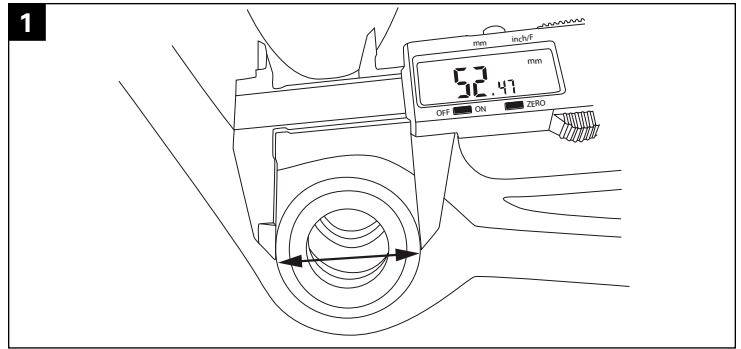


TABLE 1

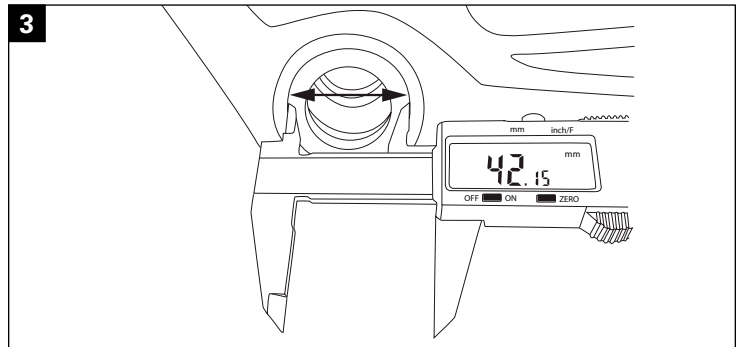
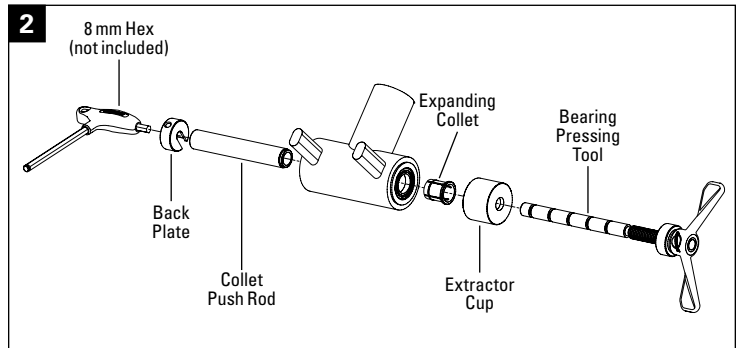
Extractor Cup and Intended Flange/Bearing Diameter

Part Number	Flange Diameter (Adapter)/ Bearing Outer Diameter (Cartridge)
2870	37 mm
2871	40 mm
2872	41 mm
2873	42 mm
2874	44 mm
2875	45 mm
2876	47 mm
2877	52 mm

TABLE 2

Expanding Collet and Collet Push Rod

Intended Bearing Inside Diameter	Expanding Collet Part Number	Collet Push Rod Part Number
19 mm	2886	2893
22 mm	2887	2890
24 mm	2888	2891
28.99 mm	2897	2898
30 mm	2889	2892



5. Install the closed end of the extractor cup onto shaft. Open end will face bottom bracket.
6. Slide the press tool through the bottom bracket.
7. Slide the smaller end of the collet push rod over the shaft and fully seat it against the collet.
8. Install the backplate onto the shaft at the nearest slot to the collet push rod.
9. Hold shaft and turn the handle of the press tool until extractor cup, collet push rod, expanding collet and bearing are in contact. Check alignment of tool on bearing.
10. Insert an 8 mm hex tool into the end of the shaft and turn the handle of press tool clockwise until the bearing is removed.

Procedure to Install Cartridge Bearing into Adapters

1. Measure the inside and outside diameter of the bearing that will be installed and choose the corresponding drift from the BBP-AOS. See Table 3.
2. Remove the backplate from the shaft of the BBB-1.2 press tool.
3. With small end of drift facing bearing, slide drift over the press tool shaft.
4. Slide the bearing on the drift.
5. Install press tool through the bottom bracket.
6. From the BBP-1.2 Bottom Bracket Bearing Press Set, select a drift appropriate for the opposite side to support the bearing being pressed. Install this drift into opposite side bearing. See Table 4.
7. Slide the backplate onto the shaft in the nearest slot (Figure 4).
8. Insert an 8 mm hex tool into shaft of the press tool. Visually line the bearing up with the bottom bracket adapter.
9. Turn the handle of the press tool clockwise until the bearing is fully pressed into the bottom bracket adapter.
10. Disassemble tool.
11. Repeat the removal and installation process on opposite side bearing.

TABLE 3

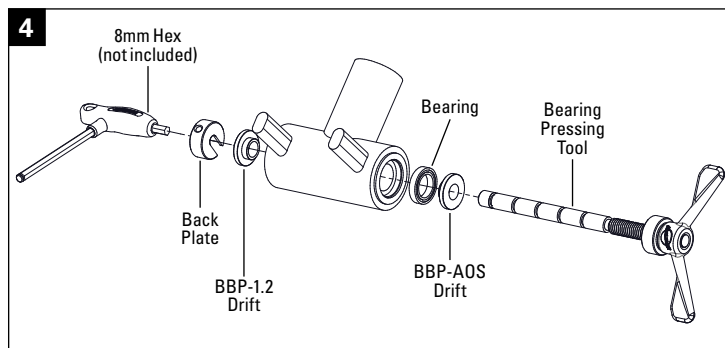
BBP-AOS Drifts and Intended Bearing Size

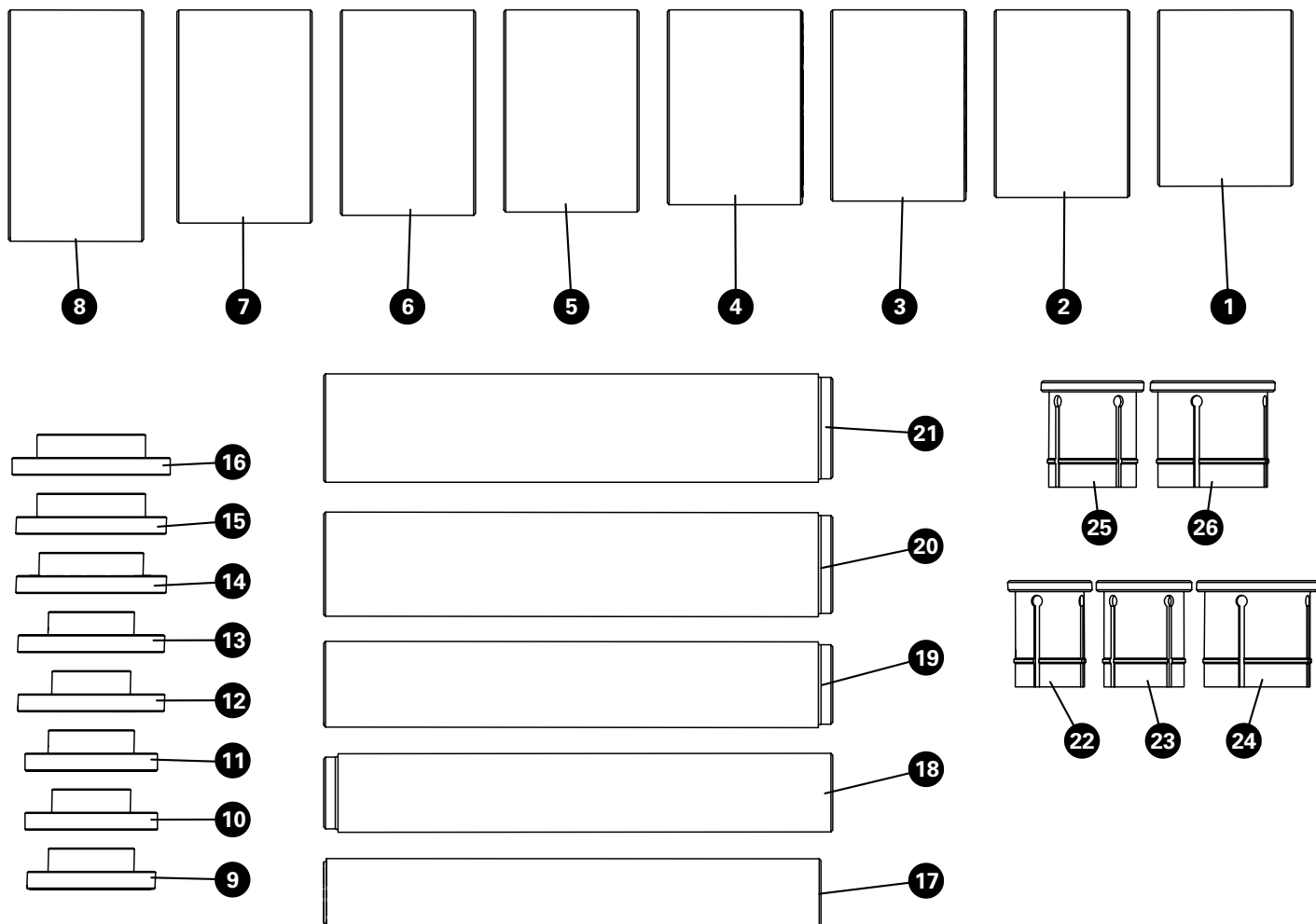
Part Number	Bearing Inside Diameter	Bearing Outside Diameter
2879	22 mm	37 mm
2881	22 mm	41 mm
2880	24 mm	37 mm
2878	24 mm	36 mm
2882	24 mm	41 mm
2899	28.99 mm	42 mm
2883	30 mm	42 mm
2884	30 mm	44 mm

TABLE 4

BBP-1.2 Drifts and Intended Bearing Size

Part Number	Bearing Inside Diameter	Bearing Outside Diameter
2289-2	19 mm	37 mm
2288-2	19 mm	41.2 mm
2292-2	28.99 mm	50 mm
2287-2	30 mm	42 mm
2290-2	22 mm or 24 mm	37 mm
2286-2	22 mm or 24 mm	44 mm




BBP-AOS PART NUMBERS

Ref. #	Part #	Description	Qty.
1	2870	37 mm Extractor Cup	1
2	2871	40 mm Extractor Cup	1
3	2872	41 mm Extractor Cup	1
4	2873	42 mm Extractor Cup	1
5	2874	44 mm Extractor Cup	1
6	2875	45 mm Extractor Cup	1
7	2876	47 mm Extractor Cup	1
8	2877	52 mm Extractor Cup	1
9	2878	36 mm OD/24 mm ID Install Drift	1
10	2879	37 mm OD/22 mm ID Install Drift	1
11	2880	37 mm OD/24 mm ID Install Drift	1
12	2881	41 mm OD/22 mm ID Install Drift	1
13	2882	41 mm OD/24 mm ID Install Drift	1

Ref. #	Part #	Description	Qty.
14	2883	42 mm OD/30 mm ID Install Drift	1
15	2884	44 mm OD/30 mm ID Install Drift	1
16	2899	42 mm OD/28.99 mm ID Install Drift	1
17	2893	19 mm Collet Push Rod	1
18	2890	22 mm Collet Push Rod	1
19	2891	24 mm Collet Push Rod	1
20	2892	30 mm Collet Push Rod	1
21	2898	28.99 mm Collet Push Rod	1
22	2886	19 mm Expanding Collet	1
23	2887	22 mm Expanding Collet	1
24	2888	24 mm Expanding Collet	1
25	2897	28.99 mm Expanding Collet	1
26	2889	30 mm Expanding Collet	1