

17mm Disc Rear Hub Overhaul Page 1

17mm Axle Hub Bearing Change, Cassette Body Swap and Overhaul Instructions.

- There are two versions of the American Classic rear disc hub. Each version require different size bearings. This overhaul / bearing change uses four 6803-C3 bearings (two in hub shell, two in cassette body). Check your bearing code before starting.
- **Tools Needed:** Two 19mm cone wrenches, needle nose pliers, hammer and small punch (at least 1/4" thick). You will also need degreaser such as Finish Line Citrus BioSolvent and a synthetic waterproof grease such as Pedro's SynGrease.
- Single speed disc hubs and bolt-on hubs will be similar in engagement but will differ based on what spacers you have on the axle. Make note of disassembly so that it is re-assembled correctly.
- **While disassembling the hub, keep all loose parts organized on a clean rag or paper towel. Do NOT modify or bend the cassette body loop spring in any way. Proper re-assembly is important to rider safety.**



1. Using two 19mm cone wrenches, loosen the lock and adjusting nut.



2. Remove lock nut.



A. Some hubs have a 1.5mm axle spacer.



B. Remove adjuster nut.



C. Remove spacer with attached dust seal.



3. Separate cassette body and axle from the hub shell by grabbing the body and pulling out from the drive side.

Very Important!

Locate the 0.5mm axle spacer, which is either stuck to the drive side hub shell bearing or the inner bearing on the cassette body.

This spacer is critical to maintaining the correct engagement, do not lose!



4. Remove large black pawl seal.



5. Remove pawls.



6. Remove cam plate.

Cleaning and Inspection:

While the hub is apart is a good time to degrease and clean. Be careful and **do not get degreaser in the bearings.**

Bearing Replacement:

Make sure you have the correct bearings. 17mm axle New Style hubs use four - 6803 C3 bearings. Use American Classic bearings for proper functioning.

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All repairs should be performed by a professional bicycle mechanic.

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7. Clean hub shell for inspection and new grease.

Bearing Removal:

You will need a hammer and small punch. Move internal hub shell sleeve to the side and place the punch through the hub shell resting it on the opposite bearing's inner race.

Tap lightly with a hammer to remove each bearing, working around the bearing keeping the bearing as straight as possible.

Note: If the hub was produced before 2006 you will not have an internal hub sleeve.



8. Bearing Installation: Position a new bearing onto the hub shell. Place old bearing on top of new bearing.

Tap lightly with a hammer, working around the bearing keeping the bearing as straight as possible.

Do not force the bearing. Make sure when tapping the bearing, it is going into the bore straight and evenly.

Install hub sleeve (if needed) and second bearing and re-grease the hub shell before further installation.

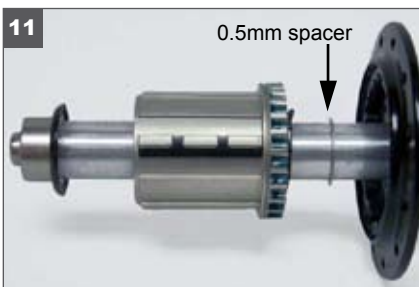
Note: Using bearings other than American Classic 6803-C3 will void the warranty and they may not function properly.



9. With a thin layer of clean grease coating the hub shell, install the cam plate. Refer to the picture for the correct orientation. Do not put the cam plate in upside down.



10. With a thin layer of clean grease coating the top of the cam plate, install all 6 pawls. Once completed the pawls should freely engage in unison with the cam plate.



Shimano/SRAM Axle Assembly.

With a thin layer of clean grease coating the pawls, join the axle, cassette body and spacers with the hub shell.

Order: Dust seal > 0.5mm spacer > Shimano cassette body > 0.5mm spacer > Hub shell.



Very Important:

12. The large black Pawl Seal **MUST** be installed after the cassette body and axle have been joined with the hub shell.

With the axle pushed completely into the hub shell and pawls engaged with the cassette body, install the large black pawl seal.

NOTE: After completing Step 12, be sure the seal is securely in the groove on the cassette body and you can rotate the body freely without the seal moving.

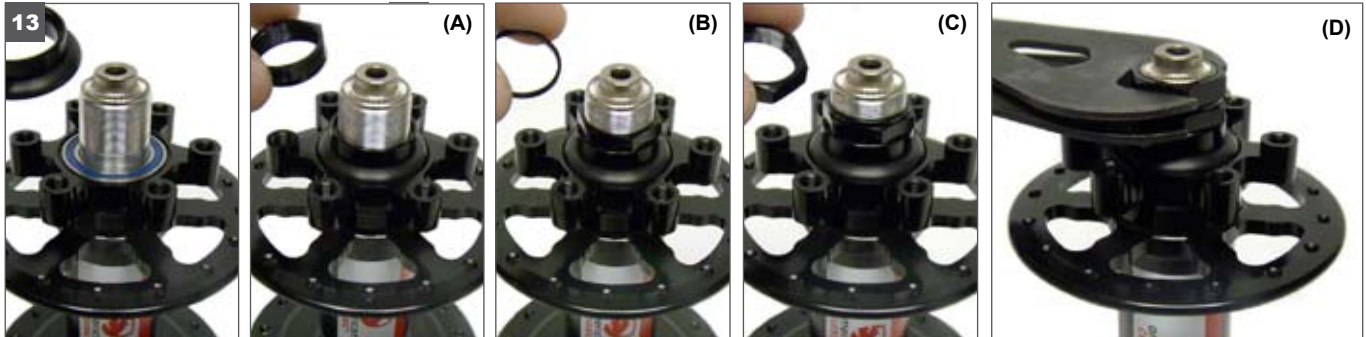
A bit of Tri-Flow® or similar lubricant will help with friction between the groove in the body and this seal.

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Final Hub Assembly:



13. Grease the threads and install the spacer with dust seal. (A) Finger tighten the adjusting nut with the should side facing the hub shell (B) If the hub had a 1.5mm spacer between the lock nut and adjusting nut, install now. (C) Install the lock nut and finger tighten. (D) Using two 19mm cone wrenches, remove all play on adjusting nut, then back off one half rotation, 180 degrees.

Final Bearing Adjustment In Frame:

The purpose of adjustability is to extend the life of your bearings, reduce friction and rolling resistance to boost performance. The desired adjustment for American Classic hubs is described as “slightly more than no play” as to not overload the bearings. Some play will be removed with the clamping action of your quick release. Be sure the two outer dust seals on each end of the axle are covering the bearings completely. This adjustment is the same for road and mountain wheel sets.



14. Place the wheel in the frame and clamp down quick release. Hold the adjusting nut in place with a 19mm cone wrench, still one half rotation loose from Step 13, tighten the lock nut against the adjusting nut. Once the lock nut is tight, check for the desired adjustment by wiggling the tire at the rim to feel for “slightly more than no play.” If the adjustment is not correct continue to Step 15.



15. Hold the adjusting nut in place and loosen the lock nut. Slightly tighten or loosen the adjusting nut and hold in place. With the adjusting nut in place, tighten down the lock nut. Wiggle rim. Repeat Step 15 until the desired adjustment is achieved. Make sure the lock nut is tightened down when finished.