

# 15mm Rear Hub Overhaul Page 1

American Classic Rear 15mm Axle Hub Bearing Change, Cassette Body Swap and General Overhaul Instructions.

- There are two versions of the American Classic rear road hub. Each version require different size bearings. If you are unsure, visit [amclassic.com/manuals.php](http://amclassic.com/manuals.php) page for a document titled: Rear Cassette Hub - Which Hub Do I Have?
- **Tools Needed:** Two 19mm cone wrenches, needle nose pliers, 10mm socket, 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.
- If you are switching your cassette body from Shimano to Campagnolo -OR- Campagnolo to Shimano you will need to redish the wheel after overhauling the hub. Note special instructions on Step 11. Redishing provides optimal wheel strength.
- **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, hold the bottom adjusting nut in place and loosen the top lock nut.



2. Completely loosen lock nut off threads.

(A) When the lock nut is off the threads, between the endcap and end of axle, start removing the adjusting nut.

(B) Keep loosening and the lock nut, adjusting nut and end cap will come off leaving a bare threaded axle.



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.

**Note:** Some hubs have an additional 0.5mm spacer between the cassette body and the outer axle cap.



4. Remove large black pawl seal from the hub shell (if your hub has one).



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. 15mm axle Old Style hubs use four - 15267 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 out the hub shell for inspection and new grease.

**Bearing Removal:**

You will need a hammer and small punch. 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.



**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 second bearing and re-grease the hub shell before installing cam plate and pawls.

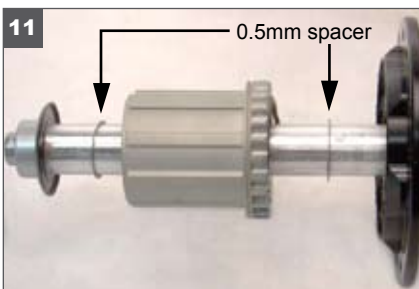
**Note:** Using bearings other than American Classic 15267 will void the warranty and they may not function properly.



**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.

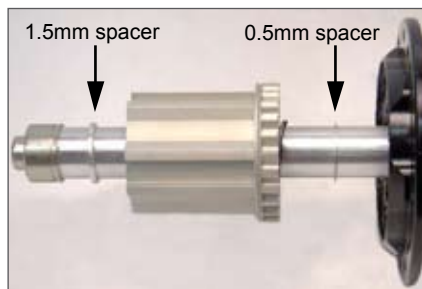


**Shimano Axle Assembly.**

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.

Wheel will require redishing if coming from Campagnolo.



**Campagnolo Axle Assembly.**

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

Order: 1.5mm spacer > Campagnolo cassette body > 0.5mm spacer > Hub shell.

Do Not use dust seal. Wheel will require redishing if coming from Shimano. 15mm Campagnolo hubs are not 11 speed compatible.



**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 fully engaging with the cassette body, now install the large black pawl seal.

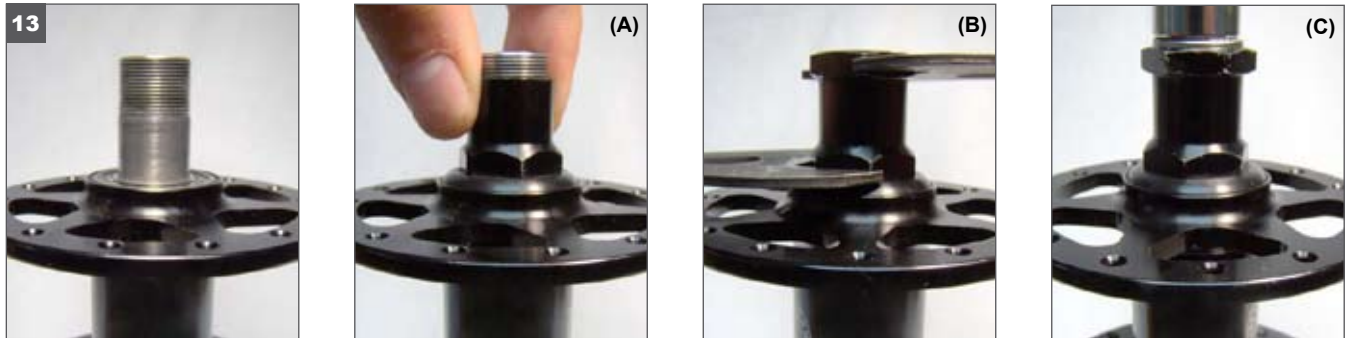
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**NOTE:** After completing Step 12, be sure the seal is securely in the groove on the cassette body and you can rotate the body freely without the seal moving. A bit of Tri-Flow® or similar lubricant will help with friction between the groove in the body and this seal.

### Final Hub Assembly:



13. Select the correct adjusting nut (Shimano and Campagnolo are different) and make sure the rubber dust seal is fully into the groove. (A) Finger tighten on adjusting nut and lock nut. (B) Using two 19mm cone wrenches, remove all play on adjusting nut, then back off one half rotation, 180 degrees. (C) Press end cap back into the axle using a socket. Do NOT hit the end cap with a hammer, press against the serrated surface.

### 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. **Shimano Only:** Be sure the two outer dust seals on each end of the axle are covering the bearings completely. Campagnolo will only have one dust seal on the non drive side.



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.

Proper re-assembly is important to rider safety.

**All repairs should be performed by a professional bicycle mechanic.**

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