

Replacement of the Cam Plate is required for rear wheels purchased from American Classic between January 1, 2005, and June 5, 2005. Wheels purchased by a consumer from a distributor or bike shop after June 5, 2005, may also need to be repaired if the distributor or bike shop purchased product within the above-mentioned time period.

All repairs should be performed by a Professional Bicycle Mechanic.
Starting and finishing this repair will require that the wheel be in the bike, and the skewer clamped down.

Tools: Two 19mm cone wrenches will be needed to complete this repair. We also recommend a degreaser such as Finish Line Citrus BioSolvent and a synthetic waterproof grease such as PedroOs SynGrease.

While disassembling the hub we recommend keeping all loose parts organized on a clean rag or paper towel.

Identify if the wheel needs the new Cam Plate

Step 1: Using two 19mm cone wrenches, remove lock nut and adjusting nut and put on paper towel.



Step 2: Separate cassette body and axle from the hub shell by grabbing the body and pulling out from the drive side. Locate the .5mm axle spacer, which will be stuck to the outer bearing on the hub shell or the inner bearing on the cassette body. This part is critical, so once you find the spacer keep it on the axle with the cassette body as shown in the picture.



If the Loop Spring looks like diagram A, where it only completes half of the radius around the bearing, no replacement is needed. For proper maintenance we recommend completing the remaining steps (excluding step 5) to overhaul the hub and properly reassemble.



A Don't Replace

If the Loop Spring looks like diagram B, where it completes almost the whole radius around the bearing, the Cam Plate needs to be replaced. Complete all 10 steps using the detailed pictures as guides.



B Replace

Removal of existing Cam Plate



Step 3: Remove large black seal and put on paper towel.



Step 4: Remove pawls and put on paper towel.



Step 5: Remove Cam Plate and throw away.

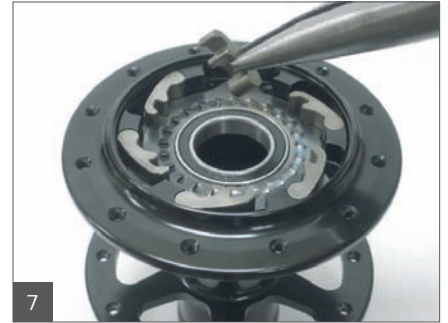
Installation of New Cam Plate

While the hub is apart is a good time to degrease, clean, and re-grease if needed. Be careful and do not get degreaser in the bearings. After cleaning and before you re-grease is also a good time to inspect for any damage to the internal moving parts.

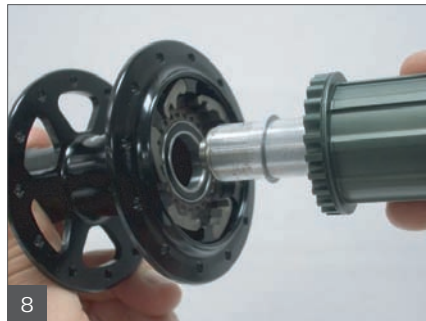
Step 6: With a thin layer of clean grease coating the hub shell, install the new Cam Plate. Refer to the picture for the correct orientation.



Step 7: With a thin layer of clean grease coating the top of the new Cam Plate, install all 6 pawls. Refer to the picture for the correct orientation. Once completed the pawls should freely engage in unison with the Cam Plate.



Step 8: With a thin layer of clean grease coating the pawls, join the axle, cassette body, and spacer with the hub shell.



Step 9: With the axle pushed completely into the hub shell and the pawls engaged with the cassette body, install the large black seal. 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.



IMPORTANT!



Step 10: With some grease on the threads, first install the adjusting nut with dust seal until it is finger tight. Then install the lock nut and adjust accordingly. Be sure the two outer dust seals on each end of the axle are covering the bearings completely.

If there is no side-to-side play in the bearings, you have over-tightened the bearings, which will result in the bearings wearing out prematurely. The correct amount of play is just slightly more than no play. If you cannot adjust your bearings to "slightly more than no play," call or email for technical assistance.