



Rub-a-dub hubs

A SMOOTH HUB IS AN ESSENTIAL PART OF ANY BICYCLE; THE SECRET TO SUCCESS IS CLEANLINESS.

BY RYAN BILSZTA

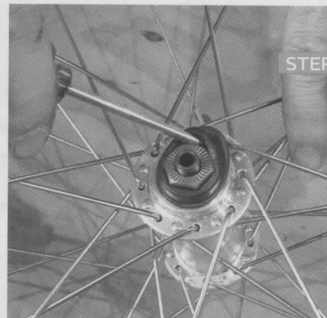
Most cyclists know that any annoying sounds from your beloved bicycle can turn an enjoyable ride into a journey of frustration and suspense as you wonder what's causing that mystery sound on your generally well behaved steed and how to best stop it before going mad.

Often mystery sounds on a bicycle are related to mechanical components that are always subject to heavy forces such as pedals or bottom brackets, although sometimes the noises can come from other less obvious parts on your bike such as the hub on your front wheel.

You should know how to properly service a standard loose bearing front hub for smooth, quiet and problem-free running for many years.

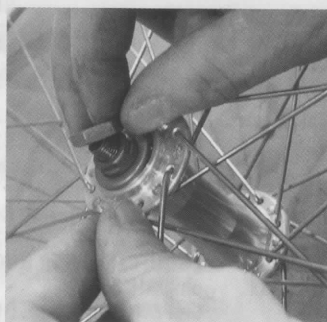
Frequency depends on the type of weather you usually ride in, but hub servicing should be done at least once a year if you often ride when it's raining.

The tools required to service most standard front hubs are a 17mm spanner or adjustable wrench and a 13mm specific cone spanner. (Some hub manufacturers may use other less common nut sizes to lock the hub together, so it's always best to check with your local bike shop if you're unsure what tools you will need for the job.) And you will need grease.



STEP 1

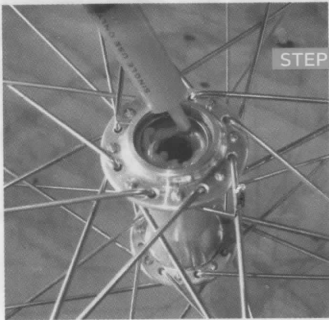
Remove the axle from the hub body. Some hubs may have rubber/metal dust seals covering the inner locking nuts on the outside of the hub body and these can be easily removed with a small screwdriver. Once the seals have been removed, the 13mm cone spanner is used to hold the inner cone section of the axle in place while the 17mm spanner is used to unlock the nut and release the tension between the inner cone and nut before threading the locking nut and cone off the axle completely.



STEP 2

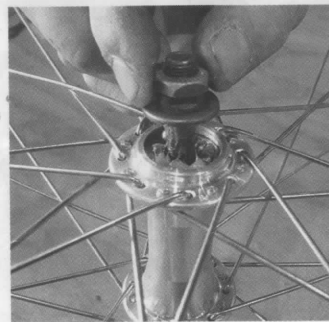
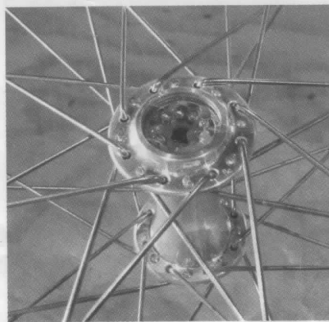
Once the axle has been removed from the hub body inspect the cups in the hub and the cones from the axle for any signs of wear. Wear will make rebuilding a smooth rolling hub almost impossible. The most common sign of wear is pitting around the bearing race on the outer cone or, even worse, the same type of pitting around the cups inside the hub body. Depending on the level of wear to the cones/cups in your hub it may be worth considering a new hub or even a new wheel for your bike. Check with your local bike shop if you are unable to determine if your hub is worth keeping.

After carefully removing the axle from your hub remove the ball bearings, take the cones off both sides of the axle and clean everything properly. Make sure that all parts (including the axle threads) are spotless as even the smallest particles of dirt can create annoying sounds as the wheel spins and the gritty noise is amplified through the hollow metal of the hub body. Once everything has been inspected properly and cleaned well it's time to rebuild your hub and get your bike back on the road.

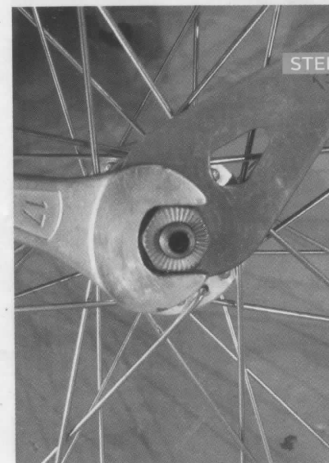


STEP 3

It's a good idea to use new bearings and fresh, quality grease to ensure you get the maximum benefit from the work you have done. There are many different types of grease available for different applications, although for general road riding any standard bicycle grease will be adequate for a smooth rolling hub. The first step in rebuilding the hub is to fit one of the cones to the axle and lock it together with the locking nut. Depending on what type of hub you have (quick release or solid axle) the number of exposed threads will vary but the aim is to have equal threads exposed on each side of the hub. Then smear the inner cups of the hub with grease; this is best done with a small syringe, making sure that you use enough grease to hold each bearing in place securely.



It's always best to start working from one side of the hub first to ensure the bearings stay in place properly. Once the grease has been applied and the bearings have been placed inside one side of the hub it's time to feed the axle through the centre of the hub before placing the remaining bearings on the opposite side of the hub. Make sure that the number of bearings on each side of the hub is equal. The last step in rebuilding your hub is without doubt the most important step and all care needs to be taken to be sure that you get the most out of the work that you have done. Once the cone has been threaded onto the axle and is resting softly against the bearings you need to thread the locking nut against the cone, making sure that the pressure against the bearings is perfect.



STEP 4

The locking nut and cone need to be locked together firmly and the technique is to make sure that the axle is spinning smoothly without any side-to-side movement. After rebuilding your front hub the last step is to make sure that all of the excess grease has been wiped away from both sides of the hub (to prevent dirt from sticking),

and replace the rubber/metal seals on each side if needed. It's always a good idea to check and re-check that the tension on the bearings is perfect once you have finished the job, as any irregular pressure on the hub bearings will significantly decrease the service life of your hub and eventually make the hub useless.



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