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Tri-eCoach
ENDURANCE SPORT COACHING

Basic Bike Maintenance

By Coach Steve

If we expect our bikes to continue performing well for us, then their ongoing maintenance is our responsibility. Bikes are no different from cars; if they don't get regular servicing, eventually they'll break! If we take care of our bikes, they'll take care of us!

Drivetrain: Keep your chain, chainrings, freewheel, and derailleur's jockey wheels as clean as possible. These parts of your bike offer much of the mechanical resistance that slows you down. When your bike's drivetrain becomes dry and gritty, friction is substantially increased. But this is only half of the reason to keep it clean. The grit particles are abrasive -- like sandpaper, and the effect on metal parts is just what you'd expect from sandpaper, premature wear. I've found that when I ride in the rain often, or have let my chain get gritty for lack of regular cleaning, it doesn't last long. Chains are relatively cheap; chainrings and cassette cogs are not. Two new chainrings and a cog set can run you $100 or more and they wear-out fast when not cleaned regularly. Also, you should know that when your chain stretches (actually it just gets longer as the pivoting surfaces wear) it wears down the teeth on the chainrings and cassettes quickly because they no longer mesh properly. Your bike's chain should be replaced every two-to-four thousand miles (depending which expert you ask and how much foul weather the chain has been through). An old chain that does not mesh properly is also creates more resistance and is slower.

Cleaning technique: Some mechanics take the chain completely off the bike and soak it, or use one of those special chain cleaning tools which I find to be more trouble than they're worth. I just spray or drip chain lube on the chain, making sure that each link gets saturated. I lube each link only once, which is about two-and-one half rotations of the cranks. Then after a minute or two, I wipe-off the outside of the chain as dry as is possible. Only the lube that penetrates to the pivot area makes any difference as the lube on the outside only collects dirt. If you don't dry the outside of the chain, or apply too much lube, it tends to shoot all over the bike and make an incredible mess. When you feel motivated and have time, clean the old grease and dirt off the chainrings and cogs. The ultimate cleaning job for the chain rings is to take them off the crank arms completely, cleaning, then reinstalling. For the cogs drag the edge of a rag between the gap or take the cassette apart completely. Be very careful not to get fingers caught between moving chainring teeth and chain.

Check tightness of all bolts periodically: When nuts and bolts are not tightened properly at the factory or a bike shop, they can loosen-up over time. Two especially troublesome areas are the handlebar binder bolt and seat binder bolt. Aero bars put severe twisting forces on handlebars when you hit a bump and often pivot, drooping down. A seat post can also easily slip down when you hit a bump. The only way you can get a feel for the proper bolt tension is to have an experienced mechanic show you. Over tightening breaks bolts, too loose and parts shift. For insurance, I always put a scratch mark on my seatpost as a benchmark for proper height just in case it slips down, or if I have to take the bike apart. Other bolts that should be checked for proper tension at least once a season are: Crank bolts, chainring bolts, water bottle cage bolts, the bolt that holds the seat to the post, and screws that hold cleats to cycling shoes.

Checking tires: Check tires often for deep cuts or any other type of damage. Flats on training rides are a drag and can sometimes be avoided by a quick check a couple times per week. Anytime you

find a spot where the tube is showing through a cut in your tire, the tire is finished. If there are any areas where the fiber casing is showing through the rubber the tire is also finished. The third threat is asymmetrical bulges or lumps caused by cuts to the fiber casing; again the tire is finished. I always check my tires the day before a race. I check all of the aforementioned threats and I look for tiny pieces of class embedded in the rubber. Sometimes when I take out a piece of glass it springs a leak. Better for this to happen the day before a race than on race day!

Check Wheels for Trueness: When wheels get out of true they can rub on your brake blocks, or worse yet, on your frame. Wobbly wheels always continue to get worse; sometimes to the point where the rim gets irreparably bent. "A twist of a spoke in time saves nine." Who said that anyway?

Changing Wheels: Always shift your derailieur to the highest gear before removing your rear wheel. This is absolutely the easiest way to do it because it places the chain on the outside cog. The chain also needs to be on the big chainring so the rear derailleur is not wound-up which leaves lots of slack in the chain. With practice you should never have to touch the chain when you remove the rear wheel. Depending on your bike, you will probably need to pull the rear derailleur back as you lift the back of the bike to let the rear wheel drop out. To put the wheel back in, pull the derailleur back and put the skewer end between the upper and lower lengths of chain. Drop the bike down on the wheel with the chain aligned over the outer cog. Let the weight of the bike down on the wheel and pull it back as far as it goes. Clamp the quick release with a lot of force.

Changing Tires: The tricky part is putting clincher tires back on without pinching the tube. It's best to put the tire back on without tire irons if you have the hand strength to do it. If not, then use tire irons but make sure not to pinch the tube between the rim edge and tool, as it will cut the tube. After you've got the tire back on with the tube inside, squeeze the tire and look to see if the tube is completely out of sight. If you can see the tube under the edge of the tire's bead, when inflated the pressure will push the tire upward and off the rim, blowing a hole in the tube.

Rotating Tires: Rear tires wear out in one-third the time of a front tire. If you move the back to front when the rubber starts to wear flat you'll get more wear out of both front and rear.

Keep your bike's frame clean: Steel rusts, aluminum corrodes, titanium and composite bikes just look cruddy. For a steel or aluminum frame, the paint is actually porous and easily penetrated by elements that will rust the tubes from underneath the paint. Grease and solvents can degrade the glued joints of some old-style composite bikes with aluminum lugs. Check inside your frame for water. It's more common than you think for water to seep in down between seat posts and seat tubes if you ride in the rain or carry your bike on top of the car in the rain. Water in a steel frame shortens its life significantly. Remember that a clean dry bike is a happy bike.