

WCM Crossmax bushing install instructions :

Start by removing the rear wheel from the bike.

You can remove the cassette for an easier installation, but it is not necessary.

On the non cassette side of the hub remove the very outside part where the skewer would normally slide through. It may be necessary to grab the nub that normally would drop into your frame with a pair of pliers and wiggle it while pulling outward. If it is still being stubborn you may have to grab a bit further back with your pliers for better leverage. If you do this, first put something between the pliers and hub surface to prevent scratching it as you can still see this part once installed. Also what seems to work good is to grab the end to prevent it from turning and use an allen wrench on the cassette side where the skewer normally slides through to hold it so you can twist the end back and forth.

With the end removed clear off a large working area so as not to lose any parts while taking the rest of it apart.

Insert a very large allen wrench inside the end you just removed, on the opposite side use an allen wrench where the skewer is supposed to go through (6mm on most hubs). Lay the wheel down with the freehub/cassette body facing up. Unscrew it by turning it counterclockwise and then remove it completely.

Now **CAREFULLY and SLOWLY** remove the freehub by pulling gently while turning back and forth. Once it gets past the pawls it will slide right off. When it is coming off it is best to cup your hands around the bottom of the freehub to prevent a spring or pawl from getting away from you. (usually doesn't happen but can.) Pull it off completely and clean it up using rags or any kind of parts cleaner or solvent. Total parts should be 2 pawls, 2 springs that are usually attached to the pawls and 1-2 washers that act as spacers, and a rubber dirt seal that is still on the hub.

As you can see the part you removed contains the bushing you wish to replace. The easiest way to get the old one out is to take a hook shaped pick and pry at the bottom of one side while using the opposite side as pivot point for good leverage. It is easy to get the pick under the old bushing and then pry it right out. If you don't have a pick set you can also use a razor and **CAREFULLY** cut the bushing in several places causing it to break apart when you use a screwdriver in the same fashion as I just described to you with the pick. Or just using hammer, and a chisel or a screwdriver you can split the old one by tapping it.

Once its removed clean the surface very well and make sure all of the old bushing is completely removed! Take the new bushing and shove it down till the lip contacts the hub. Now take something that's round and flat on the bottom and smaller than the outside lip of the freehub (large socket works great), place it on the bushing and push on it hard. You will hear it snap in.

Now take a flat screwdriver and push in at least 8 places around the outside of the bushing right next to the lip of the freehub. This just makes sure that the bushing is completely snapped under the lip of the freehub. (Our system works way better for this than the stock round bushing does) Once snapped in do not try and remove it!! It will damage the new bushing.

Make sure the old pawls are cleaned up and in place. They sit on a round pin and must be installed right to work. The pawl springs have slight indentation in the hub they have to be in or the pawl will not move back far enough to clear the bushing. By pushing them in the pawl should be level with the hub or slightly below, if its not check the spring to make sure its installed right.

Put 12-18 drops of mineral oil into the free hub and spin it around to get everything coated. Set the 1 or 2 spacer washers on top of the bearing in the hub. Press the pawls inward and slide the freehub down over the top of them. It should slide over very easily, if it doesn't recheck the pawls and springs to make sure they are right. Once slid over it should drop all the way down. Rotate the freewheel and make sure the pawls are clicking smoothly and engaging. Install the bolt and bring it down to a very light pressure and rotate the freehub again to make sure it spins very easy and still clicks and engages. Tighten the bolt to 12ft lb which equates to pulling pretty hard with an 5" long allen wrench. With the cassette installed it should spin several times around with a good spin and should engage firmly and click crisply.

Troubleshooting: If it doesn't click when the freehub is set on lift it slightly and see if it starts to click when turning it. If it does, make sure you put all of the spacer washers back in. If it doesn't remove the freehub by pulling it off lightly while turning it back and forth. Check the pawls and springs for proper installation.

Put end cap back on with a skim coat of lube or grease. Install the wheel and have fun :) I would recommend a hub service every 200 miles with off road use, 350 for highway use. If you ride in the water like small stream crossings or while raining, or in very harsh sandy conditions I would service after 100 miles to keep everything clean. If you submerge the rear completely I would service after you get done riding. These are pretty much the same maintenance intervals that Mavic recommends.