



Auto to Manual Hub Swap

BY JOHN GOETHERT AND ANDREW DANIEL

After getting Full Force I started using it as my daily driver. A mere week later I noticed a strange noise emanating from the front wheel on the driver's side. Sounding much like a baseball card in the spokes of a bicycle I did a quick check... no baseball cards or other things that I could see that would make such a sound. Since it was chilly outside I decided to do the warm thing and jumped on FullSizeBronco.com. For the fun of it I typed in the search field "baseball card in the spokes." Thinking I would get the automated response "forget it wise-guy", I was surprised to see a question posted with that exact phrase. The multiple responses to the question was "dump the auto hubs". So, I did another search using auto hubs. Hundreds of messages popped up with the same response. Being the wise guy I am I searched for the price of replacement auto hubs. \$300 OUCH! compared to between \$50 and \$100 for super-strong, manual ones.

Ford's engineers had a great concept with these components. All the driver had to do was hit the 4x4 button on the dash the start driving. The hubs would automatically

lock - no jumping out into the mud to turn the dial. The problem is, with age, the hubs lose their grease and wear out. The symptoms can range from the annoying "baseball card in the spokes" noise to totally nonfunctional hubs. And yes, regreasing is an option, but

the guys on FullSizeBronco warn against taking them apart to lube. Just opening the hubs can damage springs.

And if that wasn't enough, Andrew Daniel sent me a tech story about this very problem 2 days earlier. Enough convincing, I was going to have to replace them.

I must say this fix was much easier than I ever thought. The owner with little or no "wrenching" skills will have no trouble assuming you have a couple of proper tools (a Torx T-25 bit and a set of Allen wrenches). It took me about an hour in the dark; 45 minutes for the first and 15 minutes for the other. I must also say, ignore the instructions that come with the hubs, very confusing.

Important to note that when purchasing the manual hubs, you will need a special adapter kit if your Bronco has auto hubs with 3 screws in the hub cover. Not a big deal but the guy behind the parts counter probably won't ask.

Special thanks to Andrew Daniel for his write-up. His work helped me though the process with minimal sweat. And some pix sprinkled throughout the upgrade are his. 📷



Next use needle-nose pliers to pull out this clip and rubber gasket



My hubs were of the 5-bolt variety. Be sure to check which yours are, 3 or 5, before purchasing your new hubs. While you are at the parts store pick up a set of "star bit" sockets or wrench (with T-25 Torx) or borrow one from a friend.



Use the pliers to squeeze the two tabs of the retaining clip together...



Remove all screws with a T-25 Torx wrench.



Remove the cover. This is the view with it off.



and pull the whole thing out. The retaining clip does not come out by itself, it comes out with the whole thing. A trick is to put a couple of the cover's screws back in the holes to give you something to grab on to.

the install



Here would be where you insert the adapter kit if you had a three-bolt automatic hub. Not required here.



Now slide in the new hub.



Next install the large outer clip.



Next remove the c-clip wrapped around the axle. It will be difficult to find as it will be covered with tons of grease... feel for it. I found the gap in the ring and with one hand pushed it away from the axle just enough to get a screwdriver under it.



There is a slot in the axle that a circlip will go in. In this photo the shot is NOT showing, the axle is too far back in the hub. It will be where the arrow points. The axle will need to come out to reveal the slot.



Then put on the cap and put in screws.



Surprisingly, there should have been a large washer behind the clip. Mind did not have it. Hummm.



To move the axle out, pry it out with a large screwdriver or tire iron. If you are by yourself, as I was, use a bungee to hold the screwdriver. Thanks for this tip Andrew!



Then put on the cap and put in screws.



This is a better view of the clip (on bottom) and the missing washer.



With the slot accessible slip the circlip onto the axle.



I torqued to 45-55 INCH/POUNDS (not ft/lbs) for standard Warn hubs like mine (Premiums: 25-30)

All done!

Test everything out by getting off the pavement. Turn the hubs to "Lock". Then put the truck in 4wheel drive and go muddin'. With enough gas pedal the front wheels should spin proving that all is working.