

Two Men One Garage

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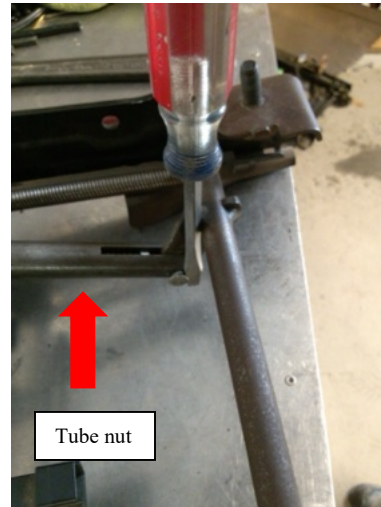
05-14 Mustang Geared Shaft Replacement Instructions.

02-10 Explorer Geared Shaft Replacement Instructions.

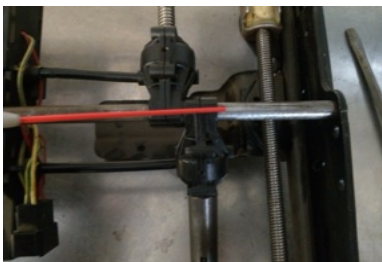
1. Remove the split plastic sleeve spacers



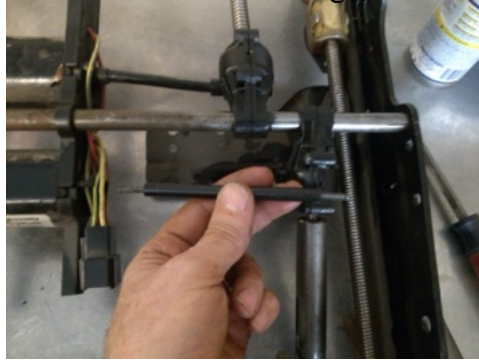
2. Remove the pin holding the tube nut to the lift lever. This is probably the hardest step. I use a screw driver to pry out the pin. Most standard tip screw drivers have a wedge shape to the side of the screw driver. Try getting the tip started between the head of the pin and the tube nut. Once the tip is started, drive the screw driver down to force the pin out. It may be possible to use a hammer and drive punch to remove the pin. Just be careful not to bend the lift lever while trying to drive out the pin. It may be necessary to support the lever in some way. Some experimenting and ingenuity may be required. If you are just replacing the outboard gear(rear lift), this is the only pin that needs removed. If replacing the inboard gear (front gear) both front and rear pins need removed to get enough movement out of the gear casings.



3. If the outboard gear(rear lift) is getting replaced, take out the four ¼ head screws from the motor casing. If the outboard does not need replaced, just slide the whole assembly to the outside and remove the four ¼ head screws from the inboard casing. Using some type of lubricant will help the gear cases slide on the shaft.

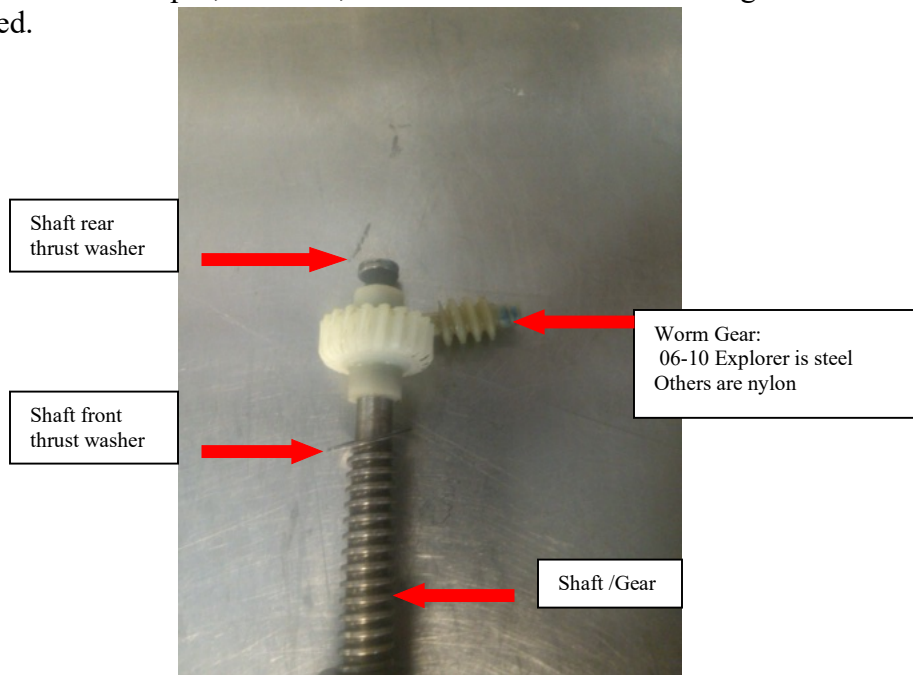


4. Sliding the cases will disengage the flexible drive shafts between the motor and the gears. Make a note what shaft goes to what motor and gear. They are different lengths.



5. After removing the 4 screws from the casing of the bad gears, use a small screw driver to separate the two case halves.

6. Once the cases are split, the shaft, shaft thrust washer and worm gear can be removed.



7. The tube nut must be reused. Getting the bushing off the tip of the shaft is very difficult, so the easiest method is to cut the shaft and unscrew the tube nut off the cut end of the shaft. The front thrust washer must also be reused so do not damage it while cutting the shaft. See the picture on where to cut the shaft.



8. After removing the tube nut and front thrust washer, reinstall them on the new gear/shaft. Slide the thrust washer onto the shaft and screw the tube nut down onto the shaft until the 1/8 hole on the shaft's end becomes visible in the tube nut slot. Use a hammer and drive pin to drive the roll pin into the hole. Ensure the pin is centered on the diameter of the shaft. If it is not centered, the pin will not rotate freely in the tube nut. Once the roll pin is driven into the shaft, rotate the tube nut by hand to ensure it does not catch inside the tube nut.



9. Reinstall the shaft, rear thrust washer, and worm gear into the casing. **06-10 Explorers use a steel worm gear. You must reuse the steel gear as it is longer than the nylon gear.** The old nylon worm gear has identical square ends. That's so a flexible drive shaft can be inserted in either side of the case for assembly interchangeability. The replacement worm gear has only one square end. The other end has a small ball bearing inserted into the end. The ball is not needed for this type of case, but just leave it in the end. It will not harm or interfere with anything. Just make sure the square open end is inserted towards the motor so the flexible drive shaft can be inserted into it later during the assembly process.



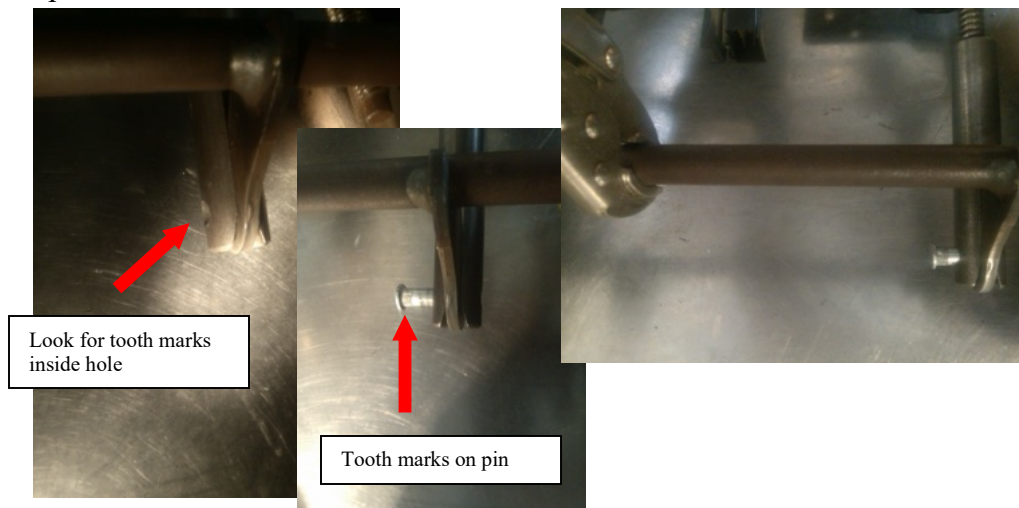
10. Below is a picture of how the assembled parts look like. Placing the seat track on its side makes reassembly easier. Slide the other side of the case towards the assembled part and reinstall the four 1/4 head screws.



11. Reinstall the flexible drive shaft into the motor and slide the gear casing assembly back onto the other end of the shaft. Ensure the square end of the shaft engages the square hole in the plastic worm gear.



12. Once the two case halves are secured, reinsert the pin holding the tube nut to the lift lever. Make sure the toothed side of the pin goes back into the hole on the tube nut with the tooth marks in the hole. If the same hole is not used, getting the pin back in will be very hard. Using vice grips to rotate the lever shaft helps line up the holes in the lift lever and tube nut.



13. Drive the pin back into the lift lever and tube nut. Be careful not to bend the lift lever from the force of hammering on the pin. A C-clamp might help installing the pin. Using something to support the lever helps.
14. Repeat all previous applicable steps to reassemble the other gear assembly.
15. Once all flexible drive shafts have been reinstalled and all tube nuts have been secured to the lift levers, snap the plastic sleeve spacers back onto the shaft.



16. Contact me with any questions. C: 912 667 4198