

Introduction

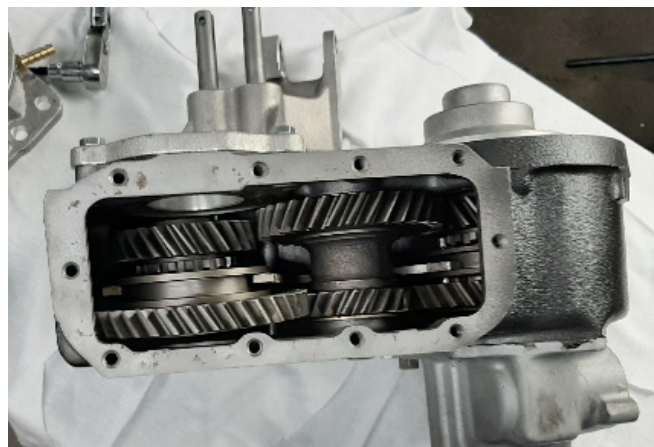
This guide will assist the installer in the process of removing the stock Dana 300 rear output, and installing the new 300RX heavy duty rear output.



Installation Instructions

Step 1. Drain the gear oil from your Dana 300.

Step 2. Remove the 10 bolts holding the oil pan on and remove the oil pan.



Step 3. Using your 1/2" socket/wrench, remove the bolt and lock plate holding the intermediate shaft in place.

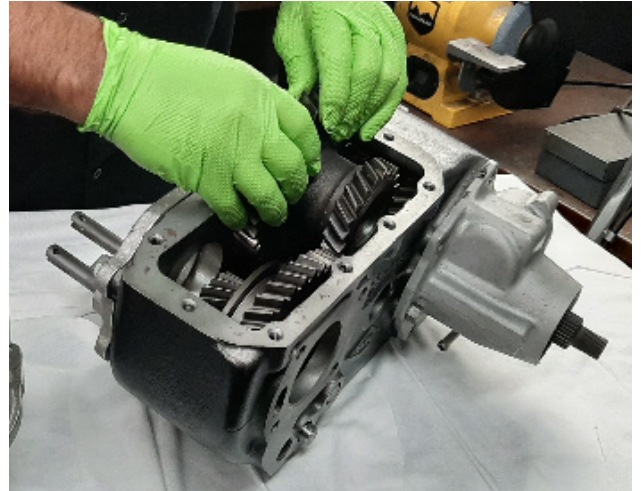
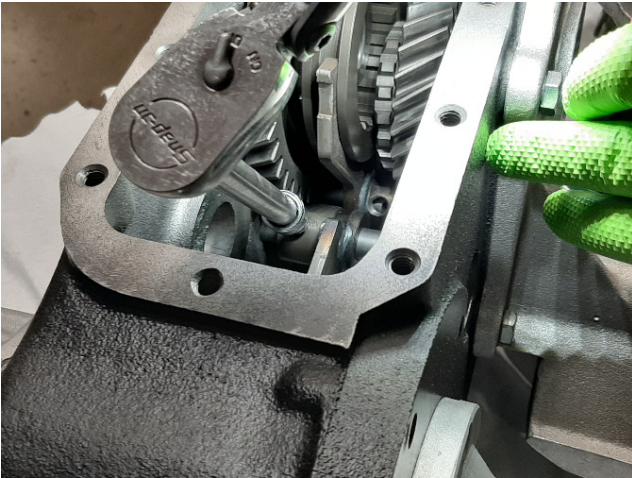
Step 4. Using your punch and striking hammer (not a dead blow), drive the intermediate shaft out rearward.



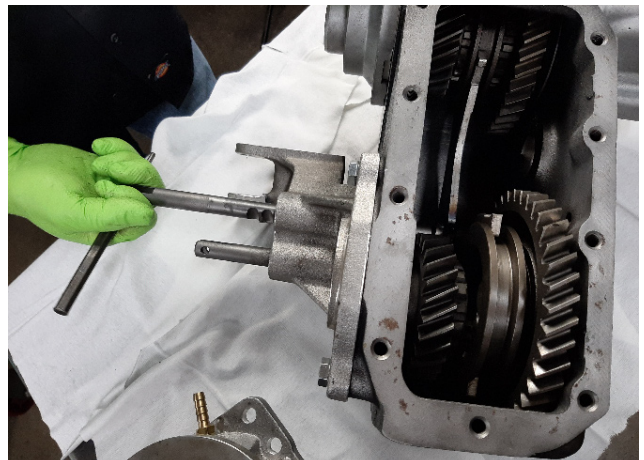
Step 5. With the intermediate shaft removed, you can now remove the intermediate gear.

****Note: be sure to account for every bearing! A missed bearing loose in the transercase will reak havoc on your gearbox.**

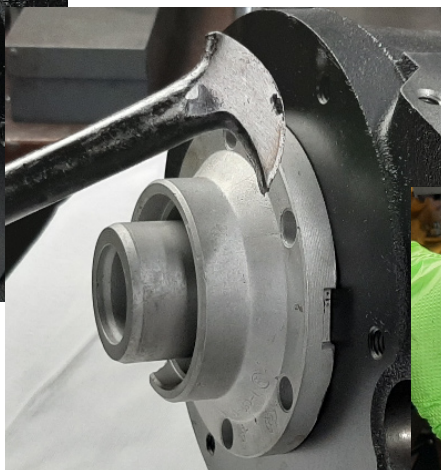
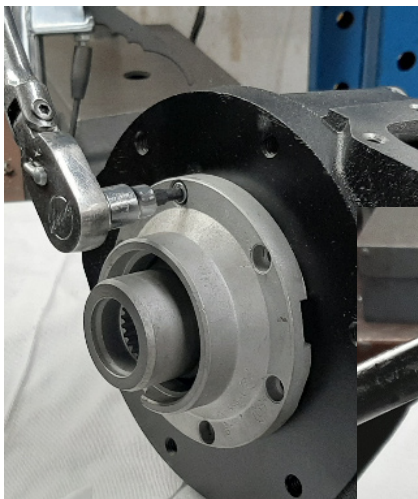
Step 6. Verify both shift rails are in the Neutral position.
Step 7. Remove the rear shift fork set screw.



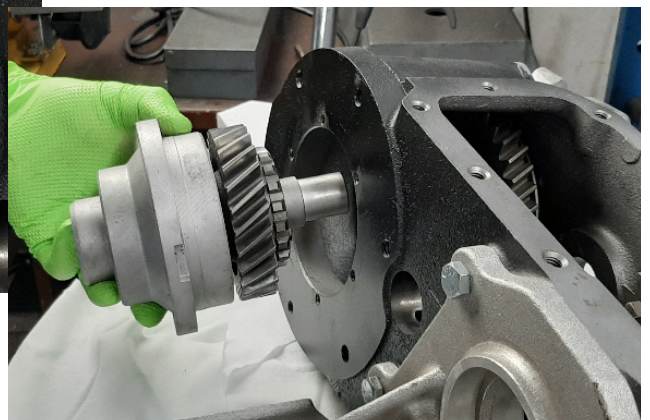
Step 8. Remove the rear shift rail. This is most easily done by inserting a small screwdriver or punch through the hole in the rail as a handle. The shift rail does not need to be fully removed, only just enough to remove the shift fork.



Step 9. Remove the 6 Allen head bolts on the input bearing retainer/housing.



Step 10. Use a prybar in the in the appropriate slots to remove the input bearing retainer.



Step 11. Remove the shift fork and shift collar.

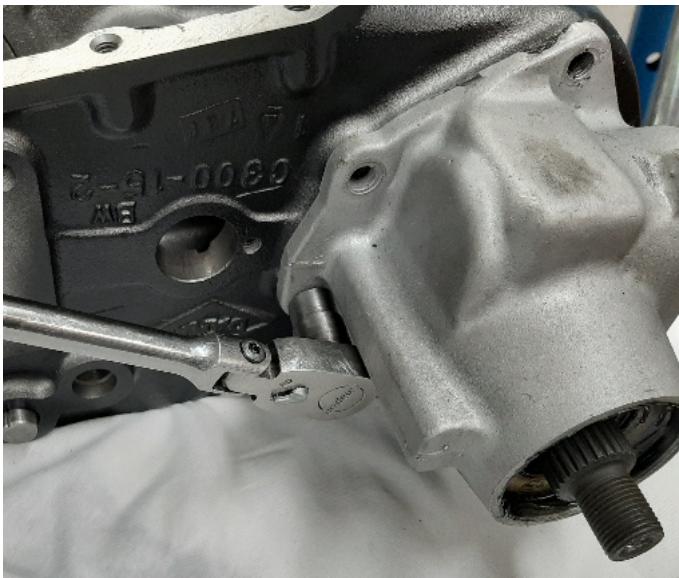
Step 12. Drive the rear output shaft out, from the rear towards the front of the case, to release the bearing. There are 3 methods you can use to remove the bearing and shaft.

* If your rear output shaft has a recessed groove in the end of the shaft, you can use a drift and hammer.



* If your shaft does not have the recessed groove, you can thread the yoke nut on and strike the nut so you don't deform the threads or otherwise harm the shaft.

* If neither of these methods work for you, or if you have a press at your disposal, a press is the preferred method



Step 13. Remove the 9/16" bolts on the rear output housing.

Step 14. Use your putty knife to break the rear output housing seal. You may also choose to gently tap around the housing with your dead blow hammer to break the seal, both methods are acceptable.



Step 15. Now you can remove the rear output housing, leaving the shaft and bearing in the case. (image, left)



Step 16. Now, rest the rear output shaft gear against the inside of the case on the input side/front of the case. Thread the yoke nut on the end of the output shaft. Using your dead blow hammer, drive the rear output shaft forward to break it free from the gear and bearing. (images, below)

*If this does not work, a press will be required.



Step 17. Now that you have the rear output shaft and gear assembly removed, you may set aside the rear output shaft, bearing, and spacer. You will not use either of these 3 components with your 300RX HD rear output. Now is also a good time to inspect your Dana 300 gears.



You are now ready to install your 300RX HD rear output assembly. The assembly has been preloaded/shimmed correctly and is ready for installation.



Step 18. Remove the yoke nut from your 300RX assembly.



Step 19. Now, remove the flange, being careful not to lose any of the shims. The shims may be stuck to either the reluctor wheel in the flange assembly, or on the output shaft.



Step 20. With the flange removed, the 300RX housing can be lifted free from the shaft. You will need to remove the shims from the shaft for the next step. Use your pick to carefully remove the shims and set them safely aside.

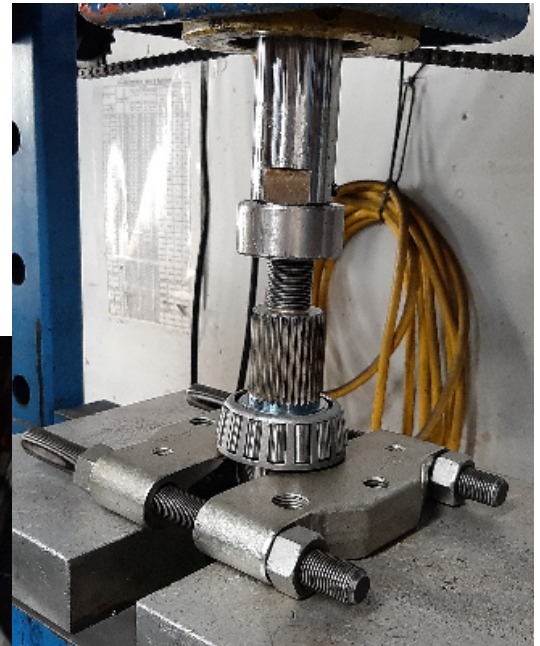


Step 21. Press the 300RX output shaft out of the bearing.

Step 22. Place the output shaft gear back inside the case against the rear output side of the case.



Step 23. Lube the 300RX output shaft in preparation for reassembly.



Step 23. Insert the 300RX output shaft through the gear and flip your Dana 300 on it's input side face so that the gear is resting flush against the case and the shaft is resting flush against your work surface. Both the gear and shaft must be resting solidly and flush in order to press the bearing back onto the shaft.



Step 24. Slide the bearing back into position on the ourput shaft and press it into place. A press is by far a simpler and the preferred method for installing the bearing. If you do not have access to a press, you may also use an installation tool, such as a pipe, the same diameter as the bearing race and a dead blow hammer to install the bearing. Be sure that the bearing bottoms out against the sholder on the output shaft. As mentioned previously, there is no spacer used here.



****Note: Whether you are using a press or a hammer and pipe, be careful to keep the installation tool on the race of the bearing and do not let it hit the cage of the bearing as this will surely ruin your bearing. Should damage to the caged bearing occur, we can sell a replacement.**

Step 25. Reinstall the shims and be sure they are seated against the bearing.

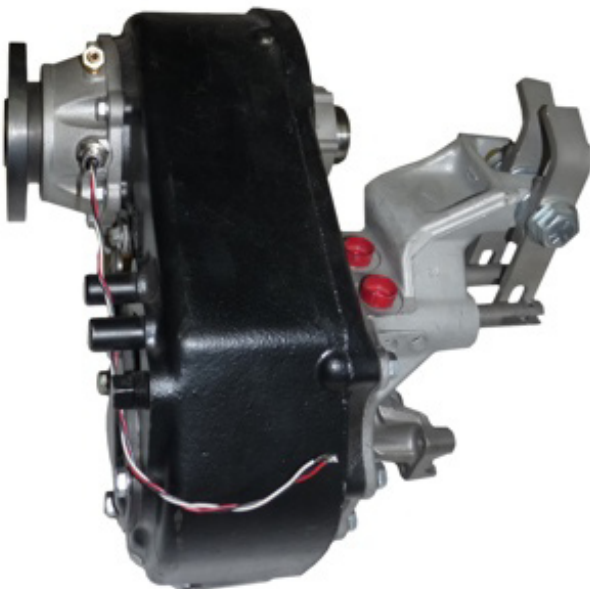
Step 26. Apply a bead of RTV sealant to the 300RX housing and install it onto your Dana 300 case using your existing hardware (3/8"-16 x 1" bolts). Apply a threadlocking compound, such as LOCTITE® blue, to each bolt. Snug each bolt, then go back and torque each bolt to 33 ft/lbs.



Step 27. Install the flange onto the output shaft.

Step 28. Reinstall the torque lock yoke nut and torque it to 195-205 ft/lbs.

Step 29. Connect your breather hose and run it to a higher up location (such as mounted high on the firewall).



Installation of your 300RX HD rear output assembly is complete! Reinstall your Dana 300 and go for a test run.

Recommended Tools & Supplies

- Large dead blow hammer
- Good striking hammer (not dead blow)
- A press, hydraulic is recommended
- Bearing separator
- A good punch
- 3/8" ratchet
- 3/8" torque wrench
- 3/16" hex head socket
- 9/16" & 1/2" sockets, or wrenches
- 6" extension for 3/8" ratchet
- 1/2" torque wrench & 1-1/2" socket (for yoke nut)
- Pick
- Putty Knife
- Pry bar, preferably a rolling head pry bar
- Assembly grease
- Installation tool, such as a pipe, the same diameter as the output shaft bearing race
- Threadlocking compound
- RTV sealant
- An 80W-90, API-GL5 or MT-1 rated fluid

Should you have any questions concerning this kit, or these components, we welcome you to contact us.



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www.novak-adapt.com

support@novak-adapt.com

877.602.1500