

By SIKwan of Sprinter-Forum, <http://www.sprinter-source.com/forum/showthread.php?t=2557&highlight=transmission>

NAG1 Transmission Fluid Change

The T1N was a tad over 20k miles when I decided to change the **transmission** fluid. Nothing out the ordinary, except changing it because I had the fluid and I wanted to get rid of the additive that I recently added.

Required Tools:

- OEM dipstick
- 5mm allen wrench
- 27mm socket, with 1 inch (1/4") extension, and socket wrench with pivoting head
- T30 torx bit
- 9 quarts of ATF fluid (service manual recommends 8 quarts for a full drain and fill).

NAG1 **Transmission**.



Pan drain bolt to the left and rectangular rubber plugs on the bottom of the bell housing.

Close up of the rectangular rubber plugs



Remove plugs to access torque converter drain bolt.

Close up of the pan drain bolt and 2 of the 6 torx bolts that fasten the pan to the **transmission**.



5mm allen wrench to remove the drain bolt and a T30 torx bit to remove the 6 pan bolts.

I don't think you need a wrench this long, but this is all I had for a pivoting head. You'll see what I mean.



27mm socket, 1 inch (1/4") extension, and wrench with pivoting head.

Here's where the wrench is attached to the crankshaft bolt. Unclipped the hose attachment for full wrench swing.



It would've been easier to use a ratcheting wrench, but I couldn't get it in there without the pivoting head. Be careful to not hit the radiator fins.

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The service manual says to turn the crankshaft in a clockwise direction until the torque converter drain bolt can be seen. It was easier for me to turn it counter-clockwise, when looking towards the front of the vehicle, so I don't think there is any damage to doing it counter-clockwise except for loosening the nut on the crankshaft pulley. As long as the **transmission** is set to neutral, I don't think there will be any danger of loosening the crankshaft pulley. At least I didn't have any problem.

I shifted the **transmission** to neutral, laid on the ground with my feet towards the front of the vehicle and positioned my head right underneath the bell housing window. I would turn the motor while watching for the drain bolt. I would worm my way back to the front, reposition the wrench, worm back, and repeat the process until I saw the drain bolt.

Drain bolt finally appears.



5mm allen wrench to remove.

I decided to drain the pan first.



The pan drain bolt was ~~not~~^{too} tight on there. Copper washer was reused.

I decided to drape a plastic over the cross member before removing the torque converter drain bolt.



I'm glad I did, otherwise it would've been an oily mess.

WARNING: I didn't find the washer for the drain bolt. 🤔 It might have fell into the collection bucket, but my fishing attempts were futile. Since, I couldn't find the drain bolt washer for the torque converter and I didn't want to install the bolt without a washer, I used a brass washer I had around (plenty) that fit fine. You might want to make sure you find that washer when draining or at least purchase one to have around. I'll insert a dimension for the washer that I used.

6 T30 bolts with clips were removed to remove the pan.



Pan with some fluid left in it. The donut next to the drain is a magnet.

Wiped off a lot of metal shavings from the magnetic donut.



Metal shavings were on there like a muddy paste.

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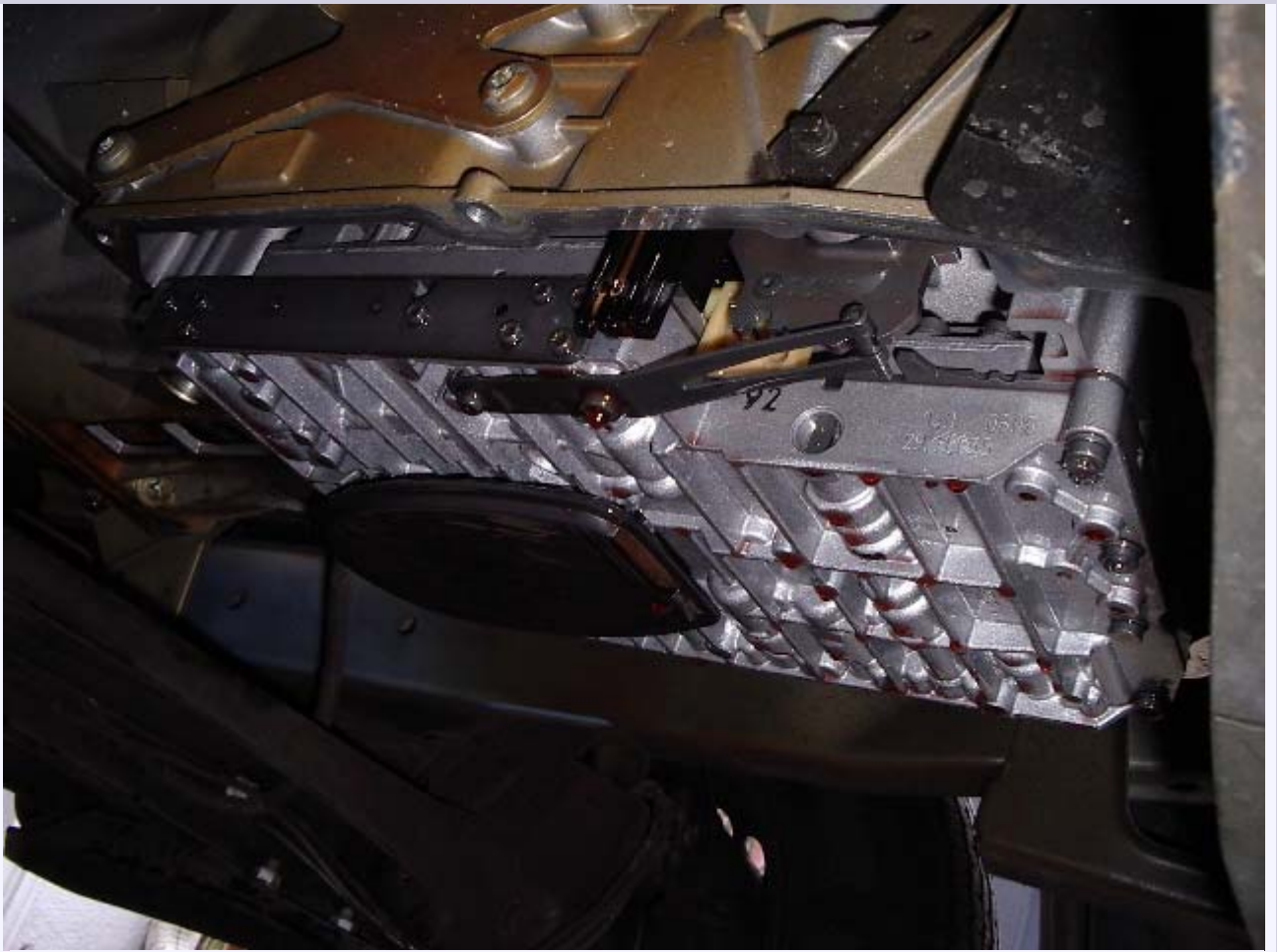
Re: NAG1 Transmission Fluid Change

The new filter. Notice the o-ring on the tube.



Make sure the plastic tab to the right is positioned correctly when mounting.

The old filter.



A cleaned up **transmission** pan with new gasket.

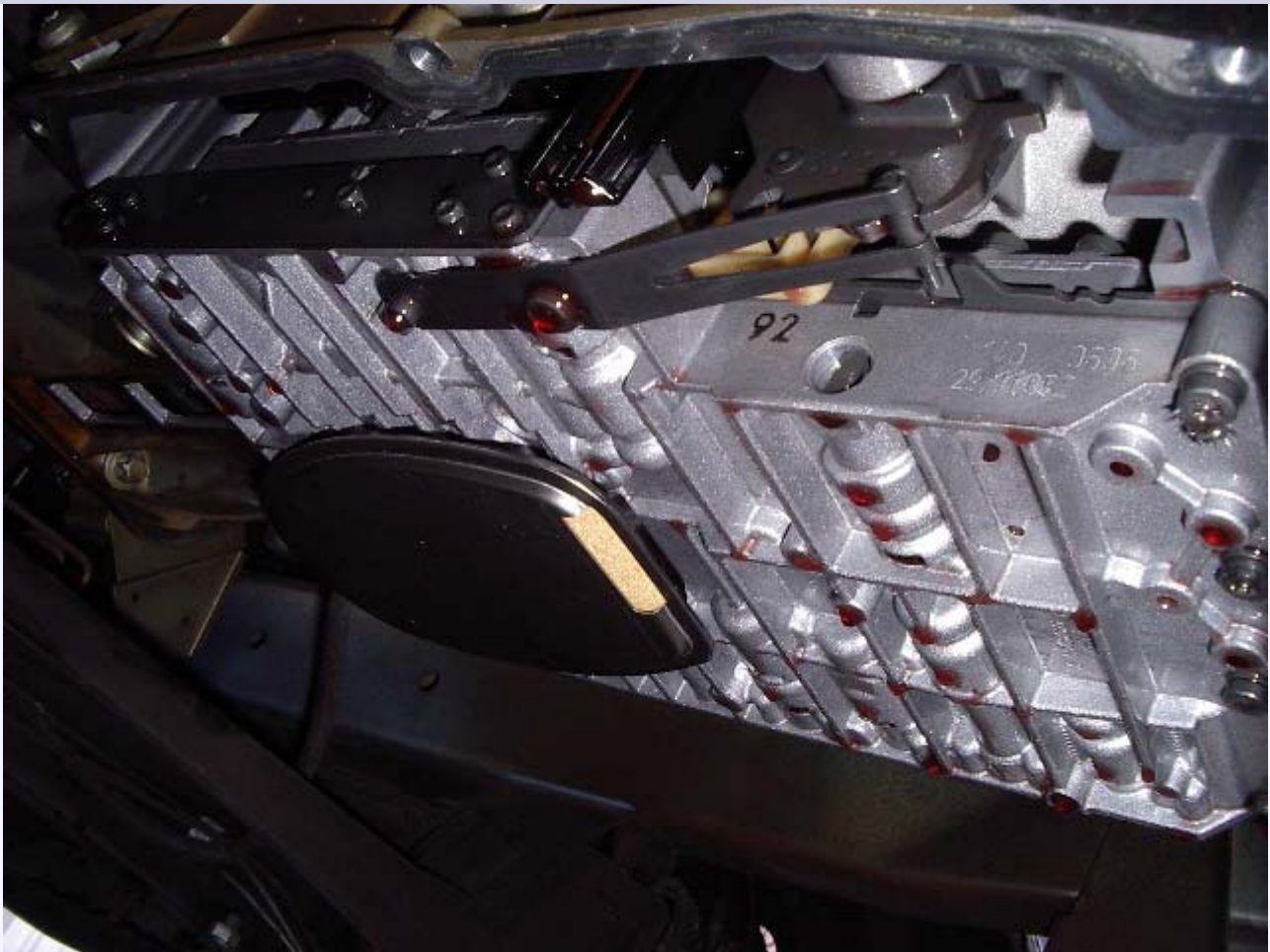


Oops, I almost forgot the magnet.



Magnet just sticks to the steel pan.

Old filter is pulled off and the new one attached.



Filter is attached using friction of the o-ring.

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Re: NAG1 Transmission Fluid Change

Make sure to make a note of the pan clips.



There are a total of six, 5 of the left, and 1 of the right.

Bolts go through the holes next to the numbers.



The clip on the right goes to the forward most, driver's side of the pan. It doesn't attach to anything though.

I purchased 9 quarts of this at \$7.95 a piece (shipping extra).



Filling the transmission was a laborious task. 🤖



I first filled it with 5 quarts, turned on the engine, and set the **transmission** to Drive with the parking brake and front wheel chocks. Shifting it into Drive will start to pump most of the fluid into the torque converter. I then filled it with 2.5 more quarts and measured it. It was definitely low, but it wasn't at operating temp, so I went for a drive around town.

Coming back, I set up the parking brake and front wheel chocks, shifted it into Drive, and measured it. I could see the fluid just on the low side. I filled up the remaining half a quart for a total of 8 quarts (service manual recommendation on a full drain and fill), measured and was at the half way mark on the dipstick. I left it at that so that the fluid had more room to expand.