

## TRANSMISSION FILTER/FLUID CHANGE

tools:

4 jack stands

1 floor jack

T-40 hex socket driver (1/2in drive)

10mm 3/8in hex socket driver (1/2in drive)

18in 1/2in drive breaker bar

12in 1/2in drive breaker bar

torque wrench

manual fluid pump

empty washer fluid container

oil pan

flat head screwdriver

Video 1 [https://www.ecstuning.com/BMW-E39-530i-M54\\_3.0L/ES2523873/Video110-HD/](https://www.ecstuning.com/BMW-E39-530i-M54_3.0L/ES2523873/Video110-HD/)

Video 2 <https://www.youtube.com/watch?v=5ZbA-OqoPJQ>

supplies:

20 liters of texaco etl 7045e atf - \$96 after employee discount comes out to \$4.80 per liter. one liter is approximately a quart.

1 box of shop towels - \$10

2 atf filter kits with gaskets (one oem - \$35 and one non-oem - \$25)

engine degreaser - \$3

kitty litter - \$0 (got a cat already who poops all the time)

the steps:

1. jack the car on four stands. jack them up as high as you can since you'll be needing as much elbow room as possible. put the car on park and hand brake on.

2. with the same hex driver, loosen the DRAIN plug which is on the bottom of the pan. again, have the oil pan ready. Loosen drain FIRST as if stuck, don't proceed.

3. with your T40 hex driver, loosen the FILL plug. its the plug that is horizontal facing the drivers side. its situated above the atf pan by the cat. make sure you have your oil pan ready. it can get really messy.

4. as you let it drain/drip, proceed by unscrewing 20 bolts with the 10mm hex socket driver all around the atf pan. the final 4 bolts to unscrew are amongst the corners.

5. this is where i had atf splash all over my hair. beware that your pan is now simply hanging due to suction of the gasket. set the oil pan aside, but not too far. place back your DRAIN plug. carefully, loosen the sides with the flathead screwdriver serving as leverage. have the other hand be able to "catch" the pan. let the atf drain further for about 15 minutes. remember, your goal is attain a minimum of 90% new atf replacement. that's why you got to do this again in about 1000 miles!

6. the atf filter is simply hanging as well due to the o-ring suction which is located closer to the front of the car. simply tug this lightly and set on the atf pan. replace that filter with the non-

oem filter by just pushing it in. try to attain some suction as well.

7. time to clean up the atf pan. take the pan out of the undercarriage and place back your oil pan to catch the dripping.

8. with your engine degreaser, spray it! use shop towels to wipe it down. there's a magnet by the top left corner. make sure you clean that thoroughly since that's gushed up with tiny metal bits. imagine if your pan didn't have this? imagine all that metal running through your tranny. ouch. wipe the whole pan in and out.

9. back to the undercarriage. remove the old gasket. with the dripping atf, slightly layer it in the atf pan. now place the new gasket the adjacent holes of the pan. this is the fun part. with your fingers, tighten back the screws. try doing this with a star pattern. once all 20 bolts are lightly screwed on, use your 10mm hex socket driver to tighten them with your torque wrench 6nm/4ft lbs tightness.

Now tighten the drain plug to 35nm/26ft lbs.

10. run the car for about 15-30 mins to warm up. the tranny must be in the temp range of 30C-50C or 85F-120F. skin temp is somewhere 85F.

11. time to put some new fluid in! with the empty washer fluid container, pump in about 3 liters of atf from your big texaco container. while the car is on park, use the same pump with the bottom hose heading towards the fill plug. remember to have your handy oil pan nearby. finger tighten the fill plug. get in the car and start it. change gears from gears one to five, about 15 times to start having the new blood flow. make sure your foot is on the brakes =P. kill the engine and leave the car on neutral.

12. unplug the fill plug, then pump in more atf until it overflows. finger tighten the fill plug once more.

13. torque the fill plug with 30nm/22ft lbs of pressure.

14. make sure clean up under the car. wipe down the atf that splattered all over the place especially if it splattered on your cat/exhaust. you don't want to smell burning atf.

15. take the car off the jacks. also, check for drips just in case you didn't tighten the plugs and screws enough. take the kitty litter out to absorb all the oil on the floor...

16. run the car around the block =) see if it changes gears, lol.

after about 1000 miles, do the same process again, but this time with the oem filter kit. =) reason so is because a lot more old atf was situated in the torque converter. key is to attain at least 90% new atf. after 50 to 60K and if your tranny doesn't need to be rebuilt yet, do this all over again.