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Audi A8 Transmission Service

By Barry Lenoble and Paul Waterloo



Background

Changing the transmission fluid and filter is probably the ***MOST IMPORTANT*** service that you can perform on your A8. The transmission has metallic wear components. Once these wear, the filter clogs up and the oil is degraded over time. This starves the hydraulic pump of oil, especially on cold start ups and causes the pump to cavitate. This is the squealing noise that can be heard. This can cause long term damage to the transmission.

Audi states the automatic transmission fluid (ATF) is a lifetime fluid. This is not true. It is recommend to change the fluid and filter every ***25,000 to 40,000 miles***. This can save over \$8,000 for a rebuilt transmission.

Parts Needed

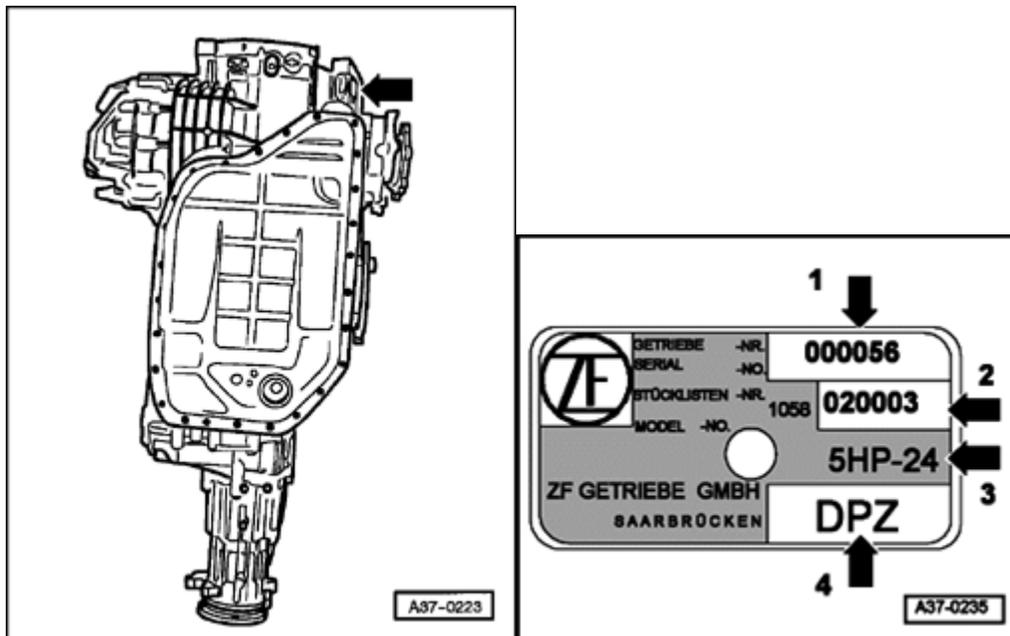
- 01L-325-429-A Filter (see note below)
- 01L-325-443 Filter to Transmission Gasket/O-Ring

- 01L-321-371 Pan Gasket
- 01V-321-379 Fill Plug Sealing Washer
- G-052-162-A2 ATF Fluid (have 8-9 quarts on hand, you might use a little less), use ONLY Audi fluid

NOTE: 01L-325-429 is the filter part number for model year 1997 A8's that came with a type DPZ transmission with a serial number of 001891 or less.

01L-325-429-A is for all 1997 A8's with DPZ transmissions with serial numbers greater than 001892, DSM type transmissions and DTE transmissions. The DTE transmission was supplied on later 97's and all 98-03 A8's.

The transmission nameplate can be found on the bottom of the transmission just forward of the pan.



Location of nameplate. Nameplate data: 1) Transmission serial number 2) Transmission serial number 3) Transmission identification (all will be 5HP-24) 4) Code letters



Here is the kit you will need. Buy it from [Wendy Hager by emailing her](#). She use to be a parts manager at an Audi dealer, now on her own. Very knowledgeable person!

She sells it for \$23.95 plus shipping for the filter, pan gasket and drain plug o-ring.

Dealer list price: \$80.64.

Special Tools Required

There are a few special tools required to complete the job. There are two pan torx screws above the right hand catalytic converter that will need to be eased out with a modified torx wrench. You will also need a breaker bar (2' pipe to fit over the allen wrench) most likely to remove the fill plug, and a pump to get the new fluid into the transmission.

- Torx T-27 bit, it will have to be ground down
- Socketed Torx T-27
- Screwdriver type Torx T-25
- "L" shaped 17mm allen wrench
- [Marine Outboard Pump with Copper Tube Installed](#) find it any marine store as Boat U.S. or West Marine for inboard/outboard motors
- Duct tape to hold marine pump oil line in place during oil fill

With these tools, you will not have to drop the exhaust to service the transmission.



Marine outboard pump. Purchase it at any marine store. Modify it by removing the threaded insert that screws into the outboard drive, and install a copper pipe. See pictures below for modified pump. They cost about \$5.00.



Purchase socketed and bit type T-27. You'll have to grind down the back side of the bit type to make it short enough to remove the two torx screws above the right hand catalytic converter.

Procedure

The Bentley service manual for the A8 states the procedure as follows, sounds easy enough:

1. Open drain plug and let fluid drain.
2. Remove transmission pan bolts and remove pan.
3. Remove filter (screen) bolts and remove old filter.
4. Install new filter.
5. Install transmission pan.
6. Remove fill plug and add new fluid.

Of course, the procedure is a little more complicated than that. With the help of the friendly people on AudiWorld, I was able to do all the work.



The victim ready for work. Note that the car should be level for this procedure. If not, you can't properly fill the transmission. Put the car up on four jack stands if you don't have your own lift. See picture at top of this procedure for jacking points. Use jackstands at the rocker panel jack points to support the car. It must be level to perform this procedure.



These are the parts you need: pan gasket, new screen, and super special VW/Audi transmission fluid (at \$12 -15/quart, you should buy 8 quarts). Remember to also buy new crush washers for the drain and fill plugs (I didn't and if the originals leak I will be very mad).



This is the transmission pan. The small bolt is the drain, the large one is the fill. The bolts are Torx bolts, size T-27. Why Torx and not Allen? Why T-27 instead of the more common T-25 or T-30? We must all make sacrifices to the Audi Gods.

The fill plug is a 17mm Allen. Make sure you can remove the fill plug **before** you open the drain plug. You don't want to drain the fluid, then find that you can't fill it! I tried using two

17mm nuts welded to a bolt with a 17mm head. No good. The fill plug took a lot of torque to loosen. I had to buy a 17mm L shaped allen for \$9.00. I put a 2' pipe on the end and it came right out.



Different shot of the transmission pan. Of course, nothing can be easy. Note that two bolts are obstructed by the catalytic converter. You could remove the exhaust, but that would be a real pain. Instead, buy a Torx T-27 bit from Sears. Grind off about 1/4" off the back side. Lock it into a vise grips, and you can use that to loosen the two bolts. I also recommend you have a socketed T-27, and a screwdriver type T-25. You can use the T-25 to remove the two obstructed bolts. The smaller tool allows you a better angle into the bolt. Be careful to not damage the bolt head too much.



Ground down T-27 bit in vice grips. This will allow you to get the two hidden T-27 screws out without dropping the exhaust.



One more shot of hard to get Torx screws, they are on the right hand side of the pan.

You need a socketed T-27 to torque the bolts when you re-install them. It's also a lot faster to use the socketed tool than to put the bit into a 1/4" socket. The bit will fall out and you will waste a lot of time crawling around the floor trying to find it.

Make sure you can loosen the two bolts before you drain the fluid.



Transmission fluid draining. Be prepared for about 6-7 quarts to drain. Note that the Audi fluid is not red like every other transmission fluid. It's sort of yellowish green. Mine was in much better condition than I anticipated. It was still clear, not burnt and did not smell rancid or overheated.

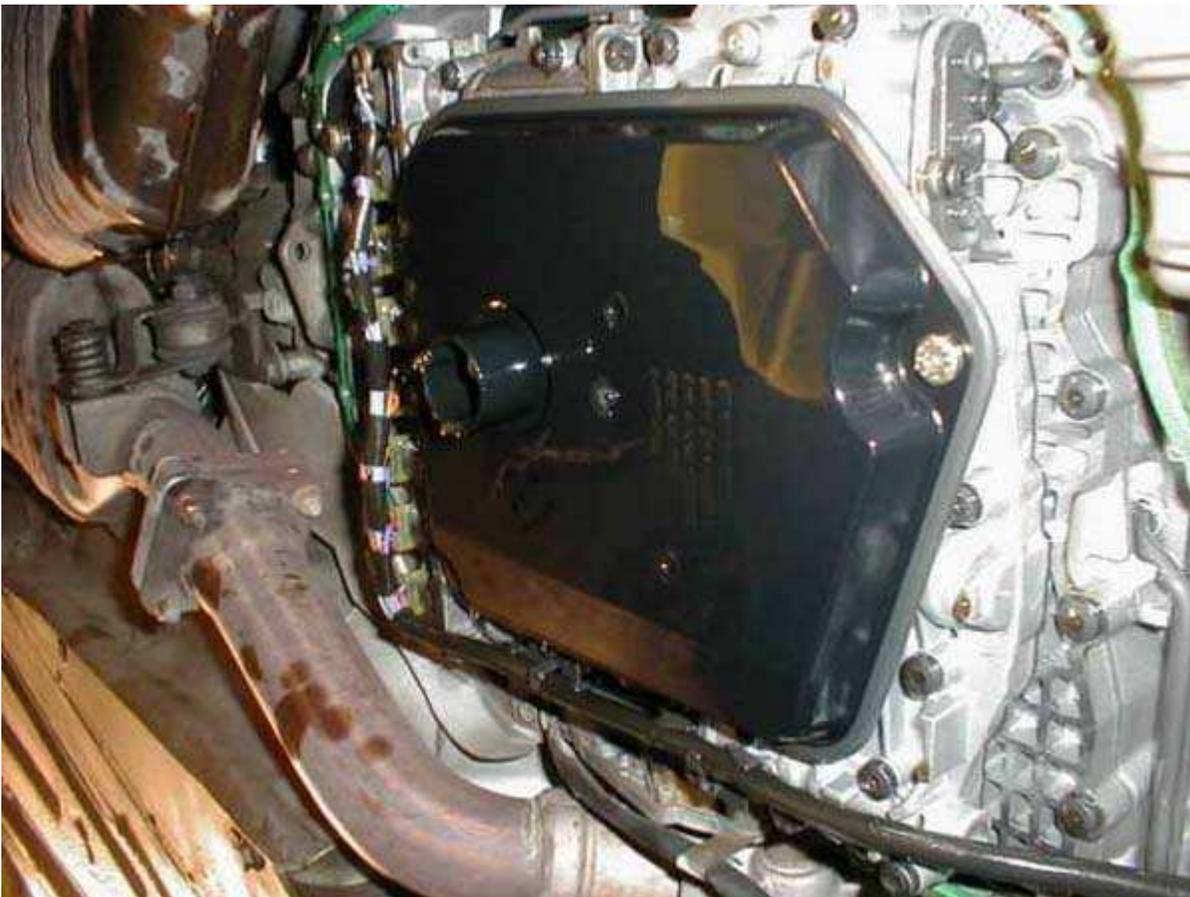
Note the two obstructed bolts in the bottom left.

I was surprised that when I removed the fill plug, a lot of fluid came pouring out. Fortunately I had the drain pan positioned. I learned that when the engine is running, a few quarts of fluid get sucked out of the pan into the transmission.



The fluid is drained, and the pan is off! There is a good amount of sediment in the bottom of the pan. The four small rectangles are magnets to collect any steel particles. Mine had some sludge on them, but it appeared to be normal wear.

The parts manager didn't think it was necessary to change the fluid, as Audi describes it as "lifetime". Considering the amount of sediment and sludge present, I disagree. audipages.com recommends changing the fluid every 25,000-40,000 miles.



The filter is still bolted to the transmission with two bolts. Remove them and it comes down. Note that there is a rubber o ring on the output of the filter. Note that those two bolts are different than the trans-pan bolts (shallower head).



The filter has been removed. Here you can see that it is also covered in sediment.



New filter and old filter. Which would you rather have in your car?



Nice clean pan. I used oil eater type stuff, then some rags. Follow with a wash of brake clean, and finish with paper towel.

Model: A8Q Year: 98 MG: 3 SG: 25 Illustration: 325-77

Pos	Part Number	Name	Remarks	Qty	Model
		torque converter valve body			DPZ,DSH,VTE
29	01L 325 061	gasket		1	
30	01L 325 061	bolt, with polygon socket hd. M5X25 (combi.)		2	
(3)	01L 325 061 A	bolt, with polygon socket hd. M6X55 (combi.)		1	
- - - E N D - - -					

Ensure Filter Gasket Is In Place When Replacing Filter!

Part Number as shown for all model years

When installing new filter, make sure the filter to transmission gasket/o-ring is in place!



Clean pan, drain bolt installed, gasket placed. I use a dab of vaseline to hold the gasket in position until it can be bolted in place.

Position the pan and bolt it in with three bolts. Make sure the gasket is properly positioned and insert the rest of the bolts finger tight. Then use a cross type pattern to tighten each bolt to 7-9 ft. lbs. You won't be able to torque the two bolts above the catalytic converter, so just make those snug.

Filling the Transmission

This is the ***MOST CRITICAL*** part of this procedure. Now came the hard part, filling the fluid.

You will need to make a pump to pump the fluid into the transmission. The pan has a stand pipe for the fill line, this is how the correct transmission fluid level is determined. Purchase a marine oil pump (one to fill an inboard/outboard drive) from a local marine store, and go to the hardware store and buy a small piece of copper tubing. Insert the copper tubing into the end of the pump (remove the fitting that comes with the pump) and bend it slightly so it can pump up and over the stand pipe. See pictures below.



Marine pump with copper tube fitted to pump oil into the transmission.



How pan stand pipe works to control level. Fluid is pumped into the transmission pan until the level reaches the top of the stand pipe. It then overflows out of the transmission. This level is higher when the car is not running versus running due to the hydraulic pump pumping fluid through the transmission.

The entire procedure is documented below from start to finish for ease of discussion.

Good idea to put the car up on lifts, drain the fluid, drop the pan and unbolt the filter at night.

Let it sit overnight, it will drain all night long.

The car must be at ambient (cool) temperature before filling the transmission! This requires the car to sit overnight to completely cool off.

Install the new filter the next morning (don't forget the filter to transmission o-ring/gasket), bolt the pan up. Fill the pan with as much fluid as you can with the car off (until it starts flowing out of the standpipe, what I call the fill hole).

Start the car. Right away it will start taking more, give it about 20-30 seconds to start pumping fluid through the tranny.

Keep filling until it overflows. Should be 2-3 more quarts (initial fill about 4 quarts).

Have somebody run through all the gears for 30 seconds each (with the brake on), when doing reverse, the fluid will flow out, let it, then go through N,D,4,3,2 30 seconds each. This is about 10-15 minutes into the fill after the car started.

Let the car run another 2 minutes, then run it through all gears for 30 seconds again, do Reverse for a shorter time because it will squirt out.

Keep filling so it has a slight overflow at all times.

If you have the Ross-Tech software, monitor ATF fluid temperature on group number 4, under measuring blocks, transmission module. The temperature of the ATF fluid during this procedure should be 30-45 C. If the engine is operated for about 15 minutes from ambient temperature, it will reach somewhere around 45 C at the end of the 15 minutes. This is why the car must be cooled overnight. If you do not have the software, just ensure it was cooled overnight. It is not absolutely critical to measure ATF fluid temperature. However, you CANNOT do this if the transmission is not at ambient at the beginning of the fill.

You'll need a total of 8 quarts of ATF on hand, I would have 9 there in case you spill one...you just might.

BEFORE TURNING OFF THE CAR, put the stand pipe plug in (fill plug). Turn off car. The procedure is complete. Test drive it for a few days, if anything does not sound correct, check level again. However, your transmission should be operating significantly smoother. There is no need to check the level again if there is nothing wrong with the transmission.

Other Transmission Fluid Changing Pictures

Here is another transmission fluid changing success story. This car went into "limp home" mode (PRND432 light up on the dash) and the owner thought he needed a new transmission. We ended up checking the fluid level, and found it was **INCREDIBLY DIRTY!** The next weekend, the fluid was changed.

Below are pictures of the transmission pan magnets, see they are completely filled with metallic particles. This are actually very fine particles, but look like something bigger, it's just the magnets doing that. Check the oil out, it was completely black (new fluid is essentially clear) and had metallic particles throughout the fluid.

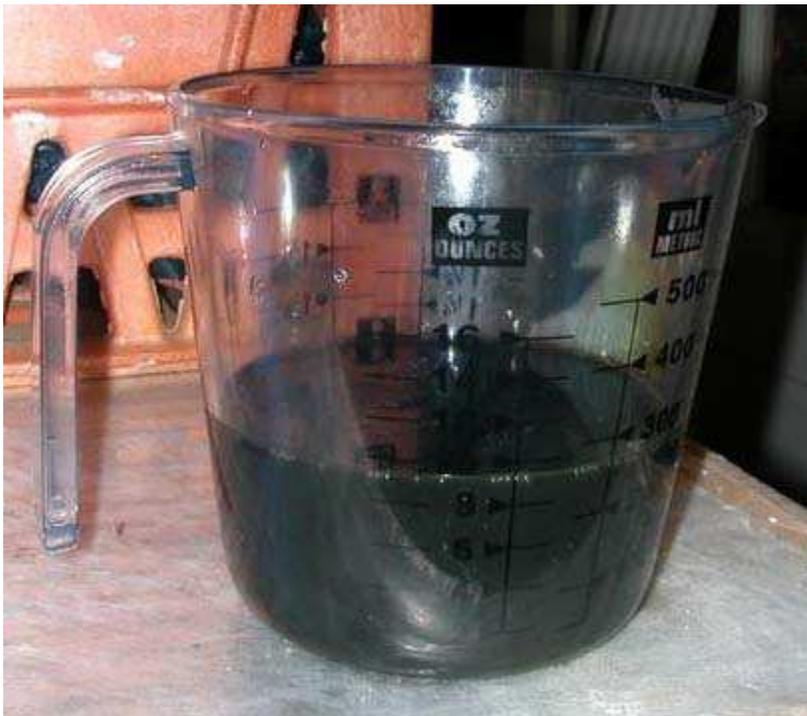
After changing the fluid and filter, the transmission ran very smooth, and the owner had one more "limp home" mode in the next six months (it was reset by turning the car on and off). The transmission is still operating just fine. The owner will perform another fluid and filter change six months after this change.



Pan magnets completely full of metallic particles. Is this an Audi Chia Pet??



*Transmission fluid from above transmission. See how bad it can get? It's NOT a lifetime fluid!
Can you see the Audi God in there? He wants a sacrifice!*



Transmission fluid from an A6 with 30,000 miles on the fluid. It is dirty! New fluid is almost clear!

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