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## ATF & Filter Replacement

Volkswagen and Audi consider the transmission to be filled for life - considering how many folks sell/total a car before 100k miles, this may well be true. But for the rest of us who enjoy keeping a multikilo buck expenditure around for a while, keeping the transmission happy should be a top priority - diluting fluid which has broken down due to heat, removing wear-in metal particles from the pan magnets, etc. For the most part, just changing the fluid every 30k miles should ensure a long life, with a proper filter change and fluid flush every now and then. Of course, at this point the issue of the "sealed" transmission pops up and ruins everyone's day. We should be worried about overfilling the tranny, right?

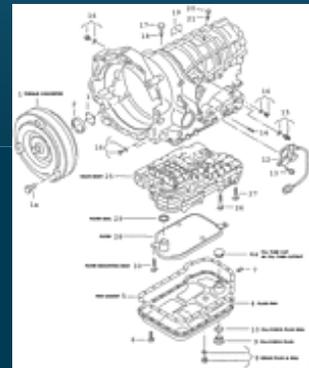
As per the Hitchhiker's Guide to the Galaxy - Don't Panic.

While VW makes a fuss about checking the fluid level between 95-113° F, there's a reasonable bit of allowance in this specification for a properly operating transmission. During my fluid drain, I started by checking the existing fluid level with the transmission at ambient temperature (around 60° F at the time), theoretically resulting in zero fluid flowing from the level cutout. In reality, about a quart of highly darkened fluid poured out of the transmission. In total, I drained 3.7 quarts of ATF and completely filled the transmission after the specified 2.7 quarts. The main cause of this points to a factory mistake - the factory overfilled the transmission by a full quart, and the car's been operating like this for the past 4 years/60,000 miles. The other possibility is that fluid from the torque converter drained back into the transmission pan - however, a fluid level check some weeks later showed the transmission to be properly filled.

Considering the state of the fluid that was drained, a complete flush, filter change, and installation of a transmission fluid cooler is slated for the near future...stay tuned.

**July 13, 2003** Unfortunately, the car was in an accident at 63k, ~6 months after the ATF service, at a total loss. In the duration, however, the transmission operated perfectly, with the smooth shifts I'd appreciated when the car was first purchased. Over the period, some further research into the transmission turned up some of the following.

The VW/Audi Tiptronic transmission is manufactured by ZF, model 5HP19FL (A4 '96-'02, A6 '98-'01 A8 '97-'99, Passat '98 -> '05). Incidentally, this transmission and some of its variants are also used in late model BMWs, which may help expand the research base if you have a particular question regarding this system. Considering the cost of the ATF through normal VW parts sources, I'd hoped that a suitable aftermarket replacement could be found - however, ZF seems to VERY STRONGLY recommend that only a particular fluid be used,



that is, Esso LT 71141. I spent some time speaking to ZF distributors in the US hoping to find an inexpensive source for the fluid - unfortunately, the fluid is normally stocked as drums, and most would sell by the quart at relatively high prices (\$15-\$19 USD). While a few of the distributors were curious as well about the compatibility of various other fluids, ZF would not honor warranty issues without the Esso fluid, precluding the ability to test out alternate fluids.

You can find some more information on the transmission and fluid through the following documents:

[ZF 5HP19FL Spare Parts Catalog](#) - includes ZF's fluid filling procedures for the transmission and differential.

[ZF 5HP19FL Data Sheet \(Deutsch\)](#)

[ZF 5HP19FL Exploded View](#)

[Esso LT 71141 Specifications](#) - note that this is a rough translation from a Russian language page. Also note that the fluid is usually referred to as "long-life", not unlimited life. A service interval of ~75k miles is given.

[BMW Model Range Transmission Overview](#) - look for blue.

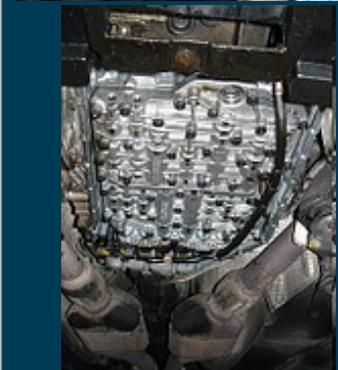
The online retailers seem to now be stocking a Pentosin ATF for VW/Audi applications. If this fluid is an appropriate substitute, chances are increasing that other good quality makes of synthetic ATF would be perfectly acceptable. Prime candidates are Mobil1 Synthetic ATF and Redline High-Temp ATF.

**August 3, 2003** Many thanks to [Geri](#), who took a few pics while changing ATF, including dropping the pan and replacing the filter. Also note his comments at the end of this page.

Also, the fluid filling procedure has been slightly changed, to reduce the time needed to fully refill the transmission.

**August 12, 2004** Added ZF's spare parts catalog for the 5HP19FL.

**February 2, 2005** Quaker State Multi-Vehicle ATF is confirmed as a suitable replacement for LT 71141 - it's also a synthetic ATF (update - this should read synthetic blend ATF. 08/05/2005), and specifically discusses Esso compatibility: [Quaker State Multi-Vehicle ATF Datasheet \(Deutsch\)](#). Note that the application chart only lists VW/Audi models up to 2000 - if you have a later year model and know that it's tranny uses LT 71141, the Quaker State is still a fine replacement. The nice thing is that it's available pretty much everywhere, and inexpensive (~\$3/quart). At that price, a filter and fluid change should run around \$50. At that price, it's also reasonable to pick up a few extra quarts and just flush the system - check the additional resources below for some pointers on ATF flushes (simple procedure).



**April 24, 2005** Minor update to note that Quaker State Multi-Vehicle ATF is also sold as Pennzoil Multi-Vehicle ATF. Added a link to an ATF & filter change on the 5HP30 tranny under "Additional Resources" below.

**August 5, 2005** Update to note that Valvoline MERCON V is also a confirmed suitable ATF for ZF trannies.  
([manufacturer statement](#))

Note that the ATF types listed here are brands that have very specifically stated full compatibility with ZF transmissions. The advantage of this is peace of mind - any fluid-related transmission problems can be directly taken up with the ATF manufacturer (though after several years of use there have been no reports of problems using approved non-Esso fluids). Currently, that is not possible with Mobil1 or Redline, two providers of fully synthetic ATF (there has also been at least one report of Mobil1 actually degrading shift quality in the 5HP19). The transmission is perfectly happy with synthetic-blend ATFs such as Pennzoil & Valvoline - that's exactly what it was shipped with from the factory.

Any performance differences between the various fluids are **\*VASTLY\*** exceeded by the performance benefit of replacing broken-down fluid with a fresh fill.

### **Part Information & Sources:**

Note - always confirm part numbers by looking at the actual part mounted in the car! Mistakes will happen sometime, somewhere.

Part numbers:

Transmission fluid	G 052 162 A2
Check/fill plug seal	01V 321 379
Drain plug & seal	01V 321 377

Note - unfortunately, the seal and drain plug are available together only, around \$10 or so.

Pan gasket	01V 321 371
Filter	01V 325 429
Filter seal	01V 325 443

OEM Pricing: ~\$15/liter

Quaker State/Pennzoil Multi-Vehicle ATF: \$3/quart

Valvoline MERCON V ATF: \$3/quart

You'll need 6 quarts, or 4 quarts if you're not dropping the pan and changing the filter.

### **Tools:**

- 8mm socketed hex (Allen) driver
- 17mm socketed hex (Allen) driver
- Torque wrench, low range up to 20 ft-lbs or so. Only needed if dropping the pan and replacing the ATF filter.
- Torque wrench, capable up to 60 ft-lbs

The 17mm driver can be found at your local AutoZone in a nice multipack, less than \$10. It also includes a 14mm driver that can be used to remove the driveshaft to wheel hub bolts if you need to do work on the halfshaft (CV boots/joints).

### **ATF Drain:**

1. Start by raising the car on jackstands (no one is considering working under the car with just a tire jack, right?). Use four jackstands, as the transmission must be level during the fluid check. [\(illustration\)](#)
2. Keeping a pan nearby, open the check/fill plug with the 17mm hex driver. Some fluid should pour out - with the engine off, the fluid level in the pan will be higher than it is during operation. However, far more fluid came out of my transmission than should have. [\(illustration\)](#)
3. Move the pan under the drain plug and open it with the 8mm hex driver. There should be a nice flow of black fluid. [\(illustration\)](#)
4. Allow the fluid to drain for a while.
5. Install a new drain plug and tighten to **30 ft-lbs / 40 Nm**.
6. Compare new fluid to old fluid - yes...definitely in need of a flush. [\(illustration\)](#)
7. If you're not changing out the ATF filter and cleaning the magnets (recommended), skip down to ATF refill.

#### **ATF Filter Change:**

8. Remove the ATF pan - there are many bolts securing the pan. Note that there will still be some fluid in the pan, so take care.
9. With the pan off, you'll see the valve body and ATF filter. Remove the two bolts securing the filter, and gently pull off the filter.
10. Lubricate the new filter's seal with some ATF, and install. Tighten the two bolts to **54 inch-lbs / 6 N-m**.
11. Clean off the pan with a lint-free cloth - especially the magnets. If the transmission is in good condition, there should only be some fuzz on the magnets. If you see bits of metal and large particles, start digging deep into your savings. :)
12. Replace the pan. The bolts should be tightened in a star pattern, making several passes until all bolts are installed and ready for final tightening (don't install and fully tighten a bolt in one step). This ensures that the pan doesn't warp, preventing a good seal. Tighten to **84 in-lbs / 10 Nm**.

#### **ATF Refill:**

13. Add fresh fluid through the check/fill tube until it begins to overflow. A plastic cap covers the fill tube, with a square cutout to the side - this allows fluid to be added and excess fluid to overflow. To get fluid into the hole, I used a length of vinyl tubing - one end inserted through the cap's cutout, the other attached to a funnel several feet from the ground. Pour fluid in the funnel, transmission gets filled. By the way, VAG's special tool does the same gravity feed, by hanging from a raised hood. A fluid pump should also work well. [\(illustration\)](#)
14. After the fluid slows to a dropwise overflow, leave the filling apparatus in place and start the engine. With the engine idling, the transmission oil pump will run, dropping the fluid level.
15. Add fluid until it overflows again.
16. With the engine still idling, press on the brakes and move the gear selector through all gears, pausing at each gear for a few seconds. This will circulate fluid through the valve body and may drop the level a bit.
17. Add fluid until overflow.
18. By now, the fluid should be warm, and at the correct level. Reinstall the check/fill plug with the new seal and tighten to **59 ft-lbs / 80 Nm**. After the seal is in place, shut down the engine.
19. You should check the fluid level again after a few days - reusing the check/fill plug seal won't pose a problem, but the seal is inexpensive if you feel like replacing it for every check. Before doing this final check, start with the engine cold and drive around for a mile or two - this should get the transmission up to the specified temperature range (95-113° F) - Haynes' seat of the pants method is to feel the transmission pan. If it feels warm but not hot to the touch, the fluid should be in the correct range. Considering the amount of factory overfill in my transmission, this methodology is more than accurate enough.

#### **Update:**

July 13, 2003 - It's also easy enough to use the shareware version of [VAG-COM](#) to monitor the ATF temperature, if you're not interested in VAG-COM's other abilities - an interface cable can be built from commonly available electronic components for around \$10 or so. More information on this to be added.

That's pretty much all there is to it. Enjoy!

#### **Additional note from Geri:**

OK, I will try to explain but beware of my bad English:

My Tranny was shifting very rough, when shifting from "D" to "R" I had a ugly noise and a rumble in the car. I was told from our local VW Dealer that I do not have to change the Fluid,

its "Lifetime" filled. I can't believe that. So I asked a lot of People, only one Person told me I must change caused by my heavy Tuning with NOS

Then we had this Threads in the German and the US Forums, in both Forums People were asking if it would make sense to change.

OK, I bought the Material (6 Liters ATF needed) and after one Hour the Filter and the Oil was changed.

Driving home felt so smooth, quick shifting without a rough noise. But when parking the Car I was impressed: Shifting from "D" to "R" did not make any noise.

Last thing I have to say: I had much dirt in the old Fluid, the magnetics were full with metall+  
+++ I can really advice you to do that Oilchange.

Bye, Geri

#### **Additional resources:**

- [e38.org - ATF & Filter Replacement](#) (for the ZF 5HP30 tranny on BMW's 7 series)
- [AudiPages.com - Audi A8 ATF & Filter Replacement](#)
- [AllPar.com - ATF Change Procedures](#)
- [OzBrick Volvo 850 - ATF Flushing](#)
- [Volvo 7xx/9xx/90 Maintenance FAQ - Automatic Transmission Information](#)

#### **Comments:**

- Hi all, for those with specific questions such as "My car is doing this, what's wrong?" etc. I recommend you head on over to the Passat B5 forums on VWVortex. You will need to get a username, but its free and simple to sign up. Many people can help with a variety of issues.

<http://forums.vwvortex.com/zeroforum?id=6>

**Ben (USA)** - Apr 23, 2008 @ 9:26 am

- I have a problem with my 2002 Passat 1.8. The tranny started to slip when at a stop. I drained the tranny and replaced the fluid and now it is stuck in 3rd or 4th gear. Tranny does not shift at all. Any ideas as to what happened or what I may have done?

**Kenneth** - Apr 18, 2008 @ 9:39 am

- Hi Folks, nice to read that this site is still on and has such a great responce for doing this oilchange. Meanwhile I got rid of NOS and switched to PES G2 Supercharger, still with the same tranny - but with it`s third "livetime" Oilfill. With it`s first sure it would have been already damaged. But my Tranny is still working very fine even with much more power than stock. And finaly I bought and old Audi Cabrio (Convertible) with nearly the same transmission. Useless to say that I have also changed ATF on this car! Greetings from Austria, Geri

**Geri** - Mar 31, 2008 @ 2:06 pm ([website](#))

- I have just called Warren Unilube and they say their Coastal Multi-Vehicle Synthetic Blend ATF meets VW/Audi G052162 spec. I am thinking about using it in '01 Passat tiptronic transmission.

**Oleg** - Mar 25, 2008 @ 12:43 pm

- hi guys, i bought a 1998 passat gls and it runs great, but i have to give it a bose each time to start it up. i don't know whats wrong with it. i did change the battery but no luck. the windows and the heated seats don't work too. i check all the fuse and all of them looks fine, but some of them don't have power, i don't know why. what can i do? any advice would be great... thanks

**hash ( from Toronto, Canada)** - Mar 16, 2008 @ 1:41 pm

- Hi Guys, I have a 2000 Beetle 1.8T APH (trans.code ELU). What kind of ATF you recommend? And how many litres I need exactly? Thx! This is a great website!

**Alex (Mississauga, Canada)** - Feb 25, 2008 @ 2:35 pm

- Hi Guys this is Irving Villaseñor from Veracruz Mexico, I have a passat 2002, recently I've changed the transmission fluid but my car has started with a non usual behavior, when I'm driving in the 5th. gear and I release the gas and push it again it becames to make kind strange movements I mean like the motor is going to turn off. Can you tell me if is this cause I changed the transmission fluid? I'm a little bit scared cause these transmissions are too expensive and I don't want to invest in a new one.

Many thanks in advance.

**Irving Villaseñor from Veracruz Mexico** - Feb 18, 2008 @ 3:00 pm

- This sight is great . You guys saved me big \$\$\$\$\$\$\$\$\$\$\$\$\$

**James USA** - Jan 17, 2008 @ 4:55 pm

- Can the red QS multi-vehicle ATF be used in a 2002 Passat SW?

**craig** - Jan 14, 2008 @ 5:28 am

- PLEASE I NEED UR HELP I GOT 2SEND HAND CAR PASSAT 2002 . THE DOOR WINDOWS NOT WORKING UR HELP PLEASE

**ZAKI JAMAL NATTO** - Jan 2, 2008 @ 6:24 am

- Alexander, read the article!!

**talogue** - Oct 18, 2007 @ 10:19 am

- Valvoline Mercon V is currently \$0.95 per quart from Advanced Auto Parts.

<http://www.partsamerica.com/ProductDetail.aspx?MfrPartNumber=VV360> -- compared to \$6+ for Mobil 1 ATF.

**talogue** - Oct 18, 2007 @ 10:19 am

- I have a Passat 1.8 T 2002 Tip-tronic and I don't know if i can use the Quaker State Multi-Vehicle ATF, please answer my question!!

**Alexander** - Oct 13, 2007 @ 2:48 pm

- Mobil 1 Syntgetic ATF ZF compatibility: yes.

([http://www.mobil.com/USA-English/Lubes/PDS/NAUSENPVLMOMobil\\_1\\_Synthetic\\_ATF.asp](http://www.mobil.com/USA-English/Lubes/PDS/NAUSENPVLMOMobil_1_Synthetic_ATF.asp))

**talogue** - Oct 12, 2007 @ 1:40 pm

- I'll tell you guys, just about when you have lost all your faith in the world and humanity from being screwed right and left from everyone and AUDI DEALERS especially, along comes a guy like this and writes such a detailed article on such a controversial subject and rescues all of us honest working poor slobes from dispair and MUCHO BUCKS!!! needless to say. We all raise our glasses and tip our hats to you. Thank you and may you have gods blessings for the rest of your life. OK enough of the mushy stuff. Really great article. Anyway I have an 99 Audi A4 and noticed the rear tranny seal leaking while I was doing an oil change so I took it to the dealer to get the scoope on the fix. The mechanic said dont worry about it it"s only a small leak. Im like WHAT! But who knows how much and how long its been leaking and there is no dip stick to check it with. Im from the old days in case you havent noticed and I like to Know How much fluid is in my tranny. I had them replace the seal and top up the fluid. But Im sure the mechanic was hoping I would listen to him and eventually blow my tranny and have to buy a new one from them. What a way to drum up some buisness huh. STAY AWAY FROM AUDI DEALERS!!!!!!!!!! After that I was seriously considering selling my A4, which I love, just because I have to go to hell and back just to make sure theres enough tranny fluid in the box. Well after reading this article I think, I will give it a shot and change my tranny fluid since it has 135,000 on it and it to is starting to slip a bit here and there. And If you want my advice on the fluid type issue, If your not 100% sure the other tranny fluids are ok to use, just go ahead and spend the extra \$50 or so and buy the right stuff. What the heck your saving so much already by doing it your self and when your laying there in bed at night thinking, " man is my tranny going to blow tomorrow, Ya know how your stomach drops out when you feel that first slip, Man I Hope I used the right stuff" ??? You will know for sure you got the right fluid and you will have one less headache. Even a \$100 is better than \$7000 for a new tranny. And Its worth the peace of mind. Anyway guys just my opinion. Well gona go buy some fluid and give the tranny a trans..... fussion. HA HA . Happy Motoring. And keep the faith.

**George olczak, New Jersey,USA** - Oct 9, 2007 @ 8:24 pm

- thank you so much for the info. it was very helpful. i did find out that the fluid was not the problem but a broken motor mount was causing the bang when accelerating.

**thomas rooney usa** - Oct 5, 2007 @ 6:52 pm

- My transmission now have 150k miles, and is starting to slip. The dealer strongly recomends against changing the fluid & filter as a remedy. What are my options? Considering there is a probability that clean filter and fluid may make it worst. help!!

**99 vw 150k miles, nj - Paul** - Sep 8, 2007 @ 10:06 pm

- Hi

This will be a head scratcher...

I bought a Passat Automatic which had slight problem with Auto box. The problem was sometimes when driving it goes through the gears pretty quick, other times hit hangs onto a gear and wont kick into higher gear (and when it does you feel a thud). Instantly I thought ATF oil and filter change will do the trick as clearly gearbox was sticking. So I got the Oil but bought wrong filter (only realised when I opened the tray). Anyway I drained the oil and conventionally petrol washed the filter, dried it and put it all back. Wow, did that car drive smooth.....(for a few days until filter clogged up and symptoms were back).

I got a new correct filter and the right oil, excited, I changed the oil and filter and put the thing back and topped up correctly. It drove sweet, with one thing though it was throwing the oil out from the top breather, which I thought must have been the excess oil. A few days later, the gear changes (higher gears) have become coarse, with a 'kick back' (Almost like the wheels lock up for a split moment). This is the clutches playing up now.

My point is when I put in new oil it drives perfect, but as the gearbox works the oil - exposes to heat and transmission load, the gearbox performance deteriorates.

My mechanics said it could be torque converter - my point, the issue never has been about transmission or pulling power, it's alway been when the oil has been in the box a few days, part of it has been chucked out, what is left is unusually being condensed (probably because it is experiencing unnecessary heating/not enough cooling). Now the car kicks hard especially in higher gears.

One thing worth mentioning, I changed the Radiator as there was a leak, as I understand, the G/Box transmission oil is cooled by your VW Radiator (After I put in a new cambelt and waterpump).

Any advise guys, please email me on wtebraiz@yahoo.com

Hope my experience helps someone out there

**Wasim London** - Sep 6, 2007 @ 9:29 pm

- Does anyone have any experience with replacing an alternator on the '04 1.8T engine? Help please!  
**Don USA** - Aug 17, 2007 @ 12:15 pm
- I have a 2003 Passat w/ 1.8 Turbo and Tiptronic Trans. Last week I changed the timing belt, water pump, tensioner, rollers, and all belts. With 102,000 miles this service was due, even though most of the miles are highway miles. This week I decided to change the Transmission fluid. I used Mobile One full synthetic for Mercon V transmissions. If you go on to the Mobile One web site, you will see that this ATF is also rated for ZF transmissions in the Spec sheet. You will need to purchase 4 quarts (\$6.88 ea at Advance Auto Parts) and a 17 mm hex/allen wrench. I bought mine from NAPA for \$9.09 plus tax. I also put my rear wheels on steel ramps and used jack stands on the front--very important. This allows the front wheels to rotate and this is necessary to put all four quarts back into the transmission when refilling. I drained out over four quarts of very dark fluid..yes it was also overfilled from the factory (I bought my Passat new). When I removed the large 17mm fill plug/nut..about a half quart of fluid came out and then I pulled the drain plug and the rest came out. After letting it drain for about an hour, I put the drain plug back in. I used a long funnel with a 3 foot section of plastic hose attached to it and on the other side I used a metal 3/8" fuel line with a hook or bend in it to hook into the refille hole. I ran the hose down from the back side of the firewall and hooked the funnel to the hood. About 2.5 quarts will go in and then you will have to start the engine and shift the transmission into and out of drive for a few minutes. The fluid will overflow after 2.5 qts, so have a pan to catch this. Leave the engine running and the transmission in drive and pour the rest of the fluid into the funnel. It will take it all. I left my engine running and crawled under the car to replace the 17mm plug. Using Steel ramps on the rear...I felt safe doing this. The car runs fine and transmission shift like new again. You can do this!  
**Ken Williams, Georgia, USA** - Jul 26, 2007 @ 3:12 pm
- I was Wondering if I can change my transmission fluid and filter in my audi A4 2001 2.8 v6 the same way as shown before?  
**Diego** - Jul 10, 2007 @ 3:34 pm
- I am looking for transmission fluid for 2001 passat auto what can I use that not to mush money.  
Thank You  
Carlos  
**Carlos Ramirez** - Jun 21, 2007 @ 10:36 am
- Thanks for the info, this website is awesome, considering I have a Passat and A4. 17mm hex wrench can be found at Sears. It appeared to be the only hex wrench over 10mm, so I guess I lucked out. Oh just a note I believe the other gentleman was incorrect, as I was able to put 3.7 quarts in my Passat of Valvoline ATF Merc V. If anyone would like to share maintenance knowledge, my email is donaldbowman@bellsouth.net  
**Don US-FL** - Jun 7, 2007 @ 10:00 pm
- a 17 MM diy tool can be made easily with a bolt and 2 17MM headed nuts locked together on one end. Just use a socket on the bolt. It works with any size allen.  
**Dave US** - May 20, 2007 @ 8:35 am
- Will it hurt my 2003 passat 1.8T if I had to use the RED Multi vehicle ATF? Please e-mail me @chris-h-brown@hotmail.com Thanks  
**Chris, USA** - May 8, 2007 @ 6:08 pm
- Thank you. Sign me up for the "I drained my transmission fluid instead of my oil" foundation. You saved me an expensive tow truck trip to the dealership. And, my transmission shifts better than ever.  
1999 Passat 1.8T with 170k miles. Used Valvoline Merkon V.  
The hardest part was locating a 17mm hex wrench.  
**Jeremy (Kansas City, MO)** - May 7, 2007 @ 7:59 pm
- Thanks for all your help !! It save you money ,,Doing it yourself!  
But i have Some other problem!  
My Tranny Is On limp mode Or Safe mode..How do i reset it back or Why is In Limp mode??  
**Oscar Anaya** - Apr 23, 2007 @ 11:22 pm
- My dear  
we need 1000 ltr of ESSO ATF LT711417  
KINDLY SEND US YOUR BEST PRICES  
**AHMAD ALSALIM - UAE** - Mar 19, 2007 @ 12:05 pm
- LUBRICANT equivalent. G052 162 ME THE AUDI QUATRO A4 1.8 T 1999  
**gustavo madrid** - Mar 10, 2007 @ 10:07 pm
- Awesome site! Very informative.

What type and size bit are the many screws that hold the transmission oil pan? I peaked under my 2001 passat and mine looks to be a torx bit, but not sure of the size.

**tony (Bay Area, CA)** - Feb 16, 2007 @ 12:33 am

- This was just the information that I was looking for. Well written article, thanks! I have a Bentley CD manual covering my 2003 Passat but it is sadly lacking the detailed information that you have presented in your article.

**Henry34212** - Nov 24, 2006 @ 8:37 am

- I have a 2005 Passat TDI (auto, they all are in the USA)  
Can someone shed some light on the difference and when to use these VW  
ATF fluid G052-162A9 (honey color)  
or ATF fluid G052-990A2 (I believe RED)  
I am getting mixed signals on the usage, any suggestions? Thanks.

**Alan USA** - Nov 17, 2006 @ 11:46 am

- i have a 2003 1.8Turbo Quattro, I was just wondering do you know if the transmission on this is an LT 71141..? Are the transmission oils you guys talking about here compatiable with my car? Really want to change my transmission oil, but dont really want to pay \$19 a quart... Just looking for an alternative for my car that would be just as good just not as expensive... Any information would be greatful... This site rocks! Thanks

**Robert** - Oct 14, 2006 @ 7:41 pm

- Does anyone know where the sensor(gray with purple top, closest to the engine)goes to? 2000 Passat 1.8  
I can provide pictures if need be. The end has been disconnected and I'm thinking it is the o2 sensor I'm not sure.  
Also could this be causing my engine to be hesitating when I exceleerate?  
Any help would be greatly appreciated.  
Paul

**Paul James** - Aug 9, 2006 @ 3:24 pm

- Q. i have a '97 passat. would the instructions you have here be applicable to that year. i have the vr6 with the automatic transmission. great site keep up the good work. thanks!

**jesse juarez** - Aug 2, 2006 @ 8:03 pm

- 99 passat. My auto tranny can't make up its mind on which gear it wants to be in. Fluid issue? Electronic? Car has 95,000 miles, but its been doing it for a long, long time and Ive learned to live with it. If any one has any ideas please drop me an email.  
Thanks

**Glen O MA USA** - Jul 28, 2006 @ 8:00 pm

- Like to know if the VW jetta 2001 Auto xmission would apply to about the same procedure.....if so please can you give me a web site if at all possible on "how to"  
It only has a drain plug with a tube extending into the drain plug( seems like its the level of the xmission fluid inside the pan.....and it has a breather plug above the pan.any suggestions would help.....NICE ARTICLE ON THE PASSAT

**Mickey> USA** - Jul 26, 2006 @ 1:27 pm

- Has anyone heard yet, that soon after transmission fluid has been replaced, car starts having troubles. Few of my friends had it done (they drive jaguar, mercedes, vw), and a week or two later transmission broke. So, I have a little oil leak on my passat 1.8T tiptronic 2002., and I don't know where from. The car's been lowered and a few times I scraped a little on the bump getting into my driveway. Nothing major. But, if it's transmission fluid, I was going to take it to the dealer. Any suggestions??????

**Amir, Boston- Mass.** - Jul 21, 2006 @ 7:10 am

- WOW ! You guys are GREAT! My Dad was trying to help me out by changing the engine oil and filter. You guessed it, he drained the transmission before he realized the engine pan was under the plastic shield. (he's old but makes no excuses) Instant panic, how to fill the trans again. Thanks to you guys, he is able to save some pride. Thanks again sooooo much! Ashley

**Ashley King USA** - Jul 8, 2006 @ 11:09 am

- great information.

Pennazoil Multi-vechnicle ATF can be found from Pep boys.  
Valvoline Mercon V can be found from Checkers.

**andrew** - Apr 29, 2006 @ 8:48 pm

- AWESOME job on creating this website. I successfully replaced my oil pan, gasket, ATF fluid, and cleaned the filter which was generally in good condition. One thing I might add to the instructions while you are adding more ATF fluid. If you removed the front left tire to get under the car, you should have a few wheel bolts screwed in as you go through the gears. If you didn't have them in place, the bolt hole would get misaligned and you'd have a hard time screwing the wheel back in.

**jos** - Apr 25, 2006 @ 12:01 pm

- Thank you very much for this web site I have a 99' Audi A4 and I'm planing to replace the tiptronic atf; I already have the filter and gasket but i'm trying to decide what aftermarket brand to use I just want to confirm with you guys if my transmission use the ESSO LT 71141 fluid and go from there. I email Amsoil and the answer was : Thank you for contacting AMSOIL with your concerns.

In response to your inquiry, AMSOIL Universal ATF is compatible and may be used to replace Esso LT71141.

Thank you again for the opportunity to respond to your concerns. As always, please feel free to contact us again if we can be of further assistance.

Sincerely,

Byron Selbrede

AMSOIL Technical Service

**Carlos Fuster** - Mar 1, 2006 @ 11:20 pm

• sealed for life ? Not here in Oz, mate.

I used to live in California where I drove a '96 E36 BMW 328i auto that was supposedly sealed for life and trusted it was so. In Australia, VW recommend ATF& filter change @ 3yrs/45kkm and presumably that interval repeated.

It's an expensive service, about AUD\$400, USD \$300, and I recall slipping it from the 3yr to the 4yr service on my '99 B5 V6 FWD Tip because of low miles.

In theory, it should be due for another ATF & filter replacement when I drop it in for the 6yr/90kkm (at 55kkm, I live downtown) service next week. I'll report back. Last time, it was the full monty, 6.0 liters of ATF, pan drop, pan gasket etc.

Is it because we in Oz have a longer vehicle lifetime expectation - older fleet, n'all ?

Rocky

**rocky - australia** - Feb 24, 2006 @ 5:04 am

- In Amsoil's latest catalog (2/1/06), it shows that they've completed in-house testing to prove that their Universal ATF is now acceptable for Esso LT-71141 apps. They did not reformulate the product, they only did additional in-house testing to prove its compatibility.

[http://static.flickr.com/41/97783514\\_12b8732fe4\\_o\\_d.jpg](http://static.flickr.com/41/97783514_12b8732fe4_o_d.jpg)

Note: I'm NOT an Amsoil dealer.

**Michael** - Feb 12, 2006 @ 6:32 pm

- This list was invaluable to me. Like a lot of others above, I found myself wondering what I'd gotten myself into. \$25 and an afternoon later, I'm feeling good about having learned something new.

One thing I will emphasize about the original instructions is that the engine doesn't get turned off until the plug goes in. I did the first start, then turned the engine off, and wondered for a minute why I couldn't get any more fluid to go in. Reading the instructions carefully, I realized my mistake.

Thanks very much!

**Tim** - Dec 10, 2005 @ 10:53 am

- Haven't seen anyone here recommend Pentosin ATF, which is supposed to be the same as the Audi OEM fluid, part no. G 052 162 A2. I'm dropping the pan for a filter change on my '98.5 A4TQ (106K miles) this weekend and plan to use the Pentosin to replace the dark black liquid I drained out of the pan.

**rb** - Nov 14, 2005 @ 5:48 pm

- Just in case I had to change the pan bolts so here is the part ## 01v-321-373 and you will need 27 of them.

**Pson USA** - Oct 24, 2005 @ 9:45 am

- Do realize that the one reported complaint about M1 Syn ATF was due to user error. The person did not fill the transmission correctly thus the improper fluid level produced rough shifts. Also, the user is exceeding the torque capacity of the transmission and has done several other modifications pushing the tranny outside its original specifications.

Dave

**Dave** - Oct 4, 2005 @ 5:52 pm

- VW wanted \$170 for filter and gasket (which they do not stock since tranny is "sealed for life" plus \$18/liter for oil. Carquest has exact match of parts for \$29, found exact oil at Import warehouse for \$11/liter. One point, the screws on trans. pan are T-27's, funny 27 screws holding pan and it takes a T-27 torxs, not a very common size but available at Sears in a security set of 5 torxs for \$10. Advise everyone to build the fill adapter as shown, saves a lot of time, hassle and oil. Also do NOT turn off engine after running through gears during top up until 17mm plug is back in place.

**kelticson Denver CO** - Oct 4, 2005 @ 12:24 pm

- I wanted to let you know your site was a lifesaver. I went to drain the oil out of my new Passat from what I assumed was the oil pan... You got it, I dumped all my tranny fluid. I freaked out trying to figure out how I was going to get new fluid back into the "sealed transmission." Your excellent graphics and descriptions made quick work out of it!

**David** - Oct 1, 2005 @ 2:12 pm

- **David** - Oct 1, 2005 @ 2:12 pm

- Great write-up! I am preparing to replace the filter/atf fluid pretty soon @ 55k...

Did some research on the Esso LT 71141...I found this Exxon Superflo ATF D/M seems to be compatible to ZF trannies. Does not mention though if it is synthetic nor a blend...Can you confirm this?..Excerpts of the Superflo ATF is below:

" Applications

Superflo ATF D/M is a super-premium lubricant for car and truck automatic transmissions and other applications that require an automatic transmission fluid satisfying either General Motors' Dexron®-III (including the new GM DEXRON® III H specification) or Ford's Mercon® ATF specifications. It is generally recommended for automatic transmissions in General Motors and American Motors (now part of DaimlerChrysler Corporation) cars, vans, and light trucks and for imported cars such as Audi, Honda, Mazda, Nissan, Opel, Renault, Toyota and Volkswagen. For Chrysler vehicles, Superflo ATF+3®, which meets Chrysler's MS-7176E specification, is recommended for makeup and full fill.

Superflo ATF D/M is also recommended for automatic transmissions in all Ford Motor Company vehicles where MERCON ESP-M2C166H or ESP-M2C138CJ fluids are specified. For Ford automatic transmissions requiring M2C33-F (Type F) fluids, SUPERFLO ATF Type F is recommended.

Superflo ATF D/M meets the transmission fluid requirements for Allison automatic transmissions and other heavy-duty equipment that requires a Dexron-III fluid. It is approved against the Allison C-4 specification and therefore can be used in Allison Powershift transmissions or other torque converter systems that specify this type fluid. It is also recommended for Caterpillar TO-2 applications and certain heavy-duty transmissions, including ZF, Voith, Renk Doromat and Mercedes Benz."

[http://www.exxon.com/USA-English/Lubes/PDS/GLXXENPVLEXSuperflo\\_ATF\\_D\\_M.asp](http://www.exxon.com/USA-English/Lubes/PDS/GLXXENPVLEXSuperflo_ATF_D_M.asp)

**B5V - Los Angeles** - Sep 30, 2005 @ 2:38 am

- to the guy that used valvoline (said you added 2 qts) and said it messed up his tranny, when you drained the tranny (without dropping the pan) you should have gotten 2.8 L (about 3 qts) out. Sounds like you did not add enough ATF. Valvoline is working great in the Audi Allroad with the ZF tranny!

**volmaniac** - Sep 26, 2005 @ 9:05 am

- Maybe you can help the ignorant. Under ATF Refill # 19, how does one perform the final fluid level check. I assume it has something to do with pulling the check fill plug since you mentioned that and can it possibly require a "pinky check" as noted by DM/ My Wife's Passat in the comments section. Just wondering.

**P. John** - Aug 31, 2005 @ 3:07 pm

- I caution VW owners about using anything but the VW ATF. I have a 2005 VW PASSAT with the 1.8T gas engine and a Tiptronic Auto transmission.

I received this answer from Valvoline in response to the following question,

```
=====
From: wgraham@ashland.com on behalf of feedback@ashland.com
To: D. Carlos
Subject: Re: Site feedback from Valvoline.com
Date: Thu, 18 August 2005 04:04:40
```

Thank you for your question! Valvoline does not recommend the use of Mercon V ATF in a VW vehicle.

To: VWEBMAIL@Ashland  
cc:

Subject: Site feedback from Valvoline.com

```
=====
The following person submitted a question or comment via the Contact us
form of type Ask Valvoline
```

Comments:

I recently removed factory ATF and then added Valvoline MERCON 5 ATF (about 2 qts.) to the transmission of my 2005 VW PASSAT. Information on the web and the product label indicates that it should be compatible. Now it seems to slip when I first accelerate in either 1st gear or reverse. Is it fully compatible? If so, then why would it cause my trans to slip?

**D. Carlos (U.S.A)** - Aug 30, 2005 @ 3:51 pm

- Ok, found a source, and this looks pretty cheap too!

<http://shop.store.yahoo.com/oilstore/pemuatfca12q.html>

**Will, USA, Illinois** - Aug 23, 2005 @ 10:04 pm

- Well, according to this write up, the QS and Penn Multi-vehicle ATFs are available everywhere. I can't find them anywhere. I have called Auto Zone, Advance Auto, Carquest, Bumper-to-Bumper, Napa, etc.... No one carries this stuff.

What about Amsoil Synthetic ATF? They carry several varieties.

**Will, USA, Illinois** - Aug 19, 2005 @ 4:14 pm

- Hi,  
I'd like to state that I e-mailed Valvoline earlier today regarding their Durablend ATF for another application and was told that it has been discontinued and replaced with another fluid, known just as "Mercon V."

MW

**Michael Wan (Sacramento, CA, USA)** - Aug 18, 2005 @ 9:30 am

- What size vinyl tubing to fit the square cut-out did you use? I have 2004 passat. Dealer told me there was a hose with a red cap near the oil filter that i could add ATF Fluid never found it ,were they lieng.try to change oil and dumbed the transmission oil stuped me. Thanks Mike

**Mike USA GA.** - Aug 16, 2005 @ 8:10 am

- valvoline mercon v atf has "bmw" lt-71411 (same as esso lt-71141 for zf trannies) listed on the back of the bottle.

**volmaniac** - Jun 20, 2005 @ 7:44 am

- after i drop my transmission pan i found out that i have to use 4 quarts of fluid my car is a gm camaro 1985

**robby hittle** - Jun 4, 2005 @ 2:10 pm

- Noticed the update on April 24 regarding the use of Pennzoil Multi-vehicle ATF. The lable clearly states it compatability with Z-F tranny. However, the Penz fluid is Red - not yellow like Quakerstate. Does this mean they use some type of die?

**Steve Harrington** - May 31, 2005 @ 9:00 pm

- Thank you very much for the great information.

**Bernd** - May 31, 2005 @ 9:00 pm

- Will this method also be applicable to my 97 Jetta 2.0L? I am wondering what oil to use. VW oil is expensive!!!

**Tap500** - May 31, 2005 @ 8:59 pm

- I was wondering do I need to use anything to go along with the new gasket, some type of sealant or anything like that? Thanks for the great information here.

**Jake E** - May 31, 2005 @ 8:58 pm

- THANK YOU !!!!!!

Thanks a lot.

You saved my life.My father repairs cars and is ill i helped him yesterday.at at 10.pm i try to change oil and dumbed the transmission oil .I got so desperate because i couldnt find a way to get the oil back . thank you ,thank you ,thank you .you saved my life.  
God bless you all.

Stefan

**Stefan Ecker** - May 31, 2005 @ 8:57 pm

- What size vinyl tubing to fit the square cut-out did you use?

**Hans S** - May 31, 2005 @ 8:57 pm

- Wow, this is awesome info!

What about the tip on 2002 wagon, it's a rebuild and I think the fluid is low and should replace the fluid.

**Hans S** - May 31, 2005 @ 8:54 pm

- I used the quakerstate multi-vehicle in my wife's 98 Passi tip over 5 months ago(at 100K miles). The stuff specks are perfect match for Esso LT. I did both filter and fluid. I had no problems with shifting before and certainly none after the change. I plan to do a second change soon to get more new fluid in as so much is left in the torque converter.

**squidbeer** - Jan 19, 2005 @ 12:28 pm

- - Jan 19, 2005 @ 12:25 pm

- These images are Great! I'm doing a website with an article about changing ATF Fluid and I'd love to be able to use these photos, maybe even purchase the rights to use them if possible. Can I get in touch with the famous "GERI" somehow? Thanks.

Todd

digitalsafari@yahoo.com

**Todd** - Jan 6, 2005 @ 2:24 pm

- "I trained my 99 Passat Tip, and changed the filter and pan gasket as well. Then, I pumped 3.5 liters into the transmission and it didn't overflow. ... About 5 liters! Huh?

Car seems to drive fine, but I'm a little flummoxed. The Haynes says 2.6 liters is the normal drain/fill amount.

Any thoughts?"

answer: the 2.6 liter volume is not when you drop the pan, but when you drain through the drain plug. when you drop the pan you will get more atf out.

also make sure the car is running when you open the fill plug and do the final fill. there is some circulating atf fluid due to the pump and you will underfill if the car is not running.

hope this helps.

**volmaniac** - Jan 5, 2005 @ 1:45 pm

- Thanks soo much for this site I have been looking all over the net for someone to show me how to change atf on my 98 Audi A4t, I did not know that Vw trannies were compatable (duh) Well I lookn foward to working on this thing.  
Q: Does lack of atf in my Audi cause hard shifting and rpm's reving higher than usual? Any info ?  
tooreel2002@yahoo.com

**Ruben Q (Waycross Ga)** - Dec 19, 2004 @ 5:29 pm

- Thanks for continuing to maintain this site post-Passat!

Now, here's my story. I trained my 99 Passat Tip, and changed the filter and pan gasket as well. Then, I pumped 3.5 liters into the transmission and it didn't overflow. Pinky check through the hole showed it nowhere NEAR full. Much puzzlement. So, I measured the black soup that I'd drained. About 5 liters! Huh?

Since I'd only bought 4 liters (and spilled 0.5) and needed to have the car back in service RIGHT NOW (cue sound of wife tapping foot) I pumped the old stuff back in until it overran, following your instructions about warming the transmission.

I figured, since there's old oil sloshing around in the torque converter anyway, it's not the end of the world.

Car seems to drive fine, but I'm a little flummoxed. The Haynes says 2.6 liters is the normal drain/fill amount.

What I might do is try again with LOTS more ATF (using the Pentosin brand) on hand and measure carefully.

Any thoughts?

DM

**MyWife'sPassat** - Dec 9, 2004 @ 3:51 pm

- hi, can you show how to change the engine oil and oil fliter ? thanks a lot
- problem with automatic transmission in passat '99 hearin some noise ,called to VW dealer they tald me that this kind transmissions dont have any AT filter.dont know what to do

**scorp** - Nov 27, 2004 @ 10:04 am

- Hi Guys, from Monterey Bay CA, What great help this info has been. I am following the advice and changing ATF this weekend. I will use Redline d4 atf. I can't find ESSO LT 71141. Thanks again. 2001 1.8 T Passat wagen

**Sanddog** - Sep 23, 2004 @ 12:24 pm

- Here is another email i got from shell:

From: PrdMktTechServices@shell.com  
To: sandlot@XXXatt.net  
Subject: ATF product compatibiltiy with Esso LT 71141  
Date: Thu, 5 Aug 2004 21:27:45  
Pennzoil Multi-Vehicle ATF Part No: 159920 and/or Quaker State Multi-Vehicle ATF Part No: 160023.

Thank you for your interest in our products.

From: sandlot@XYZatt.net  
Sent: 04 August 2004 14:50  
To: PrdMktTechServices  
Subject: ATF product compatibiltiy with Esso LT 71141

I was wondering if any of the Shell-Pennzoil-Quakerstate automatic transmission products are compatible with the ATF specified by my volkswagen (Esso LT 71141). Thanks & regards, Dave

**volmaniac** - Aug 6, 2004 @ 2:20 pm

- redline says their d4 atf is compatible with the tiptronic. several members at b5club.com are using it now (summer 2004).

mobil 1 and amsoil are not compatible according to them.

**volmaniac** - Jul 20, 2004 @ 8:18 am

### **Add a comment:**

name (and country would be nice to see)

email (optional, not shown publicly)

