

01M 4 Speed Automatic Fluid change Procedure

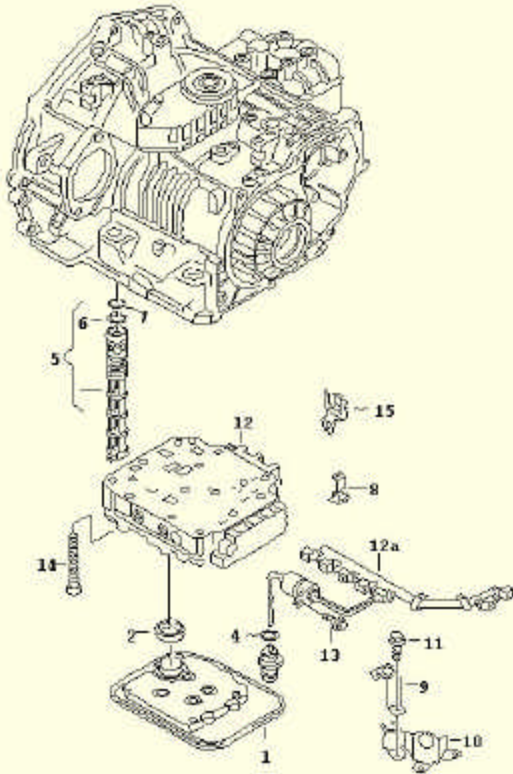
Here is the step by step on how to change the ATF fluid in the TDI 4 speed 01M Automatic transmission. For the parts lists I included cropped picture links to the ETKA pages relative to the 01M transmission.

NOTE:

-This is not the differential fluid which is independent of the ATF and is a different type of fluid. Please refer to the Bentley manual for the simple instructions on changing and checking this fluid.

-This job relies on ABSOLUTE cleanliness. Some of the pictures do not reflect the cleaning that took place when reinstalling the parts due to reuse of certain picture frames. Above all make sure that no dirt is allowed to get into the transmission housing. The housing and valve controls contain extremely close tolerance electronically controlled servo valves similar to those found inside the TDI injection pump.

**Parts
needed:**

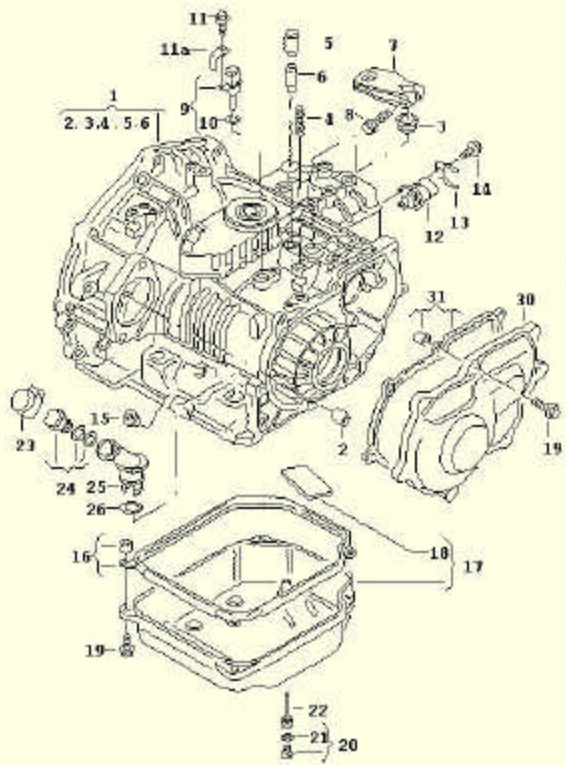


Pos	Part Number	Name	Remarks	Qt
		valve body oil strainer for 4 speed automatic transm.		
1	01M 325 429	oil strainer		1
2	01M 325 443	gasket		1
4	095 325 381 A	round seal	19X3	1
5	095 323 937	plug		1
6	095 323 969	round seal	9X2	1
7	095 323 971	round seal	7X2	1
8	01M 321 395 A	retaining clip		1
9	01M 321 424 D	bracket	upper	1
10	01M 321 397 C	support	lower	1
11	N 019 526 5	bolt, hex. hd. with shoulder	M8X22	2
12	>01M 325 039 F	valve body		1
(12)	#01M 325 039 FX	valve body		1
(12)	>01M 325 039 E	valve body		1
(12)	#01M 325 039 EX	valve body		1
12A		printed circuit foil see illustration: 927-50		1
13	N 904 407 01	screw, hex. hd.	M6X15	1
14	N 101 943 02	screw, button hd.	M6X55	13
		--- E N D ---		

<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/1ATA.jpg>

(1) 01M 325 429 "Oil Strainer" Fig 1

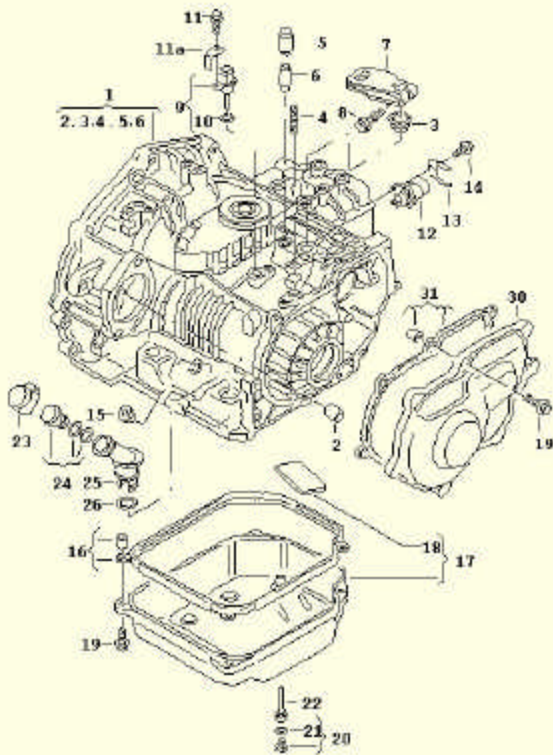
(1) 01M 325 443 "gasket" Fig 2



transmission case for 4 speed automatic transm.			
1	01M 321 101 G	transmission case	1
(1)	01M 321 101 K	transmission case	1
2	113 301 155	bushing	1
3	095 321 182 B	round seal	1
5	095 409 841	cover	2
6	010 409 847	breather tube	9, 1X23X8, 1
7	01M 321 171 B	lever	1
8	N 904 416 01	screw, hex. hd.	M6X32
9		speed sender	see illustration: 927-50
10	095 321 559	round seal	11X3
11	N 904 407 01	screw, hex. hd.	M6X15
11A	01M 321 845	retaining clip	1
12		multi-function switch for automatic transmission	see illustration: 927-50
13	097 321 527	bracket	1
14	N 905 330 02	bolt, hex. hd. (combi.)	M6x20
15	N 904 142 01	plug with seal	M10x1
16	096 321 370	gasket	1
17	01M 321 359	oil sump	1
18	097 321 368	magnet	1

<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/1ATb.jpg>

(1) 096 321 370 "gasket" Fig 16



Pos	Part Number	Name	Remarks	Qty
transmission case for 4 speed automatic transm.				
19	N 905 330 02	bolt, hex. hd. (combi.)	M6X20	11
20	N 904 142 01	plug with seal	M10X1	1
21	N 013 811 5	sealing washer	210X13,5	1
22	096 321 363	oil pipe	270H	1
23	01M 321 435 B	cap		1
24	01M 321 432 A	plug		1
25	01M 321 407	oil filler pipe		1
26	003 321 419 B	round seal	17,5X3,5	1
30	096 321 491 D	cover		1
31	096 321 488	gasket		1
-	01M 398 001	set of gaskets for 4 speed automatic transmission		1
-	G 052 128 A1	sealing grease for seal	500	X
32	01M 325 455	oil strainer		1
--- E N D ---				

<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/1ATc.jpg>

- (1) N 013 811 5 "sealing washer" Fig 21
- (1) 01M 321 435 B "cap" Fig 23
- (1) 01M 321 432 A "plug" Fig 24 optional

Fluid needed per the Bentley Manual:
"VW ATF is obtainable as a spare part.

-Container size 1.0 ltr. (1.0567 qt) - Part No. G 052 162 A2"

Note: I found that 4.5 liters were needed when replacing the filter as outlined in the following procedure.

Fluid and filter change Procedure:

First remove the plastic side liner that covers the driver side of the transmission. There are two washer retainers that can easily be removed turning them off with a flat screwdriver.

Front flat washer



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT1.JPG>

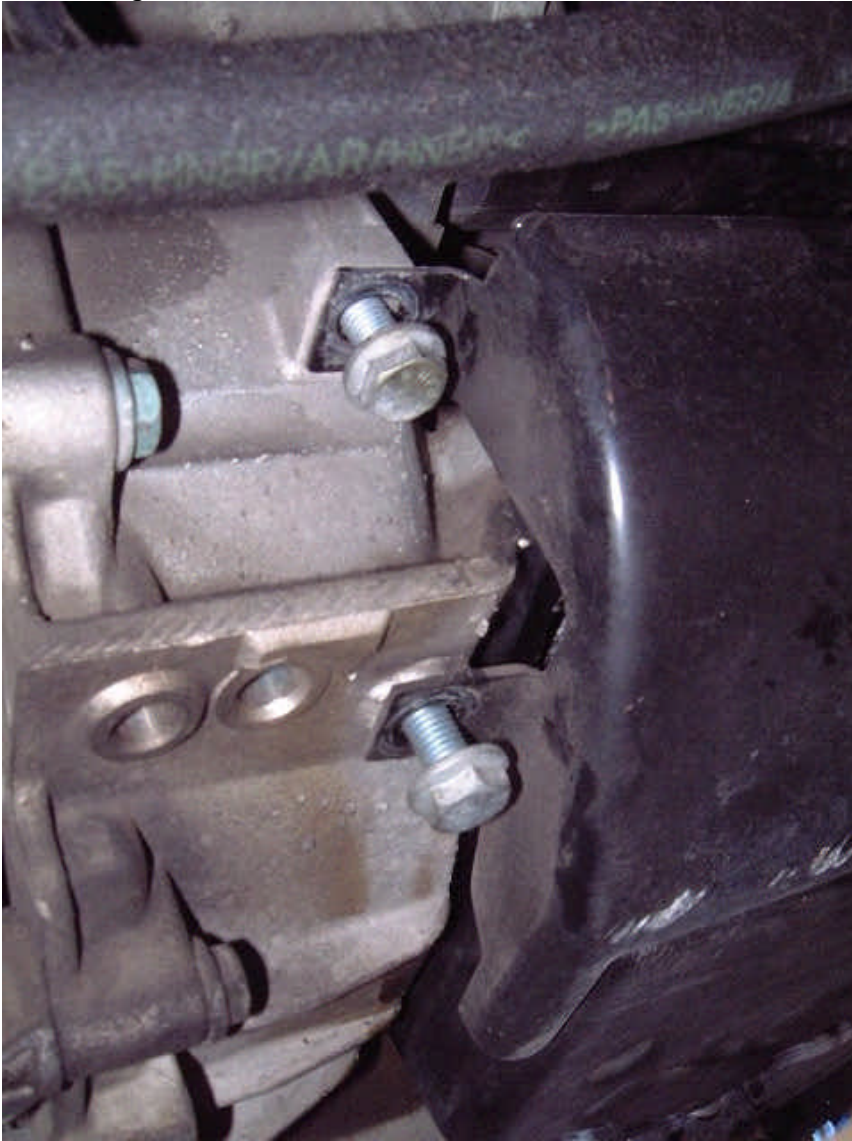
Rear flat washer



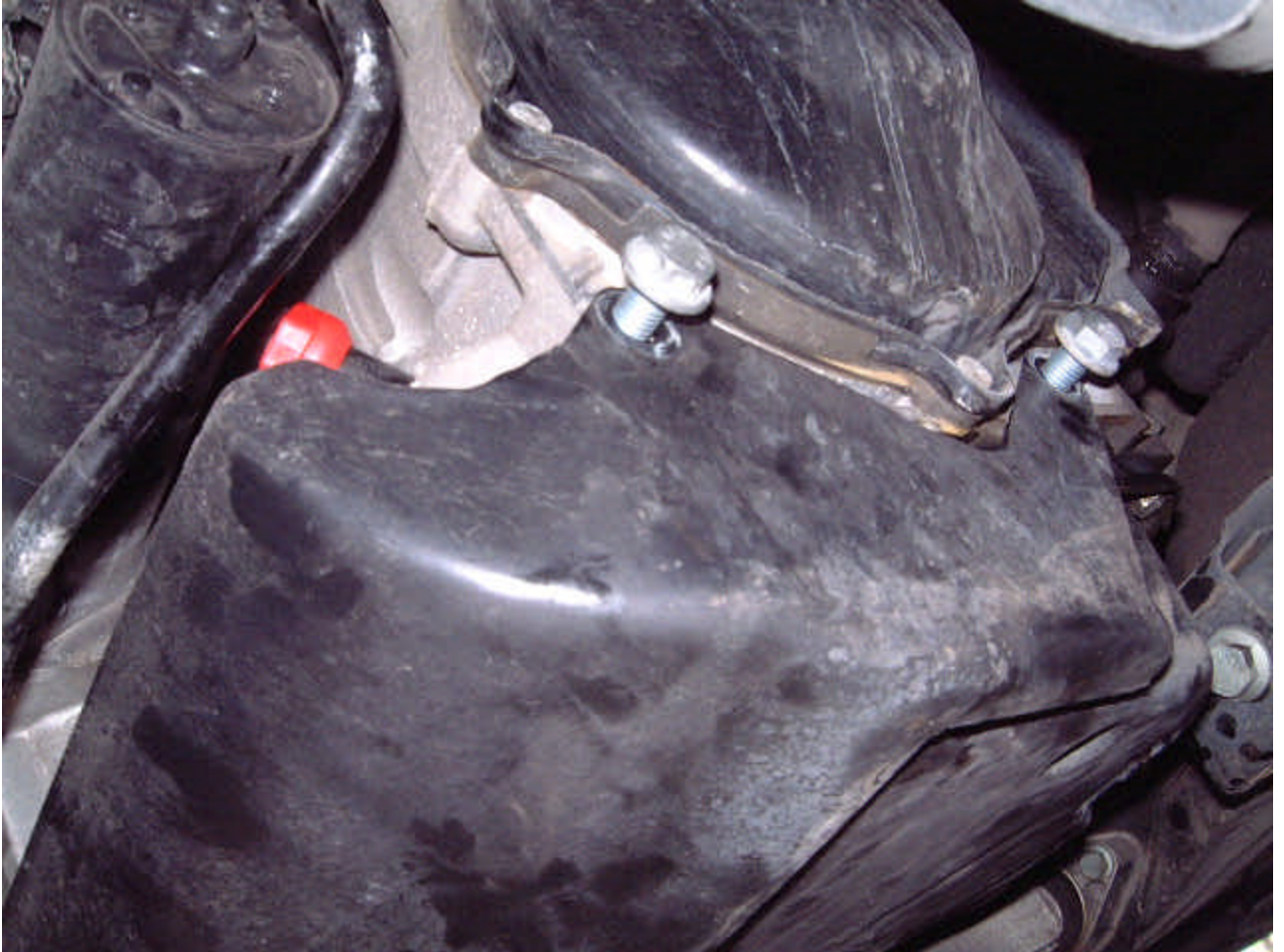
<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT2.JPG>

Next remove the guard on the transmission pan. This requires removing 4 bolts, (2)

on the engine side, (2) on the outer most drivers side of the transmission.



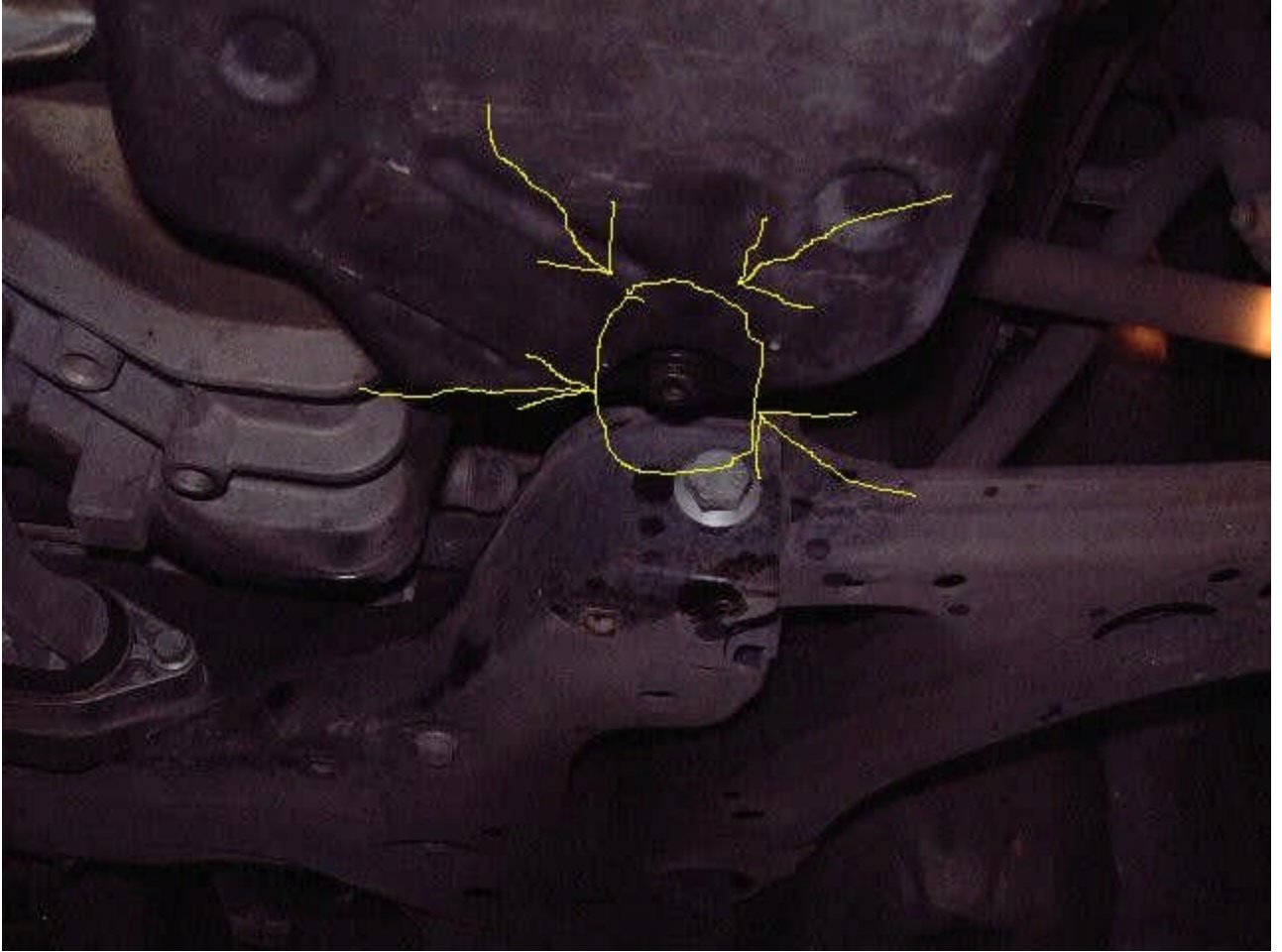
<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT3.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT4.JPG>

Using an Allen socket remove the allen cap on the transmission pan, not fluid will

drain out once loosened so be ready to catch about 2 liters of fluid.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT5a.jpg>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT5.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT6.JPG>

With the initial amount of fluid drained from the transmission, you will need to remove the plastic baffle. This is a red 2 inch long insert that retains a majority of

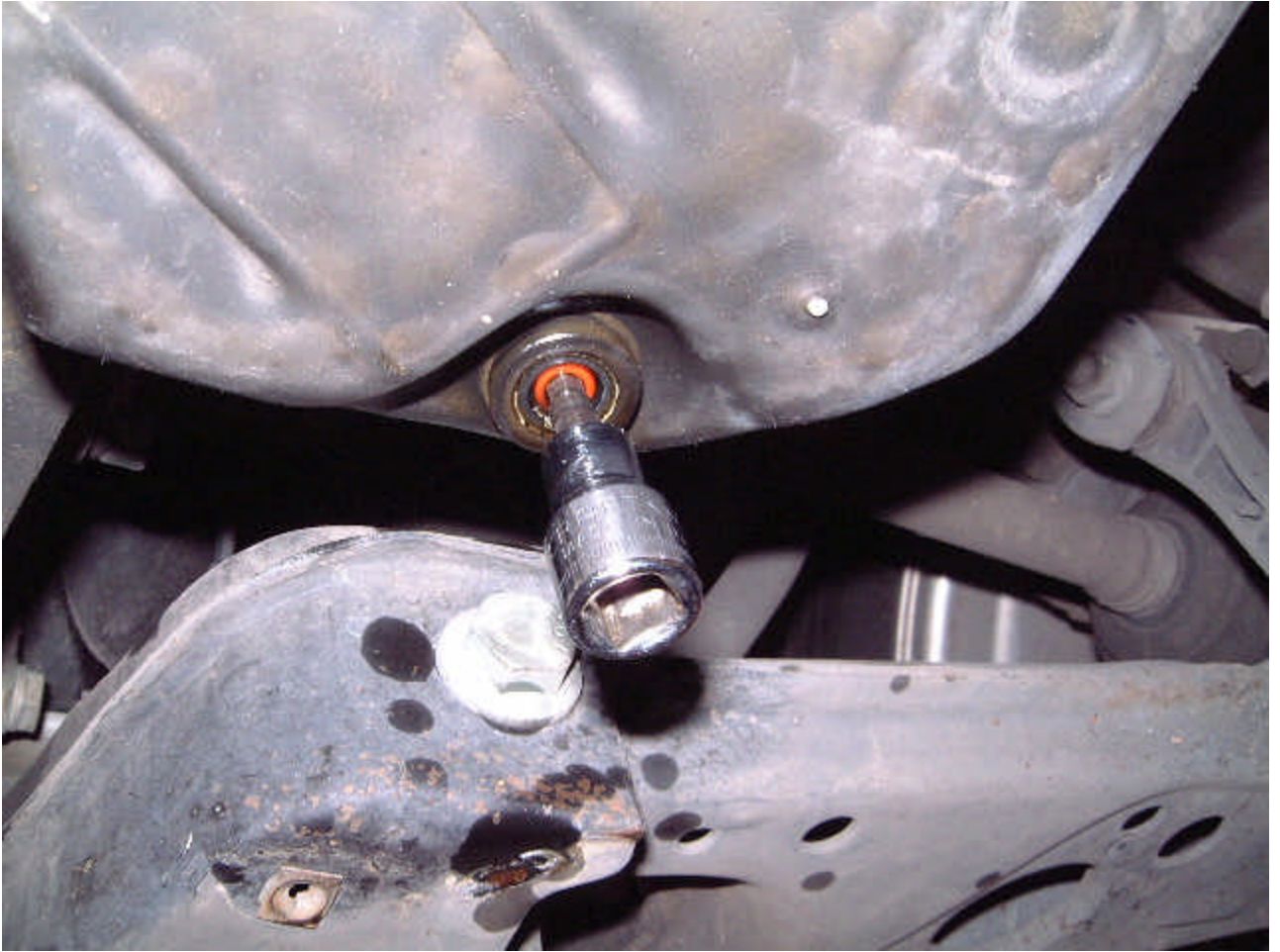
the fluid.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT8a.jpg>

This insert is also what is used to determine whether or not you have the correct amount of fluid in the ATF pan when refilling. This will be discussed later in the procedure. For now insert your allen and remove it being careful not to strip it out since its only plastic. Use caution because the fluid may still be hot and once the

baffle is removed fluid will rush out the hole.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT7.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9a.JPG>

Now with the fluid drained reinstall the plastic insert and the allen cap loosely, the

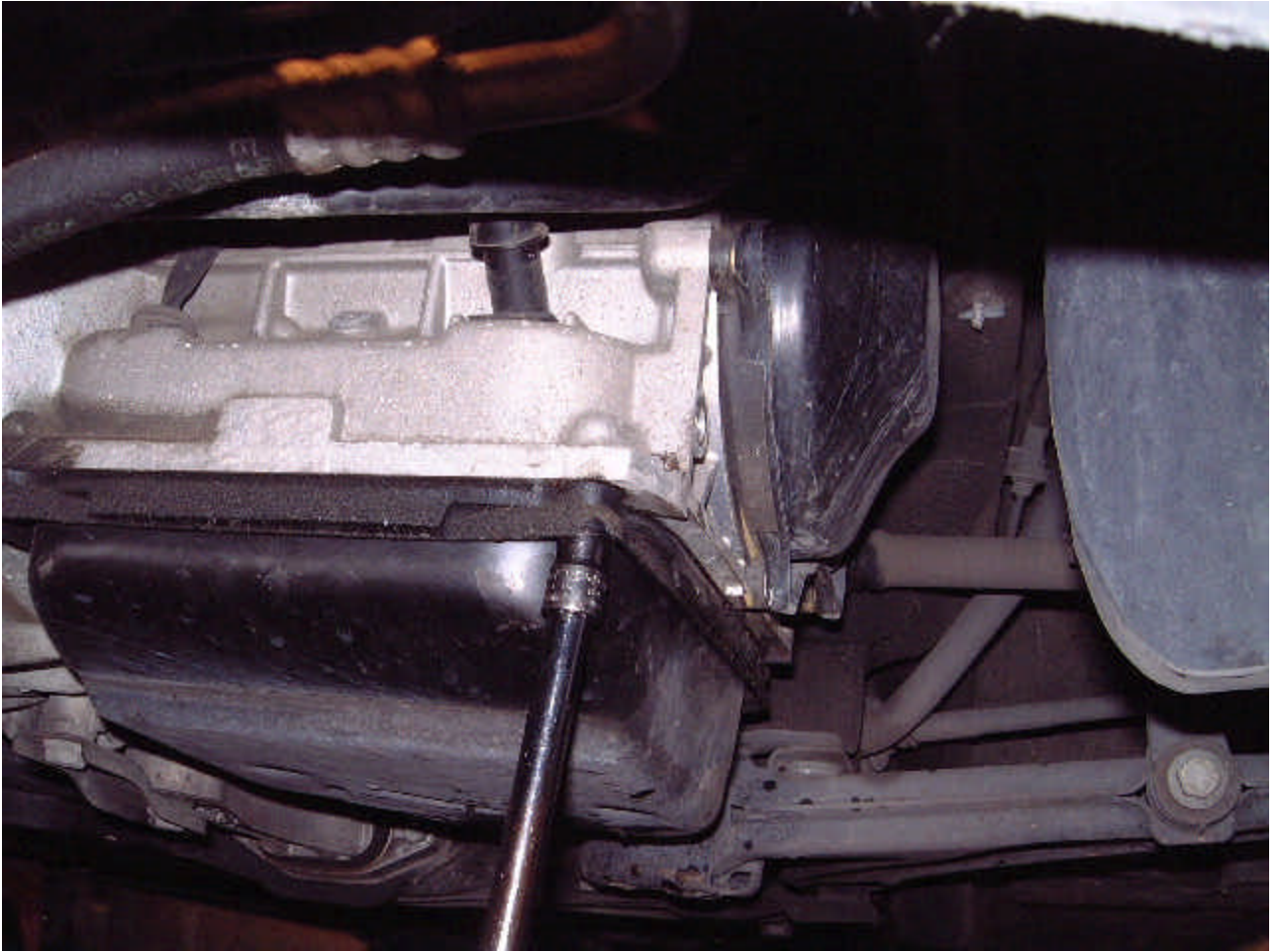
reason is you will need to remove it later to determine proper fill level.



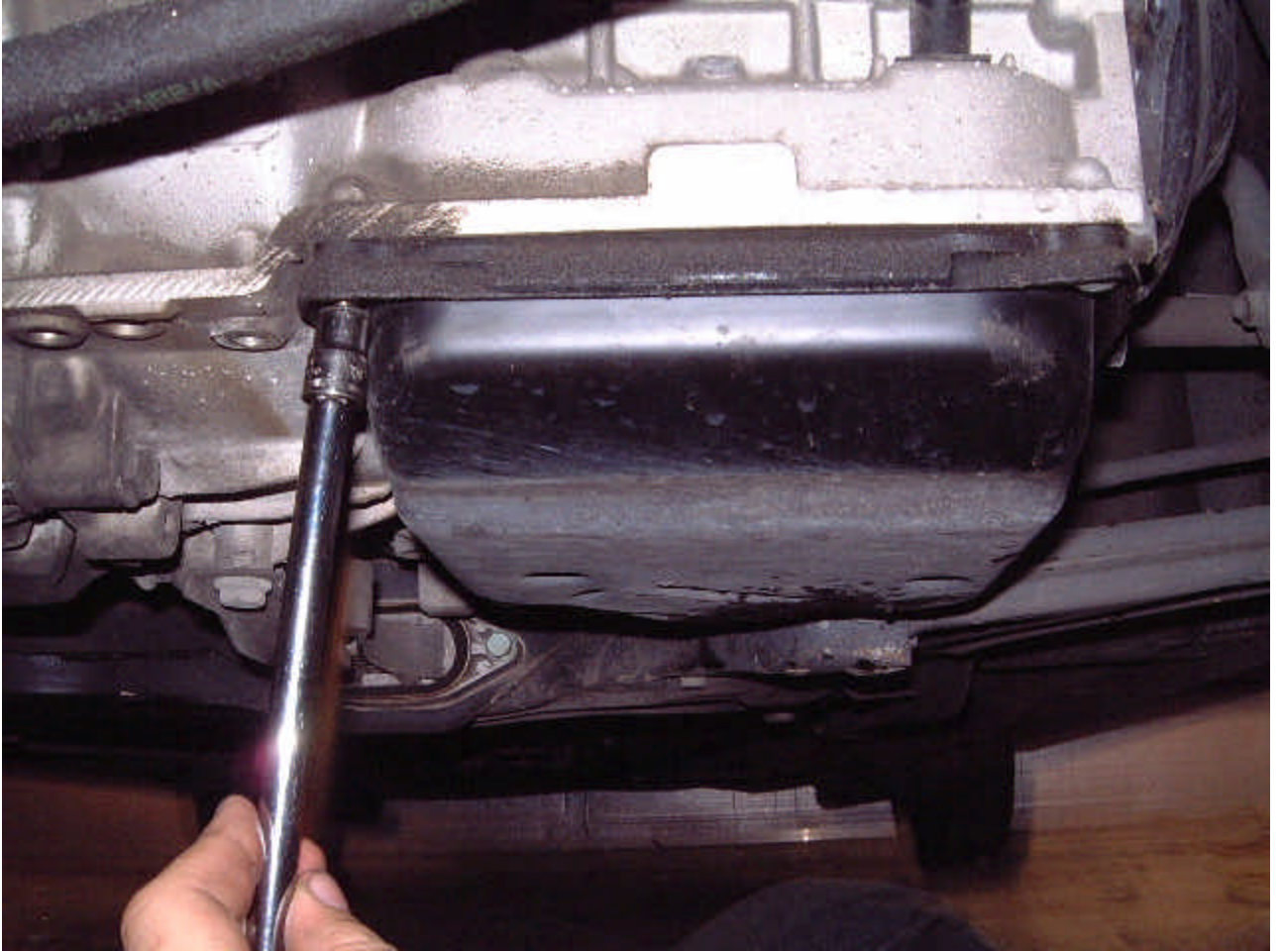
<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT8.JPG>

With the fluid drained now your going to remove the four bolts that hold the pan to

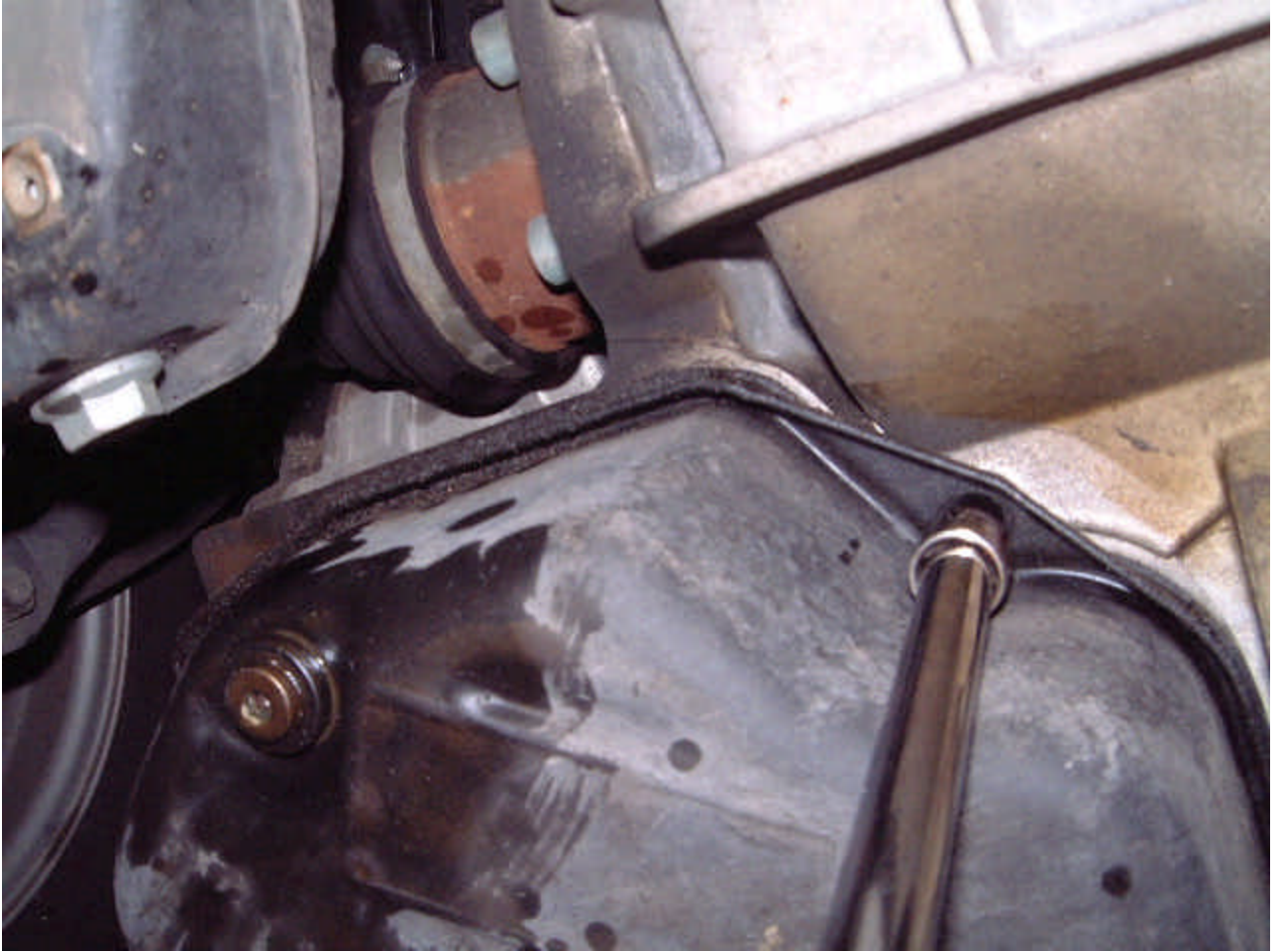
the bottom of the transmission.



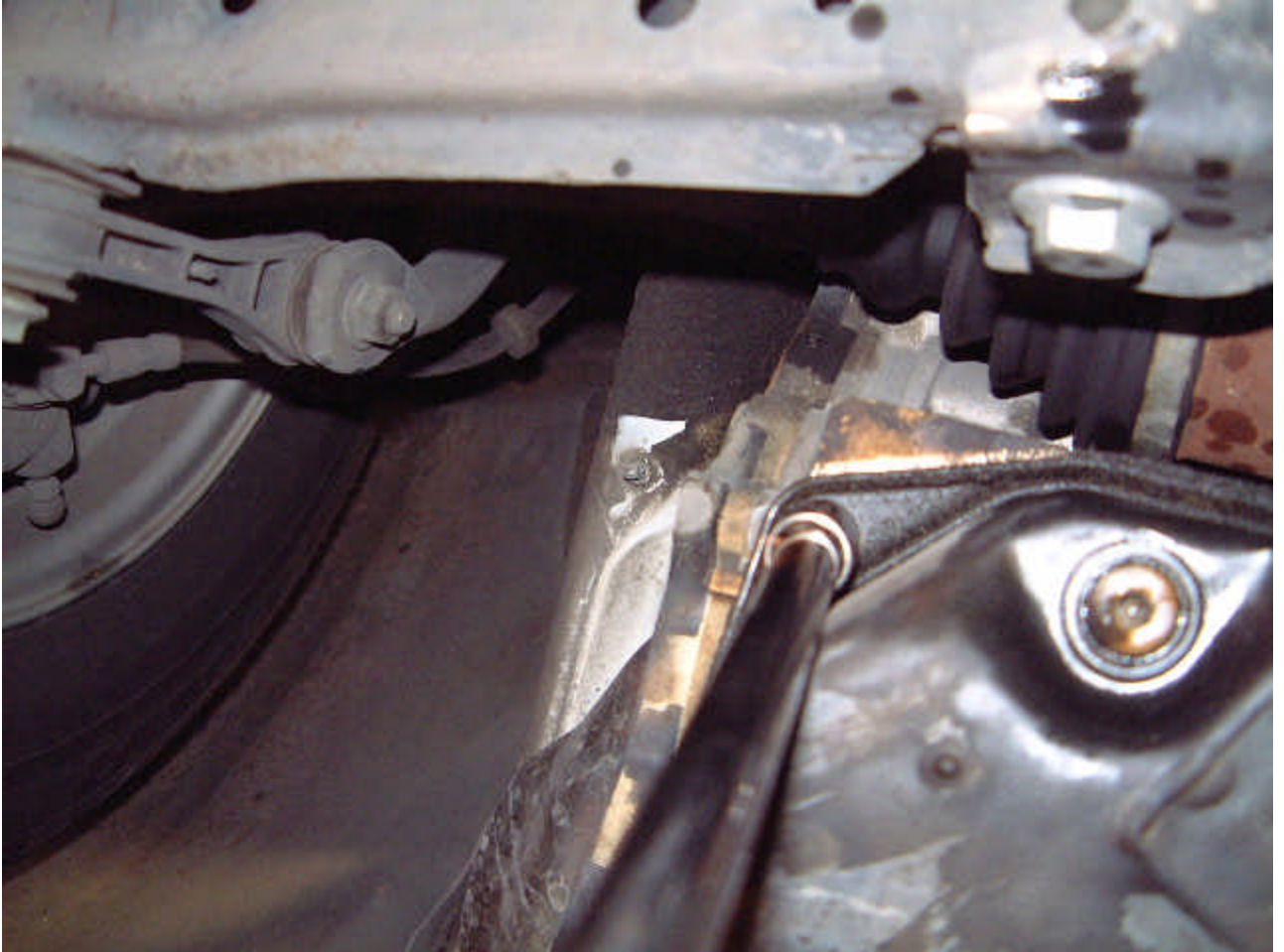
<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9c.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9d.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9e.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9f.JPG>

Now lower the pan to the floor and if you have to drain off the rest of the residual

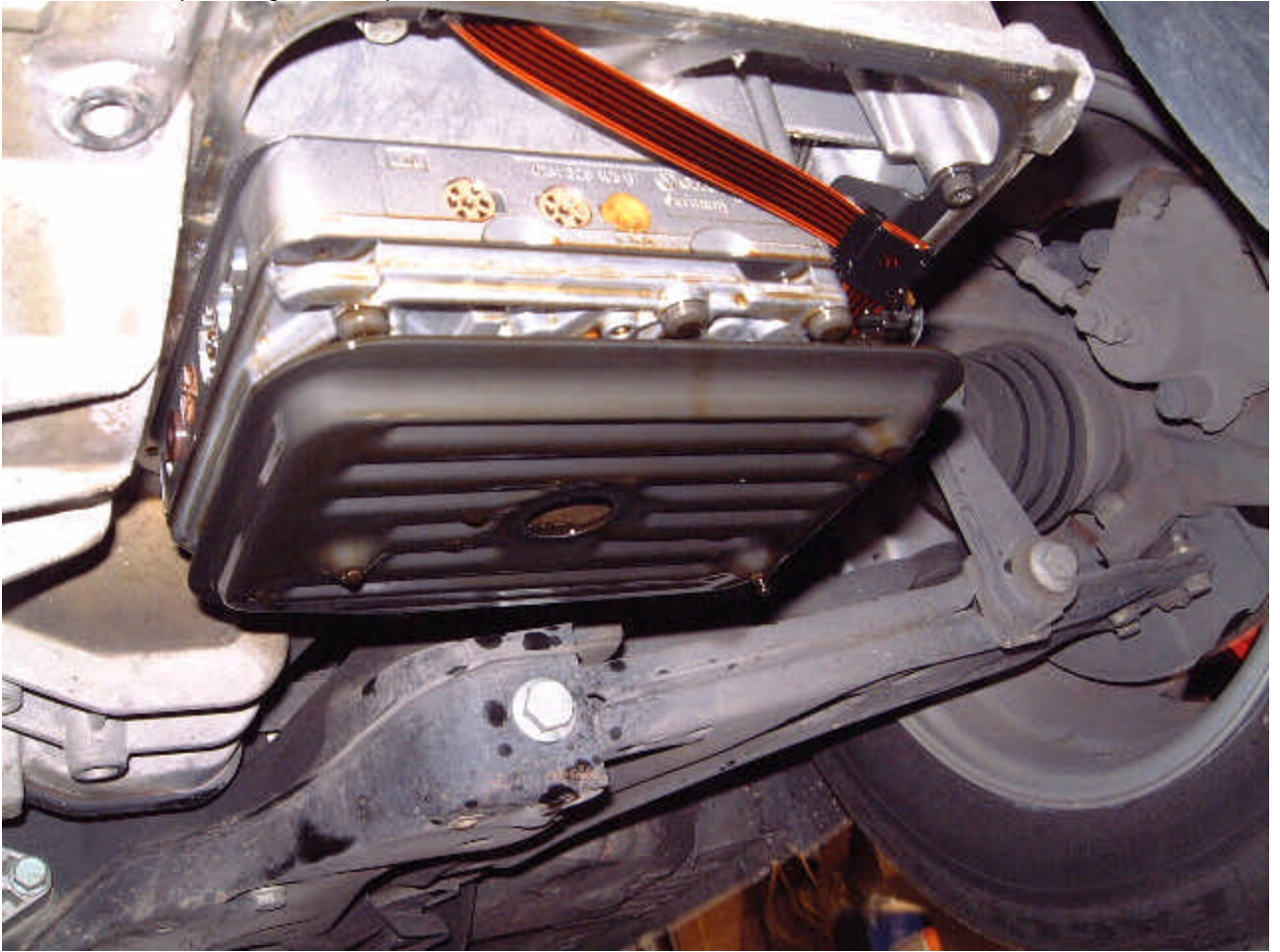
fluid in the pan.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9g.JPG>

Looking up at the transmission valve housing you will see the filter with its steel base suspended from the housing. The filter is simply a press fit into the valve housing requiring a simple twist removal. Be careful NOT to pry downward so that you do not

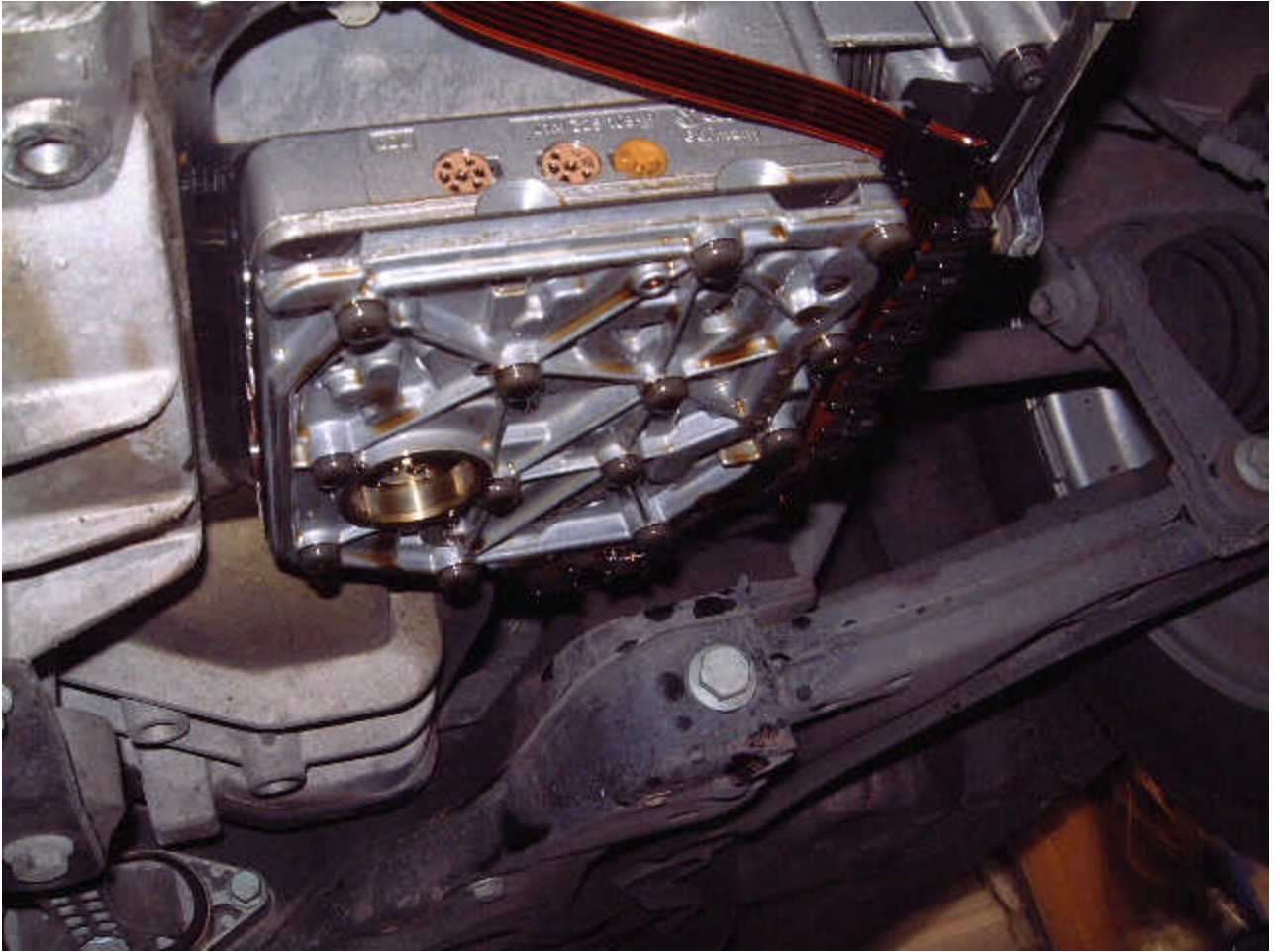
crack off the possibly brittle plastic.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9h.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9i.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9j.JPG>

This a comparison shot with the new filter and seal along side the old filter and

installed seal.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9k.JPG>

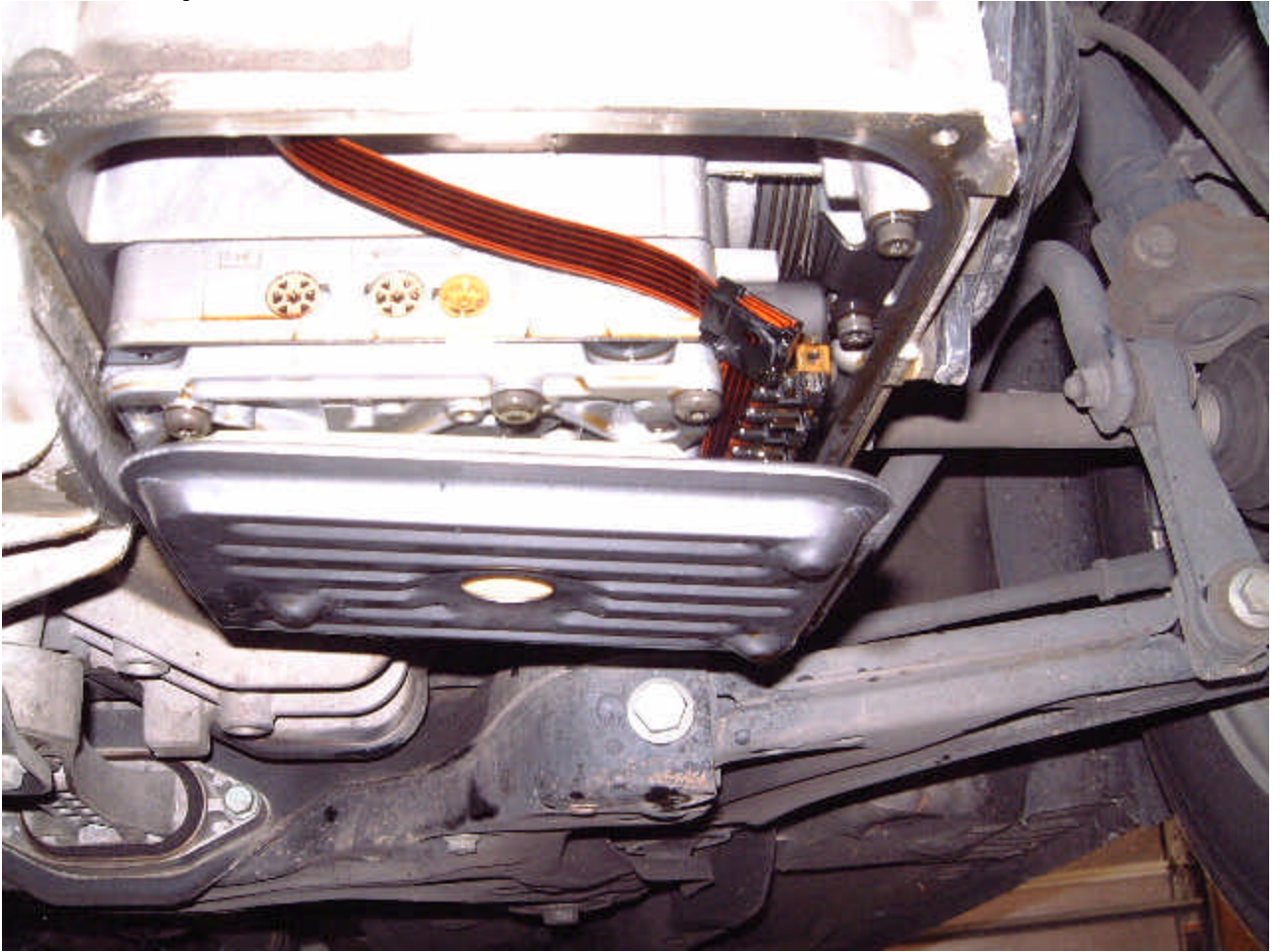
Picture of the new seal installed on the new filter.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9I.JPG>

Gently press the new filter up and into the valve body, notice that the filter may sag a bit, this is normal since the only thing holding it in is the small seal and insert into

the valve body.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9m.JPG>

Take the fluid pan and remove the old seal. I suggest cleaning out the pan and wiping it down. I noticed that on this transmission the magnet was cracked, I did not replace it but on the next change a new one will be ordered. Now reinstall the new

seal.



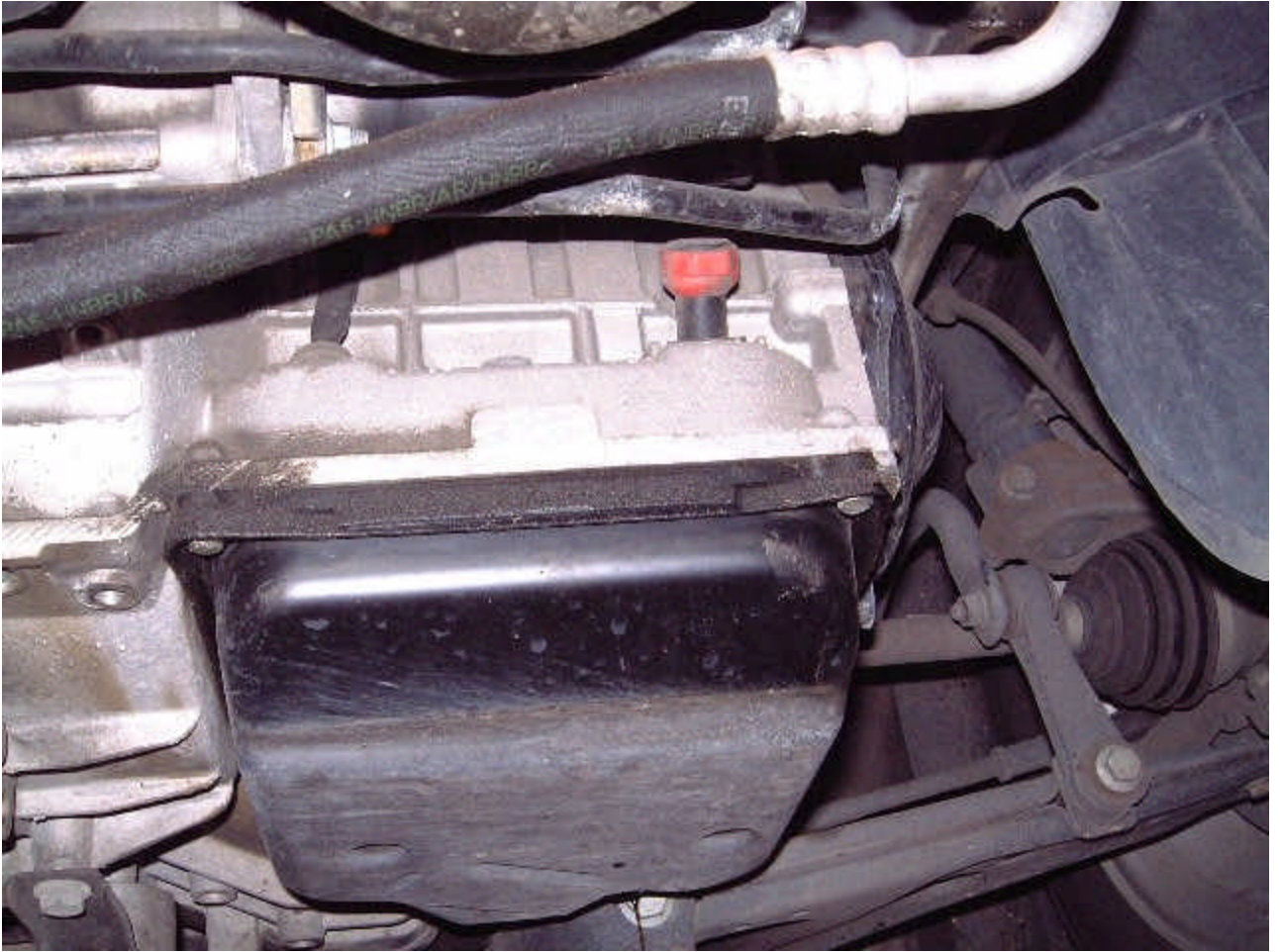
<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9n.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9o.JPG>

Reinstall the pan back on the transmission with the four bolts. Torque for the four

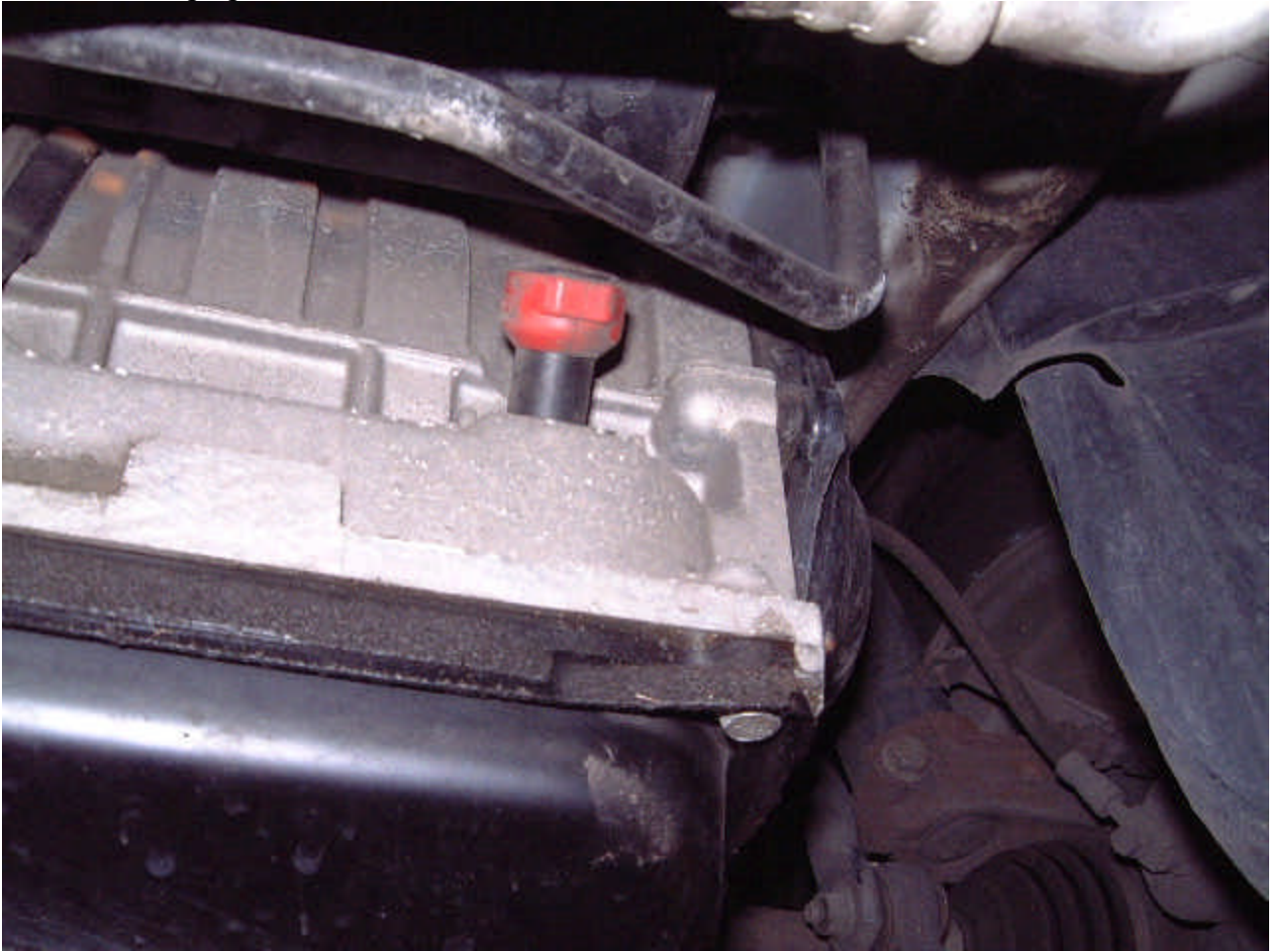
bolts are 12 Nm (9 ft lb)



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9p.jpg>

Next step is to remove the red security cap. IF your careful you can remove it

without damaging it.



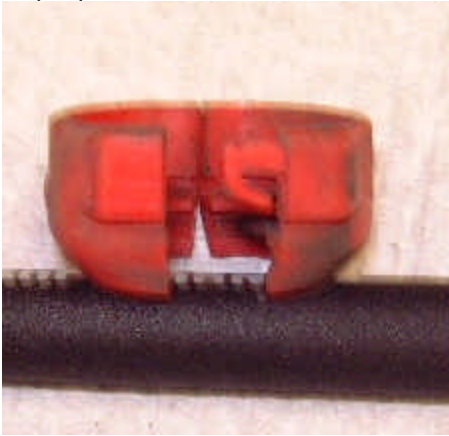
<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9q.JPG>

Cap removed:



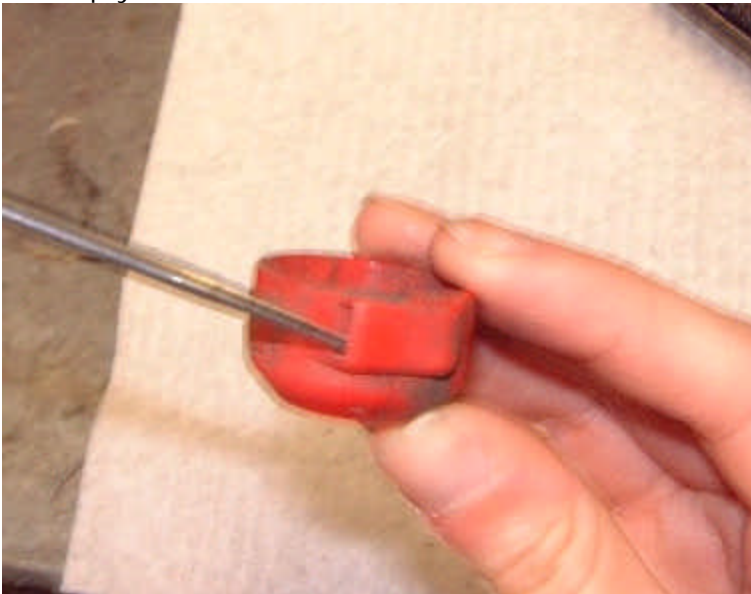
<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9r.JPG>

Cap opened:



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9s.JPG>

Insert pry tool:



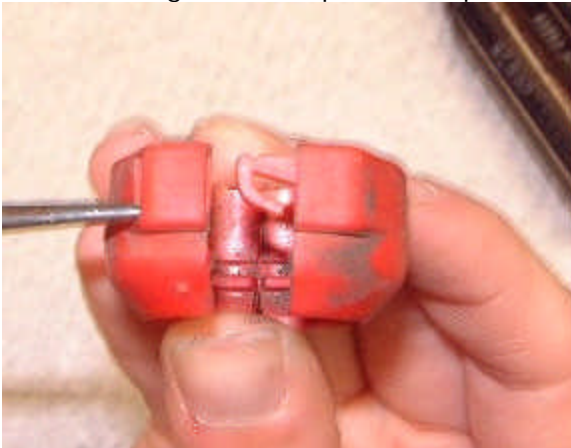
<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9t.JPG>

Pry tool up:



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9u.JPG>

While holding the tool open the cap:



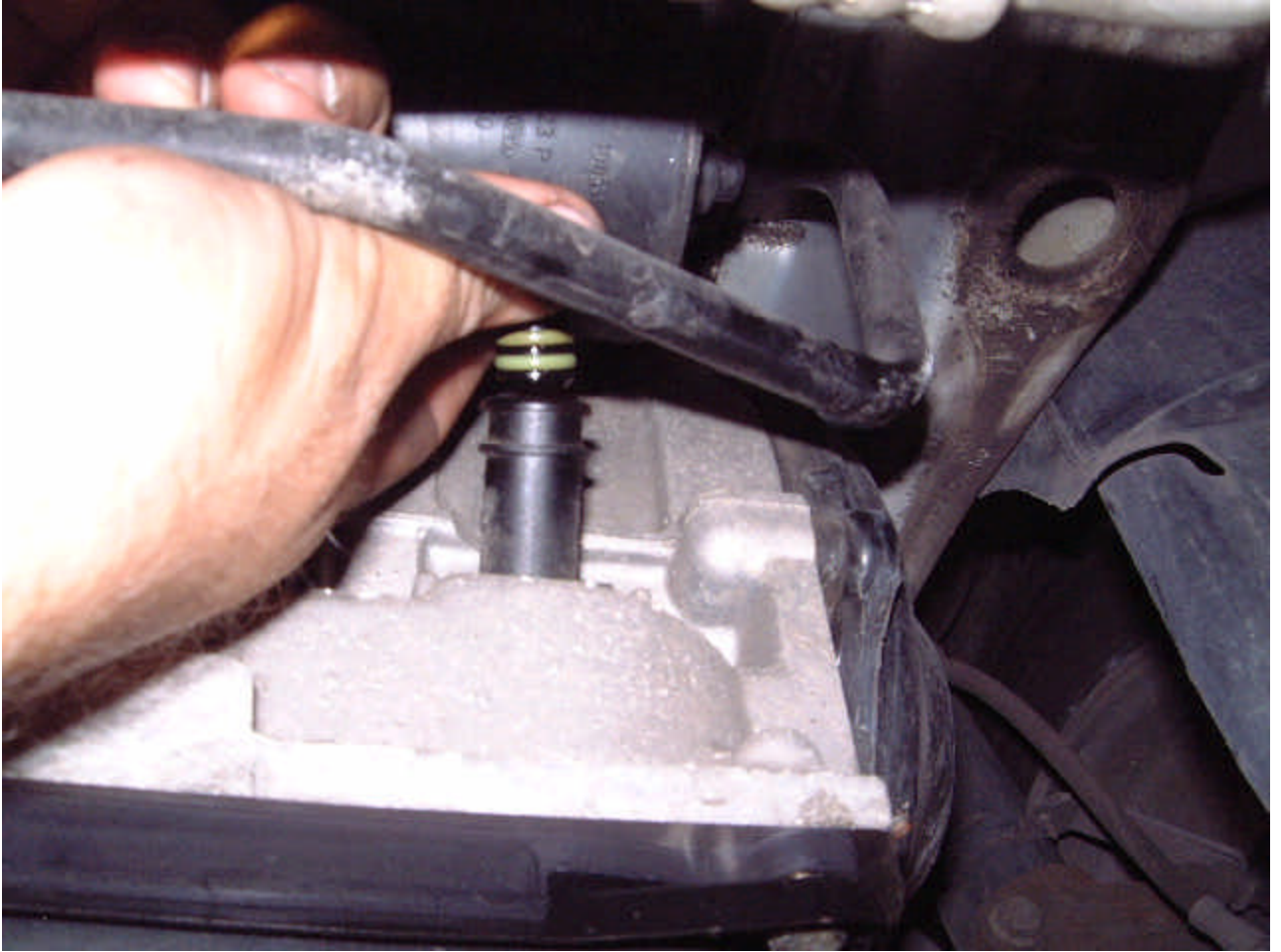
<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9v.JPG>

For the filler plug you need to pry up some small tabs as well. Using the same tool

pry them up, twist and remove the plug.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9w.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9y1.JPG>



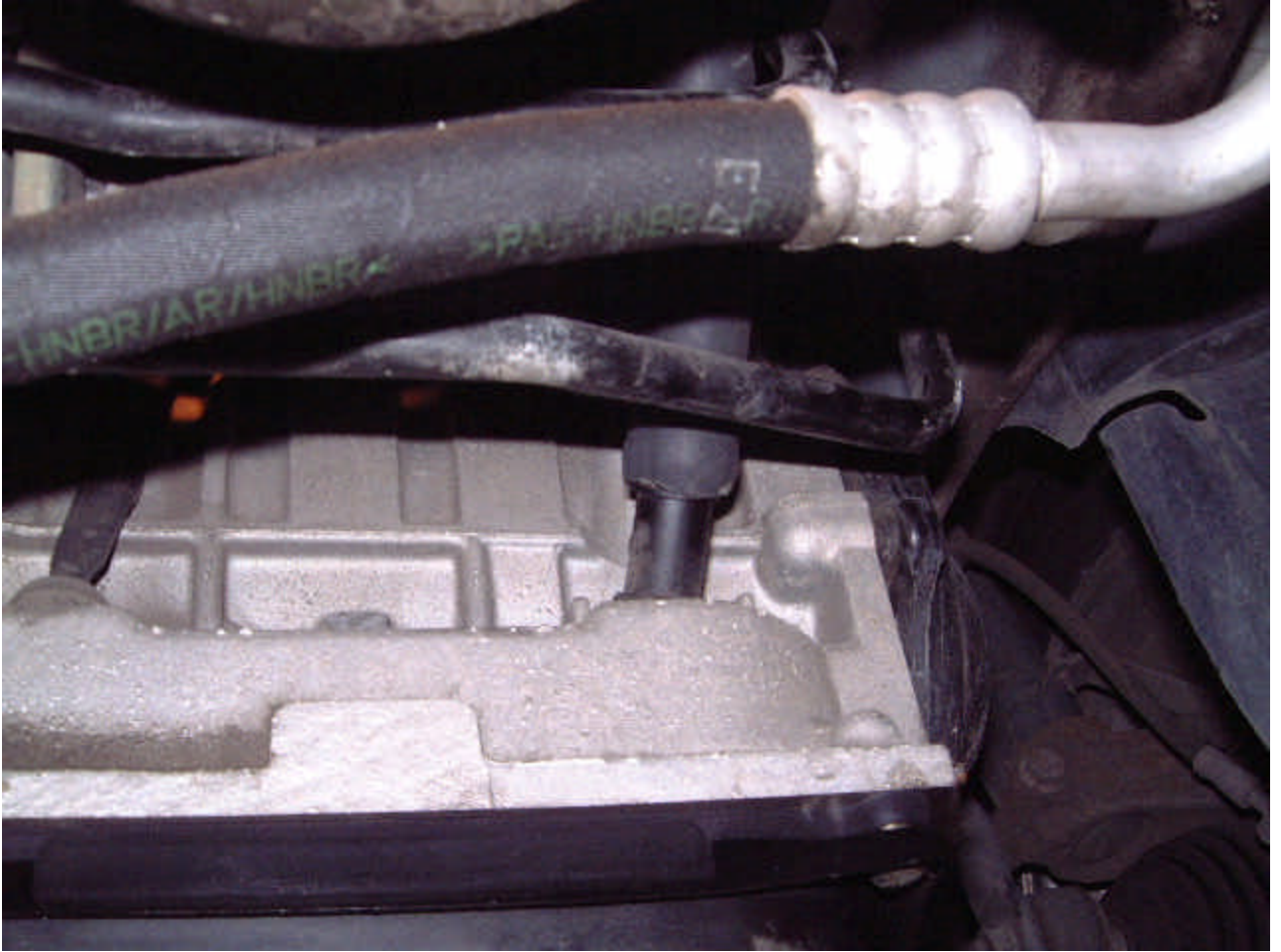
<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9y2.JPG>

Taking a 2 foot length of 3/4" heater hose slide it onto the fill port. Insert a funnel to make the filling process easier and reduce the chance of spilling. I suggest measuring the amount drained and refill that exact amount, this will cut the time to

check the proper fill amount.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9y3.JPG>

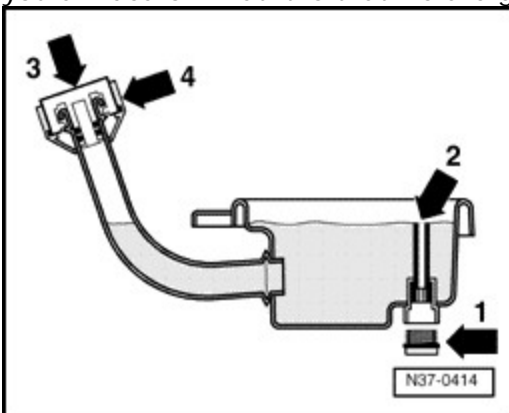


<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9y4.JPG>



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9y5.JPG>

The next step requires the use of the VAG-Com and removal of the allen nut on the transmission pan. First off look at the picture taken out of the Bentley CD. This give you an idea of what it is that we are going to be checking.



<http://pics.tdiclub.com/members/drivbiwire/Auto%20Fluid%20change%20procedure/AT9y6.jpg>

This is a condensed version of what is in the Bentley Manual:

FLUID LEVEL CHECKING PROCEDURE

Now start the car and go into the transmissions data blocks under transmission with your VAG-Com and go to block 005, this will display fluid temp.

- ATF temperature not above approx. **30C (86F)**
- Vehicle level
- Selector lever in "P"
- If ATF is below 30C (86F) bring the ATF up to test temperature.
Test temperature: 35C to 45 (95 to 113F)
- Remove ATF level plug from oil pan.

CHECKING PHYSICAL QUANTITY

If ATF drips out of hole:

ATF need not be topped up.

- Install new seal on plug and tighten to 15 Nm(11 ft lb).
- ATF check is completed.

If ATF does not drip out

- Remove plug from filler line.
 - Fill with ATF until ATF runs out of level hole
 - Install new seal on plug and tighten to 15 Nm (11 ft lb).
- ATF check is completed.

CAUTION!

Too little or too much ATF will adversely affect transmission function.