

Audi A8

Transmission and Final Drives Fluid Level Checking and Filling

Fluids in Transmission and Final Drives (overview)

There are multiple fluid cavities in the transmission. This includes automatic transmission fluid (ATF), and gear lube. The ATF is used for the torque converter, the part that couples the engine output to the transmission input. The output of this device is the input to the distributor gear. The distributor gear is aft of the torque converter. The distributor gear has its own cavity. The distributor gear drives:

- Output pinion to the final drive-front
- The driveshaft through its output drive flange

The final drive-front drives the two front axles. The final drive-rear (rear differential) drives the two rear wheel shafts.

- The 4.2Q has three differentials (or sets of gears):

1. Final drive-front 1.4 Qt
2. Distributor gear 0.9 Qt
3. Final drive-rear 1.6Qt

- All specify SAE 75 - 90 synthetic gear oil; Audi P/N G 052 145 S2

- The Audi Distributor Gear is akin to a 4WD transfer case; the transmission drives front and rear axles through this center differential

The "A8 4.2Q Distributor Gear Seal Replacement Procedure" posted was aimed at the center differential driveshaft seal located at the very rear of the A8Q transaxle assembly. It is apparently prone to dribble gear oil on the LH cat converter.

Just FYI, 75 - 90 gear oil is used in extreme pressure applications such as differentials. It is very slick and viscous, and generally has a strong smell.

Auto trans fluid is about 20 wt; like motor oil, and is good for hydraulic fluid duty and low shear gear trains. The most common these days is Dexron, which is always distinctly red in color.

The A8 calls for "VW ATF"; 10.4 qts new, and 4.2 qts when changed. The rest (6.2 Qts) stays in your torque converter, etc.

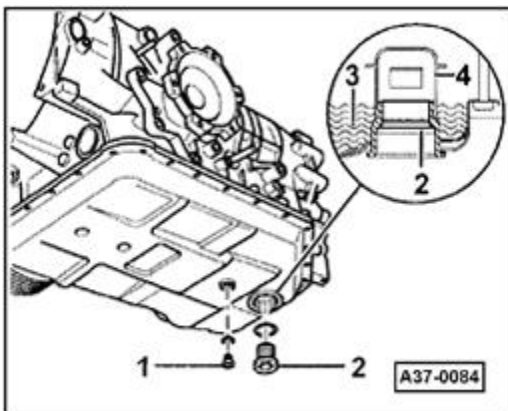
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Automatic Transmission Fluid Level

Here's how to easily check the ATF (automatic transmission fluid) level in your A8:

- A. Lift the car so you can get underneath.
 - Make sure its level
 - Use jackstands, ramps, or a station lift
- B. Start the engine; Transmission in park
 - Warm the ATF to 85 – 105 F. (Put your palm on the trans sump pan; ready when just warm)
- C. Remove sump plug #2 (See illustration below)
 - Requires 17 mm allen driver
 - Check/replace O ring seal upon reassembly
- D. ATF level should be at the top of threaded sump; engine running, fluid warm (See illustration)
 - If low, just pump a little ATF over top of sump
 - Any excess will overflow out
 - A marine outboard motor (gear oil) hand pump works fine for this; only a couple of bucks at any marine place
 - Use ONLY VW ATF (Audi P/N G 052 162 A2)
 - ATF expands as it warms. For really hot climates (110F +), let the trans warm to 115 – 130 F before checking



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ATF Capacity (called Planetary transmission part on Bently CD)

Capacities	Planetary transmission	Automatic transmission
Initial fill	aprox. 9.8 ltr. (2.58 gal)	01L
Fluid change	approx. 3.5 to 4 ltr (0.9 to 1.05 gal) 1)	
Lubricant	Automatic Transmission Fluid (ATF)	

¹⁾ Life time filling: Change only after repair or removal of oil pan up to 4 ltr. (1.09 gal.)

ATF part number: G 052 162 A2 (1 liter)

CAUTION!

Part numbers are listed here for reference only. Always check with your Parts department for latest information.

Notes on Transmission Fluid:

Only ATF with the designation ESSO LT 71141 (color: clear-yellow) can be added.

Additives cannot be used.

Container available: G052 162 A2 (1 liter)

Checking the ATF level when the temperature is too low will lead to overfilling.

Checking the ATF level when the temperature is too high will lead to under-filling.

Overfilling or under-filling the ATF impairs the function of the transmission.

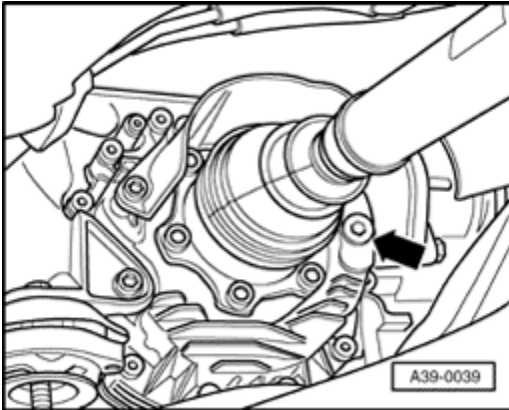
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Transmission and Final Drives Fluid Level Checking and Filling

Final Drive-Front Fluid Checking

Warm up gear oil to 60 C (140 F) by drive the car briefly.

- A. Lift the car so you can get underneath.
 - Make sure its level
 - Use jackstands, ramps, or a station lift
- B. Remove plug (see picture). This is just forward of the front drive axle.
- C. Fill until level is even with plug if necessary.
- D. NOTE: always replace o-ring on plug.
- E. Torque plug to 26 lb-ft.



Final drive-front (Drives two front shafts)

Capacities	Final drive	Automatic Transmission
Initial filling	approx. 1.3 ltr.	01L
Fluid change	Life time filling, no change	
Lubricant	Gear oil SAE 75 W 90 (synthetic oil)	

Gear oil part number: G 052 145 S2 (1 liter)

Part numbers are listed here for reference only. Always check with your Parts department for latest information.

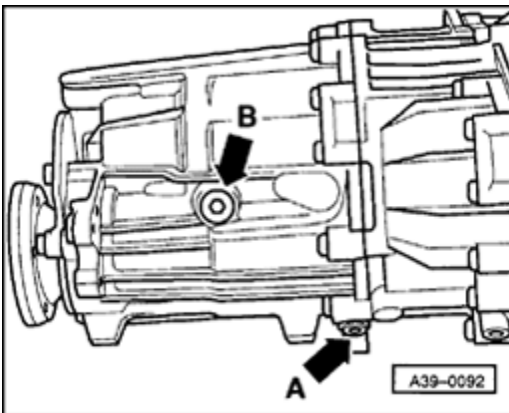
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Distributor Gear Fluid Checking

Doesn't sound like something you need to do if you don't have to.

- A. Lift the car so you can get underneath.
 - o Make sure its level
 - o Use jackstands, ramps, or a station lift
- B. Disconnect right three way catalytic converter from rear exhaust system and press three way catalytic converter to right.
- C. Remove plug (see picture arrow-B).
- D. Fill until level is even with plug if necessary.
- E. NOTE: always replace filler plug.
- F. Torque plug to 26 lb-ft.



Distributor gear

Capacities	Distributor gear	Automatic Transmission
Initial filling	880 mltr.	01L
Fluid change	Life time filling, no change	
Lubricant	Gear oil SAE 75 W 90 (synthetic oil)	

Gear oil part number: G 052 145 S2 (1 liter)

Part numbers are listed here for reference only. Always check with your Parts department for latest information.

FAQ's <http://groups.yahoo.com/group/AudiA8repair/>

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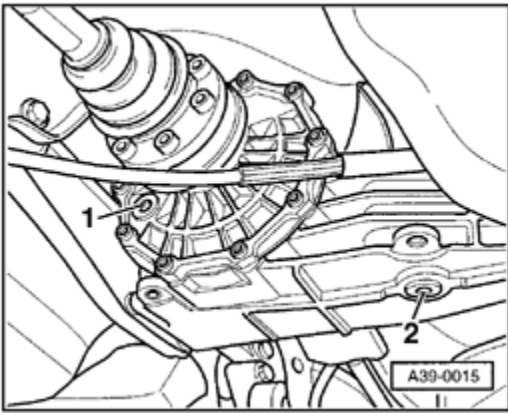
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Final Drive-Rear Fluid Checking

Warm up gear oil to 60 C (140 F) by drive the car briefly.

- A. Lift the car so you can get underneath.
 - Make sure its level
 - Use jackstands, ramps, or a station lift
- B. Remove filler plug (see picture arrow-1).
- C. Fill until level is even with plug if necessary.
- D. Torque plug to 26 lb-ft.



Final drive-rear

Capacities	Final drive	Final drive, rear
Initial filling	1.5 ltr.	01R
Fluid change	Life time filling, no change	
Lubricant	Gear oil SAE 75 W 90 (synthetic oil)	

Gear oil part number: G 052 145 S2 (1 liter)

Part numbers are listed here for reference only. Always check with your Parts department for latest information.