

Fluid level checking procedure for GM & ZF (without dipstick):

1. The transmission temperature must be between 30°C and 50°C before checking can begin. Use the DIS or the MODIC to determine the transmission temperature.
2. The vehicle must be level and without load. With the engine running, switch on the air conditioning. This will increase the idle speed and ensure that all oil passages in the transmission are filled with oil.
3. Step on the brake firmly, apply parking brake fully and move the selector lever through each gear position, pausing briefly in each gear.
4. With the engine running and the selector lever in Park position, remove the filler plug ② located on the transmission (see picture for location). If a small stream of oil runs out, the fluid level is correct.
5. If no oil runs out when the filler plug is removed, the fluid level is too low. Add oil until it starts to overflow.
6. With the engine running, reinstall the oil filler plug (for proper tightening torque refer to chart below).

Adding oil after transmission repairs:

1. With the engine stopped, add oil to the transmission until it overflows.
2. Insert the filler plug and tighten by hand. Place the selector lever in Park position and start the engine.
3. Follow the fluid level checking procedure as described under step A.

Notes on fluid level checking and adding transmission oil:

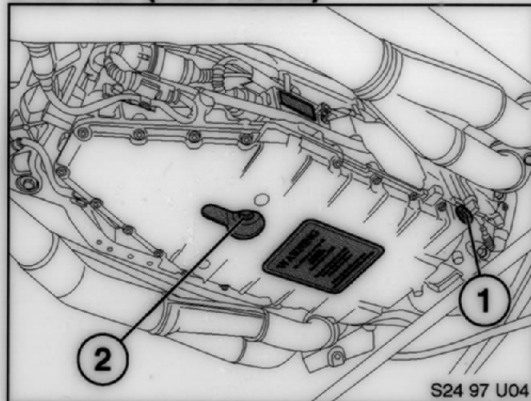
- **All lifetime use oils (Shell LA 2634, Esso ATF LT 71141, Texaco ETL 7045) are to be collected in a clean container and reused .**
- It is preferred to check the transmission fluid level at 30°C, this way the transmission will hold extra oil versus topping off at 50°C.
- If the transmission temperature rises above 50°C during the fluid level checking procedure, the resulting oil level will be too low.
- Have necessary equipment, oil pump and transmission fluid available before starting the fluid level checking procedure.

Tightening Torque for Filler & Drain Plug:

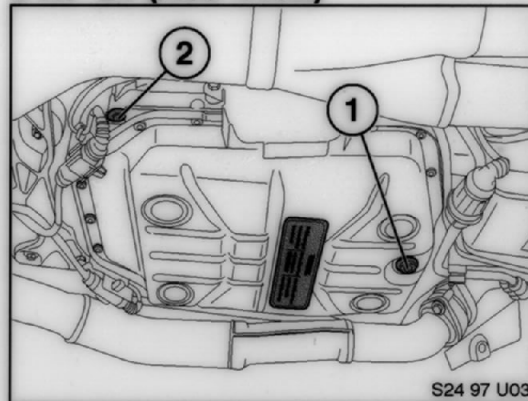
ZF Trans	Oil Filler Plug	Oil Drain Plug	GM Trans	Oil Filler Plug	Oil Drain Plug
A5S 310Z	100 nm	15 nm	A4S 270R	25 nm	33 nm
A5S 560Z	100 nm	50 nm	A4S 310R	25 nm	33 nm
A5S 440Z	35 nm	30 nm	A5S 360R	20 nm	20 nm

ZF Transmissions-Filler & Drain Plug Locations:

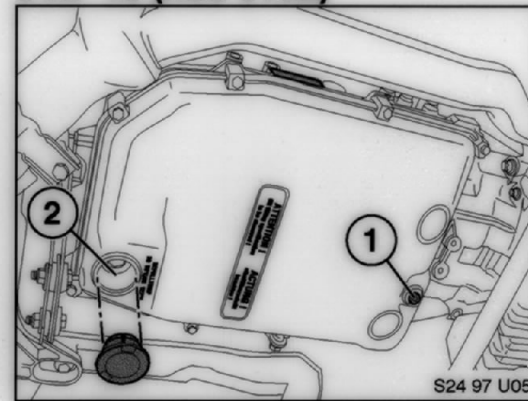
5 HP 30 (A5S 560Z)



5 HP 24 (A5S 440Z)



5 HP 18 (A5S 310Z)

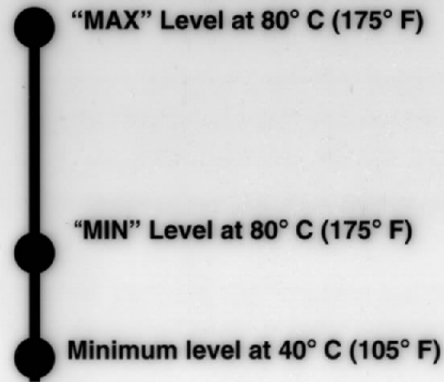


- ① Drain plug
- ② Filler plug

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3. Step on the brake firmly, apply parking brake fully and move the selector lever through each gear position, pausing briefly in each gear.
4. Pull out dipstick and wipe clean with a lint free cloth
5. Reinsert dipstick completely. Pull out dipstick and place bottom tip on a level surface, measure level from bottom tip as shown.

Reinsert dipstick completely. Pull out dipstick and look at level. Level should be between MAX and MIN marks as shown.



If oil level is too LOW:
Valve chatter, foam formation engine power is not fully transmitted to the rear wheels. Generally incorrect operation

If oil level is too HIGH:
Heavy foam formation, increase in engine temperature when driving fast, loss of oil through the vent.

Amount of oil between MAX and MIN marks is 0.3 lit (0.6 pts)

If transmission needs oil, use only **Dexron III**.

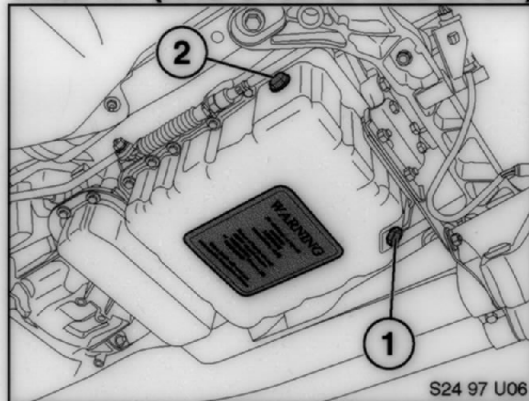
Compare measurement and oil temperature reading from MoDiC or DIS with Table below.

Oil °C	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
MIN (mm)	3	5	8	11	13	14	16	17	19	21	22	24	26	29	31
MAX (mm)	15	17	20	22	25	26	27	28	29	32	34	36	38	41	43

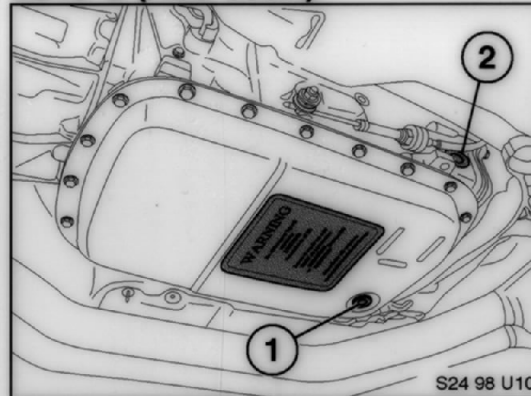
6. Add additional oil if needed.

GM Transmissions-Filler & Drain Plug Locations:

THM R1 (A4S 310R & A4S 270R)



5L40-E (A5S 360R)



- ① Drain plug
- ② Filler plug

BMW transmission - oil - temperature - drain - specs