

Table a. Automatic transmission applications

Model	Year	Transmission
323i/Ci	1999 - 2000	A5S360R (up to 03/00) A5S325Z (from 03/00)
325i (M54)	2001 - 2005	A5S325Z (up to 03/02) A5S390R (from 03/02)
325i (M56)	2003 - 2005	A5S325Z
325Ci	2001 - 2005	A5S325Z (up to 03/03) A5S390R (from 03/03)
328i/Ci	1999 - 2000	A5S360R
330i/Ci	2001 - 2005	A5S325Z (up to 03/03) A5S390R (from 03/03)
325xi 330xi	2001 - 2005	A5S390R

TRANSMISSION SERVICE

The automatic transmissions installed in the 3 Series are filled with a number of different transmission fluids. Each transmission should have a colored label on the ATF sump identifying the fluid type installed..

ATF fluid type labels

- Orange Dexron III
- Yellow Texaco ETL 7045E
(BMW p/n 83 22 0 026 922)
- Green Texaco ETL 8072B
(BMW p/n 83 22 0 024 359)
- Blue Esso 71141 LT
(BMW p/n 83 2 29 407 807)

CAUTION —

- Only re-fill or top off using ATF fluid specified for the transmission. Mixing or adding incorrect ATF fluids will lead to transmission damage.
- ATF specifications are subject to change and fluids are constantly being improved and updated. Always check with an authorized BMW dealer parts department for the latest transmission operating fluids information.

Automatic transmission fluid (ATF) level, checking

The automatic transmission is not equipped with a dipstick. Checking the ATF level requires measuring and maintaining the ATF temperature within a narrow range (approx. 100° F) with the engine running and the vehicle raised safely in air.

- Raise and safely support vehicle to access ATF fill plug. The vehicle must be level and unloaded.

CAUTION —

Make sure the car is stable and well supported at all times. Use a professional automotive lift or jack stands designed for the purpose. A floor jack is not adequate support.



- Warm up drivetrain by running engine until ATF reaches specified temperature. Switch on air conditioning to increase idle speed and to ensure all fluid passages in transmission are filled.

ATF level checking

- Fluid temperature 30° - 50°C (85° - 120°F)

- Apply parking brake firmly and step on brake pedal. Shift through all gears several times, pausing briefly between gear changes.

- ◀ With engine running and selector lever in Park, remove ATF filler plug (**arrow**).

- If a small stream of fluid runs out, fluid level is correct.
- If no oil fluid out, fluid level is too low. Add oil until it fluid starts to overflow.

WARNING —

Hot ATF can scald. Wear eye protection and protective clothing and gloves during the check. If the transmission was overfilled, hot ATF will spill from the filler hole when the fill plug is removed.

- Reinstall fill plug using new sealing ring.

Tightening torques

- ATF drain plug to ATF sump
A5S 360R / A5S 390R(M14). 20 Nm (15 ft-lb)
A5S 325Z 35 Nm (26 ft-lb)
- ATF fill plug to transmission
A5S 360R / A5S 390R(M14). 20 Nm (15 ft-lb)
A5S 325Z 30 Nm (22 ft-lb)

ATF, draining and filling

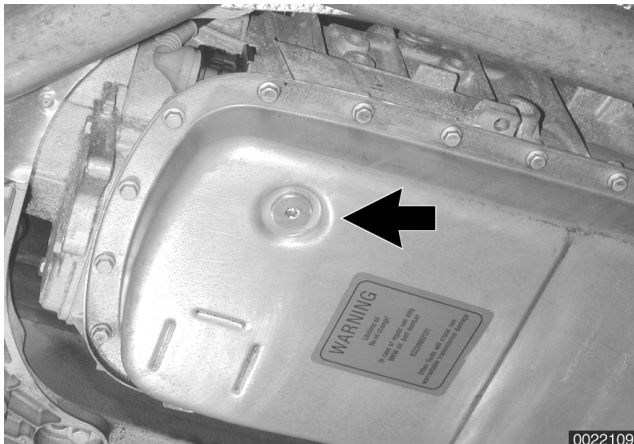
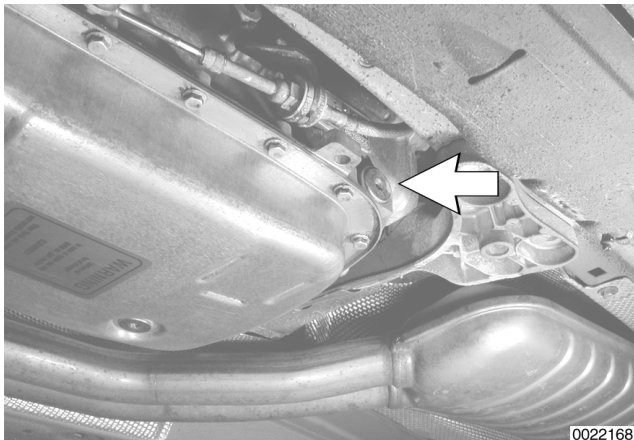
The procedure given here includes removal and installation of the ATF fluid strainer (filter).

- ◀ Remove ATF drain plug (**arrow**) and drain fluid into clean measuring container. Record quantity of fluid drained.

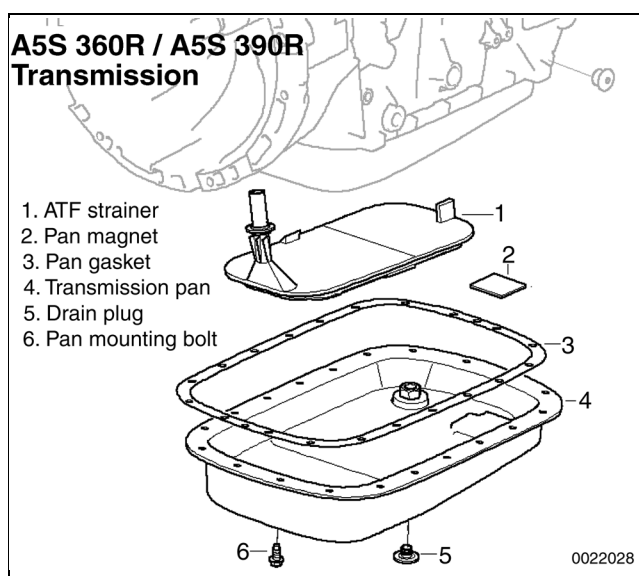
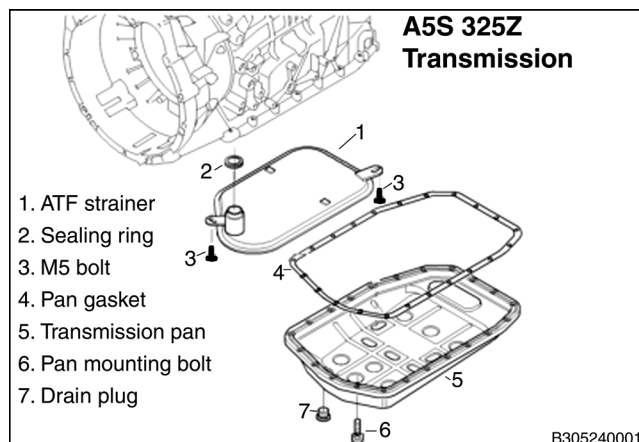
WARNING —

The ATF must not be hot when draining. Do not drain the ATF if the engine and/or transmission is hot. Hot ATF can scald. Wear eye protection, protective clothing and gloves.

- Remove transmission pan mounting bolts and remove pan.
- Remove pan gasket and clean gasket sealing surface.



240-4 AUTOMATIC TRANSMISSION



— **ZF transmission (A5S 325Z):** Remove ATF fluid strainer mounting bolts and remove strainer from transmission valve body.

— **GM transmissions (A5S 360R / A5S 390R):** Pull ATF fluid strainer from transmission pump housing. If strainer sealing ring remains in pump housing remove using a seal puller.

— Installation is reverse of removal.

- Always replace seal for drain plug and all gasket(s) and O-rings.
- Clean sump and sump magnet(s) using a lint-free cloth.
- Tighten transmission pan bolts in sequential order.
- Fill transmission with approved fluid. Add quantity of fluid drained and then check fluid level as described under **ATF level, checking**

CAUTION —

Only re-fill or top off using ATF fluid specified for the transmission. Mixing or swapping ATF fluids will lead to transmission damage.

NOTE —

Use new sump bolts purchased from BMW. Alternatively, clean old bolts and coat with Loctite® thread locking compound or equivalent.

Automatic transmission fluid capacity

- A5S 360R / A5S 390R
 - with torque converter 9 liters (9.5 qt)
 - without torque converter 4 liters (4.2 qt)
- A5S 325Z (2.5 liter)
 - with torque converter 8.9 liters (9.4 qt)
 - without torque converter 6.2 liters (6.5 qt)
- A5S 325Z (3.0 liter)
 - with torque converter 8.7 liter (9.2 qt)
 - without torque converter 6.1 liter (6.4 qt)

Tightening torques

- ATF drain plug to ATF sump
 - A5S 360R / A5S 390R (M14) 18 Nm (14 ft-lb)
 - A5S 325Z 35 Nm (26 ft-lb)
- ATF fill plug to ATF sump
 - A5S 360R / A5S 390R (M14) 18 Nm (14 ft-lb)
 - A5S 325Z 30 Nm (23 ft-lb)
- ATF sump to transmission
 - A5S 360R / A5S 390R (M14) 10 Nm (7 ft-lb)
 - A5S 325Z 6 Nm (4 ft-lb)