

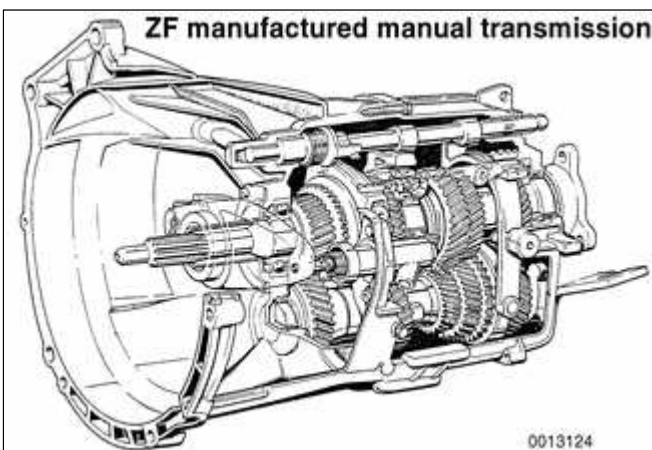
General

This section covers the repairs related to the clutch, manual and automatic transmissions, shift linkages, driveshafts, and transfer case (all wheel drive vehicles only). For repairs related to drive axles and front and rear final drive differentials, see ⇒ [311 Front Axle Final Drive](#) and ⇒ [331 Rear Axle Final Drive](#).

Drivetrain

E46 models are equipped with a longitudinal drivetrain. The transmission is bolted directly to the rear of the engine. In rear wheel drive models, a driveshaft connects the output shaft of the transmission to the rear final drive. On all wheel drive models, a transfer case is mounted to the rear of the transmission, with drive shafts leading to front and rear final drive assemblies. Individual drive axles with integrated constant velocity joints transfer rotational power from the final drive units to the drive wheels.

Manual transmission



Due to different power characteristics and performance requirements, three different manual transmissions are used in models covered by this manual. Manual transmission applications are given in ⇒ [Table a. Manual transmission applications](#).

Note:

For transmission gear ratio information and repair information, see ⇒ [230 Manual Transmission](#).

The manual transmissions use a single clutch disc with dual-mass flywheel. For further information, see ⇒ [210 Clutch](#).

Manual transmissions have a metal ID plate mounted on the side of the transmission. Do not rely on numbers cast on the transmission case for identification.

Table a. Manual transmission applications

Model	Year	Engine	Transmission
323i/Ci 325i/Ci	1999 - 2000 2000 - 2001	M52 TU M54	Getrag S5D 250G
328i/Ci 330i/Ci	1999 - 2000 2000 - 2001	M52 TU M54	ZF S5D 320Z
325xi330xi	2000 -2001	M54	ZF S5D 280Z

Automatic transmission

Two different automatic transmissions are used, depending on model and model year and/or production date. All of the automatic transmissions are electrohydraulically controlled with five forward speeds. Automatic transmission applications are given in ⇒ [Table b. Automatic transmission applications](#).

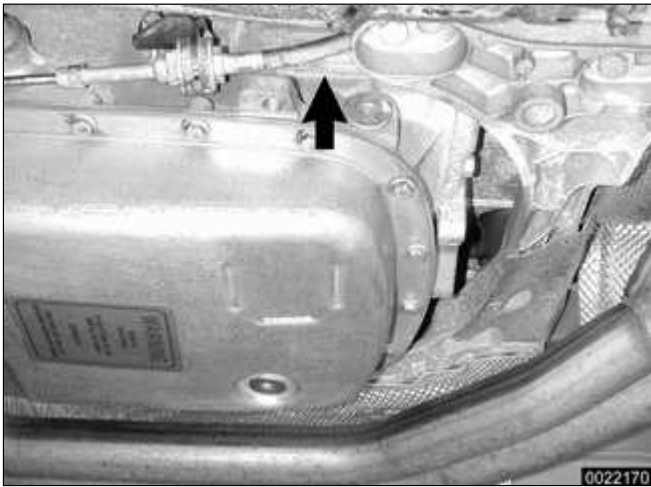
For automatic transmission repair information, see ⇒ [240 Automatic Transmission](#).

Transmission Identification codes for automatic transmissions are located on metal ID tags mounted to the body of the transmission.

Note:

323 i/Ci and 328 i/Ci models

manufactured from 08/98 to 03/00 are equipped with the A5S 360R automatic transmission. Vehicles produced after 03/00 use the A5S 325Z transmission.



- ◀ GM manufactured transmissions have the ID tag located on the left hand side of the transmission housing, behind the transmission selector cable, just above the transmission pan (**arrow**).



- ◀ ZF manufactured transmissions have the ID tags mounted on the left side of the rear of the transmissions, just above the automatic transmission pan (**arrow**).

Table b. Automatic transmission applications

Model	Year	Engine	Transmission
323i/Ci 328i/Ci	1999 - 2000 2000 - 2001	M52TU	GM A5S 360R ZF A5S 325 Z
325i/Ci 330i/Ci	2000 - 2001	M54	ZF A5S 325 Z
325xi 330xi	2000 - 2001	M54	GM A5S 390R

Transmission lubricants