

**Haynes**
shows you how**BMW 3-Series 320i & 320xi (12-14), 325i, 325xi, 330i & 330xi (06) & 328i & 328xi (07-14) Haynes Online Manual**

1 General information

Power is transmitted from the transmission to the rear axle by a two-piece driveshaft, joined behind the center bearing by a slip joint. The slip joint is a sliding, splined coupling that allows slight fore-and-aft movement of the driveshaft. The forward end of the driveshaft is attached to the output flange of the transmission by a flexible rubber coupling. On some models, a vibration damper is mounted between the front of the driveshaft and coupling. The middle of the rear driveshaft is supported by the center bearing, which is bolted to the vehicle body. Universal joints are located at the center bearing and at the rear end of the driveshaft, to compensate for movement of the transmission and differential on their mountings and for any flexing of the chassis.

The rear differential assembly includes the drive pinion, the ring gear, the differential housing and the output flanges. The drive pinion, which drives the ring gear, is also known as the differential input shaft and is connected to the driveshaft via an input flange. The differential is bolted to the ring gear and drives the rear wheels through a pair of driveaxles. E-series chassis models use a pair of output shaft flanges bolted to the driveaxles and F-series chassis models, the driveaxles inner joints are splined directly to the ring gear. Both Series use driveaxles with constant velocity (CV) joints at either end. The differential allows the wheels to turn at different speeds when cornering.

The driveaxles deliver power from the final drive unit output flanges to the rear wheels. The driveshafts are equipped with constant velocity (CV) joints at each end. The inner CV joints are bolted to the differential flanges, and the outer CV joints engage the splines of the wheel hubs, and are secured by a large nut.

Models with x-Drive (AWD) are equipped with a transfer case (see [Chapter 7C](#)) mounted to the rear of the transmission that splits power to the front and rear differentials, full-time. The front differential is mounted to the suspension subframe and delivers power to the front wheels via independent driveaxles.

Major repair work on the differential assembly components (drive pinion, ring-and-pinion and differential) requires many special tools and a high degree of expertise, and therefore should not be attempted by the home mechanic. If major repairs become necessary, we recommend that they be performed by a dealer service department or other qualified shop.