

BMW 3-Series (92-98) & Z3 (96-98) Haynes Online Manual

13 Driveshaft - removal and installation

Removal

- 1 Chock the front wheels. Jack up the rear of the vehicle and support it on axle stands.
- 2 Remove the exhaust system and heatshield (see <u>Chapter 4</u>). Where necessary, unbolt the exhaust system mounting bracket(s) in order to gain the necessary <u>clearance</u> required to remove the <u>driveshaft</u>.
- 3 On models where the front of the <u>driveshaft</u> is bolted straight onto the transmission output flange, make alignment marks between the shaft and transmission then loosen and remove the retaining nuts. Discard the nuts, new ones should be used on installation.
- 4 On models where a rubber coupling is installed between the front end of the <u>driveshaft</u> and transmission output flange, make alignment marks between the shaft, transmission and (where necessary) vibration damper. Loosen and remove the nuts and bolts securing the coupling to the transmission (see illustration). Discard the nuts, new ones should be used on installation.

13.4 On models with a rubber coupling, remove the bolts securing the coupling to the transmission flange



5 Using a large open-ended wrench, loosen the threaded sleeve nut, which is situated near the support bearing, through a couple of turns (see illustration).

13.5 Unscrew the large threaded sleeve nut by a couple of turns



6 Using paint or a suitable marker pen, make alignment marks between the <u>driveshaft</u> and differential flange. Unscrew the nuts securing the driveshaft to the differential and discard them; new ones must be used on installation.

7 With the aid of an assistant, support the <u>driveshaft</u> then unscrew the center support bearing bracket retaining nuts (see illustration). Slide the two halves of the shaft towards each other then lower the center of the shaft and disengage it from the transmission and differential. Remove the shaft from underneath the vehicle. **Note:**Do not separate the two halves of the shaft without first making alignment marks. If the shafts are incorrectly joined, the <u>driveshaft</u> assembly may become unbalanced, leading to noise and vibration during operation.

13.7 Unscrew the center bearing bracket retaining nuts and remove the driveshaft from underneath the vehicle



8 Inspect the rubber coupling (if equipped), the support bearing and shaft universal joints (see Sections 7, 8 and 9). Inspect the transmission flange locating pin and <u>driveshaft</u> <u>bushing</u> for signs of wear or damage and replace as necessary.

Installation

Note:

New driveshaft front and rear coupling nuts will be required on installation.

- 9 Apply a smear of molybdenum disulfide grease (the manufacturer recommends Molykote Longterm 2) to the transmission pin and shaft <u>bushing</u> and maneuver the shaft into position.
- 10 Align the marks made prior to removal and engage the shaft with the transmission and differential flanges. With the marks correctly aligned, install the support bracket retaining nuts, tightening them lightly only at this stage.
- 11 Install new retaining nuts to the rear coupling of the driveshaft and tighten them to the specified torque.
- 12 On models where the <u>driveshaft</u> is bolted straight onto the transmission flange, install the new retaining nuts and tighten them to the specified torque.
- 13 On models with a rubber coupling, insert the bolts and install the new retaining nuts. Tighten them to the specified torque, noting that the nut/bolt should only be rotated on the flange side to avoid stressing the rubber coupling.
- 14 Tighten the <u>driveshaft</u> threaded sleeve to the specified torque.
- 15 Loosen the center bearing bracket nuts. Slide the bracket forwards to remove all <u>freeplay</u>, then <u>preload</u> the bearing by moving the bracket forwards a further 5/32 to 1/4-inch. Hold the bracket in this position and tighten its retaining nuts to the specified torque.
- 16 Install the exhaust system and associated components (see Chapter 4).

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