11 Driveshafts(s) - removal, inspection and installation

Rear driveshaft (all models)

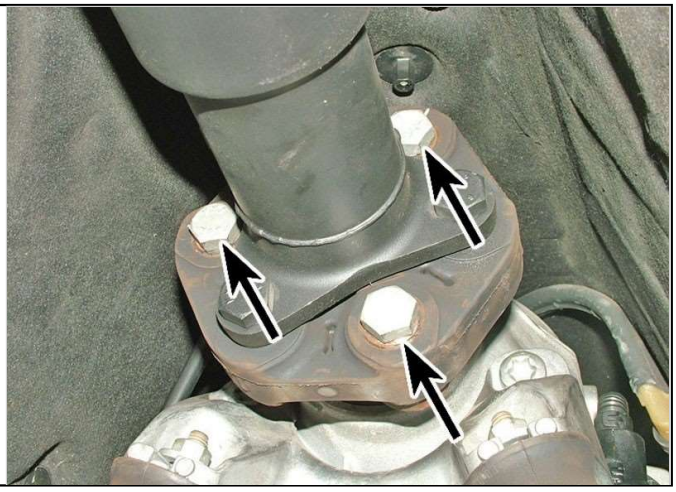
Removal

1 Block the front wheels. Raise the rear of the vehicle and support it securely on jackstands.

2 Remove the exhaust system and heat shield (see Chapter 4). Where necessary, unbolt the exhaust system mounting bracket(s) in order to gain the necessary clearance required to remove the driveshaft.

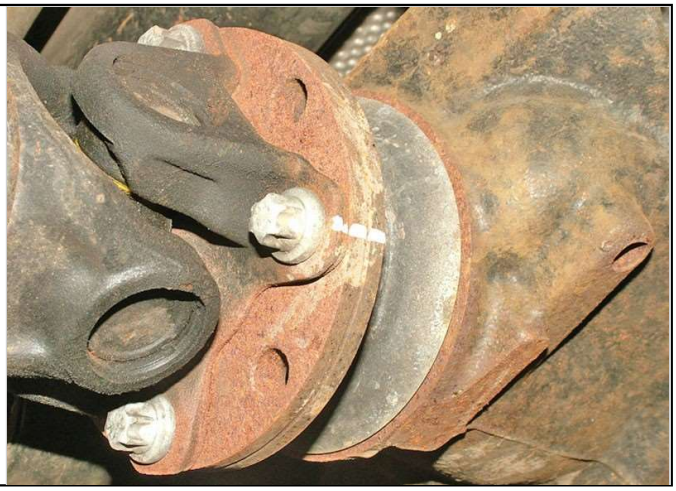
3 Make alignment marks between the shaft, transmission flange and rubber coupling (if equipped). Loosen and remove the nuts and bolts securing the coupling to the transmission **(see illustration)** . Discard the bolts and nuts; new ones should be used on installation.

11.3 Remove the driveshaft flange-to-transmission bolts/nuts



4 Using paint or a suitable marker pen, make alignment marks between the driveshaft and differential flange. Unscrew the bolts securing the driveshaft to the rear differential and discard them; new fasteners must be used on installation **(see illustrations)** .

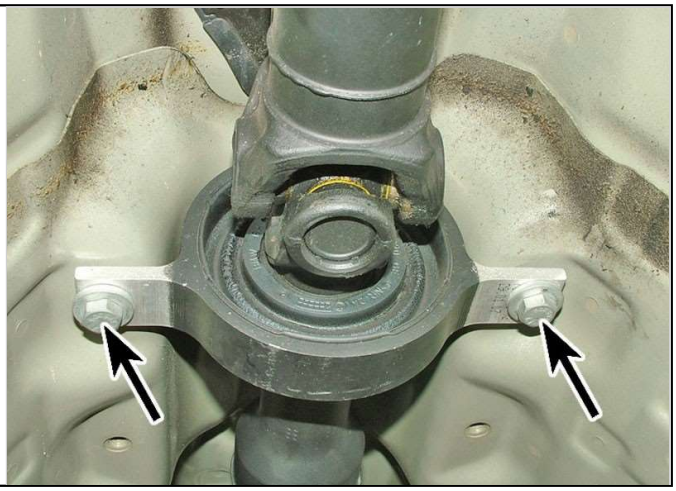
11.4a Remove the bolts securing the driveshaft to the differential pinion flange



11.4b On some models, a rubber coupling is installed between the driveshaft and the differential

5 With the aid of an assistant, support the driveshaft, then unscrew the center support bearing bracket retaining bolts **(see illustration)** . Lower the center of the shaft and disengage it from the transmission (transfer case on x-Drive models) and rear 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 driveshaft assembly may become imbalanced, leading to noise and vibration during operation.*

11.5 The driveshaft center support bearing/bracket is secured by two bolts



Inspection

6 Inspect the rubber coupling (if equipped), the support bearing shaft and universal joints. Inspect the transmission flange locating pin and driveshaft bushing for signs of wear or damage and replace as necessary.

7 Wear in the support bearing will lead to noise and vibration when the vehicle is driven. The bearing is best checked with the driveshaft removed. To gain access to the bearing with the shaft in position, remove the exhaust system and heat shields (see Chapter 4).

8 Rotate the bearing and check that it turns smoothly with no sign of freeplay; if it's difficult to turn, or if it has a gritty feeling, replace it. Also inspect the rubber portion. If it's cracked or deteriorated, replace it. If you have any doubts about the condition of the U-joints or center bearing, bring the complete driveshaft to a shop specializing in driveline repair for evaluation, repair or balancing.

Installation

9 Apply a small amount of moly-based lubricant grease to the transmission pin and shaft bushing and maneuver the shaft into position **(see illustration)** .

11.9 Apply moly-based lubricant grease to the driveshaft centering pin on the transmission

10 Align the marks made prior to removal and engage the shaft bushing with the transmission and rear differential unit flanges. With the marks correctly aligned, install the bearing support bracket retaining bolts, tightening them only slightly at this stage.

11 Install new retaining bolts to the rear coupling of the driveshaft and tighten them to the specified torque.

12 Insert the new 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.

13 Tighten the support bracket bolts to the specified torque.

14 Install the exhaust system and associated components (see Chapter 4).

Front (AWD models only)

15 Block the rear wheels. Raise the front of the vehicle and support it securely on jackstands.

16 Remove the fasteners and the engine splash shield.

17 Remove the bolts and the front subframe reinforcement panel, if equipped.

18 Make match-marks on the front differential flange and the front of the driveshaft, as well as the rear of the driveshaft and the flange at the transfer case.

19 Remove the bolts securing the driveshaft front yoke to the differential flange.

20 Remove the bolts securing the driveshaft rear flange to the transfer case, and remove the driveshaft from the vehicle.

21 Installation is the reverse of removal, except that any ZNS bolts (zinc-plated aluminum) must be replaced.