11 Driveaxle boots - replacement

1 Remove the driveaxle (see Section 10).

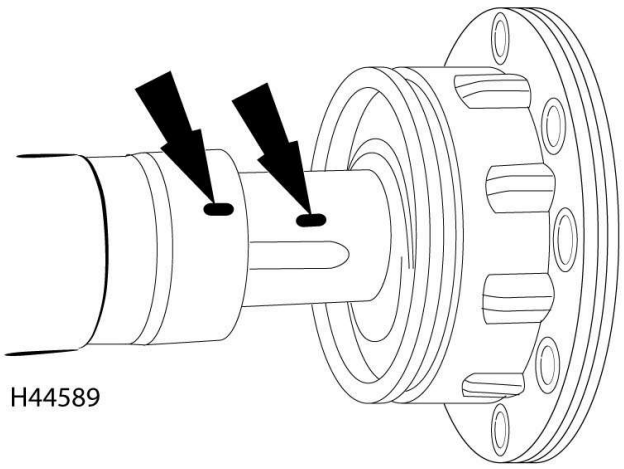
2 Clean the driveaxle and carefully mount it in a vise.

Telescopic driveaxles

3 Some models are equipped with a driveaxle where the inner CV joint is mounted on a short shaft which slides into the main driveaxle body. Release the two inner joint boot retaining clips and slide the boot away from the joint.

4 Make alignment marks between the CV joint shaft and the driveaxle tube, then slide the CV joint and shaft from the driveaxle **(see illustration).**

11.4 Make alignment marks, then slide the joint from the tube



5 Release the two outer joint boot retaining clips and slide both boots from the inner end of the shaft.

Other driveaxles

6 Release the two inner joint boot retaining clips and free the boot and dust cover from the joint **(see illustration).**

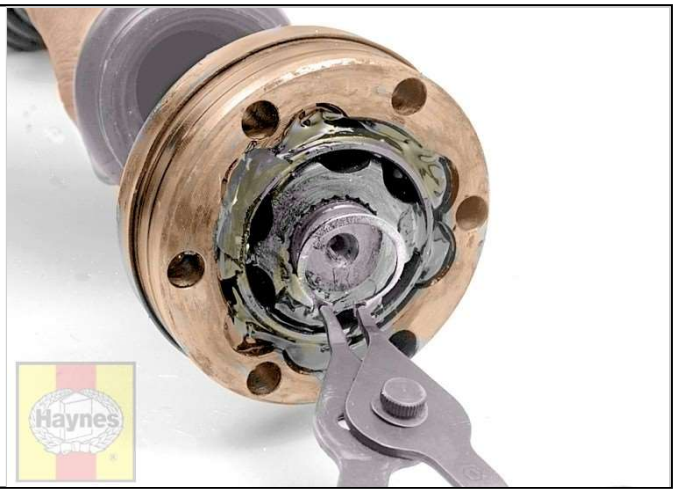
11.6 Release the boot retaining clips and slide the boot down the shaft

7 Lever off the sealing cover from the end of the inner constant velocity (CV) joint **(see illustration).**

11.7 Carefully remove the sealing cover from the inner end of the joint

8 Scoop out excess grease and remove the inner joint circlip from the end of the driveaxle **(see illustration).**

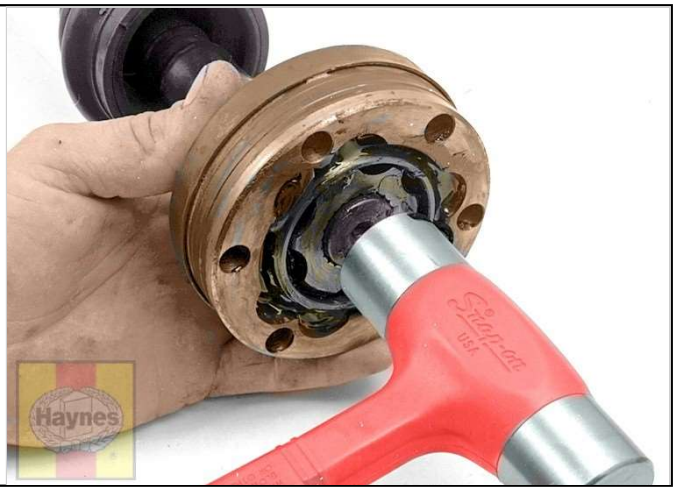
11.8 Remove the inner joint circlip from the driveshaft



9 Securely support the joint inner member and tap the driveaxle out of position using a hammer and suitable drift **(see illustration).** If the joint is a tight fit, a suitable puller will be required to draw off the joint. Do not

dismantle the inner joint.

11.9 Support the inner joint inner member then tap the driveshaft out of position . . .



10 With the joint removed, slide the inner boot and dust cover off from the end of the driveaxle **(see illustration).**

11.10 . . . and slide off the boot

11 Release the outer joint boot retaining clips then slide the boot along the shaft and remove it.

All driveaxles

12 Thoroughly clean the constant velocity joints using a suitable solvent and dry it thoroughly. Carry out a visual inspection as follows.

13 Move the inner splined driving member from side-to-side to expose each ball in turn at the top of its track. Examine the balls for cracks, flat spots or signs of surface pitting.

14 Inspect the ball tracks on the inner and outer members. If the tracks have widened, the balls will no longer be a tight fit. At the same time check the ball cage windows for wear or cracking between the windows.

15 If on inspection any of the constant velocity joint components are found to be worn or damaged, it must be replaced. The inner joint is available separately but if the outer joint is worn it will be necessary to replace the complete joint and driveaxle assembly. If the joints are in satisfactory condition, obtain new boot repair kits which contain boots, retaining clips, an inner constant velocity joint circlip and the correct type and quantity of grease required.

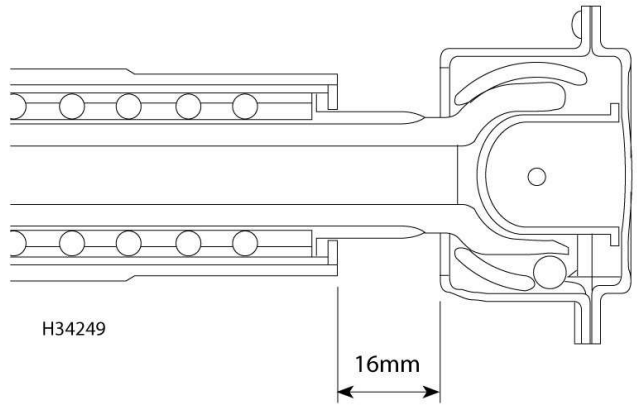
Telescopic driveaxles

16 Slide the new boots over the inner end of the driveaxle. Note that the outer boot has a length of 55 mm, and the inner boot is 65 mm long.

17 Repack both CV joints using the grease supplied in the boot kits.

18 Apply grease to the splines of the inner CV joint shaft. Align the previously made marks, and insert the CV joint shaft into the end of the driveshaft as far as it will go, then pull it back out so that the edge of the joint is the correct distance from the end of the driveaxle **(see illustration).**

11.18 After greasing the shaft, push it in as far as it will go, then pull it out so that the gap is 16 mm (approx.)



19 Ease the boots over the joints and ensure the boot lips are correctly located on the driveshaft and CV joints. Lift the outer sealing lips of the boots to equalize air pressure within the boots.

20 Position the inner joint boot clips so that the fasteners are in line with the rivet on the flange. Secure the retaining clips in position.

21 Position the outer joint boot clips so that the fasteners are on the other side of the shaft from the inner clips fasteners, i.e. 180° offset.

Other driveaxles

22 Tape over the splines on the end of the driveaxle.

23 Slide the new outer boot onto the end of the driveaxle.

24 Pack the outer joint with the grease supplied in the boot kit. Work the grease well into the bearing tracks while twisting the joint, and fill the rubber boot with any excess.

25 Ease the boot over the joint and ensure that the boot lips are correctly located on both the driveaxle and constant velocity joint. Lift the outer sealing lip of the boot to equalize air pressure within the boot.

26 Install the large metal retaining clip to the boot. Pull the retaining clip tight then bend it back to secure it in position and cut off any excess clip. Secure the small retaining clip using the same procedure.

27 Engage the new inner boot with its dust cover and slide the assembly onto the driveaxle.

28 Remove the tape from the driveaxle splines and install the inner constant velocity joint. Press the joint fully onto the shaft and secure it in position with a new circlip.

29 Work the grease supplied fully into the inner joint and fill the boot with any excess **(see illustrations).**

11.29a Fill the inner joint with the grease supplied . . .

11.29b . . . and work it into the bearing tracks

30 Slide the inner boot into position and press the dust cover onto the joint, making sure the retaining bolt holes are correctly aligned. Lift the outer sealing lip of the boot, to equalize air pressure within the boot, and secure it in position with the retaining clips (see paragraph 26).

31 Apply a small amount of suitable sealant (BMW recommends BMW sealing gel) and press the new sealing cover fully onto the end of the inner joint.

All driveaxles

32 Check that both constant velocity joints are free to move easily then install the driveaxle as described in Section 10 .