

C. Removal and Installation of Right Axle Tube

Removal:

36. Remove the right rear axle shaft (see Paras. 1 — 6).

Note: The right axle tube can only be removed or installed with the rear axle removed from the vehicle.

If the right axle tube is only being removed in order to replace the rubber cuff, the rear axle shaft does not need to be removed.

The left axle tube is at the same time the cover for the rear axle housing. Consequently, the outer race of the left taper roller bearing for the differential housing, together with threaded ring for adjustment of the bearing, is fitted at the inner side of the axle tube. Removal of the left axle tube is described in Section "D. Disassembly and Reassembly of Rear Axle Housing".

37. Remove the hexagon nut (16) from the splined bolt (14) (see Fig. 35 — 4/12) and tap out the splined bolt (Fig. 35 — 4/11).

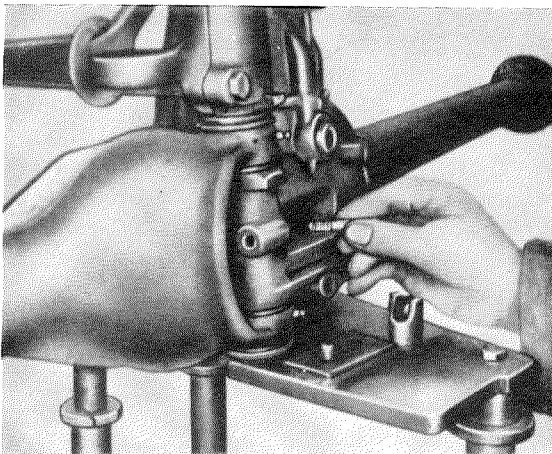


Fig. 35 — 4/11

38. After removing the hose strap and the hose clamp, release the rubber cuff at the rear axle housing and pull it off the rear axle housing.
39. After bending up the locking plate (2), remove the hexagon screw (1) of the connect-

ing pin (7). Now screw Assembly Arbor 180 589 08 39 into the connecting pin and drive out the connecting pin toward the rear. Then remove the connecting pin from the assembly arbor. Pull the assembly arbor out toward the front again, at the same time removing the support (6), paying attention to the washer 10a, the backing washer 8a and the rubber ring 9a (Fig. 35 — 4/12).

Take the right axle tube off the rear axle housing, paying attention to compensating washers 13a and 13b and rubber rings 9b and 9c.

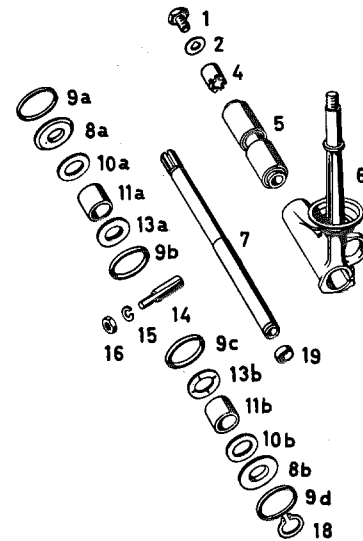


Fig. 35 — 4/12

- | | |
|-----------------------------|-------------------------------|
| 1 Hexagon screw | 10a, 10b Washers |
| 2 Locking plate | 11a, 11b Sleeves |
| 4 Spacer sleeve | 13a, 13b Compensating washers |
| 5 Buffer block | 14 Splined bolt |
| 6 Support | 15 Lock washer |
| 7 Connecting pin | 16 Hexagon nut |
| 8a, 8b Backing washers | 18 Circlip |
| 9a, 9b, 9c, 9d Rubber rings | 19 End plug |

40. Press the seal (2) out of the axle tube (1) with a screwdriver (Fig. 35 — 4/13).
41. After slackening the hose clamp, take off the rubber cuff.
42. Check and, if necessary, repair the axle tube, the connecting pin, and the support for the rear axle (see Job No. 35 — 5).

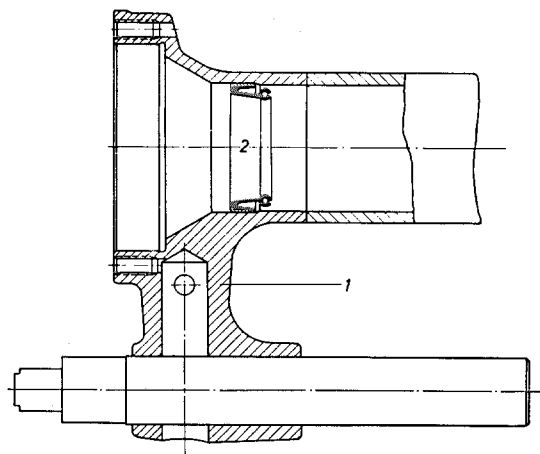


Fig. 35 — 4/13

1 Axle tube
2 Seal

Installation:

43. Press or drive a new seal into the axle tube as far as the shoulder, using Installing Arbor (Fig. 35 — 4/14 and Fig. 4/14 a).
44. Push the rubber cuff onto the axle tube. The large bead of the eccentric cuff must be at the top (see Fig. 35 — 4/15).
45. Push the two rubber rings (9 b) and (9 c) onto the eyes of the axle tube (Fig. 35 — 4/14 and Fig. 35 — 4/14 a).
46. Fit the axle tube onto the rear axle housing. To do this, hold the axle tube against the rear axle housing and immobilize it with Assembly Arbor 180 589 08 39. When the assembly arbor is pushed in, the compensating washers (13 a) and (13 b) between the yoke of the axle tube and the rear axle housing must be inserted at the same time (Fig. 35 — 4/14 a).

Caution: Do not use ordinary steel washers but only the specified compensating washers made of special bronze ("Kuprodur") with

lubricating grooves. The lubricating grooves of the two compensating washers must point toward the axle tube eyes.

47. Measure the end play between the axle tube and the rear axle housing.

The play must not exceed 0.1 mm.

For adjusting the play, compensating washers 13 a and 13 b are available in a range of 1.9—2.5 mm, in steps of 0.1 mm. If possible, compensating washers of the same thickness should be used on both sides (Fig. 35 — 4/14 a).

The play must be strictly maintained. If there is not enough play there is a tendency for the compensating washers to bind and / or to score.

The axle tubes must be easy to move. If, for instance, as a result of scoring or binding compensating washers, they are difficult to move, rumbling noises may be caused in the rear axle.

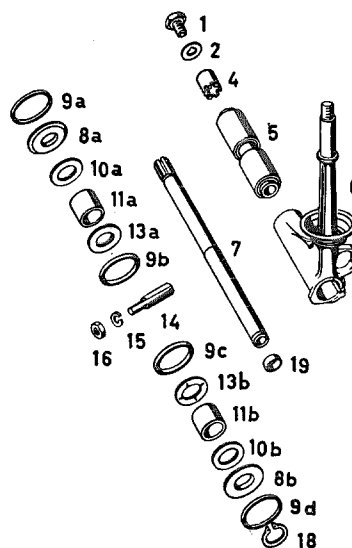


Fig. 35 — 4/14

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|-----------------------------|-------------------------------|
| 1 Hexagon screw | 10a, 10b Washers |
| 2 Locking plate | 11a, 11b Sleeves |
| 4 Spacer sleeve | 13a, 13b Compensating washers |
| 5 Buffer block | 14 Splined bolt |
| 6 Support | 15 Lock washer |
| 7 Connecting pin | 16 Hexagon nut |
| 8a, 8b Backing washers | 18 Circlip |
| 9a, 9b, 9c, 9d Rubber rings | 19 End plug |

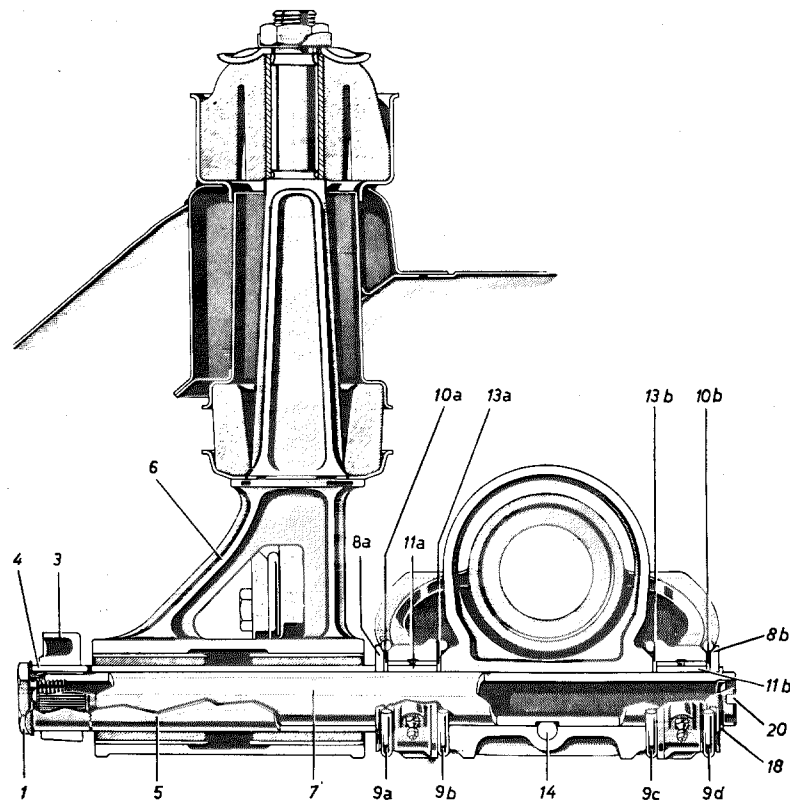


Fig. 35—4/14 a

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|-----------------|-----------------------------|-------------------------------|
| 1 Hexagon screw | 7 Connecting pin | 11a, 11b Sleeves |
| 3 Cover | 8a, 8b Backing washers | 13a, 13b Compensating washers |
| 4 Spacer sleeve | 9a, 9b, 9c, 9d Rubber rings | 14 Splined bolt |
| 5 Buffer block | 10a, 10b Washers | 18 Circlip |
| 6 Support | | 20 Groove |

48. Press or drive the sleeve (11 b) onto the connecting pin (7). Push the washer (10 b) and the backing washer (8 b) onto the connecting pin in such a way that the beveled face points away from the circlip groove.

Then put in the circlip (18) (see Fig. 35—4/14).

49. Grease the connecting pin and push it through from the rear in such a way that the face for the splined bolt points downward.

Press out the assembly bolt with the connecting pin and push in the two rubber rings 9 b and 9 c over the shoulder of the axle tube eyes.

50. Push the sleeve, the washer (1), the rubber ring (2) and the backing washer (3) onto the connecting pin (see Fig. 35—4/15).

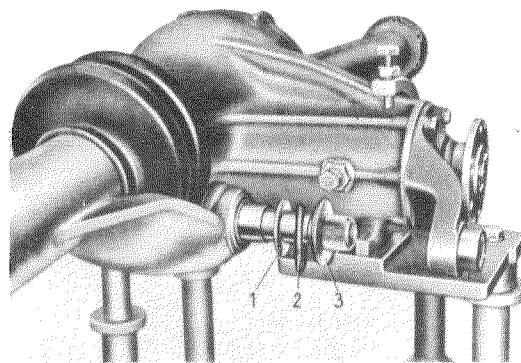


Fig. 35—4/15

- | | | |
|------------------|-------|--------------------|
| 1 Washer | (10a) | } in Fig. 35—4/14a |
| 2 Rubber ring | (9a) | |
| 3 Backing washer | (8a) | |

Caution: The beveled face of the backing washer (3) must point toward the rear in the direction of the axle tube.

51. Push the rubber cuff onto the rear axle housing and connect it to the rear axle housing and the axle tube with the hose strap and the hose clamp.
52. Slide the support for the rear axle suspension, together with the fitted — but not yet tightened — buffer block, into position and drive through the connecting pin toward the front.

When the buffer block is being **installed** in the support, care must be taken to ensure that the end of the sleeve which projects 6 mm, points toward the rear (Fig. 35 — 4/16).

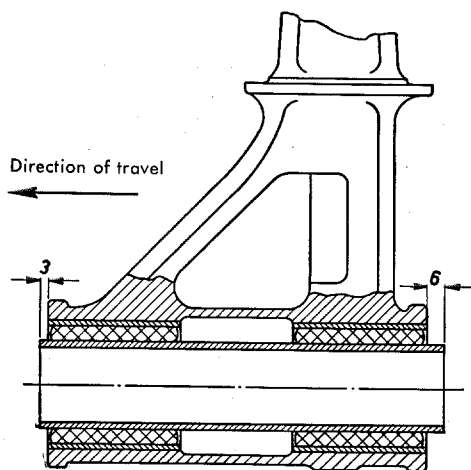


Fig. 35 — 4/16

53. Turn the connecting pin to the point where the groove (20) is exactly horizontal (see Fig. 35 — 4/14 a).

Note: This is necessary in order to allow the splined bolt to be installed properly (Fig. 35 — 4/17).

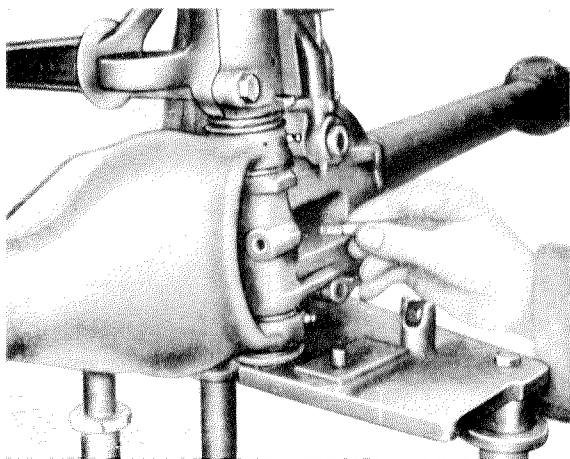


Fig. 35 — 4/17

54. Drive the splined spacer sleeve (4) toward the rear onto the connecting pin and into the cover (3) and put on the locking plate. Screw on the hexagon screw (1) and tighten up with a tightening torque of 10—12 mkg and then slacken it again (see Fig. 35 — 4/14 a).
55. Drive in the splined bolt (14), put on the hexagon nut (16) with lock washer (15) and tighten up (see Fig. 35 — 4/14). Put on the rear rubber ring (9 d) between the backing washer (8 b) and the axle tube eye (see Fig. 35 — 4/14 a).
56. Re-tighten the hexagon screw (1) with a torque of 10—12 mkg. Then lock the hexagon screw by tapping the locking plate over (see Fig. 35 — 4/14 a).
57. Adjust the distance between the face of the joint flange and the front edge of the cup (1) which is welded to the support for the rear axle suspension, using Adjusting and Checking Device 180 589 04 23 (Fig. 35 — 4/19).

Note: The distance between the face of the joint flange and the axis of the support for the rear axle suspension should be 131 ± 1 mm (Fig. 35 — 4/18).

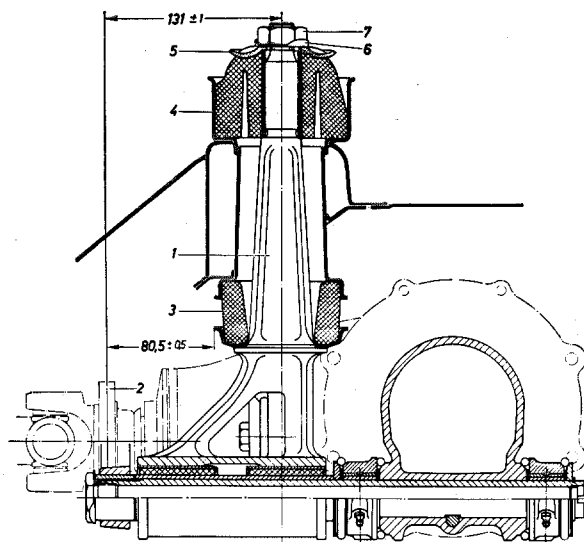


Fig. 35 — 4/18

- | | |
|---------------------|---------------------|
| 1 Support | 5 Tightening washer |
| 2 Joint flange | 6 Locking plate |
| 3 Lower rubber ring | 7 Hexagon nut |
| 4 Upper rubber ring | |

Since this distance is difficult to measure in practice, the adjusting and checking device is held against the joint flange (2) and the front edge of the cup (1) (Fig. 35 — 4/19).

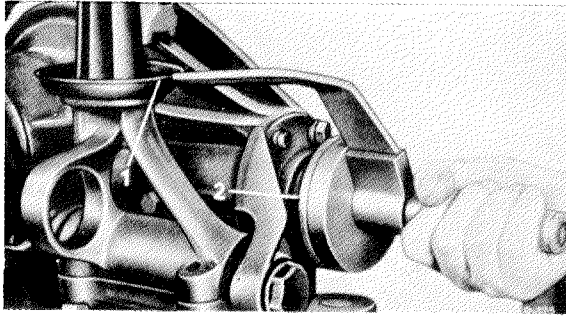


Fig. 35 — 4/19

1 Cup
2 Joint flange

This distance should be 80.5 ± 0.5 mm. The more recent version of the adjusting and checking device has been altered to this dimension. The older versions are 23 mm longer because on the earlier rear axle suspension the cup (1) was not welded on and therefore measurements could be taken

with the adjusting and checking device as far as the mounting of the cup on the support. This dimension is 103.5 ± 0.5 mm. If the older version of the adjusting and checking device is still used, it must be shortened by 23 mm to the measuring dimension of 80.5 mm.

This distance can be corrected by moving the support on the buffer block, after loosening the two clamping screws of the support.

58. Check the angle between the support and the left axle tube. The support for the rear axle suspension must form a right angle with the left axle tube, seen in the direction of travel.

If this is not the case, the support should be turned into the correct position after slackening the two clamping screws (see Fig. 35 — 1/7). When this is done, the support must not be displaced in the axial direction.

Then tighten up the two clamping screws of the support.

59. Install the right rear axle shaft (see Paras. 19 to 27).