

Lubricant for Constant Velocity Joints

Spider joint oil	In each repair set rubber sleeve available
Quantity per joint	250 cm ³

Special Tools

Cutting tool for opening protective sleeve	115 589 08 63 00
Assembly bushing for rubber sleeve	115 589 01 63 00
3 Magnetic ball holders for assembling balls	115 589 05 63 00
Beading tool for closing protective sleeve	115 589 00 63 00
Mounting plate	self-made acc. to Fig. 7

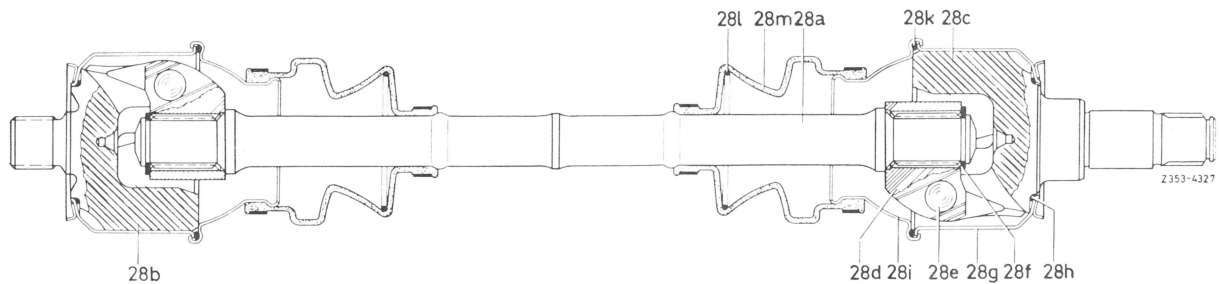


Fig. 1

- | | | | |
|----------------------------|----------------------|----------------------|-------------------|
| 28a Rear axle shaft | 28d Spider joint hub | 28g Protective sieve | 28k Sealing ring |
| 28b Outer universal spider | 28e Ball | 28h Sealing ring | 28l Clamping ring |
| 28c Inner universal spider | 28f Locking ring | 28i Stop sleeve | 28m Rubber sleeve |

General Instruction

The complete rear axle shaft can be individually removed (35.1–220). If the sleeves on both rear axle shafts must be replaced, removal together with rear axle center housing is recommended (35.1–120).

Disassembly

- 1 Cut stop sleeve (18) of constant velocity joint on beaded edge with cutting tool (Fig. 2).
- 2 Pull protective sleeve from universal spider and remove universal spider from spider joint hub together with the six balls.

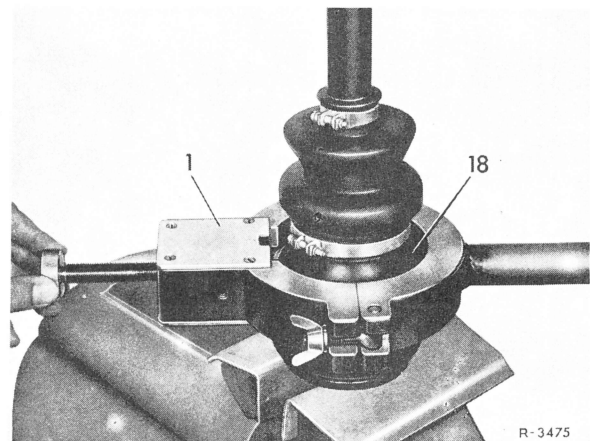


Fig. 2

- | | |
|----------------|----------------|
| 1 Cutting tool | 18 Stop sleeve |
|----------------|----------------|

35.1 Change of Rubber Sleeves on Rear Axle Shaft

3 Remove locking ring from groove in rear axle shaft and press spider joint hub (17) from rear axle shaft (Fig. 3).

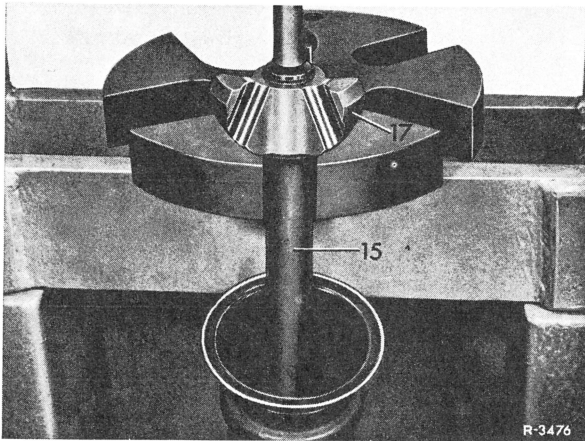


Fig. 3
15 Rear axle shaft 17 Spider joint hub

4 Pull stop sleeve and rubber sleeve from rear axle shaft.

Note: The second rubber sleeve can now also be pulled across disassembled end of rear axle shaft, if required, after loosening the hose clips. Make sure that none of the lubricant is lost and that no dirt enters inside the joint.

5 Carefully clean disassembled joints previously filled with grease.

6 Check ball surfaces of spider joint hub and universal spider, as well as balls, for wear (Fig. 4).

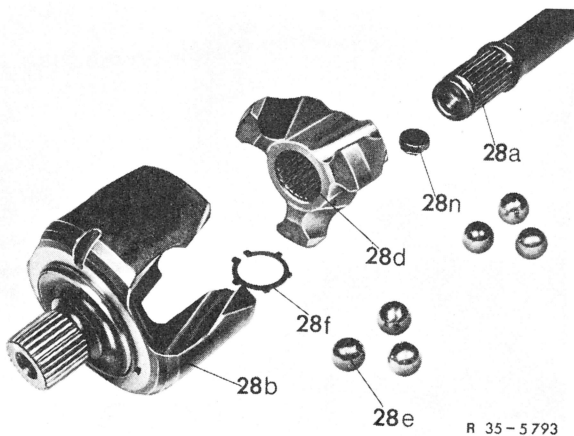


Fig. 4
28a Rear axle shaft 28e Ball
28b Universal spider 28f Locking ring
28d Spider joint hub 28n Stop buffer

Note: A repair set with all the required parts for sleeve change is available (Fig. 5).

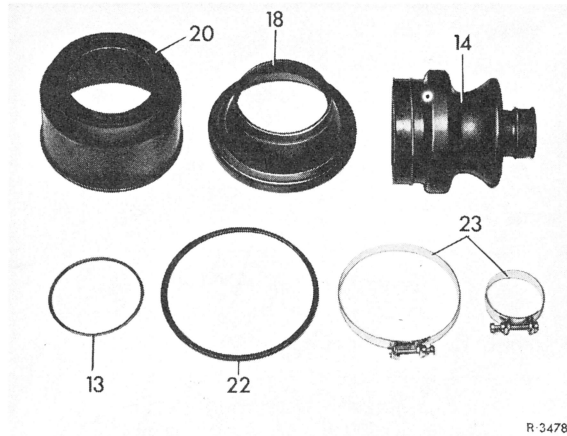


Fig. 5
13 Sealing ring 20 Protective sleeve
14 Rubber sleeve 22 Sealing ring
18 Stop sleeve 23 Hose clips

If a second sleeve is required for the same rear axle shaft, use an additional repair set, comprising one rubber sleeve and two hose clips.

Assembly

7 Slide new rubber sleeve on rear axle shaft up to bead. Place assembly bushing (1) on splining of rear axle shaft to protect sleeve against damage (Fig. 6).

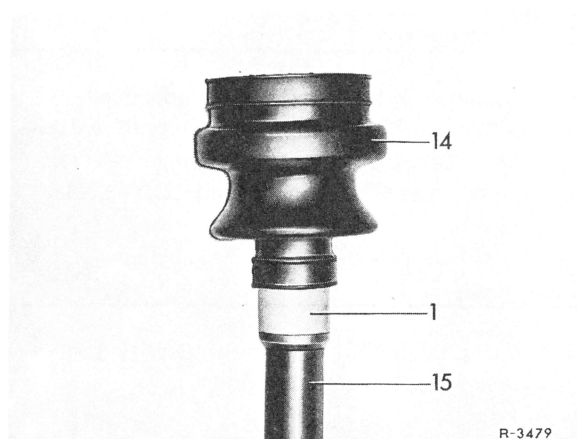


Fig. 6
1 Assembly sleeve
14 Rubber sleeve
15 Rear axle shaft

8 Place new stop sleeve on rear axle shaft. Press spider joint hub (28d) on rear axle shaft (Fig. 7).

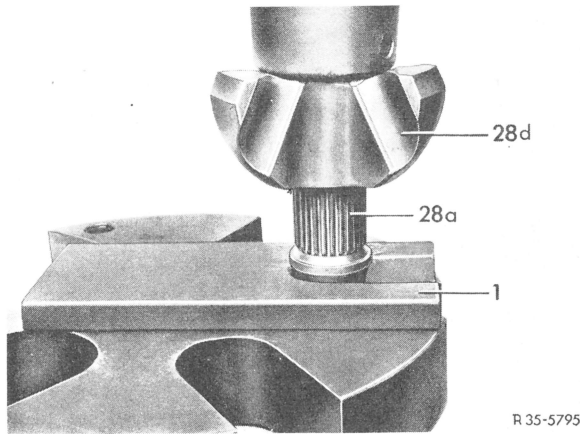


Fig. 7
 1 Receiving plate
 28a Rear axle shaft
 28d Spider joint hub

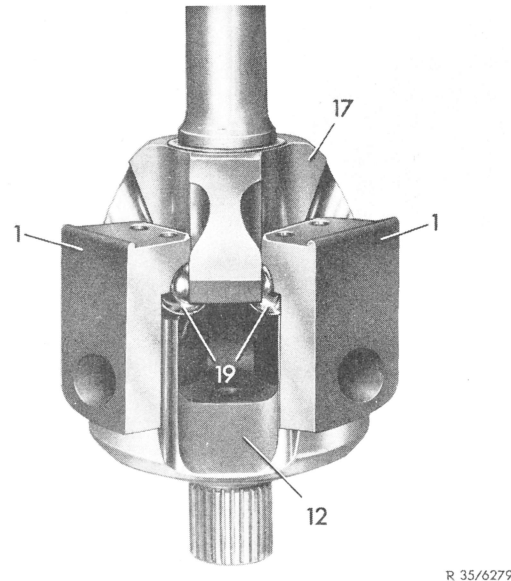


Fig. 9
 1 Magnetic ball holder
 12 Universal spider
 17 Spider joint hub
 19 Ball

11 Place new sealing rings on universal spider (12) and attach new protective sleeve (20) (Fig. 10).

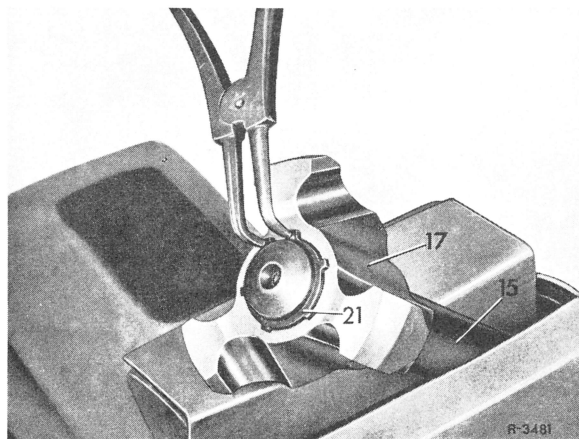


Fig. 8
 15 Rear axle shaft
 17 Spider joint hub
 21 Locking ring

9 Mount locking ring (Fig. 8).

10 Assemble universal spider (12) and the six balls with the assistance of three magnetic ball holders to spider joint hub (17) (Fig. 9).

Note: New balls are assembled with a slight overlap. Balls and universal spider will move easier on used joints. Replace complete rear axle shaft only when torsional play shows up.

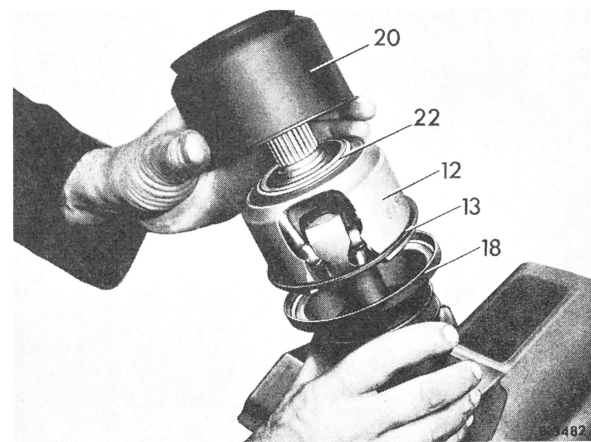


Fig. 10
 12 Universal spider
 13 Sealing ring
 18 Stop sleeve
 20 Protective sleeve
 22 Sealing ring

12 Insert complete rear axle shaft into beading tool and install split supporting ring (2) (Fig. 11).

13 Attach beading ring and bead edge of stop sleeve while uniformly tightening hex. nuts against stop of beading ring of beading fixture (Fig. 12).

35.1 Change of Rubber Sleeves on Rear Axle Shaft

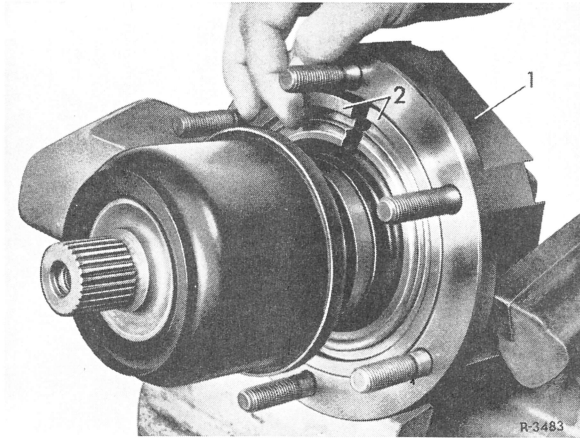


Fig. 11

- 1 Beading tool
- 2 Split supporting ring

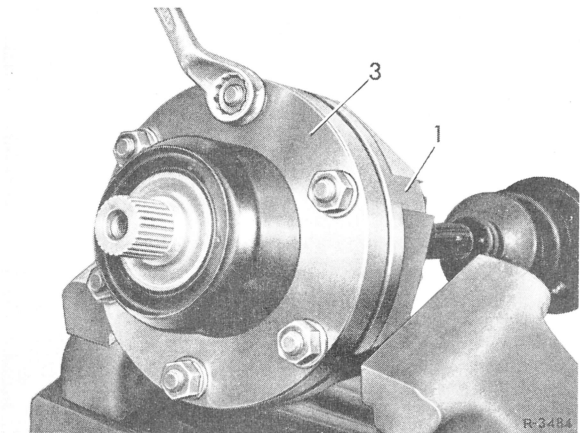


Fig. 12

- 1 Beading tool
- 3 Beading ring

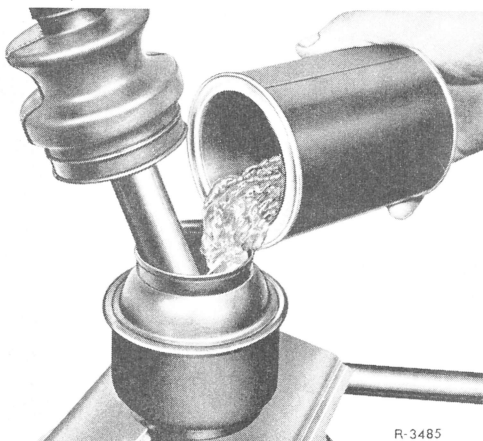


Fig. 13

14 Remove rear axle shaft from beading tool.

15 Fill constant velocity joint with spider joint oil (Fig. 13).

Caution! Use only specified amount of specified lubricant.

16 Attach rubber sleeve on stop sleeve and on rear axle shaft with new hose clips, while sliding sleeve up to bead on rear axle shaft (Fig. 14).

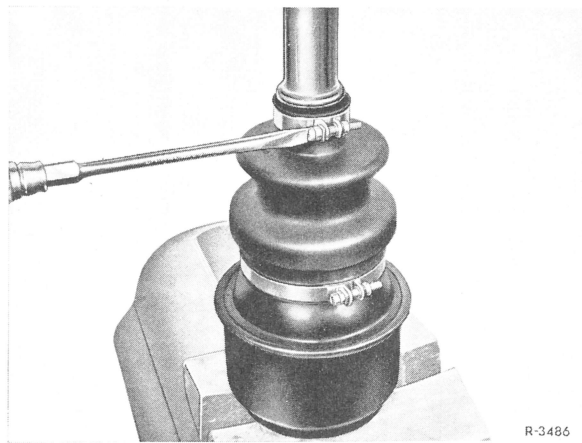


Fig. 14

Note: The bolts of the two hose clips on one sleeve should always face in one direction. The bolts of the two hose clips on the second sleeve of the rear axle shaft should always be located offset by 180°.