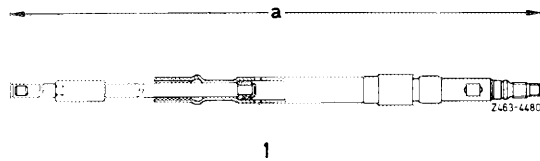


Data

Version	Length "a" of steering shaft (reference dimension)
Manual steering L 1 Z	725
Powersteering LS 75	643
Powersteering LS 90	678



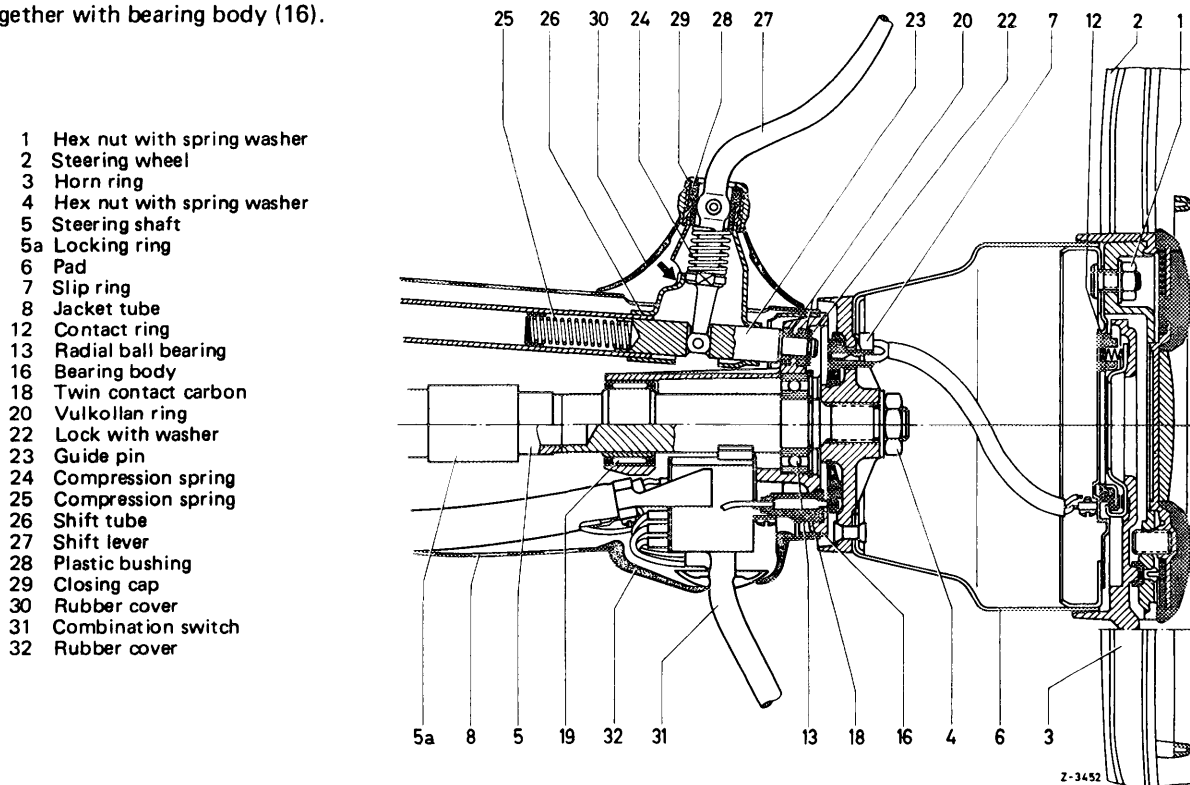
Tightening torque	Nm	(kpm)
Hex socket screw to steering coupling	25	(2.5)

Self-made tool

Assembly pin for steering shaft refer to illustration item 19

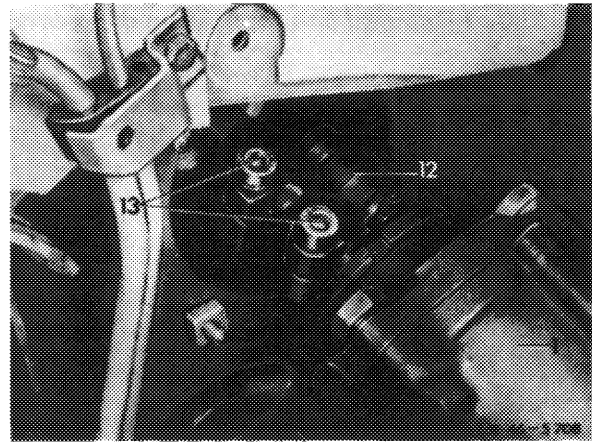
Note

Since the OD of the steering shaft locking ring (5a) is larger than the ID of the needle bearing (19) in bearing body, the steering shaft must be removed together with bearing body (16).



Removal

- 1 Unscrew upper hex socket screw (13) from steering coupling.
- 2 Remove steering wheel (46–610).

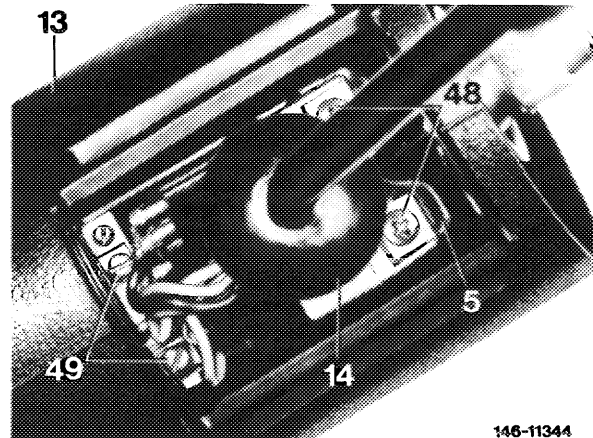


3 Remove rubber cover for combination switch from jacket tube, unscrew fastening screws (48) for switch from bearing body and pull out switch slightly.

4 Disconnect both cables of carbon on combination switch.

5 On vehicles with steering column shift, remove shift lever.

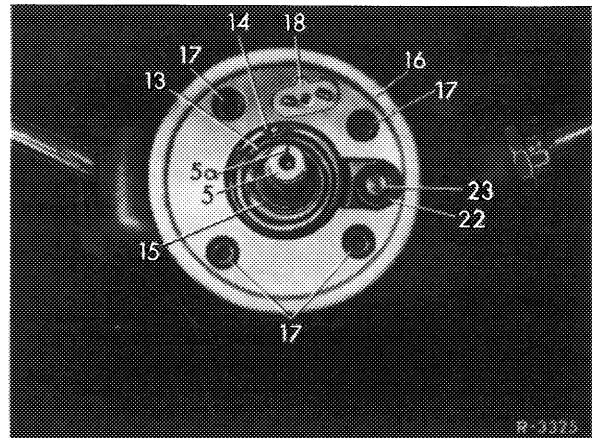
6 Turn guide pin (23) by 180°, remove lock (22) with washer.



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7 Unscrew hex socket screws (17) for fastening bearing body (16) to jacket tube and remove steering shaft (5) together with bearing body from jacket tube in upward direction.

8 Remove locking ring (15) for radial ball bearing (13) from steering shaft (5) and knock steering shaft out of bearing body (16) by means of a plastic hammer in downward direction.



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Checkup

- 9 Check radial ball bearing for wear and replace, if required.
- 10 The steering shaft should permit displacement in axial direction at 600 + 400 Nm (60 + 40 kp) only.

Check length of steering shaft and adjust. For this purpose, mount a used steering coupling to steering shaft and set steering shaft to required dimensions by means of light blows with a plastic hammer.

11 Check needle bearing in bearing body and replace needle bearing, if required.

Installation

12 Grease running surface of plastic sealing ring (5a) in range of rubber sleeve (33) with acid-free grease.

Note: a) Following repairs as a result of an accident, when one of the side members or the front end have been straightened or replaced, or when the jacket has been removed, check alignment between steering shaft and steering worm. For this purpose, install steering and complete jacket tube **without steering coupling**. A vertical and lateral offset of 2 mm between steering shaft and steering worm is permitted. Alignment may be corrected by displacing jacket tube at control arm or cover plate on front end. Attention should be paid to perfect location of steering lock cap in cutout of instrument panel.

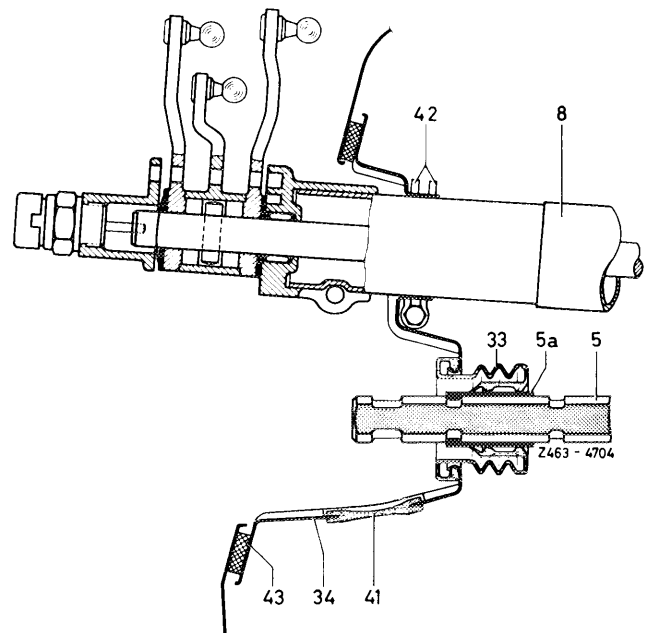
b) **When introduced into steering coupling, steering shaft should not permit axial displacement.** In addition, make sure that the sleeve (33) is not damaged or forced off from jacket tube.

13 Displace plastic sealing ring (5a) axially in relation to the length of steering shaft (5), in such a manner that the cams will engage in notches.

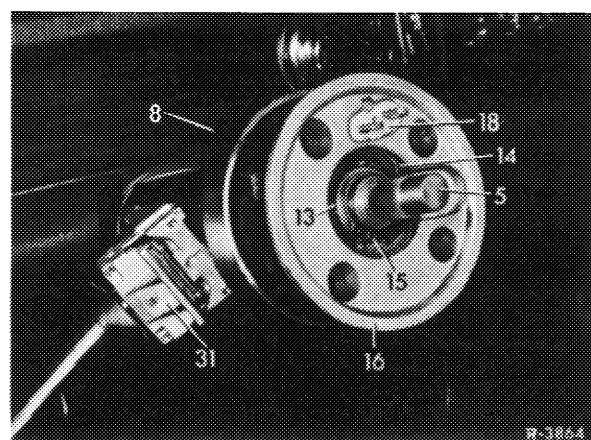
14 Insert radial ball bearing in bearing bodies and secure with locking ring.

15 Install steering shaft (5) into bearing body (16) from below and insert locking ring (15).

16 Introduce steering shaft (5) including bearing body (16) into jacket tube, making sure that the guide pin enters correctly into shift tube with bottom vulkollan ring (on vehicles with steering column shift only).

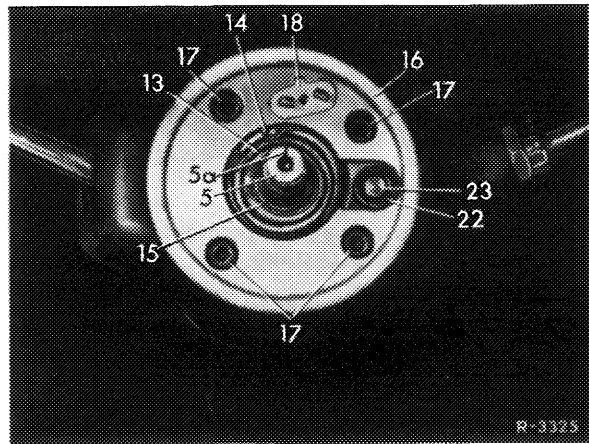


- | | |
|-------------------------|-------------------|
| 5 Steering shaft | 34 Cover plate |
| 5a Plastic sealing ring | 41 Rubber grommet |
| 8 Jacket tube | 42 Fastening clip |
| 33 Rubber sleeve | 43 Sealing shim |



17 Turn steering shaft in such a way that restoring cam for combination switch is in center of cutout in jacket tube and that the notch (5a) on steering shaft is showing in upward direction.

18 Attach bearing body (16) to jacket tube by means of hex socket screws.

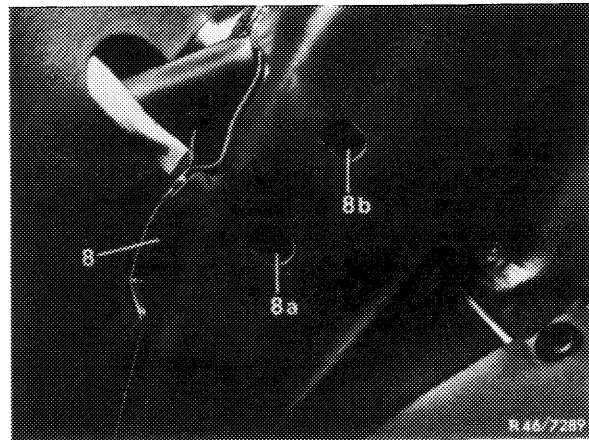


19 Check longitudinal position of steering shaft through bore (8a) in jacket tube (8). For this, insert assembly pin into corresponding check bore of steering shaft.

Note: a) For checking length of steering shaft jacket tube is supplied with two bores:

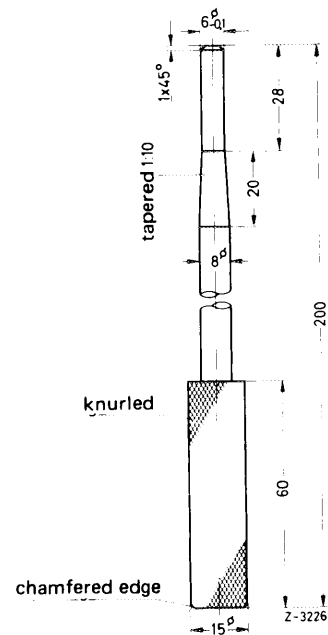
Lower bore: Vehicles with manual steering and powersteering LS 75.

Upper bore: Vehicles with powersteering LS 90.



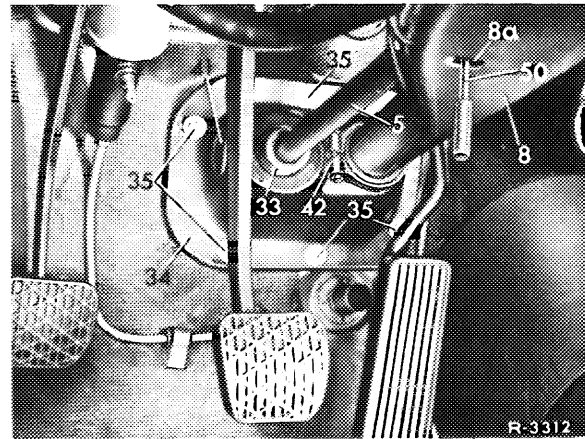
b) Make assembly pin yourself according to specified dimensions.

Assembly pin should permit insertion into check bore.



20 Screw-in upper hex socket screw into steering coupling and tighten. Tightening torque 25 Nm (2.5 kpm) — reference value.

Note: On vehicles with powersteering LS 75, a universal joint is installed. Tighten upper hex socket screw via bore in cover plate (34), which is closed by means of rubber grommet (41).



21 On vehicles with steering column shift, place upper Vulkollan ring and washer on guide pin (23) of shift tube. Insert lock (22), turn guide pin by 180° and install shift lever.

22 Install steering wheel (46–610).

23 Check steering lock for function.

24 Connect cable of carbon to combination switch, install combination switch and check for function. Insert rubber cover into jacket tube.

