

MERCEDES-BENZ

service information

Daimler-Benz AG / Export-Service

No. S 15	Order File Classenr. Archivnr.	Special Versions	Gruppe Group Groupe Grupa	46	Passenger Cars
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Stuttgart-Untertürkheim December 1964 .

To all Daimler-Benz Agencies

Re: Subsequent Installation of DB Power Steering in Type 230 SL (SA 10 560)

A detailed description of the design and operation of the DB power steering as well as of the maintenance, inspection, and repairs of the individual steering units is contained in the Workshop Manual Passenger Cars as of August 1959, Group 46.

SEQUENCE OF JOBS

a) Power steering

1. Completely remove steering gear and steering column (see Workshop Manual Passenger Cars as of August 1959, Job Nos. 46-1 and 46-14).
2. Replace the lower steering column tube installed in the steering column by the steering column tube (5) (see Workshop Manual Passenger Cars as of August 1959, Job No. 46-7).
3. Push the steering coupling on the steering column, however, do not screw in the hex. socket screws.
4. Put the pitman arm (2) on the steering shaft of the power steering gear, paying attention to the marking on the pitman arm and on the steering shaft. Screw on the castle nut (3), tighten it with approximately 15 mkg and secure it by means of a cotter pin (4) (figure 3).
5. Unscrew the locking screw from the steering gear. Turn the steering worm until the center in the working piston is exactly under the threaded hole in the steering gear case. Following this screw in centering control screw 112 589 02 23 00.

6. Check dimension "a" = 76 ± 3 mm and, if necessary, correct it by shifting the pitman arm (figure 1).

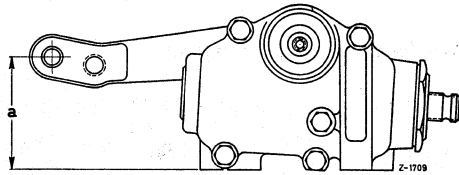


Figure 1

"a" = 76 ± 3 mm

- 7) Install complete steering column. When inserting the steering coupling into the splined steering column. The return cam for the blinker switch must be in the center of the cutout in the jacket tube (see Workshop Manual Passenger Cars as of August 1959, Job No. 46-14).

Important!

As far as there is still a cover plate with 6-hole fastening installed, two recesses have to be impressed subsequently according to figure 2. Otherwise, it may happen that the hex.-head screws of the bearing cover touch the steering gear case.

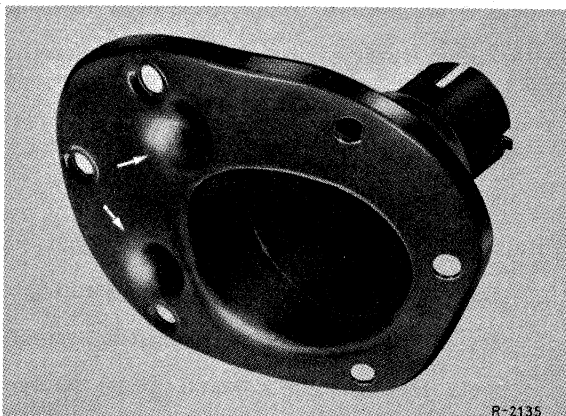


Figure 2

Cover Plate

8. Secure the steering gear at the frame floor taking care that the brake and fuel lines do not get squeezed. Following this it is absolutely important to make sure that the steering gear case does not touch the frame. If that should be the case, a corresponding impression has to be made in the frame floor.
9. Unscrew the centering control screw and screw the locking screw with the new sealing ring into the steering gear case.
10. Secure the tie rod and drag link at the pitman arm (2) (figure 3).

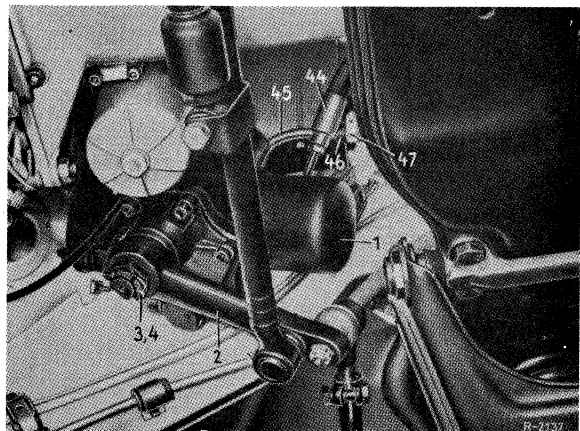


Figure 3

Arrangement of the power steering, left-hand drive vehicles

- 1 Power steering
- 2 Pitman arm
- 3 Castle nut
- 4 Cotter pin
- 44 High-pressure adaptor
- 45 Pipe elbow
- 46 Low-pressure hose
- 47 Hose clamp

b) High-Pressure Oil Pump

11. Remove engine hood and radiator (for the latter see Workshop Manual Passenger Cars as of August 1959, Job No. 50-1).

12. After taking off the V-belt, fit the two tightening clamps 187 589 04 31 on the damper rings and slightly compress the vibration damper, then replace the pulley that is installed by the pulley (31). For this purpose use the hex.-head screws (32) with lock washers (33) (figure 4).

13. Screw the support (7) for the high-pressure oil pump to the cylinder crankcase and to the oil pan using the parts listed under items 8 to 15. The distance, if any, between the prop for the

support and the oil pan is to be closed by a spacer ring (16). Take care that the spacer ring is in full contact with the oil pan. If that is not the case, the contact surface of the oil pan has to be re-machined.

14. With right-hand drive vehicles stick the transfer picture (62) on the support (7) (see arrow d in picture 6). The lettering "Loosen clamps when readjusting pump tunny" of the transfer picture means that when tightening the V-belt for the high-pressure oil pump you first have to loosen the clamps (54) for the pressure and return lines (48 and 49), as otherwise the lines would be distorted (figure 10).

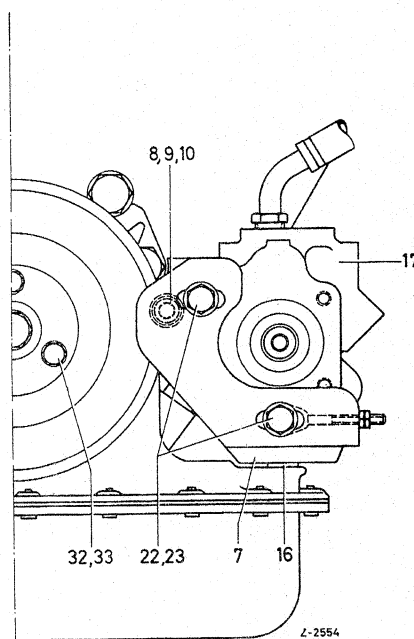
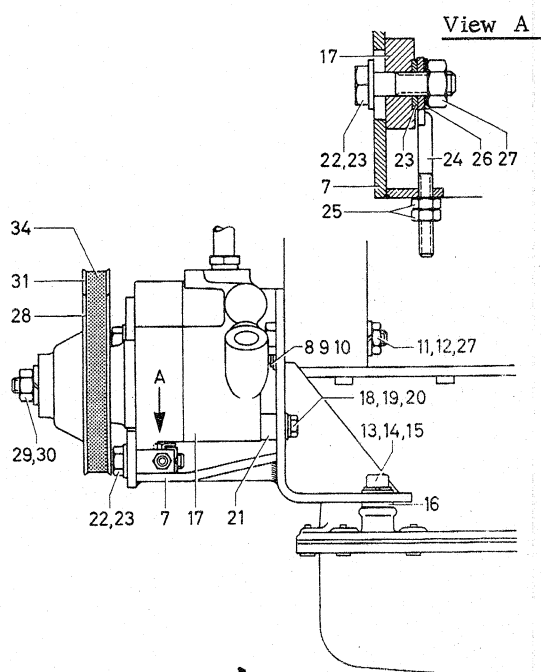


Figure 4

7 Support for pump	15 Washer	20 Washer	25 Hex. nut	30 Hex. nut
8 Fillister-head screw	16 Spacer ring	21 Spacer ring	26 Locking plate	31 Pulley
9 Lock washer	17 Pressure oil pump	22 Hex.-head screw	27 Hex. nut	32 Hex.-head screw
10 Washer	18 Hex.-head screw	23 Washer	28 Pulley	33 Lock washer
13 Fillister-head screw	19 Spring washer	24 Tightening screw	29 Lock washer	34 Narrow V-belt
14 Lock washer				

15. Insert the pressure oil pump (17) in the support (7) and secure it by means of the parts listed under items 18 to 27 in such a way that the pressure oil pump can still be slightly turned in the support (picture 4).
16. Fit the pulley (28) on the drive shaft of the pressure oil pump by means of the hex. nut (30) and the lock washer (29).
17. Re-fit and tighten the V-belt for blower and generator.
18. Put the narrow V-belt (34) on the pulley (28 and 31) and tighten it by means of the tightening screw (24) until the V-belt can still be pressed down by approximately 10 mm. Then tighten the hex. nuts (25) at the tightening screw.
19. Tighten the hex head screws (18 and 22) for securing the pressure oil pump in the support.

c) Supply Tank

20. Fix the support for the tank (35) to the cylinder crankcase. For this purpose unscrew the hex. socket screw M 8 x 30 in the cylinder head, the lock screw for the chain drive and the hex. -head screw in the cylinder crankcase for fixing the guide tube (oil dipstick) and the injection pump and replace them by the parts of items 36 to 39 (figure 5).
21. Place the oil tank (40) in the support and fix it to the support by means of the tightening clamp (41) (figure 6).
22. Push low-pressure hose (42) into the connecting tube at the oil tank and at the pump body and fasten by means of the hose clamps (43).

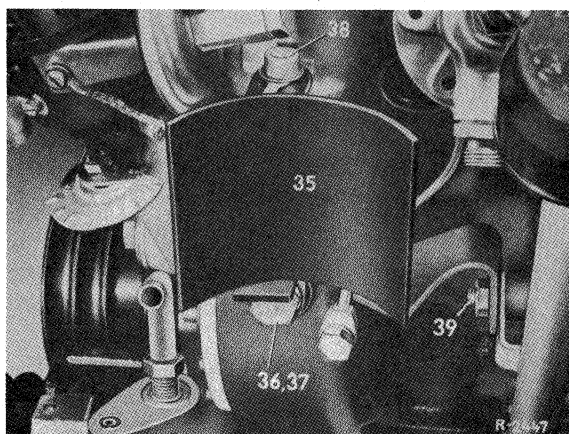
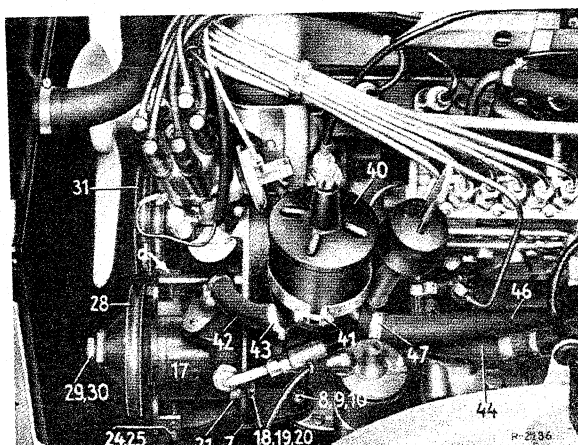


Figure 5

- 35 Support for supply tank
- 36 Lock screw
- 37 Seal ring
- 38 Hex. socket screw
- 39 Hex. head screw



d = In the case of right-hand drive vehicles this is the place on the support (7) where the transfer picture (62) has to be stuck on

Figure 6

- 7 Support for pump
- 8 Fillister-head screw
- 9 Lock washer
- 10 Washer
- 17 Pressure oil pump
- 18 Hex. -head screw
- 19 Spring washer
- 20 Washer
- 21 Spacer ring
- 24 Tightening screw
- 25 Hex. nut
- 28 Pulley
- 29 Lock washer
- 30 Hex. nut
- 31 Pulley
- 40 Oil tank
- 41 Spannschelle
- 42 Low pressure hose
- 43 Schlauchselle
- 44 High-pressure adaptor
- 46 Low-pressure
- 47 Schlauchselle

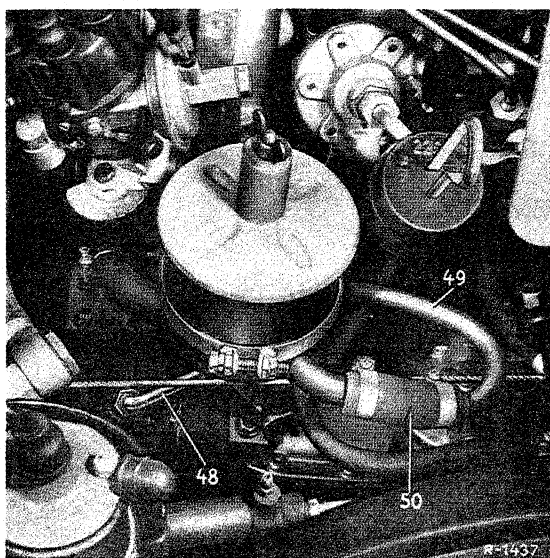


Figure 7

Arrangement of the supply tank, right hand drive

- 48 Pressure line
- 49 Return line
- 50 Low-pressure

d) Connection hoses from the pressure oil pump and the supply tank to the power steering

23. Screw the pipe elbow (45) into the return flow fitting of the power steering gear. Then push the low-pressure hose (46) on the pipe elbow (45) and, in the case of vehicles with left-hand drive, on the connection pipe of the tank and secure it by hose clamps (47) (figures 3 and 6).

In the case of vehicles with right-hand drive first push the rubber ring (46a) on the low pressure hose (46) in such a way that it lies on the front axle beam when the low-pressure hose is installed. Also push the low-pressure hose (46) on the pipe elbow (45) and secure it. Then push the low-pressure hose (50) on the connection pipe of the tank and the return line (49) into the low-pressure hoses (46 and 50). Following this fit hose clamps (51) (figures 7, 9 and 10).