Dimensions and Tolerances of Steering Shaft Mounting in mm

Steering shaft version	Steering shaft Bearing surfaces ⌀	Upper and lower bearing bushing			
		Internal ⌀ Rough-turning dimension	Internal ⌀ Finished dimension	External ⌀	Steering housing base bore ⌀
1st	25.380 / 25.359	25.2 / 25.3	25.400 / 25.421	27.548 / 27.535	27.500 / 27.525
2nd	28.480 / 28.459	28.0 / 28.1	28.500 / 28.521	30.548 / 30.535	30.500 / 30.525
3rd	29.993 / 29.980	29.5 / 29.6	30.000 / 30.013	32.059 / 32.043	32.000 / 32.025

e) **Pressure Block Assembly**

Dimensions and Tolerances of Pressure Block Assembly in mm

Pressure Spring

Connection ⌀ mm	Wire gage mm	Free length mm	Length under load mm	kg
13.0 + 0.1	3.5	$18.0 \pm \frac{0.1}{0.3}$	16.0	$80 \pm \frac{10}{5}$

Pressure Sleeve

External ⌀	Internal ⌀	Length
17.139 / 17.128	13.1 / 13.2	19.5

Set Screw

External ⌀	Internal ⌀	Tightening of set screw
Thread M 24 x 1.5	17.2 / 17.3	In dead center position screw in till tight and then back out 2-4 mm, measured at the circumference of the set screw

B. DB Standard Re-Circulating Ball Steering Type LO

On Models 180 to 220 SE the checking and repair procedures for the standard re-circulating ball steering are the same as on Model 190. The dimensions and tolerances are also the same. In addition the following points require attention:

New Mounting of Steering Shaft

On recent cars of Models 180 a, 180 b, 180 D, 180 Db, 190, 190 b, 190 D, 190 Db, 190 SL, 219, 220 S, and 220 SE a longer upper bearing bushing has been installed for the steering shaft in the steering housing (see Table).

Bearing bushing	Version	Part No.	Length in mm
top and bottom	1st	120 462 05 50	30.0
top	2nd	120 462 06 50	37.0
bottom		120 462 05 50	30.0

The steering housing with the longer upper bearing bushing has the Part No. 186 460 13 02.

The steering shaft has also been modified at the upper bearing surface and has the Part No. 186 460 03 11 (Fig. 46-5/1).

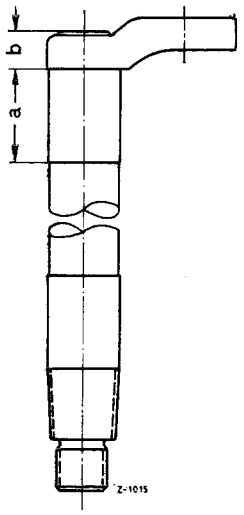

Fig. 46-5/1

Steering shaft Part No.	Length "a" mm	Shoulder "b" mm
120 460 03 11	35	19
186 460 01 11		
186 460 02 11		
186 460 03 11	39	15

The steering shafts Part No. 186 460 01 11 and 120 460 03 11 had ball cups with shoulder whereas on the recent versions the ball cup is secured by a snap ring.

When repairs are carried out, the steering shafts 186 460 02 11 and 01 11 can be replaced by the steering shaft 186 460 03 11 even on 1st version steering housings with the 30 mm long bearing bushings.

However, it is not possible to install the steering shafts 180 460 02 11 and 01 11 into the 2nd version steering housing with the longer upper bearing bushing.