

# Removal and Installation of Clutch Pedal Shaft

Job No.

29-4

**Models 180, 180 a, 180 b, 180 D, 180 Db, 190 D, 190 Db, 190 SL, and 220 a as well as Models 219, 220 S, and 220 SE with Mechanical Clutch**

## Removal:

1. Unscrew the protective plate for the pedal system.
2. Unscrew the hexagon screw for the clutch pedal shackle (1) and pull out the shackle (see Fig. 29-3/1).
3. Unscrew the clamping screw (19) from the clutch pedal flange. Then remove the two hexagon nuts (14) and pull the flange from the clutch pedal shaft (see Fig. 29-1/7).

**Note:** Mark the relative position of the flange and the clutch pedal shaft (1) before removal in order to ensure that the clutch pedal is correctly reinstalled on the pedal shaft.

- 3 a. On the 2<sup>nd</sup> and 3<sup>rd</sup> versions with end plate detach the return spring for the clutch throw-out fork and the compensating spring (18) or (18 a) (see Fig. 29-1/3). Then unscrew and remove the jointing disk (9) with flange (8) from the clutch pedal.

**Note:** Mark the position of the flange on the pedal shaft before removing it (see Fig. 29-1/3).

4. Remove the snap ring (16) from the mounting tube and remove the clutch pedal together with washer (15) (see Fig. 29-1/3).

## Checking:

5. Check the bearing bushings (12) in the clutch pedal (11) for wear (Fig. 29-1/3). Worn bushings must be replaced. The

bushings are pressed into the clutch pedal bore with an oversize of 0.02 to 0.06 mm.

After new bushings have been pressed in, the bore must be reamed to the finished size. Internal diameter of bearing bushings (finished size): 27.040–27.073 mm.

External diameter of mounting tube 26.959–26.980 mm.

6. In the case of the 2<sup>nd</sup> and 3<sup>rd</sup> versions check the jointing disk to see whether it is still serviceable. Cracked jointing disk should always be replaced.

- 6 a. In the case of the 4<sup>th</sup> version also check the silentblocs (13) in the flange (12) and if necessary press in new silentblocs (Fig. 29-1/7).

## Installation:

7. Slide the clutch pedal onto the mounting tube.
8. The clutch pedal end play on the mounting tube must be adjusted to 0.1–0.2 mm by installing one or several spring washers (14) (see Fig. 29-1/3). The spring washers are available in thicknesses of 0.2 mm (Part No. 120 290 02 48) and 0.4 mm (Part No. 120 290 03 48). The pivot point should be well greased.

**Note:** To prevent knocking noises in the clutch actuating mechanism the spring washer between the clutch pedal and brake pedal boss can be replaced by a Vulkollan damper washer (16) (Fig. 29-1/7) on all cars without a stay rod (see Job No. 29-1, Section D).

9. Install the snap ring (18), making sure that it is properly seated in the groove. Then slide the flange (12) onto the pedal shaft in such a way that the marks made during removal are aligned on the shaft and the flange. Screw the clutch pedal (9) to the flange (12) (see Fig. 29-1/7).
10. Clamp the flange to the clutch pedal shaft by means of the clamping screw (19) (see Fig. 29-1/7).
11. On the 2<sup>nd</sup> and 3<sup>rd</sup> versions with end plate (see Fig. 29-1/3) screw the jointing disk (9) with flange (8) to the clutch pedal and attach the compensating spring (18) or (18 a) and the return spring for the clutch throw-out fork.
12. Install the clutch pedal shackle and tighten the hexagon screw.
13. Adjust the clutch pedal free play (see Job No. 29-3).
14. Install the protective plate for the pedal system.