

Clutch Actuating Mechanism

Job No.

29-1

A. 1st Version

Model 180

The clutch is actuated by the clutch pedal (1) via the clutch pedal shaft (2). The clutch linkage (4) is attached to the clutch pedal shaft which is not supported on the transmission (Fig. 29-1/1). The clutch pedal is mounted on a tube on the chassis base panel. Axial support of the engine is provided by the stay rod (5) which is attached to the clutch housing and to a tube on the chassis base panel (Fig. 29-1/2).

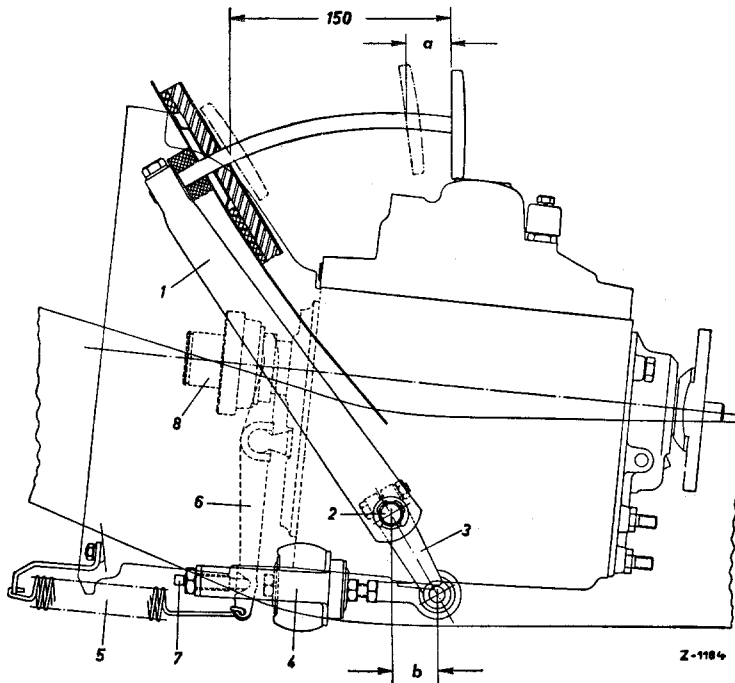


Fig. 29-1/1

- 1 Clutch pedal
- 2 Clutch pedal shaft
- 3 Relay lever
- 4 Clutch linkage
- 5 Tension spring
- 6 Clutch throw-out fork
- 7 Adjustment screw
- 8 Throw-out bearing
- a = Clutch pedal free play
- b = Adjusting dimension for relay lever

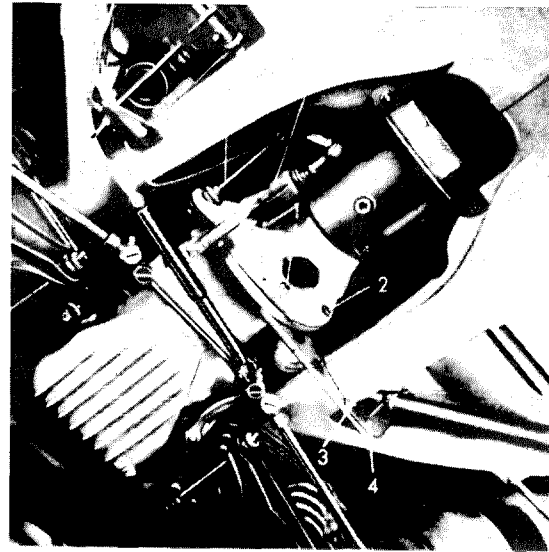


Fig. 29-1/2

- 1 Hexagon screw
- 2 Hexagon screw
- 3 Hexagon nut
- 4 Hexagon nut
- 5 Clutch linkage
- 6 Engine stay rod

B. 2nd Version

Models 180, 180 D, 190 SL, and 220 a

As in the case of the 1st version the clutch is actuated via a shaft by the clutch pedal. The clutch pedal (11) is mounted on a tube on the chassis base panel. The left side of the clutch pedal shaft (1) is attached to the clutch pedal by means of a jointing disk (9). On the right side the clutch

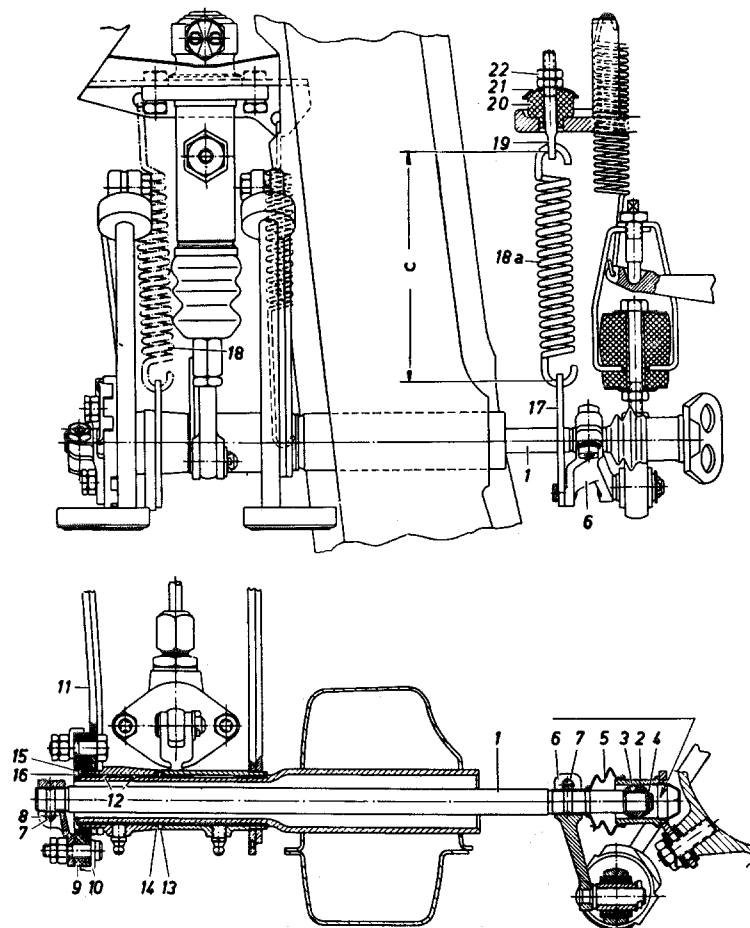


Fig. 29-1/3

- 1 Clutch pedal shaft
- 2 End plate with bushing
- 3 Ball
- 4 Snap ring
- 5 Cuff
- 6 Relay lever
- 7 Clamping screw
- 8 Flange
- 9 Jointing plate
- 10 Pressure plate with screw, hexagon nut and pal nut
- 11 Clutch pedal
- 12 Bushing
- 13 Stay rod
- 14 Spring washer
- 15 Washer
- 16 Snap ring
- 17 Shackle
- 18 1st version compensating spring
- 18a 2nd version compensating spring
- 19 Pull rod
- 20 Rubber buffer
- 21 Cup washer
- 22 Nuts
- c = Adjusting dimension for compensating spring

pedal shaft is carried in a ball (3) in an end plate (2) attached to the transmission. The compensating spring (18) (dead center spring) which reduces the clutch pedal pressure on declutching is arranged on the right side of the clutch pedal in this version (Fig. 29-1/3).

C. 3rd Version

Models 180, 180 D, 220 a, and 190 SL

The clutch pedal shaft is mounted in the same way as the 2nd version, except that the compensating spring (18 a) is attached on the right side to the relay lever and the clutch housing (Fig. 29-1/3).

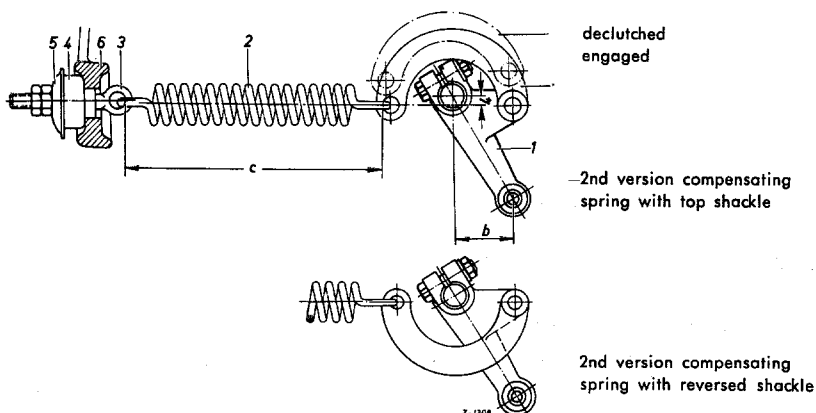


Fig. 29-1/4

- 1 Relay lever with shackle
- 2 Compensating spring
- 3 Pull rod
- 4 Rubber buffer
- 5 Cup washer
- 6 Clutch housing
- b = Adjusting dimension for relay lever
- c = Adjusting dimension for compensating spring

The shackle has been repositioned in order to prevent the hand brake cable from touching the relay lever (1) shackle. The relay lever with top shackle can be replaced by the lever with reversed shackle (Fig. 29-1/4).

D. 4th Version

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

The 4th version clutch pedal shaft is carried in a swivel support as on Model 190. On Models 180 a, 180 b, 190 D, and 190 Db the swivel support bracket is elastically mounted on the clutch housing as on Model 190 (Fig. 29-1/5). On all other models the bracket is rigidly screwed to the clutch housing (Fig. 29-1/6).

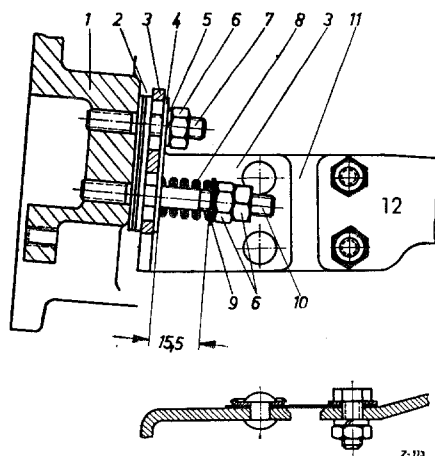


Fig. 29-1/5

- | | |
|------------------|-------------------|
| 1 Clutch housing | 7 Stud bolt |
| 2 Spacer washer | 8 Damping spring |
| 3 Bracket | 9 Washer |
| 4 Washer | 10 Stud bolt |
| 5 Lock washer | 11 Spring plate |
| 6 Hexagon nut | 12 Swivel support |

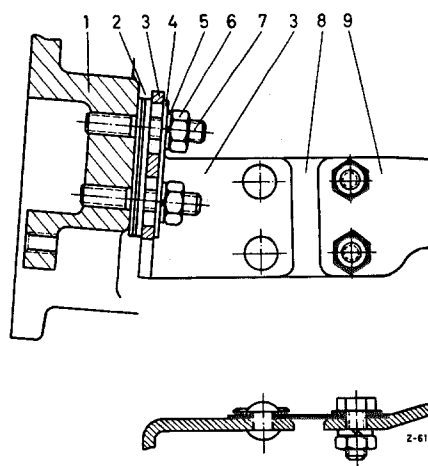


Fig 29-1/6

- | | |
|------------------|------------------|
| 1 Clutch housing | 6 Hexagon nut |
| 2 Spacer washer | 7 Stud bolt |
| 3 Bracket | 8 Spring plate |
| 4 Washer | 9 Swivel support |
| 5 Lock washer | |

On later models modified brackets (3) have been installed on which the two slots have been replaced by bores. The washer (4) is no longer required.

For vertical adjustment of the clutch pedal shaft the two bores in the swivel support (12) have been increased in diameter from 6.4 mm to 7.0 mm. If a new bracket is installed subsequently the two holes in the swivel support must be bored to 7 mm diameter (Figs. 29-1/5 and 29-1/6).

In order to prevent knocking noises in the clutch actuating mechanism the washer previously installed between clutch and brake pedal boss has been replaced by a Vulkollan damper washer (16) (Fig. 29-1/7).

The Vulkollan washer can be installed subsequently in all cars which are no longer provided with the stay rod between the mounting tube and the retaining plate of the brake master cylinder. When installing the Vulkollan washer remember that spacer washers are required on both sides of the Vulkollan washer. The shim (17 a) is a compensating shim for the adjustment of the prescribed end play of the pedals "a" = 0.1–0.2 mm. The spacer washer (17 b) has the same thickness as the thinnest compensating shim. The shims (17 a) are available in the following sizes:

Part No.	Thickness mm
120 990 38 40	0.58 ± 0.05
120 990 39 40	0.75 ± 0.07
120 990 40 40	0.88 ± 0.08
120 990 41 40	1 ± 0.09

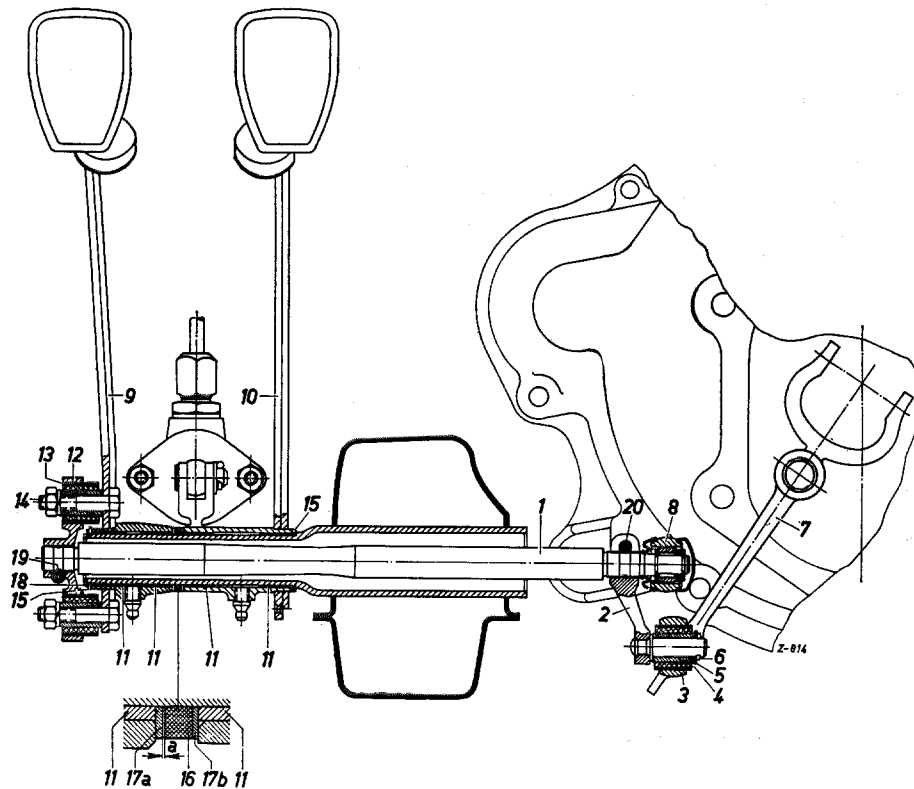


Fig. 29-1/7

- | | |
|-------------------|---------------------|
| 1 Pedal shaft | 12 Flange |
| 2 Lever with bolt | 13 Silentbloc |
| 3 Pull rod end | 14 Hexagon screw |
| 4 Silentbloc | 15 Washer |
| 5 Washer | 16 Vulkollan washer |
| 6 Cotter pin | 17a Shim |
| 7 Throw-out fork | 17b Spacer washer |
| 8 Swivel support | 18 Snap ring |
| 9 Clutch pedal | 19 Clamping screw |
| 10 Brake pedal | 20 Clamping screw |
| 11 Bushing | |

a = End play of pedals on mounting tube 0.1—0.2 mm