

Shock-absorbers can only be satisfactorily checked if a Shock-Absorber Tester is available. If, after removal, the shock-absorber is checked by hand (hold shock-absorber vertical when this is done) it is only possible to establish whether or not the shock-absorber is working at all. It is in practice impossible by this method to establish, even approximately, the degree of effectiveness. If testing shows that the shock-absorber is not working, the shock-absorber must be replaced.

Shock-absorbers must be replaced if considerable loss of fluid is discovered. Where there is only slight loss of fluid, the shock-absorber does not need to be replaced immediately if it still operates properly, since the shock-absorber contains sufficient fluid to compensate for slight losses.

The front and rear shock-absorbers can be distinguished by the different paint colors: Front shock-absorbers, black; rear shock-absorbers, red. In addition, the Part No. is stamped on.

The rear shock-absorbers function at the same time as a stop for the rear axle tubes.

In current models, shock-absorbers are being fitted with a reinforcement plate (5) at the angle brackets (4) (see Fig. 32 — 1/1).

**When replacement parts are required, only shock-absorbers with reinforcement plates for both the front axle and the rear axle will be supplied as of present date. If the vehicle is used mainly on bad roads, the reinforcement plates must be fitted subsequently (see Section E).**

**The hexagon nuts of the lower shock-absorber mounting must be checked constantly for tightness and, if necessary, tightened up.**

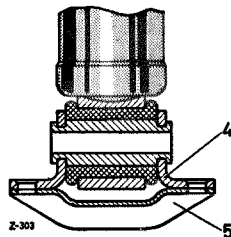


Fig. 32 — 1/1

4 Angle bracket  
5 Reinforcement plate

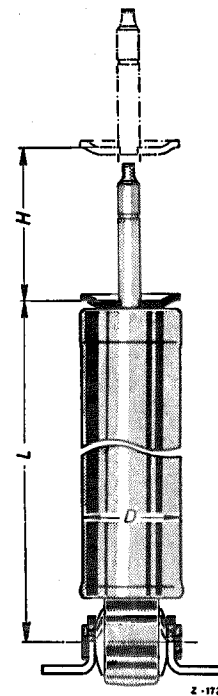


Fig. 32 — 1/2

H = Stroke  
L = Length compressed  
D = External diameter

## A. Shock-Absorbers — Standard Version

### a) Front Shock-Absorbers

Designation Color Make	Part No.	Dimensions of Shock-Absorber in mm			Adjustment and Acceptance Values at n = 100 rpm		
		External diameter D	Stroke H	Compressed L	Stroke mm	Pull kg	Pressure kg
Front Shock Absorber for Control Arm* 120 330 12 08 and 120 330 13 08							
Sov 26×130 black Fichtel u. Sachs	000 323 60 00 (without reinforcement plate) 121 323 00 00** (with reinforcement plate)	38.4	130	239	25 50 100	35 140 310	5 10 30
T 40×130 black Stabilus	000 323 56 00 (without reinforcement plate) 121 323 01 00** (with reinforcement plate)	44	130	242.5 <sup>+2</sup>	25 50 100	35 140 310	5 10 30
Front Shock Absorber for Control Arm* 180 330 00 08 and 180 330 01 08							
Sov 26×130 black Fichtel u. Sachs	120 323 00 00	38.4	130	239	25 50 100	35 140 310	5 10 30
T 40×130 black Stabilus	120 323 01 00	44	130	242.5 <sup>+2</sup>	25 50 100	35 140 310	5 10 30
<p>* For reasons of standardization, on recent models the lower control arms (Part No. 120 330 12 08 or 13 08 have been replaced by the types used on Model 220 S (Part Nos. 180 330 00 08 and 180 330 01 08). On these control arms, the through-way hole for the shock-absorber is larger (58 mm diameter instead of previously 48 mm diameter). For this reason, the shock-absorber mounting has had to be changed accordingly. When ordering, please make sure that the right type of shock-absorber is specified.</p> <p>** Only shock-absorbers with reinforcement plates are supplied as replacements.</p>							

### b) Rear Shock-Absorbers

Designation Color Make	Part No.	Dimensions of Shock-Absorber in mm			Adjustment and Acceptance Values at n = 100 rpm		
		External diameter D	Stroke H	Compressed L	Stroke mm	Pull kg	Pressure kg
Tov 30×140 red Fichtel u. Sachs	121 320 03 31 (without reinforcement plate) 121 326 00 00** (with reinforcement plate)	46	140 <sup>+1</sup> <sub>−3</sub>	251 <sup>+2</sup>	25 50 100	90 200 370 <sup>±20</sup>	20 25 35 <sup>+5</sup>
T 40×140 red Stabilus	000 326 41 00 (without reinforcement plate) 121 326 01 00** (with reinforcement plate)	44	140 <sup>+1</sup> <sub>−3</sub>	254 <sup>+2</sup>	25 50 100	80 220 380	20 30 43
* Only shock absorbers with reinforcement plates are supplied as replacements.							

## B. Shock-Absorbers for Bad Roads and Export Shock-Absorbers (Optional, SA 10 1T3)

### a) Front Shock-Absorbers

Designation Color Make	Part No.	Dimensions of Shock-Absorber in mm			Adjustment and Acceptance Values at n = 100 rpm		
		External diameter D	Stroke H	Compressed L	Stroke mm	Pull kg	Pressure kg
T 50 x 130 black Stabilus	180 323 03 00*	55	130	244.5 <sup>+2</sup>	25 50 100	65 230 330	8 12—15 30
* If these shock-absorbers are installed later, control arms with a small through-way hole (48 mm diameter, Part No. 120 330 12 08/13 08) must be replaced by control arms with a larger through-way hole (58 mm diameter, Part No. 180 330 00 08/01 08).							

### b) Rear Shock-Absorbers

Designation Color Make	Part No.	Dimensions of Shock-Absorber in mm			Adjustment and Acceptance values at n = 100 rpm		
		External- diameter D	Stroke H	Compressed L	Stroke mm	Pull kg	Pressure kg
T 50 x 130 red Stabilus	180 326 02 00	55	130	254.5 <sup>+2</sup>	25 50 100	80 220 380 <sup>+20 -18</sup>	20 30 43 ±5

## C. Shock-Absorbers for Special-Purpose Vehicles

(Optional, SA 10 154/1 or 2 and SA 10 155)

### a) Front Shock-Absorbers

same as Standard Version

### b) Rear Shock-Absorbers

Designation Color Make	Part Nr.	Dimensions of Shock-Absorber in mm			Adjustment and Acceptance Values at n = 100 rpm		
		External diameter D	Stroke H	Compressed L	Stroke mm	Pull kg	Pressure kg
Tov 36×130 red Fichtel u. Sachs	000 326 45 00 (without reinforcement plate)	55	130	242 <sup>+2</sup>	25	80	20
	121 326 03 00* (with reinforcement plate)				50	220	30
					100	380 <sup>+20</sup> <sub>-18</sub>	45±5
*Only shock-absorbers with reinforcement plates are supplied as replacements							

## D. Dust Cover for Shock-Absorbers

(Optional, SA 10 113)

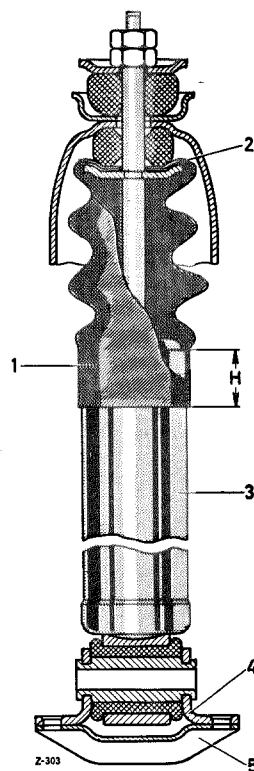


Fig. 32 — 1/3

- 1 Fabric dust bag
- 2 Leather cap
- 3 Shock-absorber
- 4 Angle bracket
- 5 Reinforcement plate
- H Length of overlap

If the vehicle is used in areas where extreme dust conditions prevail, a fabric dust bag (1) can be fitted at both the front and the rear shock-absorbers as a protection against dust and dirt penetration (see Fig. 32 — 1/3).

When fitting, extend the shock-absorber completely, then push on the fabric dust bag and fix it with bodywork adhesive.

Since the shock-absorbers have a stroke of varying length, the length of the overlap H is different at the front and the rear shock-absorbers.

Make sure that when the shock-absorber is completely extended the fabric dust bag is sufficiently slack and is not pulled taut.

Glue the fabric dust bag along the complete length of the overlap and particularly firmly at the end of the shock-absorber as otherwise the fabric dust bag might fray at this spot.

**Note:** For shock-absorbers with 55 mm diameter, a larger fabric dust bag (Part No. 180 320 01 59) is available as a replacement for the fabric dust bag with smaller diameter (Part No. 120 320 00 59).

## E. Subsequent Welding of Reinforcement Plates onto the Shock-Absorber Angle Bracket

Current models are equipped with shock-absorbers of the type which have the reinforcement plate welded on. Only shock-absorbers, therefore, with reinforcement plates will be supplied as replacement parts as of present date.

The reinforcement plates should be subsequently welded in the case of cars fitted with shock-absorbers without reinforcement plates and which are used mainly on rough roads. Proceed as follows:

1. Use four ( M 7) screws to fix the reinforcement plate tightly on the angle bracket.

**Note:** This is necessary in order to avoid welding stresses.

2. **Electrically** weld the reinforcement plate on the angle bracket at four points (Fig. 32 —

1/4). Arrange for the weld beads to run outward from the corners of the angle brackets.

3. Sink the bores 1.5 mm into the angle bracket in order to ensure that the shock-absorber rests perfectly against the control arm or torque arm (Fig. 32 — 1/5).

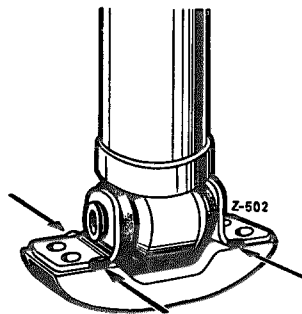


Fig. 32 — 1/4

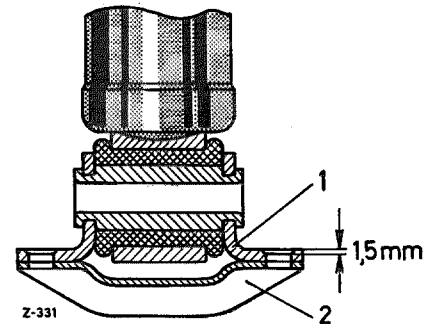


Fig. 32 — 1/5

- 1 Angle bracket
- 2 Reinforcement plate