

Suspension

**Shock absorber (damper) strut – front axle**

The damper strut is identified by 3 red stripes with a depression (arrow) in the outer tube to increase tire clearance.

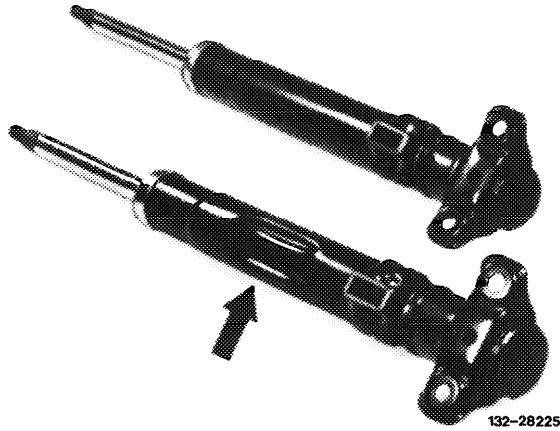


Fig. 32/1

The additional polyurethane (PU) spring (B) is harder and shorter compared with version (A).

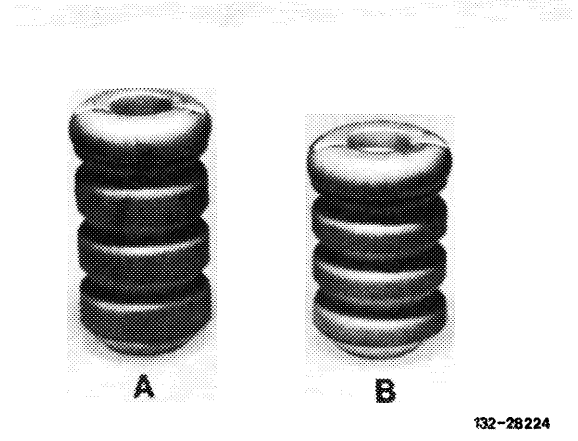


Fig. 32/2

A Model 201.024  
Length 96 mm

B Model 201.034  
Length 83 mm

**Shock absorber (suspension) strut – rear axle**

As on the front axle damper strut, the suspension strut is identified by 3 red stripes.

**Torsion bars**

The front axle torsion bar has a diameter of 23 mm (22 mm on model 201.024).

The torsion bar on the rear axle has been modified both in shape and in dia. (16 mm instead of 13 mm on model 201.024). The torsion bar links have torsional rubber bushings on both sides.

The lever on the torsion bar for actuating the levelling valve as well as the mounting bracket, are adapted to the larger torsion bar dia.

level control - rear axle

A level control system, similar to the one used on model 123.193, is also used on model 201.034.

The oil reservoir, levelling valve, and suspension struts are a new development.

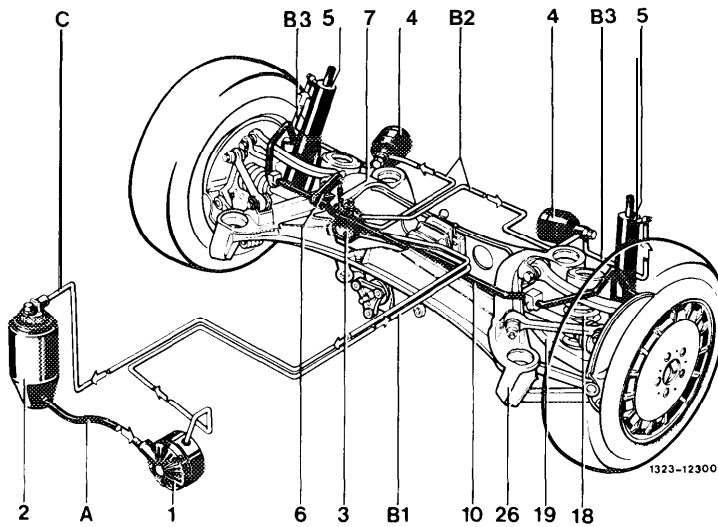


Fig. 32/3

- 1 Hydraulic oil pump
- 2 Oil reservoir
- 3 Levelling valve
- 4 Pressure reservoir
- 5 Suspension strut
- 6 Lever on torsion bar
- 7 Connecting rod
- 10 Torsion bar
- 18 Rear spring
- 19 Spring link
- 26 Rear axle carrier
- A Suction line (oil reservoir to hydraulic oil pump)
- B1 Pressure line (hydraulic oil pump to levelling valve)
- B2 Pressure line (levelling valve to pressure reservoir)
- B3 Pressure line (pressure reservoir to suspension strut)
- C Return line (levelling valve to oil reservoir)

Oil reservoir

The reservoir is located on the right side in the engine compartment and has a capacity of 1.15 liter at the min. mark and 1.35 liter at the max. mark. The level control system has a total capacity of approx. 2.0 liters of hydraulic fluid.

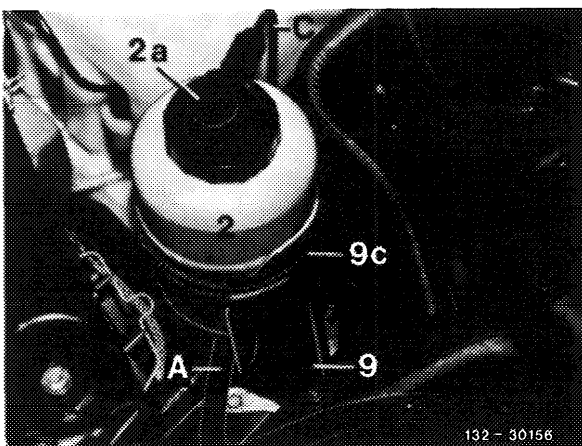


Fig. 32/4

- 2 Oil reservoir
- 2a Cap with oil dipstick
- 9 Oil reservoir mounting bracket
- 9c Holding spring
- A Suction line (oil reservoir to hydraulic oil pump)
- C Return line (levelling valve to oil reservoir)

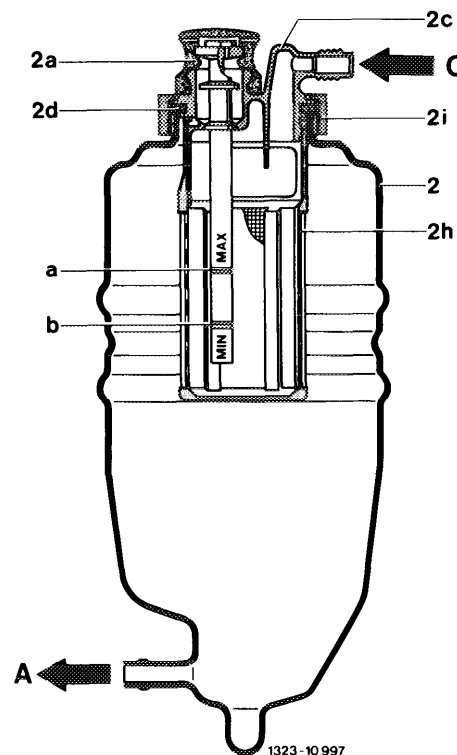


Fig. 32/5

- 2a Cap with oil dipstick
- 2c Cover with connection
- 2d Rubber seal ring
- 2h Filter element
- 2i Fastening nut
- a Max. mark
- b Min. mark
- A Suction line (oil reservoir to hydraulic oil pump)
- C Return line (levelling valve to oil reservoir)

To increase passenger comfort, a new hydraulic oil and modified rubber diaphragms in the pressure reservoirs are now used. The pressure reservoirs can be identified by a yellow dot.

**Caution!**

When filling the system, only use MB-hydraulic oil (part no. 000 989 91 03) as shown on the label on the oil reservoir (in engine compartment).

**Checking oil level**

Vehicle in curbweight condition:  
Level between MIN and MAX

Vehicle with full load:  
Level below MIN (not quite visible on dipstick).

Specified oil:  
MB-hydraulic oil  
Part no. 000 989 91 03 (1 liter container)

**Hydraulic oil pump**

The hydraulic oil pump is driven by the exhaust camshaft and is flanged to the righthand side of the cylinder head.

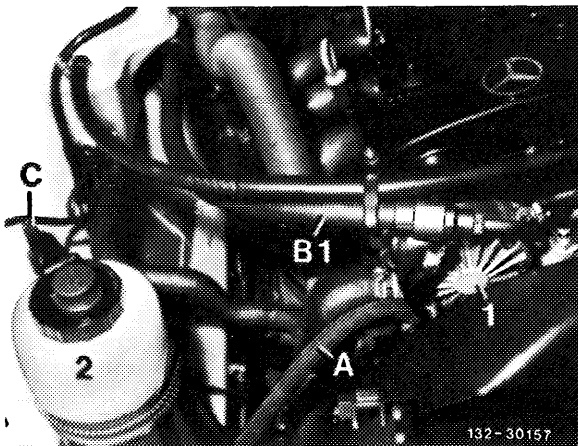


Fig. 32/6

- 1 Hydraulic oil pump
- 2 Oil reservoir
- A Suction line (oil reservoir to hydraulic oil pump)
- B1 Pressure line (hydraulic oil pump to levelling valve)
- C Return line (levelling valve to reservoir)

**Levelling valve**

The levelling valve operates the same as before. It is light weight due to its compact construction.

The opening pressure of the pressure relief valve is  $143 \pm 10$  bar.

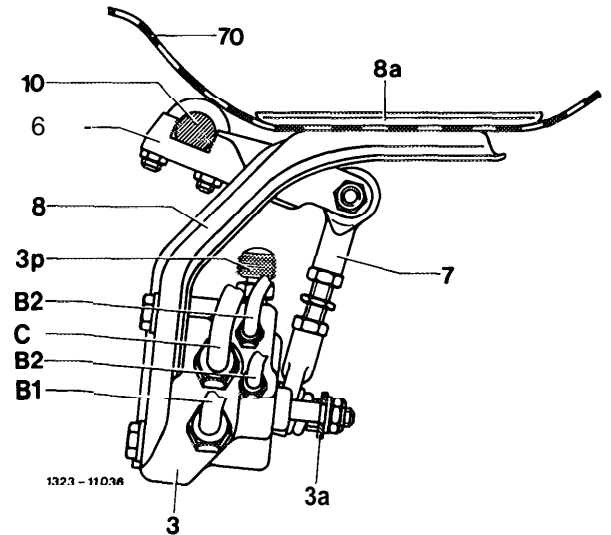


Fig. 32/7

- 3 Levelling valve
- 3a Lever on levelling valve
- 3p Oil drain plug
- 6 Lever on torsion bar
- 7 Connecting rod
- 8 Mounting bracket
- 8a Reinforcing plate
- 10 Torsion bar
- 70 Frame floor
- B1 Pressure line (hydraulic oil pump to levelling valve)
- B2 Pressure line (levelling valve to pressure reservoir)
- C Return line (levelling valve to oil reservoir)

The connecting rod is attached in bore "a" of the lever.

**Levelling valve "control point" adjustment**

Insert a 4 mm dia. pin into bore "c" and the housing bore for adjustment of vehicle level loaded with 100 kg (refer to Test and adjustment values, vehicle level p. 222).

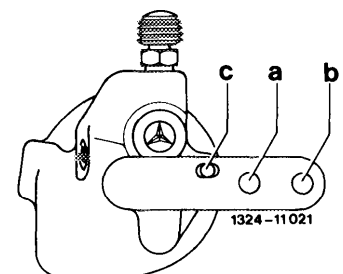


Fig. 32/8

- a Bore for connecting rod ball joint
- c Locating bores in lever and housing for control point position of levelling valve (4 mm dia. pin)

**Caution:**

The bleed screw in the levelling valve has a conical seat without point (B) and should not be mixed up with the previous bleed screw (A, with point).

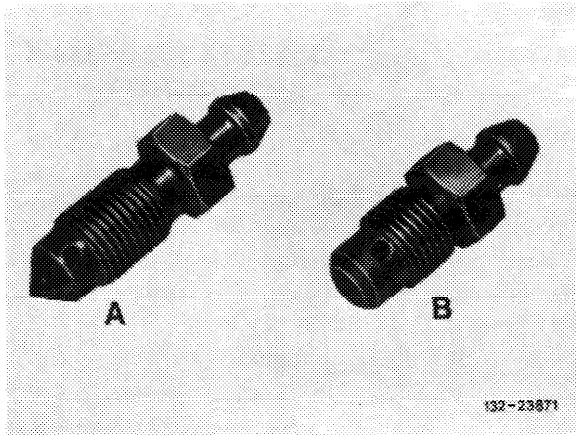


Fig. 32/9

- A Bleed screw, previous version
- B Bleed screw, current version

**Repair note**

The test procedures “Checking hydraulic oil pump and levelling valve” and “Checking pressure reservoir” can be performed as before. However, to connect the pressure tester 126 589 02 21 00 to the levelling valve use an additional flexible test line 201 589 03 63 00 (038g).

The test line is installed after unscrewing the bleed screw (3p).

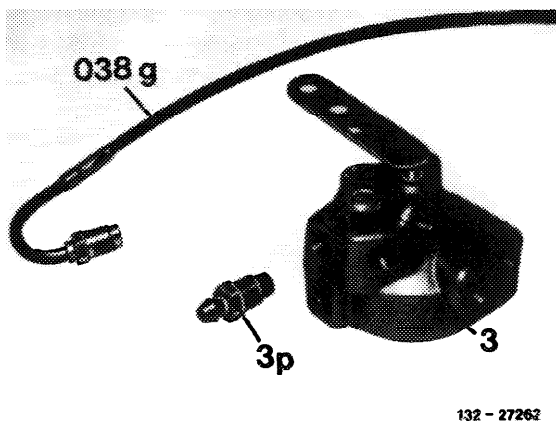


Fig. 32/10

- 3 Levelling valve
- 3P Bleed screw
- 038g Test line

**Suspension struts on rear axle**

The suspension struts are mounted between the dome of the frame floor and the spring link. The spring compression stop is integrated in the suspension strut (model 123.193 has an additional rubber bumper).

When installing the suspension strut, be sure that the pressure line (B3) for the pressure reservoir is mounted in the correct location.

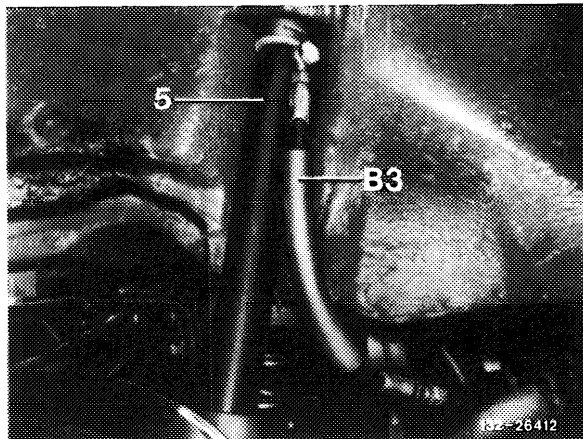


Fig. 32/11

- 5 Suspension strut
- B3 Pressure line (pressure reservoir to suspension strut)

Distance “a” of suspension strut mounting bracket in relation to wheelhousing can be used to verify the correct location.

“a” at rebound =  $3 \pm 1$  mm  
 at rest =  $6 \pm 1$  mm  
 (curbweight condition)

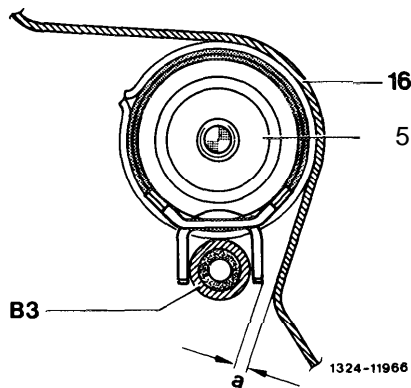


Fig. 32/12

- 5 Suspension strut
- a Distance, mounting bracket to wheelhousing

## Testing and adjusting values

### Cross-reference, springs - shock absorbers

Front spring Part No.	Damper strut, front Part No.	Rear spring Part No.	Suspension strut, rear Part No.
201 321 28 04 201 321 29 04	201 320 11 30	201 324 32 04	201 320 08 13

When installing springs, refer to tables "Adjustment of springs"!

### Adjustment of springs (cross reference, springs- rubber mounts)

A point system, based on various optional equipment, is used to determine several weight groups. Additional points for each option must be added to the base points for the standard vehicle. The total points are then used to determine the proper front or rear spring/rubber mount combination.

### Front springs - number of points

Base points (standard vehicle)	Model 201.034	35
Additional points for each option	Automatic transmission	5
	Sliding roof, electric	2
	Underfloor protection (steel plate)	1

Total points	Front spring Part No.	Height of rubber mount (in mm) depending on total points and spring color code	
		blue	red
31 - 36	201 321 28 04	18	23
37 - 41	201 321 29 04	8	13
42 - 47	201 321 29 04	13	18

The part numbers for the rubber mounts are the same as for other 201 models.

**Rear springs – number of points**

Base points (standard vehicle)	Model 201.034	17	
Additional points for each option	Sliding roof, electric	3	
	Head restraints, rear	1	
Total points	Front spring Part No.	Height of rubber mount (in mm) depending on total points and spring color code	
		blue	red
	up to 20	8	13
21 - 26	201 324 32 04	13	18

The part numbers for the rubber mounts are the same as for other 201 models.

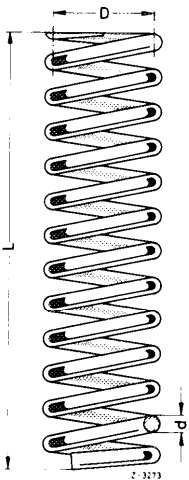


Fig. 32/13  
Front and rear springs

- L = Free length
- D = Mean coil dia
- d = Wire dia

**Test values of springs**

Part No.	Spring travel per 1000 N load	Wire dia. "d"	Spring load, N	Test height (mm)
<b>Front springs</b>				
201 321 28 04	20.7	14.0	6420 ± 220	240
201 321 29 04	18.8	14.4	7100 ± 240	240
<b>Rear springs</b>				
201 324 32 04	24.0	11.9	3310t 190	213.5