

## Installation Instructions

### **Conversion to AMG sports chassis**

#### **Model 124**

#### **32.02**

Excluding vehicles with special bodywork, 4MATIC, sedan with long wheelbase and all types with level control on the rear axle and 124.036.

On models 124.031/051/133, the special equipment points rating system for the front axle must not exceed 69 (also refer to section F, spring adjustment) in order to ensure the specified control arm positions.

Towing equipment not permitted as special equipment.

These installation instructions are valid for the assembly of the following chassis kits:

B6 602 00 02

B6 602 00 04

The installation instructions are divided up into the following sections:

- A. Scope of conversion
- B. Application range of chassis kits
- C. Special tools
- D. Front axle conversion
- E. Rear axle conversion
- F. Spring adjustment
- G. Axle adjustment values
- H. Information for ordering replacement parts

**Note**

An entry in the vehicle documents is required in the Federal Republic of Germany. A copy of the respective sample report and certificate issued by the Mercedes-Benz workshop must be submitted to the TÜV/TÜA.

**A. Scope of conversion**

## 1. Front axle

- Springs and rubber bearings
- Damper struts and PU supplementary springs

## 2. Rear axle

- Springs and rubber bearings
- Shock absorbers and PU supplementary springs

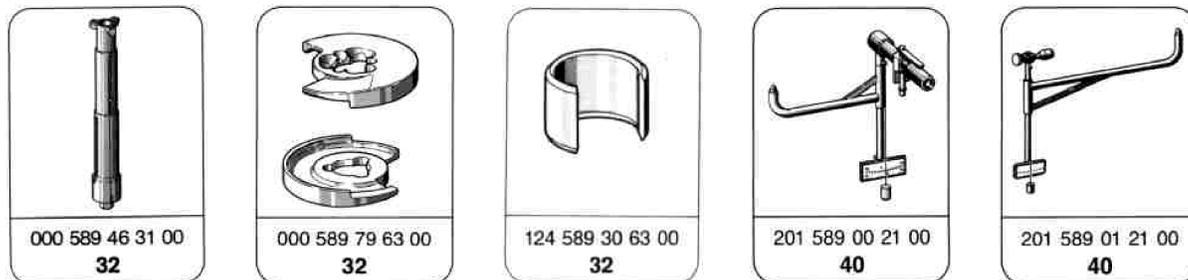
### Note

The conversion parts listed in section A differ depending on the vehicle model and special equipment installed. The assignment of conversion parts to the individual vehicle models/equipment can be obtained from section F.

## B. Application range of chassis kits

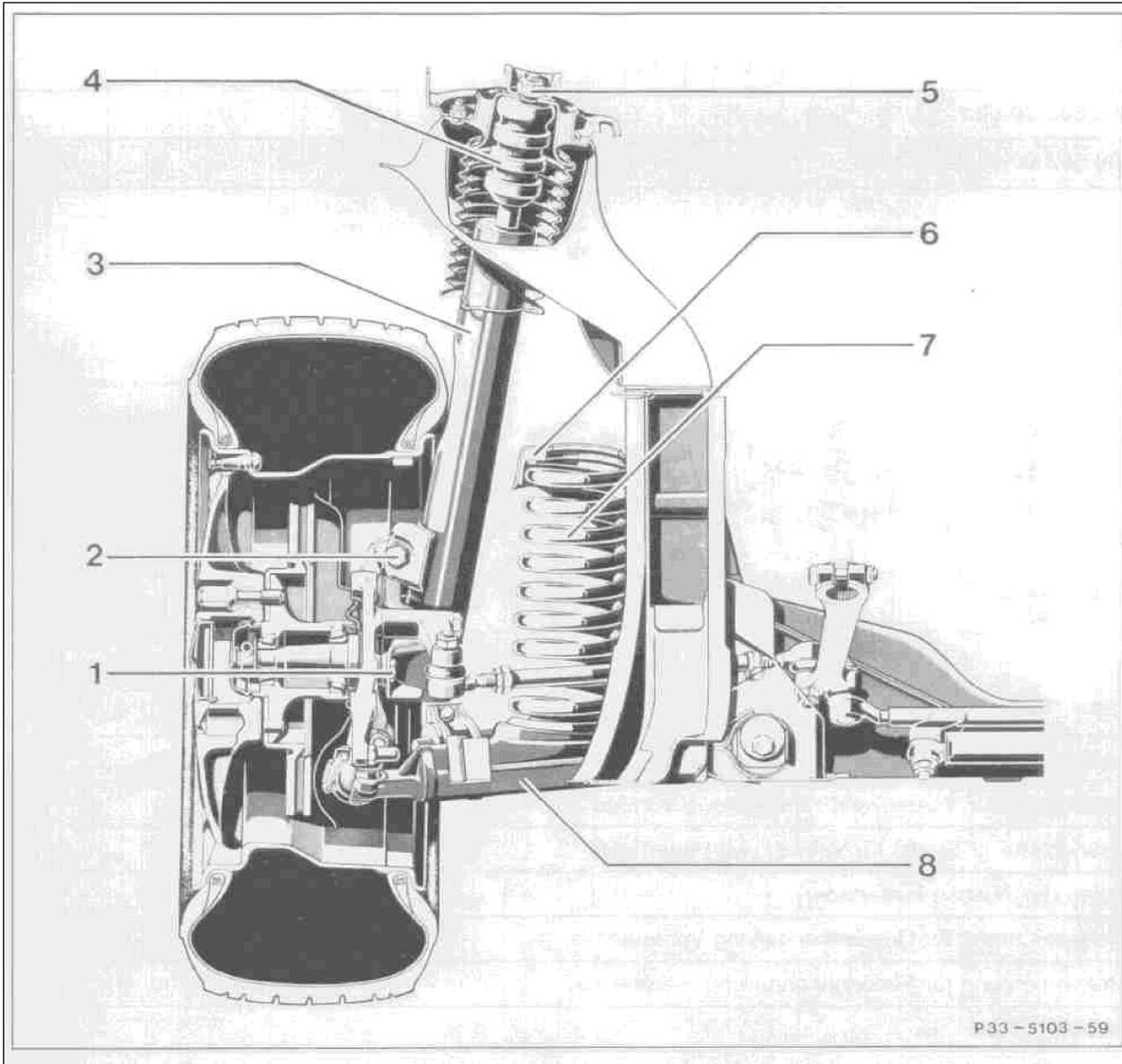
Chassis kit	4-cylinder model 124					5/6-cylinder model 124								
	020	021	023	043	120	026	030	031	050	051	125	128	130	133
B6 602 00 02	X	X	X	X	X									
B6 602 00 04						X	X	X	X	X	X	X	X	X

## C. Special tools



Description	Part no.
Clamp for front and rear spring (basic equipment)	000 589 46 31 00
Clamp plate (2 pieces) for front and rear springs	000 589 79 63 00
Sleeve (for removal of rear spring)	124 589 30 63 00

## D. Front axle conversion



- 1 Hexagon bolts - steering knuckle/damper strut, lower
- 2 Hexagon bolt - steering knuckle/damper strut, upper
- 3 Damper strut
- 4 PU supplementary spring

- 5 Upper damper mounting
- 6 Rubber bearing
- 7 Coil spring
- 8 Control arm

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The damper struts act simultaneously as rebound stops for the front wheels. Therefore only slacken the upper mounting when the vehicle is on its wheels, the control arm is supported or the spring clamp is installed.

## 1. Removing springs and damper struts

1.1 Raise vehicle at front and detach front wheels.

1.2 Install clamp 000 589 46 31 00 and clamp spring until the control arm is relieved of load. The spring clamp should engage at least 7½ spring coils.

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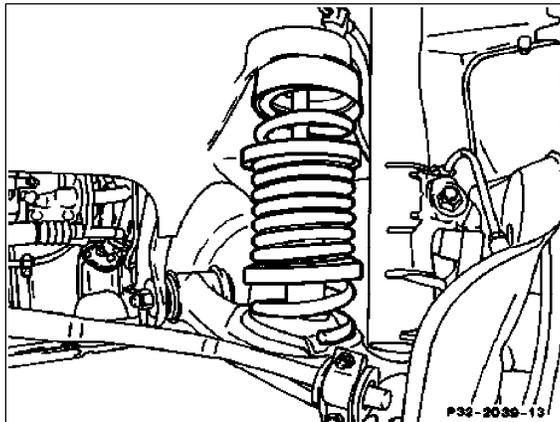
Ensure correct seating of clamp.

1.3 Support control arm using workshop jack.

1.4 Unscrew upper fixing nut on damper strut using deep-offset box wrench (WAF 22 mm), whilst steadying the piston rod using hexagon socket wrench (WAF 7 or 8 mm).

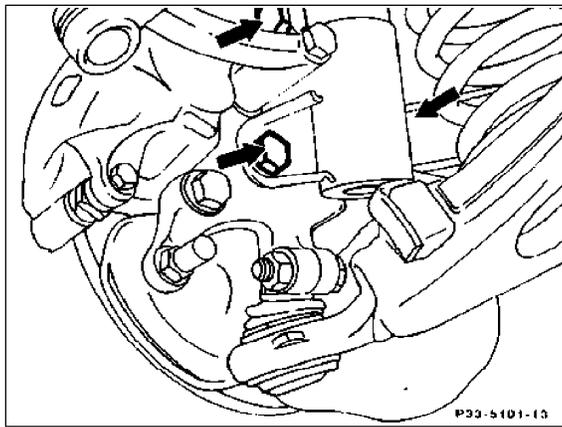
1.5 Lower control arm and remove clamped spring and rubber bearing.

1.6 Release spring carefully.



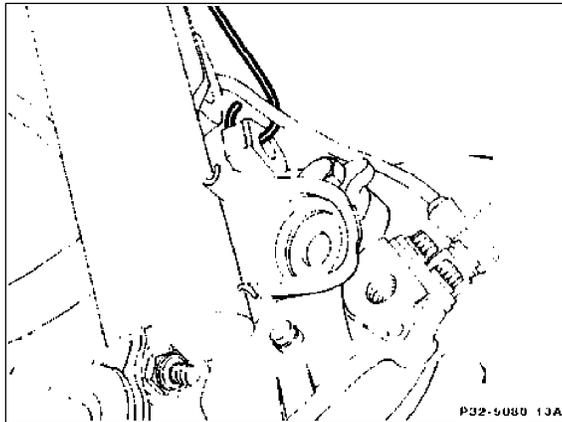
1.7 Detach lower damper strut mounting on steering knuckle. For this step, unscrew self-locking hexagon nut and then unscrew microencapsulated hexagon bolts.

1.8 Remove damper strut downwards.



1.9 Secure steering knuckle using suitable bracket.

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Protect brake hoses and electrical cables from damage.



## 2. Installing springs and damper struts

### Note

Always replace self-locking nuts and microencapsulated bolts.

2.1 Fit stop ring for dust sealing cup to damper strut and slide the PU supplementary spring onto the piston rod.

### Note

In conjunction with AMG 17-inch rims additional compression travel limiting washers (part no. H WA 124 323 01 44) are required. These are pushed onto the piston rod above the PU supplementary spring. Information can be obtained from the relevant installation instruction for rims, if required.

2.2 Install damper strut in the upper mounting bearing from below.

2.3 Mount steering knuckle on damper strut.

### Note

Guide pin on steering knuckle must engage in the bore on damper strut.

2.4 Screw in the two lower microencapsulated hexagon bolts and tighten slightly.

2.5 Install upper hexagon bolt and washers and new self-locking hexagon nut and tighten slightly.

2.6 Tighten the two lower bolts (tightening torque 110 Nm) then tighten the upper clamp connection (tightening torque 110 Nm).

**Note**

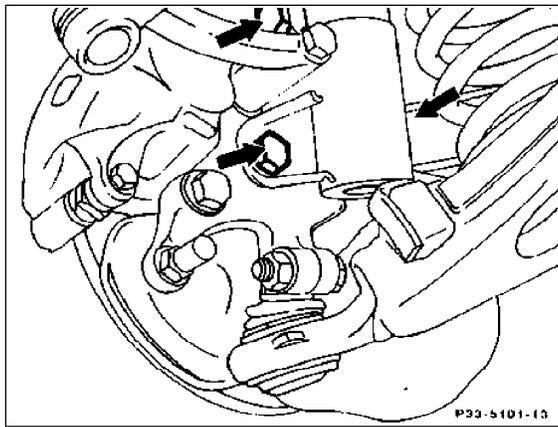
Note tightening sequence.

2.7 Raise control arm using workshop jack. Secure damper piston rod strut with self-locking hexagon nut and washer in the upper damper bearing, whilst steadying piston rod using hexagon socket wrench (WAF 7 or 8 Nm) (tightening torque 60 Nm).

2.8 Clamp coil spring using clamp 000 589 46 31 00 (at least 7½ coils).

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Ensure correct seating of clamp.



2.9 Install clamped spring and rubber bearing.

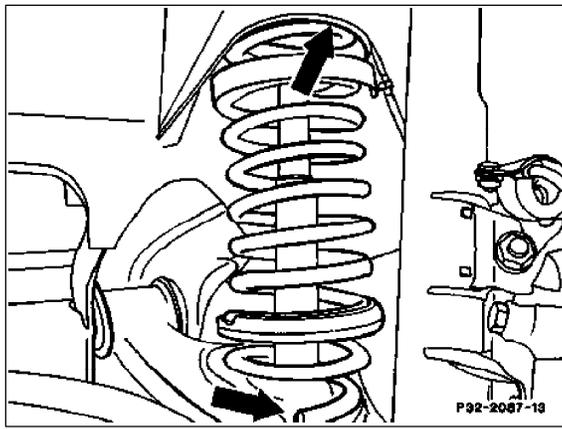
2.10 Release spring slowly.

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Ensure that upper rubber bearing and lower coil runout are correctly seated in the frame floor and control arm respectively.

2.11 Fit front wheels.

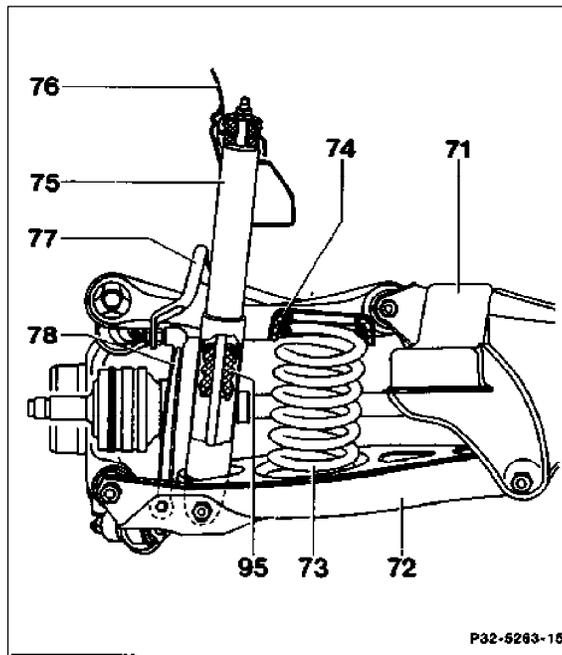
2.12 Lower vehicle and tighten wheel bolts in line with the rim manufacturer's specifications.



## E. Rear axle conversion

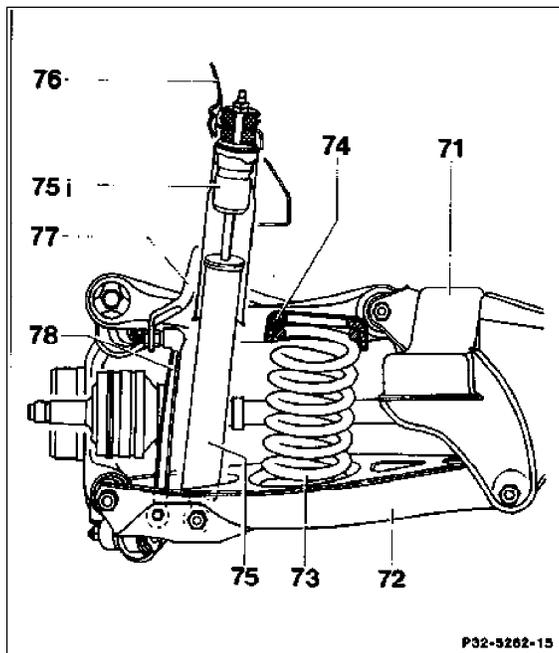
### Version up to 11/86

- 71 Rear axle carrier
- 72 Spring link
- 73 Rear spring
- 74 Rear spring rubber bearing
- 75 Shock absorber
- 76 Dome on frame floor
- 77 Torsion bar
- 78 Connecting rod for torsion bar
- 95 Stop buffer



**Version from 12/86**

- 71 Rear axle carrier
- 72 Spring link
- 73 Rear spring
- 74 Rear spring rubber bearing
- 75 Shock absorber
- 75i Stop buffer
- 76 Dome on frame floor
- 77 Torsion bar
- 78 Connecting rod for torsion bar



**Note**

AMG shock absorbers are produced with overhead piston rod (corresponds to version from 12/86). These can also be installed in earlier vehicles (version up to 11/86).

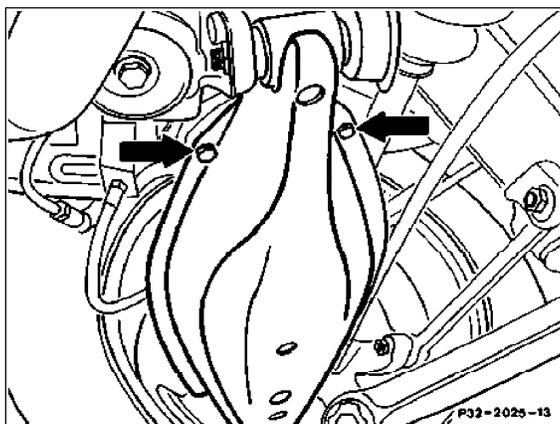
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The shock absorbers simultaneously act as rebound stops for the rear wheels. Therefore only slacken the upper mounting when the vehicle is on its wheels, the spring link is supported or spring clamp is installed.

**1. Removing springs and shock absorbers**

1.1 Raise vehicle at rear and detach rear wheels.

1.2 Unscrew hexagon bolts on spring link cover and remove spring link cover.



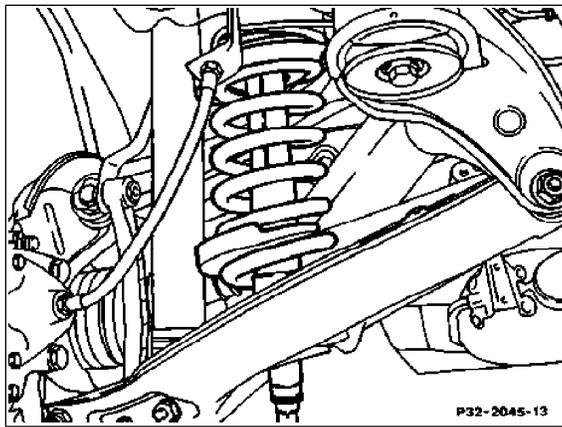
1.3 Install clamp 000 589 46 31 00 and clamp spring until the spring link is unloaded.  
The spring clamp should engage at least 5½ spring coils.

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Ensure correct seating of clamp.

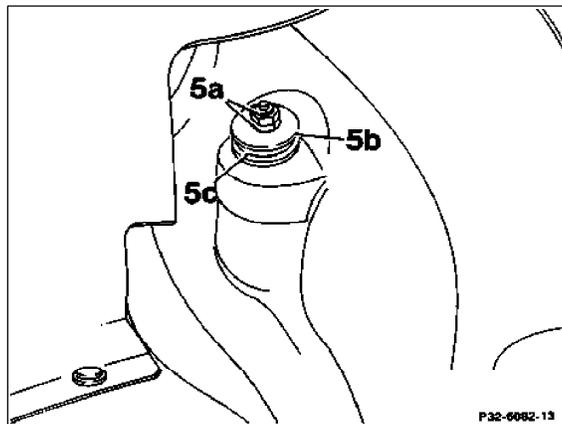
1.4 Support spring link using workshop jack.

1.5 Remove luggage compartment trim.



1.6 Unscrew upper fixing nuts (5a) on shock absorber.  
Remove washer (5b) and rubber ring (5c).

1.7 Lower spring link.

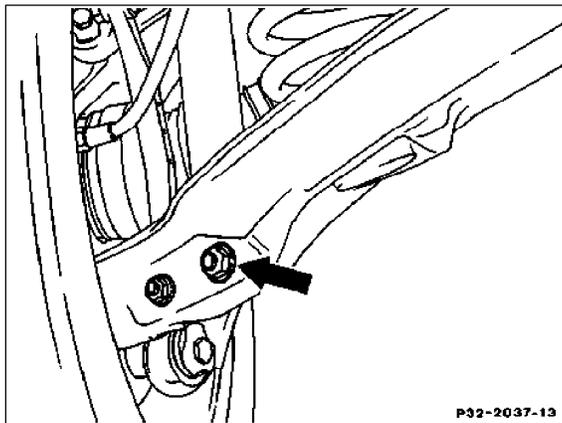


1.8 Unscrew hexagon nut on lower shock absorber mounting on spring link and press out fixing bolt.

1.9 Remove shock absorber from spring link.

1.10 Remove clamped spring and rubber bearing downwards.

1.11 Release spring carefully.



## 2. Installing springs and shock absorbers

### Note

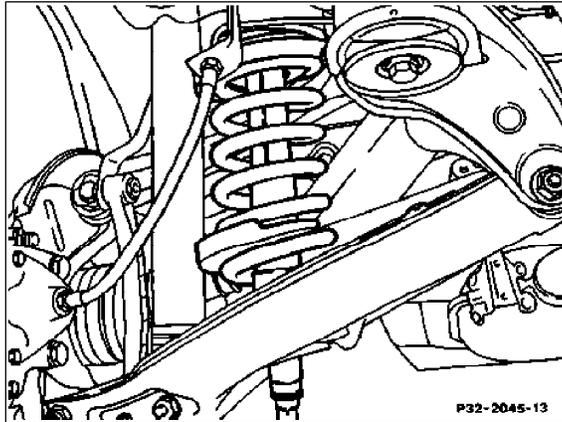
Always replace self-locking nuts and microencapsulated bolts.

2.1 Clamp coil spring using clamp  
000 589 46 31 00 (engage at least 5½ coils).

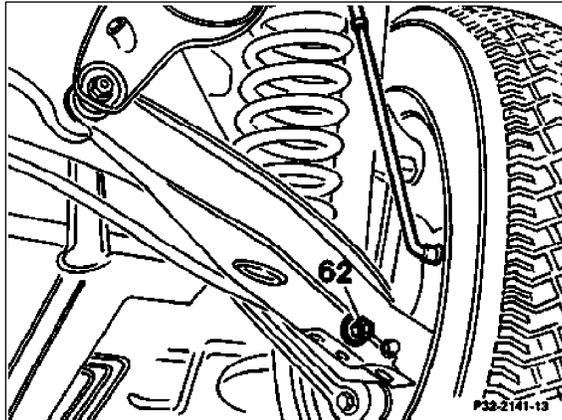
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Ensure correct seating of clamp.

2.2 Install clamped coil spring and rubber bearing.

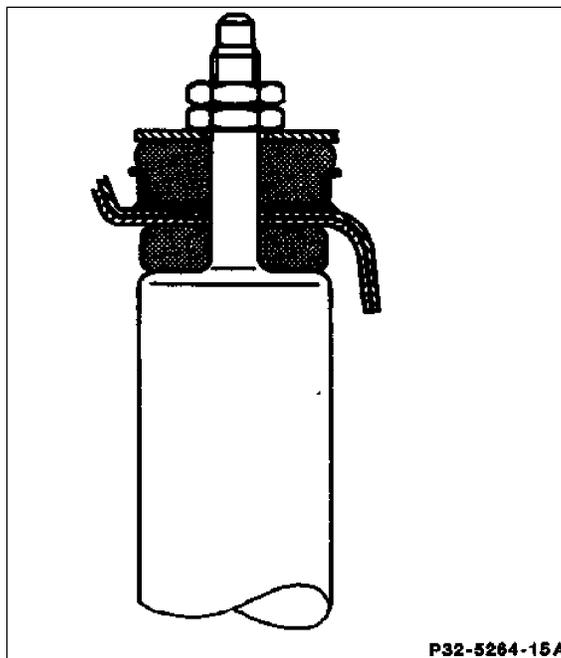


2.3 Fit upper rubber ring to shock absorber, install in spring link and mount lower screw connection (62) (tightening torque 65 Nm).



2.4 Assemble upper shock absorber mounting.  
Tighten lower of the two hexagons nuts (tightening torque 15 - 18 Nm) and then lock with the upper nut (tightening torque 30 Nm).

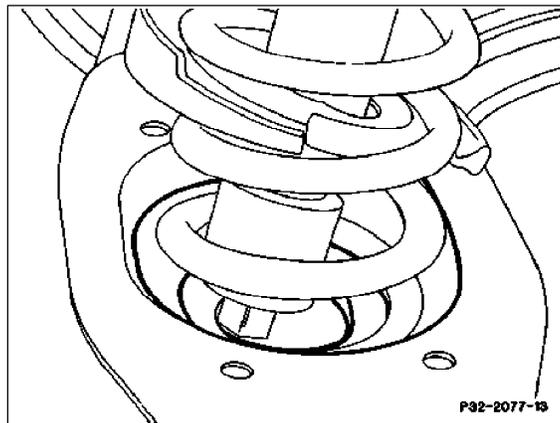
2.5 Install luggage compartment trim.



2.6 Release coil spring slowly.

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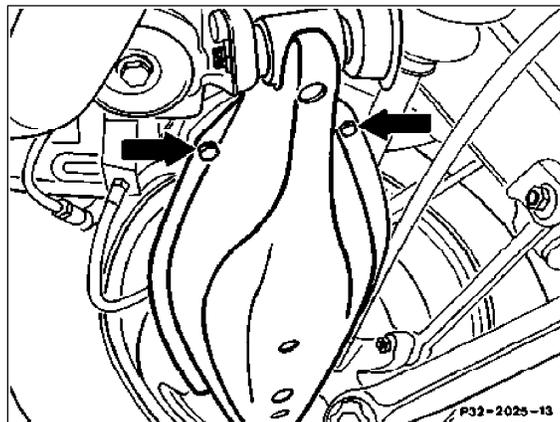
Ensure that upper rubber bearing and lower coil runout are correctly seated in the frame floor and control arm respectively.



2.7 Fit spring link cover.

2.8 Fit rear wheels.

2.9 Lower vehicle and tighten wheel bolts in line with the rim manufacturer's specifications.



## F. Spring adjustment

Depending on the vehicle model and special equipment, different rubber bearings are required when converting to AMG sports chassis.

Should the vehicle level specified in section G (axle adjustment values) not be achieved, thinner or thicker rubber bearings can also be installed.

If required it is also possible to install different rubber bearings on the left and right-hand side .

## 1. Front axle rubber bearing

### 1.1 Rubber bearing points rating system on sedans and coupés

Model/ special equipment	4-cylinder model 124					5/6-cylinder model 124								
	020	021	023	043	120	026	030	031	050	051	125	128	130	133
Basic number of points	24	23	26	31	24	40	41	50	39	48	35	40	45	56
Air conditioner or automatic climate control	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Automatic transmission	4	4	4	4	5	4	4	4	4	4	5	4	5	5
Auxiliary heater	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Tilting/sliding sun- roof	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Level control system or ASD	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Larger battery	2	2	2	2	2	2	2	2	2	2	2	2	2	2

#### Note

In order to ensure the specified control arm positions of the front axle on models 124.031/051/133 the special equipment points rating of 69 must not be exceeded.

### 1.2 Allocation of front springs - rubber bearings

Model	Total number of points	Front spring Homologation no.	Height of spring-rubber bearing (mm) depend. on colour marking of spring	
			blue	red
4-cyl.	18 - 27	001 124 321	8	13
	28 - 39	001 124 321	13	18
	40 - 53	001 124 321	18	23

5/6-cyl.	35 - 46	002 124 321	8	13
	47 - 58	002 124 321	13	18
	59 - 69	002 124 321	18	23

### 1.3 Front spring rubber bearing

Height mm	Number of lugs "n"	Part no.
8	1	201 321 09 84
13	2	201 321 10 84
18	3	201 321 11 84
23	4	201 321 12 84

## 2. Rear axle rubber bearings

### 2.1 Rubber bearing points rating system on sedans and coupés

Model/ special equipment	4-cylinder model 124					5/6-cylinder model 124								
	020	021	023	043	120	026	030	031	050	051	125	128	130	133
Basic number of points	20	20	23	25	24	26	26	28	28	31	24	26	26	28
Refrigerator box	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Telephone	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Tilting/sliding sun-roof	3	3	3	3	3	3	3	3	3	3	3	3	3	3
ASD	3	3	3	3	3	3	3	3	3	3	3	3	3	3

### 2.2 Allocation of rear springs - rubber bearings

Model	Total number of points	Rear spring without level control	Height of spring rubber bearing (mm) depend. on colour marking of spring	
		Homologation no.	blue	red
4-cyl.	20 - 29	001 124 322	8	13
	30 - 40	001 124 322	13	18
5/6-cyl.	24 - 34	001 124 322	8	13
	35 - 46	001 124 322	13	18

### 2.3 Rear spring rubber bearings

Height mm	Number of lugs "n"	Part no.
8	1	201 325 09 44
13	2	201 325 10 44

## G. Axle adjustment values

### 1. Front axle

Camber	Wheels in straightahead position with 0 toe-in	- 0° 50'	+10' - 20'
	Permitted difference between left and right	0° 20'	
Caster	Wheels in straightahead position with 0 toe-in	10° 40'	± 30'
	With steering at full lock	10° 25'	± 30'
Toe-in	Permitted difference between left and right	0° 30'	
	Total	0° 20'	± 10'
Toe-out on turns	at 20° steer angle 1)	- 0° 55'	± 30'
Control arm position		- 10 mm	+10 mm - 15 mm

1) No provision for adjustment

### 2. Rear axle

Camber	Ready-to-drive, unladen 1)	- 1° 45'	± 30'
Toe-in	Total	0° 25'	+10' - 05'
Spring link position	without level control system	-10 mm	+10 mm - 12 mm

1) No provision for adjustment

#### Note

- Perform chassis measurement with vehicle in ready-to-drive condition.
- Tolerances apply only for test.
- Try to achieve nominal values during adjustment.

## H. Information for ordering replacement parts

The parts needed for installation can be obtained under the following part numbers:

### 4-cylinder sedan [Kit not shown on 2003 accessory price list](#)

Quantity	Designation	Part no.
1	Chassis kit	B6 602 00 02 1)
2	Damper strut	H WA124 320 01 30
2	Shock absorber	H WA124 320 01 31
2	Front spring	H WA124 321 02 04
2	Rear spring	H WA124 324 01 04

[Typo - Front spring should be 124 321 01 04](#)

1 Complete kit

### 5/6-cylinder sedan [2003 accessory pricing = \\$1100 EUR \(approx. \\$1350 USD\) for complete kit](#)

Quantity	Designation	Part no.
1	Chassis kit	B6 602 00 04 1)
2	Damper strut	H WA124 320 01 30
2	Shock absorber	H WA124 320 01 31
2	Front spring	H WA124 321 01 04
2	Rear spring	H WA124 324 01 04

[Typo - Front spring should be 124 321 02 04](#)

1 Complete kit

Available from: Plant 06 (ZVL Germersheim)

Note: Late 124 chassis (approx. 1993-up) with AMG suspension used Mercedes Sportline springs (non-AMG) with AMG struts, and AMG shocks (non-SLS) or hydro spring legs (SLS). The Mercedes Sportline springs are much cheaper than the HWA- prefix AMG springs and there may not be a significant difference between them.

However, the late AMG chassis with MB springs still used the HWA-prefix AMG shocks/struts, which indicates there may be some functional difference between the MB Sportline shocks/struts, and the genuine AMG shocks/struts. (??) The AMG shocks/struts typically cost at least double what the Sportline items cost, when purchased separately (not part of the B6- accessory kit number.)

To order the kits, either contact AMG directly in Germany, or try: <http://www.speed-autoteile.com/>