

Installation instructions

## **Conversion to AMG sports suspension Model 124.036**

**32.06**

USA versions of the vehicle are excluded.

Trailer coupling not permissible as special equipment.

These installation instructions apply to mounting of the following suspension kit:  
B6 602 0040

The installation instructions are divided up into the following sections:

- A. AMG sports suspension
- B. Installation of AMG sports suspension
- C. Test and adjustment values
- D. Appendix to installation instructions

### **Note**

An entry in the vehicle documents is required in the Federal Republic of Germany. In addition, a copy of the respective sample report and confirmation from the Mercedes-Benz workshop must be submitted to the TÜV/TÜA (refer to form in appendix).

## **A. AMG sports suspension**

The following parts of the suspension have been tuned to a sporting driving style:

- Front axle/rear axle springs
- Front axle damper strut
- Rear axle spring strut
- Front axle torsion bar

The vehicle level has been lowered relative to the standard production version.

Test and adjustment values can be obtained from the appendix to these installation instructions.

### **Trailer operation**

Trailers may not be operated in conjunction with AMG sports suspension.

### **Wheel/tire combination**

The following wheel/tire combinations can be used.

#### **1. AMG 17 inch tires**

Tire dimension: 245/45 ZR 17  
Recommended tire brands can be obtained from the Service Information "summer tires in conjunction with AMG special equipment and AMG light alloy wheels from the range of accessories".

Wheel dimension: 8 1/2 J × 17 H2 ET 30  
(multi-piece AMG light-alloy disk wheel, forged)

All wheel-related details such as tightening torques, wheel bolts, inflation pressures, etc. are listed in installation instructions 40.23 "Conversion to 245/45 ZR 17 tires and 8 1/2 J × 17 H2 ET 30 disk wheel".

#### **2. MB 16 inch standard production tires**

### **Use of snow chains**

Snow chains may only be used in conjunction with MB standard production tires.

## **B. Installation of AMG sports suspension**

### **1. Assignment of front and/or rear springs and front damper struts and rear spring struts**

Model	Front axle		Rear axle	
	Spring part no.	Damper strut part no. (scope of supply) 1)	Spring part no.	Spring strut part no. (scope of supply) 1)
124.036	H WA124 321 04 04	H WA124 320 15 30	H WA124 324 04 04	H WA124 320 03 13

1) Damper or spring strut including fixing material

## 2. Removal and installation of suspension parts

- Front axle torsion bar
- Front axle/rear axle springs
- Front axle damper strut

Proceed in accordance with MB guidelines.

For this, refer to current repair microfilm  
"Steel suspension, model 124" - main group 32

The assignment of springs or spring rubber mounts can be obtained from the appendix to these installation instructions.

### Notes on mounting the AMG damper strut

The standard production front axle stop buffer of the 500 E continues to be used. Check component for any damage and replace with a new part if required.

M

Note revised tightening torque for the bolted connection "front axle damper strut to upper steering knuckle" in the case of thread dimension M14 × 1.5 × 45-12.9.

Tightening torque MA = 200 ± 10 Nm

### **3. Removal and installation of rear axle spring strut**

Proceed in accordance with MB guidelines.

For this, refer to current repair microfilm  
"Level control, model 124" - main group 32

### **4. Vehicle level**

If, in individual cases, the vehicle level at the front or rear axle should be outside the specified tolerance band after the installation of the AMG sports suspension, despite correct assignment of springs and spring rubber mounts, the vehicle level is to be retroactively corrected by means of spring rubber mounts.

The vehicle level is always to be checked at the front or rear axle in the ready-to-drive condition.

#### **Front axle**

A 5 mm change at the front spring rubber mount (corresponds to one stud) raises or lowers the vehicle level by approx. 9 mm.

#### **Rear axle**

A 5 mm change at the rear spring rubber mount (corresponds to one stud) raises or lowers the vehicle level by approx. 8 mm.

The nominal values can be obtained from the appendix to these installation instructions.

### **5. Chassis measurement**

Proceed in accordance with MB guidelines.

For this, refer to the current repair microfilm  
"Chassis measurement, model 124" - main group 40

**Note**

The adjustment values can be obtained from the appendix to these installation instructions.

**M**

The AMG sports suspension may only be installed in vehicles with the reinforced "front axle damper strut to upper steering knuckle" bolted connection with the hexagon socket bolt of size M14 × 1.5 × 45-12.9 (previously: hexagon bolt M12 × 1.5 × 40-12.9).  
Production breakpoint of the reinforced bolted connection as of approx. mid 02/92 with chassis no. WDB 124 036 1B 712 320.

**Note**

Vehicles with an earlier production date must be converted appropriately.  
Basically this involves replacing the left and right steering knuckles.

**C. Test and adjustment values****Model 124.036****Special equipment "AMG sports suspension"****Vehicle level in mm**

Model	Front axle ready-to-drive 1)	Rear axle with level control	
		ready-to-drive 1)	laden (control point)
124.036	- 20 ± 10	- 20 ± 10	- 40 ± 2 2) - 40 ± 10 3)

1) Ready-to-drive values apply to basic pressure in spring struts.

2) Values for adjustment.

3) Values for test. The difference in vehicle level between adjustment and test results from the free play of the level controller which does not, however, affect the control accuracy when driving.

**Wheel alignment at the front axle - ready-to-drive**

**Model 124.036**

Camber 1)	Wheels in straight ahead position (toe-in value 0)	- 1°	+10' - 20'	(- 1.00°	+0.15° ) - 0.35°
	Permissible difference between left and right	0° 20'		(0.35°)	
Caster 1)	Wheels in straight ahead position (toe-in value 0)	10° 50'	± 30'	(10.85°	± 0.50°)
	Over steer angle	10° 35'	± 30'	(10.60°	± 0.50°)
	Permissible difference between left and right	0° 30'		(0.50°)	
Toe-in 1) (Front wheels pressed apart with 90-110 N)		0° 20'	± 10'	(0.35°	± 0.15°)
Toe difference angle for 20° angle of the wheel on the inside of the curve 2)		- 0° 55'	± 30'	(0.90°	± 0.50°)
Maximum permissible steer angle of the wheel on the inside of the curve 3)		40°		(40.00°)	
Ball point position 4)	Pitman arm	26.5	± 2 mm		
	Steering idler arm	23.5	± 2 mm		
Permissible height deviation of the ball point position between the pitman arm and steering idler arm		3 mm			

Values in brackets in decimal degrees

- 1) Tolerances only for test. Aim for nominal value during adjustment.
- 2) Value without toe-in.
- 3) On the wheel on the inside of the curve, a 7° to 11° smaller steer angle results from the toe difference angle.
- 4) Correction upwards and downwards on the steering idler arm by inserting or removing a washer.

**Wheel alignment at the rear axle****Model 124.036**

Toe-in (ready-to-drive level) 1)	0° 25'	+10' - 05'	(0.40°	+0.15° ) - 0.10°
Permissible range of toe-in per wheel 2) (Ready-to-drive level) between	0° 30' and - 0° 05' (0.50° and - 0.10°)			

Values in brackets in decimal degrees

- 1) Values for adjustment, toe-in evenly distributed between both wheels.
- 2) Values for test. Correction not required.

**Camber values at rear axle at vehicle level****Model 124.036**

Camber (°)		Vehicle level (mm)	
- 0° 15'	± 30'	(- 0.25° ± 0.50°)	+50
- 0° 30'	± 30'	(- 0.50° ± 0.50°)	+40
- 0° 45'	± 30'	(- 0.75° ± 0.50°)	+30
- 1°	± 30'	(- 1.00° ± 0.50°)	+20
- 1° 15'	± 30'	(- 1.25° ± 0.50°)	+10
- 1° 30'	± 30'	(- 1.50° ± 0.50°)	0
- 1° 45'	± 30'	(- 1.75° ± 0.50°)	- 10
- 2°	± 30'	(- 2.00° ± 0.50°)	- 20
- 2° 15'	± 30'	(- 2.25° ± 0.50°)	- 30
- 2° 30'	± 30'	(- 2.50° ± 0.50°)	- 40

Values in brackets in decimal degrees

### Front axle rating system for model and version

#### Model 124.036

Basic rating	80
Auxiliary heater	4
Sliding roof	3
Sound system	2
Driver and front passenger airbag	2
Undershield	1
Telephone installation parts	1
Fire extinguisher	1
Electrically adjustable steering column	1

### Survey of front axle spring rubber mounts

Part no.	Number of studs	Height "s" (mm)
A201 321 09 84	1	8
A201 321 10 84	2	13
A201 321 11 84	3	18
A201 321 12 84	4	23

## Assignment of front springs to spring rubber mounts

Total rating	Front spring part no.	Spring rubber mount part no. for front springs	
		Load group - blue	Load group - red
up to 86	H WA124 321 04 04	A201 321 09 84	A201 321 10 84
up to 92	H WA124 321 04 04	A201 321 10 84	A201 321 11 84
as of 93	H WA124 321 04 04	A201 321 11 84	A201 321 12 84

## Rear axle rating system for model and version

### Model 124.036

Basic rating	61
Refrigerator box	6
Telephone installation parts	3
Sliding roof	3
CD changer in trunk	3
Sound system	2
Electric roller-blind for rear window	2

## Survey of rear spring rubber mounts

Part no.	Number of studs	Height "s" (mm)
A201 325 09 44	1	8
A201 325 10 44	2	13
A201 325 11 44	3	18

## Assignment of rear springs to spring rubber mounts

Total rating	Front spring part no.	Spring rubber mount part no. for front spring	
		Load group - blue	Load group - red
up to 67	H WA124 324 04 04	A201 325 09 44	A201 325 10 44
up to 73	H WA124 324 04 04	A201 325 10 44	A201 325 11 44
as of 74	H WA124 324 04 04	A201 325 11 44	-