Preliminary work:
General checkups and initial jobs for chassis alignment (40–200)
Positioning of wheels (40–210)
Alignment of vehicle in relation to measuring pit and measuring hoist (40–220)
Attach quick-clamping holder for wheel reflecting mirrors (40–230)
Checking vehicle level on rear axle:
- without level controller (40–300)
- with level controller (40–310)

A. Data

Camber of rear wheels at vehicle level

Semi-trailing arm rear suspension		Semi-trailing arm rear suspension with anti-squat geometry	
Semi-trailing arm position mm	corresponds to camber of rear wheels	Semi-trailing arm position mm	corresponds to camber of rear wheels
65	+1° 30′ ±30′ (+1.50° ±0.50°)	160	+1° 30′ ±30′ (+1.50° ±0.50°)
60	+1° 15′ ±30′ (+1.25° ±0.50°)	155	+1° 15′ ±30′ (+1.25° ±0.50°)
55	+1° ±30′ (+1.00° ±0.50°)	150	+1° ±30′ (+1.00° ±0.50°)
50	+0° 45′ ±30′ (+0.75° ±0.50°)	145	+0° 45′ ±30′ (+0.75° ±0.50°)
45	+0° 30′ ±30′ (+0.50° ±0.50°)	140	+0° 30′ ±30′ (+0.50° ±0.50°)
40	+0° 15′ ±30′ (+0.25° ±0.50°)	135	+0° 15′ ±30′ (+0.25° ±0.50°)
35	0° ±30′ (0.00° ±0.50°)	130	0° ±30′ (0.00° ±0.50°)
30	−0° 15′ ±30′ (− 0.25° ±0.50°)	125	−0° 15′ ±30′ (− 0.25° ±0.50°)
25	−0° 30′ ±30′ (− 0.50° ±0.50°)	120	−0° 30′ ±30′ (− 0.50° ±0.50°)
20	−0° 45′ ±30′ (− 0.75° ±0.50°)	115	−0° 45′ ±30′ (− 0.75° ±0.50°)
15	−1° ±30′ (− 1.00° ±0.50°)	110	−1° ±30′ (− 1.00° ±0.50°)
10	−1° 15′ ±30′ (− 1.25° ±0.50°)	105	−1° 15′ ±30′ (− 1.25° ±0.50°)
5	−1° 30′ ±30′ (− 1.50° ±0.50°)	100	−1° 30′ ±30′ (− 1.50° ±0.50°)
0	−1° 45′ ±30′ (− 1.75° ±0.50°)	95	−1° 45′ ±30′ (− 1.75° ±0.50°)
−5	−2° ±30′ (− 2.00° ±0.50°)	90	−2° ±30′ (− 2.00° ±0.50°)
−10	−2° 15′ ±30′ (− 2.25° ±0.50°)	85	−2° 15′ ±30′ (− 2.25° ±0.50°)
−15	−2° 30′ ±30′ (− 2.50° ±0.50°)	80	−2° 30′ ±30′ (− 2.50° ±0.50°)
−20	−2° 45′ ±30′ (− 2.75° ±0.50°)	75	−2° 45′ ±30′ (− 2.75° ±0.50°)

Note
Values in parenthesis are decimal degrees.

Total toe-in of rear wheels at vehicle level			
Mod.	Total toe-in	Vehicle level (mm) Diagonal swing axle	
		Without anti-squat geometry	with anti-squat geometry
126	0°25′ $^{+10'}_{-15'}$ (0.42° $^{+0.17°}_{-0.25°}$) or 3 $^{+1}_{-2}$ mm	0–35	95–130
	0°30′ $^{+10'}_{-15'}$ (0.50° $^{+0.17°}_{-0.25°}$) or 3.5 $^{+1}_{-2}$ mm	35–50	130–145

Note
Values in parenthesis are decimal degrees

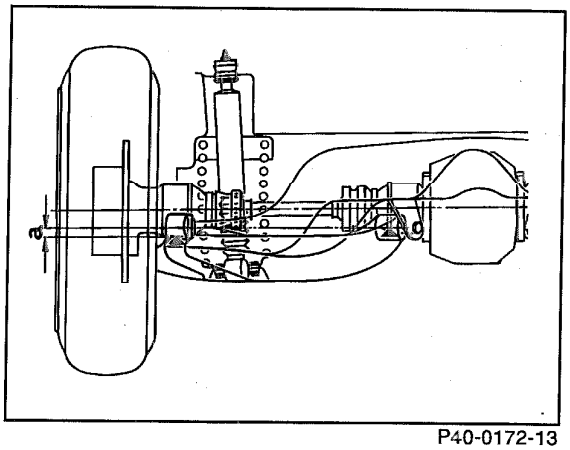
Note

If a measuring table with coordinate bores is available, the rear axle can be checked completely, as well as the rear axle carrier and the semi-trailing arms individually, in combination with special mounts. The measuring system corresponds to that of chassis measurement (refer to rear axle wheel guide 35–410).

B. Camber

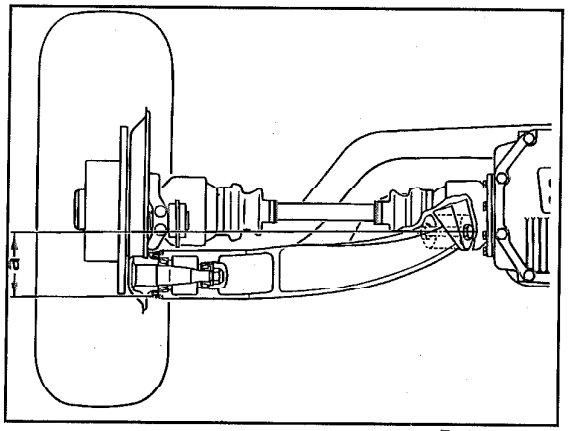
The rear wheel camber results from the vehicle level (semi-trailing arm position "a").
A corresponding camber is attributed to a vehicle (refer to table "Data").

If the measured rear wheel camber is not in agreement with the prevailing semi-trailing arm position, the difference in level between the left hand and the right hand vehicle side (max. 8 mm) may be rather large, or the rear axle carrier or/and a semi-trailing arm may be distorted. Experience has shown that distortions caused by accidents will also influence toe-in.



P40-0172-13

Diagonal swing axle with anti-squat geometry
a = Difference in height between inner semi-trailing arm bearing



P40-0113-13

Diagonal swing axle with anti-squat geometry
a = Difference in height between inner semi-trailing arm bearing (A) and bottom edge of protective ring of wheel carrier bearing on semi-trailing control arm (B).

C. Toe-in

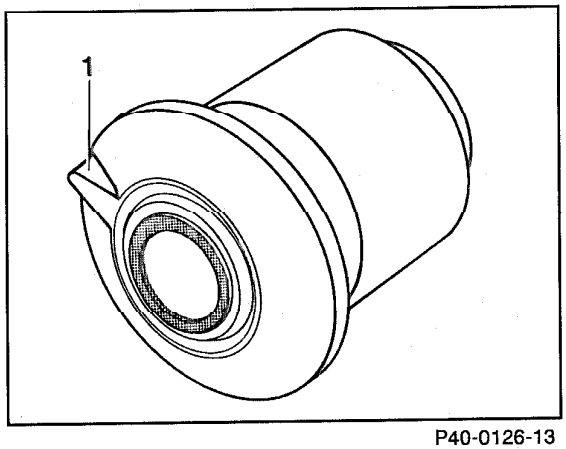
Toe-in results from the interdependent location of the rear axle carrier, semi-trailing arm and the body of the vehicle. The toe-in value depends in certain limits on the vehicle level on the rear axle.

Decisive for evaluation is the total toe-in which results from the values on left hand and right hand wheel. If the permissible values (damage following accident) are exceeded, both distortions of the respective semi-trailing arm as well as of the rear axle carrier may be the cause.

Correction

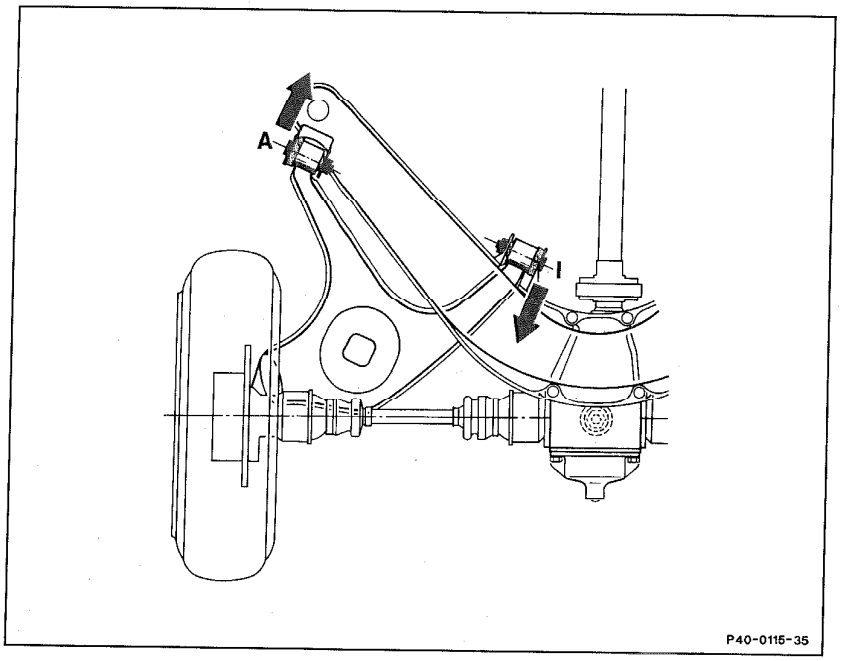
The toe-in can be corrected, if deviations are minimal, by installing eccentric rubber mounts 123 352 07 65 into semi-trailing arms.

Possible alteration of toe-in per wheel outside and inside approx. 0° 10'.



P40-0126-13

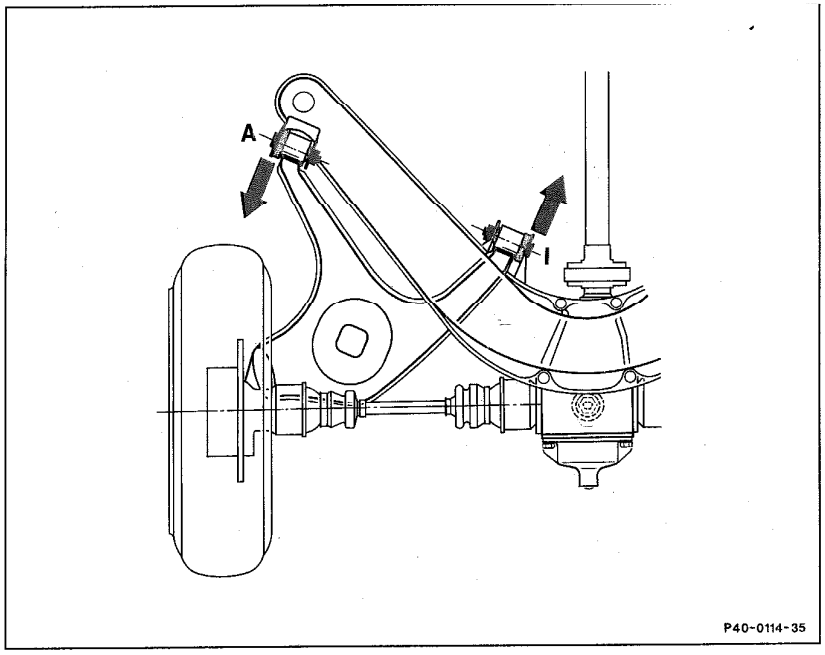
1 Arrow marking direction for installation



P40-0115-35

Increase of toe-in
Installation direction of rubber mounts:

Outer rubber mount (A)	= arrow points to the front
Inner rubber mount (I)	= arrow points to the rear



P40-0114-35

Reduction of toe-in
Installation direction of rubber mounts:

Outer rubber mount (A)	= arrow points to the rear
Inner rubber mount (I)	= arrow points to the front