# Fitting of Tires

| Job No. |
| --- |
| 40–1 |

On Models 180 to 220 SE the tires are fitted in the same way as on Model 190.

# Balancing of Wheels

| Job No. |
| --- |
| 40–2 |

**Models 180, 180 a, 180 D, 190 D, 190 SL, 220 a, 219, 220 S, 220 SE**

The wheels are balanced in the same way as on Model 190.

**Models 180 b, 180 Db, 190 Db**

The wheels are balanced in the same way as on Model 190 b.

# Adjustment of Wheels

| Job No. |
| --- |
| 40–3 |

On Models 180 to 220 SE the wheels are adjusted in the same way as on Model 190. The wheel adjustment data differ for the individual models (see table overleaf).

## Wheel Adjustment Data

| | 180, 180 a, 180 b, 180 D, 180 Db, 190, 190 b, 190 Db | 190 SL | 219, 220 a, 220 S, 220 SE | Remarks |
|---|---|---|---|---|
| Normal load | 6 x 65 + 45 kg | 3 x 65 + 30 kg | 6 x 65 + 45 kg | On Model 220 S Convertible and Coupe and on Model 220 SE Convertible and Coupé load 5 x 65 + 40 kg |
| Front axle | | | | |
| Wheel bearing end play on adjustment, mechanical | 0—0.005 mm | | | |
| Permissible total play, optical | 0° 10' | | | |
| Permissible difference of axle positioning distance from right to left | 5 mm | | | Measurement by Master Gage 180 589 02 23 |
| Pivot point distance | 34 ± 2 mm | | 30 ± 2 | Measure the difference between the axes of the pivot pins for the lower control arm and the lower edge of the steering gear arm and the steering relay arm |
| Permissible deviation of height between steering gear arm and steering relay arm | 2 mm | | | |
| Toe-in normally loaded — optical | 0—2 mm | | | The toe-in must be measured with the wheels in their neutral position |
| Toe-in normally loaded — mechanical | 0°—0° 20' | | | |
| Camber | 0° up to + 1° | | | Camber on both sides as nearly identical as possible. Maximum permissible difference 30'. Optimal camber + 0° 20' to 0° 40' under normal load |
| Caster — curb condition | 2° 50' — 4° | 3° — 4° | 2° 50' — 4° | Maximum permissible difference between right and left 30' |
| Caster — normally loaded | 3° 10' — 4° 10' | 3° 30' — 4° 30' | 3° 30' — 4° 10' | |
| Track angularity at 20° lock of inside wheel | approx.—2° 30' | | approx.—0° 30' | At left or right lock as nearly identical as possible, maximum permissible difference 30' |
| Rear Axle | | | | |
| Permissible divergence from center position | 2 mm | | | Measured with Master Gage 180 589 08 21. Start from center of the connecting pin |
| Permissible difference of axle positioning distance from left to right | 3 mm | | | Measure with Master Gage 180 589 08 23 from the check bore on the chassis base panel to the bores in the axle tubes |
| Permissible rear axle misalignment | 0° 25' | | | |
| Permissible toe-in (+) or toe-out (—) under normal load — mechanical | ± 2 mm | | | |
| Permissible toe-in (+) or toe-out (—) under normal load — optical | ± 0° 20' | | | |
| Permissible wheel base difference from left to right | 5 mm | | | |

## Rear Wheel Camber of Cars with Standard Rear Springs

| Model | Normal load kg | left | | | right | | |
|---|---|---|---|---|---|---|---|
| | Rear axle load kg | Rear spring Part No. | Camber curb condition | Camber normally loaded | Rear spring Part No. | Camber curb condition | Camber normally loaded |
| 180<br>180 D | 6 x 65 + 45 / 880 | 120 324 15 04 | approx. + 1° 45' | — 3° up to — 4° | Values as for "left" (Twin-jointed rear axle) | | |
| 180<br>180 D<br>190 | 6 x 65 + 45 / 880 | 121 324 20 04 | + 1° up to + 2° | — 3° 40' up to — 4° 40' | 121 324 21 04 | + 1° 10' up to + 2° 10' | — 4° 10' up to —5° 10' |
| 180, 180 a, 180 b<br>180 D, 180 Db<br>190, 190 D, 190 Db | 6 x 65 + 45 / 880 | 105 324 00 04 | + 1° 10' up to + 2° 10' | — 3° 30' up to — 4° 30' | 105 324 01 04 | + 1° 20' up to + 2° 20' | — 4° up to 5° |
| 190 SL | 3 x 65 + 30 / 700 | 121 324 18 04 | 0° up to + 1° | — 2° 10' up to — 3° 10' | 121 324 19 04 | 0° up to + 1° | — 2° 30' up to — 3° 30' |
| 219 | 6 x 65 + 45 / 900 | 105 324 00 04 | + 1° 10' up to + 2° 10' | — 3° 30' up to — 4° 30' | 105 324 01 04 | + 1° 20' up to + 2° 20' | — 4° up to — 5° |
| 220 a, 220 S<br>220 SE | 6 x 65 + 45 / 940 | 180 324 15 04 or 105 324 00 04 | + 1° 10' up to + 2° 10' | — 3° 30' up to — 4° 40' | 180 324 10 04 or 105 324 01 04 | + 1° 20' up to + 2° 20' | — 4° up to — 5° |
| 220 S and SE Convertible and Coupé | 5 x 65 + 40 / 925 | 180 324 15 04 or 105 324 00 04 | + 0° 30' up to + 1° 30' | —3° 10' up to — 4° 10' | 180 324 16 04 or 105 324 01 04 | + 0° 40' up to + 1° 40' | — 3° 40' up to — 4° 40' |
| **Rear Wheel Camber of Cars with Export Rear Springs and Springs for Bad Roads** | | | | | | | |
| 180 D, 180 Db<br>190, 190 D, 190 Db<br>180, 180 a, 180 b | 6 x 65 + 45 / 880 | 180 324 26 04 | + 2° 20' up to + 3° 20' | — 0° 50' up to — 1° 50' | 180 324 27 04 | + 2° 30' up to + 3° 30' | — 1° up to — 2° |
| 219, 220 a<br>220 S<br>220 SE | 6 x 65 + 45 / 940 | 180 324 26 04 | + 2° up to + 3° | — 1° 30' up to — 2° 30' | 180 324 27 04 | + 2° 10' up to + 3° 10' | — 1° 40' up to — 2° 40' |
| **Rear Wheel Camber of Cars with Rear Springs for Police Radio Cars and Ambulances** | | | | | | | |
| 180, 180 a, 180 b<br>180 D, 180 Db<br>190, 190 D, 190 Db<br>219, 220 a, 220 S | 710 curb condition 1100 maximum load | 121 324 12 04 | + 1° up to + 2° | — 2° 30' up to — 3° 30' | 121 324 13 04 | + 1° 10' up to + 2° 10' | — 2° 50' up to — 3° 50' |
| **Rear Wheel Camber of Cars with Rear Springs for Special-Purpose Bodies** | | | | | | | |
| 180, 180 a, 180 b<br>180 D, 180 Db<br>190, 190 Db, 190 D | 600 curb condition 1250 maximum load | 121 324 24 04 | + 2° 10' up to + 3° 10' | — 2° up to — 3° | 121 324 24 04 | + 2° 30' up to + 3° 30' | — 2° 20' up to — 3° 20' |
| **Rear Wheel Camber of USA Taxi Cabs** | | | | | | | |
| 190 D, 190 Db | 570 | 180 324 26 04 | + 1° 10' up to + 2° 10' | — | 180 324 27 04 | + 1° 20' up to + 2° 20' | — |

**Note:** In the case of springs for police radio cars, ambulances and cars with special-purpose bodies such as light trucks etc. the rear wheel camber listed in the column "camber; curb condition" applies only in relation to this rear axle load. If the curb condition rear axle load of these cars changes as a result of modified equipment, the rear wheel camber has to be adjusted accordingly. The camber data given in the column "normally loaded" only apply to the rear axle maximum load. If on these cars the rear wheel camber is adjusted under normal load, the load must be sufficient to produce the rear axle load listed above. For details see Job No. 32-0 "Springs".