

P100-0030-57

Note

A checking gauge in the shape of a stepped plate is used, together with a measuring plate placed on the back square, to check the measuring instruments for the vehicle level on the front axle (control arm) and the vehicle level on the rear axle (semi-trailing arm).

40-280 Checking chassis alignment measuring instruments

022 Checking gauge

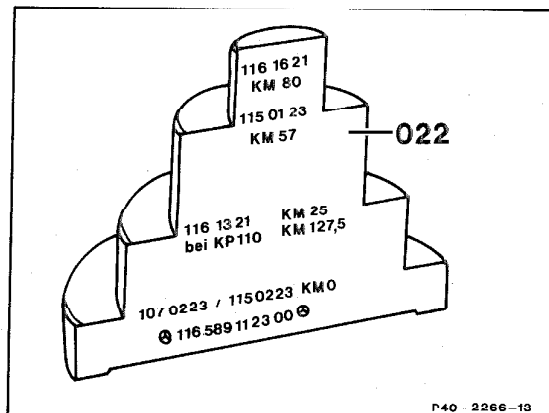
Part no. and reference dimension of measuring instrument to be checked; illustrated as code

Example: 116 16 21 = 116 589 16 21 00

KM 80 = reference dimension
80 mm

The checking gauge is self-made according to specified dimensions.

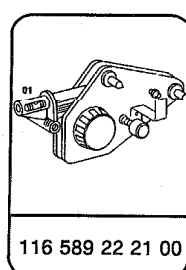
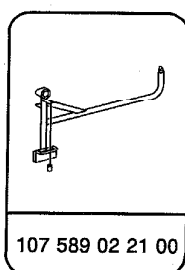
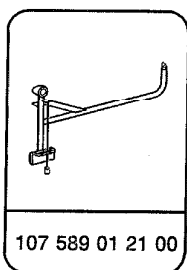
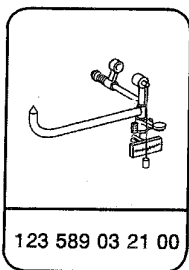
Material: light alloy



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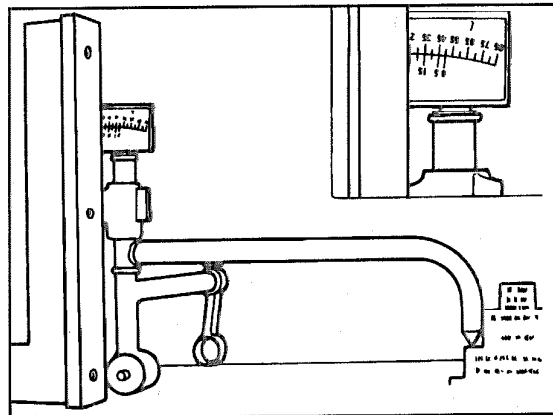
Special tools



Checking

Measuring instrument for control arm position of front axle and ball point position 123 589 03 21 00

Place measuring instrument with pickup eyes on measuring plate and with feeler element on checking gauge at reference dimension 25 mm (KM 25). Place back square below on center of stadia line eye. The back square at top of scale should also rest at 25 mm. This test also applies to measuring instrument 116 589 13 21 00, used up to now.



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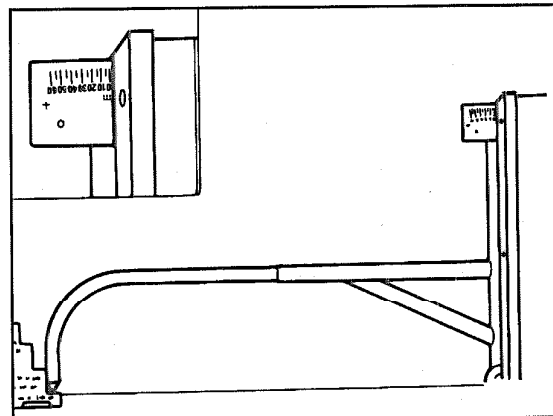
To check readout for ball point position, hold feeler at a distance of 127.5 mm (KM 127.5) away from measuring plate. In this position, a value of 110 mm must be indicated on the scale.

Note

The former measuring instrument 116 589 13 21 00 (ball point position – measuring range up to 120 mm) can be converted to version 123 589 03 21 00 (ball point position – measuring range up to 130 mm) by inserting the new feeler 123 589 03 21 31.

Measuring instrument for vehicle level on the rear axle (semi-trailing arm position)
107 589 01 21 00 with diagonal swing axle.

Place measuring instrument with pickup eye on measuring plate and with feeler element on checking gauge at reference dimension 0 mm (KM 0). Set back square below to center of stadia line eye. Back square at top must also rest at 0 mm.

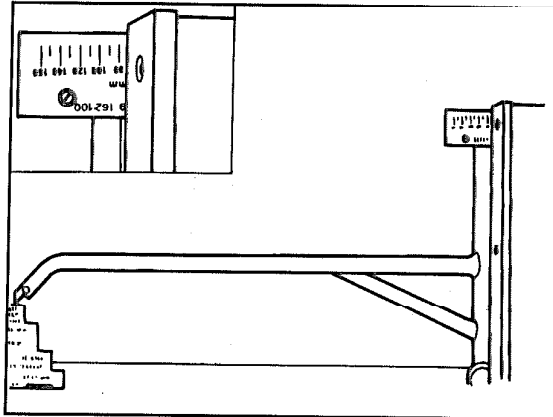


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Measuring instrument for vehicle level on rear axle (semi-trailing arm position) 107 589 02 21 00 with diagonal swing axle and starting torque compensation.

Place measuring instrument with pickup eye on measuring plate and with feeler element on checking gauge at reference dimension 80 mm (KM 80). Set back square below to center of stadia line eye. Back square at top must also rest at 80 mm.

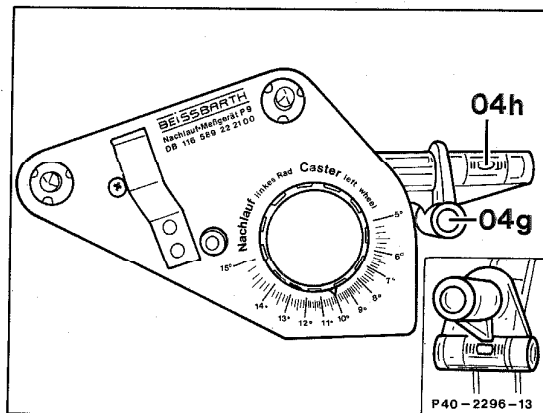


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Caster measuring instrument 116 589 22 21 00

Place measuring instrument with test surface on a measuring plate aligned in longitudinal and lateral direction.

In zero position of aligning bubble (04g) as well as of the caster bubble (04h) the pointer of the rotary knob (04e) at left and right should indicate $10^\circ \pm 10'$ on the graduated scale. To check, rotate measuring instrument on plate 180° .



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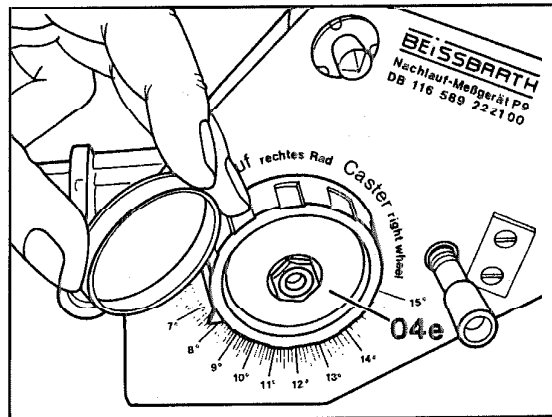
40-280 Checking chassis alignment measuring instruments

Adjusting

Note

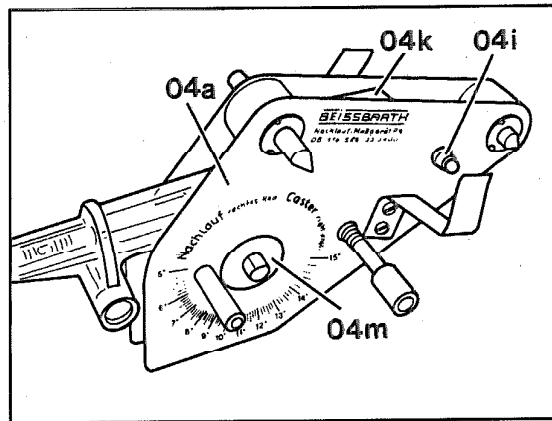
Similar to checkup, the measuring instrument is adjusted in a 10° position of the rotary knob or cam by sliding bubble carrier in its bearing (slot). Normally, no readjustment of measuring equipment is required. Following adjustment at the factory, adjusting screw and cap nut are sealed (locked) with varnish.

Lift cover on rotary knob (04e) for right hand side and pull off rotary knob after loosening hex.clamping nut.



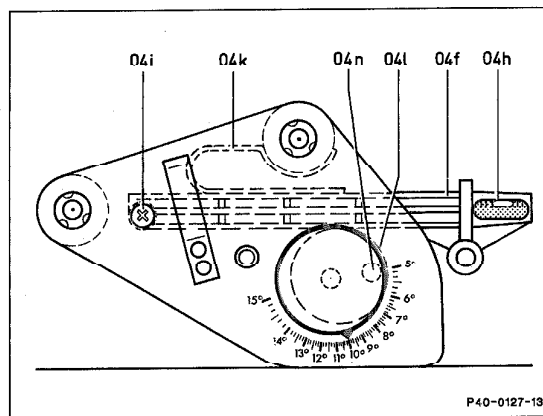
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Lock cam (04l) with housing in 10° position by means of locating bores. For this purpose, insert a bolt of 8 ± 0.05 mm dia. up to stop.



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- 04a Housing
- 04i Adjusting screw with cap nut
- 04k Leaf spring
- 04m Felt ring



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- 04f Bubble carrier
- 04h Caster bubble leaf spring
- 04i Adjusting screw with cap nut
- 04l Cam
- 04n Locating bore in housing

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Check 10° position of rotary knob for left hand side. If required, loosen rotary knob and clamp down again (tightening torque of hex. clamping nut approx. 6 Nm).

Place measuring instrument on measuring plate similar to checkup and slide swivel axis of bubble carrier in slot of housing in such a manner that the caster bubble indicates an exact zero position.

In this position, tighten cap nut of adjusting screw to approx. 3 Nm. Seal screw head and cap nut to housing with varnish.

Remove bolt and mount rotary knob for left hand side in 10° position, making sure that both rotary knobs are in accord.

Check measuring instrument once again on measuring plate (permissible tolerance after adjustment $\pm 0^{\circ} 05'$).