



Product information

Hella Gutmann Solutions GmbH

SEG IV Mercedes Benz

23.05.2017



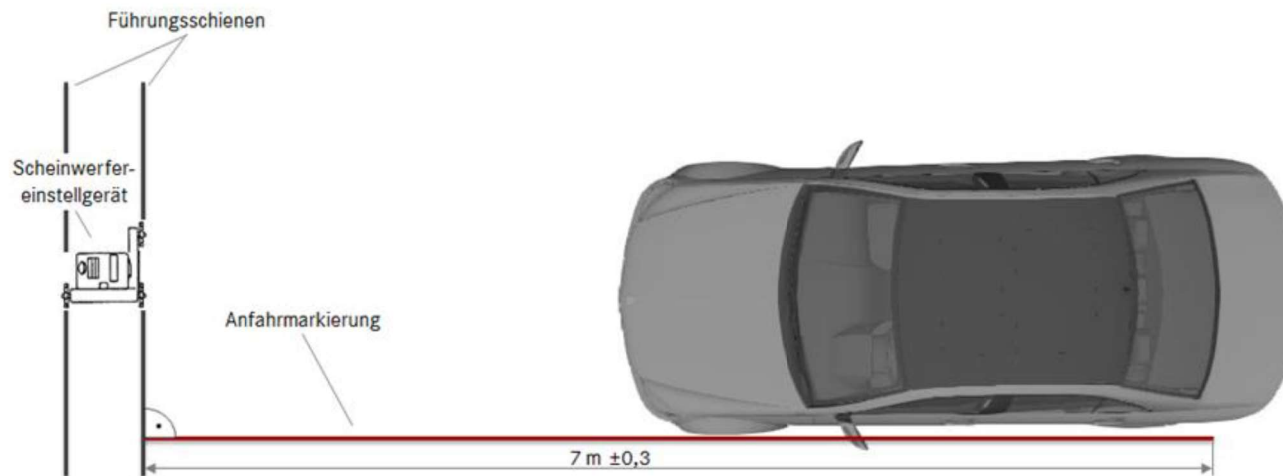
SEG IV Mercedes Benz Agenda

- Presentation
- Target groups
- Characteristics/advantages
- Sales arguments
- Competitors
- Distribution/delivery contents
- Optional accessories



SEG IV Mercedes Benz Approach method presentation

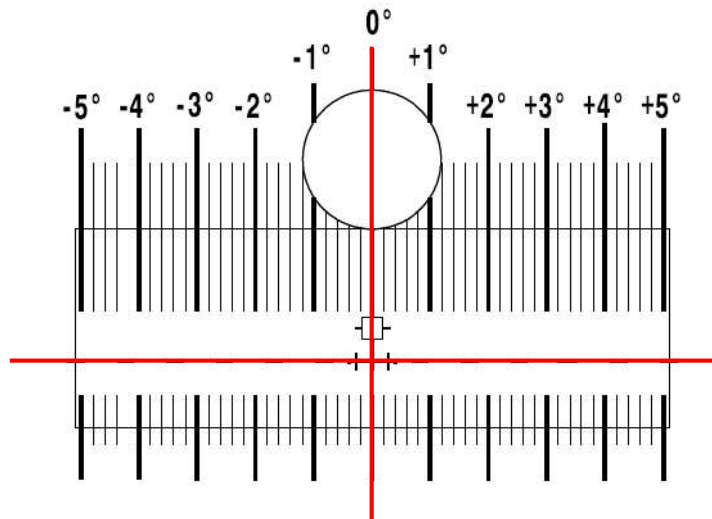
- In a project spanning several years, Mercedes Benz has developed a new method for more accurate headlight adjustment. This method takes into account all the effects of driving axis geometries. Owing to the chain of tolerances in the vehicle (body, axles, etc.), the parallel alignment of the SEG to the vehicle is no longer performed using a broad-band or laser sight.
- The alignment is performed by approaching (for the SEG) a **7 metre** long line.



- The approach marking must be positioned with an accuracy of $90^{\circ} \pm 1^{\circ}$ to the rail system.

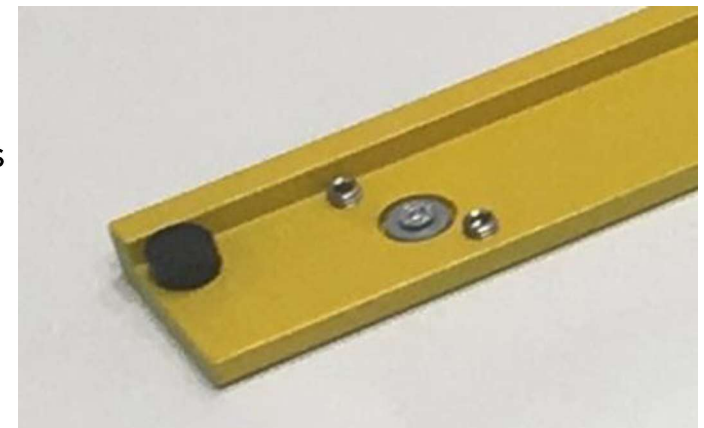
SEG IV Mercedes Benz Approach method presentation

- Adjustment of SEG to the vertical centre or zero line by rotating the beam setter box. The SEG is adjusted to 10 m for the approach marking with an accuracy of +/- 2 mm
- Tool post with connected attachment of the central tensioning screw below the wheel-mounted base with 50 Nm



SEG IV Mercedes Benz Rail system presentation

- The basis of the levellable rail system is an L-profile similar to an angle bracket with the dimensions 3000 x 50 x 16 mm (LxWxH). Due to its geometry, the rail is very rigid and therefore resistant to deflection and twisting
- The rails and bolts have a high-quality zinc coating and the sheet metal uprights are made of stainless steel. In addition, the rails are painted with a signal colour → highly corrosion-resistant, long service life, high consistent precision.
- The rail is attached to the subsurface at five points. The fastening material comprises metal drive-in anchors with an M10 internal thread and countersunk head screw.
- The level is adjusted on the horizontal and vertical axis via ten M8 grub screws with a hexagon socket head. Three sizes of grub screw with different lengths are supplied so that optimum levelling can also be achieved on a very uneven subsurface
- Rubber stops are installed at the end of the rail. This prevents inadvertent rolling
- A "zero-tolerance" roller system meets the stringent requirements of Daimler's new headlight adjustment system. This is ensured by the complex axial guidance of the steel rollers, with very small tolerances



SEG IV Mercedes Benz Tool presentation

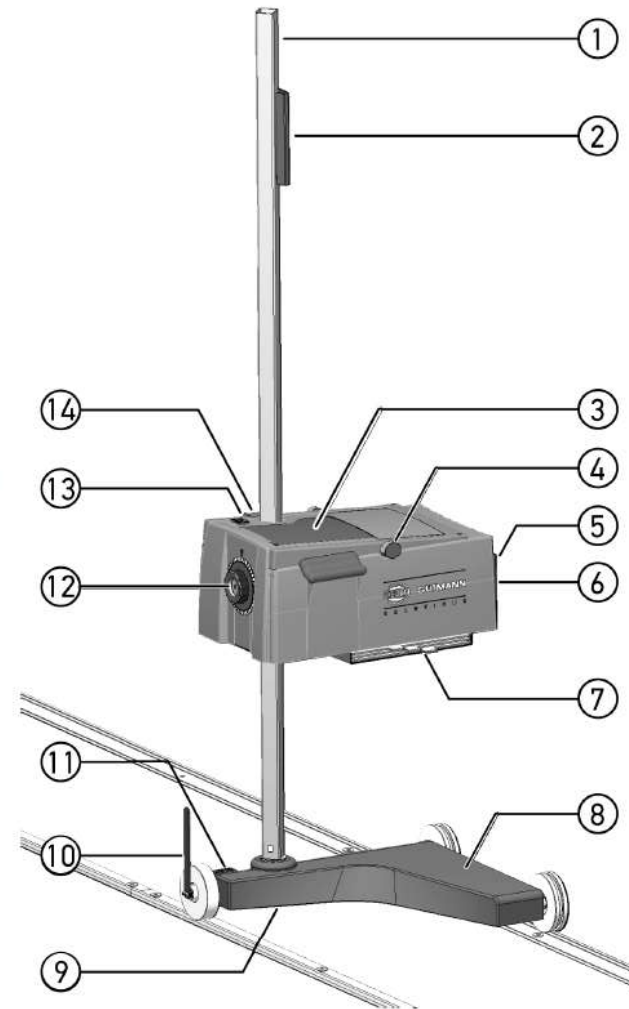


Typ 8PA 007 732-331

Baumusterfreigabe TP 8-S 35

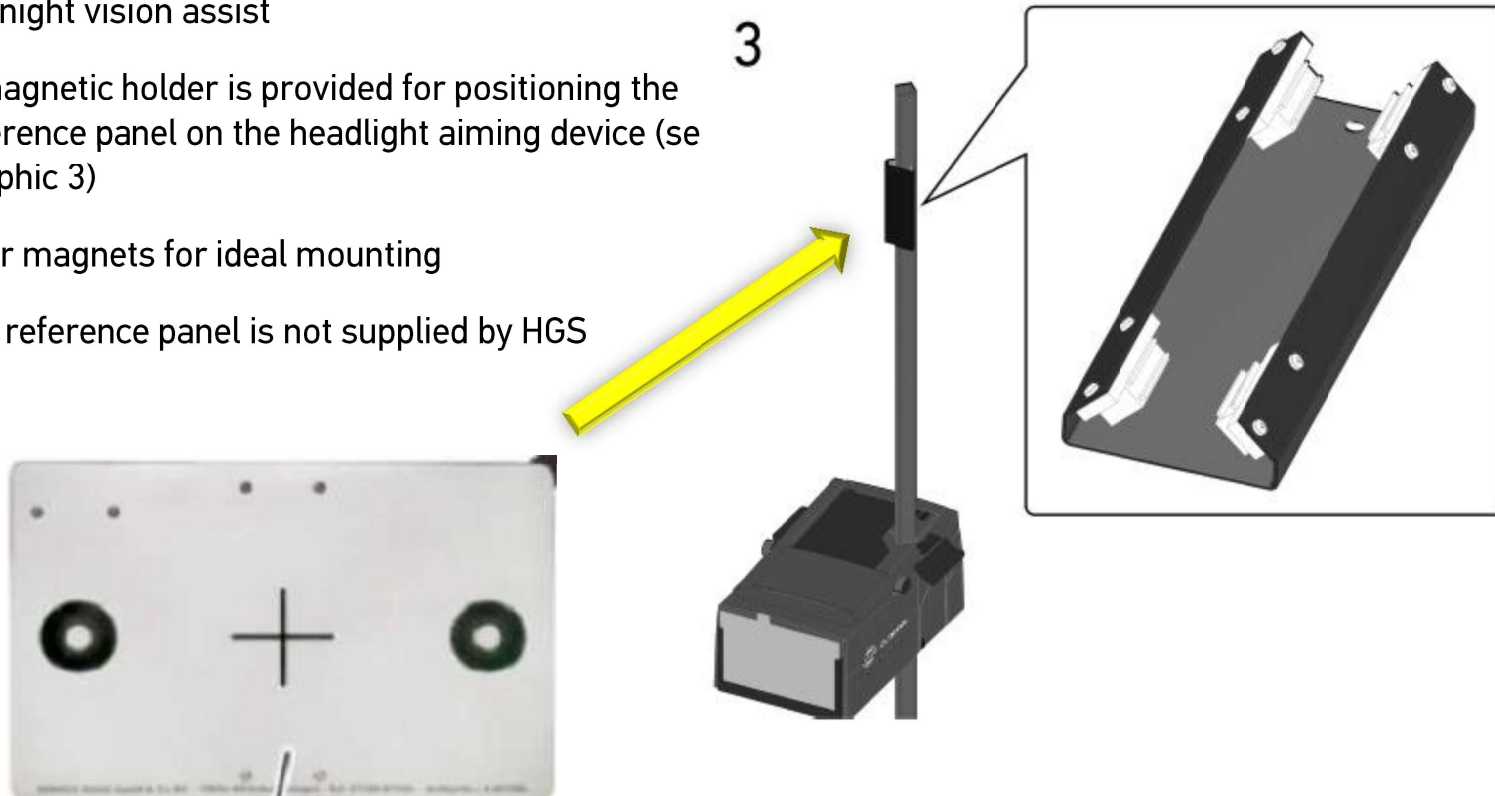
Scheinwerfereinstellgerät mit
Stahlrollen, digitaler
Lichtmesseinrichtung und
Laserpositionierhilfe.

1. Säule
2. Targethalter
3. Wasserwaage für
Horizontalausrichtung
4. Diagnosespiegel mit Stellrad
5. Halterung für Farbfilter
6. Fresnellinse
7. Einschubfach für Farbfilter
8. Gerätefuß mit Stahlrollen für den
Einsatz auf geeigneten
Laufschienen
9. Schraube für Säulenarretierung
10. Verstellhebel für
Horizontalausrichtung
11. Gewindestifte für dauerhafte
Arretierung der
Horizontalausrichtung
12. Skalenrad
13. Schalter für fotoelektrische
Lichtmesseinrichtung und
Positionslaser
14. Betätigungshebel zum Auf- und
Abwärtsbewegen des
Optikgehäuses



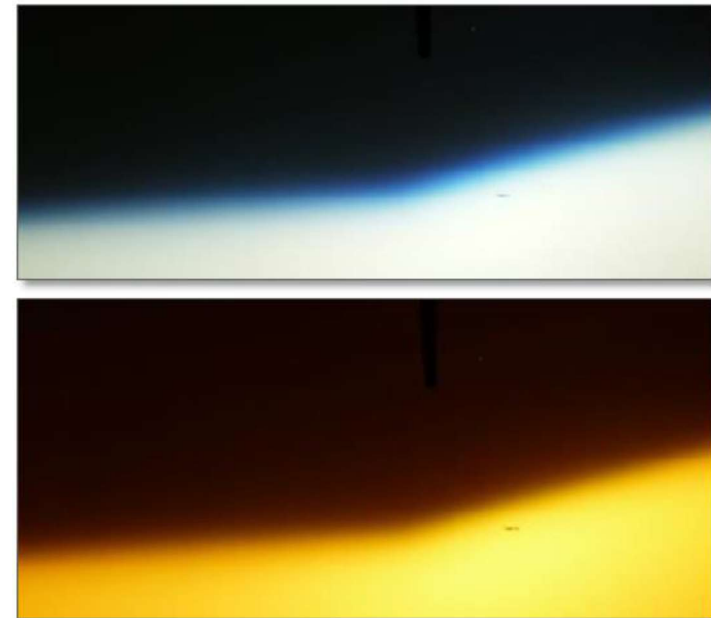
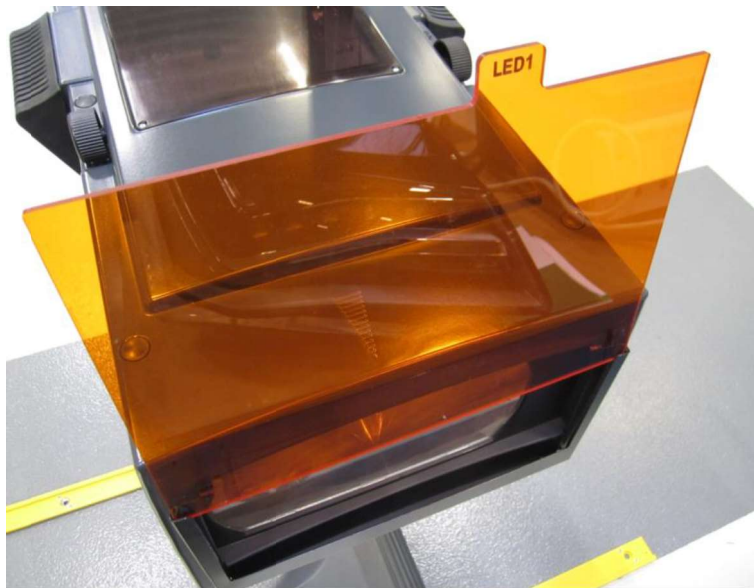
SEG IV Mercedes Benz SEG reference panel holder presentation

- The headlight aiming device, in conjunction with a special reference panel, can be used for calibrating the night vision assist
- A magnetic holder is provided for positioning the reference panel on the headlight aiming device (see Graphic 3)
- Four magnets for ideal mounting
- The reference panel is not supplied by HGS



SEG IV Mercedes Benz SEG colour filter presentation

- Some modern LED headlights have a distinct colour fringe, which makes it difficult to identify the border between light and dark. These colour effects are mitigated by using an orange colour filter, meaning that the border between light and dark is easier to see on the screen. This filter is inserted easily into a mount in front of the Fresnel lens.





SEG IV Mercedes Benz Tool presentation

Differences from the SEG IV DLLX

- The tool does not have a sight for parallel alignment to the vehicle
- The post is 1850 mm long
- The headlight aiming device, in conjunction with a special reference panel, can be used for calibrating the night vision assist.
- The tool comes equipped with a colour filter. This is used for various LED headlights according to manufacturer specifications. When not used, the colour filter can be stored in a special drawer under the tool itself.
- SEG IV MB incl. steel rollers, MB rail system, colour filter, reference panel holder and approach marking 9 m plastic band



SEG IV Mercedes Benz

Target groups

- **The target group values the following:**

- > High-quality and robust product that is suitable for daily repair shop use
- > Good price/performance ratio

What are the specific sectors involved?

- > Mercedes Benz repair shops (of every size) and service partner firms

- **Users:**

- > Test technicians/vehicle mechatronics technicians
- > Body and vehicle mechanics (including motorcycles)

SEG IV Mercedes Benz Sales arguments

What makes the SEG IV MB such an interesting solution:

- Functionality and precision, enabling it to withstand even the most demanding MB repair shop environments and remaining fit for use for many years
- Simple and practical implementation of MB requirements. In particular, the reference panel holder and the colour filter system
- The level-adjustment function of the rails achieves a high level of flexibility when it comes to floor conditions. It is possible to compensate for spatial changes along the vertical and horizontal axis
- A very good cost/benefit ratio, even when compared with competitor systems
- Implementation of the MOT test headlight adjustment guidelines (mandatory up until 01 August 2018 in Germany)



SEG IV Mercedes Benz Distribution/delivery contents

Headlight adjustment system consisting of the following:

- SEG IV DLLX MB incl. steel rollers
- Orange colour filter
- Reference panel holder
- Rail system as per Mercedes requirements, 2 x 3 m in length
- 18 x M8 hexagon-socket countersunk head screws
- 18 x conical washers
- 18 x M8 heavy-duty dowels
- 72 x grub screws (36 x short 10 mm, 36 x long 16 mm)
- 18 x shims
- 4 x rubber stops
- 500 ml primer
- 1 tube of edge adhesive
- 9-metre approach marking (plastic band)

Item number:

PA 007 732-331



SEG IV Mercedes Benz Distribution/spare parts

In addition to the spare parts for the SEG IV DLLX, the following parts are also available:

- 8 XT 861 234-051 SEG IV DLLX MB post
- 9XS 860 011-021 MB colour filter storage frame
- 9EV 857 067-021 SEG IV DLLX MB orange colour filter
- 9XS 860 011-031 SEG IV DLLX MB colour filter holder

SEG IV Mercedes Benz Optional accessories

Approach mirror

- The approach mirror makes it easier for the mechanic to move the vehicle so that it is parallel to the approach line. A second person is not required to give instructions.



Item number: 9XS 861 736-101