



PERMAGLIDE® plain bearings: Locking mechanism parts on semitrailers

Sector: Utility vehicle production

**PRODUCT
APPLICATION**

Products used

PERMAGLIDE®
cylindrical plain bearing bush
design PAP ... P10

Function

The fifth-wheel coupling connects the trailer of a semitrailer with the towing vehicle with a secure but rotatable connection. When the towing vehicle is moving in reverse, the kingpin of the trailer is pushed into the coupling. A locking mechanism locks the fifth-wheel coupling automatically. It is now in travelling position. A breech wedge secures the kingpin. To uncouple, the locking mechanism is released with a hand lever. During the release action, the locking mechanism parts move into retraction position. The towing vehicle is uncoupled from the trailer.

Advantage: reliable function of the bearing with PERMAGLIDE® P10 plain bearings

- High durability
- Low wear
- High durability
- Insensitive to shocks and impacts
- Insensitive to dirt and moisture
- Optimum corrosion protection
- No tribocorrosion

Bearing of the locking mechanism parts with PERMAGLIDE® P10 plain bearing bushes

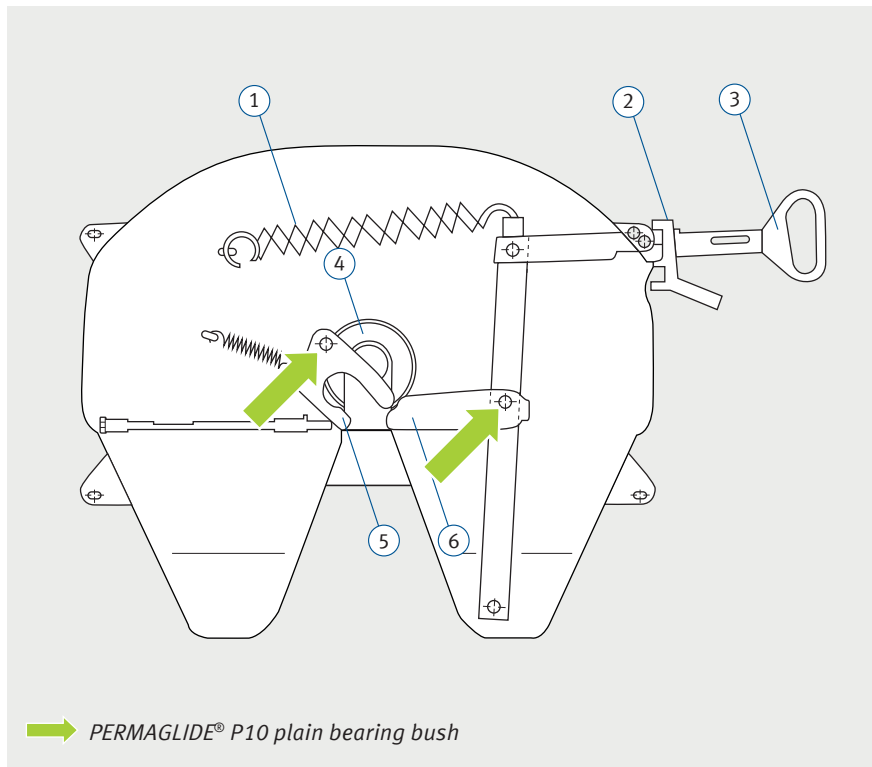
The fifth-wheel coupling is subjected to impacts, vibrations, dirt and moisture during travel. For the bearing in the fifth-wheel coupling, plain bearings must be robust and highly stressable and work smoothly even if the fifth-wheel coupling is not used frequently.



Bearing in fifth-wheel coupling with PERMAGLIDE® P10 plain bearing bushes

For the bearing, PERMAGLIDE® P10 plain bearing bushes are pressed into the locking mechanism parts. The PERMAGLIDE® plain bearings work reliably and smoothly even under difficult operating conditions over the entire service life.

The plain bearings are protected from corrosion and are subjected to extremely low levels of wear. The axes are made from steel – using PERMAGLIDE® plain bearing bushes means that no tribocorrosion occurs.



- 1 Tension spring
- 2 Circlip
- 3 Hand lever
- 4 Coupling lock
- 5 Coupling hook
- 6 Breech wedge

Description of material

PERMAGLIDE® P10 – robust and reliable

- Universal-use bearing material for dry and lubricated applications
- Material: lead bronze sintered onto a steel base, friction-minimising additives PTFE and lead
- High rigidity
- Durability
- Good emergency running property

In damp environments in particular, this sliding layer system provides outstanding protection against corrosion. Moreover, lead and PTFE have an extremely low absorption tendency. Absorption of the surrounding fluids, swelling of the materials and chemical damage to interacting sliding partners are prevented. The result is dimensional stability and optimum corrosion protection during use.



Note for the automotive industry:

The material P10 contains lead and, in accordance with the end of Life Vehicle Directive, may not be used in the automotive field. The material P14/P147 (unleaded) can be used for these applications.

Further information on PERMAGLIDE® P10 plain bearing bushes

- PERMAGLIDE® catalogue, item no. 50003863-02
- PERMAGLIDE® OnlineShop www.permaglide.com/onlineshop/