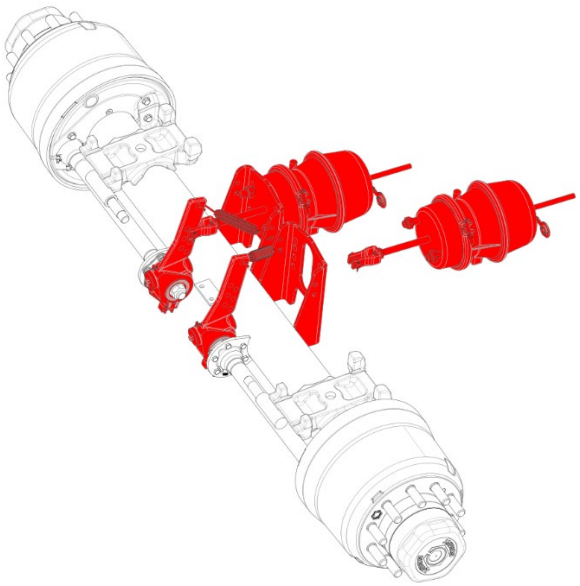
Installation of a brake cylinder on the drum brake

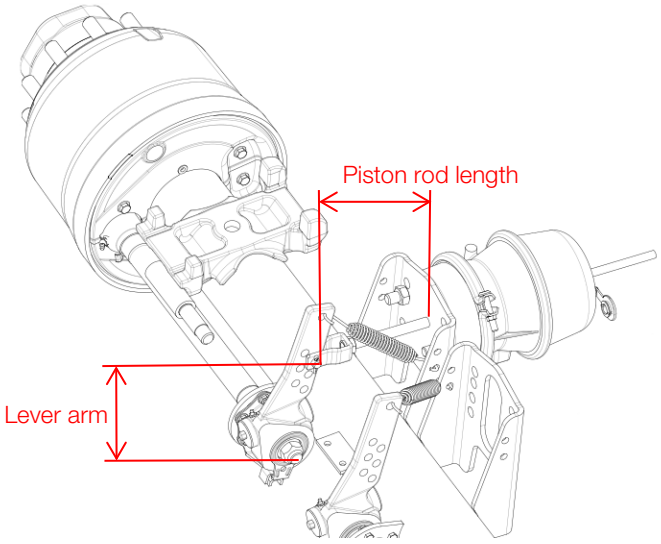
General aspects:

GIGANT provides pre-assembled axles (with pre-assembled brake cylinders, if applicable). The vehicle manufacturer is responsible for proper installation of the brake cylinder with the corresponding piston rod length with clevis, lever arm length according to the brake power calculation, attaching of the return spring and basic adjustment of the brakes.



Attention:

- The lengths of the piston rods and the position on the lever arms for the different GIGANT axle types can be found in the vehicle-specific brake power calculation.
- The test protocol required for the brake power calculation can be downloaded from the GIGANT website (https://www.gigant.com/service/pruefprotokolle/). The test protocol number can be found on the set or axle drawing.
- The product-specific installation and maintenance instructions from the respective brake cylinder manufacturer must be observed in all cases.



Piston rod length:

The piston rod length must be taken from the GIGANT axle drawing (Image 2.1/ 227 in this example). This dimension can differ depending on the axle. The piston rod length must always be checked and adjusted as shown in the figure (Image 2.2) on the installed clevis of the brake cylinder.

Fig. 2.1:

Example

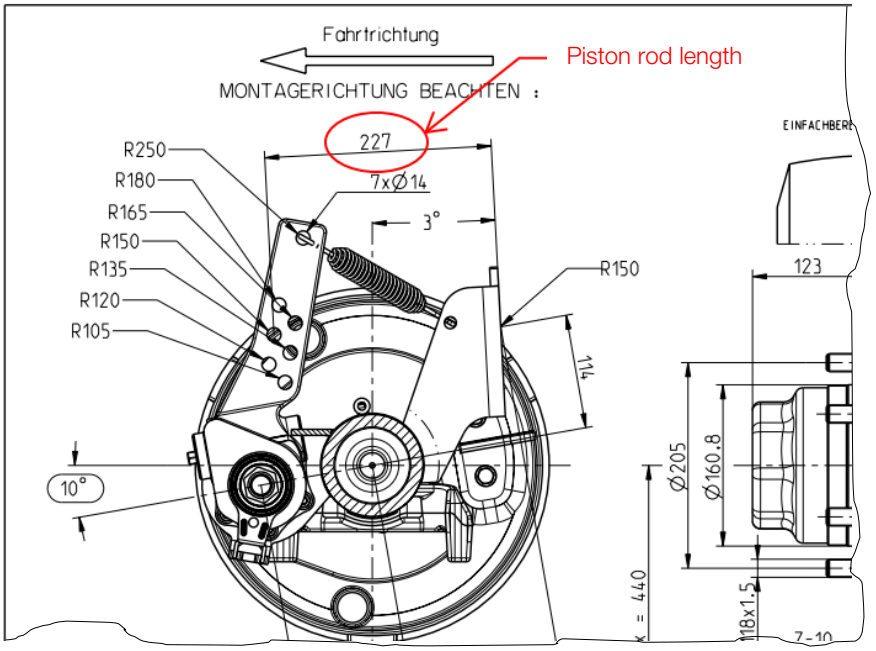
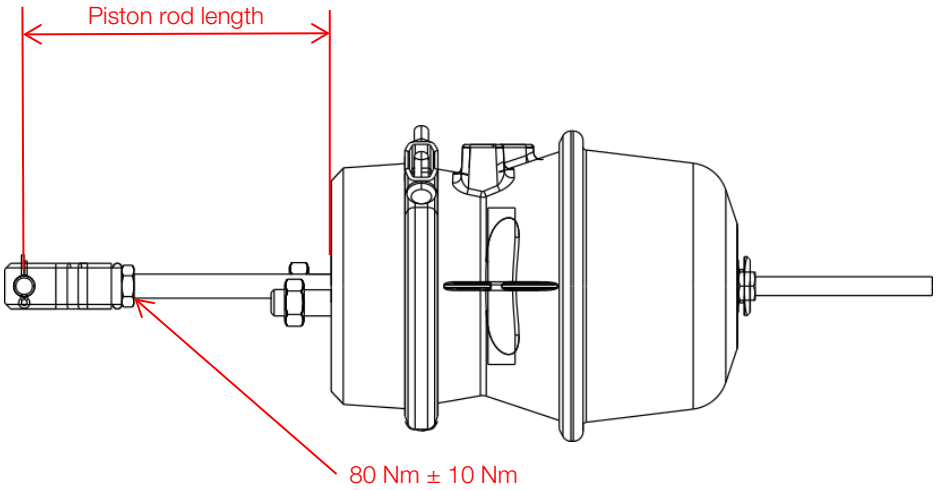


Fig. 2.2:



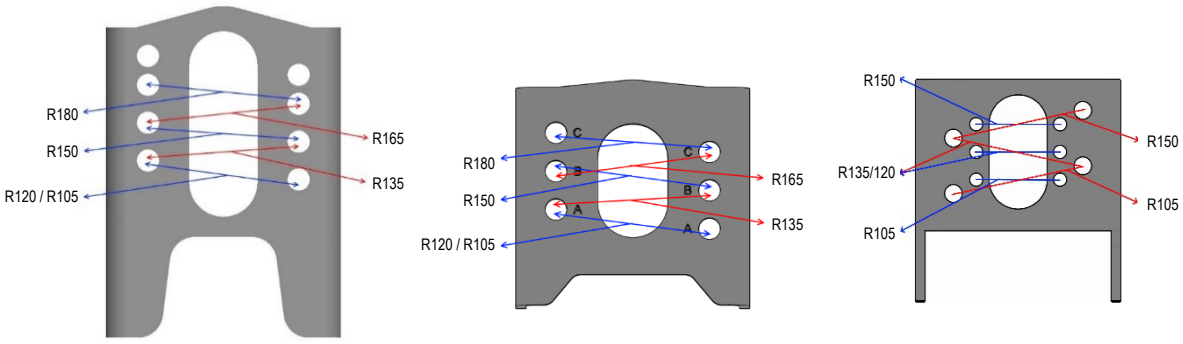
Tighten the counter nut of the clevis with 80 Nm ± 10 Nm after adjusting the piston rod length.

Attention:

- Make sure that there is enough space between the piston rod and the automatic slack adjuster.
- Short clevises may only be used in the front series of holes on the automatic slack adjuster (lever arm 105 I 135 I 150).

Lever arm length:
The lever arm length is defined by the vehicle-specific brake power calculation and can be found there.

Drilling pattern allocation: Brake cylinder / lever arm length
The brake cylinder is installed on the fastening plate proportional to the lever arm length according to the following specification:



Example for rigid axles: Hole patterns on the base plates

Note:

- The hole pattern can differ for special axles. With certain axle versions, fewer lever arm lengths are possible, so that there are fewer holes. This can be found in the axle drawing.
- The piston rod of the brake cylinder must not be bent!

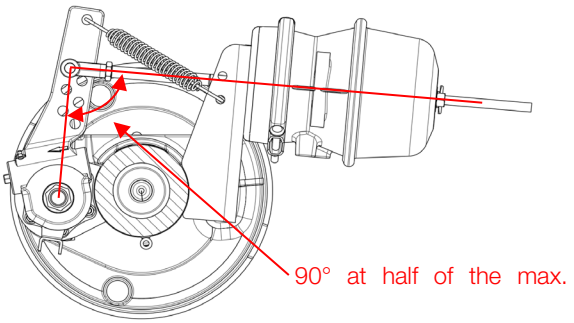
When installing the brake cylinder, please observe:

- The fastening plate must be level.
- The drain hole is at the lowest point. Remove the plug.
- Screw on the nuts for fastening the brake cylinder only lightly at first, and then tighten alternately until 180 Nm ± 20 Nm are reached.

Normal and work position of the lever arm:
After the lever arm of the automatic slack adjuster is bolted with the clevis of the brake cylinder according to the manufacturer specifications, the normal and work position must be checked.

Normal position:
In the normal position (released brake), the piston with piston rod together with the diaphragm must be resting on the bottom of the cylinder housing.

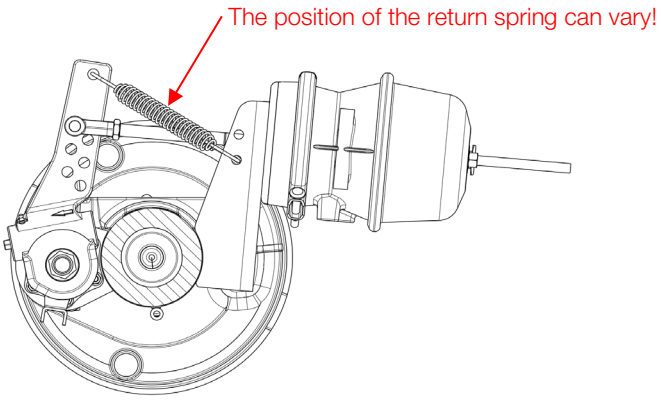
Work position:
To ensure that the brake cylinder can achieve good mechanical efficacy, the piston rod must be perpendicular to the lever arm of the automatic slack adjuster at half of the maximum stroke.



Return spring:

Then attach the return spring as shown in the figure of the axle drawing to ensure optimal operation of the brake system.

Example:

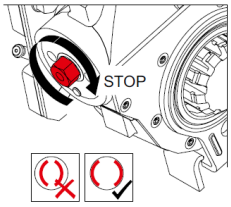


Attention:

- The spring must not be overstretched!

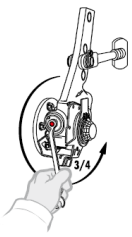
Basic setting of the brake (air gap):

Turn the adjusting screw (WAF12) for the automatic slack adjuster clockwis brake lining is resting against the drum.



Turn the adjusting screw (WAF12) on the automatic slack adjuster back by

- **If the adjustment coupling works flawlessly, a torque of at least 18 Nm can be felt when turning back!**
- **Creaking sound can be heard!**



Change number	Index	Change description	Date	Signature
A-HU373	5	Addition of figure for two-row drill pattern allocation / CI adjusted	18/04/2024	HU
AP594512403	4	Information on the return spring, basic adjustment of the brake	09/10/2018	HU
3	3	Updating of the layout, addition of the base plate	15/01/2018	HU
2	2	Adjustment of the drill pattern allocation	24/03/2014	HU
1	1	Normal and work position of the lever arm	13/03/2014	HU
0	0	Document created	26/11/2012	HU

Created/reviewed:		Approved:	
2024.04.18	HU	2024.04.18	AK
Date	Signature	Date	Signature