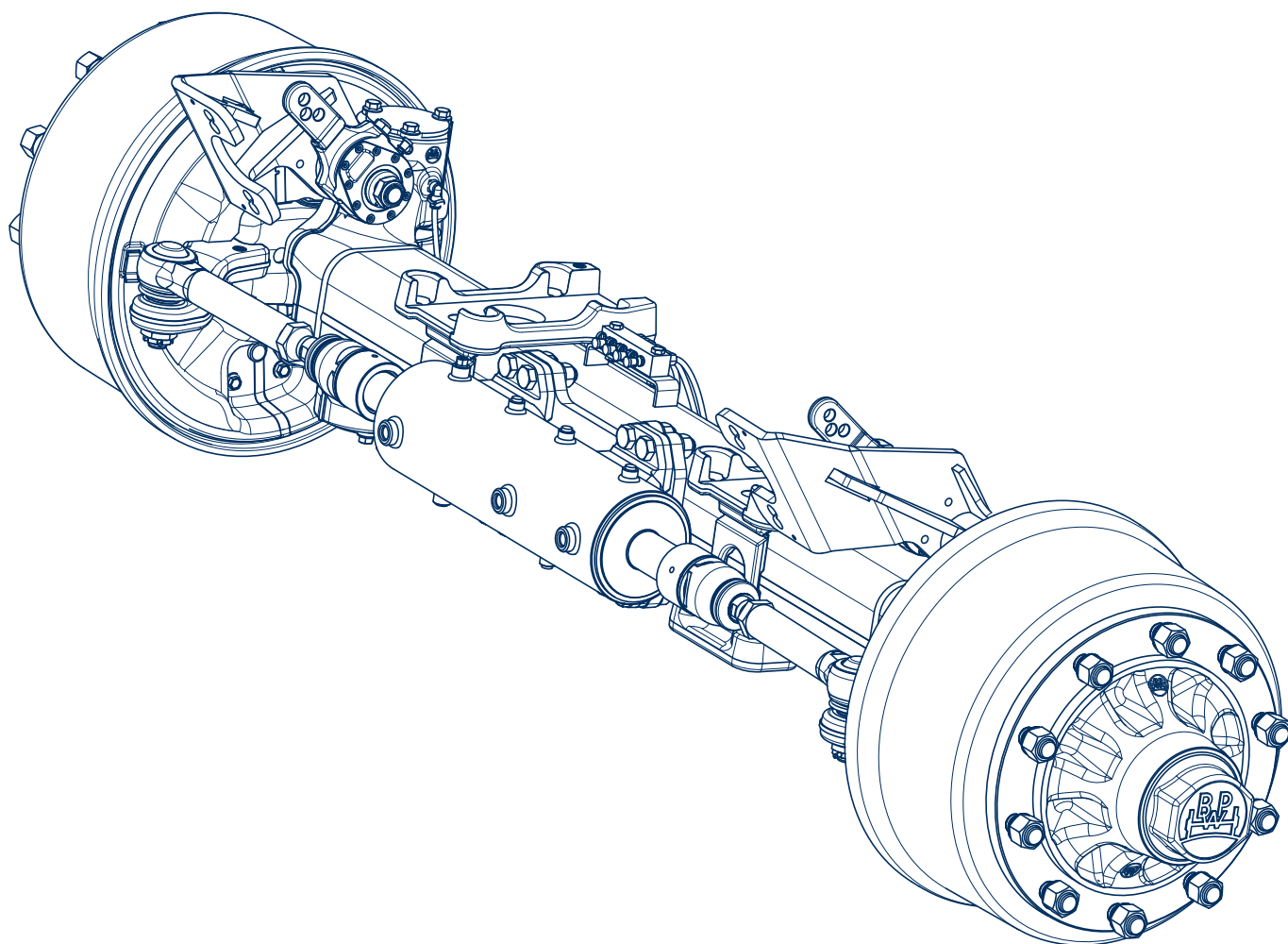




Workshop Manual

AGRO Turn steering angle setting



1

Safety regulations, safety information

1.1

Safety regulations

- ⦿ All work must be performed by trained mechanics at competent repair facilities or authorised specialised workshops who have access to all relevant tools and have acquired the know-how required for this work. Anyone who performs maintenance and repair work must have been trained as an automotive mechanic and already have experience in repairing trailers. Anyone who performs brake work must be trained in brake systems.
- ⦿ Comply with local safety regulations.
- ⦿ The relevant operations and service regulations as well as safety regulations of the vehicle manufacturer and of the manufacturers of the vehicle parts must be adhered to.
- ⦿ The dust created from grinding brake linings comprises particles that can cause lung damage. A safety mask must therefore be worn to prevent brake dust from being inhaled.
- ⦿ Use prescribed dust washing devices or vacuum cleaners for cleaning, never use compressed air or other high-pressure devices.
- ⦿ Ensure adequate ventilation at the workplace.
- ⦿ The vehicle must be prevented from moving during repair work. Please observe the relevant safety regulations for repair work on commercial vehicles, in particular the safety regulations for jacking up and securing the vehicle.
- ⦿ During repair work, make sure that the brake is not operated inadvertently.
- ⦿ Do not perform repair work unless wearing protective clothing (gloves, safety boots, safety goggles, etc.) and using the recommended tools.
- ⦿ Work on brake components removed from the vehicle must be carried out with the components fixed in place such as in a vise.
- ⦿ Only use recommended tools.
- ⦿ A second mechanic must provide assistance when working with heavy components (brake drums or brake removal/installation).
- ⦿ All air lines and components must be depressurised before being removed.
- ⦿ Following each repair, perform a function check or a test drive in order to make sure that the brakes are functioning correctly. New drums and linings only have maximum effect after a few braking actions. Avoid hard braking.
- ⦿ All exchanged components must be reused or disposed of in accordance with the applicable environmental regulations, laws and directives.
- ⦿ Tighten bolts and nuts with the prescribed tightening torque.

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2nd edition

Subject to change without notice.
Current versions and additional information can be found online at www.bpwagrار.com

This workshop manual contains different types of safety instructions, each of which is designated an icon and a signal word. The signal word describes the severity of the potential danger.

	Danger !	Immediate potential danger of serious or fatal injury (severe injury or death).
	Warning !	Possible potential danger of serious or fatal injury (severe injury or death).
	Caution !	Possible dangerous situation (slight injury or damage to property).
	Repair Guide !	Risk of damage to property or consequential damage if this information is not observed.
	Note !	Application hints and especially useful information.

2 Steering angle

Note!
The setting of the steering angle is done by means of the threaded stop sleeve at the end of the piston rod.

Note!
Steering angle of all BPW axles has been factory-set. To receive the current steering angle values of the steering axles, please contact your vehicle manufacturers or BPW partner.

Threaded stop sleeve

- The threaded stop sleeve on the thread of the axial ball joint is mounted at the end of the piston rod. Depending on the version the threaded stop sleeves are assembled and adjusted on the cylinder in two different sizes.

Repair Guide!
Steering angle always has to be set equally on both sites.

The following table contains the minimum and maximum setting ranges of the steering angles:

Cylinder	Application	Setting range (50 mm)	Setting range (37 mm)	Setting range (60 mm)	Setting range (40 mm)
05.444.50.73.0	Self-steering and Forced steering	10° - 15°	15° - 18°	6° - 14°	14° - 18°
05.444.50.84.0	Forced steering	20° - 25°	25° - 28°	18° - 23°	24° - 28°

Repair Guide!
The free movement and clearances of all moving items should be tested after setting the prescribed steering angle. Take into account of the vehicle deflection.

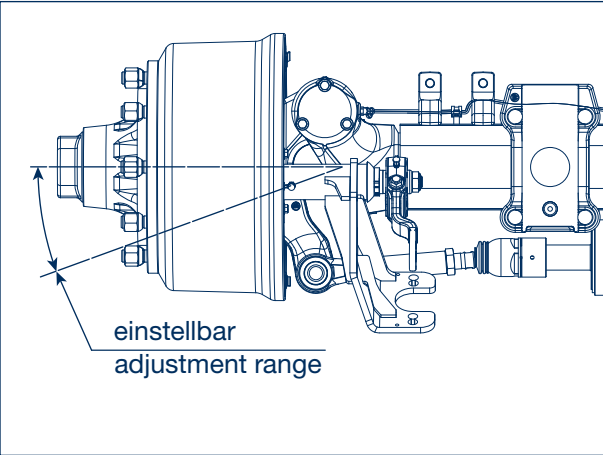


Figure 1

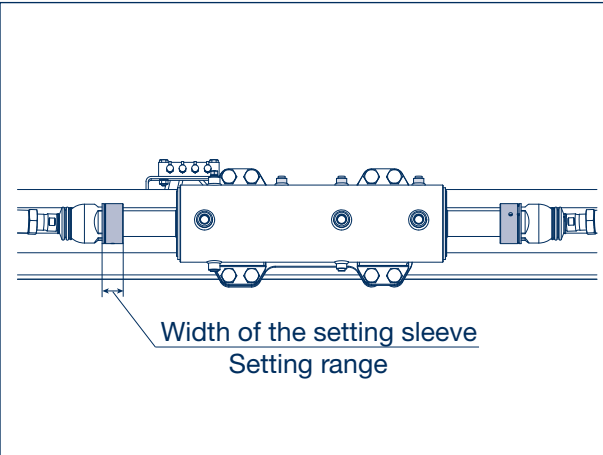


Figure 2

Adjustment:

Note!
The work can only be performed on the raised axle.

- [1] Unhook the retaining ring out of the hole.

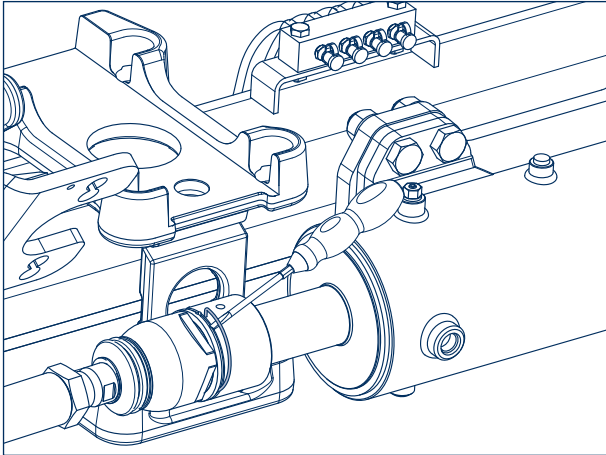


Figure 3

- [2] Turn the threaded stop sleeve in the correct direction to reach the prescribed setting angle. (1 degree corresponds to about 5 turns)

Note!
Maximum setting value can be reached at the end of the thread.

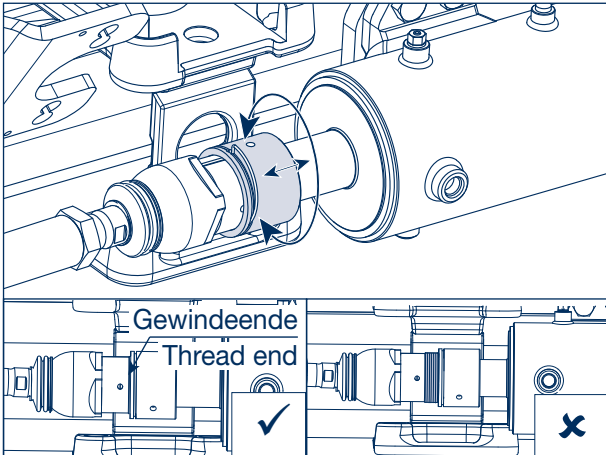


Figure 4

Repair Guide!
The condition of the stop inner sleeve on the axial joint must be verified, if necessary fasten it with the help of a hook wrench (D60) and with the prescribed tightening torque 220 Nm.

Repair Guide!
When tightening the stop inner sleeve (D60) hold the axial ball joint with a wrench (SW 55).

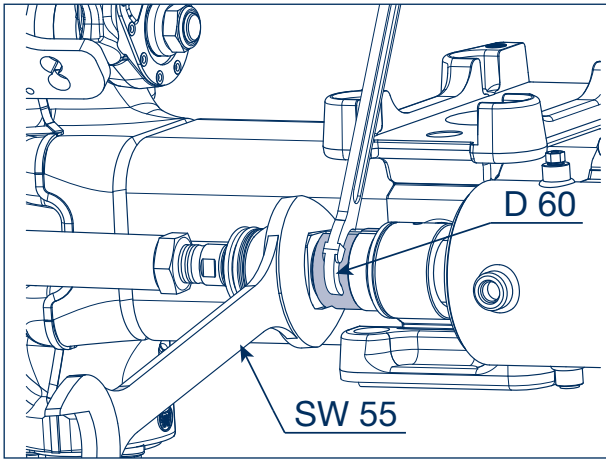


Figure 5

2

Steering angle

[3] Insert the retaining ring into the hole.

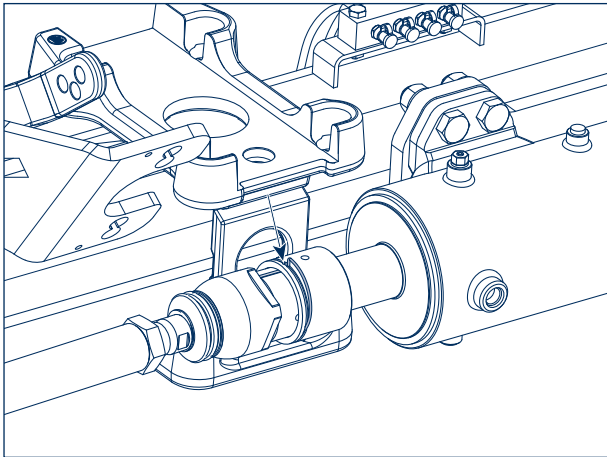


Figure 6

[4] Hook the retaining ring through hole of the stop sleeve into the groove of the inner sleeve, in order to fasten the setting steering angle.

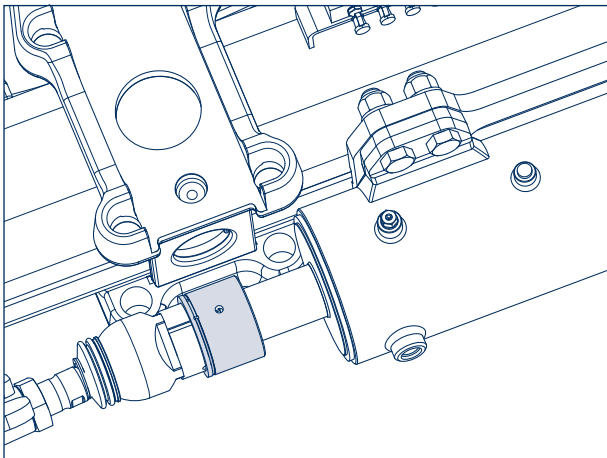


Figure 7

[5] Actuate the cylinder in full left and right direction and check for free movement and free space among all steering parts.

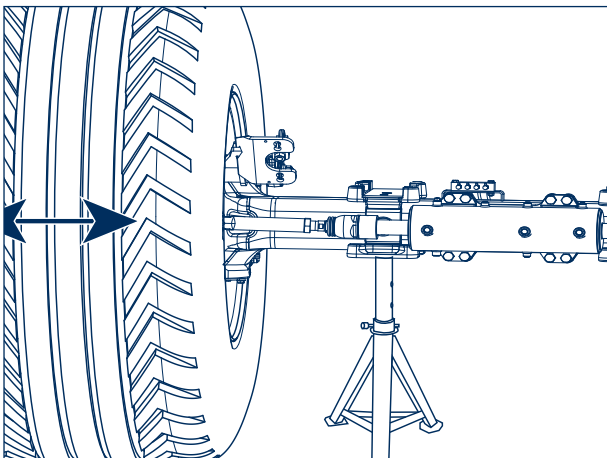


Figure 8

Note!



Steer the axle in to the left and to the right direction and check the freedom of movement and clearances of all moving parts to avoid collisions, adjust if necessary.

Notes



BPW-WH-Agrar 55121702e

BPW is a globally leading manufacturer of intelligent running gear systems for trailers and semi-trailers. As an international mobility and system partner, we offer a wide range of solutions for the transport industry from a single source, from axle to suspension and brake to user-friendly telematics applications. We thereby ensure outstanding transparency in loading and transport processes and facilitate efficient fleet management. Today, the well-established brand represents an international corporation with a wide product and service portfolio for the commercial vehicle industry. Offering running gear systems, telematics, lighting systems, composite solutions and trailer superstructures, BPW is the right system partner for automotive manufacturers.

BPW, the owner-operated company, consistently pursues one target: To always give you exactly the solution which will pay off. To this end, we focus our attention on uncompromising quality for high reliability and service life, weight and time-saving concepts for low operating and maintenance costs as well as personal customer service and a close-knit service network for quick and direct support. You can be sure that with your international mobility partner BPW, you always use the most efficient method.

Your partner on the path to economic viability



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