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AL-KO AKS3004 STABILISER COUPLING

Service Information

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AKS3004 Stabiliser Coupling

1. Introduction

Read the operating instructions and act accordingly. Keep the operating instructions for general use. Obey the safety information and the warnings on the device.

Important: This product is a safety component. Assembly should be carried out only by a qualified repairer.

2. Safety Precautions Important operating information

The tow ball on the towing vehicle must be free of grease and other residue; otherwise the stabilizing effect will be greatly reduced.

All AKS stabilizers must only be used with 50mm tow balls connected to the towing vehicle with an anti rotation plate which does not allow the tow ball to unscrew or rotate.

Contact AL-KO for advice or supply.

If friction pads are contaminated with grease they should not be cleaned as this will have a reduced stabilizing effect. Therefore friction pads should be replaced.

The AKS 2004/AKS 3004 should only be operated by one person when opening and closing.

Articulation:

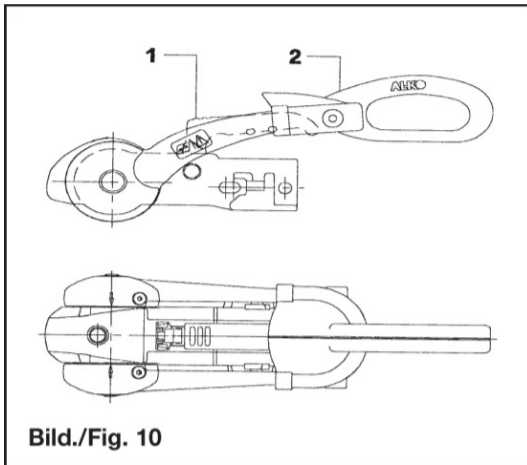
Maximum articulation must not exceed $\pm 20^\circ$ vertically. Maximum articulation must not exceed $\pm 20^\circ$ horizontally.

CAUTION: If these articulations angles are exceeded, components will be overloaded and the operation of the assembly adversely affected!

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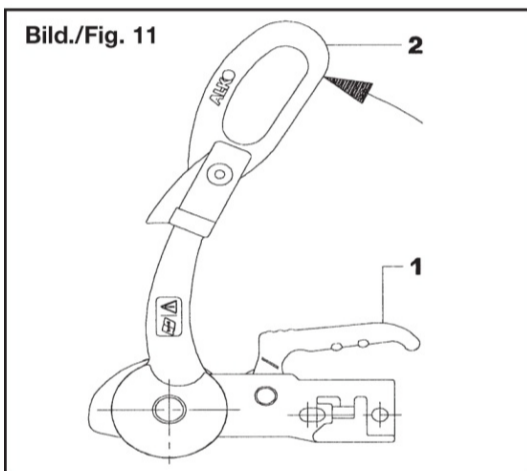
AKS3004 Stabiliser Coupling



Please check the conditions for the attachment by following the steps listed below:

Clearances for stabilizing handle (locking handle)

The area above the tow ball of the vehicle must be free from vehicle components or attachments (e.g. vehicle overhang, spare wheel etc.) and allow full function of the stabilizing handle.



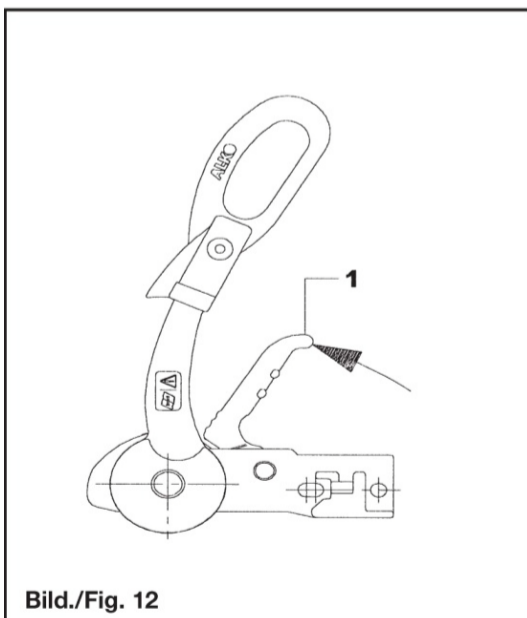
3. Operating Instructions

Coupling handle (Figure 10 item 1)

Stabilizing lever (Figure 10 item 2)

Preparation for coupling or uncoupling:

The stabilizing lever (Figure 11/2) must be in the uppermost position (open) for coupling and uncoupling.

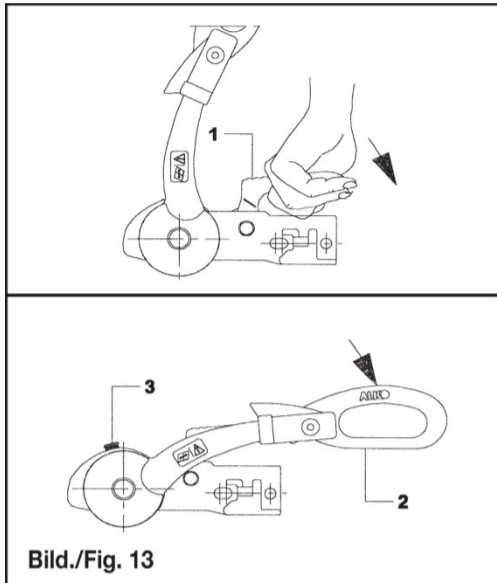


3.1 Coupling:

Ball coupling

Open ball coupling. To do this, pull the coupling handle (Figure 12/1) up in the direction of the arrow. The coupling mechanism has an open position; i.e. as long as the AKS 2004/AKS 3004 is not placed on the ball the coupling handle will remain open. Put the opened coupling on the tow ball of the towing vehicle. The coupling handle must now audibly click back into the starting position.

In addition, press the hand lever (Figure 13/1) down by hand. Closure and securing follow automatically.



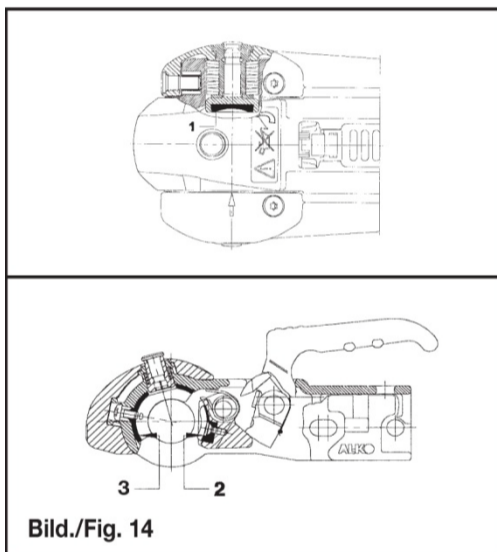
WARNING: Coupling ball is correctly engaged when the green edge of the safety indicator button (Figure 13/3) is visible.

3.2 Uncoupling

The uncoupling of the trailer from the towing vehicle takes place in the reverse order: Pull the stabilizing handle right up to stop (top end position of the stabilizing lever). Open coupling handle and lift the AKS 2004/ AKS 3004 from the ball on the towing vehicle. With bigger nose loads coupling and uncoupling can be made easier by using a jockey wheel.

Please note:

The friction pads (Figure 14/1,2,3) are pressed against the tow ball and generate a stabilizing/damping force. The friction pads are therefore subject to wear. However, they are wear resistant and have therefore a long service life.



3.3 How to check the efficiency of the stabilizing unit (lateral friction pads)

Couple up AKS 2004/AKS 3004; to a standard 50 mm tow ball

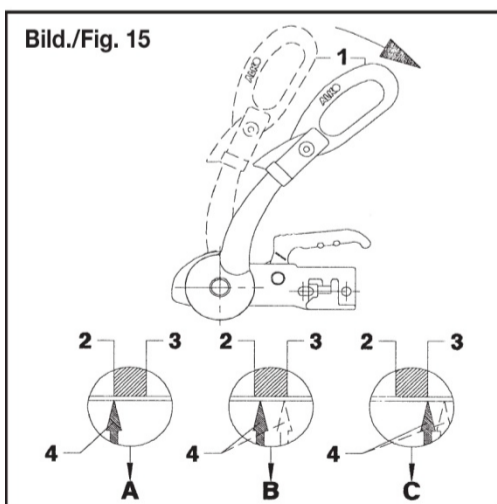
Open stabilizing lever (figure 15/1)

Close stabilizing lever until resistance is felt (friction pads are in contact with the tow ball but not yet under pressure)

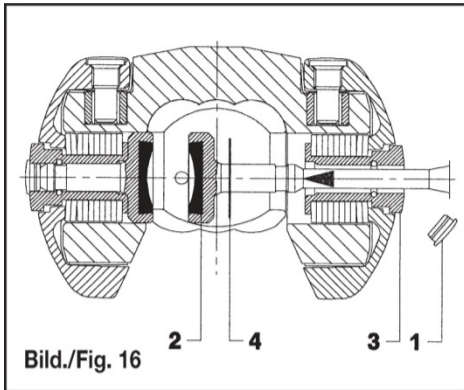
If the arrow on the pressure plate (fig. 15/4) is before or on the marked area (Fig. 15/2) the friction pads are still as new - A

The arrow on the pressure plate (15/4) should lie in the marked area on the housing (figure 15/2 and 3) -B

If the arrow on the pressure plate reaches or passes the replacement marking on the housing (figure 15/3) the friction pads are worn out -C



PLEASE NOTE: Adjustment of the friction pads is not possible.



4. Servicing and Cleaning

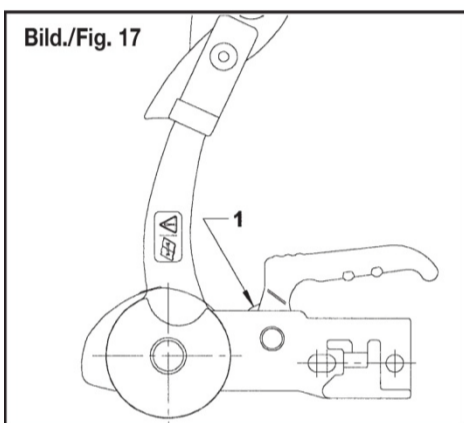
4.1 Replacing friction pads (lateral friction pads)

This should be done when the arrow on the pressure plate has reached or passed the "replace" marking on the housing (Figure 15/3).

Uncouple AKS 2004/AKS 3004.

Remove protective caps (Figure 16/1) with the aid of a screwdriver.

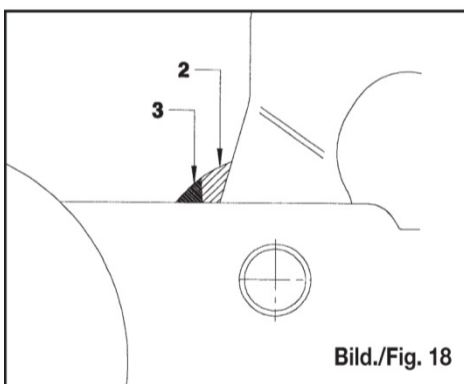
Press out the worn out friction pads (fig. 16/2) inwards and remove (use punch and hammer).



Insert new friction pads from below with the pin in the sleeve and press in as far as they will go. (Pin will engage no tools necessary). Re-insert shim rings, if present.

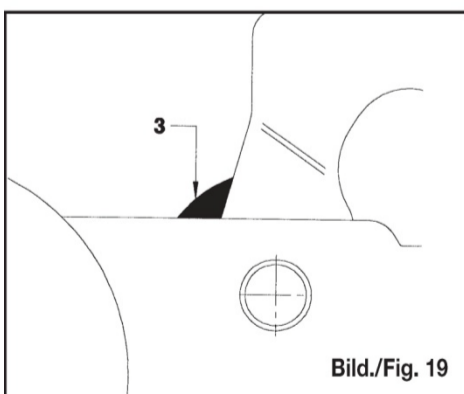
4.2 How to check the wear of the brake lining of the friction pads

The brake lining of the AKS 2004/AKS 3004 friction pads are subject to a certain degree of mechanical wear after high mileage. To show when the friction pads are worn, a wear indicator is built into the handle (Figure 17/1).



Couple the AKS 2004/AKS 3004 onto the towing vehicle (do not activate stabilizer unit). If a green indicator is visible (figure 18/2) then the AKS 2004/AKS 3004 is in a new condition or the wear of the ball and the AKS 2004/AKS 3004 is within permissible limits.

If only a red indicator is visible (Figure 19/3) then this can have the following causes:



AKS 2004/AKS 3004 is not worn but the tow ball has reached its lowest limit of wear (49 mm or smaller)

AKS 2004/AKS 3004 and the tow ball show signs of wear

Tow ball is in a new condition (50 mm) but the brake lining of the AKS 2004/AKS 3004 friction pads (Figure 14/2 and 3) show a high degree of wear.

Establish the diameter of the tow ball so that conclusions may be drawn as to the wear of the brake lining of the AKS 2004/AKS 3004 friction pads (ball diameter must not be less than 49 mm)
PLEASE NOTE: All maintenance work should be carried out by specialist workshops authorized by AL-KO (Service Centers) or in accordance with the AL-KO Operating Instructions.

Replacing the friction bearing bushing:

Always replace both friction bearing bushings!

AKS 2004 /3004 is uncoupled Remove lateral friction liners as outlined in 4.1

Pull the rubber buffer (Figure 20/1) up and off.

Press the safety indicator outwards and secure with SW 14 hexagon spanner (Figure 20/2).

Remove cheese-head bolt (Figure 20/3).

Press brake lining recess (Figure 20/4) inwards and pull down and out.

Open ball coupling – pull coupling handling (Figure 20/8) up (open position).

Remove countersunk head cap screw (Figure 20/5).

Press the friction pad (Figure 20/6) inwards with a screwdriver and remove from the ball cup.

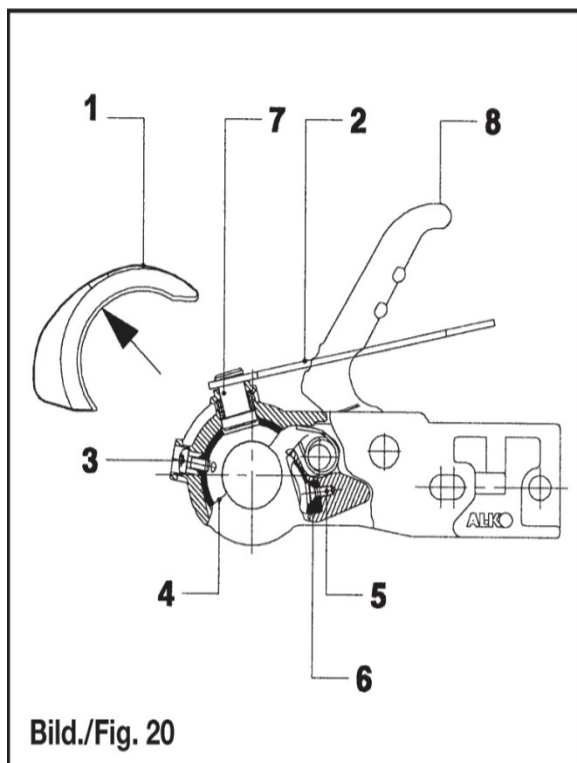


Bild./Fig. 20

Please note: A torx spanner (T25/T30) is necessary for unscrewing items 3 and 5.

Fitting the friction pads takes place in the reverse order.

Tighten screws (Figure 20/3 and 5) with 5Nm.

Replace rubber buffer (figure 20/1) over the attachment profile on housing, first at the bottom and then at the top.

Refit lateral friction liners again see 4.1

4.3 Important advice for maintenance and cleaning

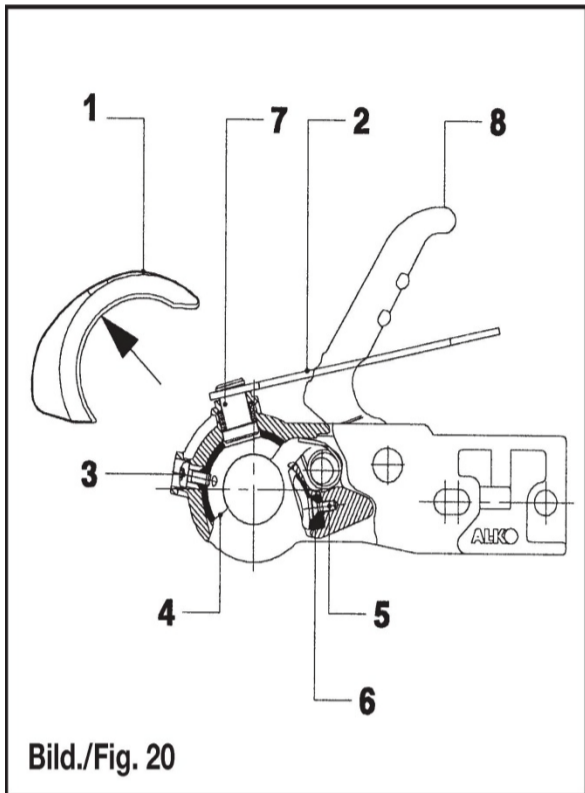
The tow ball on the towing vehicle is to be cleaned of grease and other residue.

Suitable for cleaning:

Thinners / White spirit / Brake cleaner - otherwise the stabilizing effect will be severely reduced.

If friction pads are contaminated with grease they should not be cleaned as this will have a reduced stabilizing effect. Therefore friction pads should be replaced.

The surface of the tow ball must be free of grooves, rust and seizing marks. Otherwise there will be increased wear!



Coated tow ball

Tow ball coatings (e.g. Zinc plated, Chrome plated, Dacromet, lacquered, KTL or any other coating) must be removed with a 100-120 grade emery cloth, otherwise noise, excess wear, decreased stabilizing efficiency or damage of the AKS 2004/3004 parts may occur.

When using in extreme winter conditions, carefully spray the visual indicator (coupling engaged) with defroster

4.4 Lubrication

Should lubrication of stabilizer unit parts become necessary then the following must be observed:

Clean all parts thoroughly.

Areas may only be covered with a thin film of grease.

Type of lubricant: Multi-purpose grease.

Warning:

When lubricating no oil or fat should get on the friction area or on the ball holding area!

5. Operation

5.1 Maneuvering:

For easier maneuvering (on campsites, etc.) pull the stabilizing lever right up.

The stabilizing lever may not be used as a maneuvering handle.

During opening and closing, the AKS 2004/AKS 3004 must only be operated by one person.

Press stabilizing lever down or pull it up with one hand only.

Never work with your foot or an extension. The components will be overloaded and damaged!

When opening or closing the stabilizing handle, do not leave your hand on the coupling handle!

Non-compliance means there is a danger of overloading the component parts.

5.2 Noises when driving

As a rule the friction pads of the AKS 2004/AKS 3004 do not cause any noise!

Any clicking, creaking, squeaking noises arising could come from the following causes:

Foreign bodies or dirt between the friction pad and tow ball.

Dry operation of the tow bar/tow shaft in the body of the coupling device.

Tow ball with coating (e.g. Grease, Zinc plated, Chrome plated, Dacromet, lacquered, KTL or any other coating).

Remedial action:

Clean the tow ball and clean the friction pads by lightly rubbing over the linings with sandpaper (100 – 120 grain).

Lubrication of the coupling body through the grease nipples.

Type of lubricant: multi-purpose grease.

Go to specialist workshop. Have the ball holding areas checked for damage and the locking mechanism for function. If necessary, change tow ball.

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5.3 Spare Parts

Spare parts are safety critical parts! For this reason when fitting spare parts in our products we recommend the use of original **AL-KO Genuine parts** or those parts that we have explicitly approved. The reliability, safety and suitability of parts designed especially for our products, has been determined using a special test procedure. In spite of constantly monitoring the market we are unable to assess or vouch for other products.

Please bear in mind that repairs should only be carried out by trained and qualified workshops/personnel.

To establish the correct spare parts the service centers need the ETI number = spare part identification number on the AKS 2004/AKS 3004, which is located on the front of the red cover of the coupling head (Fig 20 item 1).



All AKS stabilizers must only be used with 50mm tow balls connected to the towing vehicle with an anti rotation plate which does not allow the tow ball to unscrew or rotate. Failure to follow instructions may result in serious injury or even death.

Contact AL-KO for advice or supply.



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