Spare Parts/Attachment Parts:

Warning:

1) Only original AL-KO spare parts may be used.
2) All attachments and accessories must be approved by AL-KO.

FAILURE TO COMPLY WITH THIS DEMAND WILL RELEASE THE MANUFACTURER OF AKS 2700 FROM ALL GUARANTEE OBLIGATIONS.

5. GENERAL INFORMATION

The surface of the ball must be free from grooves, rust and siezing marks. Any Dacromet coating (dull silver corrosion protection coat) must be removed, otherwise there will be increasing wear and a reduction in the stabilsiing effect.

Manoeuvring by hand:
Stabilising lever may not be used as a manoeuvring handle. Please use the handles on your caravan or the AL-KO manoeuvring handle which can be purchased separately to attach to your jockey wheel.

Failure to comply results in danger of overloading component parts.

Manoeuvring with towing vehicle:
Pull the stabilising handle to the top position(manoeuvre position) to make the manoeuvring easier (on camp sites etc).

Storing:

To reduce the contamination of component parts of the AKS 2700, the stabilising handle should be closed if stored over a longer period. Protect the towball of the vehicle from rusting.

Noises when driving:

As a rule the friction linings DO NOT MAKE A NOISE when driving! Any clicking, creaking, or squeaking noise arising, could have the following causes:

1) Foreign bodies or dirt between the friction pad and towball.
   Remedial action:
   Clean the towball and clean friction pads by lightly rubbing over the pad with sandpaper (100-200 grain).
2) Dry operation of the towball shaft in the sleeve of the overrun equipment.
   Remedial action:
   Lubrication of the sleeves through the grease nipples (use multi-purpose grease DIN 51825 KTA 3K), additionally pull the gaiter off the overrun, towards the front and grease all of the exposed drive shaft (see Fig. 27).
3) The towball on the towing vehicle has too much play in the locking mechanism (if detachable).
   Remedial action:
   Go to specialist workshop. Have the towball checked for damage.
   If necessary change towball or if permissible re-lubricate locking mechanism.

During winter use, spray the visual indicator button with de-icer.

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ASSEMBLY AND OPERATING INSTRUCTIONS FOR AL-KO AKS 2700 STABILISER

AL-KO
Vehicle Technology

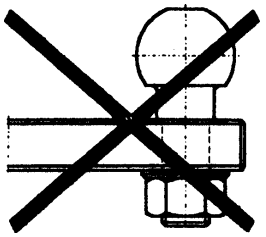
PLEASE ENSURE YOU READ THESE INSTRUCTIONS CAREFULLY, BEFORE COMMENCING TO OPERATE THIS PRODUCT.

REGULATIONS:
1) The AKS 2700 must be used in conjunction with 50 mm dia. towballs which conform to EC Directive 94/20 (DIN 74058 or local equivalent).
2) Suitable for attachment to drawbars or approved overrun braking equipment for single axle (and tandem axle) trailers, with a minimum weight of 200 Kg and a maximum permissible weight of 2700 Kg.
3) EC design approval has been given to the AL-KO AKS 2700 coupling under permit No. e1*94/20*0030*00.
4) This design approval has been recognised by all EC member states and must be implemented with effect from 01.12.95.

RESTRICTIONS OF USE:
Spare wheels fitted to rear door of vehicle, or vehicle with platforms etc:
1) the AKS 2700 Stabiliser is based on the latest regulations. This means the new DIN 74070 (dimensions of couplings) are also adhered to.
2) The trailer coupling may only be connected to towing vehicles where the clearance for the stabiliser can be observed, in accordance with Directive 94/20 EC (DIN 74058). If these clearances are infringed by special attachments, then the use must be checked separately.
3) Not suitable for use with overrun devices which revolve above 25°.
4) For Swan Neck towbars (fixed or detachable), refer to clearances on separate towball sheet.

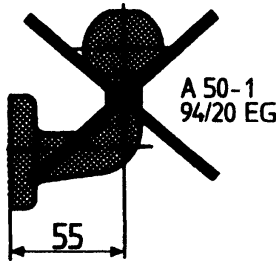
WARNINGS:
1) In accordance with EC Directive 94/20, couplings type A 50-1 cannot be used (see Fig. 2).
2) A bolted-in type ball coupling (Fig. 1) is only permissible if the thread is locked.
3) The AKS 2700 cannot be used with a laterally attached reversing lever, on the left side, when facing direction of traffic.

Fig. 1



This type of coupling must be locked to ensure it cannot revolve.

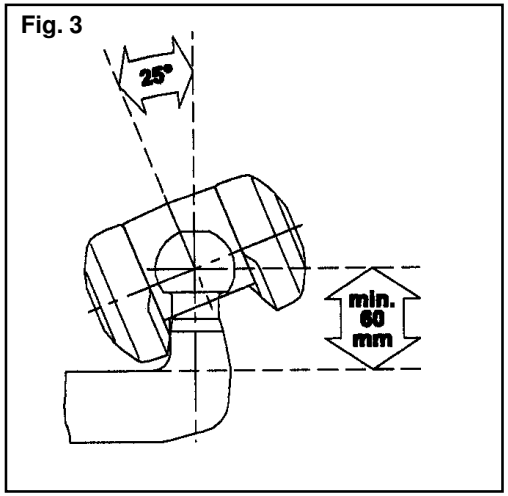
Fig. 2



1. PLEASE CHECK THE CONDITIONS FOR ATTACHMENT BY FOLLOWING THE STEPS LISTED BELOW.

Towing vehicle with towball attachment:
The equipment may only be used for connecting to towballs to Directive 94/20 EC A50, where the clearance below the ball, is at least 60 mm (Fig. 3). According to British Standards the prescribed rotation of ±25^0 will thus be achieved. Not suitable for use with revolving shafts above 25^0.

Fig. 3



Handbrake lever on right:
The AKS 2700 can be used only on overrun devices where the handbrake is mounted on the right, viewed by someone facing the direction in which the vehicle is moving. For handbrake levers on the left, please order the special handles, Part No. 581158 & 581158.

Clearances for AKS 2700 (Fig. 4):

a) The area above the towing ball of the vehicle must be free from vehicle components (eg. spare wheels).
b) Clearing for stabiliser handle = 340 (B) + stroke (D) (85-100 mm) = 440 mm with AL-KO overrun devices.
c) Max. 50 mm (C) clearance for coupling handle (at initial operation).
d) Min. 45 mm clearance (E) to rear of towing vehicle.

Fig. 4

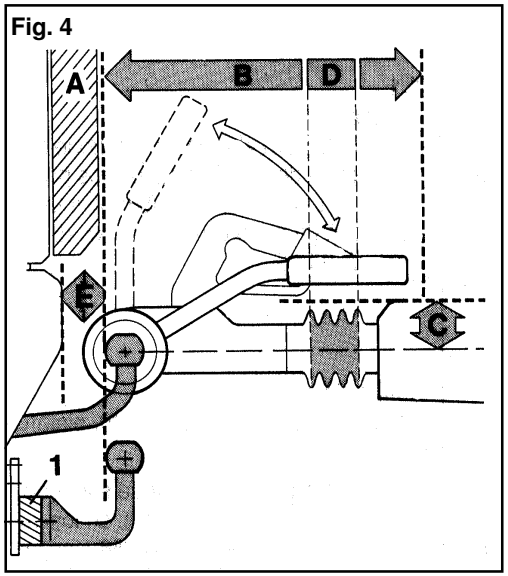
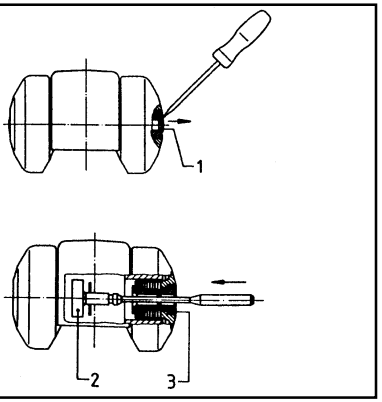


Table 1

Min Mass Kg	Total Permissble Weight Kg	Nose Weight Kg		Weight Kg
200	2700	100		5
Hole Type	Shaft Dia. (mm) A (Fig. 5)	Distance Between Holes B	C	Length D (Fig. 5)
Horiz	50	50	12	177
	35&40	54	12	177
Cross	46&51	40	18	177

Use a screwdriver to remove plastic protective caps (fig. 22/Item 1).

Fig. 22



Press worn friction linings (Fig. 22/Item 2) inwards and remove (use punch and hammer - replace one at a time).

Insert the new friction linings from below with the pin in the sleeve (Fig. 22/Item 3) and press in as far as possible (pin engages, no tools necessary). Also reinsert adjusting washers, if present on original friction pads.

Check wear on ball:

If the wear indicator (Fig. 23/Zu) is no longer visible, it is probable that the ball is worn and has developed play within the coupling housing. Proceed as follows:

- Connect ball DIN 74058 (ISO 50)
- Handle is automatically tightened
- No pushing by hand
- Check the position of the wear indicator

Warning: The AKS 2700 can disengage and the caravan could uncouple from the towing vehicle. Check AKS and towball immediately!

Warning: Exchange the worn out part immediately. The diameter of the towball should be ascertained first of all, so that conclusions may be drawn as to the wear of the coupling mechanism (min dia. 49.61 mm).

Checking the towball coupling:
Have the towball re-checked with standardised test ball at the AL-KO service station. The towball coupling/trailer ball is not worn at handle (Fig. 23/A) (Tightening only via spring force, without pushing by hand).

Fig. 23

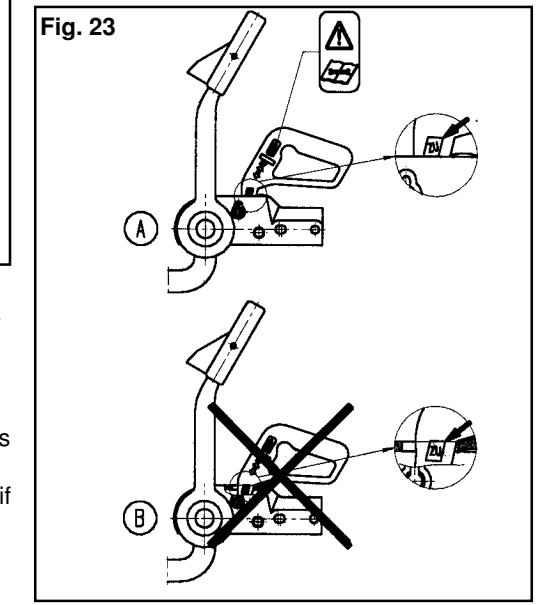
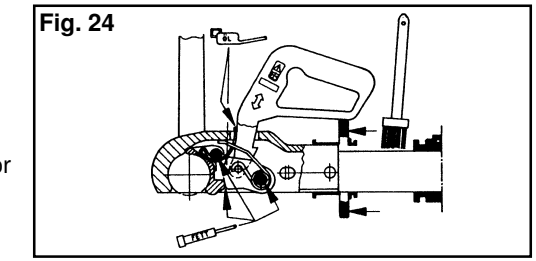


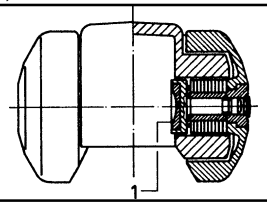
Fig. 24



Painted towballs or similar coatings: In the event of the ball being coated, this must be thoroughly removed (with 100-200 grain sandpaper). Otherwise reduced stabilising effect, increased wear and damage to AKS 2700 components may occur.

Technical Information: The friction linings are pressed against the towing ball and generate a stabilising/damping force. The friction pads are therefore subjected to wear. The linings have reserves of wear and thus have a long service life (Fig. 18).

Fig. 18



How to check the efficiency of the AKS 2700:

1) Couple the AKS 2700.
2) Pull stabilising handle into off position (Fig. 19/Item 1).
3) Close stabilising handle until resistance is felt (friction linings are in contact with the towball - but not under pressure).
4) The mark on the pressure plate is between the two marks (Fig. 19/Item 4) on the housing (Fig. 19/Items 2&3),
5) The friction linings are beyond permissible wear range and require adjustment, when the marking on the pressure plate coincides or passes the marking on the housing (Fig. 19/Item 3).

Fig. 19

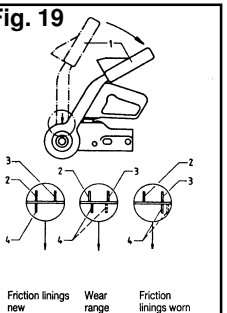
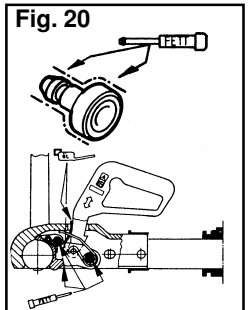


Fig. 20



Lubrication:
Coupling Mechanism:
In order to maintain the easy action of the coupling mechanism and to achieve a longer life for the AKS 2700, the coupling mechanism must be lubricated at regular intervals (at least once a year). Type of lubricant: General purpose grease to DIN 51825 KTA 3K (or local equivalent). (Fig. 24).

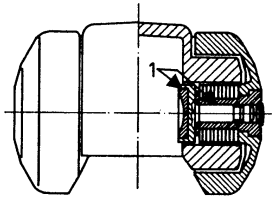
Warning: When lubricating, no oil or grease should get on the friction area or the ball holding area.

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

Stabilising Unit:
Should lubrication of the stabiliser unit parts become necessary then the following must be observed:
a) Clean all parts thoroughly.
b) Areas may only be covered with a thin film of grease (Fig. 21/Item 1).
c) Type of lubricant: Multi-purpose grease to DIN 51825 KTA 3K (or equivalent)

Warning: When lubricating, no oil or grease should get onto the friction area or on the ball holding area!.

Fig. 21

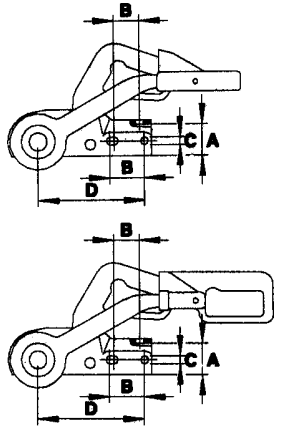


Replacing Friction Linings:

The marking on the pressure plate (Fig. 19/ Item 4) has reached or passed the “replace” marking on the housing (Fig. 19/Item 3).

Uncouple the AKS 2700.

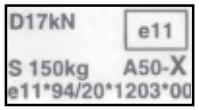
Fig. 5



All EC Countries:

The installation is to be examined in conformity to the stipulations in Appendix 1, No.5.10, according to the demands of Appendix VII of Directive EC 94/20. These installation and operating instructions are to be included with the caravan/trailer papers.

GB - Installation only possible with special tow ball attached to towing vehicle. Towball label will appear as follows:



(see regulations and restrictions of use on page 1).

2. ASSEMBLY INSTRUCTIONS

Removal of existing coupling head:
Before you begin dismantling the coupling head, please note the following:
The shock absorber (damper) on most overrun equipment is suspended on the rear fixing bolt (Fig. 6).

Attention:
The shock absorber moves out independently and for this reason, you will find a retaining pin in the box, to facilitate coupling head removal.

Remove gaiter from coupling head.
Loosen and remove hexagon nuts (Fig. 6/Item 1&2).
Pull or push out hexagon bolt (Fig. 6/Item 1).
Knock through hexagon bolt (Fig. 7/Item 2) with retaining pin (Fig. 7/Item 1) and leave in retaining pin to secure shock absorber (damper) in the drawbar.
The AKS 2700 is designed for drawshaft tubes up to 50 mm dia. For small diameters, spacer brackets are enclosed (Fig. 8).

Assembly of the AKS 2700 Stabiliser:
Place AKS (and spacers - if required) (Fig. 9/ Item 3) onto the drawshaft, aligning mounting holes 1&2 and spacer sleeve (Fig. 9/Item 4).
Insert hexagon bolt M12x80/75 (Fig. 9/Item 1) and take up spacer sleeve (if used).

Fig. 6

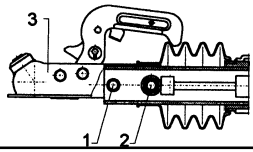


Fig. 7

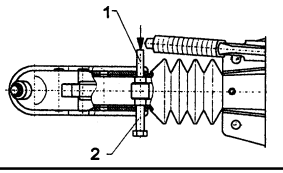
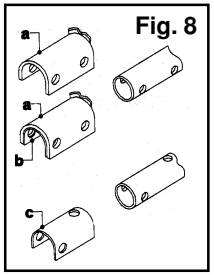


Fig. 8



50 mm = no spacer required
40 mm = Spacer (a) required
35 mm = Spacer (b) 5.5 mm (1x5.0 mm & 1x2.5 mm)
45 mm = Spacer (c) 2.5 mm

Warnings:
Always insert horizontal bolts from stabiliser lever side, as this allows correct clearances and theft prevention if used with AL-KO barrel lock (not included).
Always insert vertical bolt from top to bottom and re-use original shim used on the overrun. (Fig. 10/Item 1).

Fig. 9

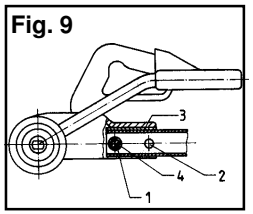
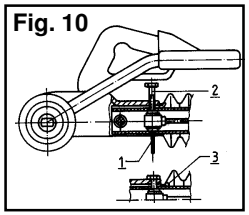


Fig. 10



Knock through retaining pin with hexagon bolt M12x80/75 (Fig. 9/Item 2). Shock absorber (damper) will remain in place.

For your own safety please check:
To ensure shock absorber (damper) is retained in place, push drawshaft in and out.
If resistance is felt when pulling the drawshaft out, then the shock absorber (damper) is in place.

Place the lock-nut (use the new nuts enclosed) onto the bolt and torque to 100 Nm.
Warning: Self-locking nuts may only be used once.

Depending on design of gaiter may either be:
- put over coupling
- linked into space bracket
- fixed over retaining ring.

IMPORTANT:
In any operating condition, there must always be free room of approx. 25 mm between the AKS controls and the operating parts of the overrun device, so that a hand can be inserted. (Figs. 11/11a)
This should be checked as follows:

a) AKS 2700
- stabiliser handle closed
- stabiliser handle open

b) Overrun device
- drawshaft telescoped out
- drawshaft telescoped in
- handbrake lever on
- handbrake lever released

The free room is required to guarantee correct functioning and ease of operation.

Fig. 11

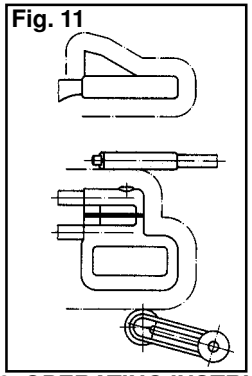
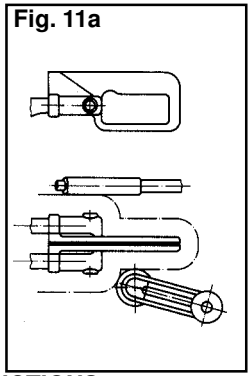


Fig. 11a



3. OPERATING INSTRUCTIONS

AKS 2700 Delivery Specifications:
Fig. 12/Item 1: Stabilising Lever
Fig. 12/Item 2: Coupling Handle

Coupling/Uncoupling:

Please Note: When coupling or uncoupling, the stabiliser lever must be in the top position (open).

Pull stabiliser handle fully up right to stop (open) (see Fig. 14/Item1).

Fig. 12

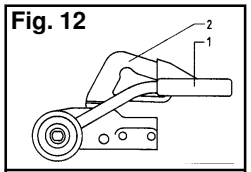


Fig. 13

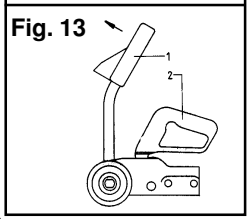
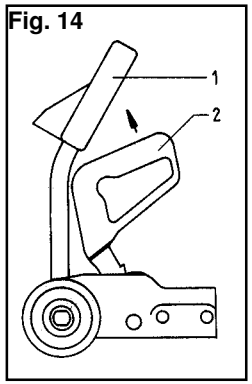


Fig. 14



Coupling Up:

Coupling Head:

Open the ball coupling - to do this, pull coupling handle fully upwards in direction of arrow (Fig. 14/Item 2).

Put the opened coupling on the towball of the towing vehicle and release the coupling handle. It should now slide back into the initial position on its own. However, press down with the hand as well. Closure and fastening are automatic.

Safety Warning: If the stabiliser is correctly coupled to the towball, then the green edge of the safety indicator is visible. The coupling mechanism is correctly positioned when the hand lever can no longer be pressed down even by hand (Fig. 15/Item 3).

If the AKS 2700 is not correctly coupled to the towball, then the trailer/caravan can become disconnected from the towing vehicle!

Press the stabilising handle down until it is over centre and against the end stop.

Uncoupling:

Lower the jockey wheel.
Detach breakaway cable and electrical plugs.
Pull stabilising lever up, right to stop (Fig. 13/ Item 1).
Pull coupling handle hard up in direction of arrow (Fig. 14/Item 2).
Lift coupling head from towball of towing vehicle. This process can be carried more easily if the towbar is set high with the jockey wheel, when the coupling handle is opened.

Fig. 15

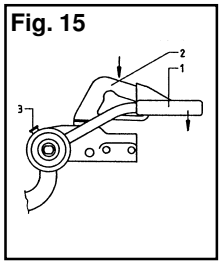
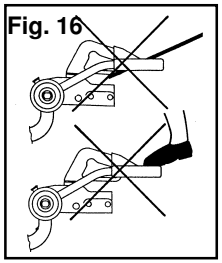


Fig. 16



Safety Tips:

During coupling and uncoupling, the AKS 2700 must only be operated by one person.

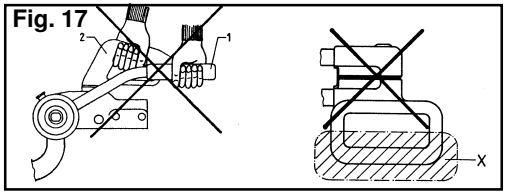
Warning; Never operate with foot or extension bar! The components will be overloaded and damaged. (Fig. 16).

Only press stabilising handle down or pull it up with one-hand only.

Warning: The stabilising lever must not be used as an aid for manoeuvring.

Caution: When opening or closing stabilising handle, do not leave hands on the coupling handle (Fig. 17).

Fig. 17



Important Operating Factors:

The towball should be completely free of grease and other residue. Clean thoroughly with Thinners, White Spirit or Brake Cleaning fluid.

Hints: The surface of the towball must be free of grooving, rust and scratch marks, otherwise increased wear and tear will occur. If pads are contaminated by paint or if they are glazed, they can be cleaned with 100-200 grain sandpaper.