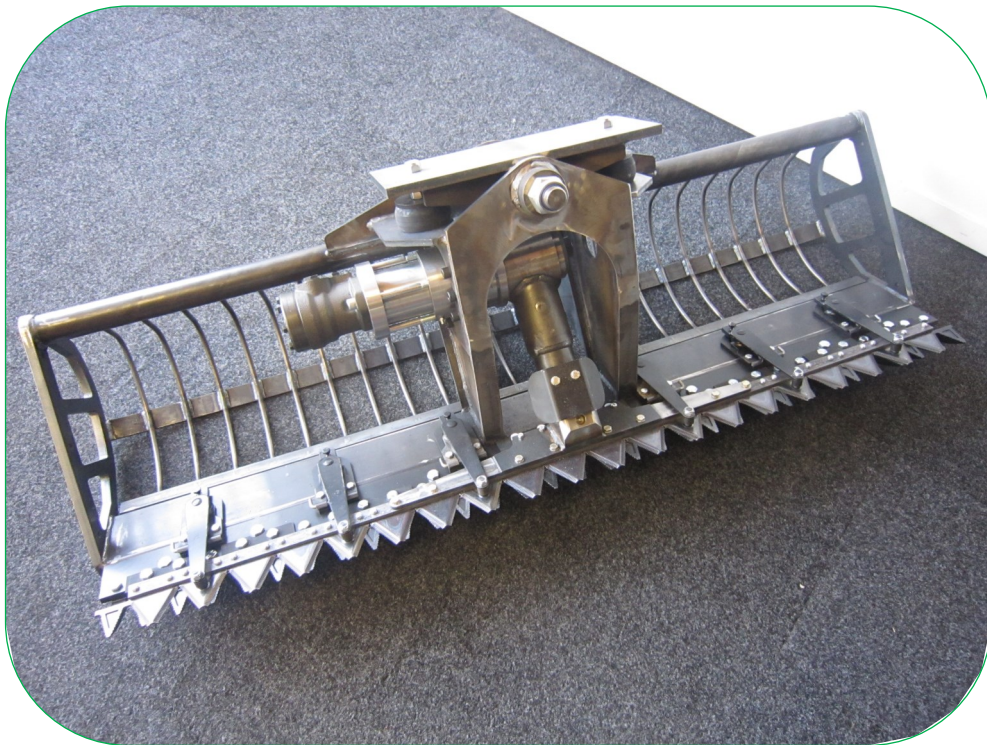




# User Manuel

## Landreus weed cutting buckets 2017



**EC- declaration of confirmation.**

According to the directive 98/ 37/ EEG, appendix II A.



Business organization Hugo Popken  
De Hanekampen 29  
9411 XN Beilen  
The Netherlands

Hereby declare that the product

Landreus Mowing buckets      Type:  
Serial number:  
Year of manufacturing

On which this declaration is applied to:

Is in confirmation with the directive 98/37, as last modified.

Is in confirmation with the following standards:

DIN 20022/1, NEN and 982.

Drawn up:

On

Signature

A handwritten signature in black ink, appearing to be 'H. Popken', written over a horizontal line.

Made by: H. Popken business organization, Director Landreus Machines Beilen, The Netherlands.

**Serial notification on the mowing buckets.**

Landreus  
De Hanekampen 29  
9411 XN Beilen  
Tel: +31 593 54 0232  
[www.landreus.nl](http://www.landreus.nl)



Type:  
Nummer:  
Bouwjaar:  
Gewicht:

Dutch	English
Type	Type
Nummer	Serial Number
Bouwjaar	Year of manufacturing
Gewicht	Weight

Always keep this document with the machine.  
This document belongs with the Landreus Mowing buckets

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All rights reserved business organization Hugo Popken of changing the mowing buckets on any part or any time, without perceded or direct notification of its costumers. The same goes for the users manual.

Beilen, 16 july 2015

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# **1. In general**

## **1.1 In general**

This owner's manual is written for all the buyers and users of one of the mowing buckets of Landreus mowing bucket series.

For any questions that this users guide does not provide an answer, please contact the manufacturer Handelsonderneming Hugo Popken.

Our own conditions, as registered by the K.VK in Emmen, reg. Nr 51640163, are applied to all quotations made by us and also on all the agreements made with us.

On request a copy will be sent to you. Ownership and risk will be passed to the buyer at the moment of delivery, unless the general conditions provide else.

See also the general conditions of business organization Hugo Popken.

This userguide is written for all of the standard types of the Landreus mowing buckets line. Eventual damage resulting from:

- Changes of the product made by others than the manufacturer.
- Usage of non-original parts and equipment
- The wrong execution of repairs and adjustments.
- Not following up the valid safety directions.

Can not be held responsible for business organization Hugo Popken

**Read chapter 1 till 8 before taking the mowing bucket in use**



- Only skilled and wellinstructed personal that is qualified to work with the machine is allowed to work whit the mowing bucket.
- During operation the whole has to meet the requirements of the law.

# **1. Introduction**

## **1.2 Purpose**

The mowing buckets are built only for under and above water mowing of cane, grass-like plants in waterways.

## **1.3 Prohibited in use**

- The transportation of persons in the mowing bucket
- Working in the dusk and / or the dark without proper working-lights
- Using the mowing bucket with earth works
- The mowing of braches, trees, bushes and hedges or other wood-like vegetations
- Mowing with the mowing bucket while riding
- Supporting the crane or tractor machine with the mowing bucket
- Every other use than the described purpose in paragraph 1.2 is not allowed
- Working with an instable combination ( crane or tractor machine with mowing bucket )
- Working with the machine at temperatures less than 0 degrees celsius

## **1.4 Guarantee**

Guarantee on the Landreus mowing buckets will be given when it concerns production and / or material errors. Knives are excluded from any form of guarantee. Damage of the knives due to collision with a obstacle will be seen as a working-risk. For a claim of guarantee, please contact your dealer. Never do repair jobs yourself on parts that you think to claim guarantee on, but contact immediately your dealer. When someone else than the manufacturer makes modifications to the mowing bucket, all kinds of guarantee fall into decay.



## **2. Valid safety directions**

### **2.1 Safety directions**

**Read the safety directions thoroughly before taking the mowing bucket in use**

**Obey the safety directions at any time**

**Taking the mowing bucket in use implies that you have read and understood the usermanual**

- Obey the safety directions of the machine the mowing bucket is attached to
- Only skilled and well-instructed personnel that is qualified to work with the machine is allowed to work with the mowing bucket
- Mechanically driven implements are also in normal use in principle always dangerous and can cause injuries and / or damage
- In case of an emergency don't jump off the machine See the owner's manual of the machine also
- Don't work in dusk and / or dark make sure you've got proper working-lights
- When leaving the crane or tractor machine, always turn engine off and remove the key out of the contactlock
- Never transport persons in the mowing bucket

## **2. Valid safety directions**

- While mowing with the mowing bucketets parts of plants and / or stones may fling away, make sure nobody comes near the mowing bucket while operating.
- Check the machine everyday on damaging and / or defects
- Remove the keys out of the contact lock
- It's illegal for anyone to come with in a radius of 2 meter ( 66 ft. ) near the mowing bucket
- Move the mowing bucket is coupled on the boom, transport on prescribed methods only see chapter 10 or the owner's manual of the crane or tractor machine
- Use origianl / spare parts only
- A leakage in the hydraulic system can penetrate though the skin and cause serious injuries
- Remind that the oil-jets under high pressure can be invisible
- Never attamp to stop or trace a leakage whit your hands. Use a solid and firm cloth
- An unconnected oil-cylinder filled with oil will leak oil, when moved with a force from the outside
- When an injury caused by an oil leakage accurse, immediately contact a doctor, because of infection danger
- Always stop oil-leakage as soon as possible, because of the change of power-loss and the pollution of the environment
- During activity near or with the knives, always wear firm gloves. The knives are sharp and can cause injuries
- After every activity with the mowing bucket always replace the knife-protetion
- It has to be visible for the driver with a control led whether the mowing bucket is turned on or off the switch has to be provided with an on and off switch
- Before starting with activities always remove lubricant and plant leftovers first
- Before starting wiht activities always read the users guide of the machine first. This because of the disconnection of the electic circuit
- Place the earth terminal so close as possible near the welding-site
- Make sure that there are no bearings between the welding-site and the earth terminal
- Make sure that there are fire extinguishers nearby when welding
- Protect eyes and hands while welding, while grinding protect eyes, hands and ears

## 2. Valid safety directions

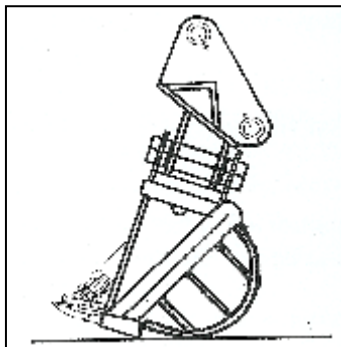
Make sure that the mowing bucket is well supported, even when coupled to the machine. Stay cautious while coupling or uncoupling the mowing bucket

Make sure that the uncoupled mowing bucket lies stable and firmly on to the ground. It's preferred to place the mowing bucket on the mowing bar ( photo A )

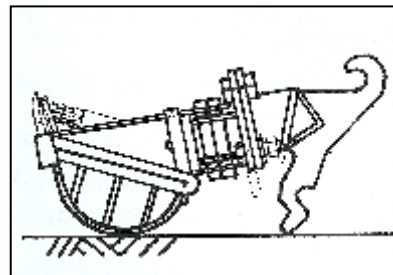
When the mowing bucket is top-heavy it's preferred to place the mowing bucket on it's back ( photo B )

See paragraph 6.5 al so

1. Pay attention
2. When the mowing bucket is working keep 2 meters ( 6.6 ft. ) distance
3. Don't come near the mowing parts, because the risk of jamming and / or cutting clothes and / or bodyparts caused by the mowing bucket knives
4. Knives are sharp and capable to cut off fingers



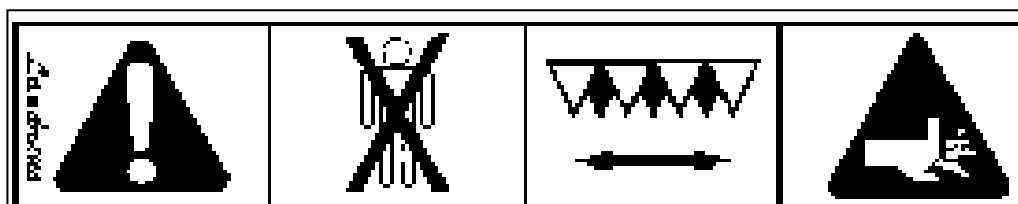
A



B

### 2.2 Explanation of the sticker

1. Pay attention
2. When the mowing bucket is working keep 2 meters ( 6.6 ft. ) distance
3. Don't come near the mowing parts, because the risk of jamming and / or cutting clothes and / or bodyparts caused by the mowing bucket knives
4. Knives are sharp and capable to cut off fingers



### **3. Product description**

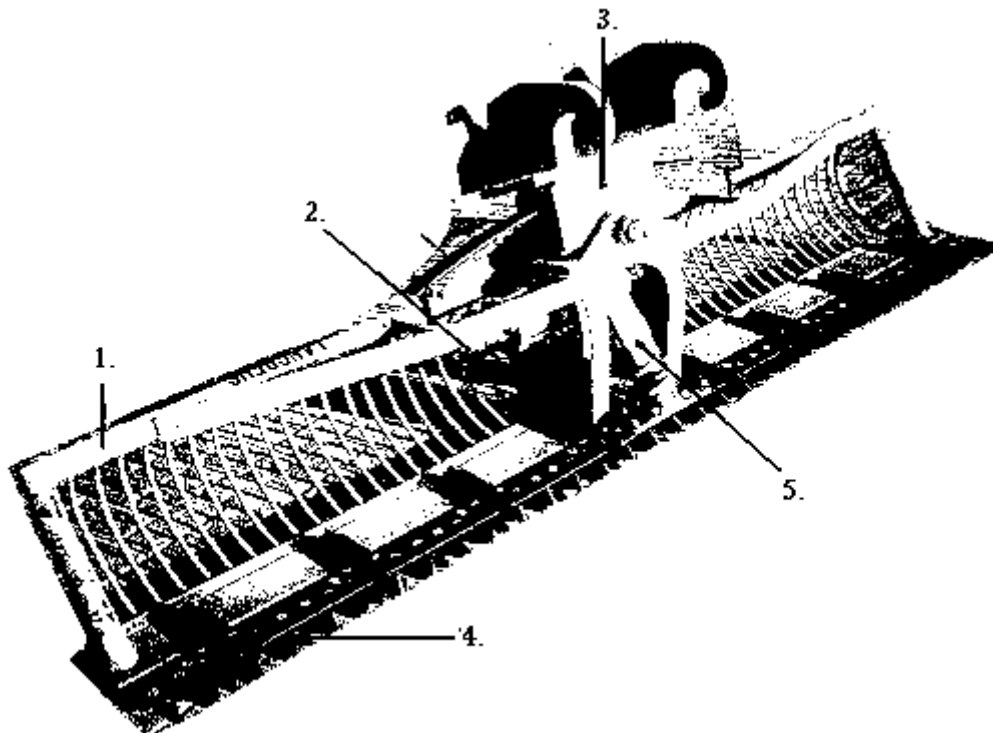
The Landreus mowing bucket are manufactured with the greatest care and has to be delivered undamaged and with all of the in the appendices described parts. May in your option there be anything wrong and / or missing with the product.

Contact your dealer or the manufacturer, business organization H. Popken in Beilen.

#### **3.1 Description**

The Landreus mowing buckets exist of the next parts also see the appendices

1. Mowing bucket frame ( see appendix 1 )
2. Hydraulic engine
3. Suspension
4. Cutter head ( see appendix 2 )
5. Propulsion ( see appendix 3 )
6. Plate spring



### **3. Product description**

#### **3.2 Operation**

The mowing bucket is connected to the boom with basic suspension. The plate spring enables the mowing bucket to follow roughness of the slope. The hydraulic engine puts, through the propulsion, the knife into movement. Plants that are under or above the waterline and are between the knife will be cut. Due to the pulling movement of the mowing bucket the cut plants are caught in the bucket, which can be emptied on the side of the waterway or else where.

#### **3.3 Prohibited in use**

- The transportation of persons in the mowing bucket
- Working in the dusk and /or the dark without proper working-lights
- Using the mowing bucket with earth works
- The mowing bucket of branches, trees and hedges or other wood-like vegetations
- Mowing with the mowing bucket while riding
- Supporting the crane or tractor machine with the mowing bucket
- Every other use than the described purpose in paragraph 1.2 is not allowed
- Working with an unstable combination crane or tractor machine with the mowing bucket
- Working with the machine at temperatures less than 0 degrees / celsius

**Damages caused by wrong or ligurative use or the mowing bucket can business organization  
Hugo Popken not be eld responsible for**

## 4. Technical specifications

Model type	Wide in mm	Height in mm	Dept in mm	Weight in kg	Max. oil-jet	Allowed pressure (bar)
<b><u>MINI</u></b>						
200	1952	502	410	180	25 L / min	150 bar
250	2562	502	410	200	25 L / min	150 bar
300	3151	502	410	220	25 L / min	150 bar
<b><u>MK.L</u></b>						
250	2562	540	590	259	40 L / min	150 bar
300	3151	540	540	299	40 L / min	150 bar
400	4081	540	540	372	40 L / min	150 bar
500	4992	540	540	454	40 L / min	150 bar
<b><u>MK.Z</u></b>						
250	2562	540	540	323	40 L / min	150 bar
300	3151	540	540	362	40 L / min	150 bar
400	4081	540	540	428	40 L / min	150 bar
440	4420	540	540	444	40 L / min	150 bar
500	4992	540	540	460	40 L / min	150 bar
550	5590	540	540	612	40 L / min	150 bar

Every type is made for different machines:

**MINI:**      **Mini excavators from 2– till 5 tons**

**MK.L:**      **Crane or tractor machine from 4– till 9 tons**

**MK.Z:**      **Crane from 9– till 16 tons**

To prevent wear and tear as much as possible, you can decrease the oil-jet. This will decrease the number of revolutions of the hydraulic engine. With an oiljet of 25l/min comes a maximum revolution of 800 rev/min and a minimum of 10 rev/min. With an oil-jet of 40 l/min a maximum of 750 rev/min and a minimum of 10 rev/min. Don't decrease the oil-jet too much in order to keep the mowing bucket mowing. You can find in your users guide of the crane or tractor machine how to decrease the oil-jet.

The weight of every mowing bucket is mentioned on every mowing bucket. Also see page 2 of this users guide.

## **4. Technical specifications**

### **4.2 Optional parts**

With all the mowing buckets of Landreus are the following parts obtainable:

- Extension racks, used to increase the capacity of the bucket
- Side racks, used to increase the capacity of the bucket
- Hydraulic tilting head, used on the largers mowing buckets ( > 3.50 m ) to stay with in the regulations.

### **4.3 Allowed lubricants and hydraulic oils**

#### **Lubricants**

Water-resistant lubricating oil is recommended in use

#### **Hydraulic oils**

For usage is recommended:

Oil on mineral basic with an anti wearing addiction, type

- HLP ( DIN 51524 )
- HM ( ISO 6743/4

Or decomposable oil, type:

- HE
- HTG

## **4. Technical specifications**

### **4.4 Increase of sound**

The increase in sound in a normal cabin is about 1 dBA at 500 movements/min , measured at the driver's seat

## **5. Bringing the mowing bucket in working order**

Before you start working with the mowing bucket it's important that you'll take notice of the next



- Check if the mass of the mowing bucket is no more the allowed maximum load of the machine
- See the sticker on the boom or the users guide of the machine also
- Check the return line of the crane or tractor machine for a maximum resistance of 15 bars, otherwise the oil seals of the hydraulic engine will be destroyed
- Check if the warning sticker is in place see chapter 2
- Check if the bolts and nuts of the cutters head are well tightened
- Check the hydraulic hoses on damages
- Check whether the hydraulic system is designed in such way that after the pressure has dropped and returns the mowing bucket will not start working without any action of the driver. Also a defect may never cause the mowing bucket to start working automatically. See for this the owner's manual of your machine
- Check the whole mowing bucket on defects or damages
- Check the lubrication of the mowing bucket
- Check the connection between the mowing bucket and the boom
- Joined together the whole operating machine has to comply with the regulations. Have the whole checked by an expert before taking the combination in use



## **5. Bringing the mowing bucket in working order**

### **5.1 Connecting the hydraulic hoses**

Keep the hydraulic hoses and junctions free of dirt

Push the right hose on the right hydraulic quick coupling, what means the return line on to the return coupling and press line on to the press coupling

Changing the return ( R ) and press-lines will increase wearing of the machine, because it sets the hydraulic engine to turn in the other direction and therefore the force and speed of the cutters head will increase

The maximum pressure for the tilting head cylinder is set on 150 bars

The hydraulic hoses

- A. Must be able to stand a pressure of 180 bars
- B. Must have an internal diameter of 3/8 inch
- C. Has to comply with: DIN 20022/1 –ST and the SEA 100–RIA

The whole hydraulic installation has to comply with NEN and 982

### **5.2 Mowing bucket bearer**

It's possible to order a suitable bearer for your mowing bucket. It's also a possibility to have suspension made that fits both on the boom as on the mowing bucket. The suspension of the machine has to be welded all about

## **6. To couple, handle and uncouple the mowing bucket**

**When repairing or up keeping the mowing bucket make sure yhat it's well supported. When the bucket falls over it can cause bruises and / or bone fractures. Always wear safety-shoes**

### **6.1 How to couple the mowing bucket to the boom**

With all suspensions, except for the ones with a safety governor it goes like this:

Attach the mowing bucket to the boom whit a pen and secure this. After that you attach the bucket cylinder with a pen onto the mowing bucket sercure this. Connect the hydraulic hoses.

With a suspension with safety governor it goes like this:

Consult your owner's manual of the crane, tractor machine or safety governor for further instructions. Coonect the hydraulic hoses

### **6.2 How to handle the hydraulic tilting head**

Handling an eventual tilting head has to happen in the cabin. Consult the users of your crane or tractor machine for further instructions

## **6. To couple, handle and uncouple the mowing bucket**

### **6.3 How to operate the mowing bucket**

Remove the knife protection

Move the boom and mowing bucket to the other side of the water. Keep the mowing parallel with the waterline. This can be achieved best when you ride parallel with the waterway.

Turn the knives on only when you're about to make a mowing-move: at every other movement you keep the knives turned off

Move the boom and mowing bucket down, make sure that the knives are parallel to the slope

As soon as you've reached the bottom of the waterway, you stop the boom

Move the boom slightly up

The mowing bucket has to become parallel with the bottom of the waterway. You can do this with the bucket cylinder. Now move the boom and bucket towards yourself until you've reached the other slope.

Move the boom and the cylinder slightly away

Move the mowing bucket so, that the knives are parallel with the slope. This slope you move from below to the above

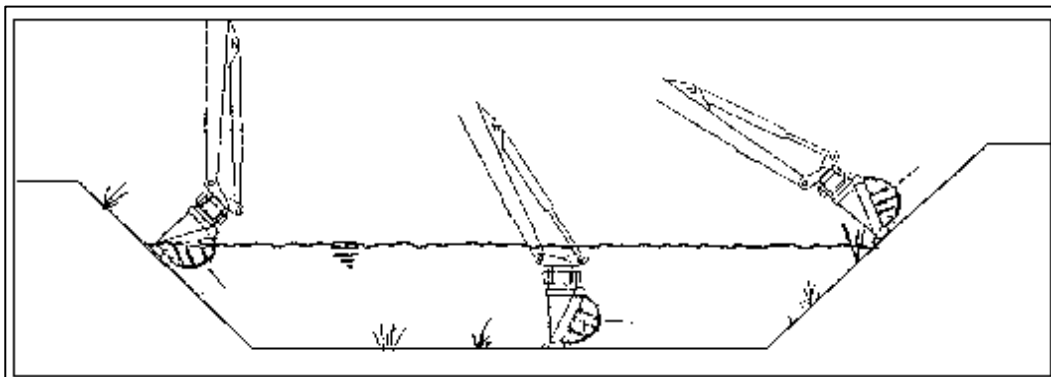
When you've reached the top of the slope, Turn off the knives and empty the bucket where you want

### **A short notice:**

Do not attempt to change the profile of the waterway while using the mowing bucket>

First remove floating plants from the water surface, before you mow under water.

Keep the mowing bucket as clean as possible



#### **6.4 Cleaning the mowing bucket**

When the mowing bucket is very dirty you can clean it best with a high pressure cleaner at a washing-accommodation.

#### **6.5 How to uncouple the mowing bucket**

When your crane or tractor machine is provided with return lines that remain under pressure, make sure you let the pressure off before you uncouple the lines. This is not necessary when you have self-closing junctions on your machine.

##### **For all the suspensions except for the ones with a safety governor goes:**

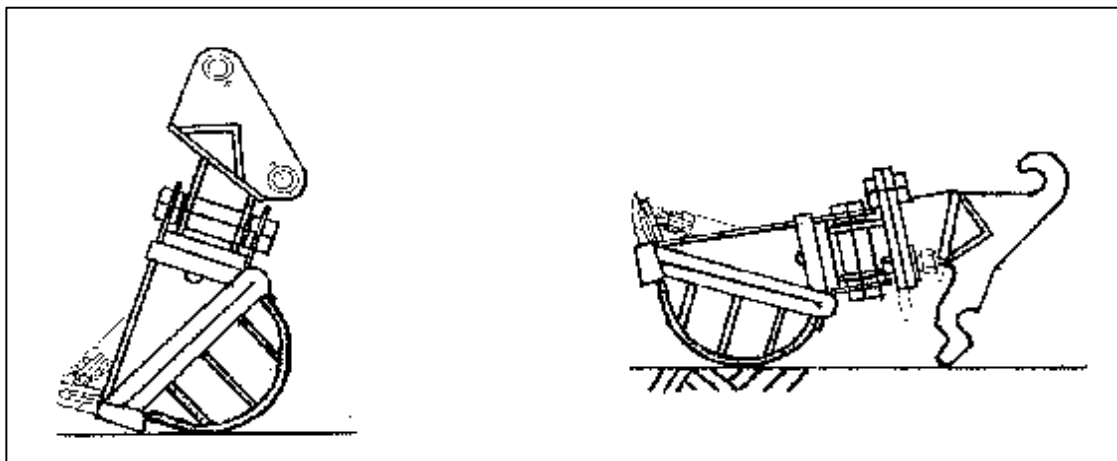
- Put the mowing bucket down with the cutter head on the ground make sure that the knives are free of the ground.
- Disconnect the hydraulic lines and push the caps on the far end
- Collect eventual leaking oil in a tray
- Remove the pin out of the bucket cylinder
- Remove the pin out of the boom
- Lighter mowing buckets can be left standing on the mowing bar, top-heavy ones have to be pushed with the boom onto the back of the bucket. See picture

##### **For mowing buckets with a safety governor goes:**

- Uncouple the mowing bucket by the directed method
- Lighter mowing buckets can be left standing on the mowing bucket bar, top-heavy ones have to be pushed onto the back of the bucket with the boom. See picture

##### **For mowing buckets with a hydraulic tilting head goes:**

- Open tap on the return of the hydraulic engine till all pressure is released, then close it again.
- For further instructions see one of the above instructions

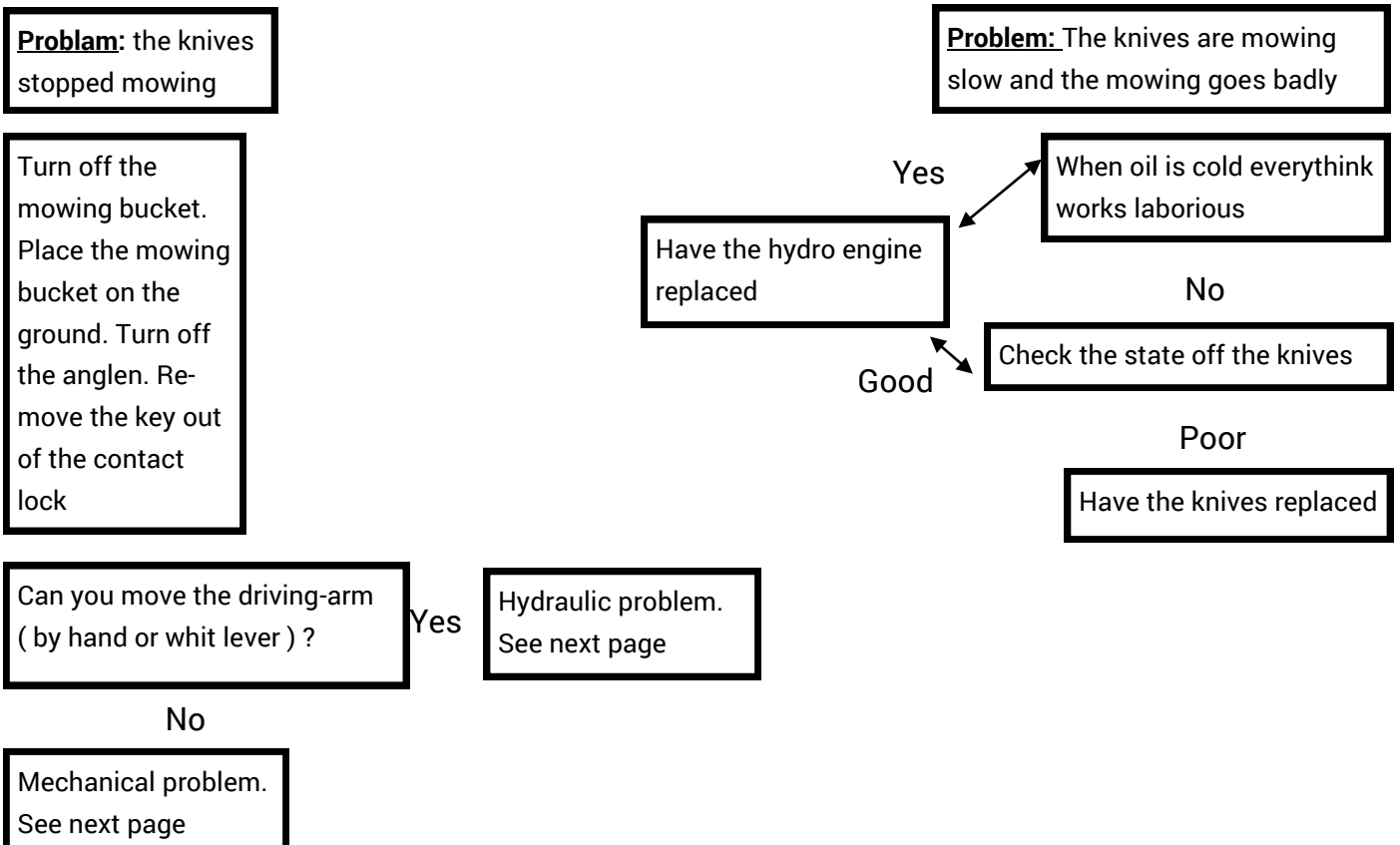


## 7. Technical problems

Whit a mowing bucket different technical problems may appear. Whit the mowing buckets of Landreus this can be a mechanical or hydraulic or hydraulic problem. The following diagram will help you to find the most likely problem. For the place of parts see one of the appendices.

**When you're about to repair a damage or commit maintenance on the mowing bucket, always do the next:**

- Turn off the mowing bucket
- Place the mowing bucket on the ground
- Turn off the engine of the crane or tractor machine
- Remove the key out of the contact lock



## 7. Technical problems

### Mechanical problem

Make mowing bar loose

Can driving-arm be moved by hand ?

No

Check the mowing bar / driving-arm connection

Yes

Are the knives blocked ?

Yes

Remove obstacle

No

Are the knife-head bolts loose ?

Yes

Tighten knife-head bolts and / or check screw thread

No

Is the mowing bar broken

Yes

Have mowing bar replaced

Mechanical problem	Yes	No
Make the mowing bar loose		
Can the driving arm moved by hand		
Are the knives blocked	Remove the obstacle	Are the knife-head bolts loose
Are the knife-head bolts loose	Tighten knife-head bolts and / or check screw thread	
Is the mowing bar broken	Have the mowing bar replaced	

Hydraulically problem	Yes	No
Dismantle the hydro-engine from the coupling house		
Start the machine engine		
Is the hydro-engine turning without any force	Have the hydro-engine repaired or replace hydraulic valve	Stop the machine engine
Can the hydro-engine moved by my hands	Have hydraulic hoses be replaced	Have hydro-engine replaced

## **8. Maintenance**

The user can do the daily upkeep and the periodical upkeep. All other kinds of activities have to be done by experts.

**When you're about to repair a damage or commit maintenance on the mowing bucket, always do the next:**

- Turn off the mowing bucket
- Place the mowing bucket on the ground
- Turn off the machine engine off the crane or tractor
- Remove the key out of the contact lock

**During activity near or with the knives, always wear firm gloves.  
The knives are sharp and can cause injuries.**

**Use original spare parts only. These can be ordered at your dealer**

**When repairing or up keeping the mowing bucket make sure that it's well supported. When the bucket falls over it can cause bruises and / or bone fractures, Always wear safety-shoes**

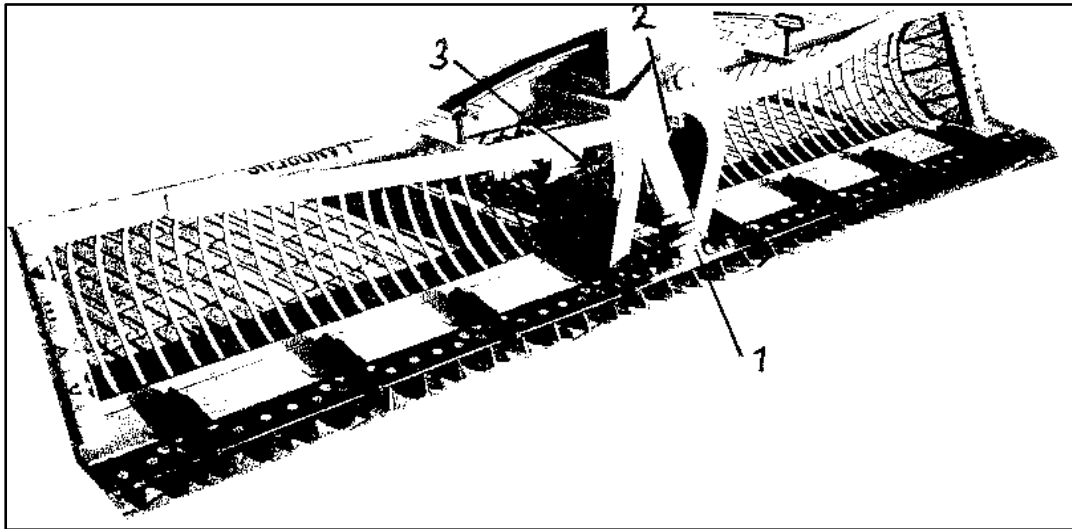
**Protect eyes and hands while welding, while grinding protect eyes, ears and hands**

## **8. Maintenance**

### **8.1 Daily upkeep**

Lubricate the knife-head bearing after each working day( nipple nr. 1 ) and both bearings of the drive axel ( nipples nr. 2, 3 ) with the prescribed lubricant ( see paragraph 4.3 )

At the propulsion nipples the grease has to come out of the nipple, for the exact place of the nipples see photo below.



Check the mowing bucket at loose parts, bolts and nuts. Tighten eventually loose bolts and nuts.

When the warning sticker is loose or gone order a new one at your dealer.

Check the rubber cover on cracks and getting loose, replace or repair if required.

Check the mowing bar every day for:

Loose Knives

Broken or damaged cutting edges ( see replacement values in paragraph 8.3 )

Check the wear plates and the knife-conductor on wear end tear

### **8.2 Periodical upkeep**

Check the whole mowing bucket on cracks every week

Check the knife-pressure every week the knife-pressure with a spring balance has to be 15 Kg, in / or decrease eventually with the set bolt.



## **8. Maintenance**

### **8.3 Replacement values**

**The knife has to be replaced when it's less than 82mm, measured from the point of the knife till the bar. When replacing knives always wear firm gloves.**

Replacing the knives goes as this:

1. Turn off the machine engine
2. Remove the key out off the contact lock
3. Dismantle the knife-head by removing the bolts
4. Lift the driving-arm a little and make sure it doesn't fall down again
5. Lift the pressure divice up
6. Remove the knife forward

**A set of fingers has to be replaced when the teeth are almost completely worn out. When replacing a set of fingers always wear firm gloves.**

Replacing fingers goes as this:

1. Turn off the machine engine
2. Remove the key out of the contact lock
3. Dismantle the worn off fingers by removing the bolts
4. Replace the set of fingers

The soket of a pressure device has to be replaced when tere is more than 0.5mm, clearance between the cam and the socket when assembling make sure that the flat site of the pressure device is directed forward. When the wear plate is worn off at one site it can be turned around. When there is less than 1mm material of the wear plate left it 's need to be replaced.

**The bush of the knife-head has to be replaced when is clearance between the bearing and the bush, which is glued to the knife-head**

1. Turn off the machine engine
2. Remove the key out of the contact lock

#### **Dismantling**

3. Remove the 4 bolts of the knife-head lid
4. Heat the bush until the glue lets loose and the bush can be removed

#### **Assembling**

5. Make the knife-head free from grease
6. Put the new bush in the knife-head and glue it with Loctite
7. Press the new knife-head lid tighty whit the 4 bolts together

**The hydraulic hoses have to be replaced when the iron wickerworks shows, or when they are aged or damaged**

## **9. Repairs**

**This chapter meant for maintenance personal only**

**Before you start whit working, please take notice of the next:**

- Make sure that the mowing bucket is well supported so it can't fall or roll over
- Connect the hydraulic system of the mowing bucket to an other system than the crane or tractor
- Keep away from the mowing bucket knives and other moving parts
- When the mowing bucket is still attached to the crane or tractor make sure that the engine is turned off and the key removed out of the contact lock

**When you're about to repair a damage or commit maintainance on the mowing bucket always do the next:**

- Turn off the mowing bucket
- Place the mowing bucket on the ground
- Turn off the machine engine of the crane or tractor
- Remove the key out of the contact lock

**During activity near the knives, always wear firm gloves.  
The knives are sharp and can cause injuries.**

**When repairing or up keeping the mowing bucket make sure that it's well supported. When the bucket falls over it can cause bruises and / or bone fractures, always wear safety-shoes.**

**Use only original spare parts, these can be ordered at your dealer**

### **9.1 The knives**

The edge under which the cutting side of the knives have to be grinded in in lins, between 35° and 40°

The knives have to be screwed in a straiht line. Knieves with a piece missing or hollow knives has to be grinded or replaced

The finger has to be in a straight line, so that the knife smoothly run over the fingers

The fingers should have undamaged and straight sides, broken or damaged fingers need to be replaced

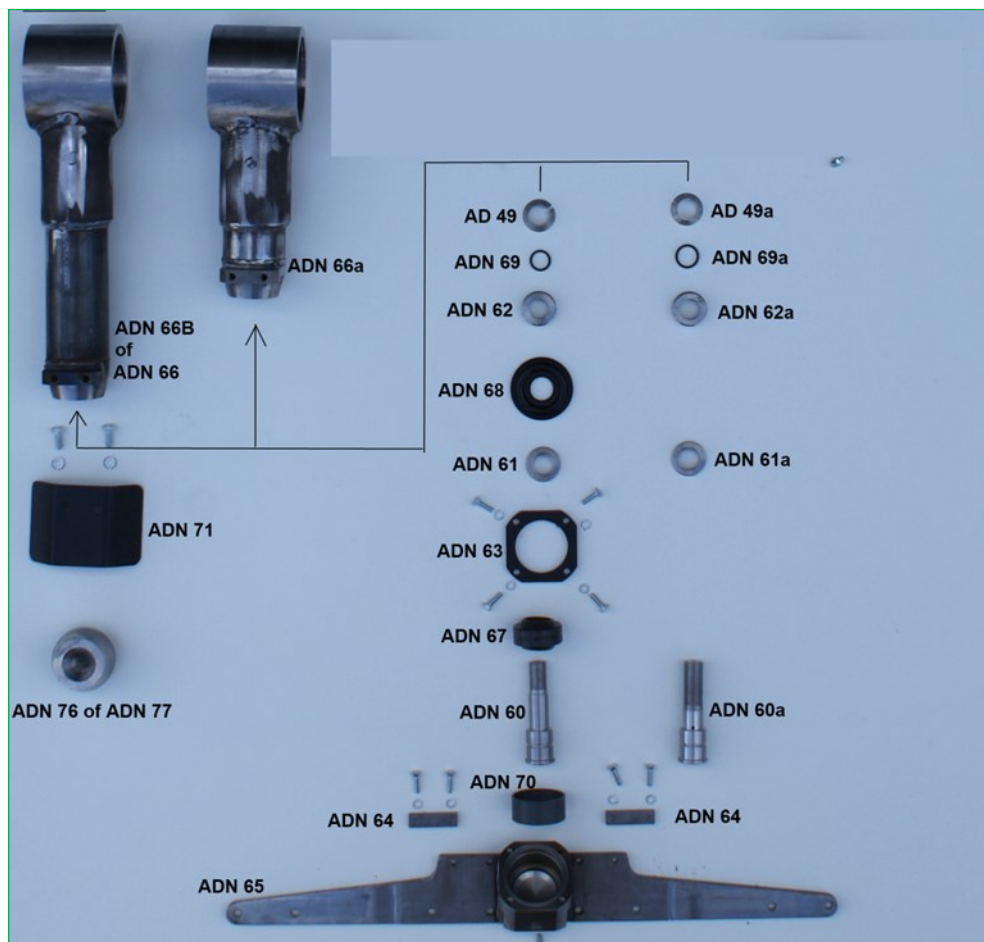
## 9. Repairs

### 9.2 The knife-head connection

The rubber lid ADN-68 is the protection for the complete innerworks of the knife-head. When the rubber cover is leak or broken it is important to replace it immediatly. This will prevent funder damage to the inner works. You must always check all parts when replacing the rubber lid ADN-68 so that the mowing bucket perform at it's best.

#### The discription guide follow below:

1. Remove the protection plate from the drive-arm (ADN-71)
2. Unscrew the knife-head (ADN-72, ADN-73)
3. Remove the bolts from the knife-head lid (ADN-65)
4. Remove the knife-head (ADN-65)
5. Remove the bearing pin (ADN-60) from the drive-arm (ADN-66 or ADN-66-A)
6. Check the following parts ADN-49-69-62-63-68-61-60-67 replace if nescesary
7. Check the knife-head (ADN-65) and inner ring (ADN-70) and replace if nescesary
8. Re assamble all parts and tighten bearing pin with 280Nm (ADN-60)
9. Re assemble the knife-head lid (ADN-63)
10. Put het knife-head back in place and bolt them togther
11. At last reassamble the protectionplate (ADN-71)



## **9. Repairs**

### **9.3 The hydraulic engine**

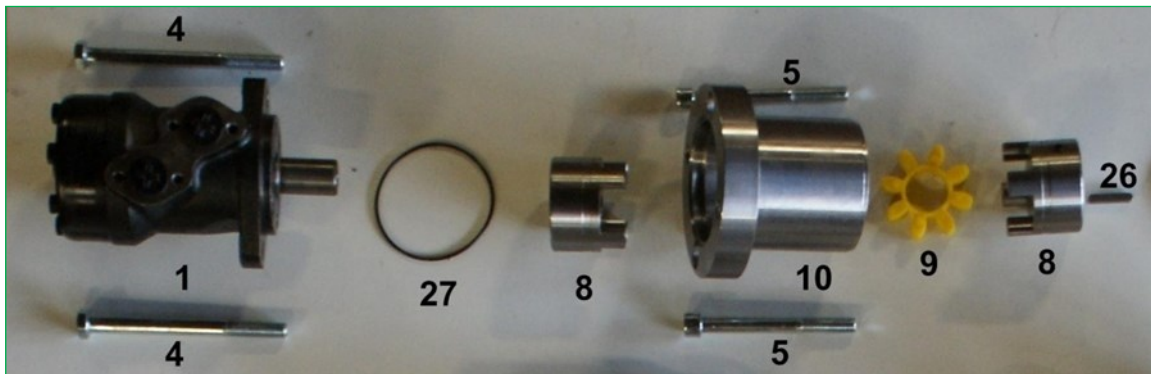
Description of dismantling and assembling the hydro-engine follow below:

#### **Dismantling**

1. Remove the bolts (AD-5) and thak them out
2. Pull the hydro-engine out of the coupling house (AD-10)

#### **Assembling**

1. Check if the rubber lid (AD-9) and the O-ring (AD-27) are in place
2. Push the hydro-engine back into the coupling house AD-10)
3. Replace the bolts (AD-5) and crew them togther



### **9.4 The plate spring**

The Landreus mowing bucket, type Mini, MK.L and the MK.Z are supplied with a plate spring. When using the mowing bucket in a normal way it is not nescessary to adjust the plate spring. Remind that by adjusting the plate spring firmer the mowing bucket will follow the slope less easier.

#### **Working order for adjusting the plate spring**

- Turn the spring holder loose
- Turn the bolt-set tighter or looser at will

**Be aware that the plat spring is pre-stresses, caution is needed while working on the plate spring.  
When the plate spring shoots loose it can cause serious injuries or worse.**

## **10. Storage, transport and dismantling**

### **10.1 Storage**

When you are about to store the mowing bucket for a longer period, please take notice of the next:

1. Clean the mowing bucket with a high pressure cleaner
2. Remove the fuses and / or plugs from the crane or tractor
3. Uncouple the mowing bucket
4. Tighten the hydraulic hoses
  - Press                      With a cap
  - Return                      With a cap
  - Cylinder of the head      Connect hoses with each other
5. Repair eventual damage
6. Lubricate the bearings
7. Clean the mowing bucket from eventual rust and loose paint
8. Clean those places with thinner
9. Paint the bolt material with a ground layer and paint
10. Lubricate the knives with silicon-spray or other lubricant
11. Assemble the knife protection
12. Store the mowing bucket on a dry place

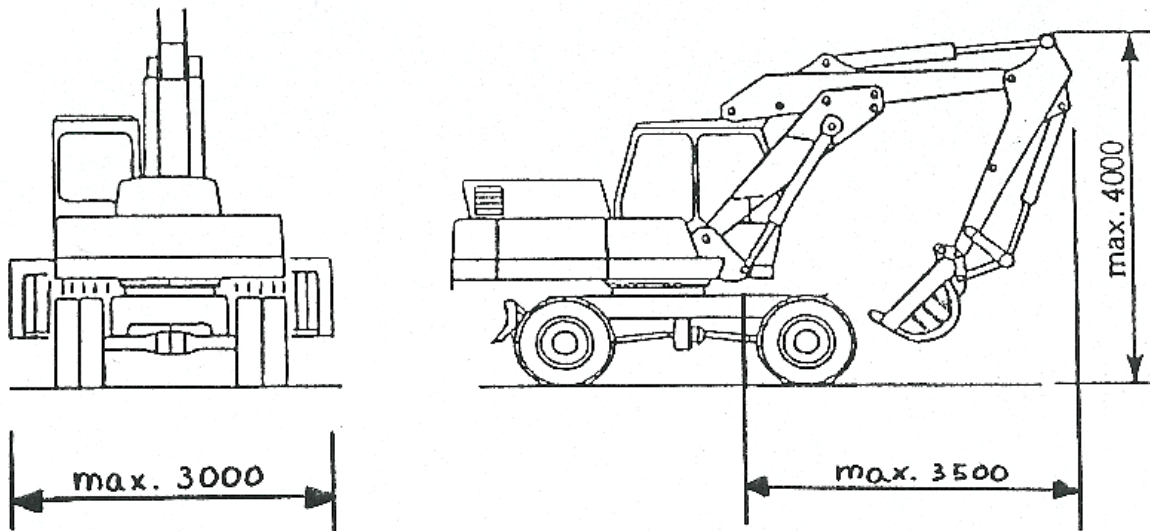
### **10.2 Lifting methods**

Move the mowing bucket only on prescribed with a lift truck or crane and a webbing or round sling attached to the hoisting-eyes.

## **10. Storage, transport and dismantling**

### **10.3 Transport over public roads**

While riding, where ever, you need to keep the mowing bucket as close as possible. When driving over public roads you have to be sure not to exceed legal measurements. You can request these measurements at your government.



### **10.4 Dismantling**

When the mowing bucket has reached the end of its existence you need to dismantle it on a justified manner. When you want to dismantle the mowing bucket pay attention to the following points.

When you are about to repair a damage or commit maintenance on the mowing bucket, always do the next:

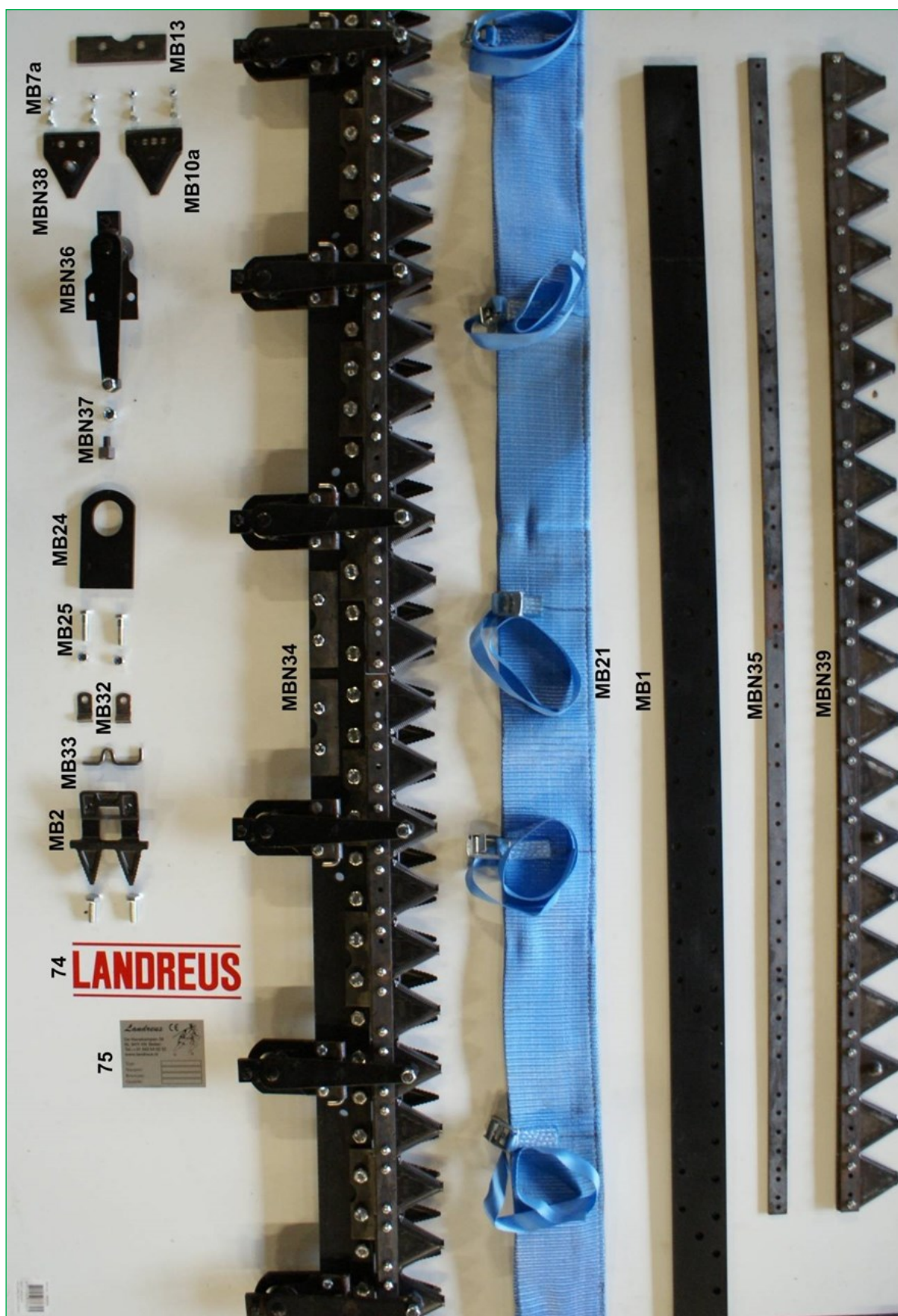
- A. Turn off the mowing bucket
- B. Place the mowing bucket on the ground
- C. Turn off the engine of the crane or tractor machine
- D. Remove the key out of the contact lock

Care for the environment! Recycle old iron parts, collect the grease from the relevant parts, dismantle and discharge the hydraulic oil and grease on the prescribed methods

**Beware the plate spring is pre-stressed, caution is needed while working on the plate spring. When the spring shoots loose it can cause serious injuries or worse**



## Appendix 1. Knife beam new type weed cutting bucket



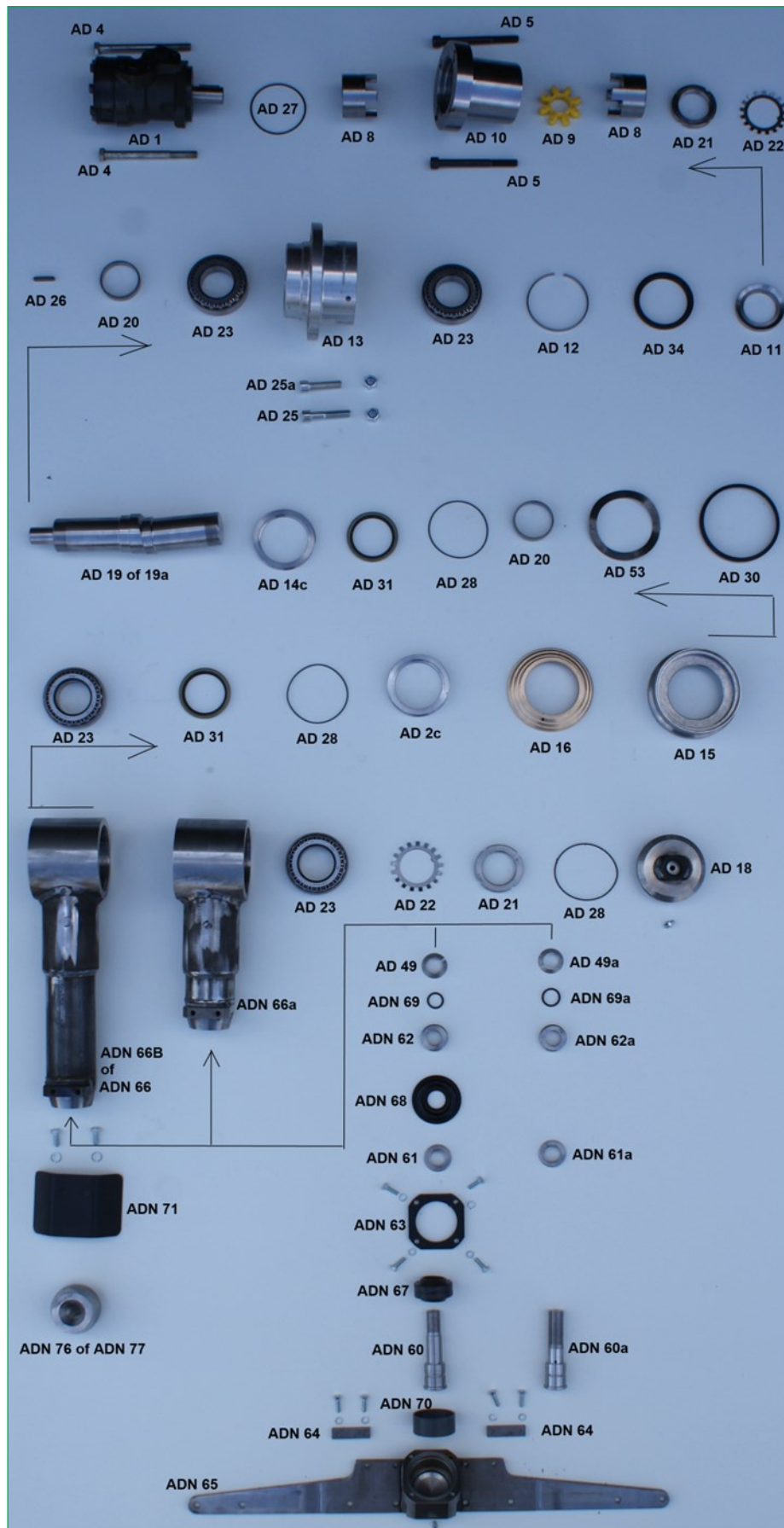
## Appendix 1. Knife beam weed cutting bucket

Article number	Definition
MB-1-A	Beamback 2 meter
MB-1-B	Beamback 2,50 meter
MB-1-C	Beamback 3 meter
MB-1-D	Beamback 4 meter
MB-1E	Beamback 4,40 meter
MB-1-F	Beamback 5 meter
MB-1-G	Beamback 5,50 meter
MB-2	Finger double
MB-3	Finger single
MB-7-A	Knife bolts + nuts per 100
MB-10-A	Knife 4mm 5 holes
MB-13	Wear plate
MB-21-A	Knife protection 2.00
MB-21-B	Knife protection 2.50
MB-21-C	Knife protection 3.00
MB-21-D	Knife protection 4.00
MB-21-E	Knife protection 4.40
MB-21-F	Knife protection 5.00
MB-21-G	Knife protection 5.50
MB-24	Ground plate
MB-30	Presser arm case small
MB-32	Bracket
MB-33	U-syphon
MBN-34-A	Compl. mowingbar 2.00
MBN-34-B	Compl. mowingbar 2.50
MBN-34-C	Compl. mowingbar 3.00
MBN-34-D	Compl. mowingbar 4.00
MBN-34-E	Compl. mowingbar 4.40
MBN-34-F	Compl. mowingbar 5.00
MBN-34-G	Compl. mowingbar 5.50

Article number	Definition
MBN-35-A	Knife back 2.00
MBN-35-B	Knife back 2.50
MBN-35-C	Knife back 3.00
MBN-35-D	Knife back 4.00
MBN-35-E	Knife back 4.40
MBN-35-F	Knife back 5.00
MBN-35-G	Knife back 5.50
MBN-36	Presser arm compl.
MBN-37	Presser arm case
MBN-38	Knife whit nut high
MBN-39-A	Knife 2.00 meter
MBN-39-B	Knife 2.50 meter
MBN-39-C	Knife 3.00 meter
MBN-39-D	Knife 4.00 meter
MBN-39-E	Knife 4.40 meter
MBN-39-F	Knife 5.00 meter
MBN-39-G	Knife 5.50 meter



## Appendix 2. Drive shaft weed cutting bucket new type

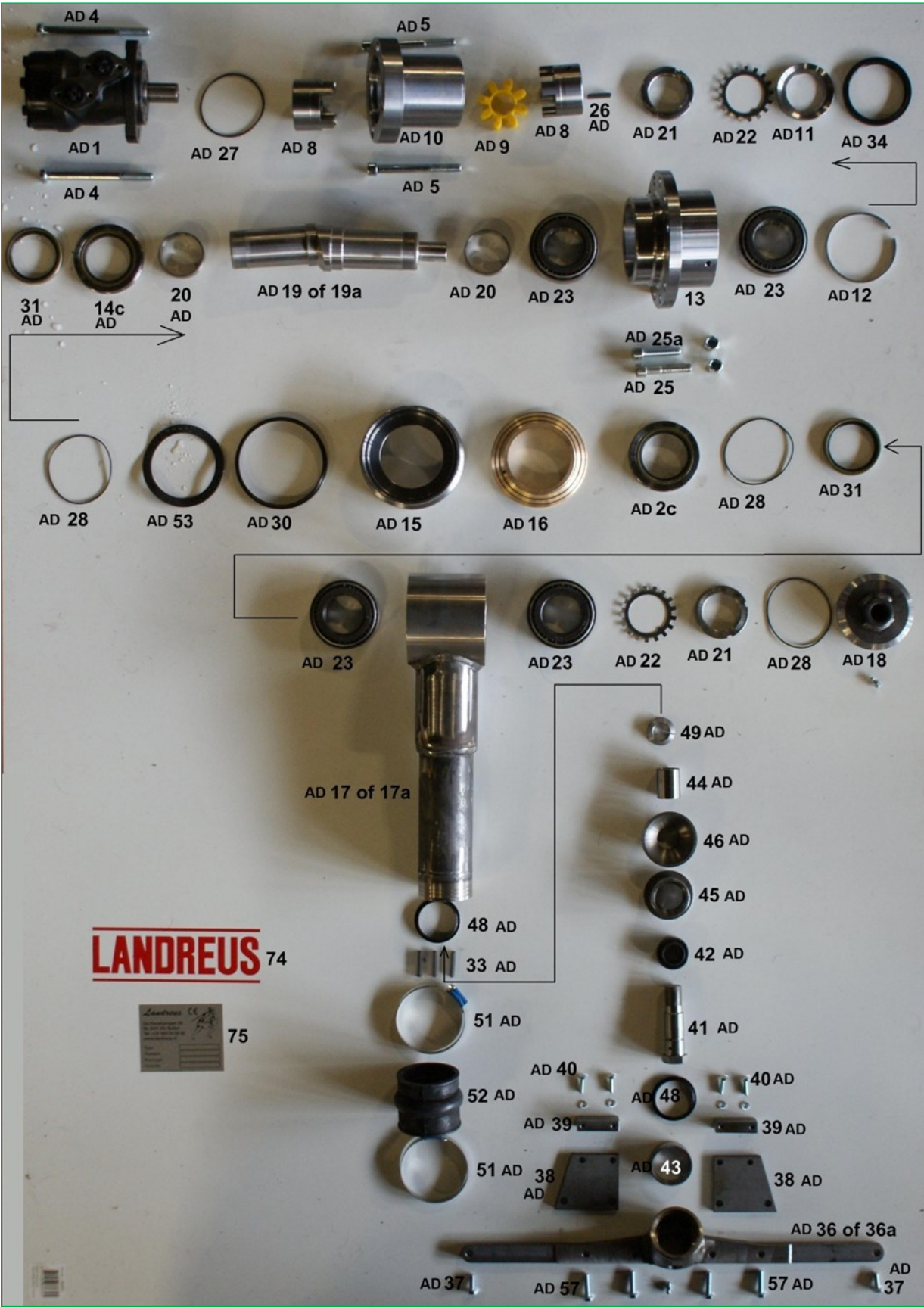


## Appendix 2. Drive shaft weed cutting bucket new type

Article number	Definition
AD-1	Hydro motor
AD-2-C	Pressure ring thick compl.
AD-8	Socket
AD-9	Socket rubber
AD-10	Gear house
AD-11	Ring
AD-12	Distance ring
AD-13	Bearing housing
AD-14-C	Pressure ring thin compl.
AD-15	Hollow ring
AD-16	Bold ring
AD-18	Cover plate
AD-19	Drive shaft long
AD-19-A	Drive shaft short
AD-20	Ring
AD-21	Locknut
AD-22	Lock ring
AD-23	Bearing
AD-25	Socket crew M12x50
AD-25-A	Socket crew M12x60
AD-26	Parallel key
AD-27	O-ring
AD-28	O-ring
AD-30	Wiper ring
AD-31	Oil seal ring
AD-34	Oil seal ring
AD-49	Conical ring 20 mm
AD-49-A	Conical ring 22 mm
AD-53	Wave ring

Article number	Definition
ADN-60	Bearing pin 20 mm
ADN-60-A	Bearing pin 22 mm
ADN-61	Clamp ring lower 20 mm
ADN-61-A	Clamp ring lower 22 mm
ADN-62	Clamp ring upper 20 mm
ADN-62-A	Clamp ring upper 22 mm
ADN-63	Lid sealing plate
ADN-64	Wear strip
ADN-65	Knife head
ADN-66	Drive arm long 20 mm
ADN-66-A	Drive arm short
ADN-66-B	Drive arm 22 mm
ADN-67	Plain bearing
ADN-67-A	Bearing compl. set 20 mm
ADN-67-B	Bearing compl. set 22 mm
ADN-68	Rubber membrane
ADN-69	O-ring 20 mm
ADN-69-A	O-ring 22 mm
ADN-70	Inner ring
ADN-71	Protection plate
ADN-72	Conical Hexagon socket screw
ADN-73	Conical Hexagon socket screw
ADN-74	Landreus sticker
ADN-75	Type plate
ADN-76	Welding prop
ADN-77	Welding prop

Appendix 3. Drive shaft weed cutting bucket old type



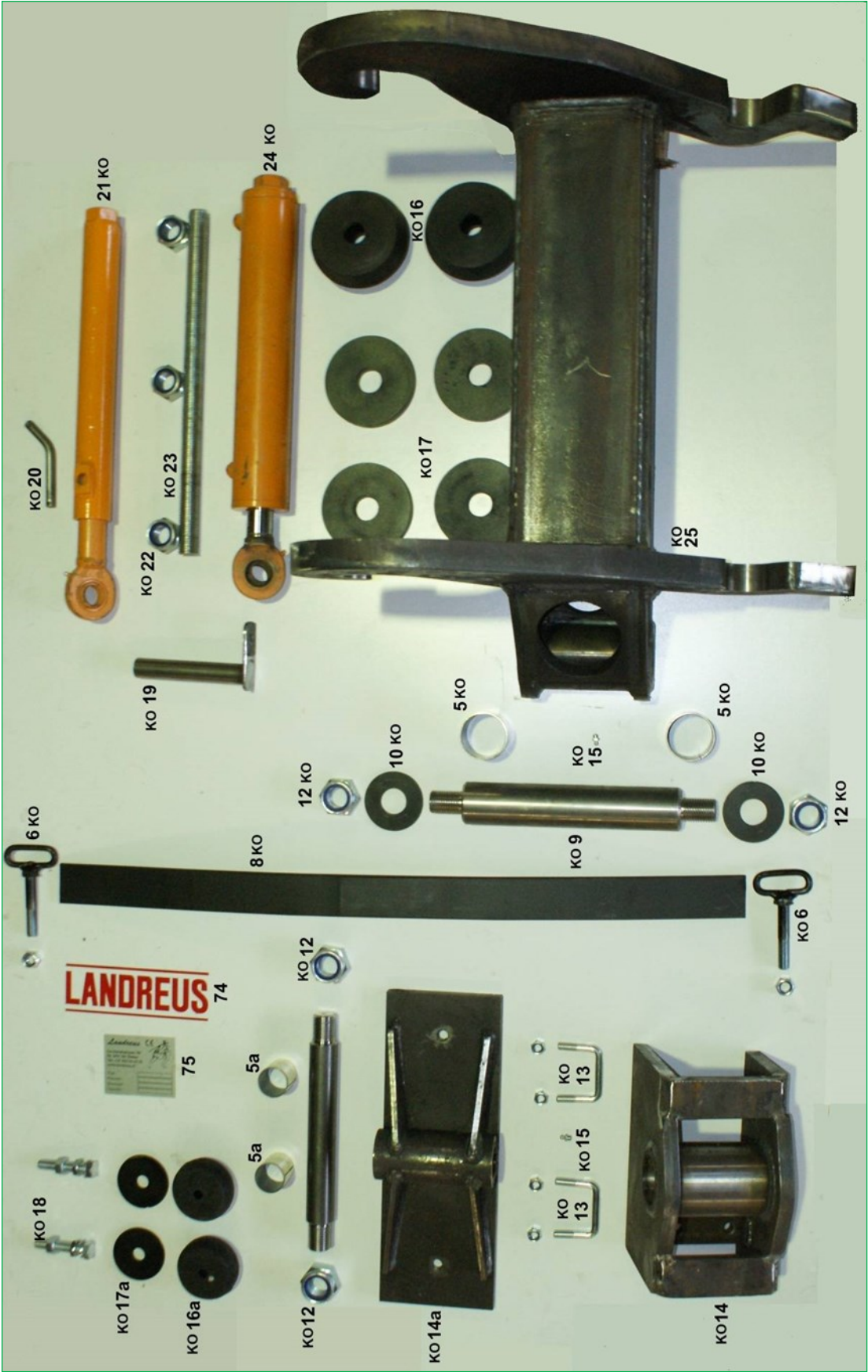
### **Appendix 3. Drive shaft weed cutting bucket old type**

Article number	Definition
AD-1	Hydro motor
AD-2-C	Pressure ring thick compl.
AD-8	Socket
AD-9	Socket rubber
AD-10	Gear house
AD-11	Ring
AD-12	Distance ring
AD-13	Bearing housing
AD-14-C	Pressure ring thin compl.
AD-15	Hollow ring
AD-16	Convex ring
AD-17	Drive arm long
AD-17-A	Drive arm short
AD-18	Cover plate
AD-19	Drive shaft long
AD-19-A	Drive shaft short
AD-20	Ring
AD-21	Locknut
AD-22	Locking ring
AD-23	Bearing
AD-25	Socket crew M12X50
AD-25-A	Socket crew M12X60
AD-26	Parallel key
AD-27	O-ring
AD-28	O-ring
AD-30	Wiper ring
AD-31	Oil seal ring
AD-33	Compression spring
AD-34	Oil seal ring
AD-36	Knife head short
AD-36-A	Knife head long

Article number	Definition
AD-38	Wear strip holder
AD-39	Wear strip
AD-41	Bearing pin
AD-42	Plain bearing
AD-42-A	Plain bearing replace set
AD-43	Inner ring
AD-44	Distance ring
AD-45	Mushroom
AD-46	Dish ring
AD-48	Wiper ring
AD-49	Conical ring
AD-51	Hose clamp
AD-52	Reinforced rubber sleeve
AD-53	Wave ring
AD-56	Welding part



Appendix 4. Frame weed cutting buckets

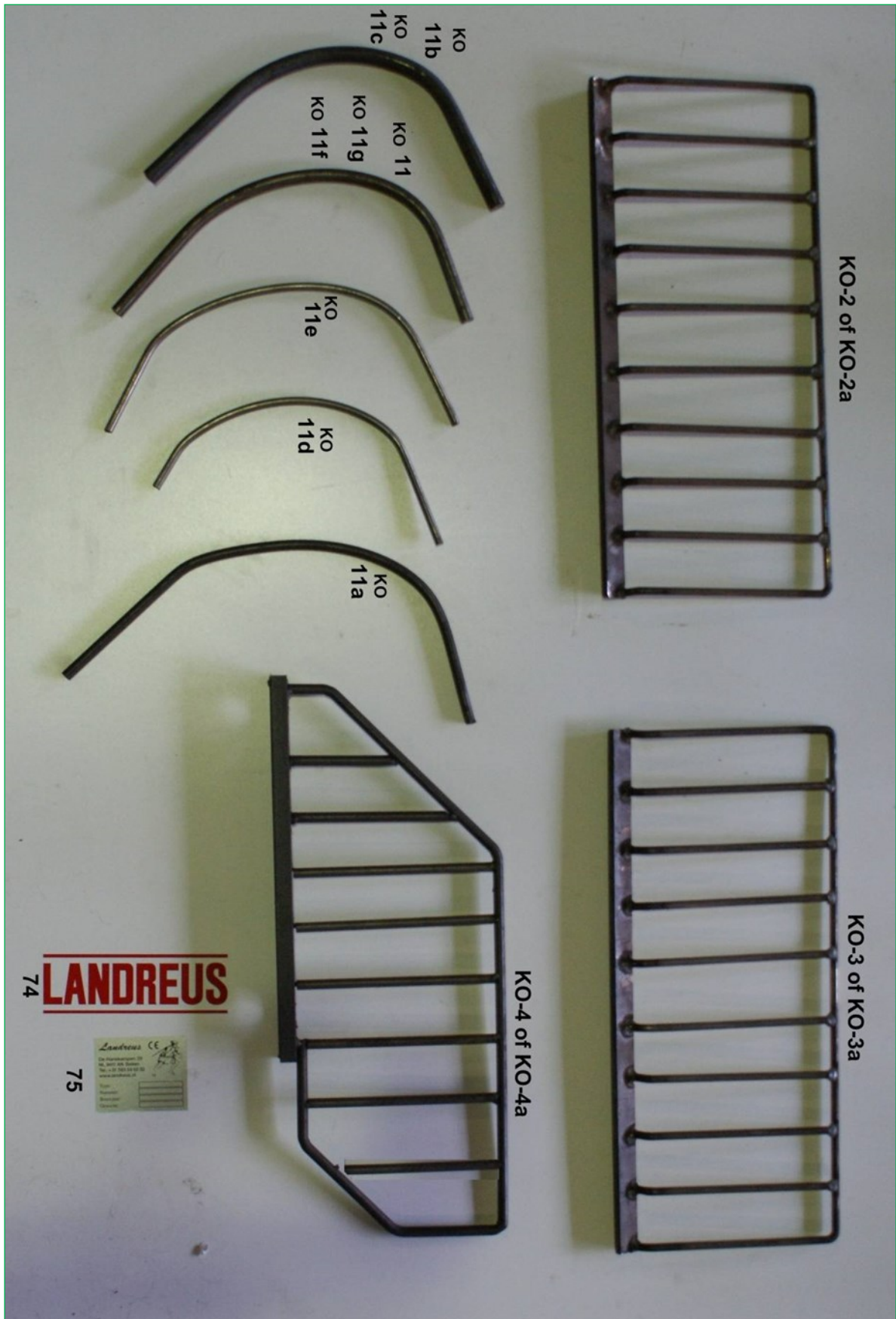


## Appendix 4. Frame weed cutting buckets

Artikel nummer	Omschrijving
KO-1	Bucket frame
KO-2	Rear rack right for L/Z
KO-2-A	Rear rack right for mini
KO-3	Rear rack left for L/Z
KO-3-A	Rear rack left for mini
KO-4	Side rail for L/Z
KO-4-A	Side rail for mini
KO-5	Distance ring 60 mm
KO-5-A	Distance ring 40 mm
KO-6	Spring holder
KO-7	Bar cage
KO-8	Parabola leaf spring
KO-9	Suspension pin 60 mm
KO-9-A	Suspension pin 40 mm
KO-10	Ring for pin 60 mm
KO-11	Balusters for L/Z
KO-11-A	Balusters for wide body L/Z
KO-11-B	Side balusters for L/Z
KO-11-C	Side balusters wide body L/Z
KO-11-D	Balusters for mini
KO-11-E	Balusters for wide body mini
KO-11-F	Side balusters for mini
KO-11-G	Side balusters wide body mini
KO-12	Locknut M33
KO-13	Spring holder U-model
KO-14	Coupler adapter basis 60 mm
KO-14-A	Coupler adapter basis 40 mm
KO-15	Grease nipple
KO-16	Rubber buffer big
KO-16-A	Rubber buffer small
KO-17	Ring for buffer big
KO-17-A	Ring for buffer small

Artikel nummer	Omschrijving
KO-18	Adjusting bolt for buffer
KO-19	Pin 30 mm for cillinder
KO-20	Mount pin mechanical swivel-head
KO-21	Mechanical cillinder
KO-22	LocknutM30
KO-23	Threaded 500 mm M30
KO-24	Hydraulic cillinder
KO-25	Swivel head 90°

## Appendix 4. Frame weed cutting buckets



## Appendix 5. Drive shaft aluminium for ultra lite weed cutting buckets



Artikel nummer	Omschrijving
AD-25	Socket crew M12X50
ADA-76	Hydro motor
ADA-77	Socket crew M8X25
ADA-78	Engine cover plate
ADA-79	Bearing housing
ADA-80	Drive shaft
ADA-81	Drive arm
ADA-82	Cover plate

Artikel nummer	Omschrijving
ADN-74	Landreus sticker
ADN-75	Type plate