



# KRONE

**Operating Instructions**

**No. 227-3 GB**

## **Disc Mower**

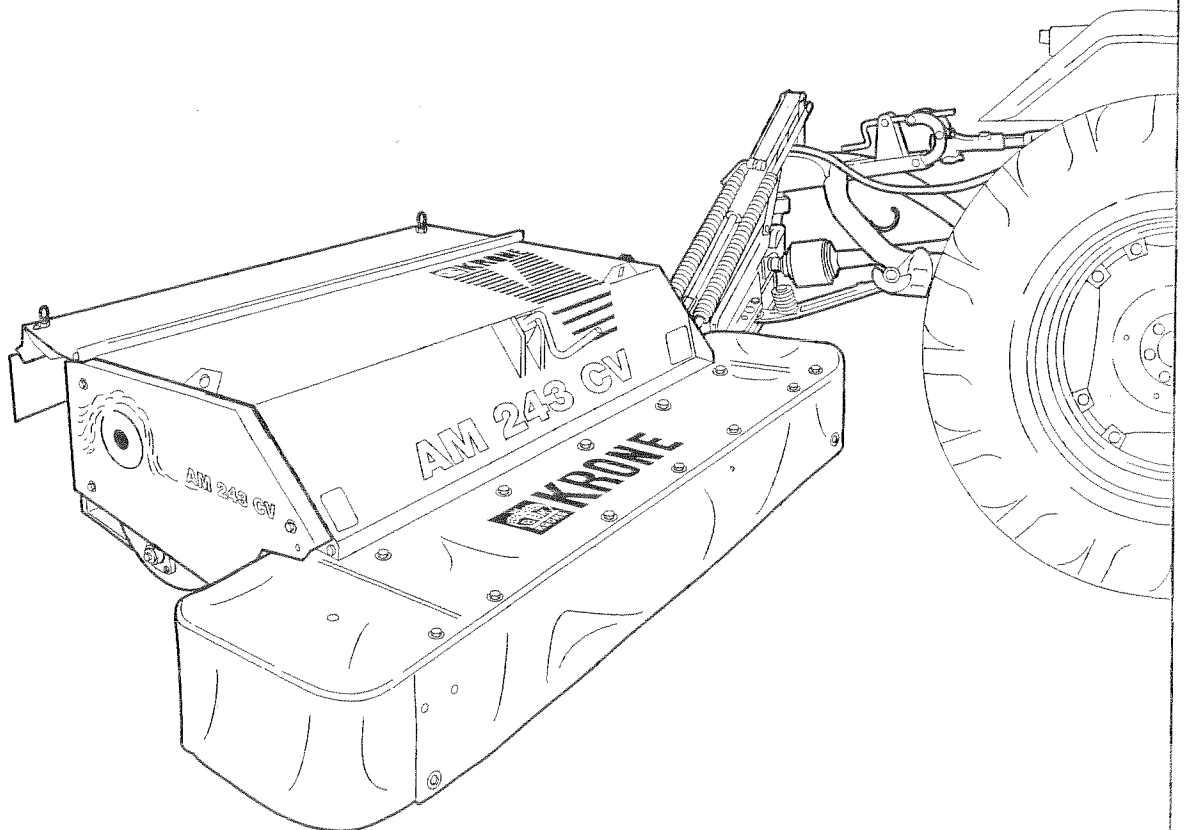
**AM 203 CV**

**AM 243 CV**

(from machine no. 393 980)

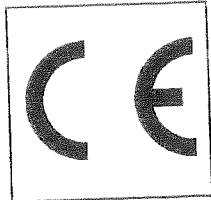
**AM 283 CV**

**AM 283 CV + B**





**EC Declaration of Conformity**  
according to Directive 89/392/EEC



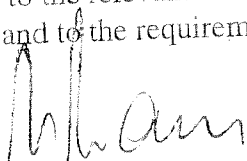
We **Maschinenfabriken Bernard Krone GmbH**  
**Heinrich-Krone-Str. 10, D-48480 Spelle**

declare under our sole responsibility, that the product


**Krone-Disc Mower**  
**Models: AM 203 CV; AM 243 CV; AM 283 CV; AM 283 CV + B**

to which this declaration relates corresponds to the relevant basic safety and health requirements of the Directive 89/392 (EEC) and to the requirements of the other relevant Directives:

Spelle, 10.05.95

  
\_\_\_\_\_  
(Heinz Krone, Board of Directors)

  
\_\_\_\_\_  
(Josef Horsmann, Designing office sub-manager)

  
\_\_\_\_\_  
(Josef Jungel, Quality assessment manager)

**Dear customer,**

Here are the operating instructions for the KRONE product you purchased.

These operating instructions contain important information for the proper use and safe operation of the machine.

If these operating instructions have for any reason become completely or partially redundant, you can obtain replacement operating instructions for your machine with the specification numbers listed overleaf.

## I. Foreword

Dear customer,

We thank you for the trust you have placed in us by purchasing this machine.

When you received this machine, the dealer should have given you instructions for the operation, maintenance and adjustment of the machine.

However, this **brief introduction** to the machine can not replace a detailed acquaintance with the different tasks and functions of the machine and the proper way of treating it.

These operating instructions are designed so that you are extensively informed of the activities required in each area, from commissioning and operation to the maintenance and care of the machine. The structure of the individual chapters in the text and illustrations corresponds to the sequence of work procedures when you use the machine.

Read these operating instructions carefully before you use the machine, and pay special attention to the safety instructions.

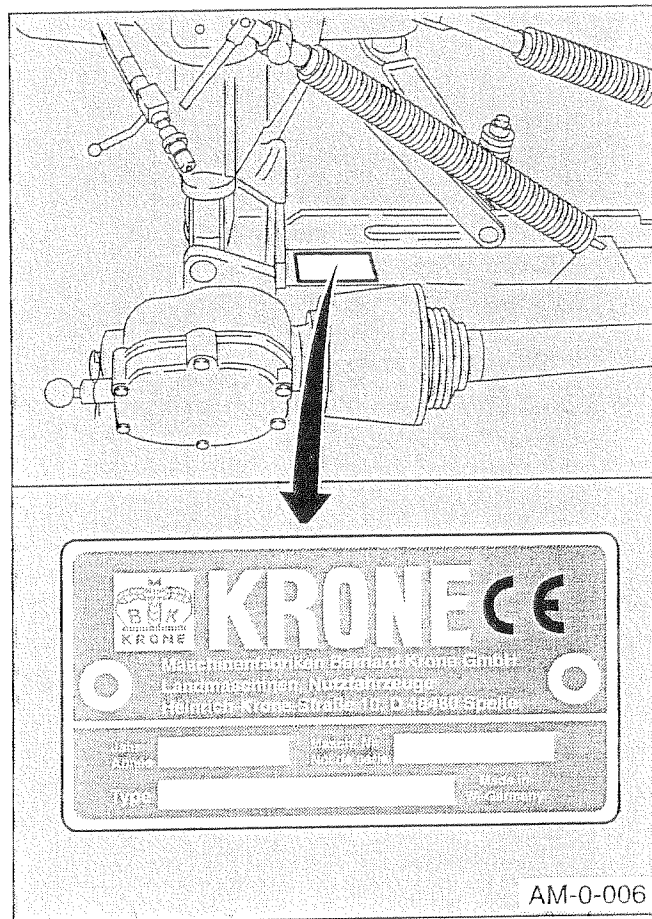
**Important:** To avoid accidents and to ensure maximum results, no alterations may be made to the machine without the manufacturer's permission. Similarly, the machine must only be used under the conditions prescribed by Krone.



This symbol is designed to draw attention to the safety instructions contained in the operating instructions. These instructions must be observed to prevent accidents.

All information, illustrations and technical information in the operating instructions represent the latest status at the date of publication. The company reserves the right to make constructional alterations at any time and without prior notice or obligation.

## Ordering Replacement Parts



Type

Mach. No.

Year

When ordering replacement parts, the machine type, machine number and year of manufacture must be given. These details can be found on the identification label on the machine.

We recommend that these details be entered in the above boxes so that they are readily available.

And please remember that imitations and copies of parts, especially wearing parts, do not keep what they appear to promise. Material quality is difficult to test visually, therefore special care is required when purchasing cheap offers and imitation parts!

The simplest remedy:  
Purchase only **original KRONE parts!**

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### III. General

#### 1. Operation in Accordance with Specifications

The disc mower is designed solely for normal agricultural use (operation in accordance with specifications).

Any use of the machine for other purposes is deemed to be not in accordance with specifications. The manufacturer bears no responsibility for any resulting damage; such use is entirely at the operator's risk.

Use in accordance with specifications also includes adherence to the operating, maintenance and service instructions prescribed by the manufacturer.

The disc mower must only be used, maintained and repaired by personnel who are acquainted with the machine and have been informed of the danger involved.

The applicable accident prevention regulations and all other generally recognized safety, health and road traffic regulations must be adhered to.

Any unauthorized alterations to the machine render any liability for damage undertaken by the manufacturer null and void.

#### Basic rule:



Before any public roads are used and before the machine is started, check the disc mower and the tractor for road-worthiness and operational safety.

#### 2. Safety and Accident Prevention Regulations

1. Take note of both the regulations in these operating instructions and also the general safety and accident prevention regulations!
2. The attached warning and information signs give important advice for safe operation. Observing them will enhance your safety!
3. When you use public roads, make sure you observe the relevant traffic regulations!
4. Make sure you know all equipment and controls before you begin working with the machine. When you are operating the machine, it's too late!
5. The operator's clothing should be tight fitting. Avoid wearing loose fitting clothes.
6. Keep the machine clean to prevent the danger of fire!
7. Before starting the machine and moving off, check the danger area around the tractor (children!). Good visibility is absolutely essential!
8. Carrying passengers on the implement during work or transport is not permitted.
9. Make sure that the implement is correctly coupled, and that it is only fixed and secured with the prescribed fittings!
10. Make sure that the supporting devices, jacks etc. are in the correct position during assembly and removal!
11. Special care is required when equipment is being coupled to the tractor or detached from the tractor!
12. Ballast weights must always be attached in the prescribed way at the designed attachment points!
13. Adhere to the permitted axle loads, total weights and transport dimensions!
14. Check and fit transport equipment – e.g. lighting, warning signs and, if required, protective equipment!
15. Operating equipment for remote controls (ropes, chains, rods etc.) must be laid out in such a way that, whatever the working or transport position, it can not inadvertently cause any movements.
16. Prepare equipment for road transport as prescribed by the manufacturer, and lock the equipment in accordance with the manufacturer's regulations!
17. Never leave the driver's position when the tractor is in motion!
18. The speed of travel must always be suited to the environmental conditions! Avoid any sudden turns when travelling uphill, downhill or across a slope!
19. The handling, steering and braking of the tractor is affected by integrated or attached equipment and ballast weights. Make sure that you allow for more flexibility in steering and braking!
20. When turning, remember to take account of the wide load and/or the greater weight of the equipment!
21. Only switch on equipment when all protective devices are fitted and in protection position!

22. Persons are not allowed to enter the working area!
23. Keep clear of the area of rotation and swing of the equipment!
24. Hydraulic controls must only be operated if no persons are in the swing area!
25. Power operated parts (e.g. by hydraulics) contain danger points which can cause injury by bruising and grazing!
26. Before leaving the tractor, rest the mower on the ground, switch off the engine and remove the ignition key!
27. Make sure that no personnel go between the tractor and the implement unless the tractor is protected from rolling by the parking brake and/or wheel blocks!

### 3. Attached Equipment

1. Special care is required when the implements is being connected to the tractor or disconnected from it!
2. The implement must only be coupled to the appropriate fittings (e.g. the 3-point connection), and they must be so secured (transport, operation) that unintentional lifting or lowering of the implement is not possible.
3. In three-point connection, it is absolutely essential that the hitching categories of the tractor and attachment (e.g. power take-off shaft speed, hydraulics) are matched!
4. When operating the external controls for three-point connection, make sure that nobody goes between the tractor and the implement (danger of injury)!

### 4. Power Take-Off shaft Operation

1. Only the P.T.O. shafts prescribed by the manufacturer may be used!
2. Both male and female guard tubes and cones of all P.T.O. shafts must be fitted and in good condition!
3. Observe the tube overlap prescribed for P.T.O. shafts in transport and operating position!
4. Before installing or removing the P.T.O. shafts, make sure to turn off the power take-off shaft and the engine, and remove the ignition key!

5. When using P.T.O. shafts with overload or free wheel clutches that are not covered by the guards on the tractor, the overload or free wheel clutches must be fixed on the implement side!
6. Always ensure correct assembly and guarding of the P.T.O. shaft!
7. Protect the P.T.O. shaft guard from rotating with the shaft by fitting the chains!
8. Before switching on the power take-off shaft, make sure that the p.t.o. speed of the tractor matches the permitted speed of the implement!
9. Before switching on the power take-off shaft, make sure that nobody is in the danger area of the implement!
10. Never switch on the power take off shaft when the tractor engine is turned off!
11. Any work on the power take-off shaft may only be carried out when nobody is in the area of the rotating power take-off shaft or P.T.O. shaft.
12. The power take-off shaft should always be turned off when the angle is too great or the p.t.o. shaft is not required!
13. **Danger!** Working elements continue to rotate after the power take-off shaft is turned off! Do not approach the machine during this time! Work may only be carried out on the machine when the machine is fully stationary and the rotating parts have been secured by the parking brake.
14. Cleaning, lubrication or adjustment of the P.T.O. shaft or any equipment driven by the power take-off shaft may only be carried out when the p.t.o. shaft and the engine are turned off and the ignition key has been removed! Rotating parts must be secured with the parking brake.
15. Place the detached P.T.O. shaft on the support bracket provided!
16. After removing the P.T.O. shaft, place the protective cover on the stub of the power take-off shaft!
17. Any damage must be repaired immediately before any work is carried out with the attachment!

## 5. Hydraulic System

1. The hydraulic system is pressurized!
2. When connecting hydraulic cylinders and motors, make sure that the hydraulic hoses are correctly coupled!
3. When connecting hydraulic hoses to the tractor's hydraulic system, make sure that all pressure has been released from the hydraulics of both the tractor and the implement!
4. When there are functional hydraulic connections between the machine and the implement, all coupling sleeves and plugs must be marked to prevent operating errors. If the connections are switched, the functions are reversed (e.g. lifting and lowering) – **this can cause accidents!**
5. Hydraulic hoses must be checked regularly, and they must be replaced if they are damaged or worn. Replacement hoses must conform to the technical requirements of the implement manufacturer!
6. When tracing leaks, suitable aids should be used to prevent injury!
7. Fluid leaking under high pressure (hydraulic oil) can penetrate the skin and cause serious injury! When injury occurs, consult a doctor immediately! Danger of infection!
8. Before carrying out any work on the hydraulic systems, lower the machine to the ground, depressurize the system and turn off the engine!

## 6. Maintenance

1. Repair, maintenance and cleaning work and the correction of malfunctions must always be carried out only when the drive is turned off and the engine is at a standstill! Remove the ignition key! Apply the parking brake.
2. Nuts and bolts must be checked regularly for tightness, and tightened if necessary!
3. When carrying out maintenance work on the machine in a lifted position, it must always be supported on suitable jacks.
4. When replacing fittings that contain cutting blades, always use suitable tools and gloves!
5. **Oil, grease and filters must be correctly disposed of!**
6. The power supply must always be disconnected before any work is carried out on the electrical system!
7. If protective devices are subject to wear, they must be checked regularly and replaced in good time!
8. When electric welding is carried out on the tractor and any fitted attachments, the cables must be disconnected from the generator and battery!
9. Replacement parts must conform at least to the technical requirements defined by the manufacturer! **The best guarantee is to use only original KRONE parts!**
10. Where gases are stored, only refill with nitrogen. **Danger of explosion!**

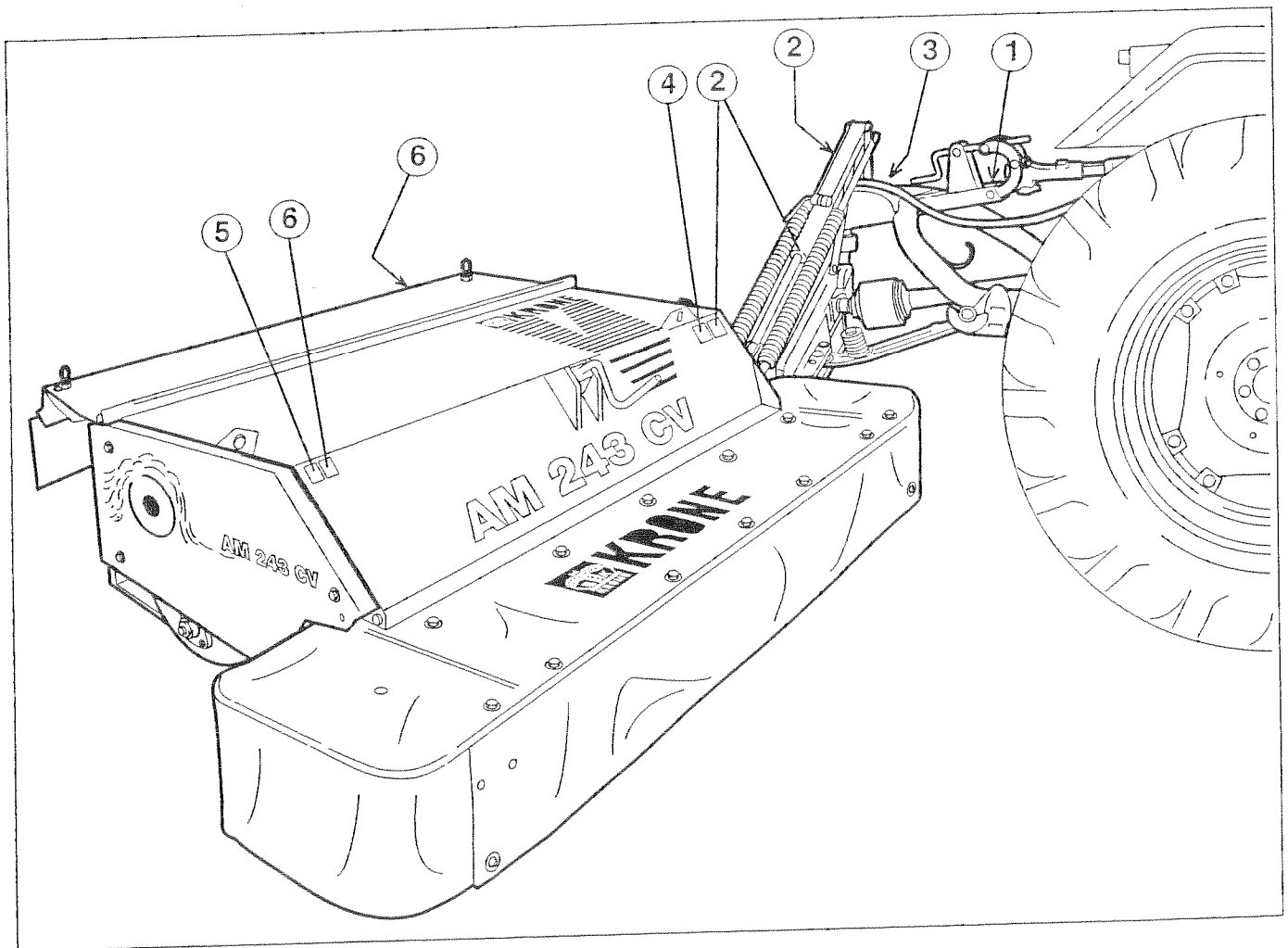
## 1. Introduction

The KRONE Disc mower is equipped with all necessary safety features (protective equipment). Not all danger points on this machine can be completely safeguarded with regard to the function of the machine. On the machine you will find appropriate warnings that point out this residual danger. We have designed these danger notices in the form of so-called warnings symbols. For the position of these warning notices and their meaning/explanation, please refer to the following information.



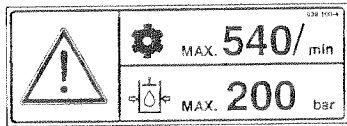
Make sure that you are fully conversant with the meaning of the warning symbols. The text next to the symbols and the position on the machine where the notices are displayed provide information about the specific danger points on the machine.

### 1.1 Position of the warning signs, with safety-technical information, on the machine





1



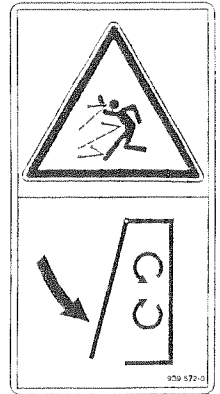
The PTO shaft speed must not exceed 540 rpm!  
The operating pressure in the hydraulics system must not exceed 200 bar.

Order No. 939 100-4 (1x)

4

Move guards into position.

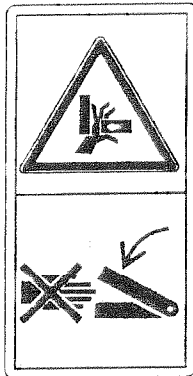
Order No. 939 572-0 (1x)



2

Never put your hand into the danger area as long as parts may be moving.

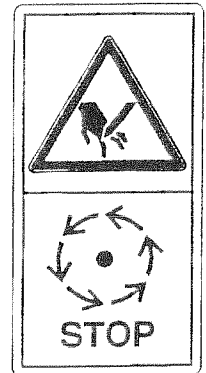
Order No. 942 196-1 (3x)



5

Do not touch any moving parts of the machine. Wait until they are completely stationary.

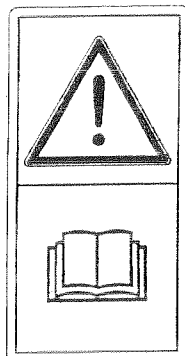
Order No. 939 410-2 (1x)



3

Read and take note of the operating instructions.

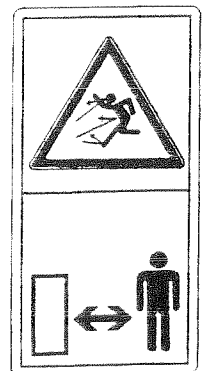
Order No. 939 471-1 (1x)



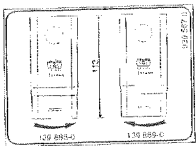
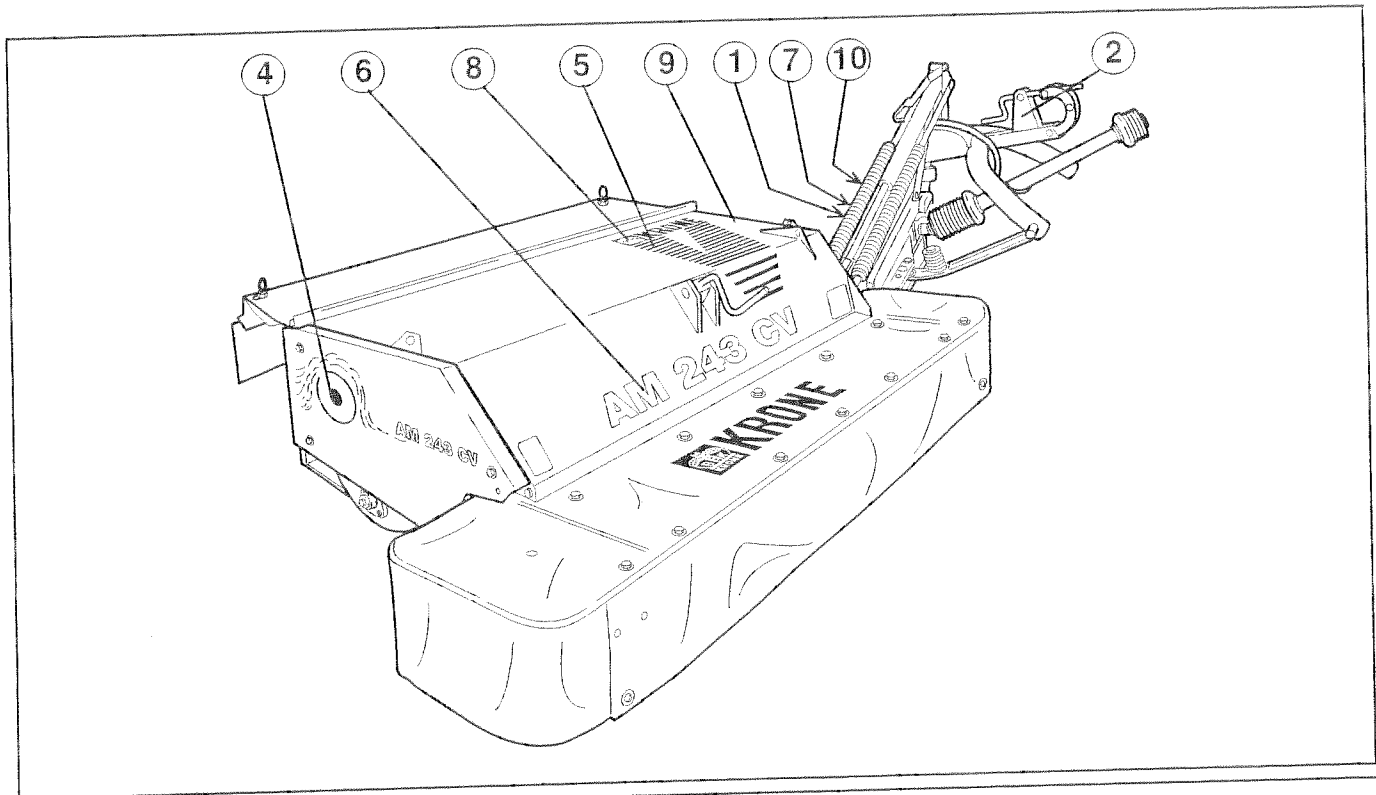
6

Keep at a safe distance when the engine is running.

Order No. 942 197-1 (2x)



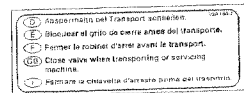
## 1.2 Positions of the general information labels on the machine



① 939 567-0 (1x)



① 939 470-1 (1x)



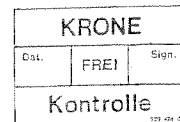
② 939 180-2 (1x)



④ 939 515-0 (1x) AM 203 CV  
 939 518-0 (1x) AM 243 CV  
 939 519-0 (1x) AM 283 CV  
 942 207-0 (1x) AM 283 CV + B



⑤ 939 514-0 (1x)



③ 939 428-0 (1x)



⑦ 942 132-0 (1x)



⑥ 939 511-0 (1x) AM 203 CV  
 939 512-0 (1x) AM 243 CV  
 939 513-0 (1x) AM 283 CV  
 942 206-0 (1x) AM 283 CV + B



⑩ 939 548-0 (1x)



⑧ 939 109-1 (1x)



⑨ 939 531-0 (1x)

### 1.3 Technical Data for Disc Mower AM 203 CV / AM 243 CV / AM 283 CV

Type	AM 203 CV	AM 243 CV	AM 283 CV (AM 283 CV + B)
Cutting width [mm]	2000	2400	2800
Transport width	Tractor width	Tractor width	Tractor width
Number of mowing discs	3	4	5
Number of mowing cylinders	2	2	2
Conditioning system	V-shaped flail.	V-shaped flail.	V-shaped flail.
Speed of conditioner rotor [rpm]	600 & 900	600 & 900	600 & 900
Width of conditioning system [mm]	1600	2000	2400
Swath width [m]	0.8 - 1.6	0.9 - 2.0	1.2 - 2.4 (1.2 - 2.7)
Area covered [hectares/hour]	2.5	3	3.5
Power consumption [kW/PS]	33/45	37/50	44/60
Power take-off shaft speed [rpm]	540	540	540
Weight of machine [kg]	760	810	860
Required hydraulic connections	1 x Single acting	1 x Single acting	1 x Single acting

### Required Quantities and Lubricant Designations for Gearboxes

	Required quantity [litres]	Oil type	Biological lubricants Brand name
Main gearbox	0,3	SAE 90	<b>on request</b>
Gearbox of conditioner drive	1,5	SAE 90	
Auxiliary gearbox for 1000 rpm pto	0,2	SAE 90	
Mowing beam			
AM 203 CV	4	SAE 90	
AM 243 CV	5		
AM 283 CV (+B)	6		



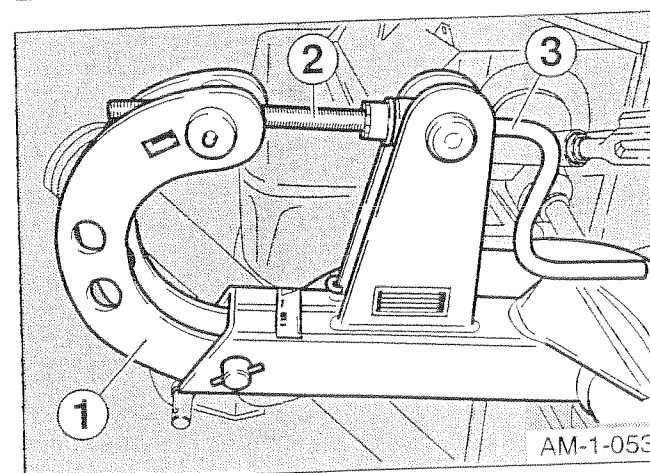
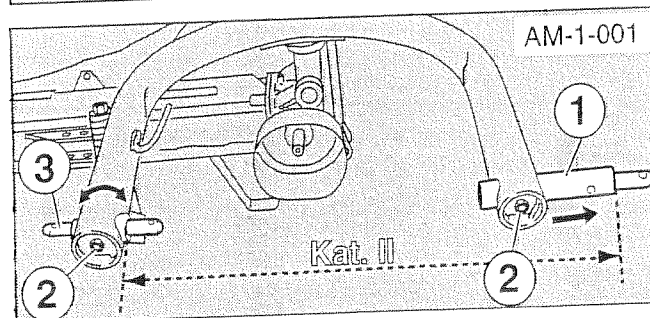
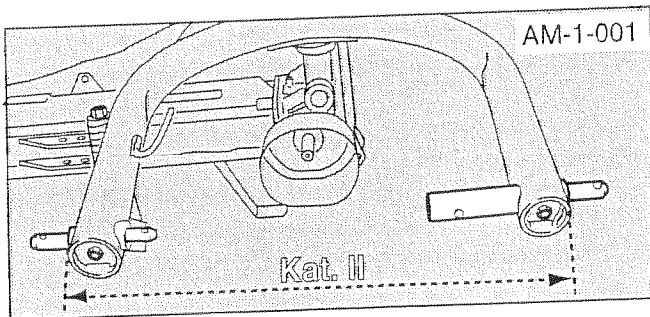
For biological lubricants, the oil change intervals must be strictly adhered to due to ageing of the oils.

## 2. Preparing for Operation

### 2.1 Attaching the Disc Mower to the Tractor



1. The mower is designed solely for normal agricultural use. (Operation in accordance with specifications)
2. While working with the mower, all personnel must keep a sufficient safety distance from the cutting elements.
3. The support skids must be on the ground before the machine is switched on and during operation.
4. Even when the mower is used in accordance with specifications, stones etc. may be thrown out. Therefore, nobody must be allowed to enter the danger area. Special care must be taken when working near roads and buildings.
5. The protective cloth covers must be regularly checked. Covers that are worn or damaged must be replaced.
6. The protective features on the mower, e.g. cloth covers and guard plates, are designed as protection from stones etc. that are thrown out, and also to prevent access to dangerous parts of the machine. Therefore it is essential that they are placed in position before work commences.
7. When the mower is being lowered from transport position to working position or back to transport position, nobody must be allowed to go between the tractor and the mower.
8. Special care is required when fitting implements to the tractor or removing them. It is essential that the accident prevention regulations are observed.



### Adapting the hitch points

The hitch points are adjusted as standard for cat. II.

If the mower is to be moved to the side in the case of cat. II, hitch point (1) must be moved to the outside. Tighten the bolts (2) firmly after modification.

The weight of the disc mower would normally make it very difficult to adjust the cutting height from the upper link arm. The cutting height is adjusted using a crank (3). The inclination of the disc mower and therefore also the cutting height are adjusted at the top link arm coupling point (1) using a threaded spindle (2).

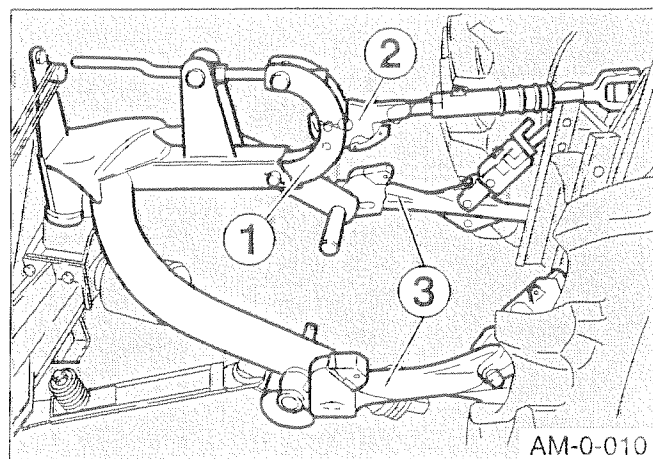


The lower link arm must be fixed to the tractor with chains or bars so that the mower does not swing out during transport or mowing!

The lower link arms (3) are connected to the coupling points provided, and the top link arm (2) is connected to the newly designed top link arm coupling point (1).



Use hydraulic control device with floating position!



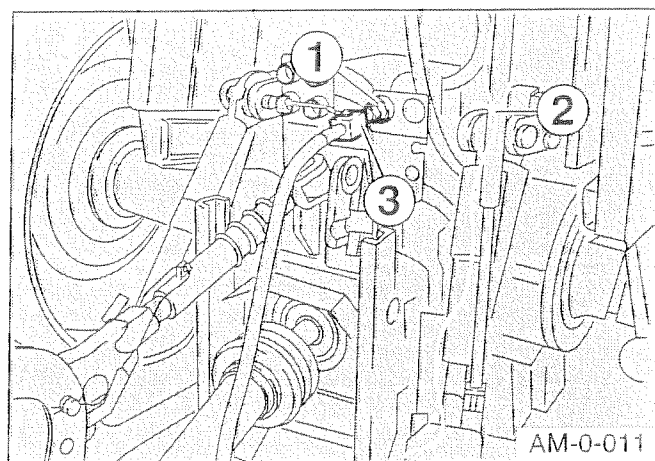
- When the hydraulic hoses are connected to the tractor, the hydraulic system on both sides must be free from pressure!
- When looking for leakages, use suitable aids and protective goggles to prevent injuries.
- Liquid escaping under high pressure (hydraulic oil) can penetrate the skin and cause serious injury! In case of injury, consult a doctor immediately! Danger of infection!

- Release the pressure before disconnecting hoses and before any work is carried out on the hydraulic system!
- Check hydraulic hoses regularly, and replace any damaged or worn hoses. Replacement hoses must conform to the mower manufacturer's technical specifications.

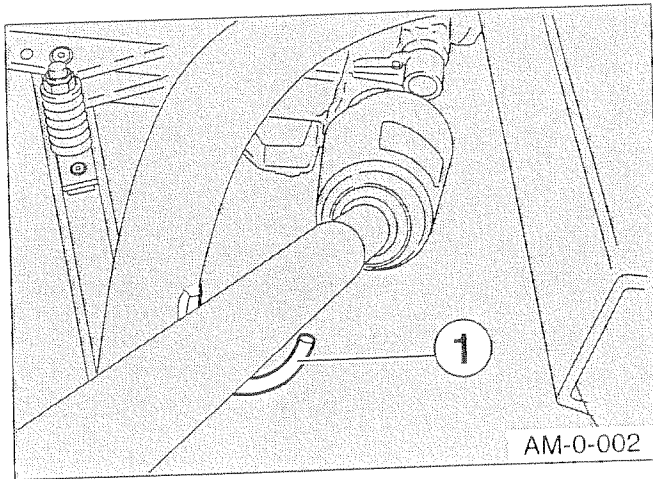
A single control valve is required on the tractor to operate the disc mower. The hydraulic hose with the shut-off tap (3) is coupled into the coupling sleeve (1) of the control valve. The control cord (2) to activate the "transport position" locking feature is fixed at a convenient point on the tractor.



When the hydraulic hose is connected, the hydraulic control device must be in floating position or in the "Lower" position.



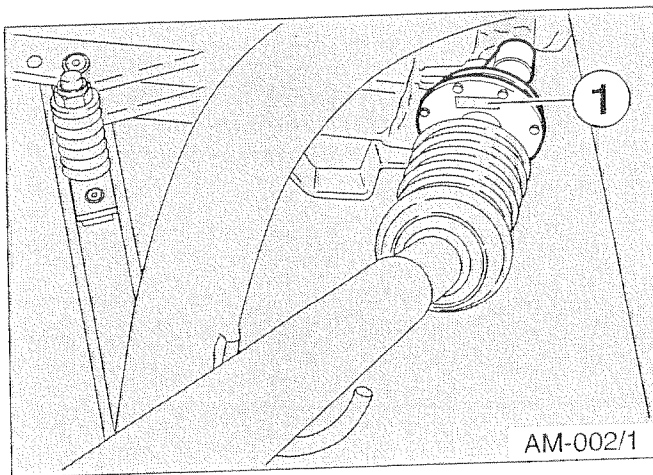
## 2.2 P.T.O. Shaft



This mower is driven with a maximum power take-off shaft speed of 540 rpm. Under no circumstances may it be operated with a higher power take-off shaft speed.

The PTO shaft must only be fitted or removed when the power take-off shaft and the engine are turned off and the ignition key has been removed!

The PTO shaft is slid onto the gearbox input shaft with the friction clutch towards the disc mower, and it is rested on the support bracket (1). The safety chains must never be used to hold the PTO shaft. Make sure that the locking device of the PTO shaft has snapped into position.



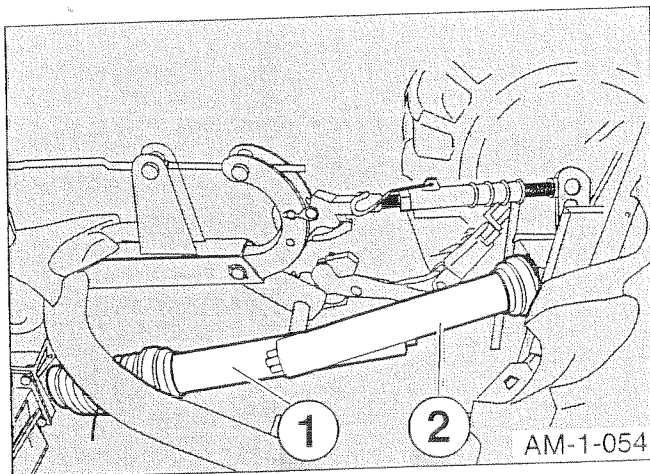
### Special equipment

#### Auxiliary gearbox for 1000 rpm power take-off shaft

Operation with a power take-off shaft speed of 1000 rpm at the tractor requires the fitting of an auxiliary gearbox (1) on the mower unit.



- The retaining chain should be inserted to prevent the PTO shaft guard from rotating with the shaft.
- The chain should be inserted in such a way that the PTO shaft has sufficient freedom of movement in all operating positions.



### Adapting the PTO Shaft

In order to adapt the PTO shaft, the two halves of the shaft (1) and (2) should be held next to each other in the shortest operating position to check the overlap of the section tubes. If the overlap is too great, the section tubes and protecting tubes must be shortened so that they can move freely in any operating position and do not knock each other. The exact procedure for shortening the PTO shaft can be found in the **operating instructions from the PTO shaft manufacturer**, which are supplied with the PTO shaft.



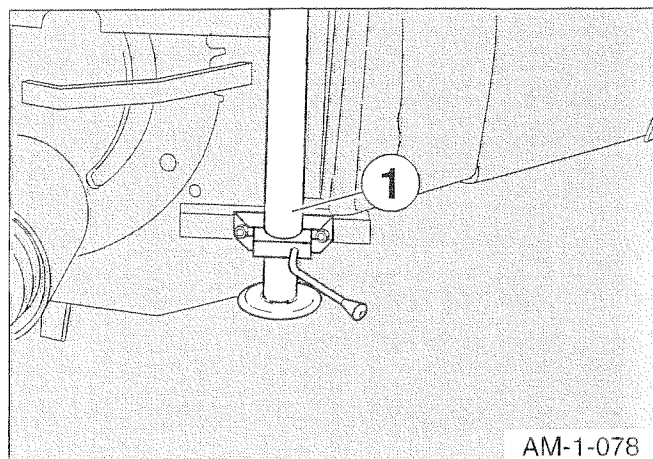
Check the swivel space and the free movement space of the PTO shaft. If the free PTO shaft touches the tractor or the attachment, this can cause damage.

## 2.3 Jack Stand

The jack stand (1) must be retracted when the disc mower is in operating position.



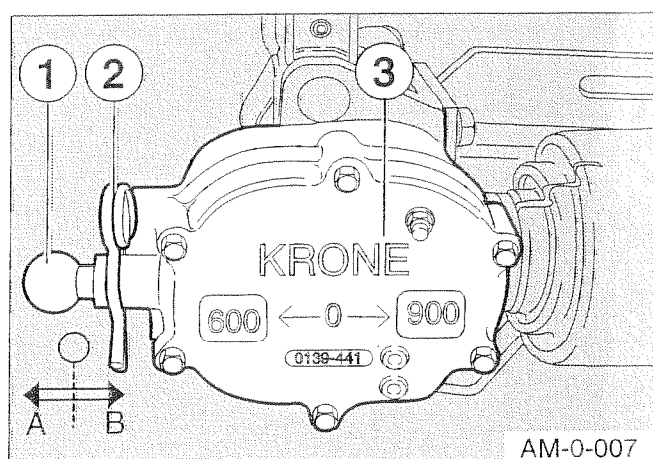
Make sure that the jack stand is retracted before switching on the mower.



AM-1-078

## 2.4 Conditioner Drive (lever change gearbox)

The rotation speed of the tine rotor can be adjusted by means of the change lever (1) after the retaining pin (2) on the conditioner gearbox (3) has been removed.

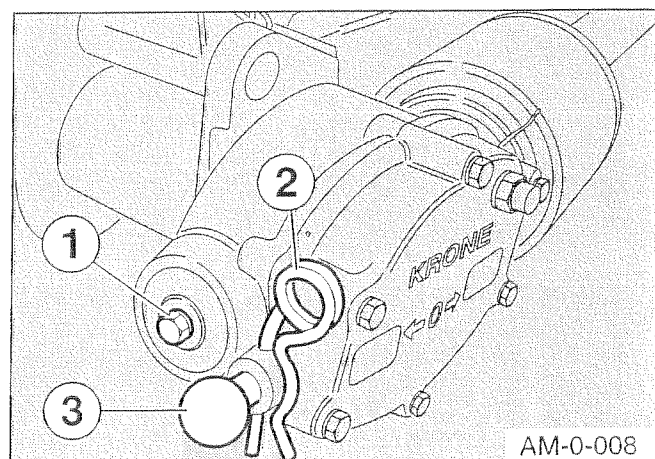


AM-0-007

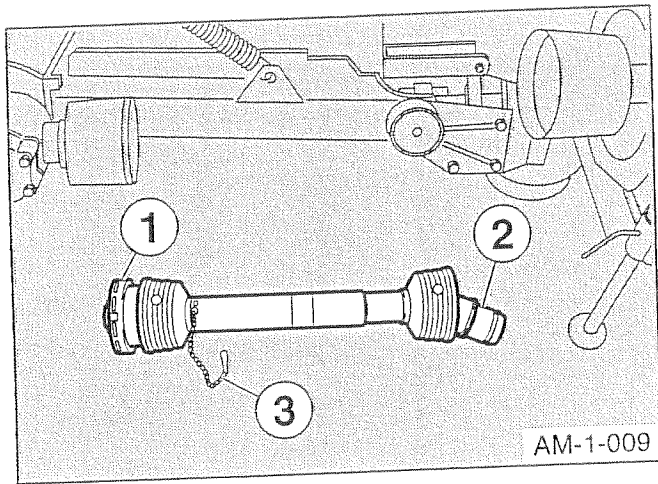
By turning the screw (1) with the spanner supplied, the gear shift process with the gear change lever (3) is made easier.



After changing the speed, make sure that the retaining pin (2) is inserted again.



AM-0-008



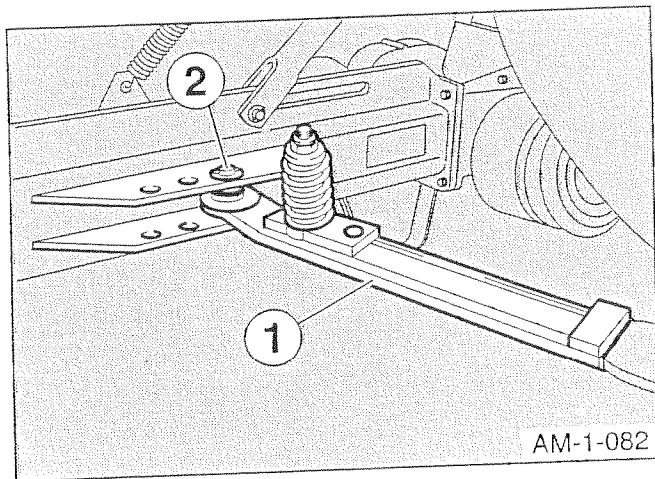
The PTO shaft for the conditioner drive is mounted with the friction clutch (1) towards the gearbox and the free-running end (2) towards the conditioner. Attach the retaining chain (3) to the mower.



The retaining chain should be inserted to prevent the PTO shaft guard from rotating with the shaft. The PTO shaft must only be fitted or removed when the power take-off shaft and the engine are turned off and the ignition key has been removed!

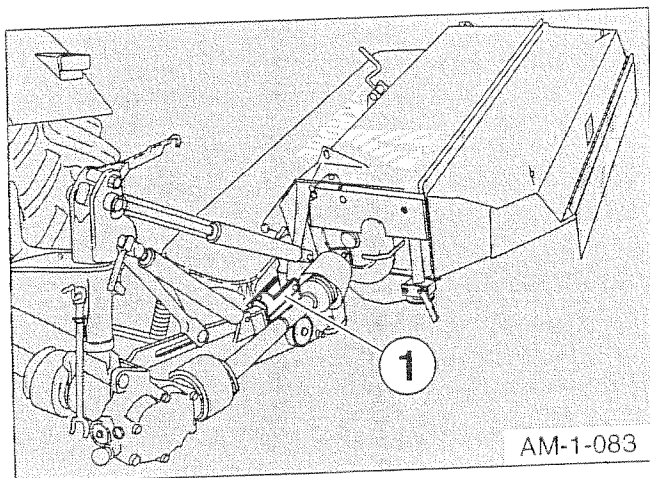
## 2.5 The angle of the mower to the tractor

The adjustment of the angle of the mower to the tractor can be made with the breakaway safety unit (1). Basic setting is position (2).



## 2.6 Preparing to turn

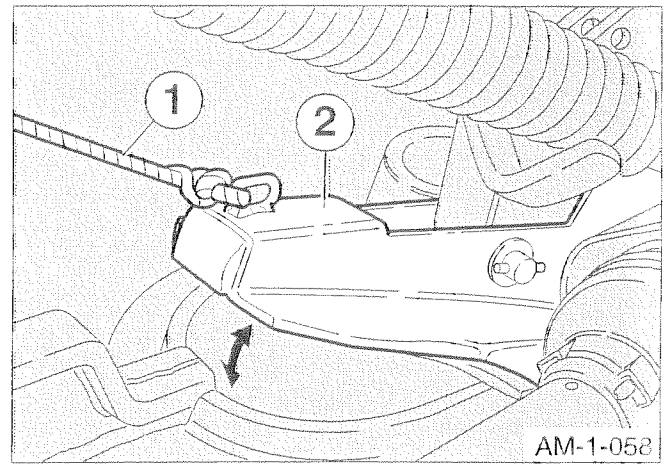
When preparing to turn the tractor, simply lift the disc mower by means of the hydraulic cylinder on the machine until the locking mechanism (1) rests against the catch.





## 2.7 Transport Position

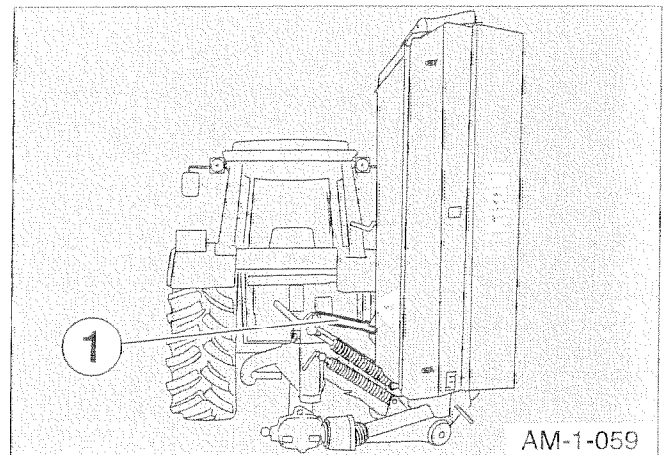
To do this, the locking mechanism (2) is pulled from the tractor with the synthetic cord (1) and the mower brought to the transport position by activating the lifting cylinder.



The disc mower is folded upwards for transport.



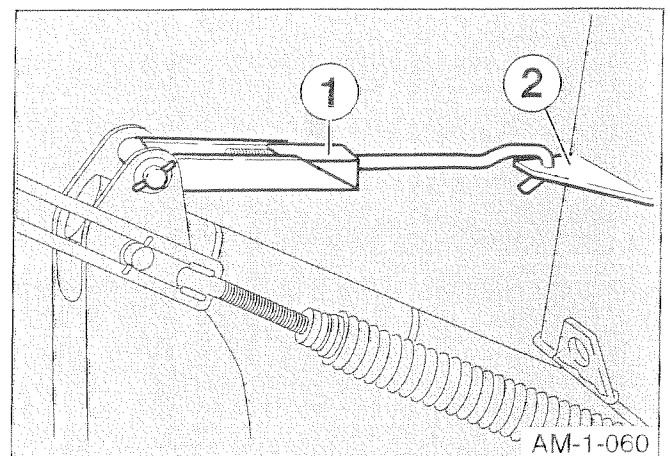
- After the drive is turned off, the mowing discs may continue to rotate.
- It is essential to wait until the machine is at a complete standstill before the mower is folded up or any personnel approach the machine!

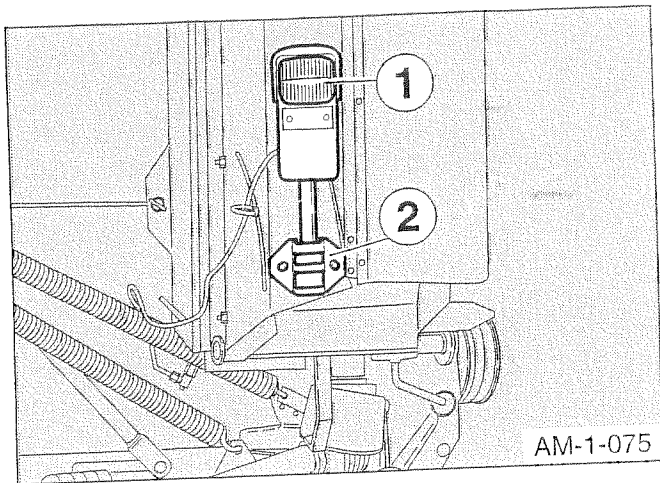


The mower unit must be secured in the transport position. This is realised via the transport lock (1), which has to be hooked onto the conditioner housing (2) when the mower unit is moved to transport position. When lifting the mower unit to transport position, hold the synthetic cord taut until the mower unit has reached transport position. Then release the cord so that the hook can engage in the lug in the housing. In addition to this, close the shut-off tap on the tractor-side of the hydraulic hose pipe.



- Ensure that the transport lock is engaged at all times.
- The shut-off tap on the hydraulic hose must be closed.



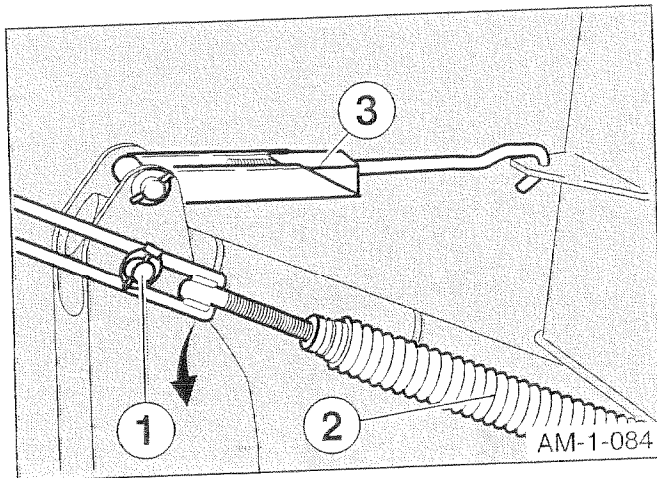


Always remember to attach the lights (1) to the lights bracket (2) on the disc mower when driving on public highways. Use standard attachable lights.

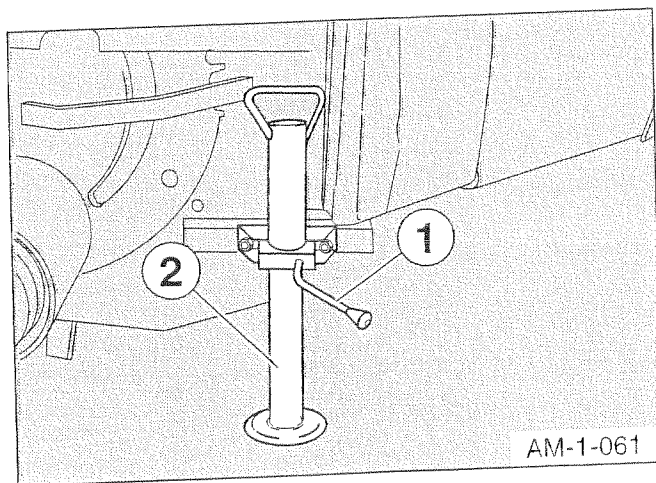
## 2.8 Detaching the Disc Mower from the tractor

The ground underneath must be level and should be solid.

First remove the rear compensation spring (2) from the upper bearing bolts (1) while mower unit is in transport position, and set down on the mount. (This makes mounting the mower unit easier!)



The compensation spring should be detached from the bolt (1) only when in transport position. Otherwise there is a high risk of injury!



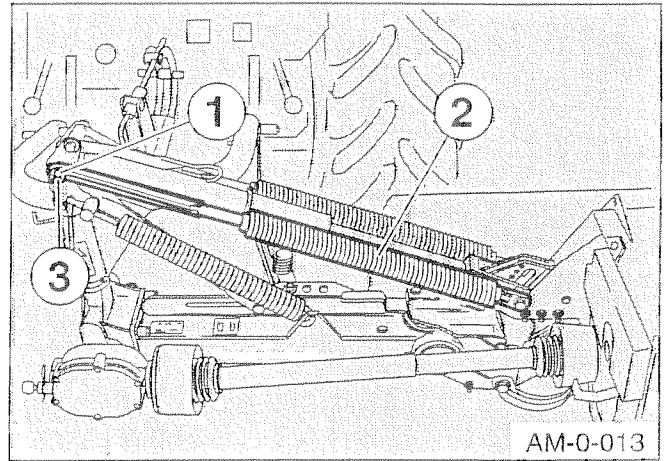
Set mower unit to transport position and lower to ground.  
Set down support leg (2) and retighten clamping bracket (1). Detach propeller shaft from tractor and set down on the support.  
Unload the hydraulic system and uncouple hydraulic hose from tractor - attach dust cap. Detach synthetic cord from tractor. Unload top link arm and remove bolt on unit side or unhook top link arm.  
Detach lower link arm or disengage tail hook.

Do not pass between tractor and machine while disassembling the mower unit!


When coupling the disc mower to the tractor, it is essential that the compensation spring (2) be pushed back onto the retaining bolt (1) and secured with a hinge clip (3) and washer.



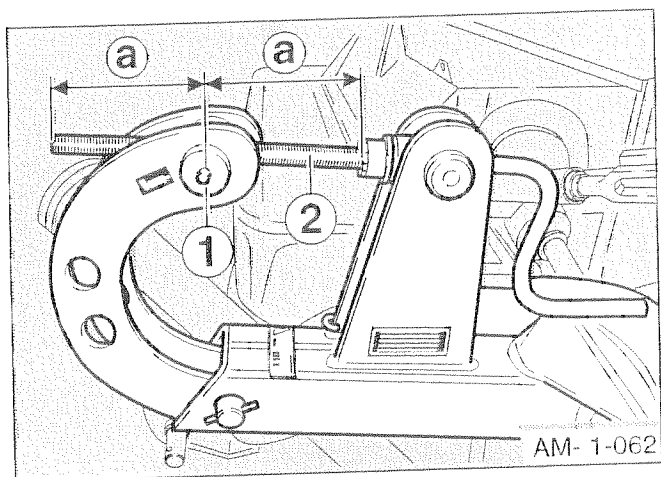
Mounting the compensating spring is only possible in transport position.



### 3. Adjusting the Disc Mower and Blades

 The mower is designed and suited to cutting grass crops that grow on the ground.

#### 3.1 Adjusting the Top Link Arm Coupling Point

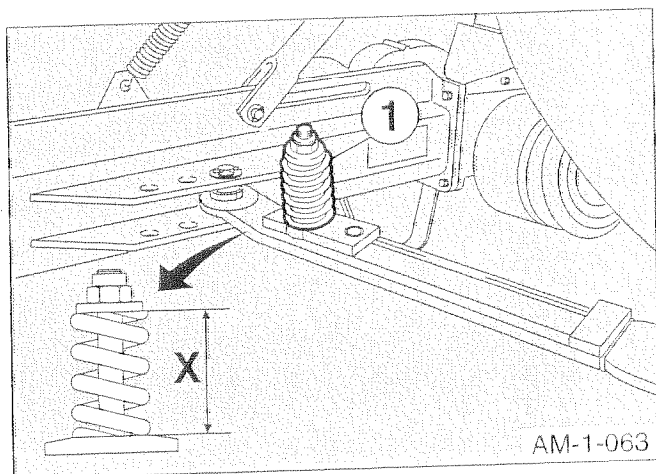


When the threaded spindle (2) on the top link arm coupling point is in the basic position, the bolt (1) is in the centre of the threaded spindle. The distances marked "a" are equal.


#### 3.2 Adjusting the Safety Breakaway Unit

To protect the disc mower from damage caused by driving over any obstacles, the machine is equipped with a spring loaded breakaway unit.

The most advantageous setting for the moment of actuation is set in the factory. Should other settings be required, adjust the length of the spring (1) as necessary. Greater spring tension increases the actuation moment.



Type	Dimension x
AM 203 CV	81mm
AM 243 CV	80 mm
AM 283 CV	79 mm
AM 283 CV + B	79 mm

 Do not set the tension in the spring on the safety breakaway unit too high. Risk of damage to the disc mower if the tension is too high.

### 3.3 Adjusting the Compensating Spring for the cutterbar

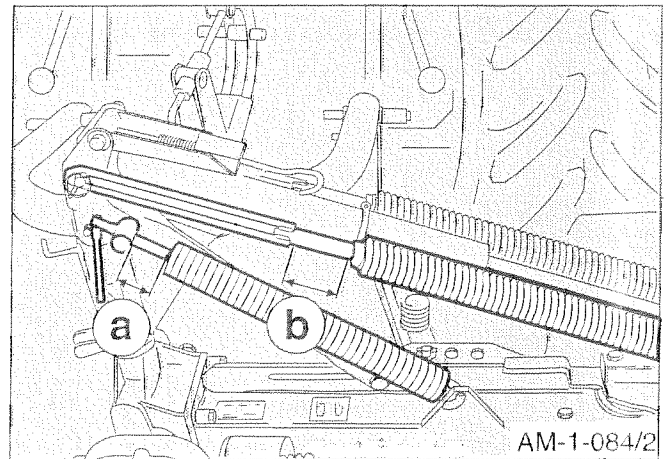
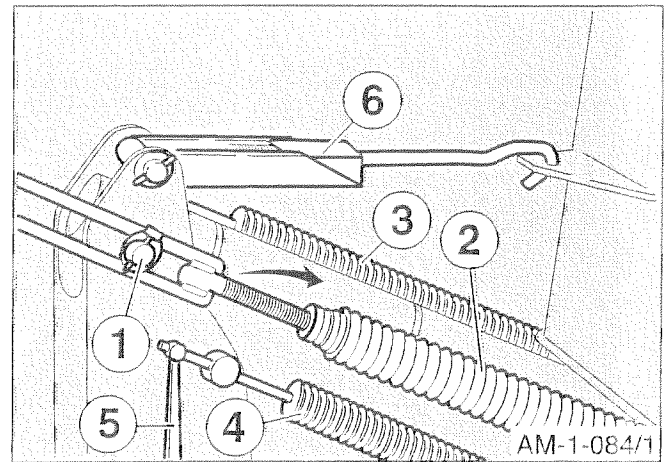
The three compensation springs adapt the pressure exerted by the cutter beam on the ground below to local conditions. In the interests of the turf, the cutter beam should be provided with enough load compensation to prevent jumping and subsequently leaving marks in the ground. To make the appropriate adjustment, set the disc mower to transport position, ensuring that the transport lock (6) is engaged.

In this position, the compensation springs (2+3) of the cutter beam can be taken off the pin (1), making it possible to change their length. Shortening the length means that the load compensation of the cutter beam is greater.

The compensation springs (4) can be adjusted at the spindle (5). Springs 2 and 3 provide load compensation for the cutter beam, particularly on the outside. Spring 4 provides more load compensation on the inside.

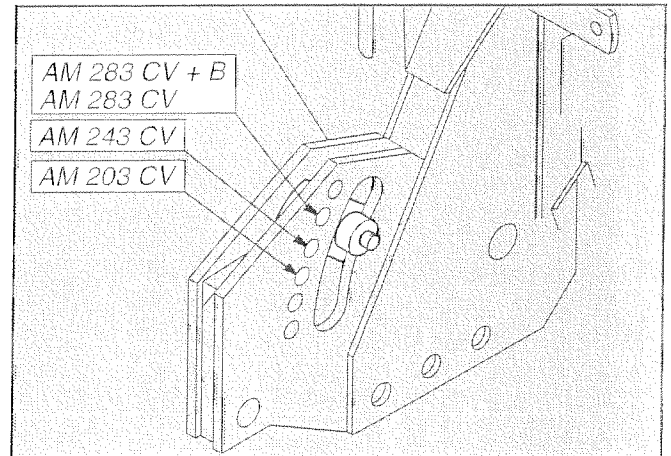
After the compensation springs have been mounted, resecure them on the pin with the hinge clip and washer to prevent them slipping off.

**Basic setting:** distance "a" = 80 mm  
distance "b" = 60 mm



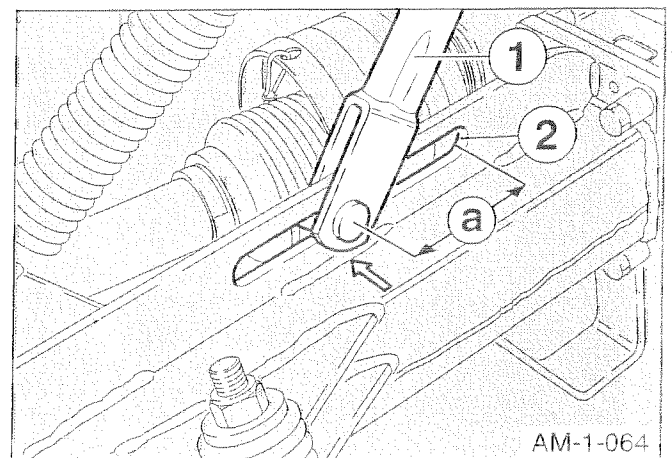
### 3.4 Adjusting piece for lifting cylinder and flotation spring

The lower bearing bolt for the lifting cylinder and the flotation spring must be locked in the correct position on the different mower types. This adjustment is performed at the factory and must **not** be changed.



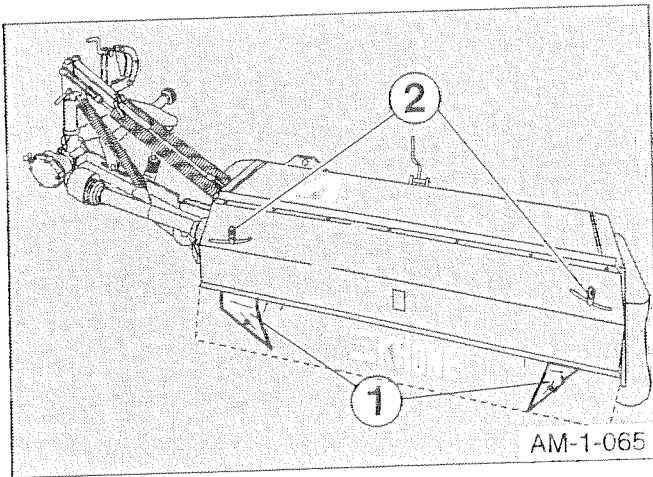
### 3.5 Basic setting of the tractor lower link-arm

The best working height of the lower link arms is achieved when the bracket (1) is fitted in the slot (2) with a distance of  $a = 70 \text{ mm}$ . This guarantees that the mower unit will be able to adapt to uneven ground. When preparing for turning, the cutterbar is simply lifted by means of the hydraulic cylinder fitted to the disc mower.



### 3.6 Adjusting the Swath Width

The swath width is adjusted by means of swath deflector plates (1) located under the swath hood on the mower. These can be adjusted by loosening the ring nuts (2) in the slot area. Fasten the ring nuts securely again after making the adjustment.



### 3.7 Changing Blades on the Cutting Discs with Blade Screw Connectors

Safe and reliable operation of the mower is only guaranteed with correctly fitted cutter blades.

Missing and damaged cutting blades cause dangerous irregularities in the rotation. Cutting blades and fixing bolts must therefore be checked daily.

Always inspect the mower before starting work to check for damaged, missing or worn cutter blades. Replace blades if necessary.

The upper section of the adjacent diagram shows individual parts required to mount the blades and the positions of the blades on one disc. The procedure for mounting on the mower drums is identical. Screws (3) and nut and washer assembly (4) are required to mount the blades (5). Insert the screws from below through the wear plate (2). The blades are fitted between the wear plate and the blade disc (1). Tighten the screws from above with nut and washer assemblies (4). After mounting, the blades on the screws must be able to move freely.

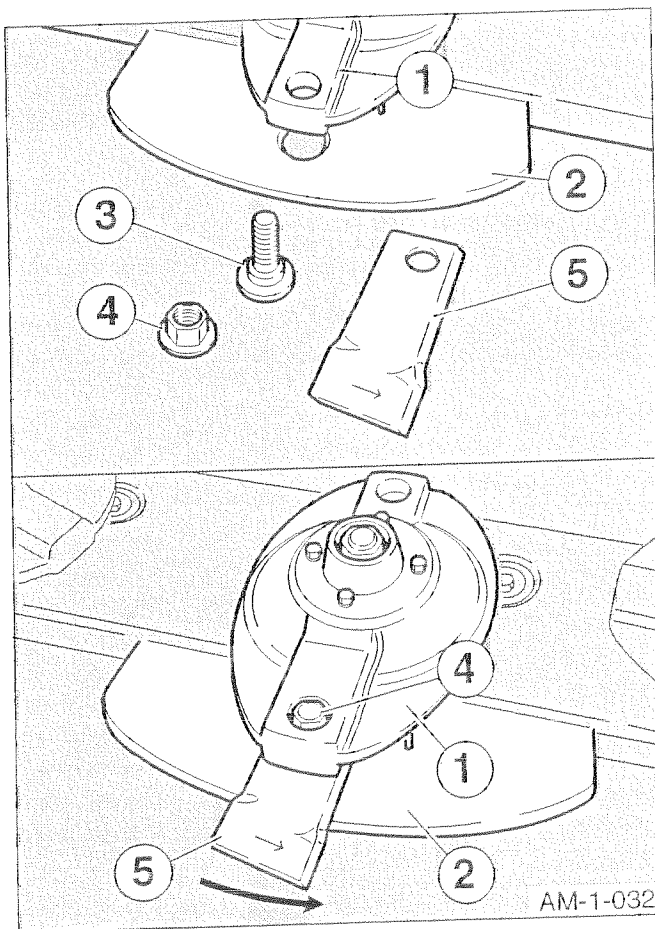
A number of different types of blade can be mounted on this mower unit. The universal blade has a crossed (twisted) shape. The blades are classed as:  
Blades for

Cw rotating disc	Order-No. 139-889
Ccw rotating disc	Order-No. 139-888

All blades have a corresponding designation. The arrow on the blade should be pointing in the direction of operation!


It is also possible to mount so-called roof shaped blades. These can be employed identically with discs which rotate to the left or right.

Roof shaped knife	Order-No. 139-800
-------------------	-------------------

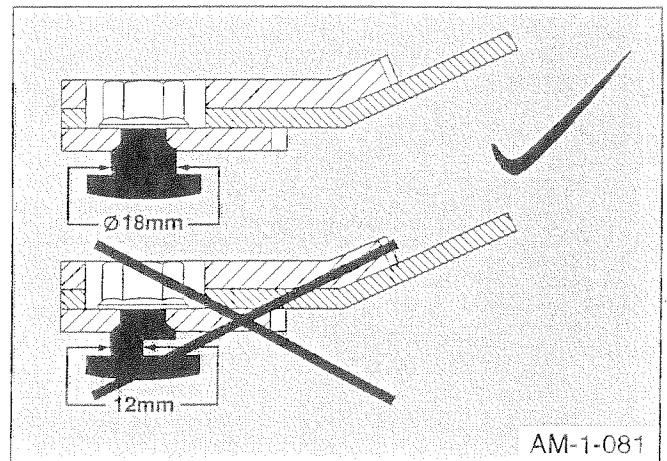


Use only original blades with the order no. specified next to them. Employment of wrong or unsuitable blades may lead to accidents!

The material strength of the blade screws used in the area of the blade receptacle of may **not** be below 12 mm .



**Missing or damaged fixing bolts / cutter blades must be replaced immediately!**

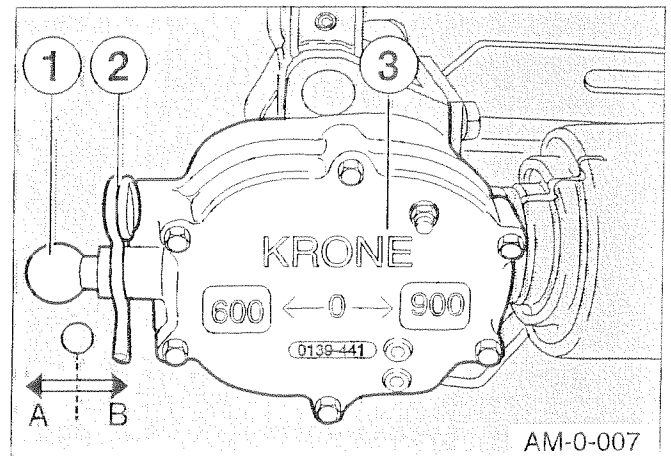


### 3.8 Adjusting the Conditioner Speed

The drive speed of the conditioner rotor can be adjusted on the conditioner gearbox (3). This enables the speed and effect of the conditioner to be adapted to the material concerned.

- stem crop                      = high conditioner speed
- leaf crop                        = low conditioner speed

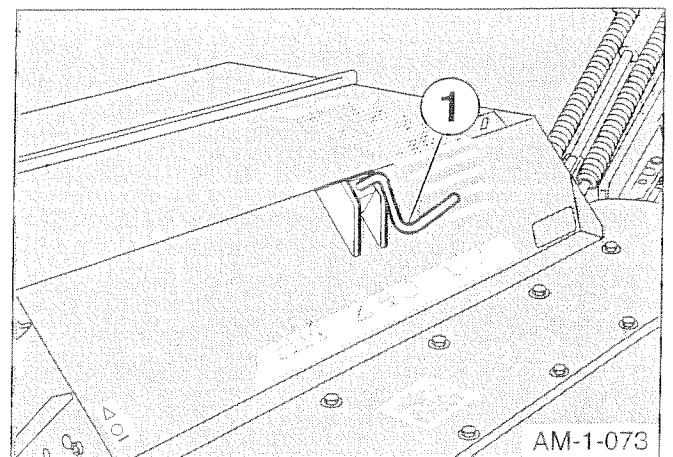
First, the retaining pin (2) is removed. Then, the shift lever (1) is moved out or in to select the tine rotor speed. When the lever is pulled out (position "A"), the conditioner speed is **600 rpm**. When it is pushed in (position "B"), the speed is **900 rpm**. In the central position of the lever, (position "0"), no torque is transmitted.



### 3.9 Adjusting the Conditioner Cover Plate

The swath cover plate is adjusted by means of a crank handle (1) on the front of the disc mower. The setting depends on the required degree of conditioning of the crop.

- conditioner cover plate closer to the conditioner rotor means stronger conditioning
- conditioner cover plate further from the conditioner rotor means less conditioning.

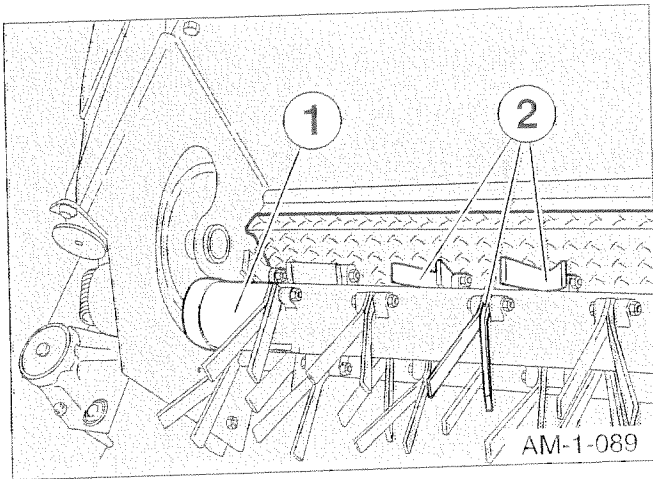


### 3.10 Adjusting the Position of the Conditioner Rotor to the Cutterbar

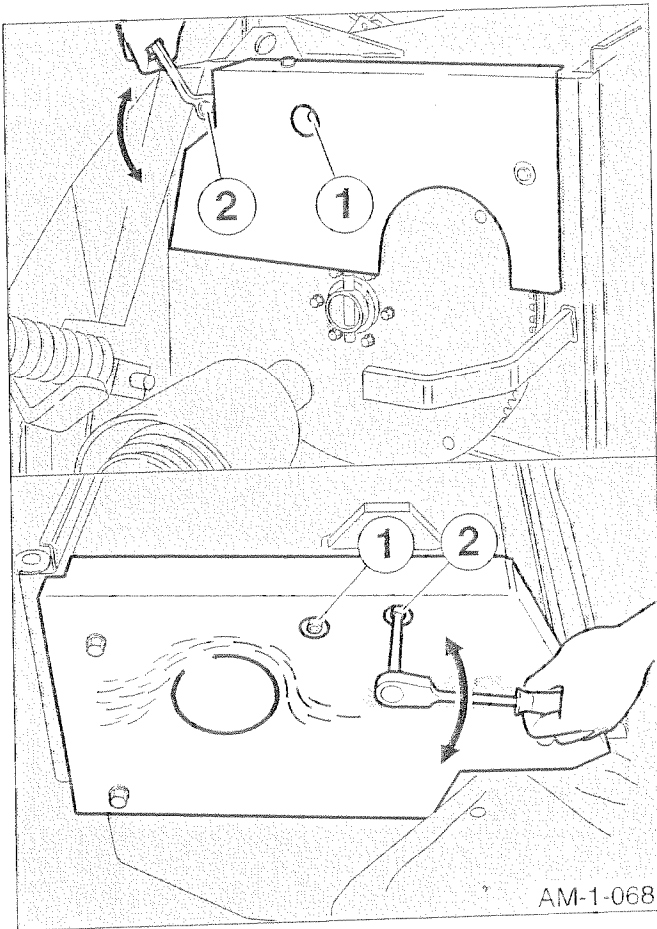
The conditioner rotor (1) of the rotor with the V-shaped tines (2) can be adjusted to four different positions. This is done by adjusting the distance of the conditioner from the cutterbar.



**Broken or bent tines cause irregular rotation. Replace them immediately when you notice them.**



The locking screw (1) on the left and right sides of the machine must be removed to make the adjustment. The adjustment to the toothed disc (3) is made by rotating the right hand ratchet (2). Turn the ratchet until the desired setting is reached.



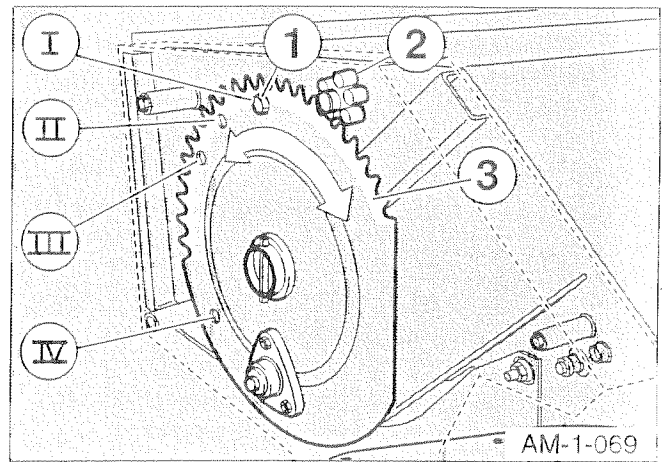


Position of conditioner roller on cutter beam

- I: basic position
- II: position for longer crops
- III: position for very long crops
- IV: conditioner out of service



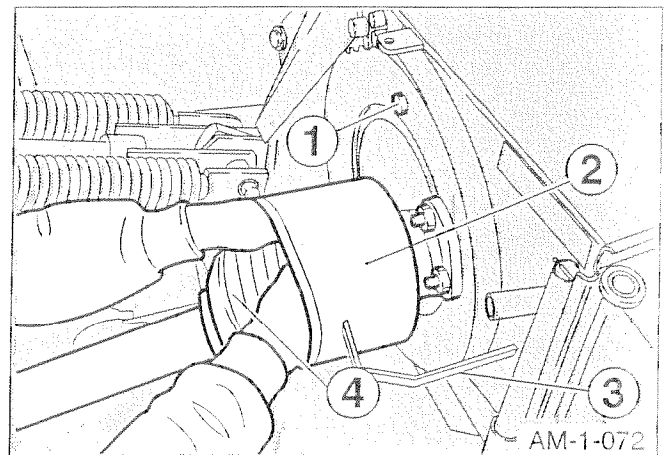
The conditioner may not be operated in position IV. Detach the propeller shaft completely from the machine. Switch gearbox to "0" position.



Before the conditioner rotor can be brought to standstill position (position IV, pos.1), the drive PTO shaft (4) must be completely removed, even from the conditioner drive gearbox. Put the gearbox in the "0" position. The PTO shaft guard can only be moved past the spacer element (3) when the PTO shaft is detached.



Fit and remove of the PTO shaft only when the drive and the engine is turned off and the ignition key removed.



## 4. Maintenance

### 4.1 General



Repair, maintenance and cleaning work must be carried out only when the drive and the engine are turned off! Danger, cutting discs continue to rotate!

Remove ignition key. Take measures to ensure that the tractor can not be inadvertently started or roll away. The transport lock must be engaged when working on the disc mower in transport position. The shut-off tap on the hydraulic hose must be closed.

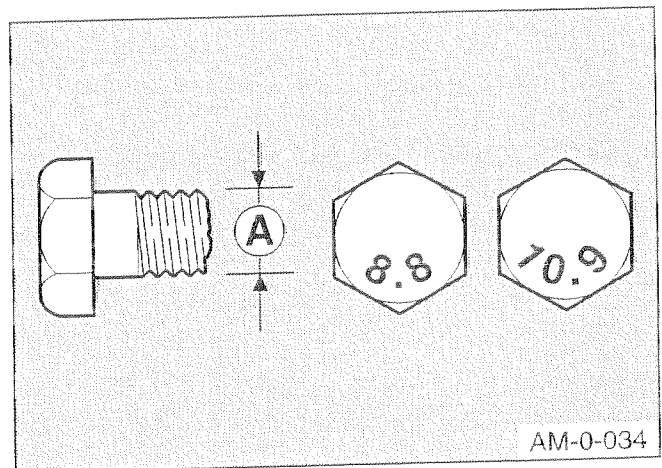


Check nuts and bolts regularly (approx. every 50 hrs.) for tightness, and tighten if necessary!

Torque moment  $M_A$  in Nm (if not given differently).

A Ø	5.6	6.8	8.8	10.9	12.9
	$M_A$ (Nm)				
M 4		2,2	3,0	4,4	5,1
M 5		4,5	5,9	8,7	10
M 6		7,6	10	15	18
M 8		18	25	36	43
M 10	29	37	49	72	84
M 12	42	64	85	125	145
M 14		100	135	200	235
M 14x1,5			145	215	255
M 16		160	210	310	365
M 16x1,5			225	330	390
M 20			425	610	710
M 24			730	1050	1220
M 24x1,5	350				
M 24x2			800	1150	1350
M 27			1100	1550	1800
M 27x2			1150	1650	1950
M 30			1450	2100	2450

A = Thread size  
(The bolt grade is visible on the bolt head.)



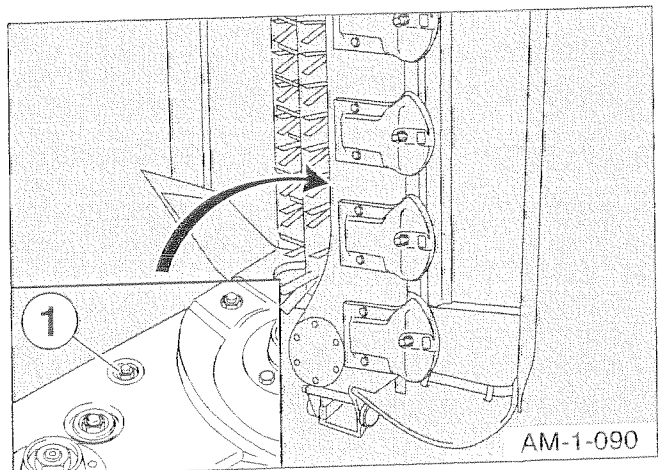
### 4.2 Oil Level Check and Oil Change for Cutterbar



When checking the oil in the cutterbar, always ensure that the cutterbar is secured by the transport safety device. High risk of injury!

#### Oil Level Check - Cutterbar

To check the oil level in the cutterbar, first move it to transport position and secure with the transport safety device. Unscrew the oil level check screw (1) on the top side of the cutterbar. The oil level in the cutterbar must reach up to the oil check hole. Refill if necessary.

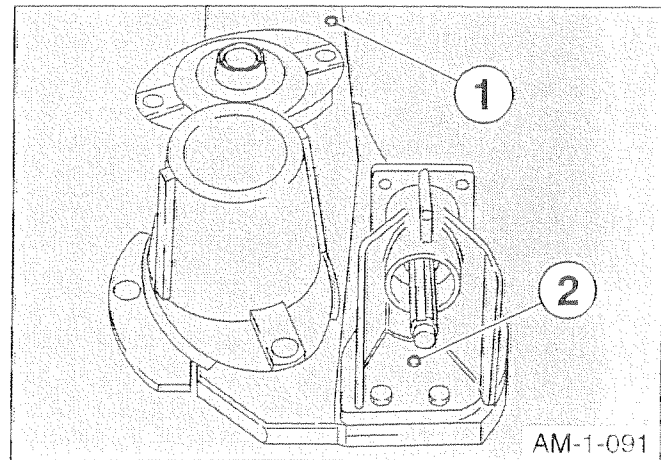


## Oil Change - Cutterbar

An oil change should be carried out after approx. 500 hectares of operation. Bring the disc mower to the transport position and secure with the transport safety device. Unscrew the oil drain screw (2) and the oil check screw (1) on the cutterbar. Collect the used oil (approx. 4–6 litres) in a suitable container. When the oil has drained, insert the oil drain screw again. Fill up to the oil control holes (1) with new oil. Insert the oil check screw with a ring seal. Close the oil check hole with the screw. For oil quantities and oil types, please refer to the chapter "Technical Data".



**Dispose of used oil in the correct way after every oil change!**



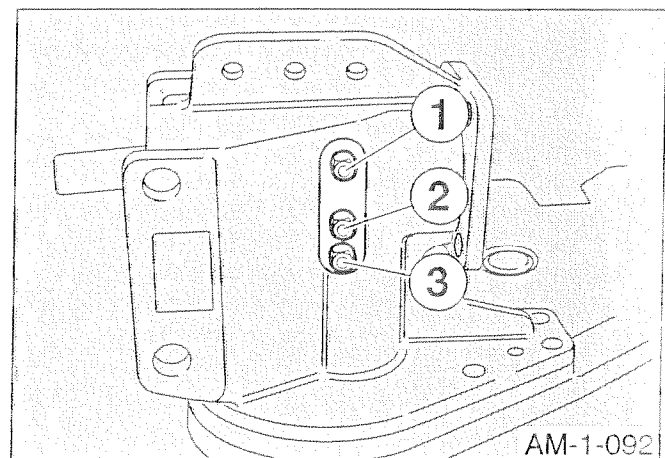
## 4.3 Oil Level Check and Oil Change for Main Gearbox

Bring the disc mower into the working position before checking the oil. Underneath the breather connection (1) you can see the oil check hole (2) and the drain screw (3) in the adjacent diagram. To check the oil, take the screw out of the oil check hole. The oil in the main gearbox must come up to the check hole. Top up with oil if necessary.

When changing oil, take out the drain screw and the check screw. Drain the oil (approx. 0.5 litres) into a suitable container. Replace the drain screw and fill up to the check hole with oil. For information on quantities and types of oil, please refer to the chapter "Technical Data".



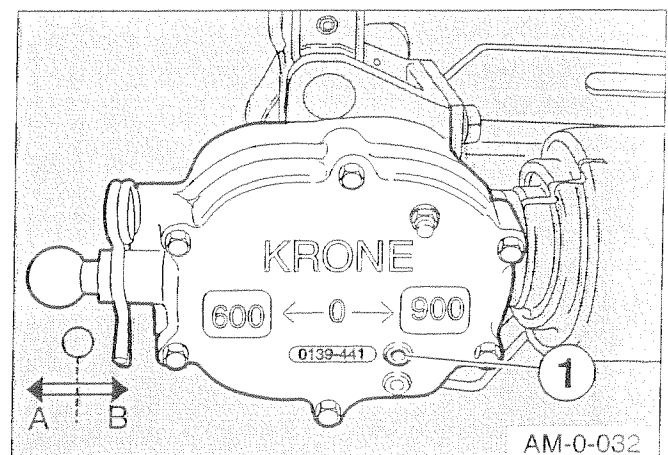
**After an oil change, the used oil must be disposed of in the correct way!**



## 4.4 Oil Level Check and Oil Change for Getriebe Mäherantrieb / Zetterantrieb

### Oil Level Check - Main Gearbox

The gearboxes for the mower and conditioner drive units have a common oil supply. To check the oil level for the gearbox, twist out the screw (1). The oil must come up to the oil check hole. Top up with oil if necessary.

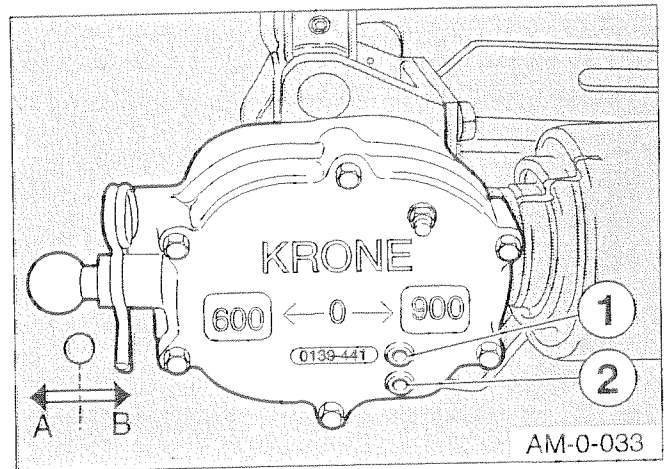


## Oil Change - Main Gearbox

The oil should be changed after about 500 hectares of operation. Unscrew the oil drain screw (2) and the oil check screw (1) on the main gearbox. Collect the drained oil (approx. 1 litre) in a suitable container. After the oil has drained, insert the oil drain screw. Fill with new oil up to the oil check hole. Close the oil check hole with the screw. For oil quantities and oil types, please refer to the chapter "Technical Data".



After an oil change, the used oil must be disposed of in the correct way!

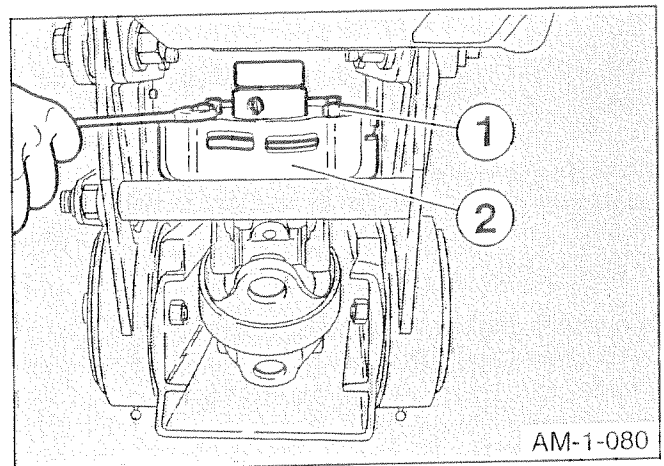


## 4.5 Unlocking the Overload Coupling on the Drive Shaft to the Cutterbar and on the Conditioner Drive



The overload coupling on the cutterbar drive can only be unlocked with the disc mower in the transport position. The cutterbar must be secured with the transport bracket.

The overload coupling must be unlocked after not being used for long periods (e.g. before the start of harvesting). To do this tighten the nuts (1) on the overload coupling (2) on the cutterbar drive. Fix the PTO shaft into place. Turn the blade drum manually in either direction. When turned, the discs in the overload coupling separate from each other. Loosen the nuts again after doing this until there is a clearance between the nut and the housing of at least 3 mm. Follow the same procedure for the overload coupling on the conditioner drive PTO shaft.

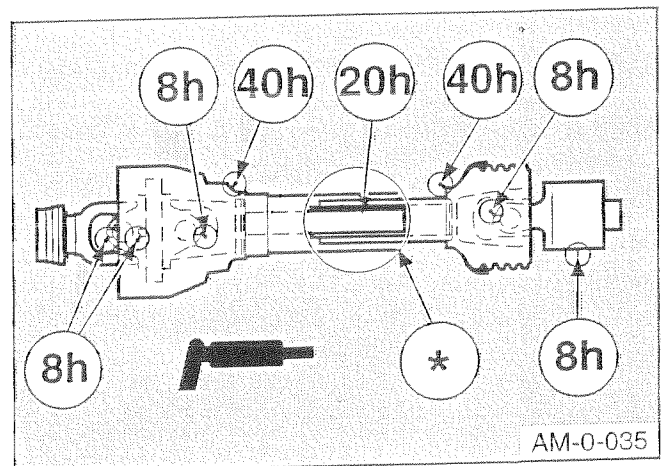


## 4.6 Lubrication

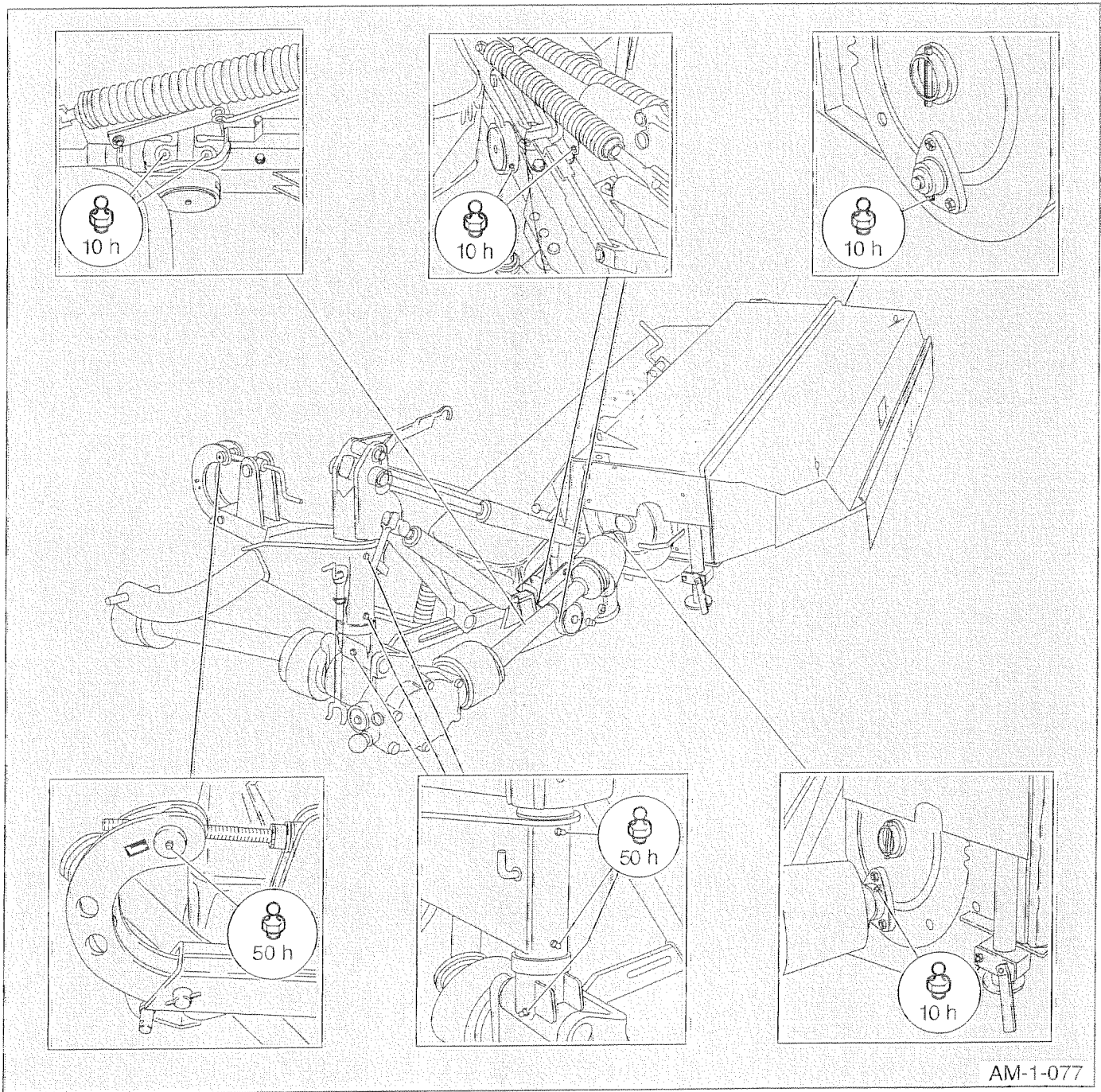
### PTO Shafts

Lubricate the PTO shafts for the main drive and the conditioner drive at the points indicated and the time intervals indicated.

\* Apply grease to the protective tube from time to time.



# Lubrication Plan for Disc Mowers



Lubricate at the lubrication points listed below after the specified number of operating hours.

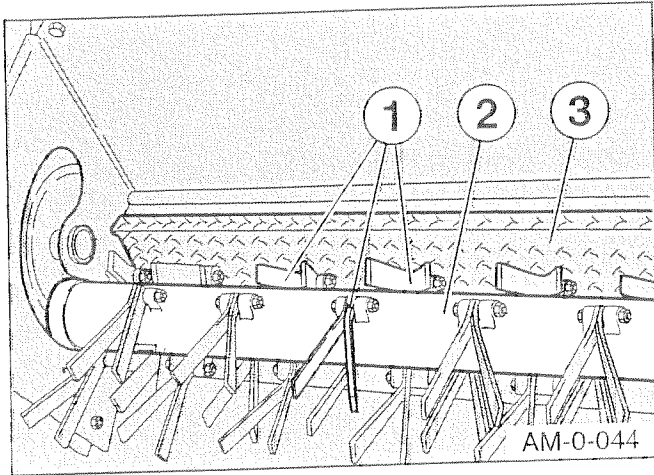


Refer to the section entitled "Technical Data" for the recommended types of oil and lubricant

## 5. Conditioner and Protective Cloth Covers

### Conditioner

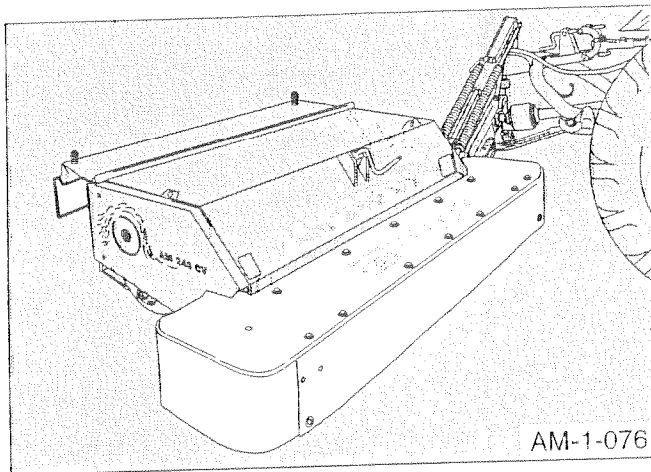
The conditioner processes the cut crop so that it can dry faster. To ensure the best possible effectiveness, the conditioner shaft (2) must be inspected for damaged tines before each use. Bent tines must be straightened. Broken tines must be replaced. The degree of processing of the crop is adjusted by means of the distance setting of the cover plate (3) of the conditioner (see chapter "Adjustments").



The conditioner shaft rotates at speeds of up to approx. 1000 rpm. Broken tines cause dangerous irregularities in the rotation. Therefore, broken tines must be replaced immediately.

### Protective Cloth Covers

The protective cloth covers (1) must be checked regularly. Worn or damaged cloth covers must be replaced. Protective features on the cutter bar, e.g. cloth covers and cover plates, protect from thrown up stones etc. and from access to the dangerous part of the machine. They must therefore be put in protective position before work commences.



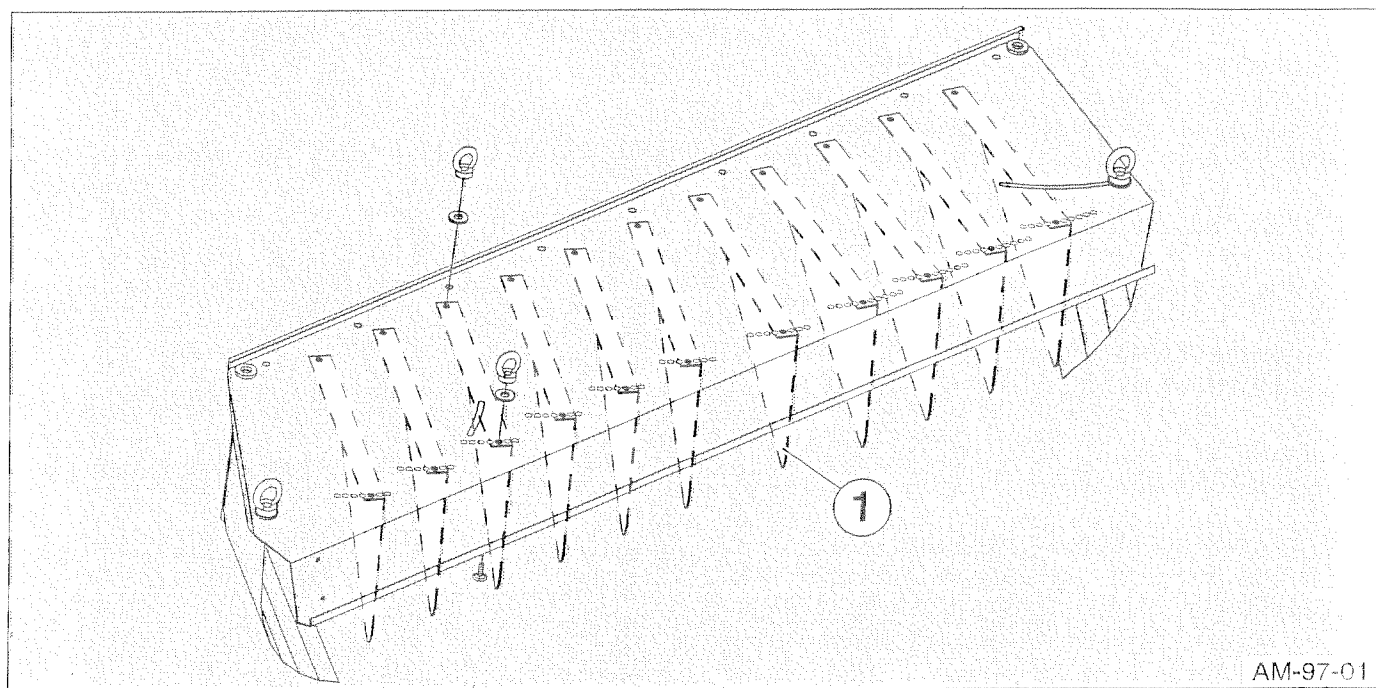
Safety first! Take no risks. Do not experiment with imitation parts. Use only original KRONE parts!

## 6. Wide swath hood

### Basic setting

The disc mower AM 283 CV + B is fitted with a wide swath hood. Once conditioned by the V-shaped steel tines of the conditioner rotor, the cut forage crop is evenly spread over the entire surface which considerably speeds up the drying process.

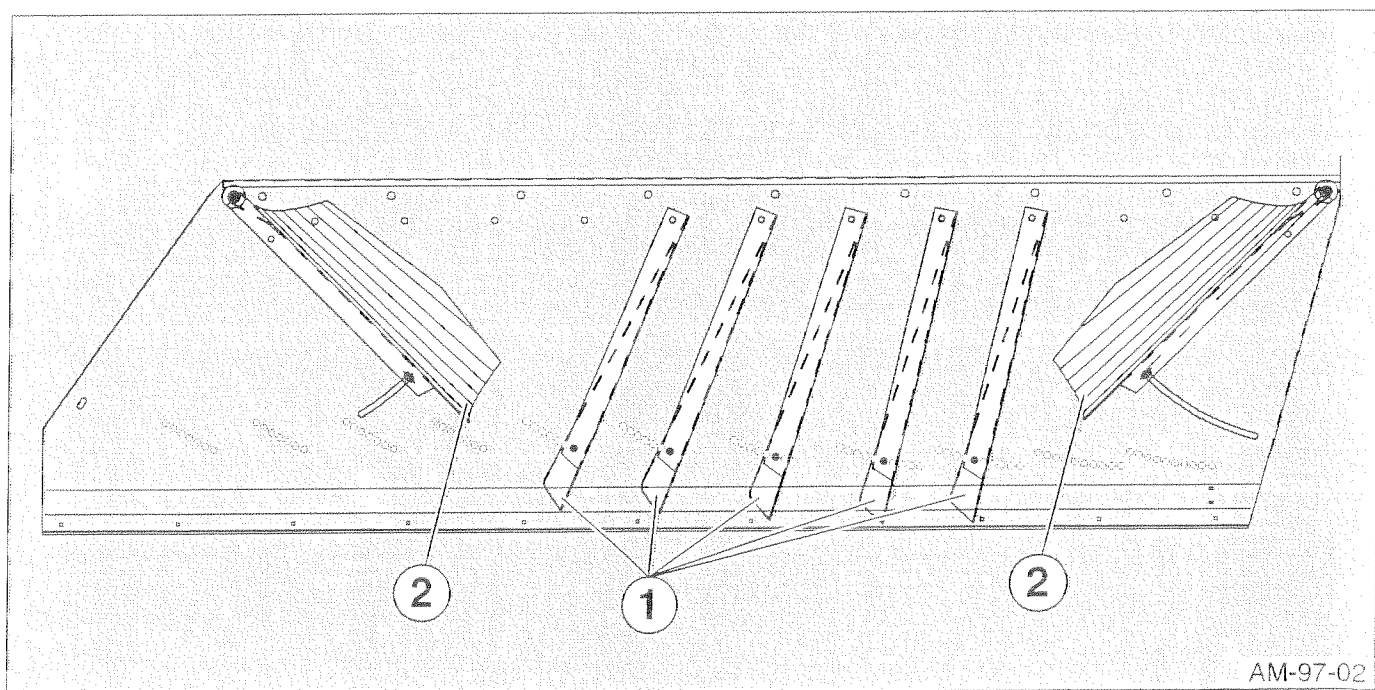
The deflector plates (1) are secured in the marked holes when in the basic setting.



AM-97-01

### Change-over to swathlaying mode

If required the grass can also be laid in a swath. For this secure the deflector plates (1) in the marked holes and fold in the swath deflectors (2).



AM-97-02

## 7. Winter storage

- Store the machine in a dry place that is not near artificial fertilizers.
- Clean the machine thoroughly from the inside and the outside. Dirt attracts moisture and causes corrosion. When cleaning the machine with high pressure water jet cleaners, do not aim the water jet at the bearings.
- Check moving parts (joints etc.) for freedom of movement, and if necessary remove them, clean them and check for wear. If necessary, replace them with new parts.
- Lubricate all moving parts.
- Thoroughly grease the machine.
- Grease the protective tubes of the PTO shaft to prevent it from freezing.
- Touch up the paint work. Thoroughly treat any bare metal with rust protection.
- Make a list of all replacement parts required, and order them in good time. It is easier for your **KRONE** dealer to obtain and fit the required parts out of the main season. This ensures that your machine is fully operational for the coming season.

## 8. Start-up after winter storage

- Wipe off the grease and oil used for machine conservation.
- Carry out in full the steps described in the chapter on maintenance.
- Spin the friction clutch to release sticking friction surfaces.
- Carefully read through the operating instructions again.



## Supplement to

## Operating Instructions AM 203 CV / AM 243 CV / AM 283 CV / AM 283 CV + B

### 1. Assembly Instructions

The following instructions give a detailed description of the assembly procedure for the above mentioned KRONE disc mowers.



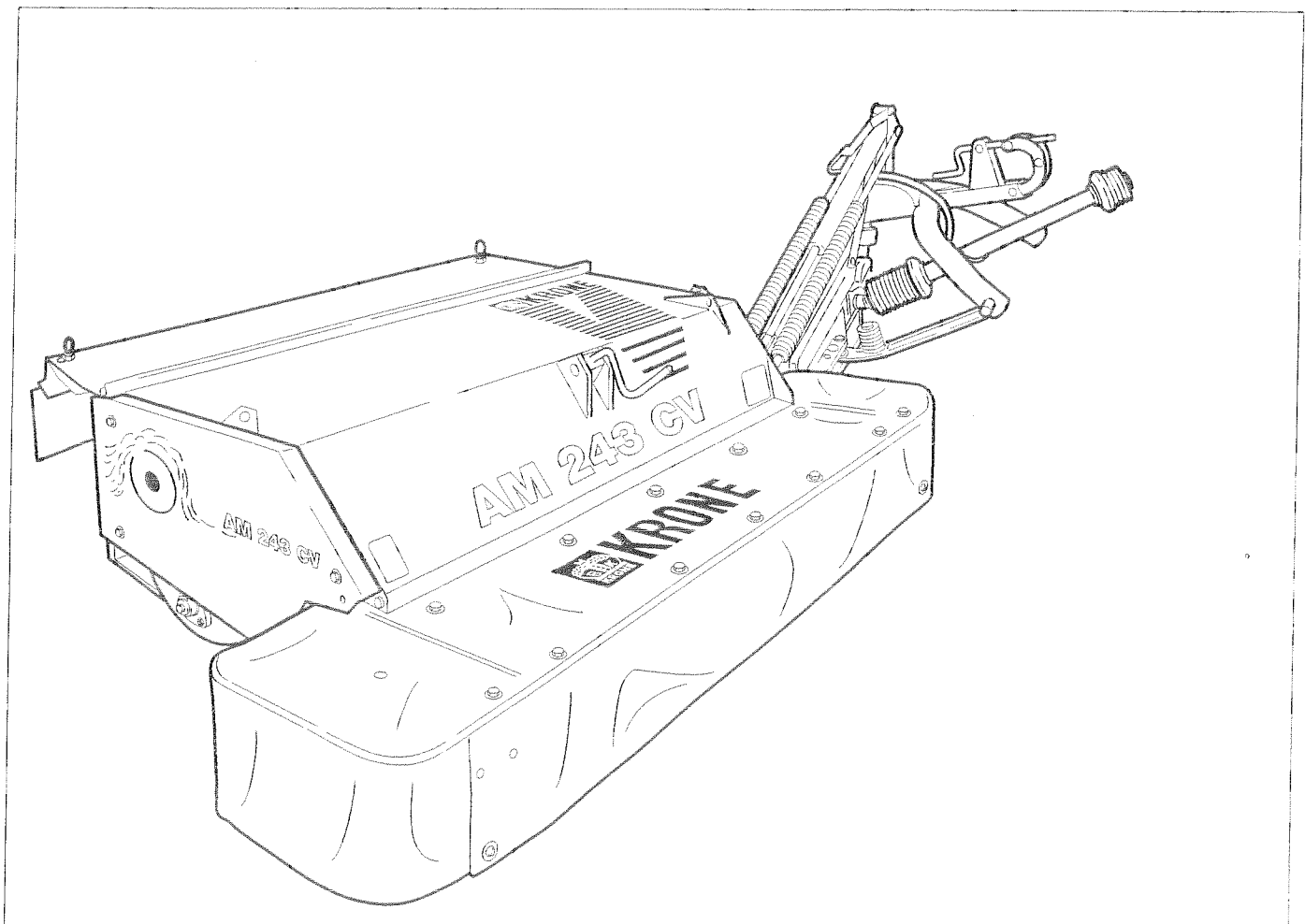
The mowers must only be assembled by an approved specialist workshop.

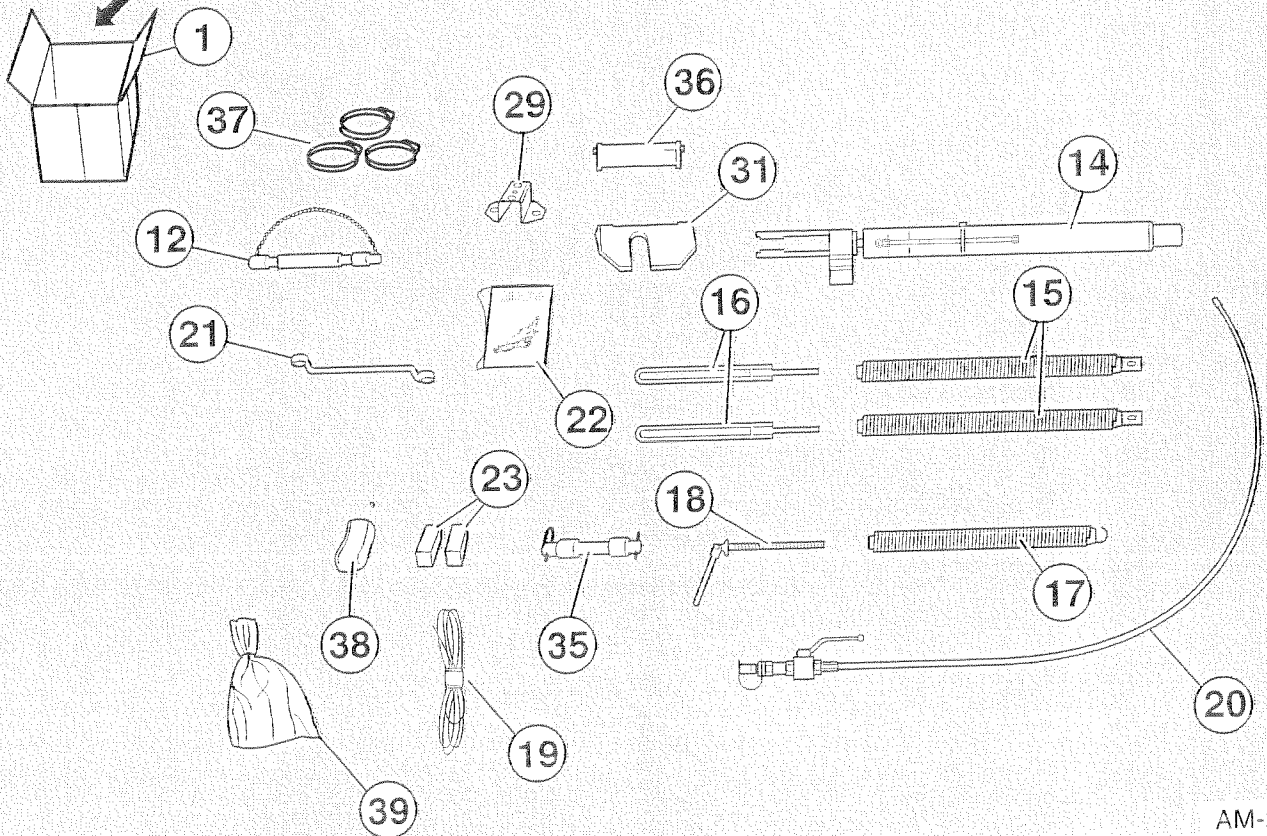
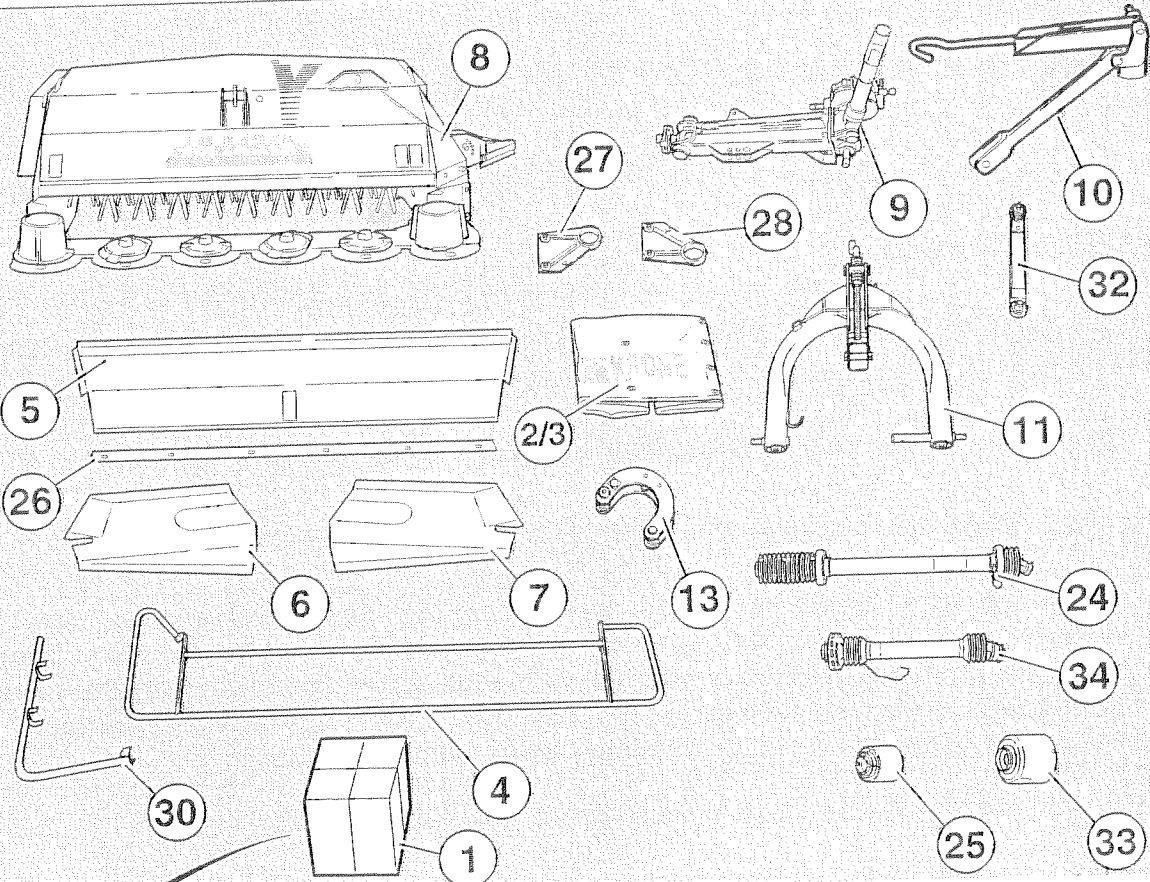
All steps described in the following instructions must be carried out in the described sequence.



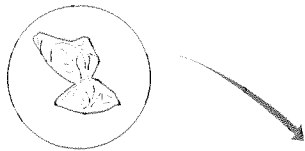
The assembly of the mower must be performed with the greatest possible care. All relevant accident prevention regulations must be complied with. Use only lifting gears and tools of adequate dimensions. The mower must only be set into operation if all guards and protective devices are installed. Never carry out changes yourself. Otherwise no warranty will be assumed for resulting damage.

The operation of the mowers is described in the respective Operator's Manual.



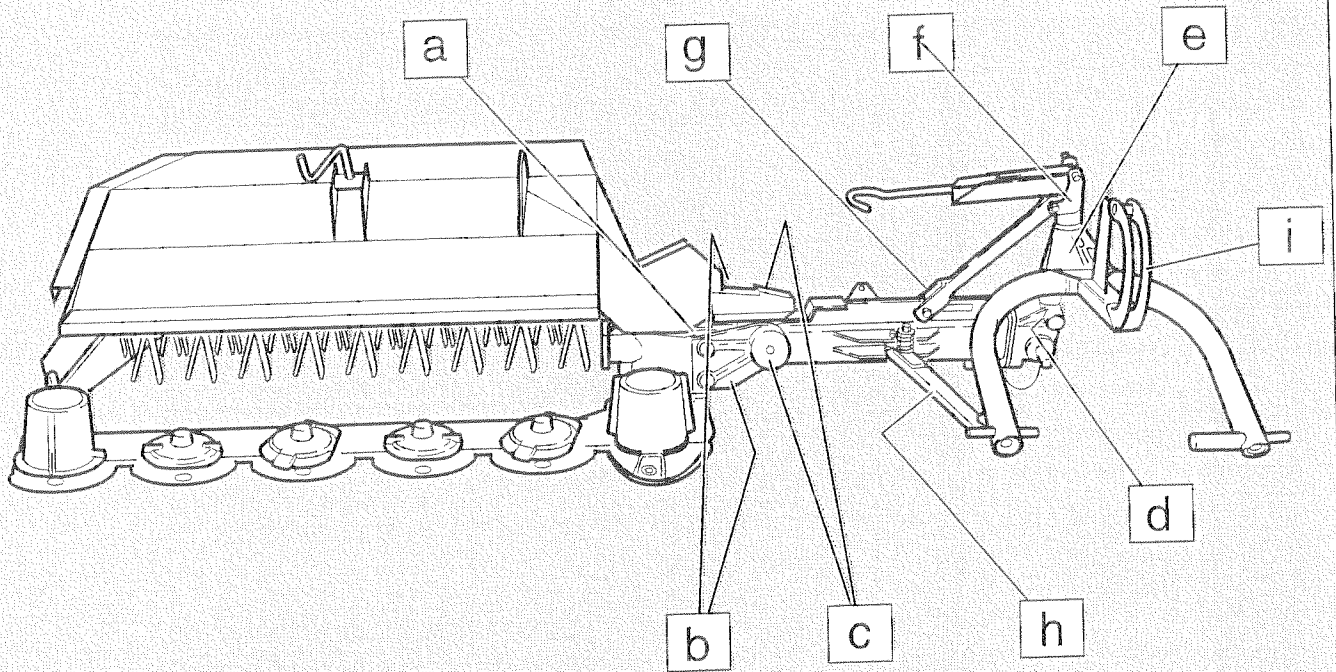


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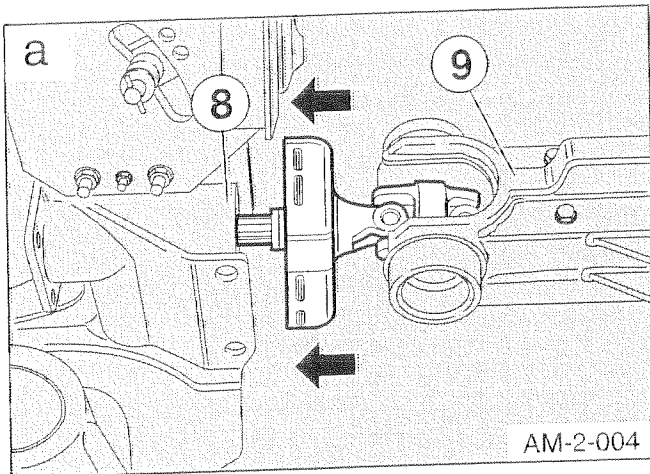


Anzahl	Typ	Pos.	Teile-Nr.		Maße
1		(50)	016 096		Ø 20 x 110
-		(51)			Ø 20 x 95
-		(52)			Ø 20 x 45
-		(53)			M 16 x 240
2		(54)	900 674		M 16 x 35
-		(55)			M 14 x 70
-		(56)			M 12 x 70
-		(57)			M 10 x 20
-		(58)			M 8 x 110
3		(59)	901 425		M 8 x 60
2		(60)	904 882		M 12 x 25
6	AM 203 CV	(61)	908 706		M 10 x 20
7	AM 243 CV				
9	AM 283 CV				
2		(62)	904 732		M 8 x 25
2		(63)	904 730		M 8 x 16
6	AM 203 CV	(64)	904 710		M 6 x 16
7	AM 243 CV				
9	AM 283 CV				
2		(65)	908 716		M 16
6	AM 203 CV	(66)	908 758		M 10
7	AM 243 CV				
9	AM 283 CV				
7		(67)	908 706		NM 8
6	AM 203 CV	(68)	908 704		M 6
7	AM 243 CV				
9	AM 283 CV				
2		(69)	909 503		M 12
-		(70)			ø 13 x 85
-		(71)			ø 5 x 40
-		(72)			Ro. 26,9/2,65 x 191
2		(73)	910-512		21 x 37 x 3
2		(74)	910 303		17 x 30 x3
2		(75)	910 347		17 x 37 x 3 Kunststoff
6	AM 203 CV	(76)	910 609		13 x 37 x 3
7	AM 243 CV				
9	AM 283 CV				
2		(77)	910 353		11 x 34 x 3
5		(78)	909 908		SKM 8
6	AM 203 CV	(79)	909 906		SKM 6
7	AM 243 CV				
9	AM 283 CV				
1		(80)	917 007		7,5 x 42
1		(81)	150 032		20 x 185
1		(82)	912 670-1		8 x 40

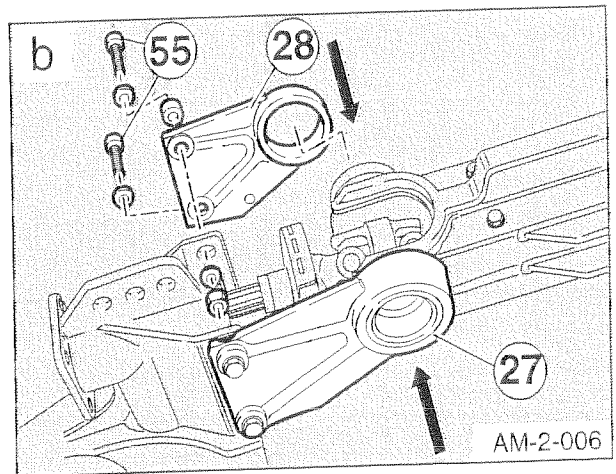
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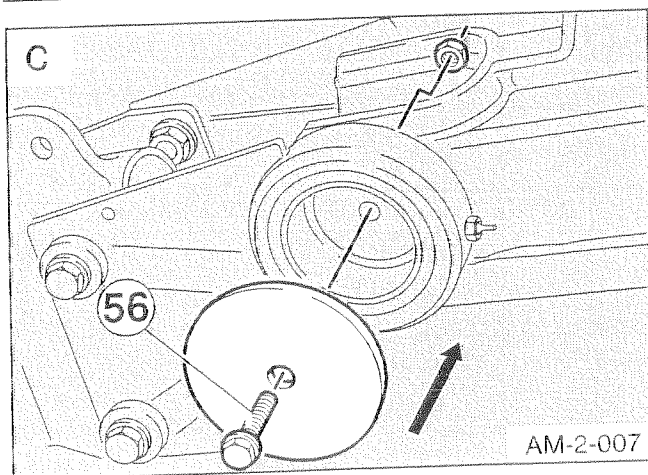
AM-2-005



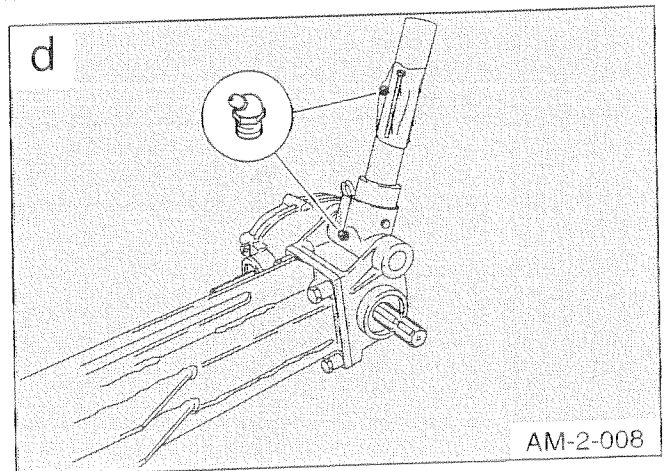
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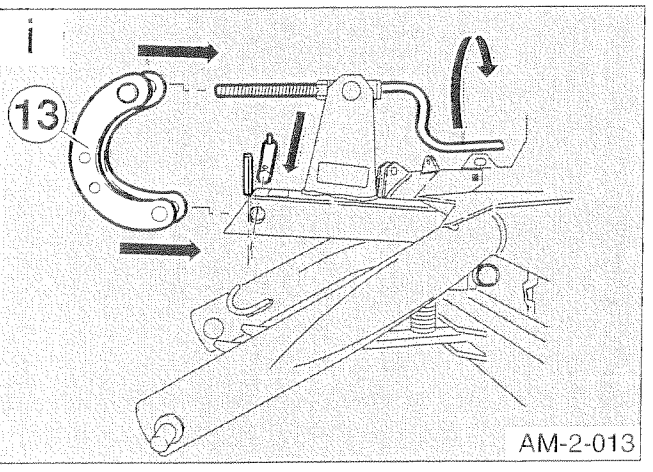
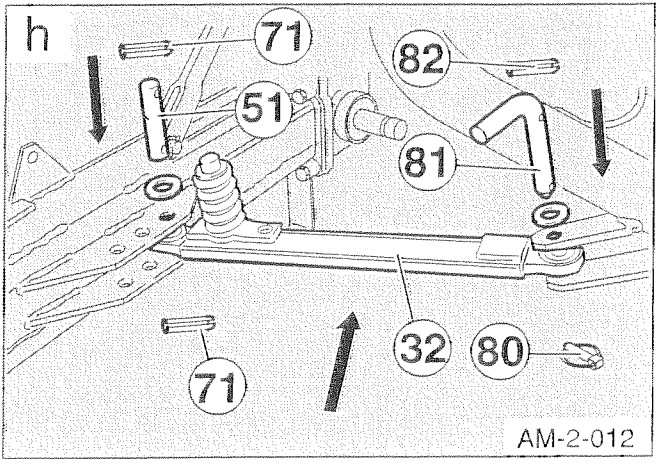
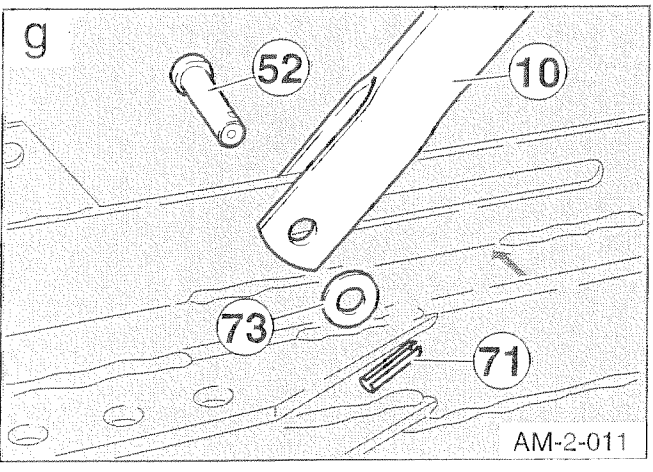
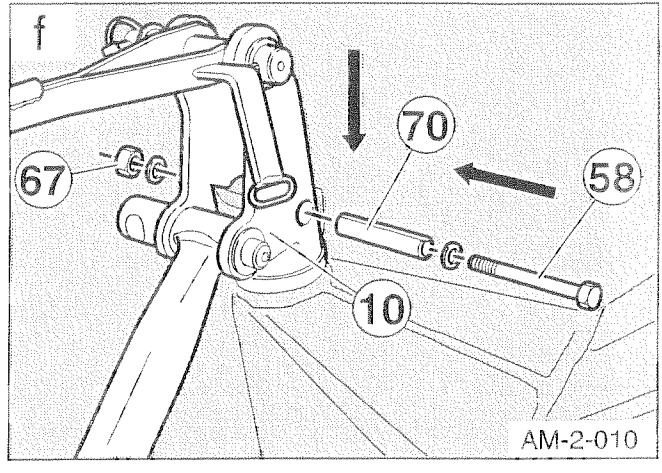
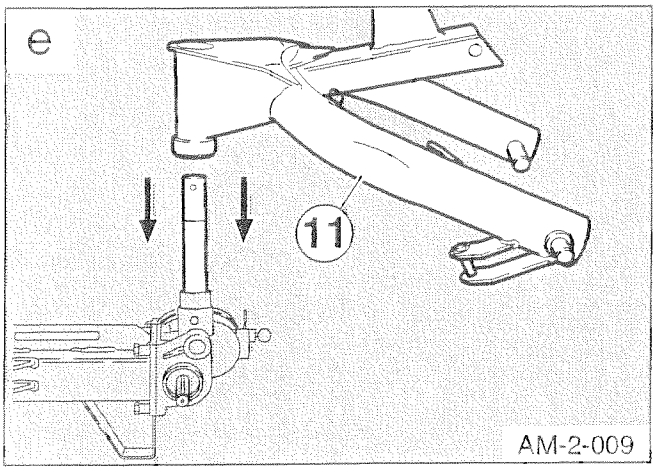
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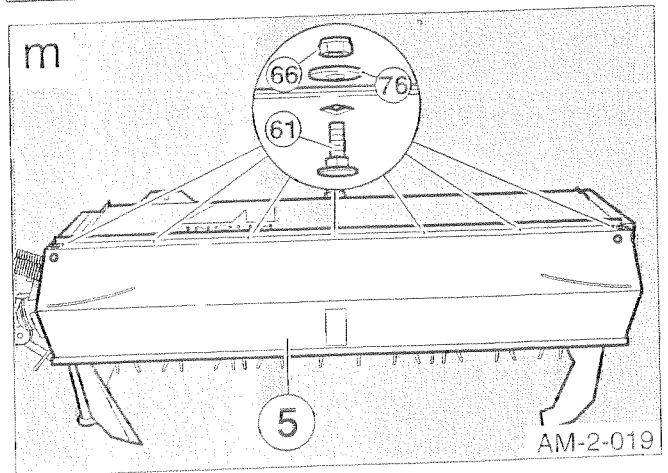
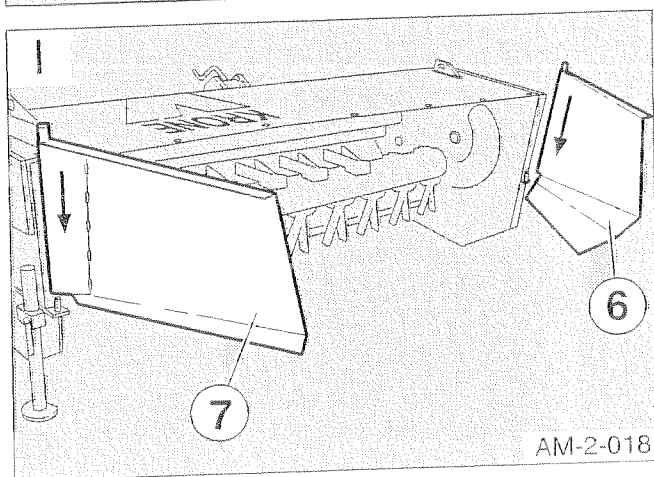
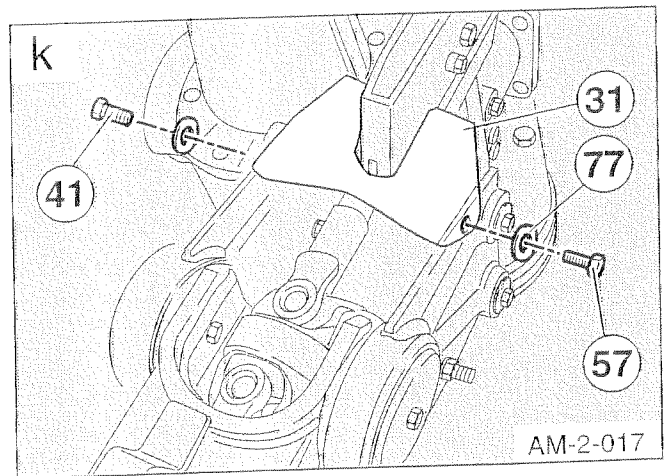
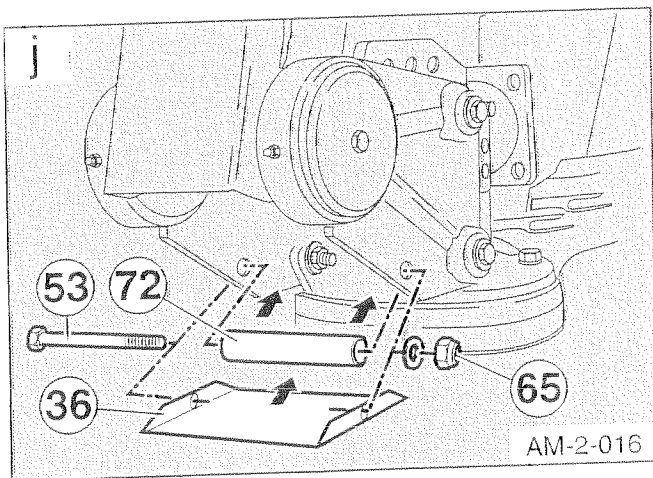
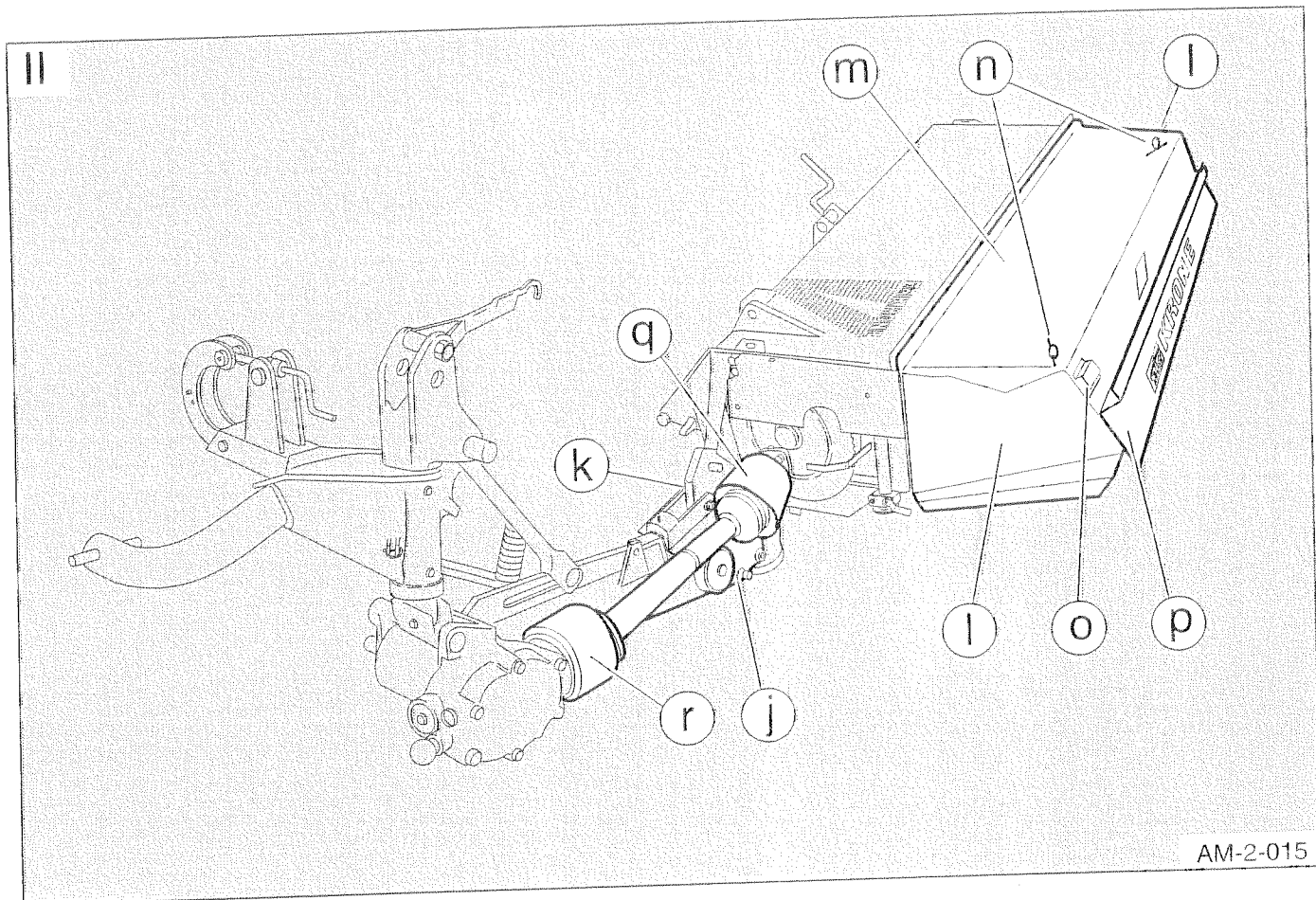


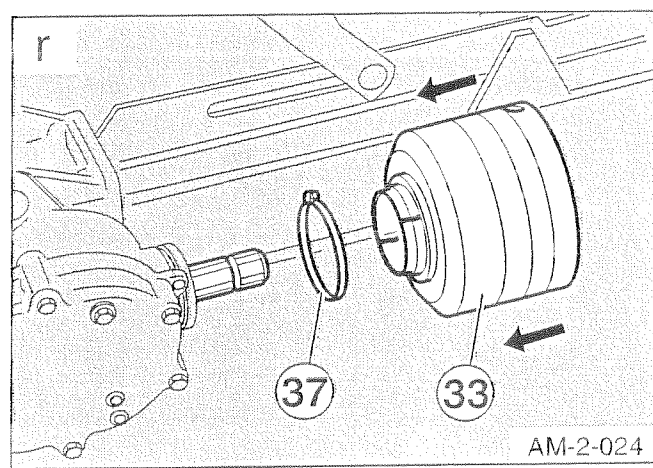
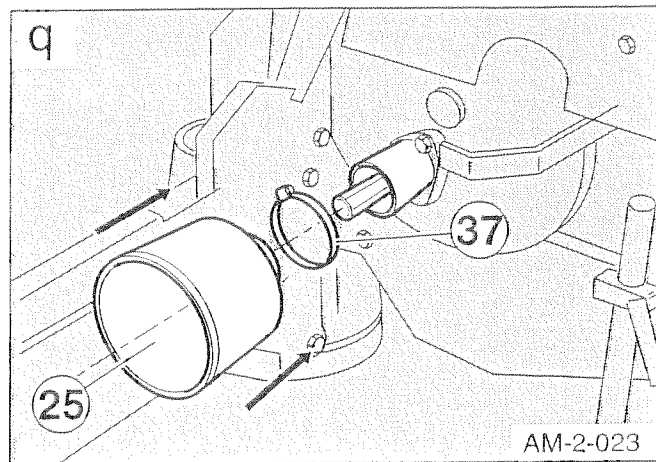
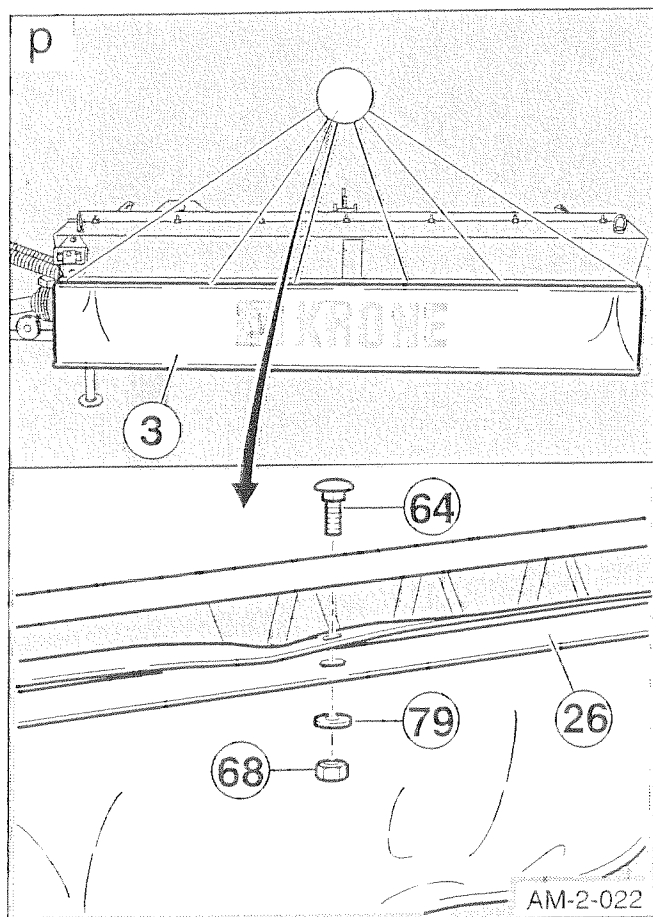
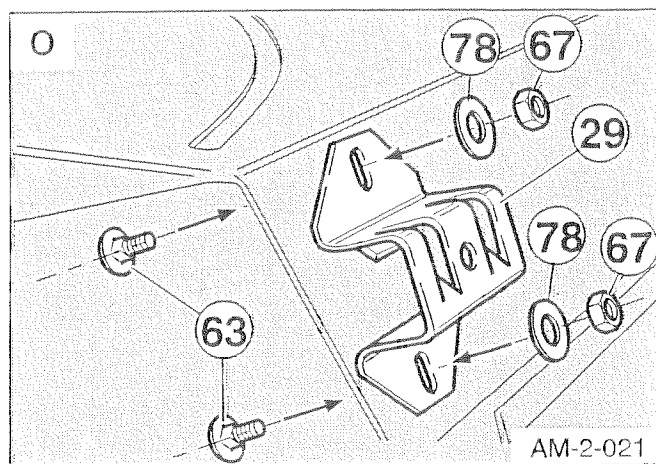
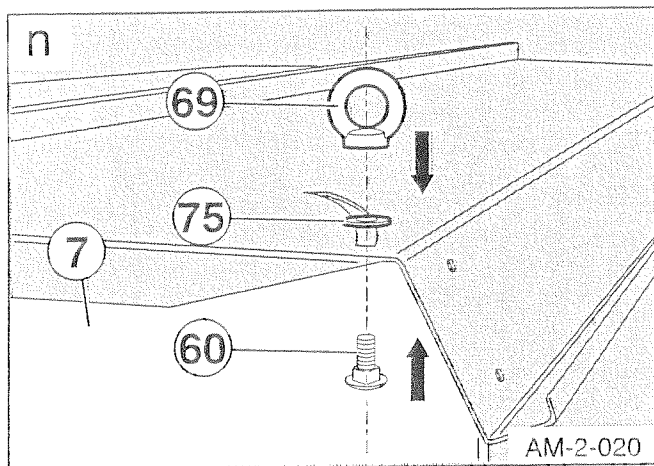
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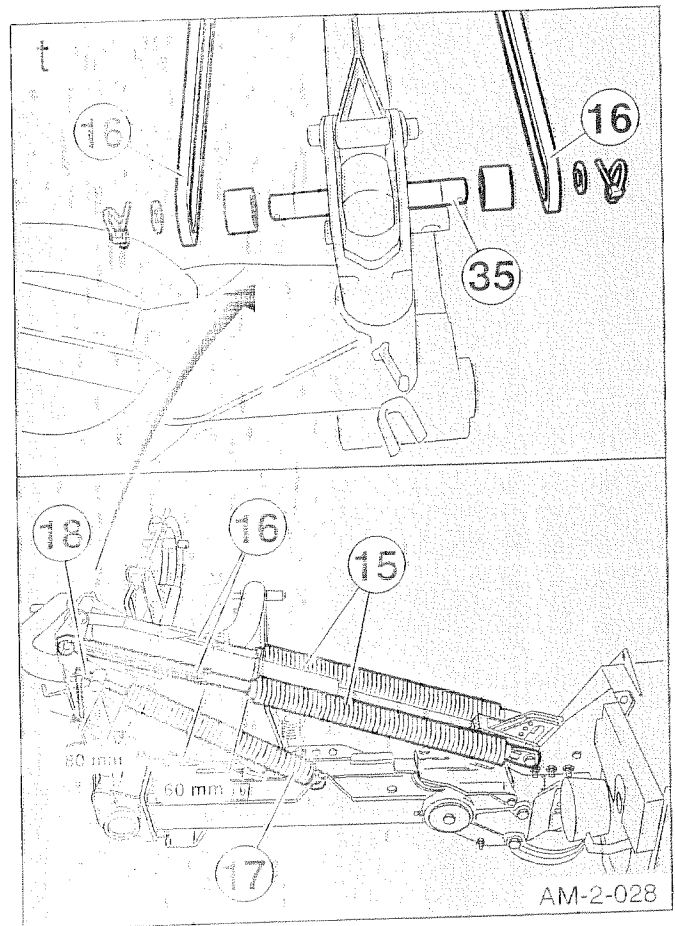
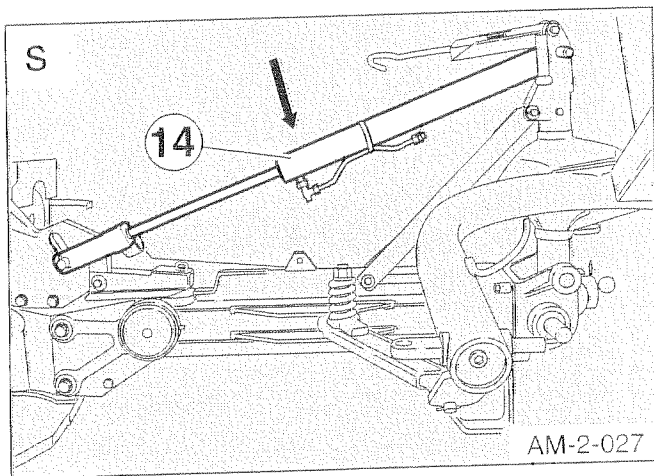
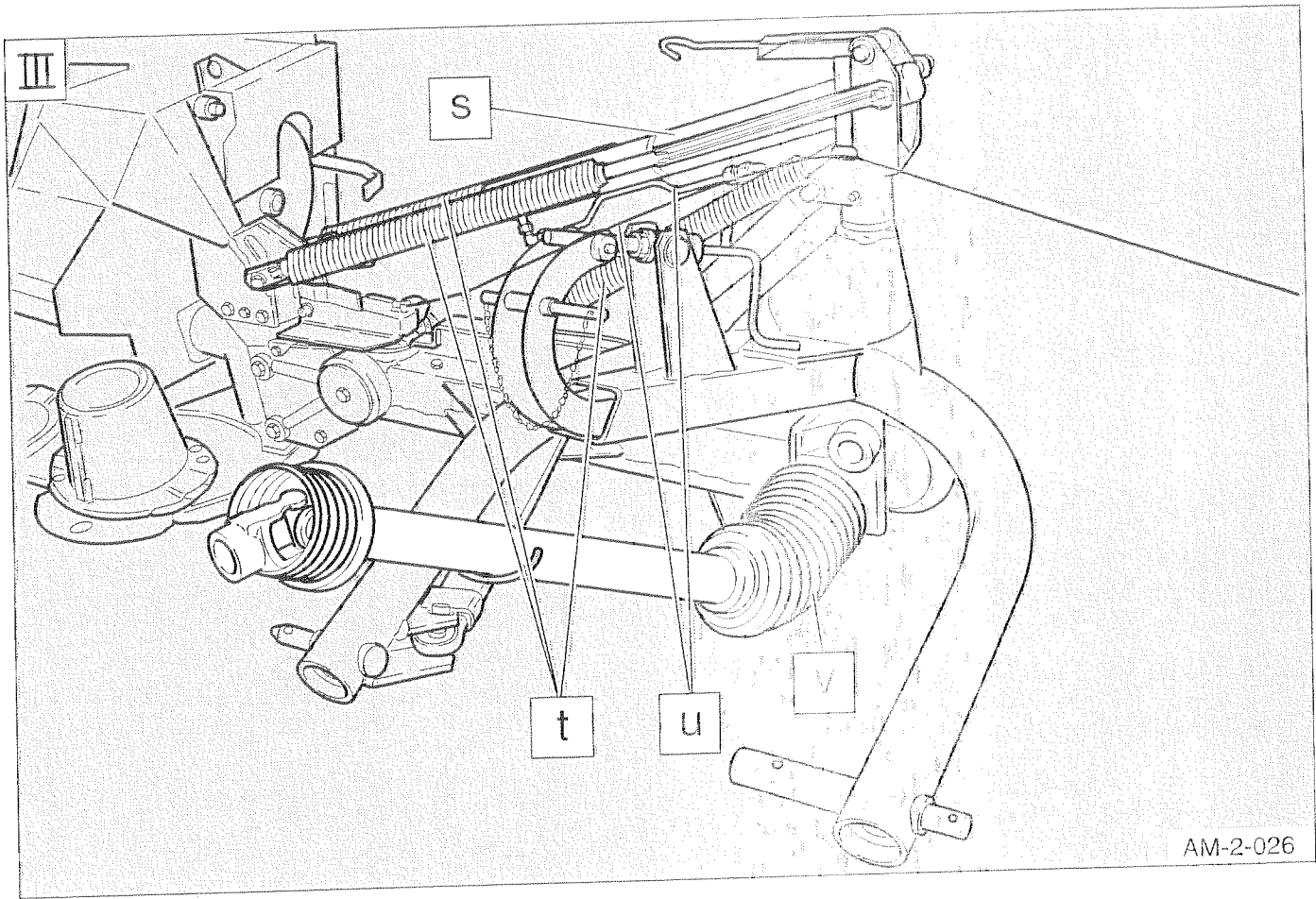


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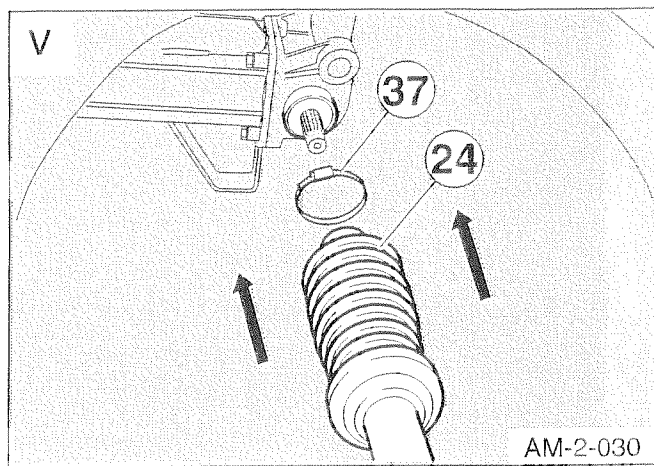
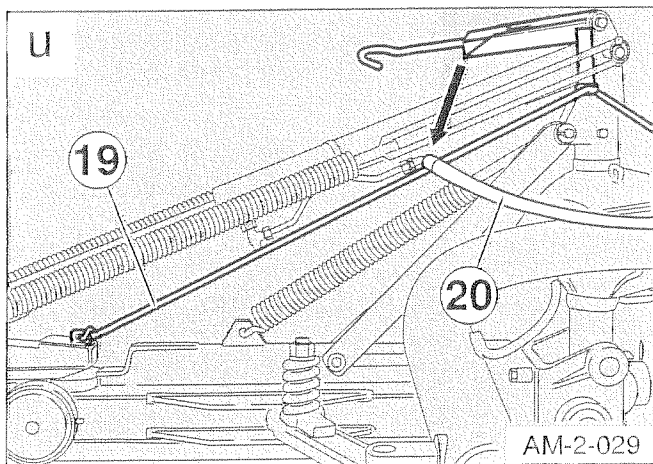




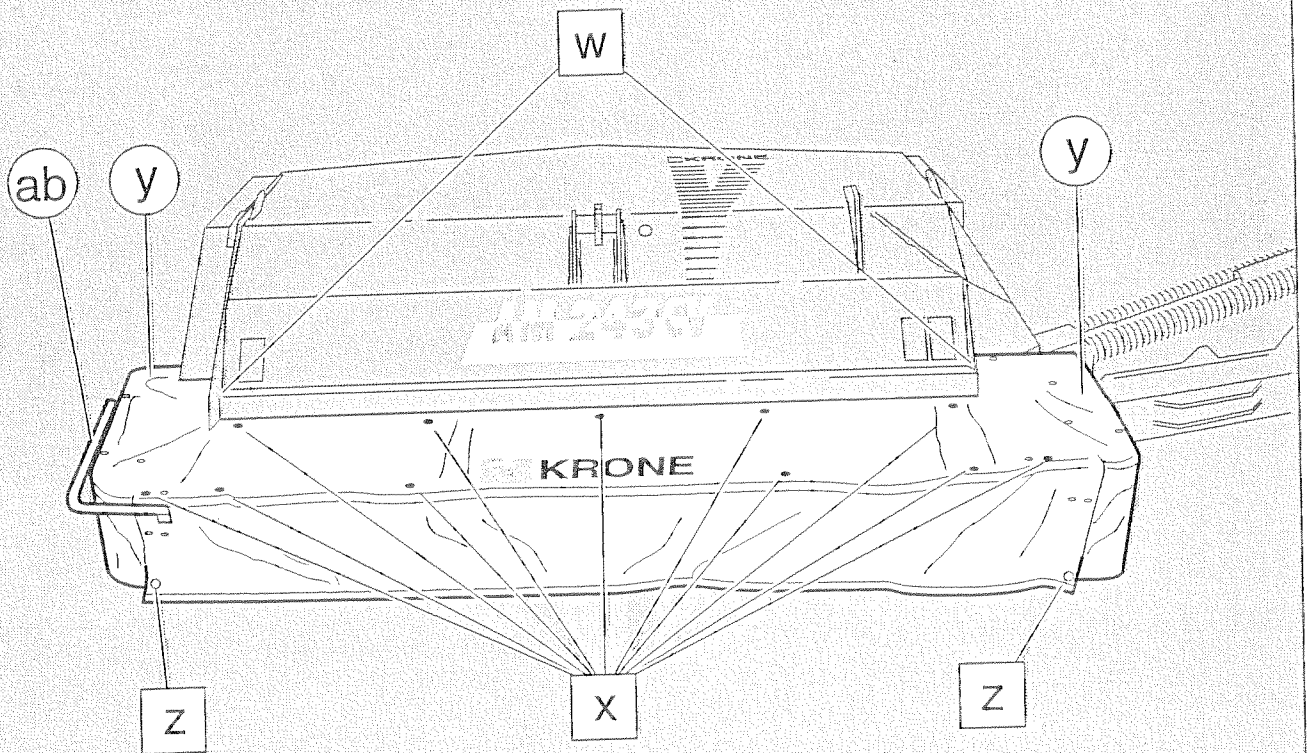




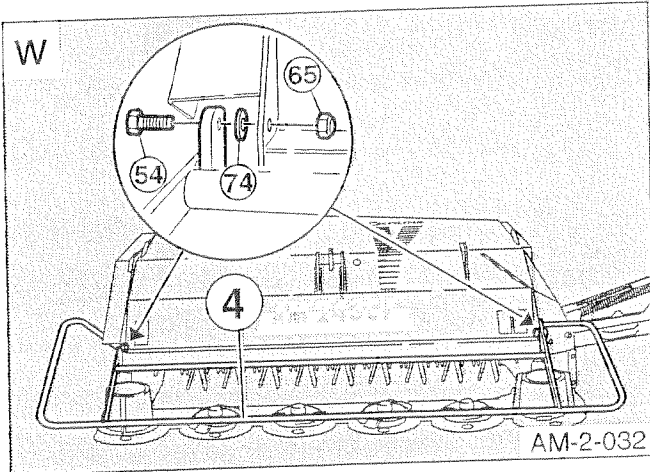




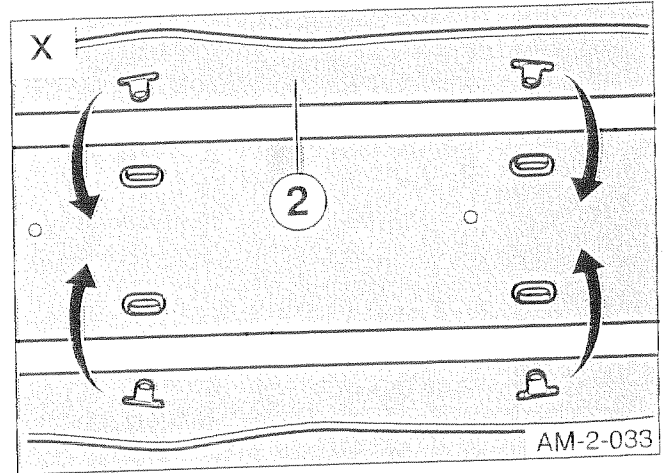
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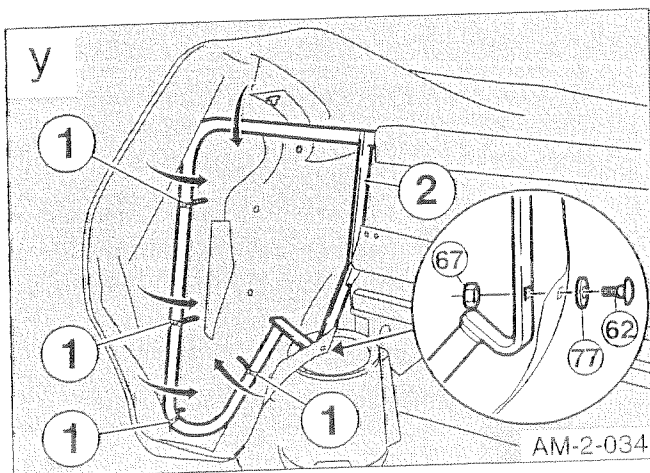
AM-2-031



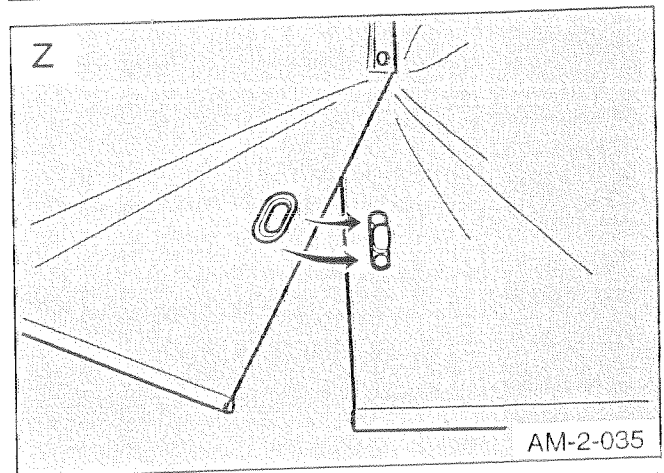
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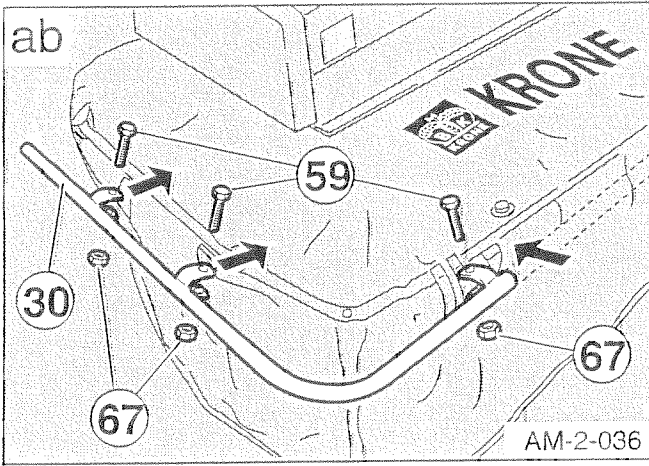
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AM-2-034



AM-2-035



## 2. Mounting the Gearbox for a 1000 rpm Power Take-Off Shaft

