

ORIGINAL INSTRUCTIONS - according to Directive 2006/42/EC, Annex I 1.7.4.1

OPERATOR'S MANUAL

SM 2805

SM 3205

Disc Mower

FOREWORD

DEAR CUSTOMER!

We appreciate the confidence you have shown our company by investing in a KONGSKILDE product and congratulate you with your new machine. Of course, it is our wish that you will experience complete satisfaction with the investment.

This instruction manual contains information about correct and safe use of the machine.

When buying the machine you will receive information about use, adjustment and maintenance.

However, this first introduction cannot replace a more thorough knowledge of the different tasks, functions and correct technical use of the machine.

Therefore you should read this instruction manual very carefully before using the machine. Pay special attention to the safety instructions.

This instruction manual is made so that the information is mentioned in the order you will need it, i.e. from the necessary operation conditions to use and maintenance. Besides this there are illustrations with text.

"Right" and "Left" are defined from a position behind the machine facing the direction of travel.

All the information, illustrations and technical specifications in this instruction manual describe the latest version on the time of publication.

Kongskilde Industries A/S reserves the right to make changes or improvements in the design or construction of any part without incurring the obligations to install such changes on any unit previously delivered.

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1. INTRODUCTION

INTENDED USE

KONGSKILDE disc mowers are developed for agricultural work. They should only be connected to tractors and driven by the PTO of the tractor.

The disc mowers are solely intended for:

Cutting on the ground of natural or planted grass and stem crops for animal feeding purposes.

It is assumed that the work is performed under reasonable conditions, i.e. that the fields are cultivated normally and to a reasonable extent kept clear of foreign matter and the like.

Any other use is regarded as not intended. Kongskilde Industries A/S is not responsible for any damage resulting from such use, the user bears that risk. If changes are made on the machine and its construction without permission from Kongskilde Industries A/S, Kongskilde Industries A/S cannot be held responsible for any damage resulting from this.

Intended use, of course, implies that you observe the instructions in the instruction manual and the spare parts book, use original spare parts and contact an authorised workshop, in so far as it is necessary.

The following safety instructions as well as common rules concerning technical safety, working practices and road safety must be observed altogether.

The disc mowers should only be used and maintained by persons who, through relevant instructions and after reading the instruction manual, are familiar with the machine in question and, in particular, are informed of possible dangers.

SAFETY

The safety of persons and machines is an integral part of KONGSKILDE's development work. However, damage can occur as a consequence of misuse and insufficient instruction. **We wish to ensure the safety of you and your family in the best possible way**, but this also requires an effort on your part.

A mower cannot be constructed in such a way that it guarantees the full safety of persons and at the same time performs an efficient piece of work. This means that it is very important that you as user of the machine pay attention and use the machine correctly and thereby avoid exposing yourself and others to unnecessary danger.

The following safety instructions as well as common rules concerning technical safety, working practices and road safety must be observed altogether.

The machine demands skilled operation, which means that **you should read the instruction manual before you connect the machine to the tractor**. Even though you have been driving a similar machine before, you should read the manual - this is a matter of your own safety!

You should **never** leave the machine to others before you have made sure that they have the necessary knowledge to operate the machine safely.

DEFINITIONS

The safety decals and the instruction manual of the machine contain a line of safety notes. The safety notes mention certain measures, which we recommend you and your colleagues to follow as to increase the personal safety as much as possible.

We recommend that you take the necessary time to read the safety instructions and inform your staff to do the same.



In this instruction manual this symbol is used with reference to personal safety directly or indirectly through maintenance of the machine.

CAUTION: The word **CAUTION** is used to ensure that the operator follows the general safety instructions or the measures mentioned in the instruction manual to protect the operator and others against injuries.

WARNING: The word **WARNING** is used to warn against visible or hidden risks, which might lead to serious personal injuries.

DANGER: The word **DANGER** is used to indicate measures which, according to legislation, must be followed to protect the driver and others against serious injuries.

1. INTRODUCTION

GENERAL SAFETY INSTRUCTIONS

The following is a brief description of the measures, which should be observed by the operator.

TRANSPORT

- 1 Always lower the cutting unit to the ground or activate the transport safety device when parking the machine.
- 2 Never stand between the tractor and the machine during connection and disconnection.
- 3 Always drive with the statutory lights and safety marking during transport on public road and at night.
- 4 Always use transport safety devices and stop valves for hydraulic cylinders.
- 5 Limit the transport speed to maximum 30 km/h if the machine has not been marked with another maximum speed limit. Always adjust the driving speed to the conditions of the road.

WORKING

- 6 The clothes of the operator must be tight-fitting. Avoid loose clothes.
- 7 Use hearing protectors if the tractor has not been silenced sufficiently.
- 8 Make sure that all guards are intact and have been mounted correctly.
- 9 When connecting the PTO drive shaft, check for 540/1000 rpm.
- 10 Never start the tractor until all persons are safely away from the machine.
- 11 Do not stand near the machine while it is working.
- 12 Do not allow any children to be near when you are working with the machine.
- 13 Never use the machine for other purposes than what it has been constructed for.
- 14 Do not stand near – or try to lift a guard – until all revolving parts have stopped moving. This also applies when adjusting the machine!
- 15 Always disengage the PTO drive shaft, activate the parking brake and stop the tractor engine before you adjust the machine. - Remove the ignition key.

MAINTENANCE

- 16 Never work under the machine unless it is secured by means of stop blocks or other mechanical securing device.
- 17 Always block the wheels before working under the machine.
- 18 Always disengage the PTO drive shaft, activate the parking brake of the tractor, stop the tractor engine and remove the ignition key before you:
 - lubricate the machine,
 - clean the machine,
 - disassemble any part of the machine,
 - adjust the machine.
- 19 Make sure that all tools have been removed from the machine before starting the tractor.

SAFETY KONGSKILDE MOWERS

CHOICE OF TRACTOR

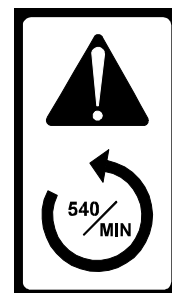
Always follow the recommendations specified in the instruction manual of the tractor. If this is not possible, technical assistance must be sought.

Choose a tractor with a suitable power on the PTO. To obtain full capacity under all conditions, we recommend you to choose a tractor which has 15 kW more than the informed minimum.

If the power of the tractor is considerably larger than that, the machine should be secured against overload with a suitable clutch on the PTO.

If you have chosen a machine which is constructed for 540 rpm, you should make sure not to use the wrong PTO by mistake. It is **highly dangerous** to connect a machine intended for 540 rpm, to a PTO delivering 1000 rpm.

Long-term overload may damage the machine and at worst result in ejection of parts.



Choose a tractor with a suitable own weight and track width so that it can drive steadily on the ground. Also make sure that the link arms and towing hook of the tractor are intended to carry machines with the own weight in question.

To maintain full control of the tractor under all conditions, minimum 20% of the own weight of the tractor should be on the front axle. It may be necessary to use front weights to fulfil this requirement.

Always choose a tractor with a closed cabin when working with a disc mower.

The hydraulic system of the tractor should deliver a pressure of maximum **210 bar**.

TRANSPORT

Never drive faster than the conditions allow, and maximum 30 km/h.

It is important to block hydraulic transport adjustments. An unintentional operation of the cylinders may cause the machine to move and at worst hit cyclists or pedestrians. This may also happen if there is air in the hydraulic cylinders or if there is a sudden loss of oil from the hydraulic hoses.

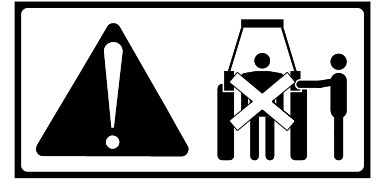
Therefore, always check that mechanical transport safety devices are activated before transport.

1. INTRODUCTION

CONNECTION AND DISCONNECTION

Never stand between the tractor and the mower during connection and disconnection.

An unintentional manoeuvre with the tractor may cause serious injury.



Make sure that the PTO drive shaft has been mounted correctly, i.e. that the lock pin is in mesh and that the support chain has been fastened at both ends.

The guard must be intact. If the guard is defective it must be replaced immediately.

Check that all hydraulic couplings are correctly mounted and tight and that all hoses and fittings are undamaged before activating the hydraulic system.

When the tractor engine has stopped, make sure that there is no pressure in the hydraulic hoses by activating the tractor hydraulic spool valves.

Hydraulic oil under pressure can penetrate the skin and cause serious infections. You should always protect the skin and the eyes against oil splashes. If, by accident, hydraulic oil under pressure hits you, consult a doctor immediately.



Make sure that no persons are near the machine when starting as there might be air in the hydraulic system which might lead to sudden movements.

To ensure all the air has been expelled from the oil in the hydraulic cylinders, test all the functions after the hydraulic connections are connected to the tractor. Especially before driving on the public road.

MACHINE SAFETY

All revolving parts are balanced by KONGSKILDE by means of a special machine with electronic sensors. If it turns out that a part still has an unbalance, small counterweights should be mounted.

As the discs run at up to 3000 RPM, even the slightest unbalance will cause vibrations which may lead to fatigue fractures.

When replacing blades, both blades on the disc in question must be replaced as not to create an unbalance.

During the season check daily that no blades, carriers or bolts are missing. If any of these are missing, mount new parts immediately.

Clean caps (if mounted) and flow intensifiers of earth and grass regularly.

Friction clutches must be "aired" regularly to ensure that they do not get rusty.

1. INTRODUCTION

WORKING

Before working check blades and discs for cracks and other damage. Replace damaged blades and discs.

Check periodically if shredding blades and bolts are worn as mentioned in the instruction manual. (See section on maintenance)

Loose stones and foreign matter in the field might get in contact with the revolving discs and get thrown out again at a very high speed.

Therefore, all guards must always be correctly mounted and intact when you are working with the machine.

In stony fields the stubble height should be adjusted to maximum (horizontal cutter bar) height.

It is important that the cutting unit is correctly relieved to ensure perfect operation in the field and to reduce the risk of damaging the cutter bar.

If the cutting unit is blocked, stop the tractor engine, activate the parking brake and wait until the revolving parts have stopped before removing the foreign matter.

When working with a side-mounted mower, never drive too fast along slopes and hillsides as you should be able to avoid large stones, ditches and other obstacles which may cause the tractor to overturn.

Also remember to adjust the speed for sharp turns on hillsides and for lifting the machine in the three-point linkage.

The side-mounted mowers have a spring-loaded safety release which secures the directional stability of the tractor and reduces damage in case of collision.

Check that the safety release can be released and that it is not blocked.

If the vibrations or the noise of the machine increase considerably during the operation, stop working immediately. Do not continue the work until the fault has been corrected.

MAINTENANCE

Always make sure that the used spare parts are tightened to the correct torque.

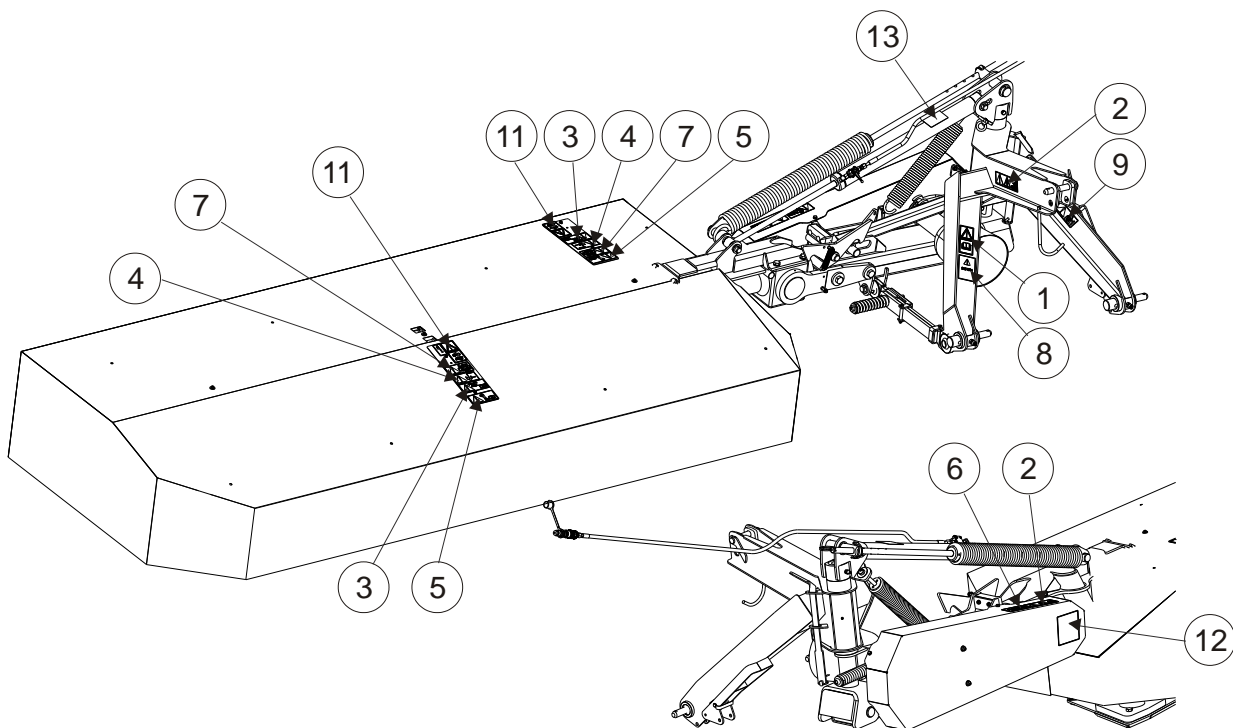
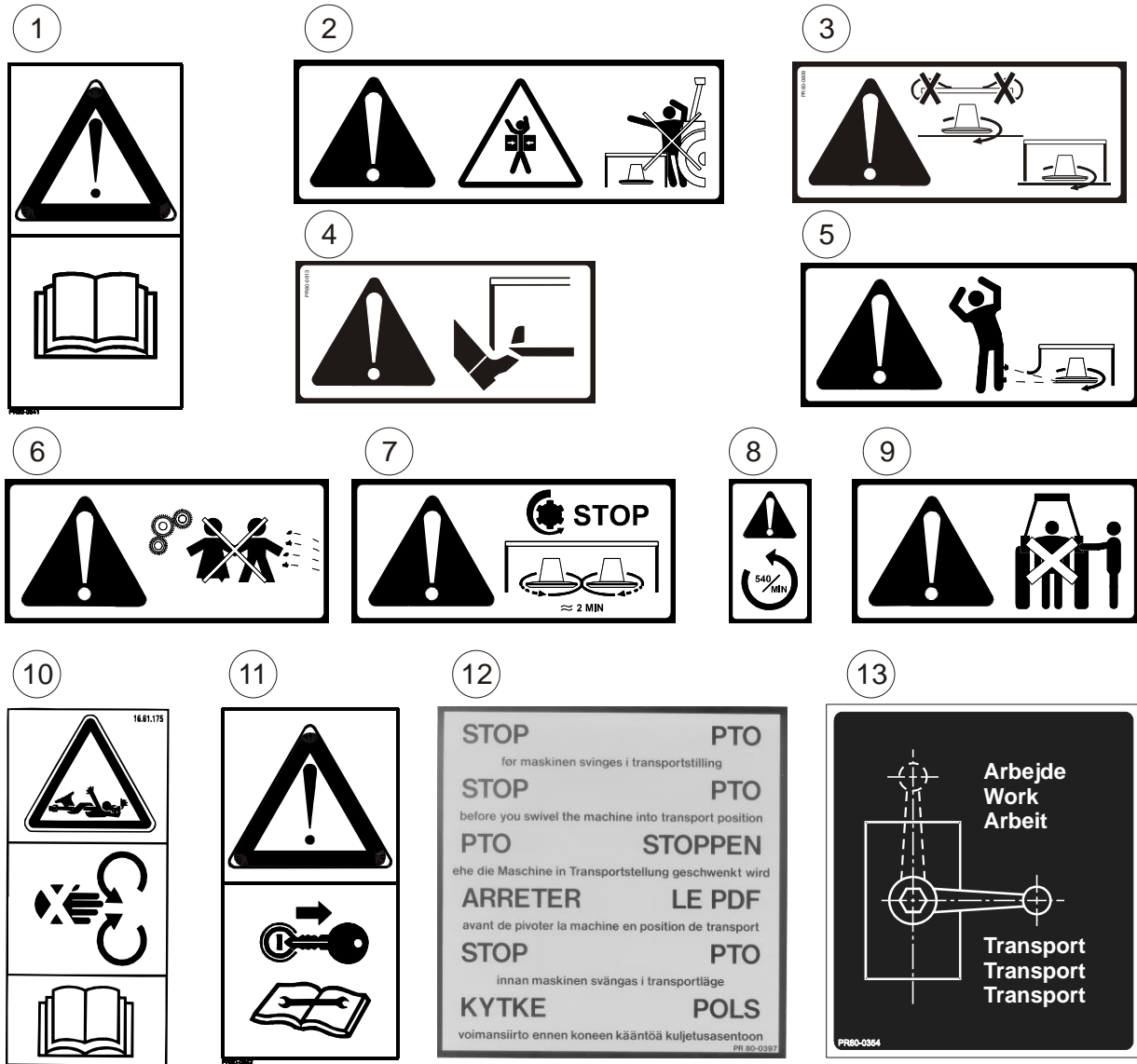
When replacing parts in the hydraulic system always make sure that the cutting unit rests on the ground or the lifting cylinders are blocked.

Hydraulic hoses must be checked by an expert before use, and after that minimum once a year. If necessary, they must be replaced. The working life of hydraulic hoses should not exceed 6 years, including maximum 2 years of storage.

When replacing, always use hoses which comply with the requirements stated by the manufacturer. All hoses are marked with date of production.

1. INTRODUCTION

1. INTRODUCTION

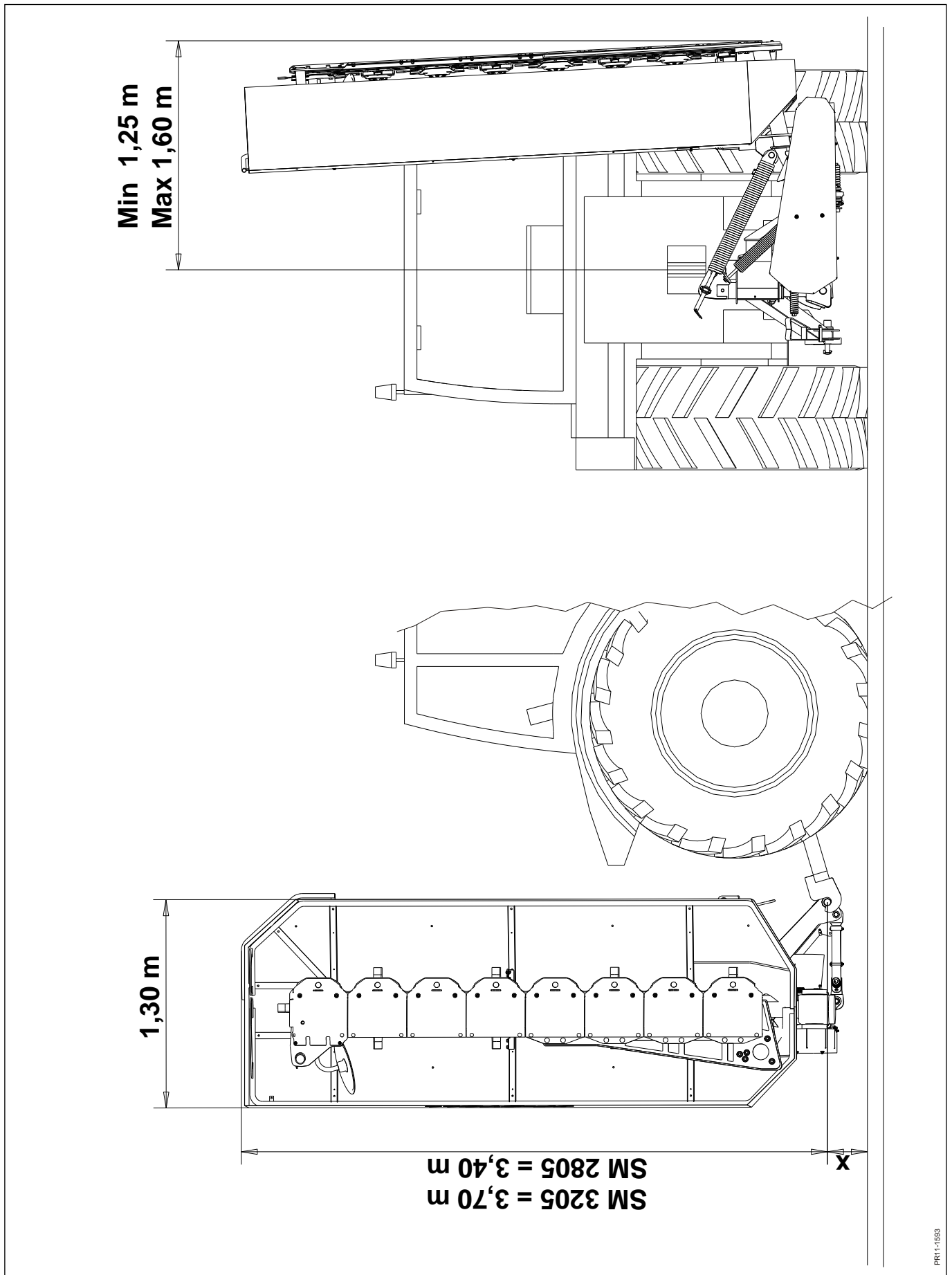


Safety decals

The safety decals shown on the previous page are positioned as shown on the drawings at the bottom of the page. Before using the machine, check that all decals are present: if not, require those missing. The decals have the following meaning:

- 1 Read the instruction manual and the safety instructions**
This is to remind you to read the delivered documents to ensure the machine is operated correctly and to avoid unnecessary accidents and machine damage.
- 2 Risk of getting jammed**
Never let anyone stand between the machine and the tractor after the connection. An unintentional manoeuvre may cause serious injury.
- 3 Operation without canvas**
Do not start the machine unless canvases and guards are intact and in their right place. The machine can throw out stones and other foreign matter during operation. The purpose of the canvases and the guards is to reduce such danger.
- 4 Rotating blades**
Do not under any circumstances let anyone get near or stand near the machine during operation. The rotating blades of the machine can without difficulty cause serious injury to any part of the body if hit by such a blade.
- 5 Risk of stones being thrown**
Similar meaning to decal No. 3. Even though all canvases and guards are in the right place, there is still a risk of stones etc. being thrown out. Therefore, nobody should be allowed to stand near the machine during operation.
- 6 Children**
Never let children stand near the machine during operation. Especially not small children as they have a tendency to do unforeseen things.
- 7 Rotating parts**
After the PTO drive shaft has stopped, the blades will have a momentum where they keep rotating for up to 2 minutes. Wait until the blades have come to a complete stop before you remove the canvas and the guards for inspection and maintenance.
- 8 The number and the direction of rotations**
Check that the PTO drive shaft runs with the right RPM and in the right direction. A wrong number of rotations and/or direction of rotation can eventually damage the machine with the risk of personal injury as a result.
- 9 Risk of injury during the connection**
Never let anybody stand between the tractor and the machine during connection to the tractor. An unintentional manoeuvre may cause serious injury.
- 10 The PTO drive shaft**
This decal has the purpose to remind you how dangerous the PTO drive shaft can be if it is not correctly mounted or protected.
- 11 Stop the tractor engine and remove the ignition key before touching the machine**
Always remember to stop the tractor engine before lubricating, adjusting, maintaining or repairing. Also remember to remove the ignition key to ensure that nobody starts the engine until you have finished.
- 12 Stop the PTO before placing the machine in transport position**
The PTO must always be stopped before the machine is folded up in order to avoid risk of personal injury and machine damage.
- 13 Block the hydraulic cylinder before transport**
In order to ensure that there will be no unintentional movements, the hydraulic cylinder must be disconnected from the tractor hydraulics at the stop cock before transport.

1. INTRODUCTION



TECHNICAL DATA

			SM 2805	SM 3205
Working width	[m]		2.8	3.2
Capacity	[Ha/h]		2.4 - 2.8	2.6 - 3.0
Power requirement on PTO	[kW/HP]		Minimum 42/57	Minimum 50/68
PTO (Standard)	[rpm]		540	540
Suspension (Standard)			Cat. II	
Outlets			1 single-acting	
Weight	[kg]		700	740
Number of discs	[pcs.]		7	8
Number of blades	[pcs.]		14	16
Swath roller, right			Option	
Swath width	[m]		approx. 2.4	approx. 2.8
Transport width	[m]		< 3	
Stone release, mechanical			Standard	
Overrun clutch			Standard	
Noise level in tractor cabin	Machine connected	Window closed	71.6 dB	
		Window open	84.6 dB	
	Machine dis-connected	Window closed	71.4 dB	
		Window open	73.1 dB	

We reserve the right to change the construction and specification details without notice.

2. CONNECTION OR DISCONNECTION AND TEST DRIVING

CONNECTION TO THE TRACTOR



DANGER:

Check the following before you start working:

- Check if the blades are mounted correctly.
- Check if the safety devices are intact and placed correctly.
- Check the screws.
- The guard of the PTO shaft is secured with the chain.
- If the tool for replacement of blades is placed on the machine, it must be secured with clip pin.
- Only start the mower in working position.
- Never let the machine run without supervision.
- Make sure that there are no persons in the danger zone. Stop the mower immediately if persons are approaching.
- Grease the machine carefully before you start working.

2. CONNECTION OR DISCONNECTION AND TEST DRIVING

First, the machine should be adjusted to the track width of the tractor.

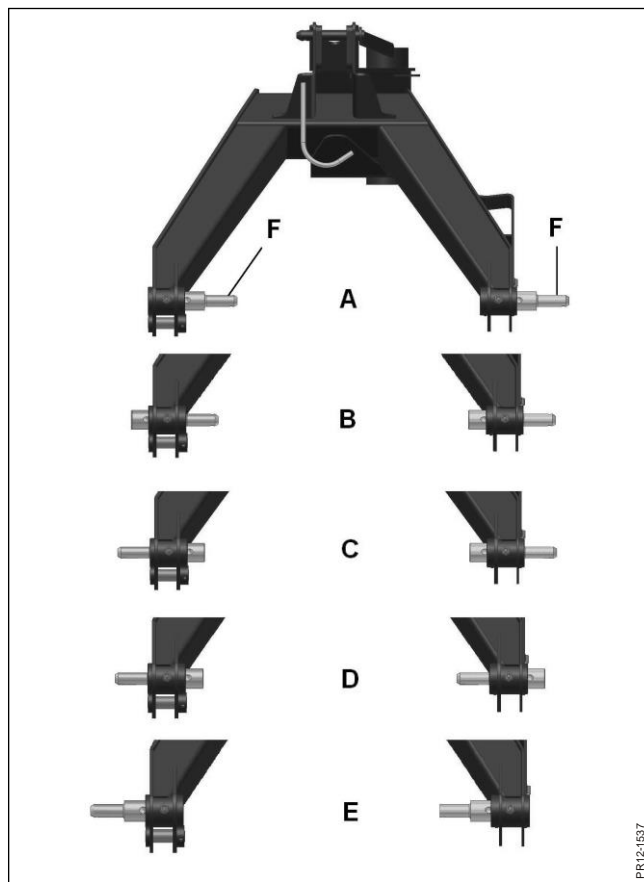


Fig. 2-1

Fig. 2-1 You can choose between 5 settings (**A**, **B**, **C**, **D** and **E**) of the pins **F** on the headstock corresponding to the following tractor widths:

Tractor width [mm]	Pin position
>2568	A
-2468	B
-2306	C
-2144	D
< 2045	E

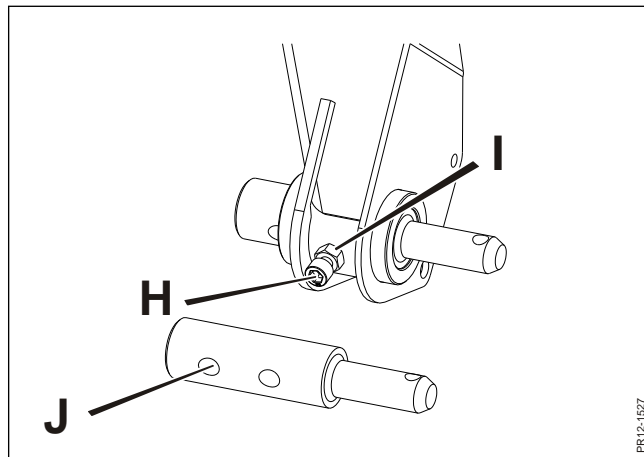


Fig. 2-2

Fig. 2-2 Adjustment of pin position: Counter nut **I** is loosened and bolt **H** is turned out. The pin is displaced and fastened above the centre hole **J**, the bolt is tightened and the counter nut is tightened.



DANGER: If the draw pins are not fixed properly or if the link arms are not mounted correctly, there is a risk of losing the machine unintentionally.

- check if the draw pins are fastened correctly
- check if the draw pins are correctly engaged with the link arms.

Connect the link arms of the tractor to the coupling points **F** of the machine.

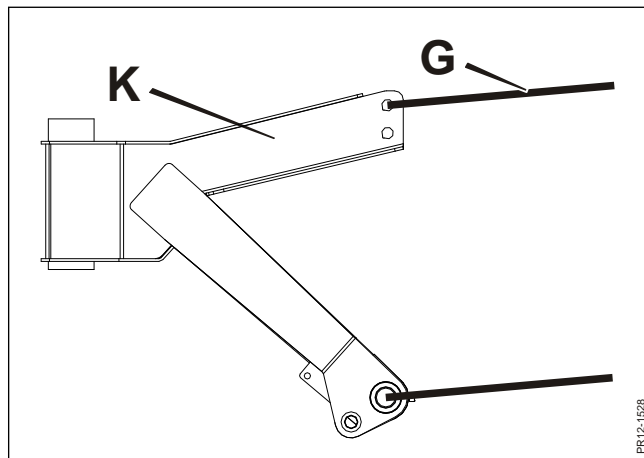


Fig. 2-3

Fig. 2-3 Mount the top link **G** so that it is approximately parallel with the link arms of the tractor.

2. CONNECTION OR DISCONNECTION AND TEST DRIVING

Thereby a suitable movement is achieved when lifting the machine with the link arms and optimal conditions for later connection and disconnection of the machine.

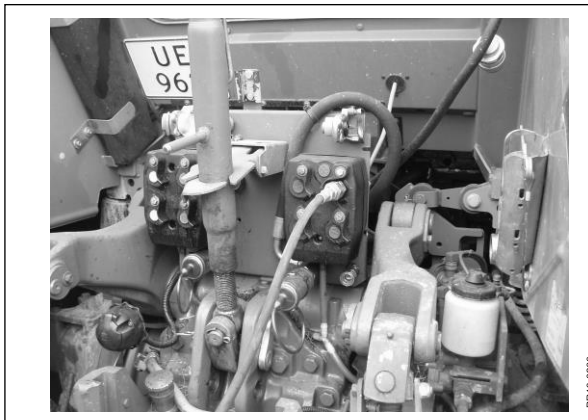


Fig. 2-4

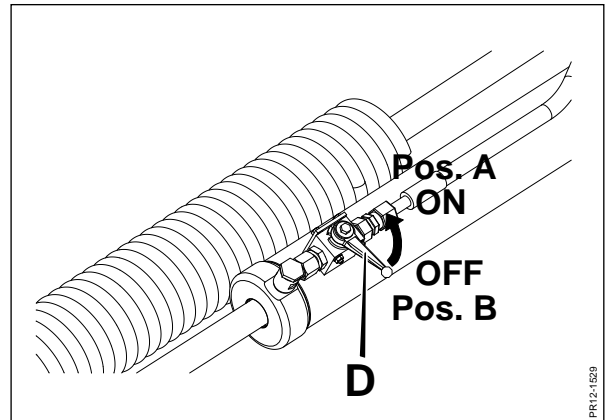


Fig. 2-5

Fig. 2-4 Connect the hydraulic hose to a single-acting hydraulic outlet.

Fig. 2-5 The stop cock **D** at the hydraulic cylinder must be opened - position A, in order for the machine to get into working position.



DANGER: During transport and disconnection of the hydraulic hose, the stop cock must be closed - position B Fig. 2-5.

Raise the machine with the link arms and place it in working position.

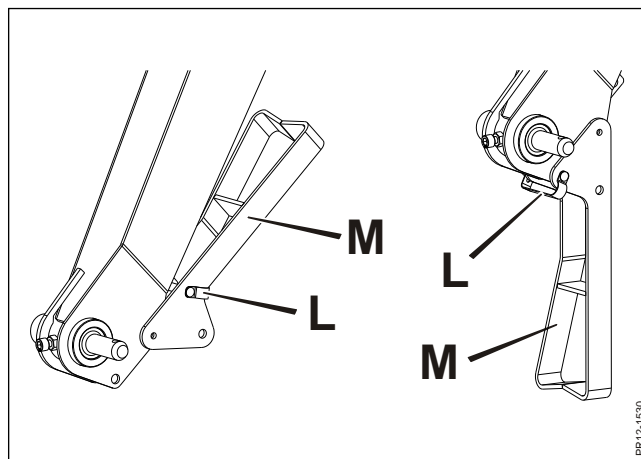


Fig. 2-6

Fig. 2-6 Folding of the support: Remove the spring pin **L** and the support **M** can be folded up. The support is secured again with the spring pin.

Fig. 2-3 Adjust the length of the top link **G** so the headstock **K** is vertical.

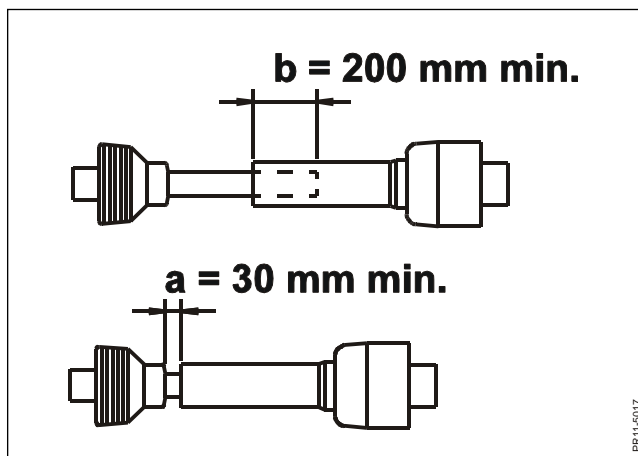


Fig. 2-7

Fig. 2-7 Adjust the length of the PTO drive shaft so that it in working position has minimum 200 mm overlapping on the profile tubes, in no position is compressed more than the prescribed 30 mm in order not to bottom the shaft, and in the longest position has minimum 100 mm overlap.

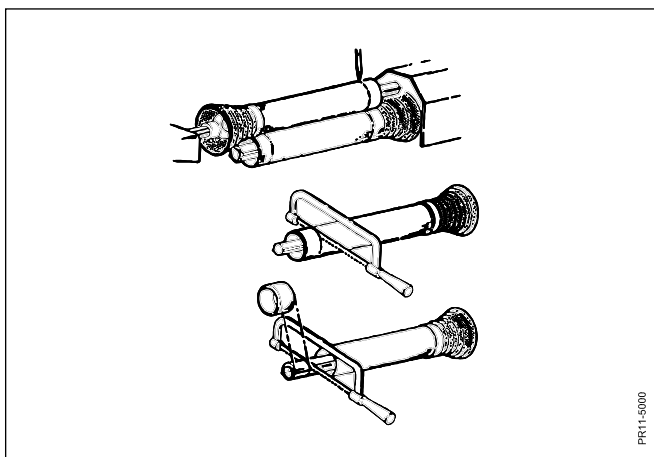


Fig. 2-8

Fig. 2-8 Fasten the PTO drive shaft half parts to PTO (on the tractor) and PIC (input shaft on the machine), respectively, when these are at the same horizontal level and opposite each other. (The shortest distance from the machine). Hold the shaft ends parallel to each other and mark the 30 mm (minimum).

The PTO-shaft can be mounted – the free wheel towards the machine side.

The guard of the PTO shaft is secured with the chain.



CAUTION: Shorten all 4 tubes equally. The ends of the profile tubes **MUST** be rounded off outside and inside. Burrs **MUST** be removed carefully.

Grease the tube carefully before reassembling. If the shafts are not greased, they are exposed to big friction forces if e.g. the stone release system is activated during the transmission of heavy load.

2. CONNECTION OR DISCONNECTION AND TEST DRIVING



IMPORTANT: For the warranty of the PTO shaft to be valid, and to retain the durability, the following rules must be observed.

- Always start the machine with the engine running at low speed.
- Always start the machine with the PTO shaft in a position of maximum 10° from horizontal.
- A sudden increase in the number of rpm of the machine, e.g. when driving into the crop after turning in the field, must only take place with the PTO shaft in a position of maximum 10° from horizontal.
- Last, but not least: Grease the PTO shaft and especially its profile tubes every 20 working hours, minimum.

TEST DRIVING

When all guards are in place and the machine is in working position, a test drive can be made.

Before connecting the PTO, check if all tools have been removed from the machine and that no persons are near. Connect the PTO shaft carefully and let the engine run at low number of rpm for some minutes. If there is no unintended noise or unusual vibrations, the speed can be increased to normal number of RPM.

Apart from the tractor driver nobody should stand near the machine.

DISCONNECTION OF THE MACHINE

The machine is parked on firm and even ground.



DANGER: Stop the engine and remove the ignition key before working on the machine.

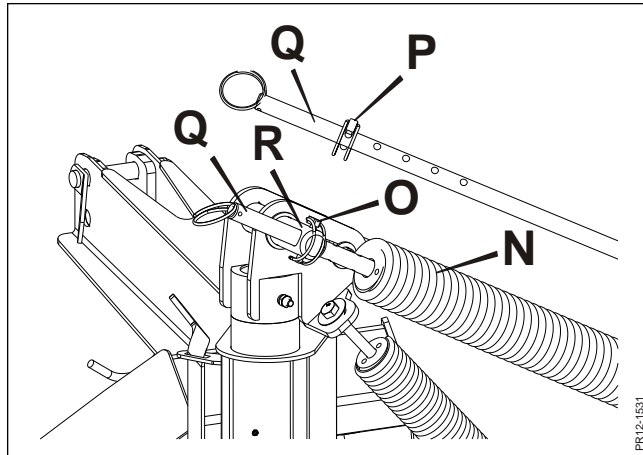


Fig. 2-9



CAUTION: It is important to loosen the relief spring **N** before disconnecting the machine since connection and disconnection will otherwise be difficult.

Fig. 2-9 Loosen relief spring **N**. This can only be done in transport position. **See section 3 - Conversion from working to transport position.**

The spring pin **O** is pulled out at contracted, not tensioned, relief spring **N** and put into the upper hole **P** in the adjustment rod **Q**. The spring pin **O** must be put into the adjustment rod **Q** through the guide pin **R**.

2. CONNECTION OR DISCONNECTION AND TEST DRIVING

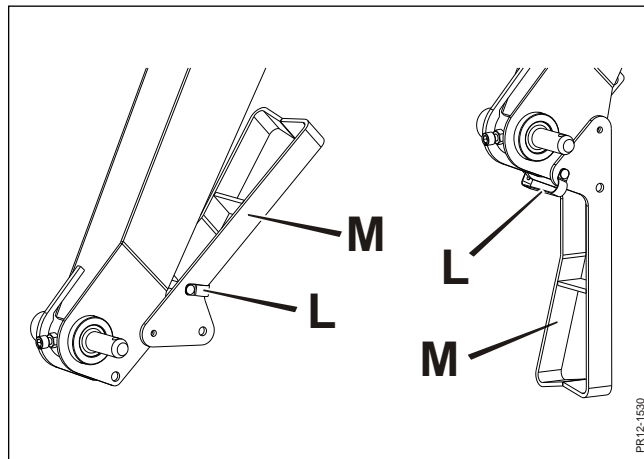


Fig. 2-6

Fig. 2-6 Folding of the support: Remove the spring pin **L** and the support **M** can be folded down. The support **M** is secured again with the spring pin **L**.

The mower is lowered to the ground.
The stop cock is closed - see fig. 2-5

The top link is loosened and dismantled.
The headstock is lowered and the link arms are disconnected.



Fig. 2-10

Fig. 2-10 Place the PTO shaft in the holder.

3. ADJUSTMENTS AND DRIVING

CONNECTION

Note:

The following instructions imply that the machine has been prepared, adjusted to the tractor and tested according to section 2. CONNECTION OR DISCONNECTION AND TEST DRIVING.

Instruction for normal connection:

- 1) Place the tractor right in front of the three-point linkage of the machine.
- 2) Check if the link arms of the tractor are at the same height.
- 3) Connect the machine to the link arms of the tractor.
- 4) Mount the top link. It should be approximately parallel with the link arms.

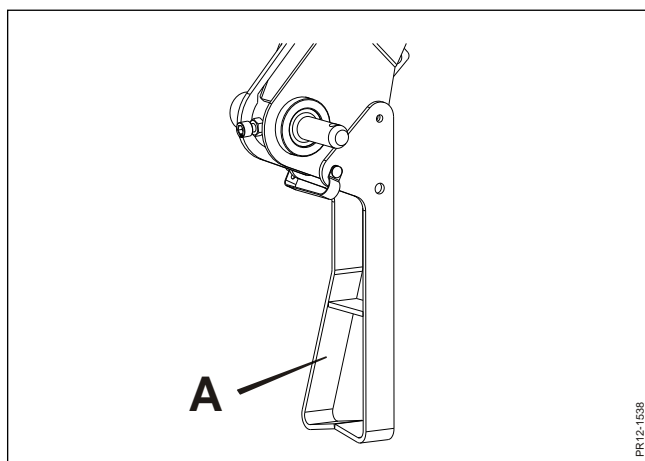


Fig. 3-1

- Fig. 3-1**
- 5) Raise the link arms so that the support **A** can be lifted.
 - 6) Connect the hydraulic hose to a single-acting hydraulic outlet.

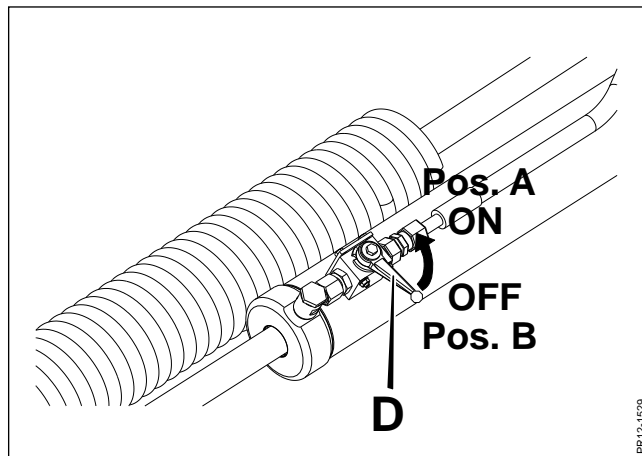


Fig. 3-2

Fig. 3-2

DANGER:

During transport and disconnection of the hydraulic hose, the stop cock D must be closed - position B.



- 7) The PTO shaft is mounted on the tractor and the guard is secured with the chain.

CONVERSION FROM WORKING TO TRANSPORT POSITION

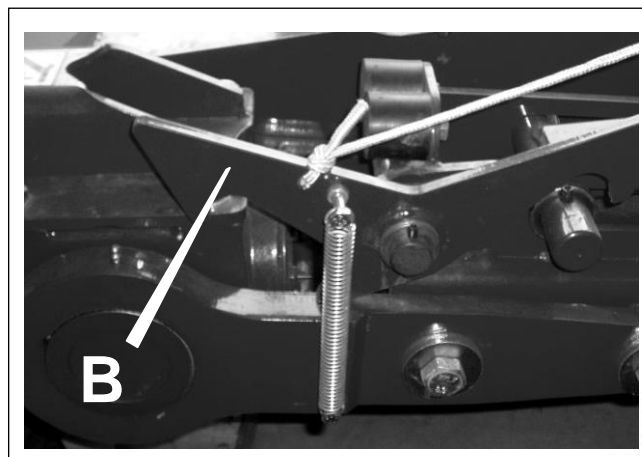


Fig. 3-3

Fig. 3-2
Fig. 3-3

Conversion:

The machine is lifted by means of the single-acting outlets, until the transport hook **B** is engaged.

The stop cock is adjusted to position B.



DANGER:

Before the machine is placed in transport position, you must check that there are no persons in the danger zone and that there is no risk of collision with objects near the machine.

3. ADJUSTMENTS AND DRIVING

Fig. 3-3 Check that the transport hook is in mesh before road transport.



WARNING: Conversion to transport position should not take place with revolving PTO shafts.

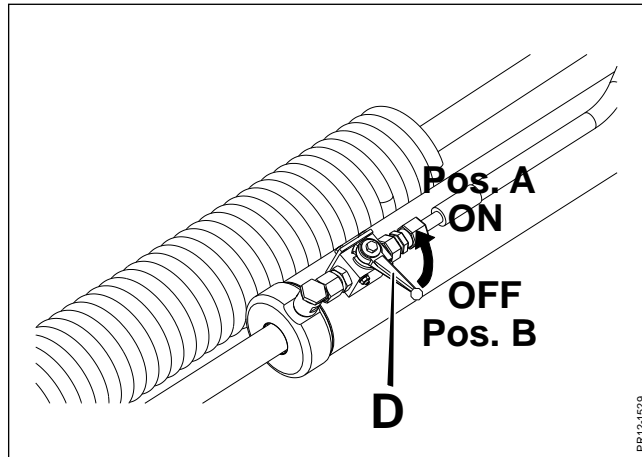


Fig. 3-2

Fig. 3-2 During transport the cylinder must be blocked by the tap **D**.



DANGER: **TRAFFIC MARKING:** Before transporting the machine on public road, make sure that the traffic rules can be observed. This, of course, implies that the machine does not cover the lights and signals on the tractor.

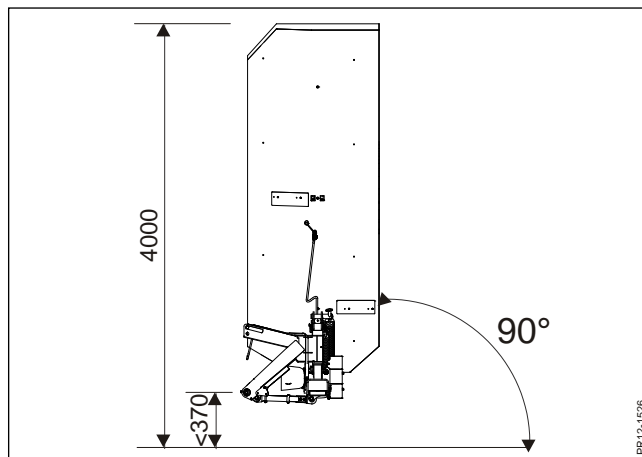


Fig. 3-4

Fig. 3-4 Be aware of the transport height. To obtain a transport height of less than 4 m the height of the link arms must be below 370 mm. If the machine is not positioned at a right angle of 90° in relation to the road, the height of the link arms must be further reduced.

3. ADJUSTMENTS AND DRIVING



DANGER:

Transport height

Before transporting the machine on public road, make sure that the transport height of 4.0 m is not exceeded.



WARNING:

Lowering of the 3-point suspension

When the machine is lowered in the 3-point suspension, it must be checked, that the machine does not touch parts on the tractor.

CONVERSION FROM TRANSPORT TO WORKING POSITION



DANGER:

Before the machine is placed in working position, you must check that there are no persons in the danger zone and that there is no risk of collision with objects near the machine.

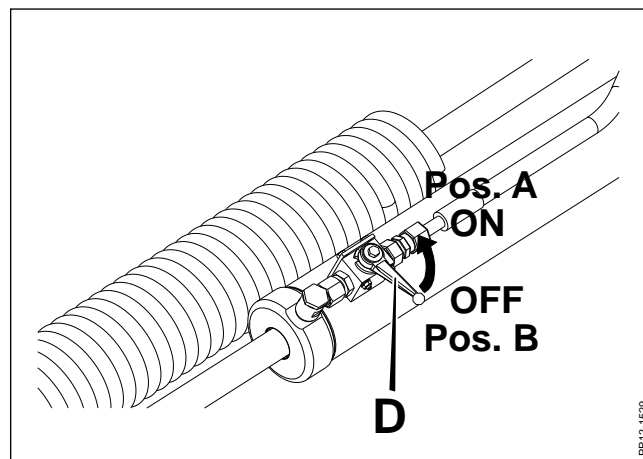


Fig. 3-2

Fig. 3-2 The stop cock at the hydraulic cylinder is opened.

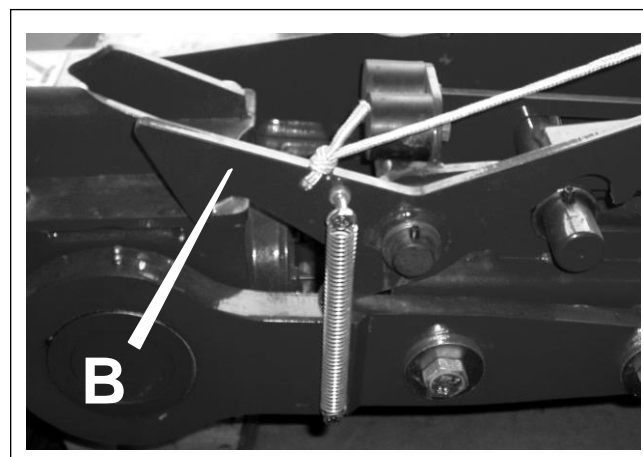


Fig. 3-3

Fig. 3-3 In order to lower the machine, the lock must be loosened by means of the cord.

3. ADJUSTMENTS AND DRIVING

During work the hydraulics must be in floating position / free motion, so that the machine can follow the ground.



WARNING: If you work without the tractor hydraulics being in floating position / free motion, it may result in serious machine damage.

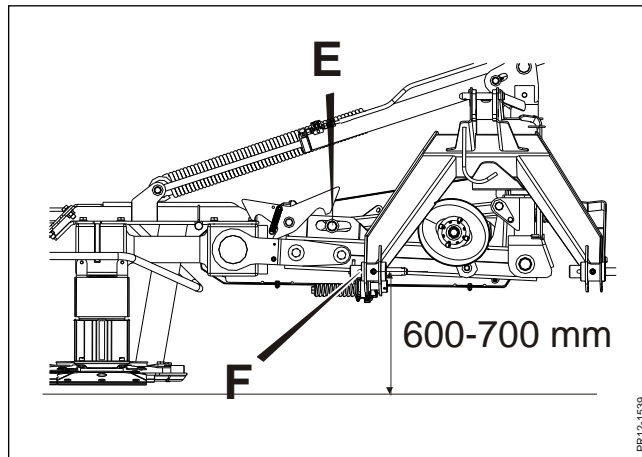


Fig. 3-5

Fig. 3-5 When the machine has been lowered to the ground, the headstock must be raised or lowered with the 3-point suspension so that the bolt **E** is in the middle of the oblong hole. In this position the link arms have a height of 600-700 mm.

The 3-point suspension can now be fixed for the operation, since the height should not be changed during working.

WORKING IN THE FIELD



CAUTION: Stop the tractor engine, remove the ignition key and activate the parking brakes before changing the adjustments of the machine.

STUBBLE HEIGHT

The stubble height can be adjusted by changing the inclination of the cutter bar. This is done by making the top link longer or shorter.

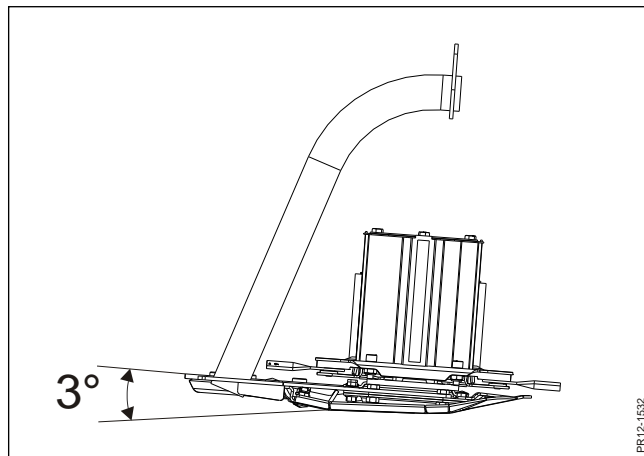


Fig. 3-6

Fig. 3-6 In most cases an inclination of 3° has turned out to be optimal.

IMPORTANT: To reduce the wear of blades and discs and to improve the possibility of regrowth, the stubble should never be lower than 60 mm. In stony fields, adjust the stubble height to maximum and be particularly careful.

STARTING

First of all, carry out the points mentioned under **Chapter 2 - Connection and disconnection and test driving** - “Check the following before you start working”.



DANGER: Before starting check that the guards are intact and that no persons are near. If this is not the case, the machine must be stopped immediately.

Danger due to rotating parts, and risk of ejecting foreign matter.

If canvases are worn or damaged, they must be replaced immediately.

Do not under any circumstances lean against or step on the canvas.

Clear the field of foreign matter.

Any work near the blades means danger of personal injury. Always stop the tractor engine, remove the ignition key and wait until the PTO has stopped before carrying out any work on the machine. Always use safety gloves.

Before driving into the crop, increase the PTO to 540 rpm.

Always make sure that the number of revolutions is not reduced considerably during the operation as this might result in an unsatisfactory cut.

Always adjust the driving speed to the conditions of the ground.

3. ADJUSTMENTS AND DRIVING



CAUTION:

Before working in the field, always check the machine - especially the blades - for any damage. The same applies after collision with obstacles. Check if the blades are mounted correctly. Worn or missing blades must be replaced immediately. Always replace both blades on the disc in question.

TURNING

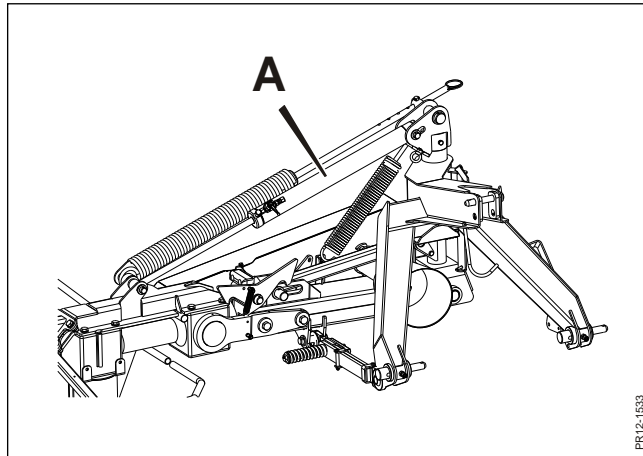


Fig. 3-7

Fig. 3-7 When turning in the field, use the lifting cylinder **A** on the boom (Easy Lift). The headstock stays where it is.

STONE RELEASE

A mechanical stone release enables the cutting unit to swivel backwards in case of collision with foreign matter.

When the stone release is activated, disengage the power take-off immediately and stop driving.

Disengagement is important as the PTO shafts will otherwise be exposed to a large angle due to the backwards movement of the cutter bar.

The stone release can be locked again by reversing the tractor with lowered cutting unit.

After each stone release the machine must be checked for damage.

3. ADJUSTMENTS AND DRIVING

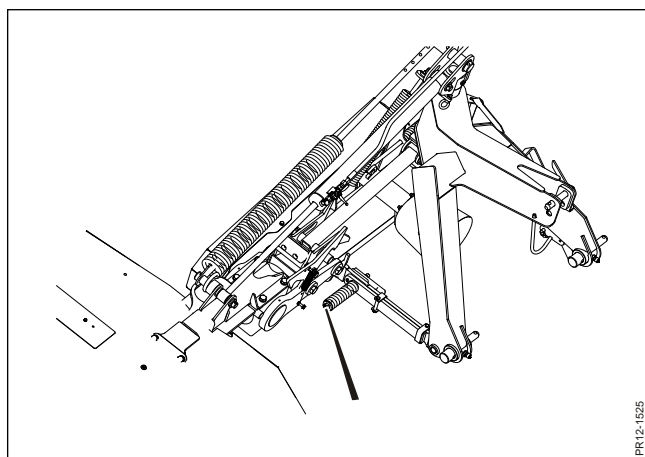


Fig. 3-8

Fig. 3-8 Tighten the spring to 140 mm (5 mm = 3 turns of the nut).

The factory setting of the stone release is adapted to most conditions, but If the stone release is activated too often, it is possible to increase the initial tension of the spring. Never tighten the spring so much that it blocks the release due to insufficient spring travel.



DANGER: Stop the engine and remove the ignition key before working on the machine.

RELIEF / GROUND PRESSURE

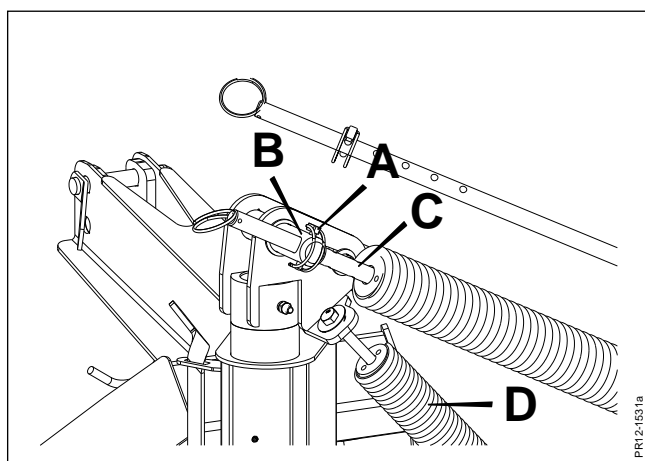


Fig. 3-9

Fig. 3-9 In order to spare the stubble as much as possible it is important that the ground pressure of the cutter bar is as low as possible. Be aware of finding a suitable compromise between high relief and optimal ground following.



IMPORTANT: The adjustment of the relief can only take place in transport position!
See section 3 - Conversion from working to transport position.

3. ADJUSTMENTS AND DRIVING

The relief is set by means of clamping pin **A** through the bore in the guide pin **B** and the adjustment rod **C**.

The upper adjustment hole corresponds to the lowest relief; the lower adjustment hole corresponds to the highest relief.

A good compromise between ground following and low ground pressure is obtained by choosing one of the middle adjustment holes.

The spring **D** relieves especially the innermost part of the cutter bar. Usually the adjustment is suitable when there is approx. 80 mm free thread on the bolt that tightens the spring.

SECURING AGAINST OVERLOAD



IMPORTANT: The tractor driver can secure the transmission against overload!

When using the machine, the following should be considered:

- 1) Always start the machine with the engine running at low speed. This especially applies to tractors with electro-hydraulic connection of the PTO shaft.
- 2) The machine must be in working position when starting.
- 3) A sudden increase in the number of RPM of the machine, e.g. when driving into the field or after turning in the field should also happen with the machine lowered to working position.
- 4) Listen to the RPM of the tractor when working in the field. If the RPM falls slowly or is suddenly reduced it may be a sign of overload of the transmission due to too high driving speed or foreign matter in the cutting unit. In this case, the belt drive will slip and you should disconnect the PTO immediately and let the machine “rest”. If the machine is blocked or has hit an obstacle, the machine should be stopped and inspected immediately.

LIFTING SPEED

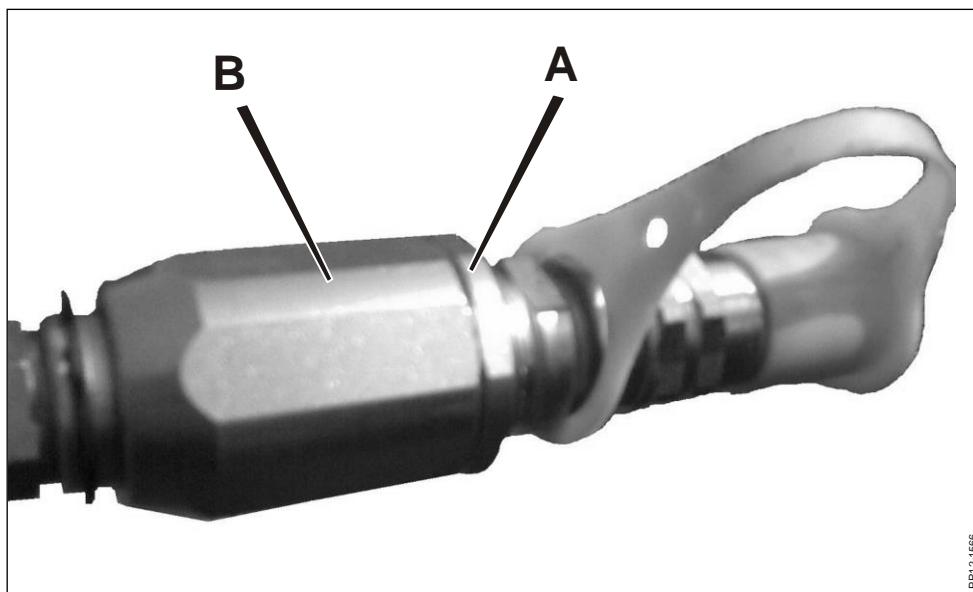


Fig. 3-10

Fig. 3-10 The lifting speed on the headland (Easy Lift) can be adjusted by means of the throttle valve behind the hydraulic coupling. If the machine is lifted too quickly or too slowly, the throttle valve can be adjusted by loosening the counter nut **A** and turning the adjustment part **B**. After the adjustment, the counter nut **A** must be tightened again.

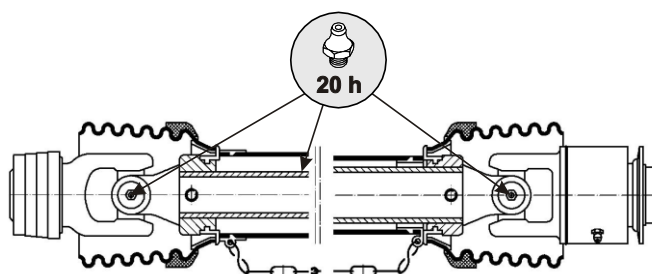
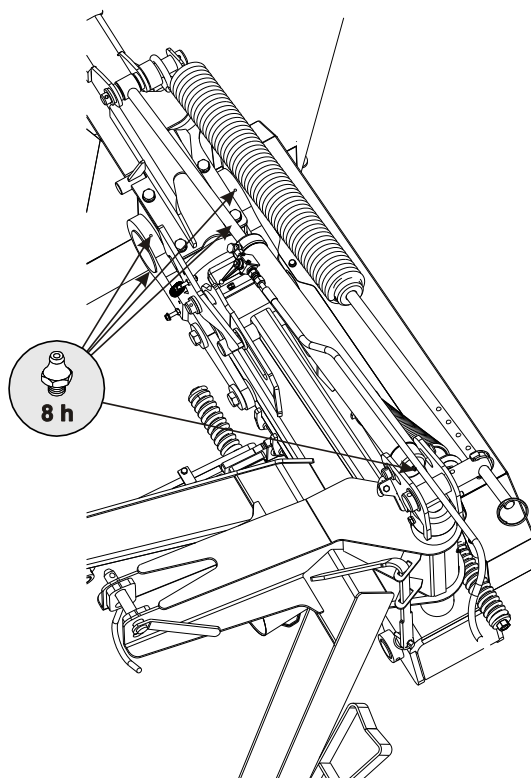
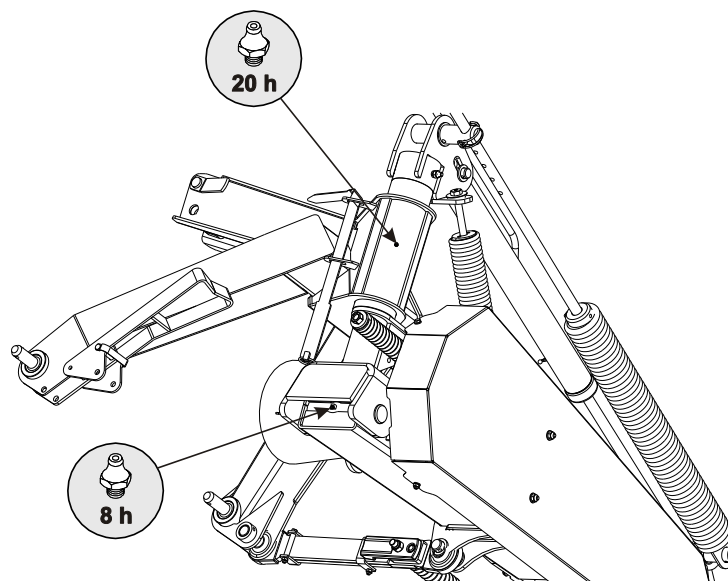
DISCONNECTION OF THE MACHINE

Procedure as in Chapter 2 - Disconnection of the machine.

4. GREASING

Lubrication chart for disc mower type SM 2805 and SM 3205.

The below grease spots must be greased according to the operation time intervals indicated.



PR11-1535

4. GREASING

GREASE

Always ensure that the machine has been properly greased before it starts operating.

Go through the greasing chart.

TYPE OF GREASE: Universal grease of good quality.

Rotating mechanical connections are greased with grease or oil as required.



WARNING - REMEMBER: Pay special attention to the sliding **PROFILE TUBES** of the PTO shafts. They must be able to slide back and forth when the torque is heavy.

If you neglect to grease the profile tubes sufficiently it will result in high axial forces which will damage the profile tubes and in time also connecting shafts and gearboxes.

OIL IN THE CUTTER BAR

THE CUTTER BAR

The cutter bar is available in two versions. They are easy to distinguish since on one version the discs are mounted with 4 bolts and on the other version with 6 bolts. Therefore they are called **4-bolt** and **6-bolt** cutter bar, respectively. There are other differences between the two types of cutter bar. Some parts such as guide shoes, shearbars etc. are different, whereas e.g. the blades are the same.

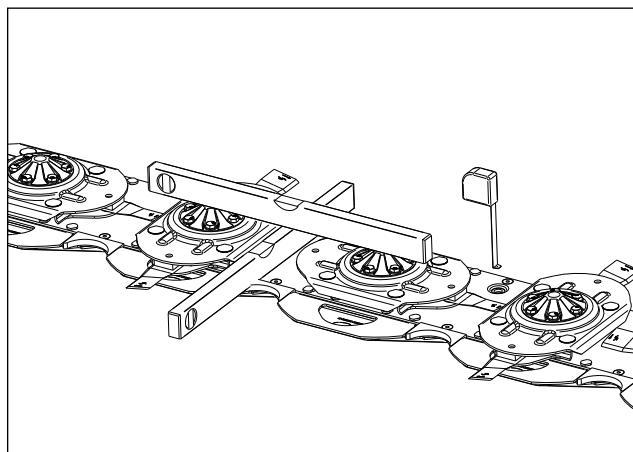
In the following there will be separate sections marked with the headings **4-bolt** and **6-bolt** cutter bar. If there are not any separate sections, the description applies to both types of cutter bar.

OIL CONTENT

The oil in the cutter bars is very thick, especially when it is cold. Therefore, wait minimum 15 minutes if the oil is cold and minimum 3 minutes if the oil is warm before checking the oil level if the machine has been moved or has been in operation.

It is practical to place the machine in the correct position for oil level measuring (as described below) when the working day is over to be sure that the oil is correctly distributed the next morning and the oil level can be checked without any waiting time.

4. GREASING



Figur 4.3

4-bolt cutter bar

Fig. 4.3 The oil level must be between 5 and 8 mm, measured at the filling holes.

There are 2 plugs for inspection of oil level and filling.

On **SM 3205** these are placed between the two outer discs at each side.

On **SM 2805** they are placed between the two outer discs in the right-hand side and between 2nd and 3rd disc in the left-hand side.

Correct oil content:	SM 2805	2.00 l
	SM 3205	2.25 l

6-bolt cutter bar

Fig. 4.3 There are 2 plugs for inspection of oil level and filling.

The oil level must be between 7 and 9 mm, as an average of the measurements at the filling holes.

Even if the cutterbar is inclined or curved up to 20 mm, the oil level is read as an average of the two measurements.

On **SM 2805** these are placed between the 2nd and 3rd disc and between the 5th and 6th disc.

On **SM 3205** these are placed between the 3rd and 4th disc and between the 5th and 6th disc.

Correct oil content:	SM 2805	2.5 l
	SM 3205	3.0 l

4. GREASING

Oil level

Fig. 4-3 To check the oil level, place the cutter bar horizontal, which should be checked by means of a level tube, both lengthwise and crosswise.

In order to facilitate the oil check we recommend you to have a permanent "oil measuring platform" on which the cutter bar can be placed when checking the oil level.

This means that the check for horizontal cutter bar with level tube as shown in Fig. 4-3, need not be repeated every time the oil level is checked.

The oil level must be checked every day during the harvesting season at one of the plugs.

OIL CHANGE:

Oil change: The first change of oil in the cutter bar must be made after 50 working hours and then after every 200 working hours or at least once every season.

The easiest way to change the oil is to let the machine run a couple of minutes until the oil is hot. At the same time this will ensure that impurities are mixed with the oil and are removed when changing the oil.

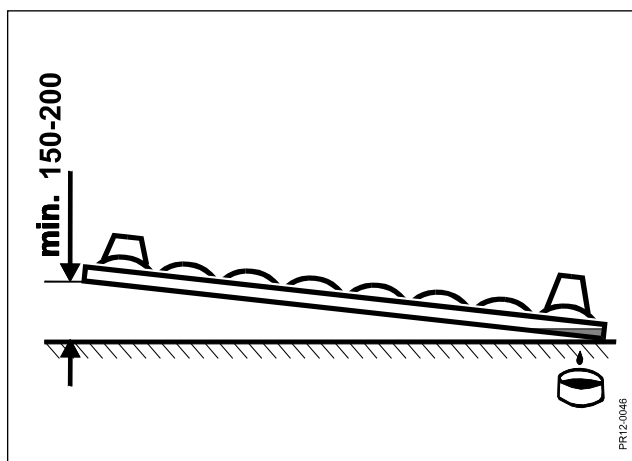


Fig. 4-4

Fig. 4-4 For oil change the cutter bar is raised minimum 150-200 mm from horizontal in the right-hand side to ensure optimum emptying.

To get access to the drain plug of the cutter bar in the left-hand side, the outermost guide shoe must be dismounted. After that the plug can be unscrewed and the oil can be drained off.

REMEMBER: to mount the plug again after draining. The drain plug has a magnet to collect metallic impurities. Therefore, always clean the magnet before remounting it.

Lower the cutter bar again before adding new oil.

4. GREASING

When changing the oil, be sure to use a correct oil type.

Correct oil type: **SHELL OMALA S2G 320**
Or similar quality of other suppliers.



WARNING: **Never fill with more or less oil than prescribed.**
Too much oil as well as too little oil in the cutter bar may cause unintentional overheating which in the long term will damage the bearings.

4. GREASING

BEVEL GEARBOX ABOVE THE CUTTER BAR

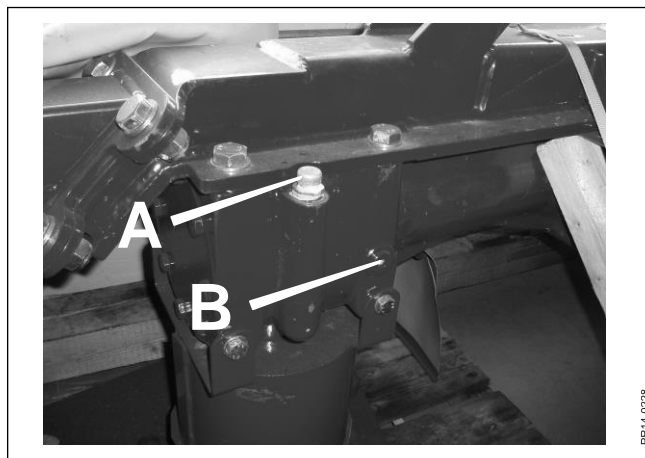


Fig. 4-5

Fig. 4-5 Oil content: **Right-hand side 1.0 litre**
A = Air escape valve and filling hole
B = Drain and inspection plug

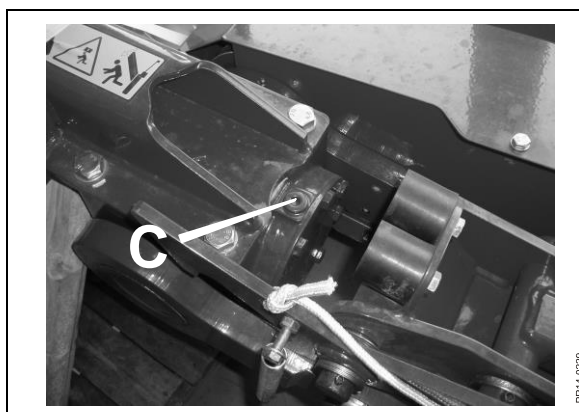


Fig. 4-6

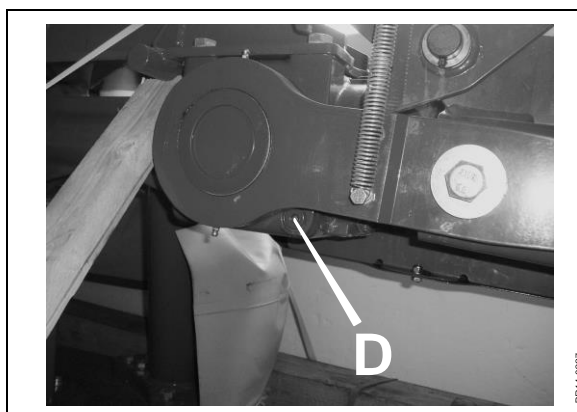


Fig. 4-7

Fig. 4-6 **Left-hand side 1.5 litre**
Fig. 4-7 C = Filling hole
D = Drain and inspection plug

Oil type: EP SAE 90

Oil level: **Check the oil level after every 80 hours of operation.**
The oil must reach the inspection hole

Oil change: First oil change after 10 working hours and then after every 100 working hours or at least once a year.
For draining of the oil, the machine must be moved to vertical position.

The air bleed screw **A** is screwed out and cleaned after the first 10 hours of operation. This must be repeated regularly.

5. MAINTENANCE

IN GENERAL



WARNING: When repairing or maintaining the machine it is especially important to ensure correct personal safety. Therefore, always park the tractor (if mounted) and the machine according to the **GENERAL SAFETY RULES** in the beginning of this instruction manual.



IMPORTANT: Screws and bolts on your new machine must be retightened after some hours of operation. This also applies if repairs have been made.

Fig. 5-1 Torque moment M_A (if nothing else has been stated).

M_a \emptyset	Class: 8.8 M_A [Nm]	Class: 10.9 M_A [Nm]	Class: 12.9 M_A [Nm]
M 8	25	33	40
M 10	48	65	80
M 12	80	120	135
M 12x1,25	90	125	146
M 14	135	180	215
M 14x1,5	145	190	230
M 16	200	280	325
M 16x1,5	215	295	350
M 18	270	380	440
M 20	400	550	650
M 20x1,5	430	615	720
M 24	640	900	1100
M 24x1,5	690	960	1175
M 30	1300	1800	2300

CONTROL OF BALANCE



WARNING: When driving in the field you must always pay attention if the machine starts vibrating more than usually or if it has jarring sounds.

The discs run at up to 3000 RPM, and one broken blade may cause serious injury to persons or material damage resulting from unbalance.

If working with a modern closed cabin the symptoms may be difficult to discover, and once in a while you have to get out and check if all blades are intact.

In the long run unbalance may cause fatigue fractures and serious damage. All machines manufactured by KONGSKILDE are tested and checked for vibrations with special tools.

The first time you start the machine pay attention to vibrations and noise to have a standard of comparison later.

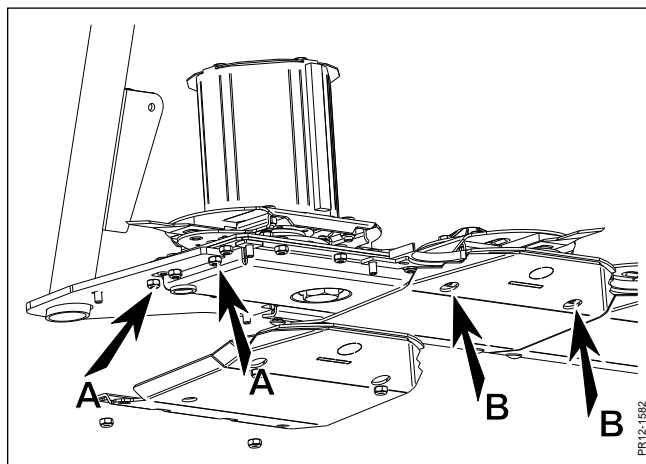


Fig. 5-4

Fig. 5-4 To avoid damage caused by vibrations in the cutting unit, the cutter bar must be fastened correctly to the frame.

In order to check this the outermost guide shoes must be dismantled. The nuts on the bolts, **A**, which go through both cutter bar and frame must be retightened.

On the **4-bolt cutter bar** it is M12 bolts which must be tightened to 110 Nm (11 Kpm).

On the **6-bolt cutter bar** it is M10 bolts which must be tightened to 75 Nm (7.5 Kpm). The bolts that are placed where there are carvings in the frame should not be retightened. These are only intended to hold the cutter bar together and do not go through the frame.

Bolts at guide shoes and shearbars, **B**, on the cutter bar should also be checked at regular intervals.

BELT DRIVE

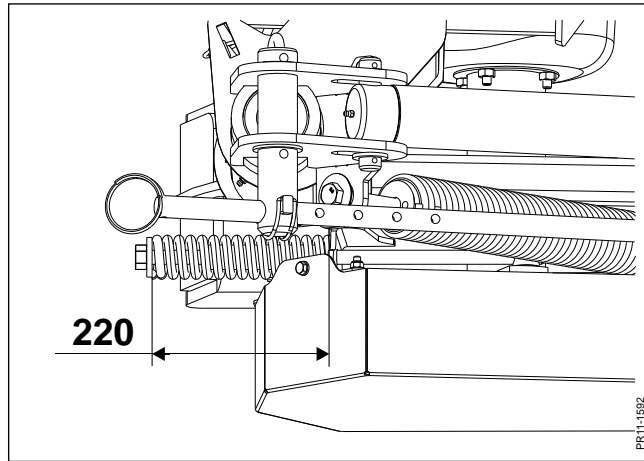


Fig. 5-5

Fig. 5-5 The belt drive consists of 4 identical V-belts. Their tension is correct when the spring is tightened to 220 mm.

DISCS AND BLADES - QS

Your machine can be fitted with a disc/blade system for quick replacement of blades which has been developed to facilitate maintenance of the machine.

If the machine is fitted with discs on which the blades are attached with bolts, see the next section “Discs and blades - HDS”.

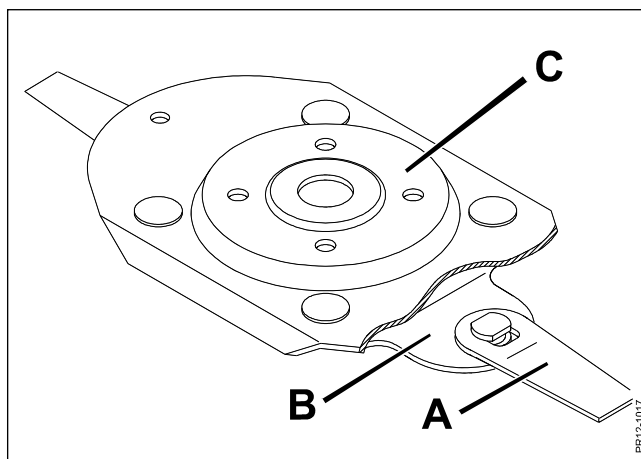


Fig. 5-6

Fig. 5-6 The system is called QS, (Quick and Safe), which indicates the quick mounting/change of blades and the high safety as blades **A** cannot unintentionally be released from the blade holder **B**, which is bolted on the disc **C**.

Discs, blade holders and blades are made from high-alloyed hardened materials. A special heat treatment results in an especially hard and ductile material which can handle extreme stress. If a blade or disc is damaged, do not attempt to weld the parts together again as the generation of heat will destroy the material properties and expose you and others to increased risk.

IMPORTANT: Damaged blades, discs and blade holders must be replaced by original KONGSKILDE spare parts to obtain a safe operation.



WARNING: When replacing blades, both blades on the disc in question must be replaced in order not to create an unbalance.

CAUTION: Always lower the cutting unit to the ground before replacing blades, blade holders, discs and the like.

BLADES

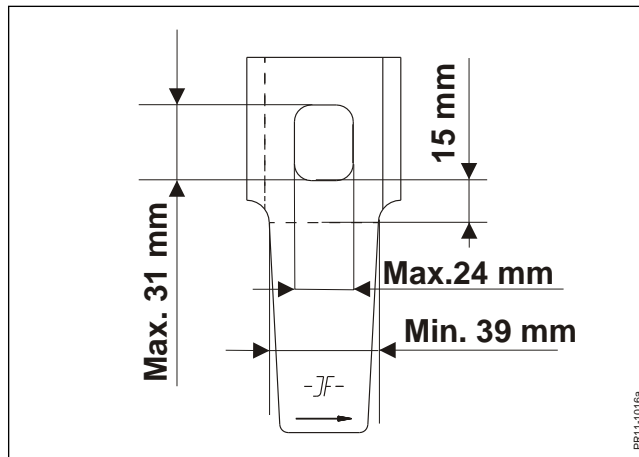


Fig. 5-7

Fig. 5-7 Replace blades immediately if:

- 1) the blade is bent or cracked,
- 2) the width of the blade is less than 39 mm measured 15 mm from the edge,
- 3) the blade hole is larger than stated.

BLADE HOLDER

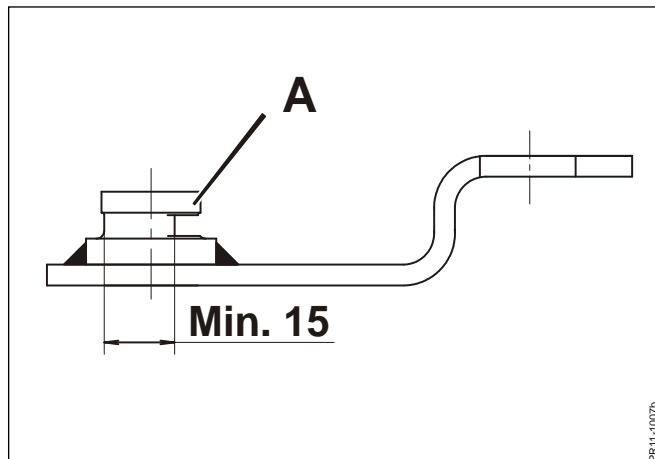


Fig.5-8

Fig. 5-8 The blade holder must be replaced if:

- 1) the blade pin **A** is not in contact with the disc,
- 2) the blade pin **A** is strongly worn on one side,
- 3) The diameter of the blade pin is less than 15 mm.



IMPORTANT: This must especially be checked after collision with foreign matter, after replacement of blades and the first time you use the machine.

REPLACEMENT OF BLADES



DANGER:

It is very important to check the parts after:

- Collision with foreign matter, or
- If a blade, as an exception, is missing on the cutter bar.

Parts can be damaged and **MUST** be replaced if you have the slightest doubt whether they have been damaged to ensure safety against loss of rotating parts.

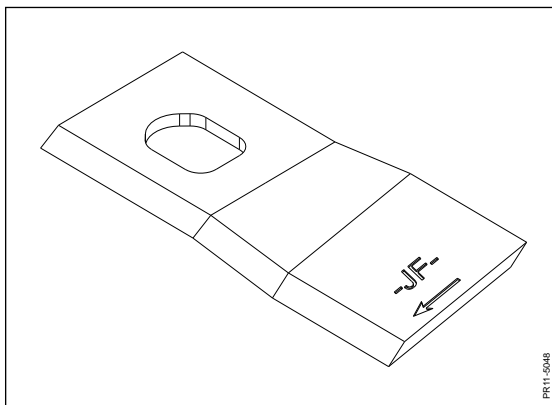


Fig. 5-9

Fig. 5-9 Twisted blades can be used on both sides by turning the blade, but it must remain on the same disc.

Please note that twisted blades are available in a left-twisted and a right-twisted version, adapted to the different direction of rotation of the discs. The blade is placed correctly if the front edge of the blade is lower than the rear edge when the disc is turned in its direction of rotation. An arrow is stamped in the blade showing the right direction. If blades are not placed correctly, it will result in cutting problems.

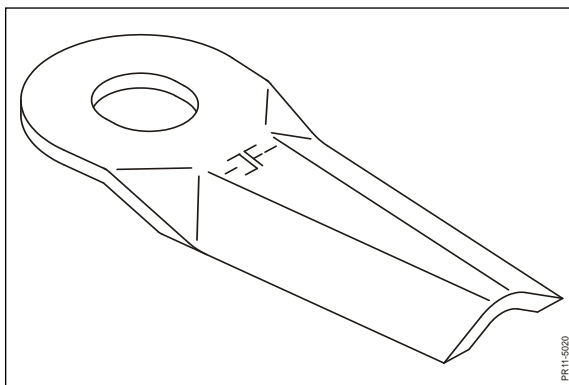


Fig. 5-10

Fig. 5-10 Profile blades can be used on both sides by moving the blades from one disc to another with opposite direction of rotation.

Replacement of blades

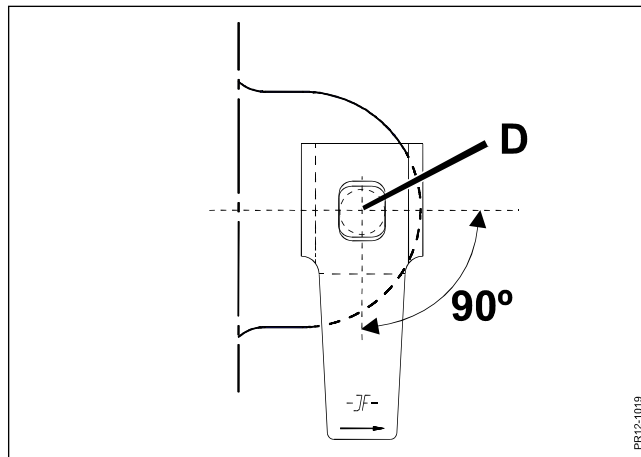


Fig. 5-11

Fig. 5-11 Turn the blade 90 degrees from working position and release the blade from the blade pin **D**.

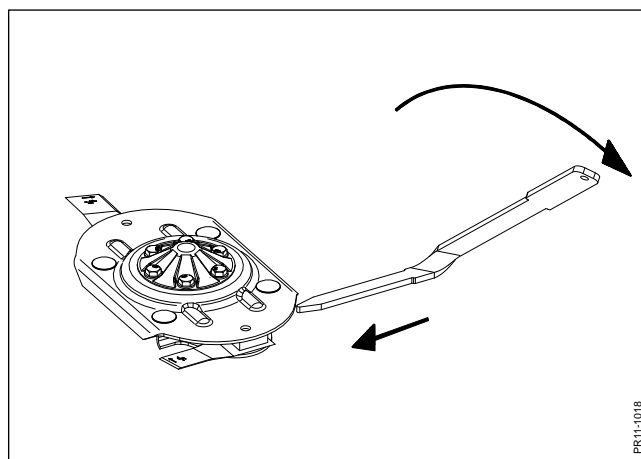


Fig. 5-12

Fig. 5-12 The supplied replacement tool is placed as shown. The short milled end is placed behind the blade. So far in that it covers the whole width of the blade holder.

5. MAINTENANCE

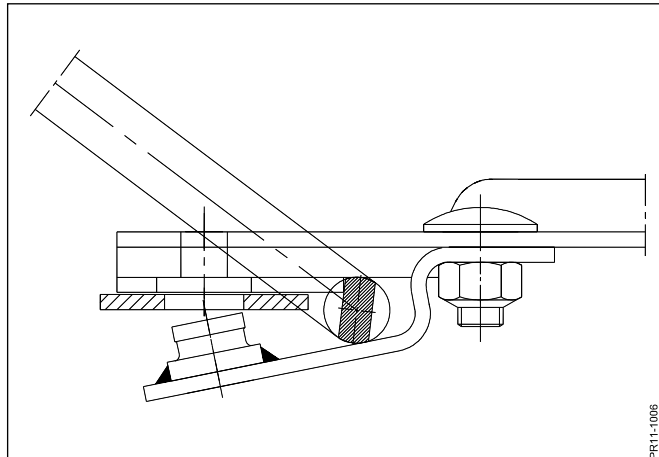


Fig. 5-13

Fig. 5-13 Press the blade holder down by pulling the long end of the tool forward.



WARNING: Replace the blade with your free hand. Do not let go of the handle since the spring power can make the tool spring back with considerable power.

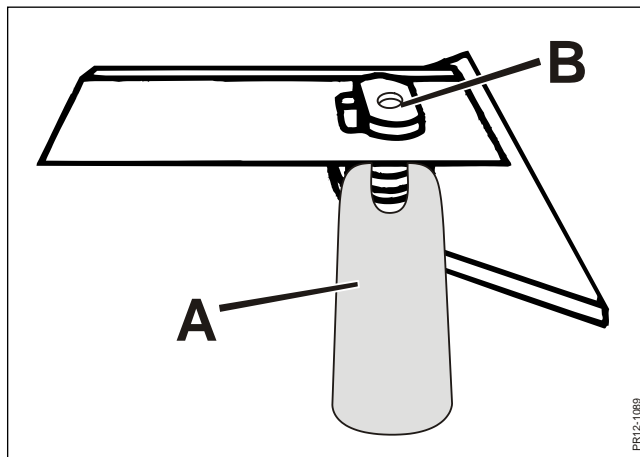


Fig. 5-14

Fig. 5-14 In connection with replacement of blades check the blade pins **B** on the discs regularly with the gauge **A** (in the spare parts package).



IMPORTANT: When the gauge **A** can get over the blade pin **B** it **MUST** be replaced immediately.

When mounting blades this is done in reverse order.

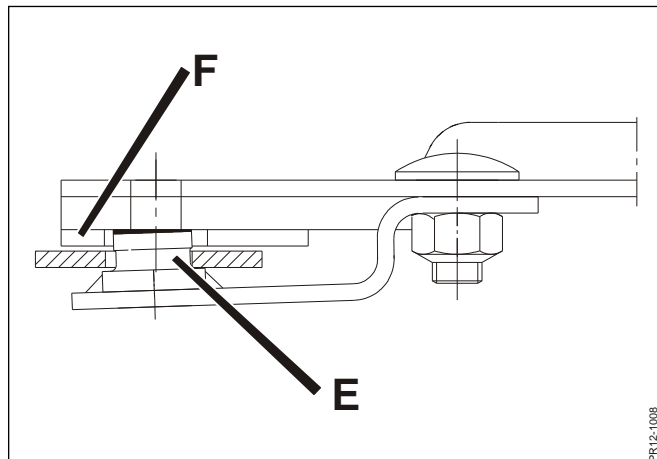


Fig. 5-15

Fig. 5-15 **IMPORTANT:** Make sure that there are no impurities between the contact faces of the blade pin and the disc and that the blade pin E of the blade holder has correct contact with the bottom of the disc F. If the blade pin is not in contact with the disc, the blade holder should be replaced.



IMPORTANT: All discs must have the correct number of blades and it must be possible to turn the blades freely from side to side. NB: The blades will in both sides stop against the blade holder.



CAUTION: When mounting is finished, the discs must be turned minimum once by hand in order to check that no parts are colliding.

CAUTION: Worn blades and the replacement tool must be removed from the machine and the guards must be placed correctly.

REMEMBER: The blades can be used on both sides.

REPLACEMENT OF DISCS

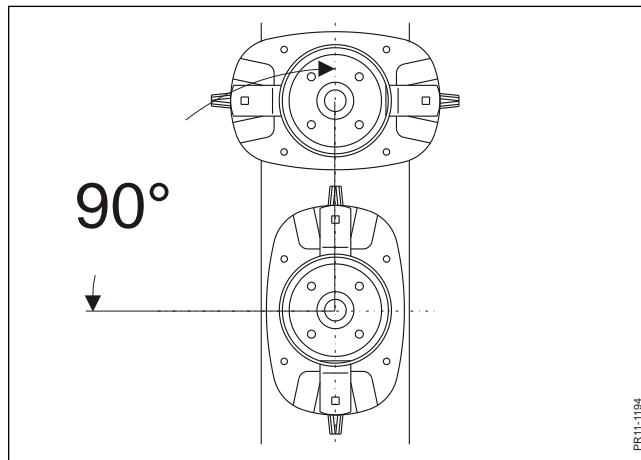


Fig. 5-16

Fig. 5-16 If discs have been dismantled they must be mounted again staggered 90° in relation to each other.

DISCS AND BLADES - HDS

Your machine can be fitted with discs on which the blades are attached with bolts. It may be oval HDS discs or round HD discs.

If the blades are not attached with bolts but fixed with a springy blade holder, it is QS discs that are mounted. QS discs are described in the preceding section.

Discs, blade bolts and blades are made of high-alloyed, hardened materials. This heat treatment provides especially hard and ductile material which is able to withstand extreme stress. If a blade or a disc is damaged, do not attempt to weld the parts together again as the generation of heat will weaken the parts.

Damaged blades, discs, blade bolts and nuts **must be replaced by original KONGSKILDE spare parts to obtain a safe operation.**



WARNING: When replacing blades, both blades on the disc in question must be replaced as not to create an unbalance.

CAUTION: Always lower the cutting unit to the ground before replacing blades, blade bolts, discs and the like.

BLADES

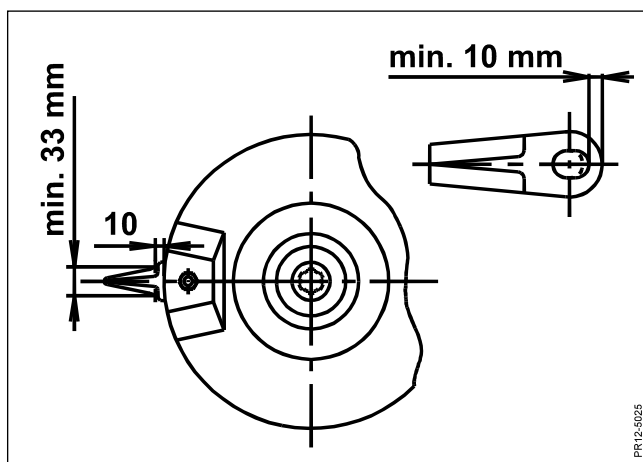


Fig. 5-17

Fig. 5-17 Blades must be replaced if:

- 1) the blade is bent or cracked,
- 2) the blade width is less than 33 mm measured 10 mm from the edge of the disc,
- 3) the metal thickness around the blade hole is less than 10 mm.

Bent blades must be replaced immediately.

Blade bolts and nuts must also be checked regularly, especially the tightening of the nuts. This inspection must be made especially after collision with foreign matter, after replacement of blades and the first time you use the machine.

5. MAINTENANCE

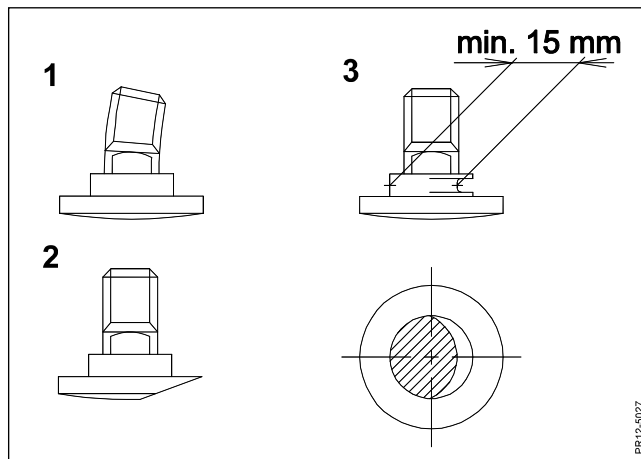


Fig. 5-18

Fig. 5-18 Blade bolts must be replaced if:

- a) they are deformed
- b) they are strongly worn on one side
- c) the diameter is less than 15 mm.

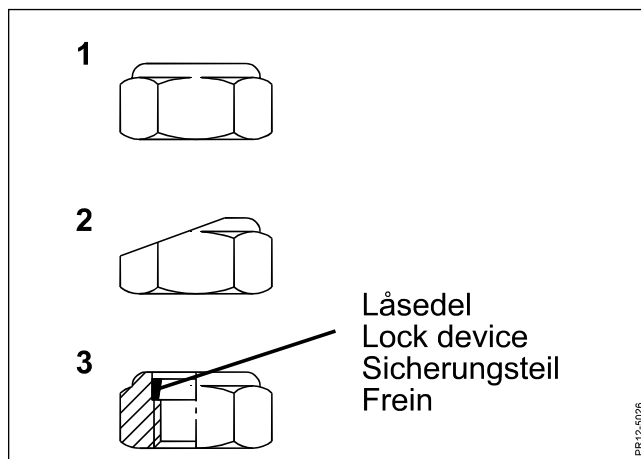


Fig. 5-19

Fig. 5-19 The special nut must be replaced if:

- a) it has been used more than 5 times
- b) the height of the hexagon is less than half of the original height
- c) the lock device is worn or loose.

REPLACEMENT OF BLADES

To obtain a satisfactory harvesting it is important that blades and shearbars are intact and sharp.

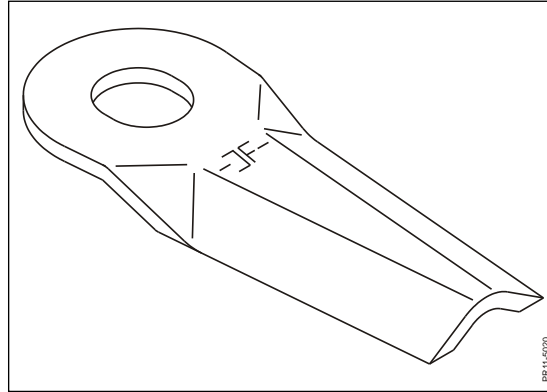


Fig. 5-20

Fig. 5-20 Profile blades can be used on both sides by moving the blades from one disc to another with opposite direction of rotation.

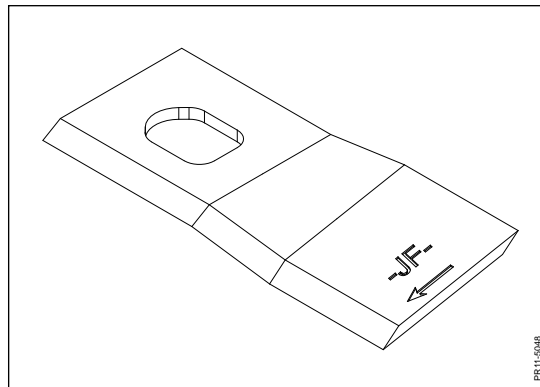


Fig. 5-21

Fig. 5-21 Twisted blades can be used on both sides by turning the blade, but it must remain on the same disc.

Please note that twisted blades are available in a left-twisted and a right-twisted version, adapted to the different direction of rotation of the discs. The blade is placed correctly if the front edge of the blade is lower than the rear edge when the disc is turned in its direction of rotation. An arrow is stamped in the blade showing the right direction.

If blades are not placed correctly, it will result in cutting problems.

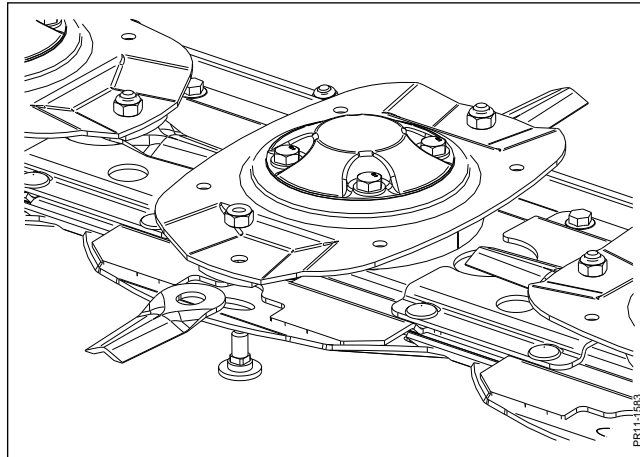


Fig. 5-22

Fig. 5-22 Replacement of blades

Replacement of blades is made by dismounting the blade bolt and pulling it out from beneath the disc. This is easily done when the blade is in the front position so that the bolt can fall out through the hole in the stone protector. Remove the old blade and mount the new one together with the blade bolt. Make sure that the blade bolt falls into place in the square hole on the disc. The special nuts must be tightened to 95 Nm (9.5 kpm).

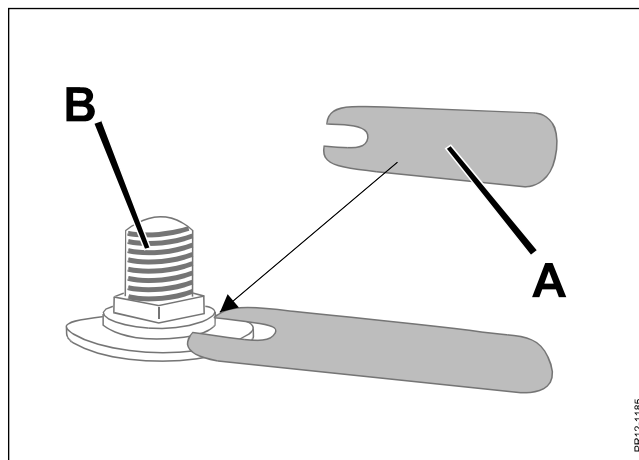


Fig. 5-23

Fig. 5-23 In connection with replacement of blades check all blade bolts **B** on the discs regularly with the gauge **A** (in the spare parts package).



IMPORTANT: When the gauge **A** can get over the blade bush **B** it must be replaced immediately.

Also check regularly if blade bolt, special nut and disc are worn, loose or deformed. If this is the case, the parts must be tightened or replaced.

**DANGER:**

It is very important to check the parts after:

- Collision with foreign matter, or
- If a blade, as an exception, is missing on the cutter bar.

Parts can be damaged and **MUST** be replaced if you have the slightest doubt whether they have been damaged to ensure safety against loss of rotating parts.

REPLACEMENT OF DISCS

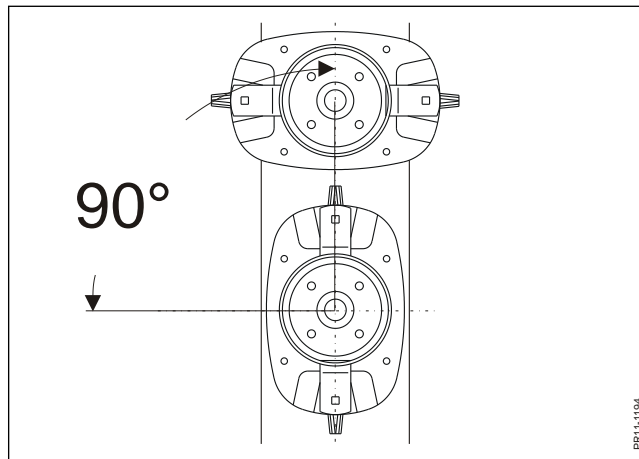


Fig. 5-24

Fig. 5-24 If discs have been dismounted they must be mounted again staggered 90° in relation to each other.

The height of the disc can be adjusted by mounting spacers under the disc, between disc and hub. This may be necessary when replacing the discs if the blades are not at the same height.

4-bolt cutter bar

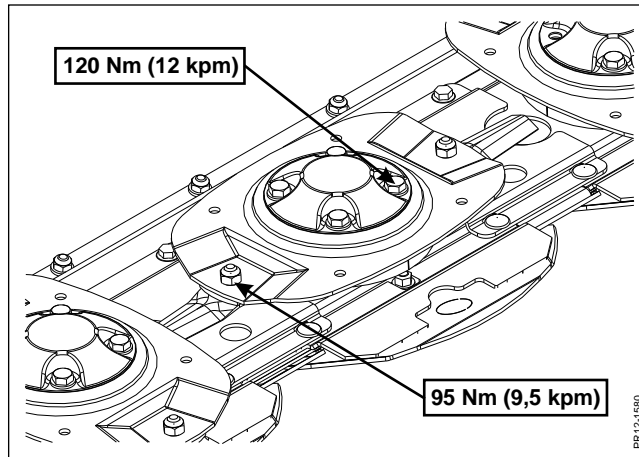


Fig. 5-25

Fig. 5-25 The discs are fastened with 4 bolts which must be tightened to 120 Nm (12 kpm). Blade bolts must be tightened to 95 Nm (9.5 kpm).

6-bolt cutter bar

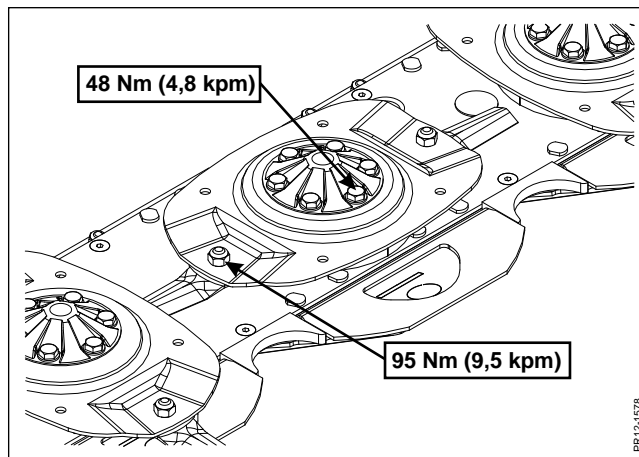


Fig. 5-26

Fig. 5-26 The discs are fastened with 6 bolts which must be tightened to 48 Nm (4.8 kpm). Blade bolts must be tightened to 95 Nm (9.5 kpm).

IMPORTANT: After replacement of blades and blade bolts it must be checked that the blades can be turned freely from side to side and that all discs have the correct number of blades.

CAUTION: When mounting is finished, the discs must be turned minimum once by hand in order to check that no parts are colliding.



WARNING: After replacement of blades, blade bolts, discs and the like check that no tools have been left on the machine and that the guards have been placed correctly.

CUTTER BAR

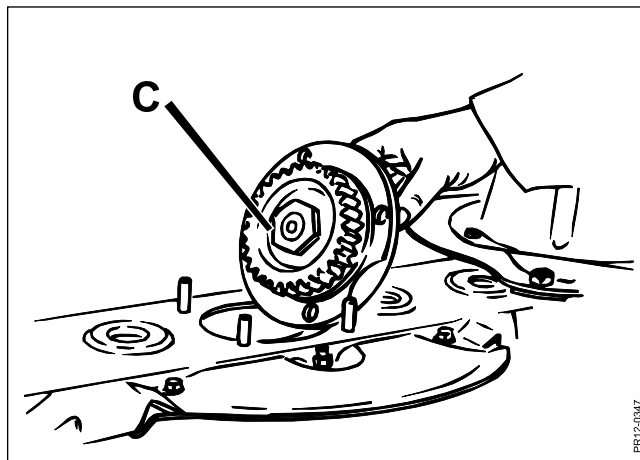


Fig. 5-27

Fig. 5-27 Cutter bars are used on which each hub **C** below the discs is easily replaced from above (Top Service cutter bar).

The hubs with bearing housing are dismantled by loosening the bolts that fix it to the cutter bar.

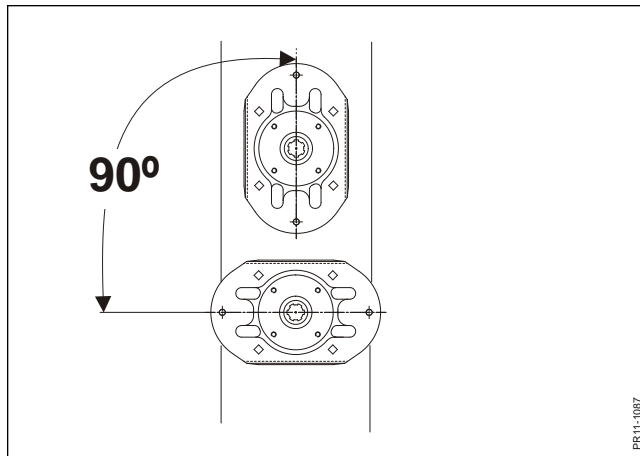


Fig. 5-28

Fig. 5-28 Make sure that the discs are mounted 90 degrees staggered in relation to each other.

4-BOLT CUTTER BAR

When the hub is mounted the surface of the cutter bar and the underside of the hub must be clean and greased with a thin layer of grease. The O-ring must be placed correctly. The 4 nuts must be tightened to 85 Nm (8.5 kpm).

Input disc

The driving disc where the transmission is connected to the cutter bar is called the input disc. The 4-bolt cutter bar is driven by a special input disc which is constructed and mounted differently from the other discs on the cutter bar.

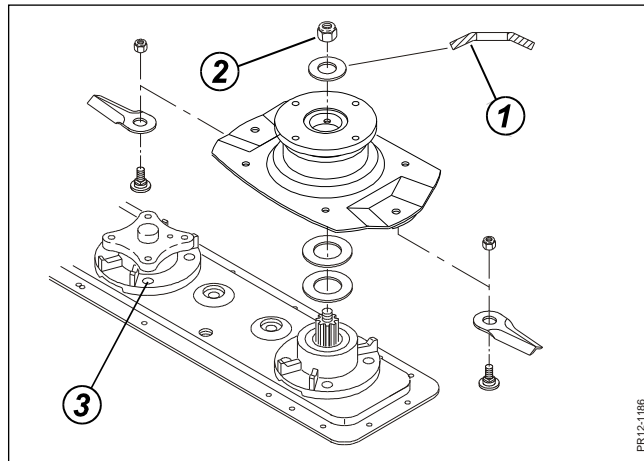


Fig. 5-29

Fig. 5-29 The spring washer (1) above the input disc is placed as shown with the curved side upwards.
The nut (2) is tightened to **190 Nm** (19 Kpm).
The bolts (3) which hold the disc bearing housing to the bar are tightened to **85 Nm** (8.5 Kpm).

6-BOLT CUTTER BAR

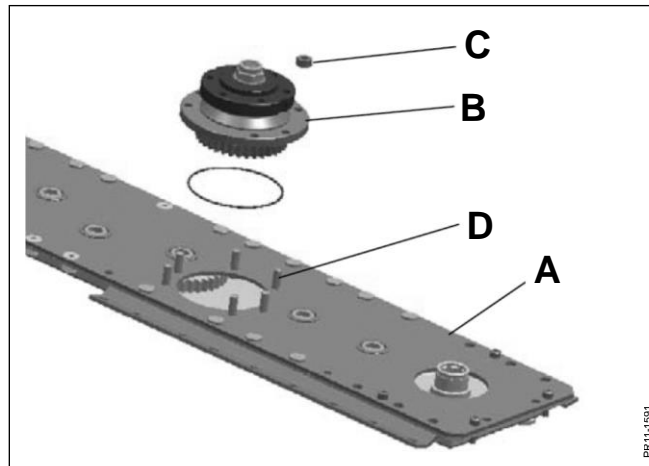


Fig. 5-30

Fig. 5-30 When the hub is mounted the surface of the cutter bar **A** and the underside of the hub **B** must be clean and greased with a thin layer of grease. The nuts **C** must be locked with Loctite 243 on the threaded pins **D** and tightened to **92 Nm (9.2 Kpm)**. On the 6-bolt cutter bar all discs are the same. There is no special input disc.

POWER TAKE-OFF FOR THE CUTTER BAR

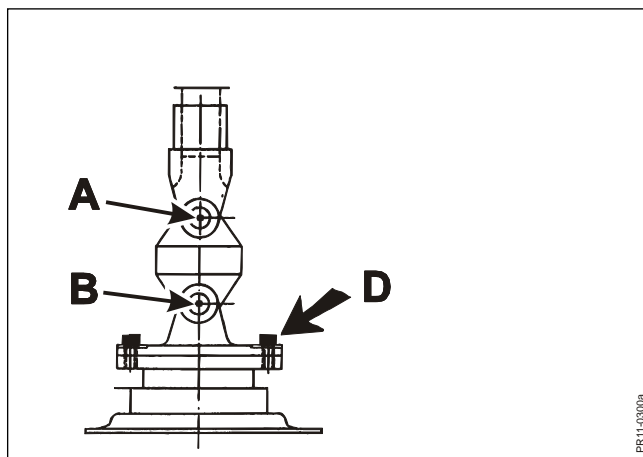


Fig. 5-31

Fig. 5-31 The PTO for the cutter bar should run with minimum angular deviation. Therefore a special tool is available (KONGSKILDE part number 6000-836x) which is used for placing the bevel gearbox precisely in relation to the cutter bar.

If you do not have this special tool, check that the deviation from the vertical line at **A** and **B** is as small as possible and maximum ± 3 mm. This can be tested by placing a right angle on the flange at **D**.

Bolts **D** must be tightened to:

4-bolt cutter bar: 60 Nm (6 Kpm) and must be locked with LocTite 243.

6-bolt cutter bar: 48 Nm (4.8 Kpm) and must be locked with LocTite 243.

The PTO shaft for the cutter bar which is bolted onto the input disc is greased for life. If it is separated it must however be greased before it is mounted again.

CAUTION: Before starting the machine, the discs must be turned minimum once by hand in order to check that no parts are colliding.



WARNING: After replacement of blades, blade bolts, nuts or discs check that no tools have been left on the machine.

6. VARIOUS

DRIVING TIPS AND FAULT-FINDING

Problem	Possible cause	Remedy
Uneven stubble or bad cut	<p>The cutter bar is relieved too much.</p> <p>The number of rpm of the tractor is too low.</p> <p>The blades are worn</p> <p>Discs, stone protectors or flow caps are deformed.</p>	<p>Check the basic adjustment of the machine and, if necessary, reduce the relief.</p> <p>Check that the number of rotations of the tractor PTO is correct. Keep a constant number of RPM</p> <p>Turn/move the blades to another disc or replace the blades</p> <p>Replace deformed parts.</p>
Stripes in stubble	<p>The cutting angle is too large, the grass is not transported across the cutter bar</p> <p>Accumulation of material in front of the cutter bar</p> <p>Earth and grass around the cutter bar between the discs</p> <p>You are working early in the morning when the grass is very wet.</p>	<p>Adjust the cutter bar more horizontal by lengthening the top link</p> <p>Increase the driving speed, if possible</p> <p>Increase the cutting height or replace worn shearbars.</p> <p>Increase the driving speed, if possible</p>
The machine vibrates/ uneven operation	<p>Blades may be deformed, damaged or missing</p> <p>Defective PTO drive shafts</p> <p>Defective bearings in cutter bar</p> <p>Flow caps are defective.</p> <p>Earth and grass in flow caps</p>	<p>Replace damaged blades and mount new ones where these are missing</p> <p>Check if the shafts are intact. Repair, if necessary</p> <p>Check if bearings are loose or damaged. Replace if necessary</p> <p>Replace flow caps and intensifiers</p> <p>Clean flow caps.</p>
Gear or cutter bar overheated	Oil level not correct	<p>Check the oil level and refill/drain out oil, if necessary</p> <p>NB: Gear temperature maximum 80° C, cutter bar temperature maximum 90-100° C.</p>
Power consumption unusually high	<p>Crop and dust under the discs</p> <p>String or wire is wrapped around a disc.</p>	<p>Stop the tractor engine. Dismount the discs and clean cutter bar and discs.</p> <p>Remove the foreign matter.</p>

STORAGE

When the season is over, the preparation for winter storage should be made. First, clean the machine thoroughly as dust and dirt absorb moisture and moisture increases the formation of rust.



CAUTION: Be careful when cleaning with a high pressure cleaner. Never clean the cutter bar with a high pressure cleaner and never spray directly on bearings.



IMPORTANT: Grease all grease points after cleaning the machine.

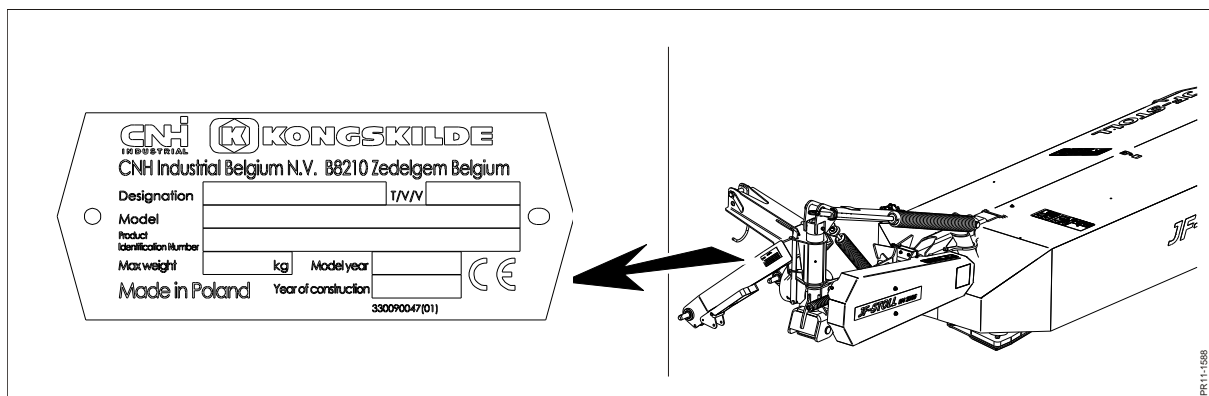
The following points are instructions how to prepare for winter storage.

- Check the machine for wear and other defects.
 - Note down the wearing parts needed before the next season and order the spare parts.
- Dismount, clean and lubricate the PTO shafts. Remember to grease the profile tubes. The PTO shaft must be kept in a dry place.
- Spray the machine with a thin coat of rust-preventing oil. This is especially important on the parts polished with use.
- Store the machine in a ventilated engine house.

SPARE PARTS ORDER

When ordering spare parts, please state machine type and serial number.
This information is printed on the machine plate which is placed as shown on the figure below.

We request you to write this information on the first page in the spare parts book supplied with the machine as soon as possible so that you have the information at hand when ordering spare parts.



DISPOSAL

When the machine is worn-out it must be disposed of in a proper way.

Observe the following:

- The machine must not be placed somewhere outside, and gearboxes, cylinders and cutter bar must be emptied of oil. These oils must be handed over to a destruction company.
- Disassemble the machine and separate the individual parts, e.g. PTO shafts, hydraulic hoses and components.
- Hand over the usable parts to an authorised recycling centre. The large scrapping parts are handed over to an authorised breaker's yard.

7. WARRANTY

Your machine is warranted according to legal rights in your country and the contractual agreement with the selling dealer. No warranty shall, however, apply if the machine has not been used, adjusted and maintained according to the instructions given in this operator's manual.

It is prohibited to carry out any modifications to the machine unless specifically authorized, in writing, by a NEW HOLLAND representative.

EF-overensstemmelseserklæring/ EG-Konformitätserklärung/ EC Declaration of Conformity/ Déclaration CE de conformité/ Dichiarazione CE di conformità/ EG Verklaring van Overeenstemming/ EG-försäkran om överensstämmelse/ EY-vaatimustenmukaisuusvakuutus/ Declaración de conformidad CE/ Deklaracja Zgodności WE./ Декларация за съответствие EO/ EK Megfelelőségi Nyilatkozat /ES Prohlášení o shodě/ EB Atitiktis deklaracija/ ES prehlásenie o zhode/ Declarația de conformitate CE/ Vastavuse Deklaratsioon EÜ /ES Izjava o skladnosti/ Δήλωση πιστότητας EK/ Declaração de fidelidade CE/ Dikjarazzjoni ta' Konformità tal-KE/ EK Atbilstības deklarācija/

Fabrikant/ Hersteller/ Manufacturer/ Fabricant/ Produttore/ Fabrikant/ Fabrikant/ Valmistaja/ Fabricante/ Producent/ Производител/ Gyártó/ Výrobce/ Gamintojas/ Výrobca/ Producător/ Tootja/ Proizvajalec/ Κατασκευαστής/ Fabricante/ Fabbrikant/ Ražotājs

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Leon Claeyssstraat 3a, 8210 Zedelgem, BELGIUM

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Maskine:	La máquina:	Masin:
Maschine:	Maszyna:	Stroj:
Machine:	Машината:	Η μηχανή:
Machine:	Gép:	Máquina:
La macchina:	Stroj:	Il-magna:
Machine:	Mašina:	Mašina:
Maskin:		Stroj:
Laite:		Mašina:



Model/Type: **SM 2805- SM 3205 OLD**

Designation: Mower

Serial:

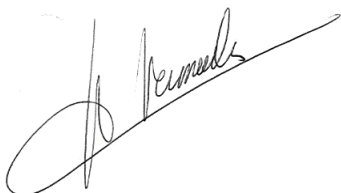
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- In übereinstimmung mit den Bestimmungen der Maschinen-Richtlinie 2006/42/EG und wenn erforderlich auch mit der EMC-Richtlinie 2014/30/EU hergestellt wurde.

- is in conformity with the provisions of the Machinery Directive 2006/42/EC and if relevant also the provisions of the EMC Directive 2014/30/EU.

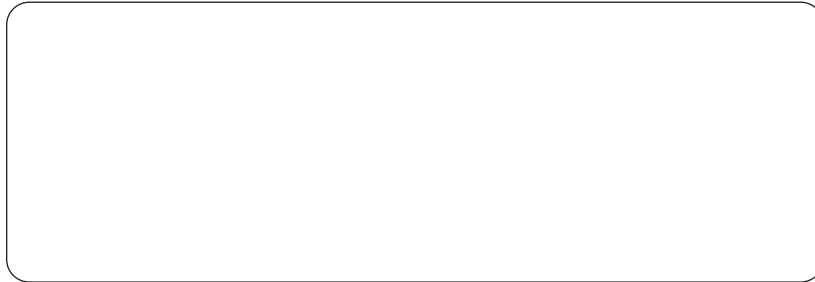
- est conforme aux dispositions de la Directive relatives aux machines 2006/42/CE et également aux dispositions de la Directive sur la Directive EMC 2014/30/UE.
- é in conformita' con la Direttiva Macchine 2006/42/CE e, se pertinente, anche alla Direttiva alla Direttiva EMC 2014/30/UE.
- in overeenstemming is met de bepalingen van de Machine richtlijn 2006/42/EG en wanneer relevant ook met de bepalingen van de EMC richtlijn 2014/30/EU.
- är i överensstämmelse med Maskindirektivets bestämmelser (Direktiv 2006/42/EG) ock om relevant också bestämmelserna EMC-direktivet 2014/30/EU.
- täyttää Konedirektiivin (Direktiivi 2006/42/EY) määräykset ja oleellisilta osin myös EMC-direktiivin 2014/30/EU.
- es conforme a la Directiva de Maquinaria 2006/42/CE y, si aplica, es conforme también a la Directiva EMC 2014/30/EU.
- pozostaje w zgodzie z warunkami Dyrektywy Maszynowej 2006/42/WE i jeżeli ma to zastosowanie również z warunkami Dyrektywy dot. kompatybilności elektro magnetycznej EMC 2014/30/UE.
- отговаря на изискванията на Директивата за Машините 2006/42/ЕО и ако има приложение на изискванията на Директивата за електромагнитна съвместимост 2014/30/EC.
- Megfelel a 2006/42/EK Gépi Eszközökre vonatkozó előírásoknak és amennyiben felhasználásra kerül, a 2014/30/EU Elektromágneses kompatibilitás Irányelv feltételeinek.
- odpovídá základním požadavkům Strojní směrnice 2006/42/ES a jestliže to její uplatnění vyžaduje i s podmínkami Směrnice 2014/30/EU týkající se elektromagnetické kompatibility.
- atitinka Mašinų direktyvos Nr. 2006/42/EB ir, jeigu taikoma, Elektromagnetinio suderinamumo direktyvos Nr. 2014/30/ES reikalavimus.
- je v súlade s podmienkami Smernice 2006/42/ES o strojných zariadeniach a pokiaľ si to jeho uplatnenie vyžaduje aj s podmienkami Smernice 2014/30/EÚ o elektromagnetickej kompatibilite.
- îndeplineşte prevederilor Directivei de Maşini 2006/42/CE şi dacă este utilizată de asemenea cu prevederile Directivei referitoare la compatibilitatea electro-magnetică EMC 2014/30/UE.
- on vastavuses Masinate Direktiivi tingimustega 2006/42/EÜ ning sammuti juhul, kui on tegemist sammuti on vastavuses Elektromagnetilise kokkusobivuse Direktiivitingimustega EMC 2014/30/EL.
- z določili Direktive o strojih 2006/42/ES ter, če je to relevantno, tudi z določili EMC Direktive 2014/30/EU.
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- atbilst mašīnu direktīvai 2006/42/EK, kā arī nepieciešamības gadījumā elektromagnētiskās saderības direktīvai EMC 2014/30/ES.

Zedelgem, date:



Antoon Vermeulen

Dealer's stamp



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