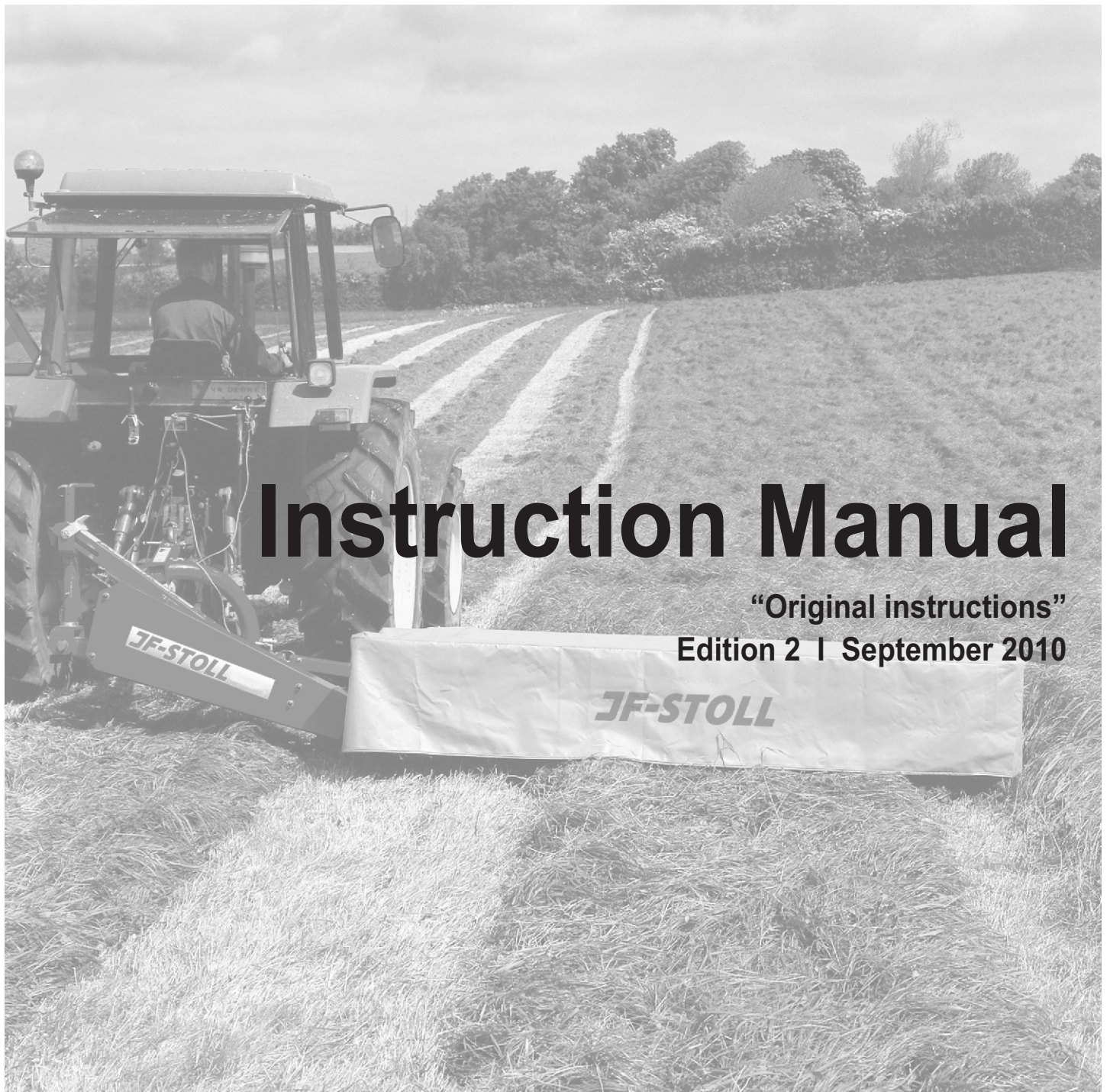

JF-STOLL

Disc Mover

SB 200 | SB 240



Instruction Manual

“Original instructions”

Edition 2 | September 2010

JF-STOLL

EN EC-Declaration of Conformity
according to Directive 2006/42/EC

DE EG-Konformitätserklärung
entsprechend der EG-Richtlinie 2006/42/EC

IT Dichiarazione CE di Conformità
ai sensi della direttiva 2006/42/EC

NL EG-Verklaring van conformiteit
overeenstemming met Machinerichtlijn 2006/42/EC

FR Déclaration de conformité pour la CEE
conforme à la directive de la 2006/42/EC

ES CEE Declaración de Conformidad
según la normativa de la 2006/42/EC

PT Declaração de conformidade
conforme a norma da C.E.E. 2006/42/EC

DA EF-overensstemmelseserklæring
i henhold til EF-direktiv 2006/42/EC

PL Deklaracja Zgodności CE
według Dyrektywy Maszynowej 2006/42/EC

FI EY : N Vaatimustenmukaisuusilmoitus
täyttää EY direktiivin 2006/42/EC

EN We,
DE Wir,
IT Noi,
NL Wij,
FR Nous,
ES Vi,
PT Me,
DA Vi,
PL Nosotros,
FI Nós,

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EN **declare under our sole responsibility, that the product:**
DE erklären in alleiniger Verantwortung, dass das Produkt:
IT Dichiaro sotto la propria responsabilità che il prodotto:
NL verklaren als enig verantwoordelijken, dat het product:
FR déclarons sous notre seule responsabilité que le produit:

ES declaramos bajo responsabilidad propia que el producto:
PT declaramos com responsabilidade própria que o produto:
DA erklærer på eget ansvar, at produktet:
PL deklarujemy z pełną odpowiedzialnością, iż produkt:
FI ilmoitamme yksin vastaavamme, että tuote:

EN **Model:**
DE Typ :
IT Tipo :
NL Type :
FR Modèle :
ES modelo :
PT Marca :
DA Typ :
PL Model :
FI Merkki :

SB 200
SB 240

EN **to which this declaration relates corresponds to the relevant basic safety and health requirements of the Directive:**

2006/42/EC

DE auf das sich diese Erklärung bezieht, den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der EG 2006/42/EC

IT E' Conforme ai Requisiti Essenziali di Sicurezza a di tutela della Salute di cui alla Direttiva e sue successive modificazioni: 2006/42/EC

NL waarop deze verklaring betrekking heeft voldoet aan de van toepassing zijnde fundamentele eisen inzake veiligheid en gezondheid van de EG-machinerichtlijn no: 2006/42/EC

FR faisant l'objet de la déclaration est conforme aux prescriptions fondamentales en matière de sécurité et de santé stipulées dans la Directive de la: 2006/42/EC

ES al cual se refiere la presente declaración corresponde a las exigencias básicas de la normativa de la y referentes a la seguridad y a la sanidad:

2006/42/EC

PT a que se refere esta declaração corresponde às exigências fundamentais respectivas à segurança e à saúde de norma da 2006/42/EC

DA som er omfattet af denne erklæring, overholder de relevante grundlæggende sikkerheds- og sundhedskrav i EF-direktiv sam: 2006/42/EC

PL dla którego się ta deklaracja odnosi, odpowiada właściwym podstawowym wymogom bezpieczeństwa i ochrony zdrowia Dyrektywy Maszynowej: 2006/42/EC

FI johon tämä ilmoitus liittyy, vastaa EY direktiivissä mainitua perusturvallisuus- ja terveysvaatimuksia (soveltuvin osin) sekä muita siihen kuuluvia EY direktiivejä: 2006/42/EC



Konstruktion (Design) + Produktion (Production)
Sønderborg, 15.04.2010 Jørn Freudendahl

FOREWORD

DEAR CUSTOMER!

We appreciate the confidence you have shown our company by investing in a JF-STOLL 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 at the time of publication.

JF-Fabriken - J. Freudendahl 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

The disc mower **SB 200/240** should only be used for the agricultural work which it is intended for, i.e.: Usual work in fields or meadows where natural or planted grass or green crops are cut on the ground for animal feeding purposes. The material is laid in a swath, which allows subsequent picking up.

Of course, the machine should only be connected to a tractor which corresponds with the specifications of the product and is legal to use.

Any use beyond this is outside the intended use. JF-Fabriken A/S is not responsible for any damage resulting from such use, the user bears that risk.

The performance of the machine will depend on the material, i.e. the crop, the condition of the field, the ground, and finally the weather.

The machine can be delivered with either round discs which reduce secondary cutting of the material, or oval discs which ensure that the discs will not be damaged in case a knife is bent upwards.

It is assumed that the work is performed under reasonable conditions, i.e. thorough agricultural knowledge and authorised operation.

Intended use, of course, implies that the prescriptions concerning adjustment, operation and maintenance in the instruction manual are observed.

The disc mower SB should only be operated, maintained or repaired by persons who are confident with the use of the product and are aware of the risks.

In the following there are a number of general and special safety instructions which **must** be observed altogether.

If changes are made on the machine and its construction without permission from JF-Fabriken A/S, JF-Fabriken A/S cannot be held responsible for any damage resulting from this.

SAFETY

The safety of persons and machines is an integral part of JF-STOLL's development work. **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. However, damage can occur as a consequence of misuse and insufficient instruction.

A disc 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 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 himself 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

Before use, the operator should make sure that the tractor and the machine observe the general work-related legislation and can comply with the Road Traffic Act.

The following is a brief description of the measures, which should be a matter of common knowledge to the operator.

1. Always disengage the PTO drive shaft, activate the parking brake and stop the tractor engine before you
 - lubricate the machine
 - clean the machine
 - disassemble any part of the machine
 - adjust the machine.
2. Always lower the machine to the ground and use correct support or transport safety device when the machine is parked.
3. Always use the transport safety device of the cutting unit and the stop valves of the hydraulic cylinders during transport.
4. Never work under a raised machine unless the lift suspension of the tractor is secured by means of a support chain or other mechanical securing device.
5. Always block the wheels before working under the machine.
6. Never start the tractor until all persons are safely away from the tractor and the machine.
7. Make sure that all tools have been removed from the machine before starting the tractor.
8. Make sure that all guards have been mounted correctly.
9. During work never wear loose clothes which can be pulled in by the moving parts of the machine.
10. Do not change the guards or work with the machine when a guard is missing.
11. Always drive with the statutory lights and safety marking during transport on public road and at night.

1. INTRODUCTION

12. Limit the transport speed to maximum 30 km/h if the machine has not been marked with another maximum speed limit.
13. Do not stand near the machine while it is working.
14. When mounting the PTO drive shaft observe that the number of RPM of the tractor matches those of the machine.
15. Always use hearing protectors if the noise from the machine is annoying or if you are working with the machine for a considerable period in a tractor cabin, which has not been silenced sufficiently.
16. Before raising or lowering the machine in the lift suspension of the tractor, check that no persons are near the machine or touching it.
17. Do not stand near the guards of the cutting unit and do not lift the guards before all revolving parts have stopped moving.
18. Never use the machine for other purposes than what it has been constructed for.
19. Do not allow any children to be near when you are working with the machine.
20. Never stand between the tractor and the machine during connection and disconnection.

SPECIAL SAFETY INSTRUCTIONS

When working with mowers the following special measures should be observed.

1. Use a tractor with a cabin provided with safety glass. Furthermore it is advisable to protect the glass of the cabin with polycarbonate plates inside or with a close-meshed net outside. The cabin should be closed when working in the field.
2. Always keep away from the cutting unit when the parts of the machine rotate.
3. When replacing blades it is important to observe the rules in the instruction manual to fulfil the safety requirements. Always use original spare parts.
4. Before use, check the revolving parts (blades, blade bolts, discs and flow caps). If parts are damaged (bent or cracked), worn or missing, they should be replaced immediately.
5. Damaged, worn or missing blades should be replaced in sets in order not to create an unbalance in the machine.
6. Check canvases and guards regularly. Replace worn or damaged canvases.
7. Canvases and guards secure against ejection of stones and foreign matter. Before use canvases and guards must be placed correctly.
8. Lower the cutting unit to working position before starting the power transmission.
9. The field should be kept clear of stones and foreign matter, if possible.
10. Even if the machine is adjusted and operated correctly, stones and foreign matter in the field can be ejected from the cutting unit. Therefore no persons should stand near the cutting unit where the conditions are unknown. Be particularly careful when working along public roads or facilities (schools, parks etc.)
11. Though it is possible, you should never reverse with the cutting unit in working position. The correct movement for the cutting unit only works when driving forward, as there is a risk of damage if driving backwards with the machine in working position.
12. Even though the power transmission has stopped, the revolving parts have a momentum. Therefore, always wait until the revolving parts have come to a complete stop before getting near the cutting unit.
13. If in doubt, always contact the nearest dealer.

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.

If the power of the tractor is considerably larger than the prescribed power, care should be taken to avoid long-term overload. This may damage the friction clutch in the PTO drive shaft which secures against overload.

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 lift suspension of the tractor is intended to carry machines with the own weight in question.

However, the tractor specifications are different within the individual tractor brands. Therefore, at worst, it may be necessary to adjust the weight distribution with a couple of front weights on the tractor.

The machine is designed for 540 rpm. Therefore you should make sure not to use a wrong number of rotations on the PTO by mistake.

To apply the hydraulic function of the machine, it is necessary that the tractor has a single-acting hydraulic outlet with possibility of floating position.

Likewise, make sure that the hydraulic system of the tractor has a pressure of max 210 bar.

Finally, always choose a tractor with a closed cabin when working with a disc mower.

1. INTRODUCTION

CONNECTION AND DISCONNECTION

Always make sure that nobody is standing between the tractor and the machine during connection and disconnection. An unintentional manoeuvre with the tractor may cause serious injury. (See figure 1-1)

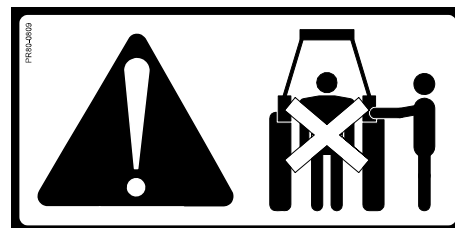


Fig. 1-1

Check that the machine is intended for the number and the direction of rotation of the tractor PTO. (see figure 1-2). A wrong number of rotations over a long period may damage the machine and at worst result in ejection of parts.

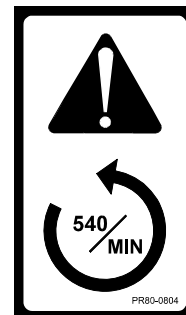


Fig. 1-2

Make sure that the PTO drive shaft has been mounted correctly. The lock pin must be in mesh and the support chains must be fastened at both ends.

The PTO drive shaft must be correctly protected. If the guard is damaged it must be replaced immediately.

Check that all hydraulic couplings are correctly mounted and fastened and that all hoses and fittings are undamaged before activating the hydraulic system. When the tractor engine has stopped, ensure 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. (See figure 1-3).



Fig. 1-3

Check that the cutting unit can move freely before you activate the hydraulic cylinder. 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.

1. INTRODUCTION

ADJUSTMENT

Never adjust the mower while the PTO drive shaft is engaged. Disengage the PTO drive shaft and stop the tractor engine before you adjust the machine. Do not lift the guard until all the revolving parts have stopped moving.

Before starting check that no blades are missing or are defective and can be turned freely. Likewise, check that the blade bolts are not loose or defective. Replace damaged blades and blade bolts. (see section 5: MAINTENANCE)

Check periodically if blades and blade holders are worn according to the rules in the instruction manual. (see section 5: MAINTENANCE)

TRANSPORT

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

It is important to block the cutting unit in folded position with the mechanical transport lock. An unintentional operation of the hydraulic handle for the cylinder, sudden leakage from hoses or fittings or air in the system may cause the cutting unit to be lowered and perhaps hit the ground.

Therefore, always make sure that the transport lock is correctly mounted during transport. (see section 3: ADJUSTMENTS AND DRIVING)

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 roads. Otherwise you risk that the cutting unit suddenly moves downward after you have dismantled the transport lock.

1. INTRODUCTION

WORKING

During the daily work it should be considered that loose stones and foreign matter on the ground might get in contact with the revolving parts 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.

Never allow anybody to stand near the mower during work, especially not children.

On stony ground adjust the stubble height to maximum, reduce the cutting angle as much as possible and limit the driving speed.

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

However, there is **no** securing against shocks if backing with a lowered cutting unit and you **risk damaging the machine**. Check that the safety release can be released and that it is not blocked.

If the cutting unit or the conditioner is blocked because of foreign matter, stop the power take-off of the tractor, activate the parking brake and wait until all revolving parts have stopped. Then try to remove the foreign matter.

Change into a lower tractor gear if working on hilly ground. 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 of the tractor for sharp turns on hillsides and for lifting the machine in the three-point linkage.

GREASING

When lubricating or maintaining the machine, make sure that the cutting unit is resting on the ground or that the lifting cylinders are blocked by means of stop valves.

Also check that the PTO has been disengaged, the tractor engine has stopped and the parking brake is activated before you clean, grease or adjust the machine.

1. INTRODUCTION

MAINTENANCE

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

If a compression spring is damaged and you are unable to release the spring as per instructions, you should let a workshop make the repair since uncontrolled release of a compression spring may cause serious personal injury.

Always make sure that the applied spare parts are tightened to the correct torque and that parts on the machine are retightened regularly. (see section on maintenance)

Never apply other spare parts than those prescribed by the manufacturer.

When replacing parts in the hydraulic system always make sure that the cutting unit rests on the ground.

MACHINE SAFETY

All revolving parts are checked 100 % and balanced by the factory by means of special machines with electronic sensors.

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

If the vibrations or the noise of the machine increase gradually during a period you should stop working and check whether the revolving parts have been damaged. Do not continue the work until the fault has been corrected.

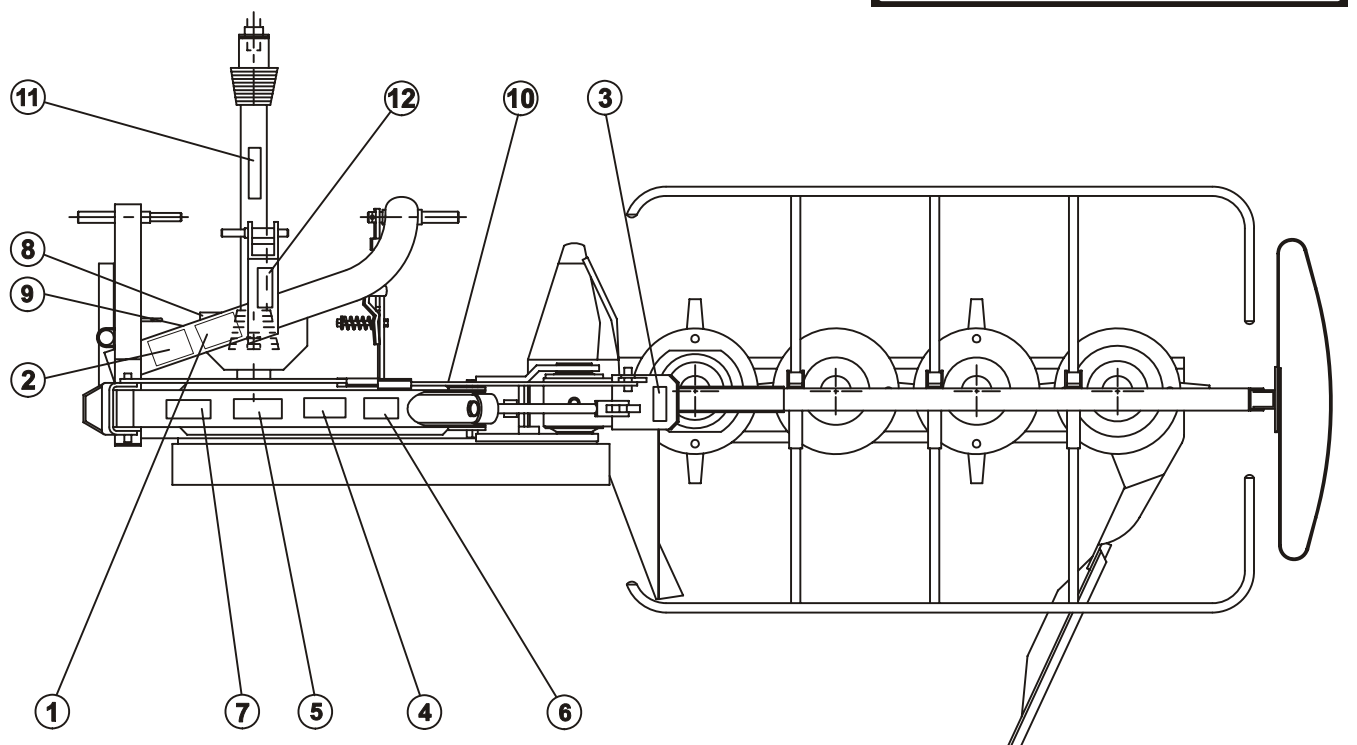
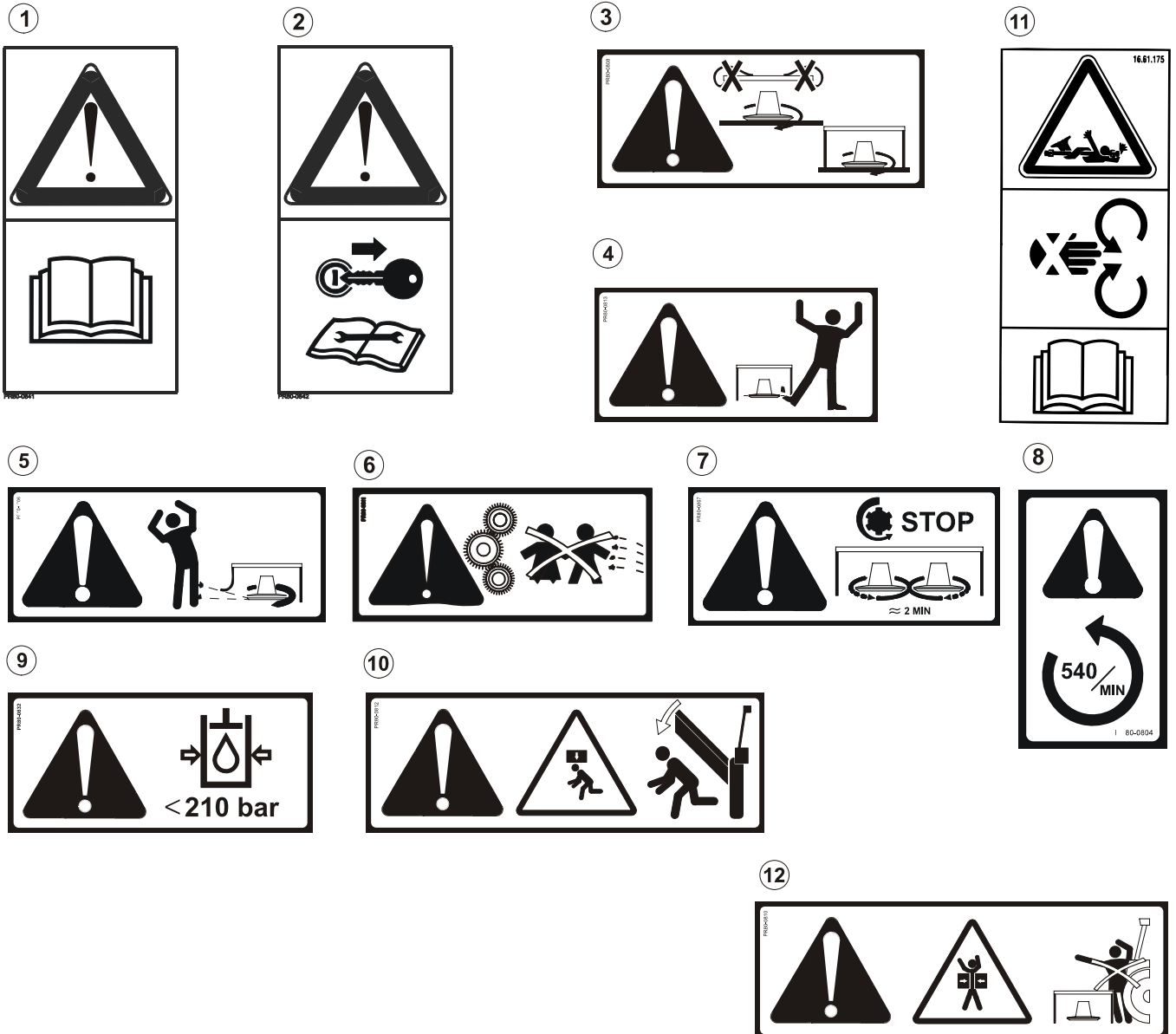
During the season check daily that no blades, carriers or bolts are missing. If any of these are missing, mount new parts immediately.

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

Clean discs and flow intensifiers of earth and grass regularly and check that all parts are intact.

Check regularly that all parts at the mortise joints (various pins and ball heads) are intact and sufficiently lubricated.

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 **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.
- 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 damage the machine with the risk of personal injury as a result.
- 9 **Maximum 210 bar.**
Make sure that the hydraulic components are not exposed to more pressure than maximum 210 bar as there could be a risk of explosive damage of parts. Hereby you expose yourself and others to serious danger of getting hit by metal parts with high speed or oil under high pressure.
- 10 **Remember the transport lock.**
Always remember to activate the transport lock before transporting the machine on public road. Errors in the hydraulic system and unintended manoeuvres may cause the machine to move to working position during transport which may result in serious machine damage or personal injury.
- 11 **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.
- 12 **Risk of getting jammed.**
Never let anyone stand between the machine and the tractor after the connection. Unintentional manoeuvres and misuse may cause serious personal injury.

1. INTRODUCTION

TECHNICAL DATA

Type		SB 200	SB 240
Data	Working width	2.0 m	2.4 m
	Capacity at 10 km/h, effective	2.0 ha/h	2.4 ha/h
	Number of discs/blades	5 / 10	6 / 12
Tractor requirements	Power requirements at 540 rpm	30kW/40HP	35kW/50HP
	PTO rpm	540 rpm	540 rpm
	Oil outlet	1 single-acting	1 single-acting
Equipment	Individual lift of cutting units	Standard	Standard
Dimensions	Swath width, standard	1.4 m	1.8 m
	Swath width with extra swath board	1.1 m	1.5 m
	Net weight	420 kg	460 kg
	Transport width	Tractor width + 0.25 m	Tractor width + 0.25 m
Noise level In the tractor cabin	Machine connected	Window closed	76.5 dB (A)
		Window open	90 dB(A)
	Machine disconnected	Window closed	76.5 dB (A)
		Window open	78 dB(A)

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

ASSEMBLY INSTRUCTIONS

To make it easier and less expensive to dispatch the machine, we deliver it partially assembled to some markets. Follow the mounting instructions below:

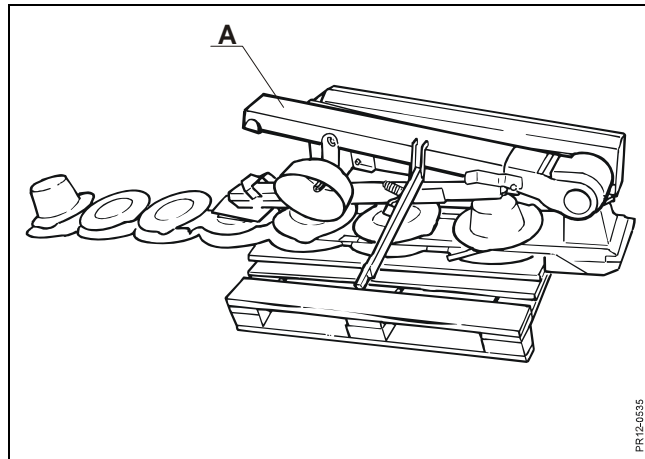


Fig. 1-1

Fig. 1-1 Release all loose parts from the transport package. The cutterbar must temporarily remain fastened to the transport pallet. Move the boom **A** into working position.

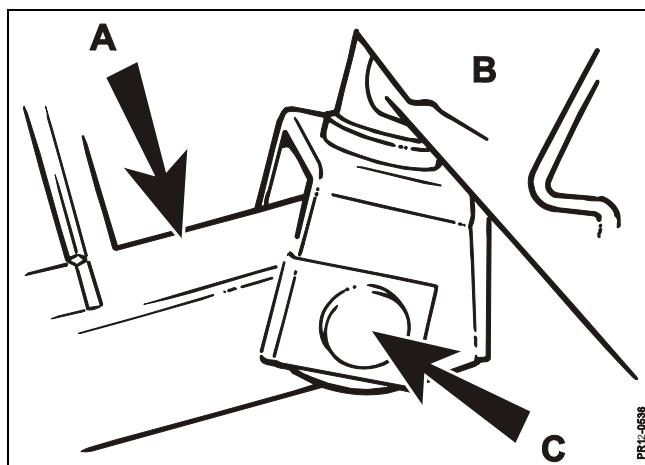


Fig. 1-2

Fig. 1-2 Fasten the headstock **B** to the boom **A** with the pin **C**.

1. INTRODUCTION

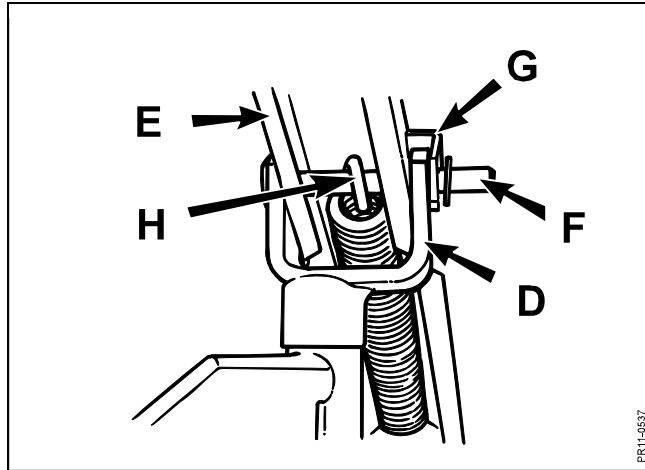


Fig. 1-3

Fig. 1-3 Connect the clevis **D** of the headstock to the relief device **E** by means of the pin **F**. Also remember to mount the parking lock **G** and the relief spring **H**.

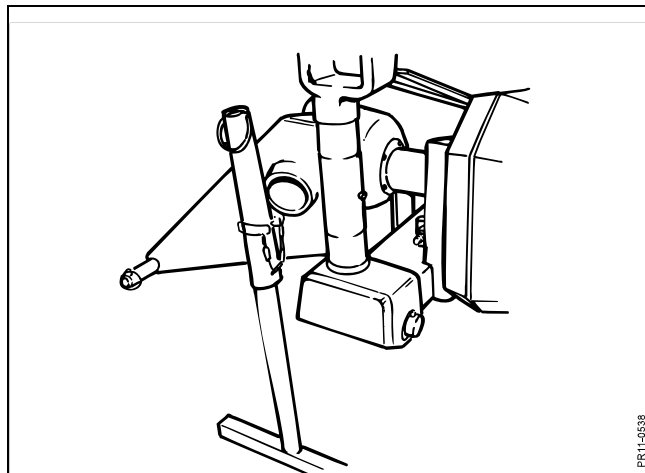


Fig. 1-4

Fig. 1-4 Mount the jack on the headstock.

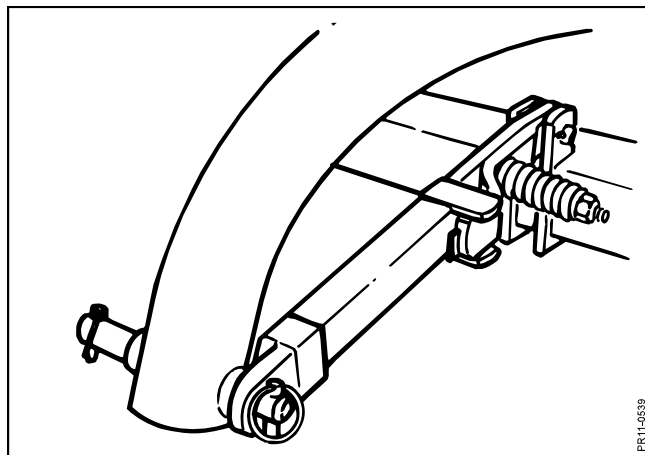


Fig. 1-5

Fig. 1-5 Mount the stone release mechanism on the headstock.

1. INTRODUCTION

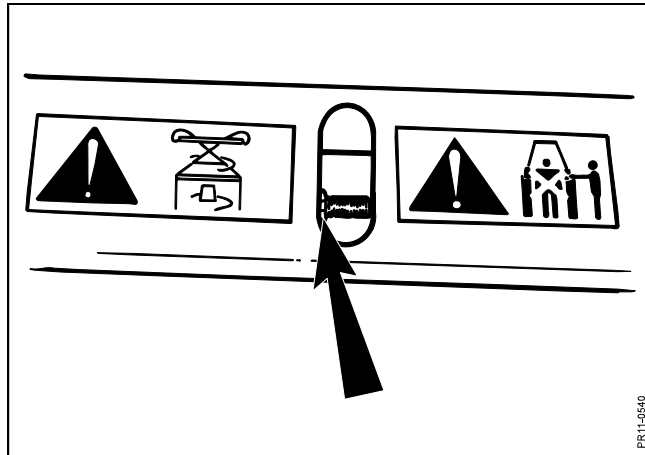


Fig. 1-6

Fig. 1-6 Tighten the relief spring. The nut must be fully tightened.

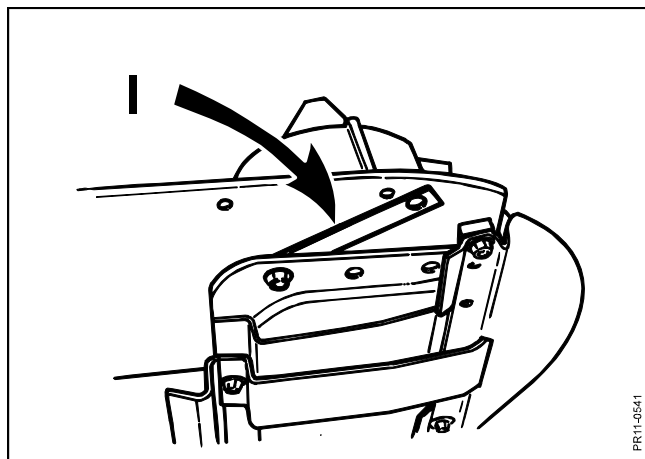


Fig. 1-7

Fig. 1-7 Mount the anchor plate for the right swath board at the outer end of the cutterbar if it has been dismantled. Remember to place the shim (I).

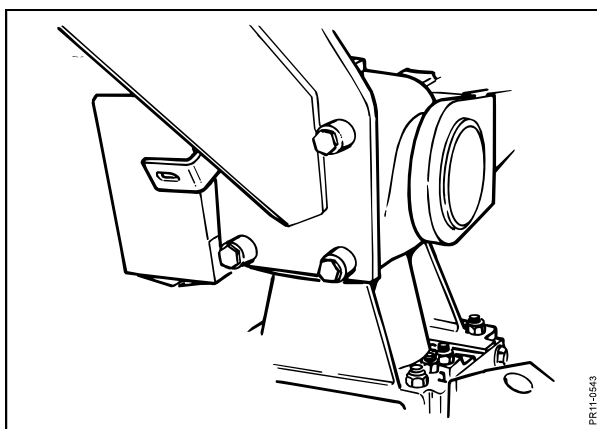


Fig. 1-8

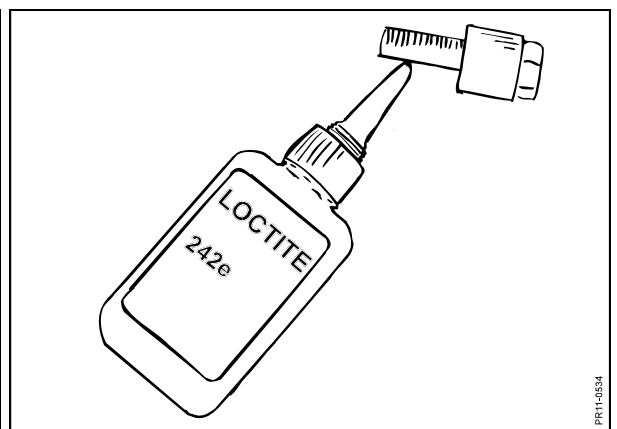


Fig. 1-9

Fig. 1-8 Mount the boom for protective canvas on the bevel gearbox.

Fig. 1-9 Apply a drop of Loctite 242 to ensure that the bolts do not get loose. Tighten the bolts to 120 Nm.

1. INTRODUCTION

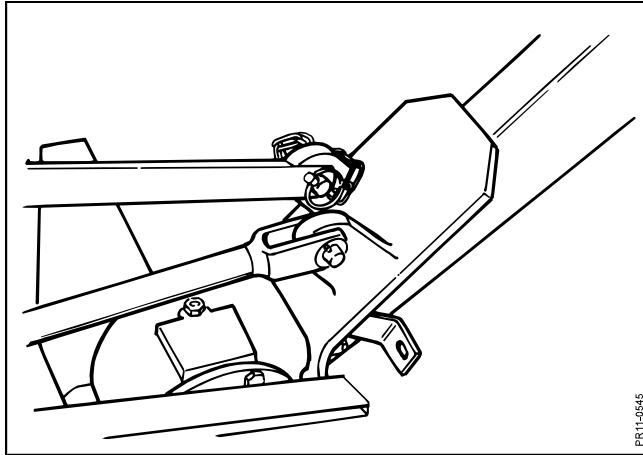


Fig. 1-10

Fig. 1-10 Mount the lifting cylinder on the cutting unit. The easiest way to do this is to pull out the piston rod. In order to do this, the oil in the cylinder has to be pressed out through the quick coupling of the hydraulic hose into an empty oil can.

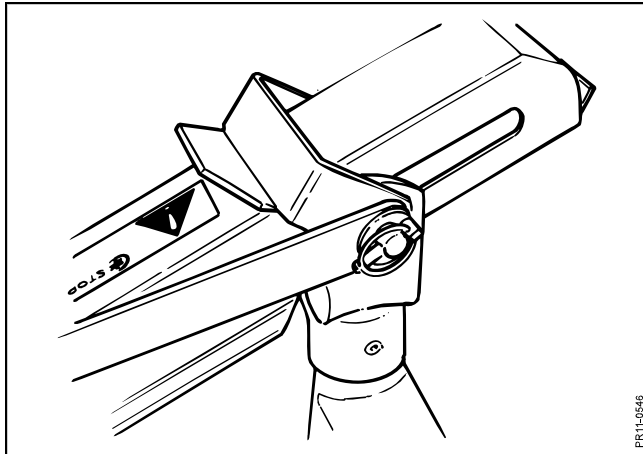


Fig. 1-11

Fig. 1-11 Assemble the two parts of the stabilizer and mount on the pin at the yoke of the headstock and on the cutting unit.

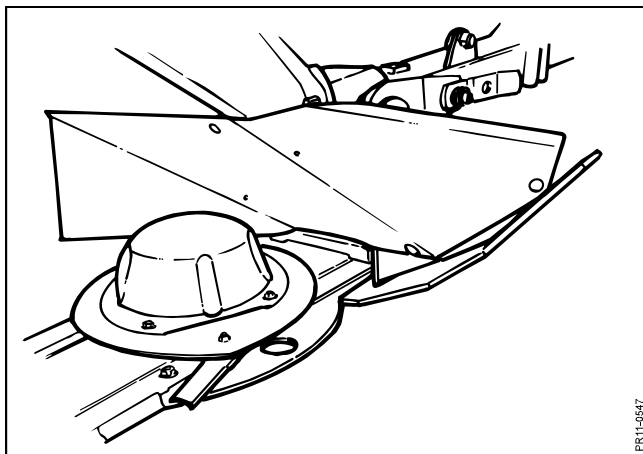


Fig. 1-12

Fig. 1-12 Mount the fixed swath board at the right side of the bevel gearbox.

1. INTRODUCTION

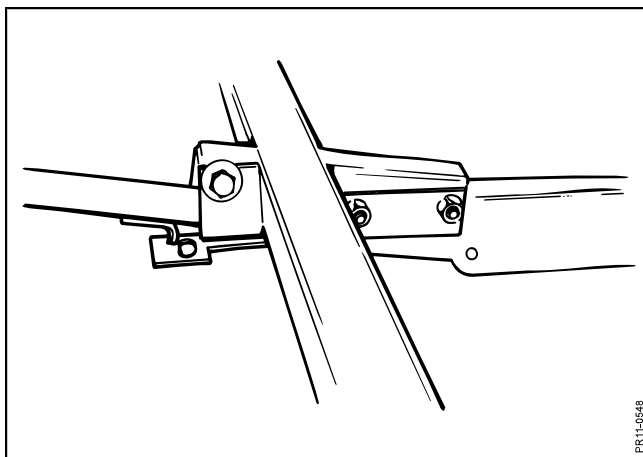


Fig. 1-13

Fig. 1-13 Mount the rear protection hoop with the long, bent end out towards the end of the cutterbar. Remember to mount the retaining spring together with the centre brace.

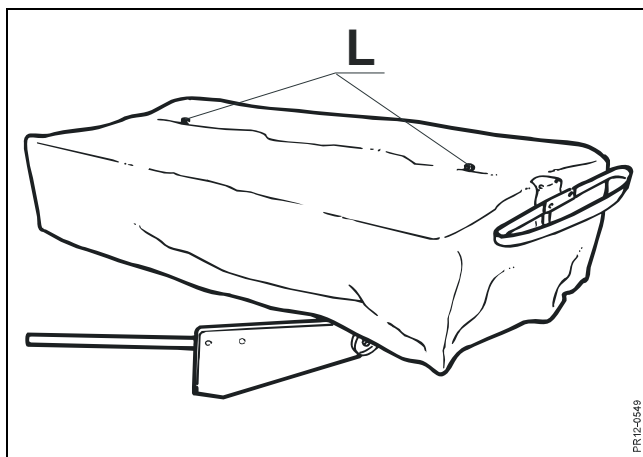


Fig. 1-14

Fig. 1-14 Mount the right swath board on the anchor plate.
Pull the protection canvas out over the protection hoops and fasten it to the boom with the screws (L).
Now the side protection hoop can be mounted at the end of the boom.
Mount the lever in the pocket in front of the protection canvas and fasten it with a screw.

The machine is now ready to be connected to a tractor.

2. CONNECTION AND TEST DRIVING

CONNECTION TO THE TRACTOR

PLACING SIDEWAYS

The machine can be adjusted to the 3-point linkage and the track width of the tractor in three ways:

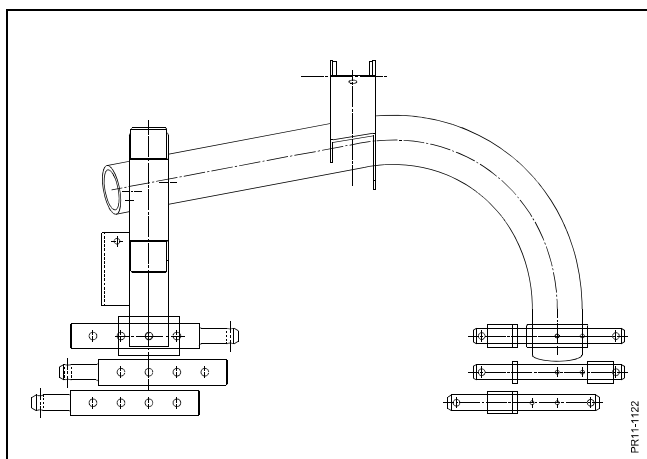


Fig. 2-1

Fig. 2-1 CONNECTION

1. Place the tractor right in front of the three-point linkage of the machine.
2. Adjust the link arms of the tractor so that they are at the same height.
3. Carefully reverse the tractor while lifting the link arms until the draw pins of the machine can be connected to the tractor. Connect the pins.
4. Mount the top link of the tractor and place it as parallel to the link arms of the tractor as possible.
5. Connect the lifting cylinder to the single-acting hydraulic outlet of the tractor.
6. Lock the link arms of the tractor to prevent them from moving sideways.

HYDRAULIC CONNECTION

The machine is equipped with a lifting cylinder for transport.



DANGER: The hydraulic components must not be exposed to a higher pressure than 210 bar as a higher pressure may cause parts to be damaged. Hereby a risk of serious personal injury occurs.
Make sure that no persons are near when activating the hydraulics for the first time.

NB: Remember to disconnect the hydraulic hose from the coupling when disconnecting the machine.

JACK

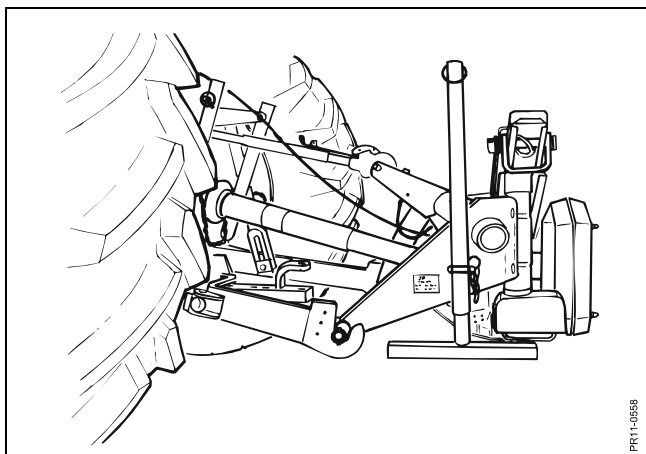


Fig. 2-2

Fig. 2-2 When the machine is going to be parked disengaged, the jack must be lowered to rest on the ground and be secured with the special pin. When the machine is connected to the tractor, the jack must be raised so that the machine can move freely within the operation area. Secure the jack with the special pin.

ADJUSTMENT OF DEPTH STOP ON THE LINK ARMS

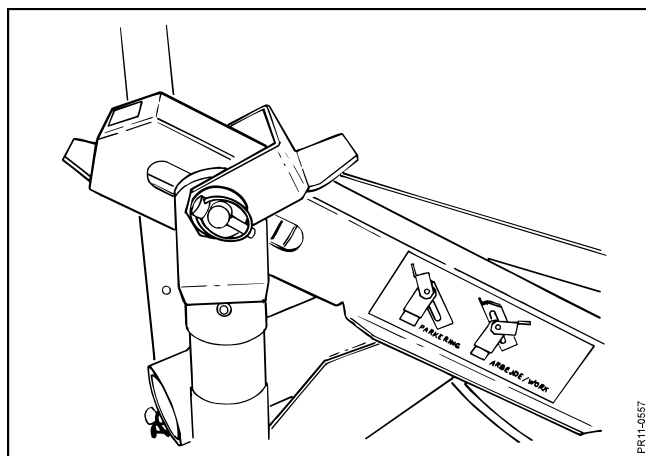


Fig. 2-3

Fig. 2-3 The depth stop on the link arms must be adjusted so that there is a 2 cm oblong hole above the pin in the relief device.

SUPPORT CHAIN

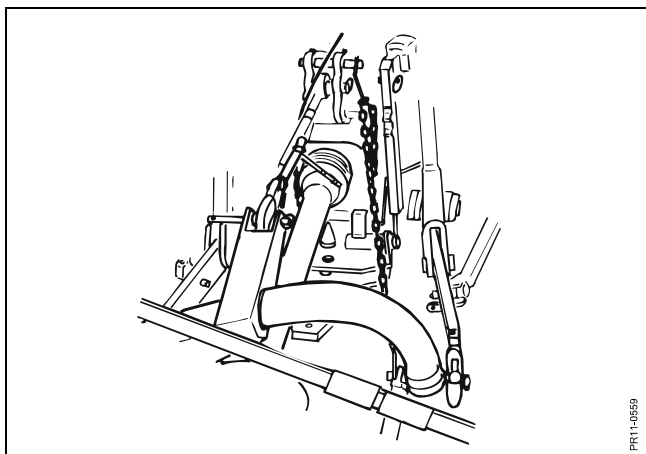


Fig. 2-4

Fig. 2-4 A support chain can be supplied to stabilise the depth stop, -JF- No.: see spare parts list.

TRANSPORT LOCK

The machine has a mechanical transport lock. When the machine is connected and the cutting unit is lifted with the hydraulic lifting cylinder, it must be secured before transporting the machine. The transport lock ensures that the cutting unit is fixed in the top position and cannot fall down if the hydraulics is misused or if a hose is damaged.

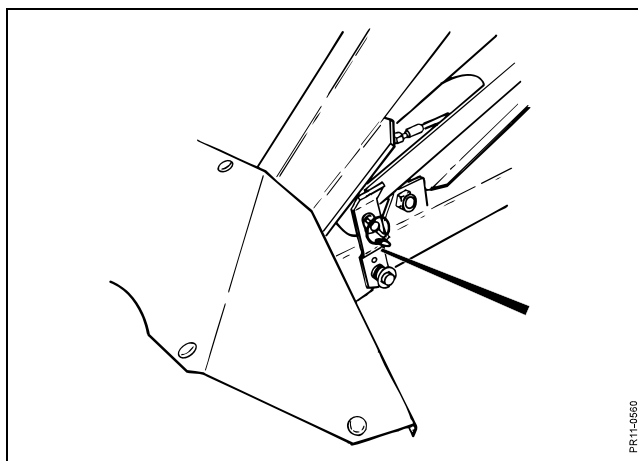


Fig. 2-5

Fig. 2-5 Before transporting the machine, release the spring transport lock from the support pin and turn it 90° upwards over the pin and secure it by means of the cotter pin.



IMPORTANT: The lock must always be in the position shown on fig. 2-5 when transporting the machine.

After transport, when the machine is to be prepared for work, remove the cotter pin from the pin, tip the transport lock and turn it 90° over the support pin until the pin is released.

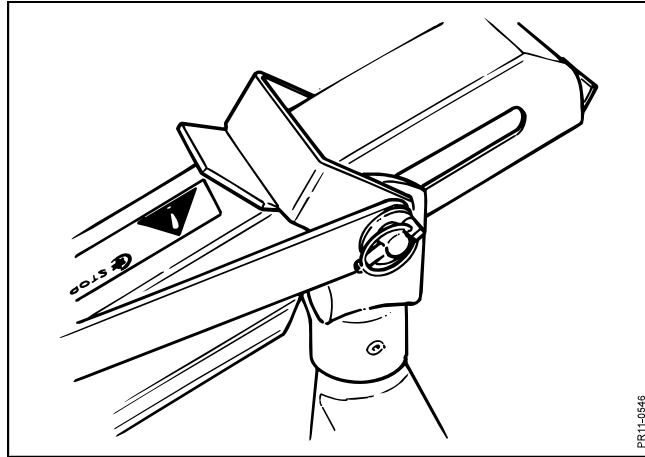


Fig. 2-6

Fig. 2-6 The machine is also equipped with a parking lock (yellow), which must be tipped back before driving in the field.

ADJUSTMENT OF THE PTO DRIVE SHAFT

The PTO drive shaft between the tractor and the machine must now be mounted to complete the drive line.

Dimensions and movements of the link arms of the individual tractor brands are not standardised. Therefore, the distance from the power take-off (PTO) of the tractor to the input shaft (PIC) on the machine may vary according to the tractor.

It may therefore be necessary to shorten the PTO shaft before using it on the machine to ensure correct operating ability.



IMPORTANT: Do not shorten your new PTO shaft until you are certain that it is necessary. From the factory the shaft is adjusted to the distance from PTO to PIC which is standard on most tractor brands.

If it is necessary to shorten the shaft on your machine, the following applies:

2. CONNECTION AND TEST DRIVING

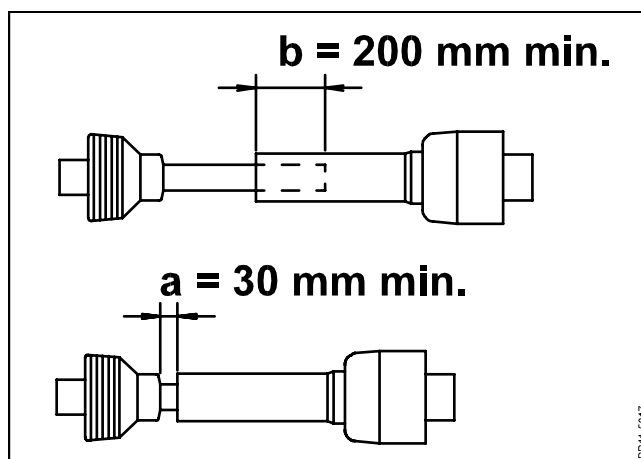


Fig. 2-7

Fig. 2-7 Adjust the length of the PTO shaft so that it:

- **has as much overlapping as possible**
- **in working position does not have less overlapping than 200 mm.** (As the distance from PTO to PIC varies when the machine moves up and down within the normal working area, make sure that the overlapping is sufficient in both extreme positions).
- **is not compressed more than the prescribed 30 mm in order not to bottom the shaft.**



IMPORTANT: The specified values for overlapping on the tubes of the PTO shaft must be observed as shown on figure. 2-7.

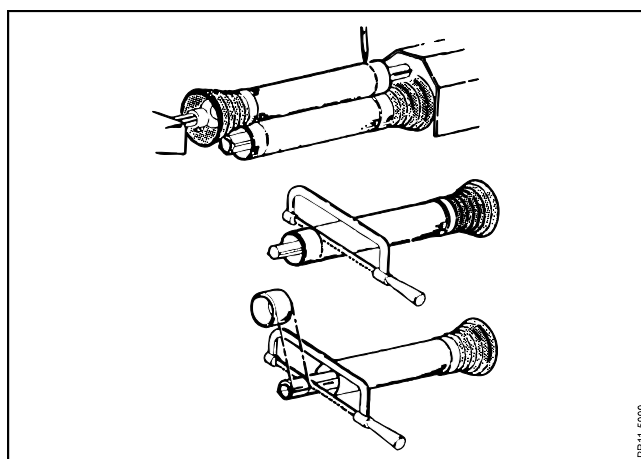


Fig. 2-8

Fig. 2-8 Shortening procedure:

- 1) Separate the PTO shaft in two halves and mount these on PTO and PIC, respectively, when these are at the same horizontal level. This corresponds with the shortest possible length of the shaft on this machine and usually corresponds with the working position when the machine rests on even ground.
- 2) Hold the ends of the shaft parallel side by side and mark the 30 mm (minimum) on the tubes. See also fig. 2-8.

2. CONNECTION AND TEST DRIVING

- 3) Shorten all 4 tubes equally.
- 4) Round off the ends of the profile tubes and remove burrs carefully with a file until the tubes are smooth. It is important **to deburr the inside of the outer tube and the outside of the inner tube**. Thereby the surface of the profile tubes is secured against damage by sharp edges and impurities.
- 5) Clean the ends of the profile tubes of dirt and loose burrs.



WARNING: Lubricate the profile tubes carefully before reassembling. If the shaft has insufficient lubrication it may lead to high frictional forces during work which may cause the transmission to be overloaded.

When the PTO shaft is assembled the end with the free wheel must be fastened to the PIC shaft on the machine.

Check that the PTO has sufficient overlapping in all positions by raising and lowering the machine by means of the hydraulics.

Finally, check that the number of rotations of the tractor PTO is 540 RPM as the machine is intended for.

A too high number of rotations of the PTO can be highly dangerous. A too low number of rotations, however, may cause insufficient cutting and an unnecessarily high torque load on the transmission.

MAXIMUM ANGLES

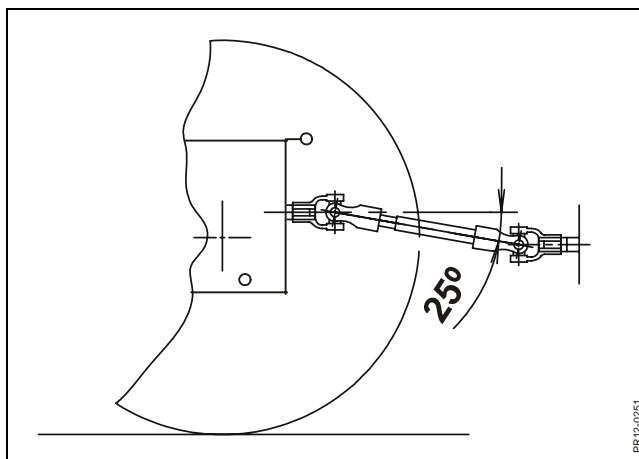


Fig. 2-11

Fig. 2-11 For a standard PTO drive shaft we recommend the following maximum angles for the individual universal joints:

2. CONNECTION AND TEST DRIVING

Constant operation	25°
Short operation	45°
Standstill	90°

The angles at each universal joint should be approximately the same, i.e. the deviation should be maximum 5°. If you find bigger deviations when lifting the machine, you should change the placement of the top link at the tractor side and make sure that the top link and the link arms are more parallel.

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 close 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, disconnect the PTO immediately and let the machine "rest".

TEST DRIVING

CHECK BEFORE TEST DRIVING

Before test driving, the following should be checked:

- 1) That the hydraulic components are correctly connected and tightened.
- 2) That the PTO shaft of the tractor has the correct number of RPM (540 rpm).
- 3) That the cutterbar and the bevel gearbox have the correct oil level. See section 4: GREASING.
- 4) That all lubricating points have been greased. See section 4: GREASING.
- 5) That all blades on the discs are intact and correctly tightened.
- 6) That connection of the PTO shaft of the tractor is made with the cutting unit lowered to the ground and the machine in working position.
- 7) That connection of the PTO shaft of the tractor is carried out with a low number of RPM on the engine.
- 8) That the PTO shaft between the PTO of the tractor and the PIC of the machine is not squeezed, or bottomed, when the link arms of the tractor are raised and lowered carefully.
- 9) That the safety guard of the PTO shaft does not rotate with the shaft, that the support chains are fastened correctly.
- 10) That the protection (guards and canvases) on the machine are complete, intact and correctly mounted.
- 11) That all tools have been removed from the machine.
- 12) That nobody stands near the machine during operation.

2. CONNECTION AND TEST DRIVING

THE ACTUAL TEST DRIVE

Connect the PTO shaft carefully and let the engine run at a low number of RPM for some minutes.

If there is no unintended noise or unusual vibrations, the speed can gradually be increased to normal number of RPM (PTO = 540 rpm).

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

NB: All machines have been tested for vibrations before they leave the factory. This is an essential part of the company's quality assurance.

It is, however, necessary to check regularly whether the machine has unnatural vibrations, especially during test driving.



WARNING: When discs and blades rotate with more than 3000 rpm, even slightly damaged rotating parts (blades, discs and caps) may result in vibrations which in the long run may lead to secondary damage such as cracks or fractures.

Even though the machine has been secured against impacts and vibration damage, there will always be a certain risk, though limited.

During the season check daily if blades, discs and caps are damaged and replace parts if necessary.

3. ADJUSTMENTS AND DRIVING

CONSTRUCTION AND FUNCTION

SB 200 / SB 240 is a disc mower designed to be mounted at the rear of the tractor and places a swath at the right side of the wheels of the tractor.

THE MOST IMPORTANT ELEMENTS OF THE MACHINE

BLADES

On each of the 5 or 6 discs on the machine is a set of profile blades bolted on. These blades are made of 4 mm hardened high-strength steel.

REMEMBER: Before working with the machine, check:



- that all blades are there and correctly mounted.
- that no blades are bent or cracked.
- that all blades can turn freely around the blade bolt.

A special characteristic of the machine and the cutterbar is the large effective cutting length of the blades.

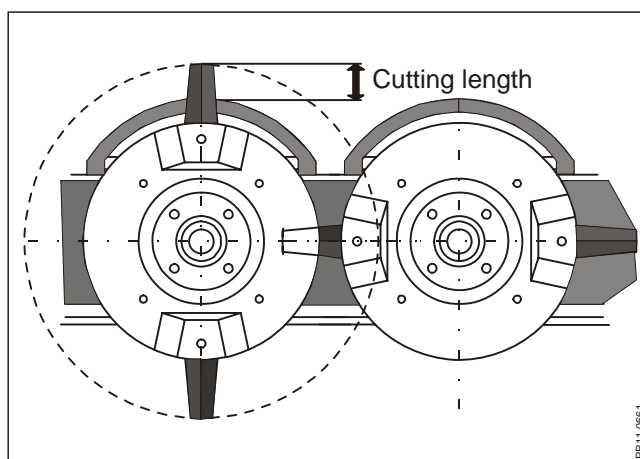


Fig. 3-1

Fig. 3-1 The cutting length of a blade is defined as the distance from the front edge of the stone protector to the blade end/point. The larger the cutting length per blade, the higher the maximum possible driving speed with the machine before an unclear cut appears.

3. ADJUSTMENTS AND DRIVING

The following example will illustrate this:

The cutting length of the blade	0.05 m
Number of blades per discs	2
RPM of the blade	3040 rpm
Minutes per hour	60
Metres per kilometre	1000
Maximum driving speed	<u>18.24 km/h</u>

This result shows that the large effective cutting length gives a high reserve capacity in this respect.

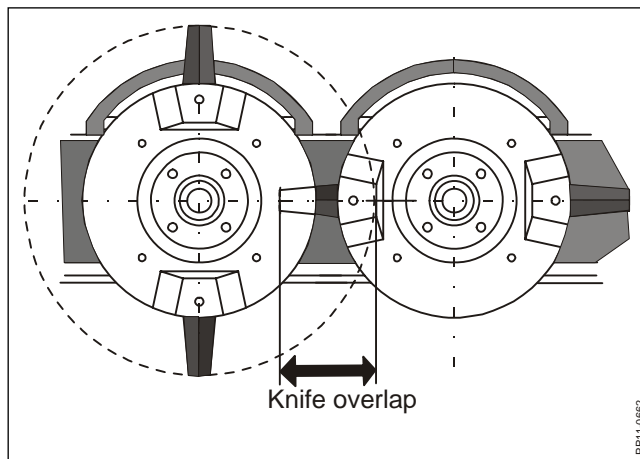


Fig. 3-2

Fig. 3-2 At the same time, the cutterbar has a large blade overlap between the discs. This will reduce the formation of stripes between the discs. The blade overlapping helps keeping the bar clean and reduces the risk that the crop will be wrapped round the hubs under the discs.

DISCS

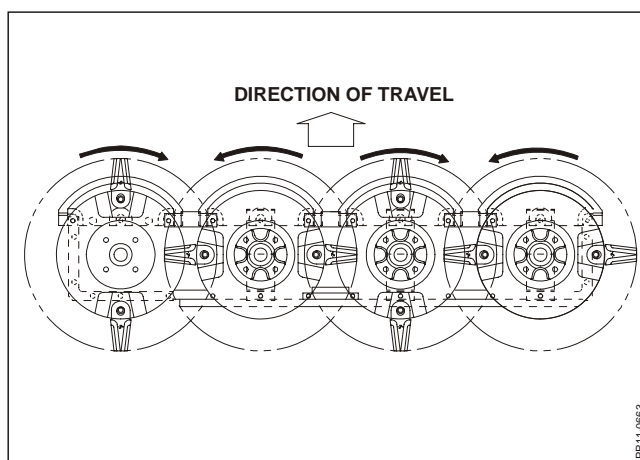


Fig. 3-3

Fig. 3-3 The discs turn towards each other two and two in order to ensure the crop has the shortest passage across the cutterbar and thereby optimise the crop flow.

3. ADJUSTMENTS AND DRIVING

This construction ensures that the cutting is not blocked by the material and that there is no risk of secondary cutting.

NB: It is not possible to change the direction of rotation of the individual discs.

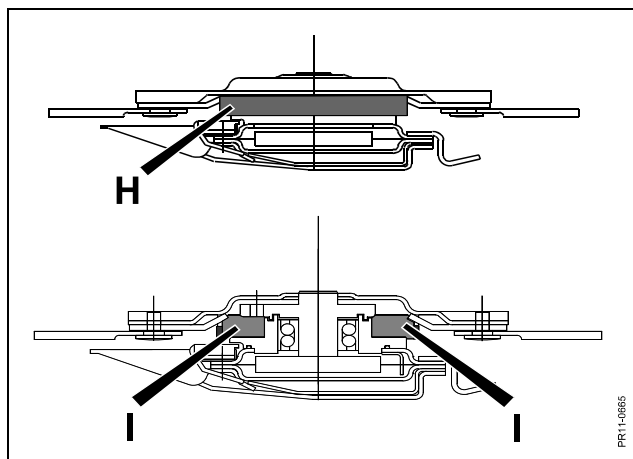


Fig. 3-4

Fig. 3-4 Under the discs there is an anti-wrapping ring **H** which is going to ensure that e.g. cords, threads or wires are not wrapped around the discs and their hubs and block the rotating movement.

Regularly, the discs should be dismantled and dust and other impurities which may accumulate between the discs and hubs on the cutterbar should be removed (**I**).

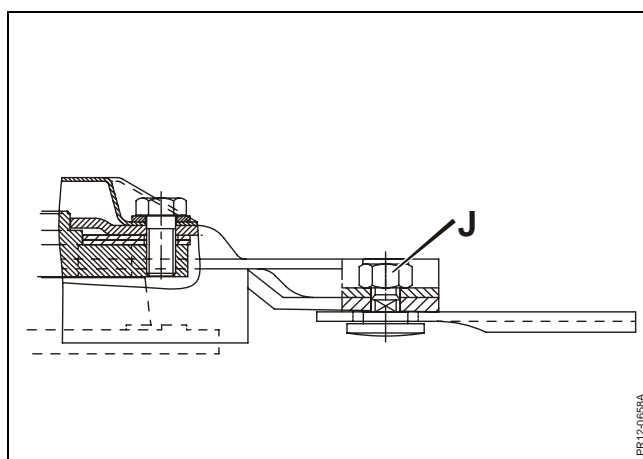


Fig. 3-5

Fig. 3-5 On the discs the nuts **J** of the blade bolts are countersunk and thereby protected against wear. Since the countersunk hole is open toward the edge of the disc, dust and dirt cannot get stuck in the countersinking and make it difficult to replace the blades.

FLOW INTENSIFIERS

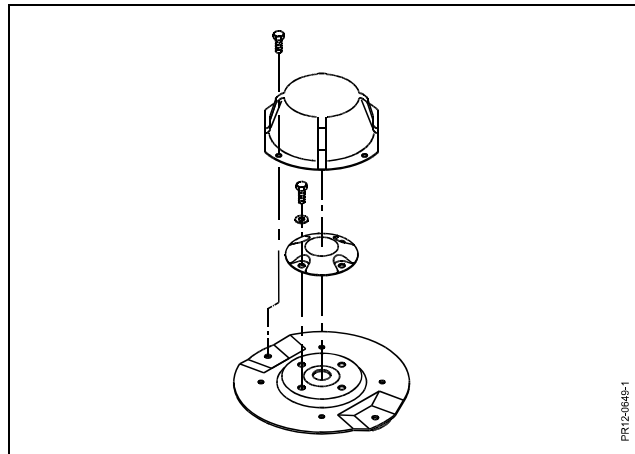


Fig. 3-6

Fig. 3-6 To ensure that the machine forms a gathered swath behind the machine, a flow intensifier, a so-called cap, has been mounted on the end discs to optimise the crop flow across the cutterbar.
The two caps are there to ensure that the crop is transported the right way around the disc (towards the middle) and across the cutterbar.

WORKING ADJUSTMENTS

In order to optimise the functions of SB 200 / SB 240 there are several elements which must be adjusted correctly.

RELIEF

In order to spare the stubble during work, reduce the wear on the guide shoes of the machine and ensure optimal ground following, the machine is relieved by means of a strong tension spring.

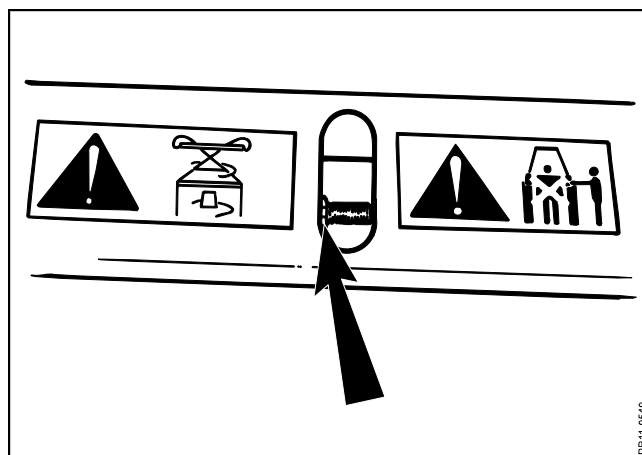


Fig. 3-7

Fig. 3-7 If the machine has a tendency to be lifted from the ground at the end which is closest to the tractor, the relief spring is tightened too much. This can be corrected by loosening the nut by turning it a couple of times.

SAFETY RELEASE

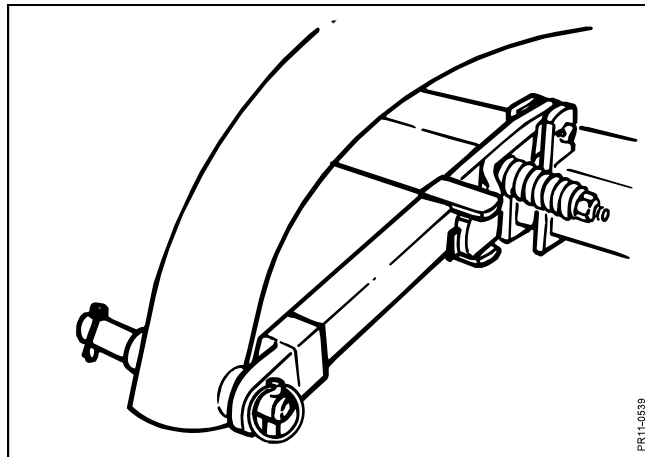


Fig. 3-8

Fig. 3-8 The machine is equipped with a safety release which allows the cutting unit to swivel to the rear when the pressure from the front gets too high, for instance if driving against firm obstacles such as a tree, a pole, stones or the like. If the safety release has been activated, the easiest way to reengage it in working position is to reverse the tractor with a jerk. If the safety release releases too easily, the spring should be tightened. However, there is **no** securing against shocks if backing with a lowered cutting unit and you **risk damaging the machine**.



WARNING: Do not tighten the spring so much that the safety release is blocked as the machine may be damaged unnecessarily in case of collision.

ADJUSTMENT OF THE CUTTING HEIGHT

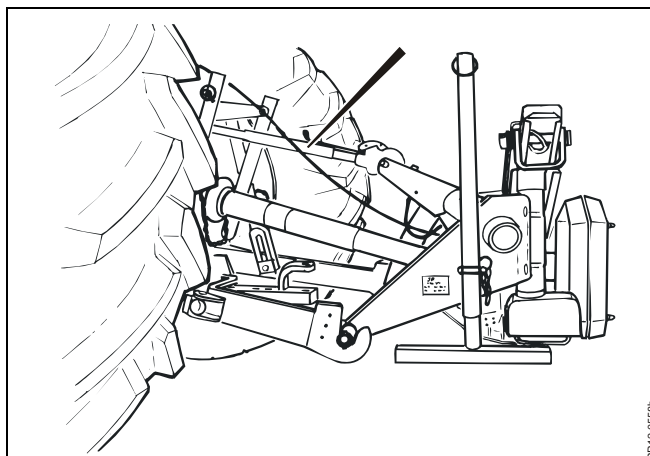


Fig. 3-9

Fig. 3-9 The cutting height can be adjusted with the top link.

3. ADJUSTMENTS AND DRIVING

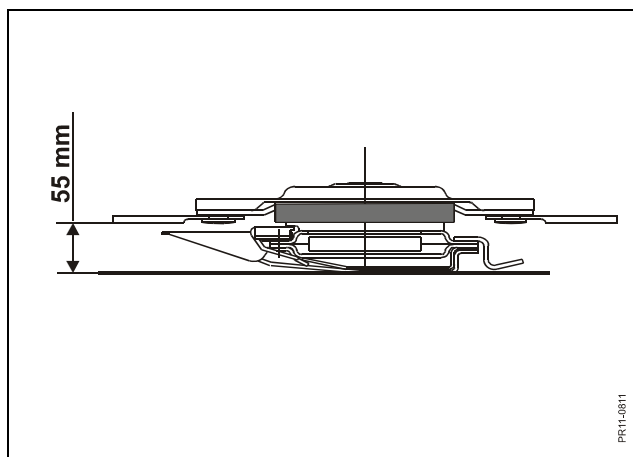


Fig. 3-10

Fig. 3-10 A machine in horizontal position has a theoretical cutting height of 55 mm.

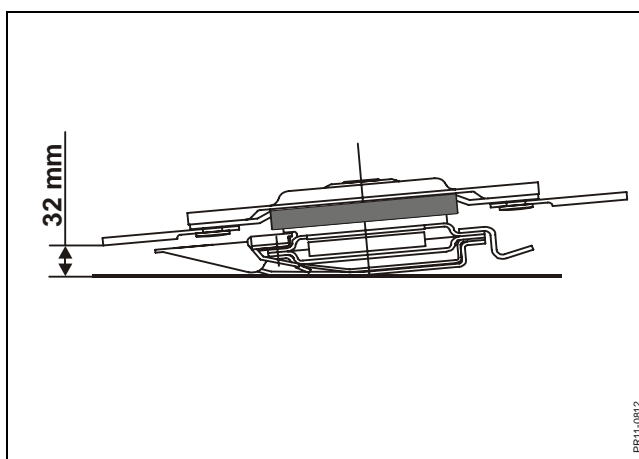


Fig. 3-11

Fig. 3-11 If the machine is inclined approximately 7° to the front, the cutting height will be 32 mm.

Do not incline the machine further as the PTO drive shaft may be damaged, discs and blades are worn too quickly and the feed is soiled.

If you want an extra high stubble, e.g. when topping fallow fields, it is possible to raise the position of the cutterbar by mounting high guide shoes on the machine. These are available as optional equipment. See section 6: MISCELLANEOUS.

PARKING

Park the machine with the cutting unit resting on the ground.

Always park the machine on even and stable ground. If this is not possible, support blocks or plates must be used.

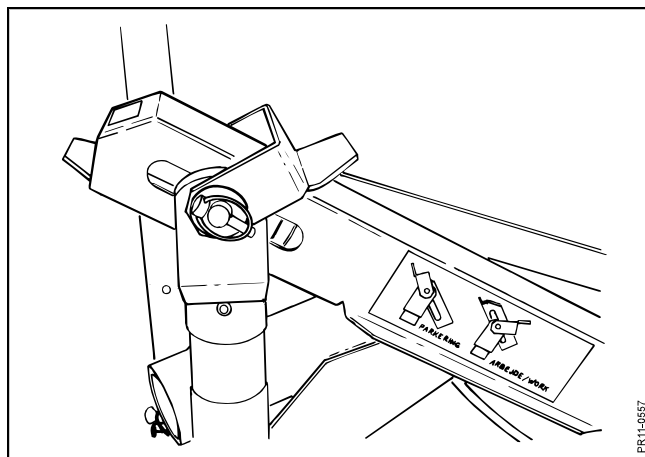


Fig. 3-12

- Fig. 3-12** -
- Activate the parking lock.
 - Lower the jack.
 - Disengage the hydraulic connection.
 - Lower the link arms until the machine rests on the jack.
 - Disconnect the link arms and the top link. Remember to place the PTO on the support hoop to avoid dirt.

DRIVING WITH THE MACHINE

STARTING

When arriving at the field you want to work in, the following procedure must be followed:

- 1) Lower the cutting unit to the ground without driving into the crop.
- 2) Connect the PTO of the tractor with the engine at idle speed.
- 3) Increase the number of rotations gradually until the wanted 540 rpm on the PTO is obtained.
- 4) Drive forwards and lead the cutting unit into the crop.

NB: It is normal that the cutting parts (cutterbar, discs and blades) make noises when starting due to the high number of revolutions of the discs (3000 rpm).
The noise will be reduced when the machine starts working in the crop.



IMPORTANT: When the machine is in working position during mowing, the single-acting hydraulic cylinder for lifting the cutting unit must be in floating position so that the cutting unit can move freely.

3. ADJUSTMENTS AND DRIVING

WORKING IN THE FIELD

There are several important conditions to be aware of when mowing with the machine.

Theoretically, it is possible to work with a speed of 18 km/h. However, always adjust the driving speed to the conditions, i.e. the amount of crop and the conditions of the ground.

The operator should always have full control of the tractor and be able to avoid irregularities of the ground and foreign matter in front of the tractor and the machine.

Reduce the driving speed if:

- the ground is uneven or hilly
- the crop is lodged
- the crop is unusually high and thick

Increase the driving speed if:

- the crop is low and thin
- the crop contains for instance peas etc.

As mentioned earlier, it is important that you pay special attention when working on hilly ground. Reduce the driving speed and be aware of the movement of the machine on the ground.

On hilly ground there is a greater risk that the machine hits a bank of earth or foreign matter and you, as tractor driver, should minimise the risk of damage to the equipment.

REMEMBER: As long as the stubble remains uniform and the machine moves evenly and smoothly across the ground, the driving speed is correct.



DANGER: When driving along field boundaries and steep slopes, always be careful and never drive too fast, as there is a risk of foreign matter on the boundary and often varying ground conditions along steep slopes and boundaries.

During mowing make sure to keep the rpm of the PTO-shaft constant (540 rpm), so that the cutting parts of the machine can work optimally.



DANGER: After having worked with the machine for a long time, the cutterbar will have a temperature of about 80 degrees and you must be aware of the risk of getting burnt if you want to replace blades or other parts.

MOWING A SLOPE

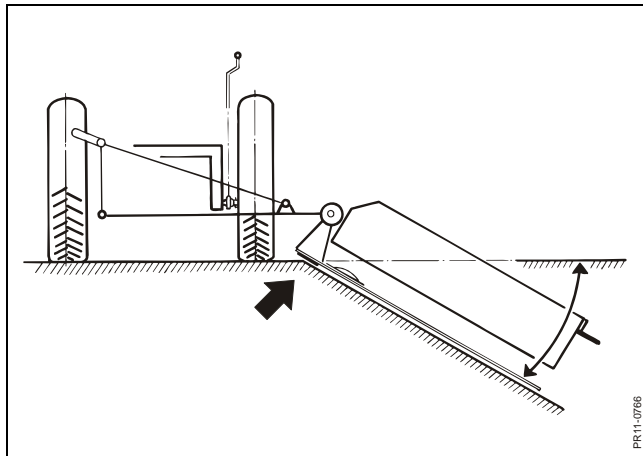


Fig. 3-13

Fig. 3-13 When mowing ditches, move the cutterbar out over the ditch so that the left guide shoe rests on the edge and the cutterbar is hanging freely out over the ditch. Lower the link arms of the tractor (past the depth stop). The cutterbar will now go down to the slope. The lifting cylinder must still be in floating position.

TURNING

When turning in the field, lift the cutting unit from the ground with the link arms and reduce the number of rotations.

NB: Noise may occur from the PTO shaft between tractor and machine when the machine is lifted completely during turning. This noise is due to the angle of the shaft and is practically of no importance as the torque of the shaft is minimal in this situation.

Before increasing the number of rpm again, the cutterbar must be lowered to working position.

When turning on hilly ground or on steep slopes, turn with the machine towards the hill/slope, if possible, to ensure sufficient stability of the tractor.

Always reduce the driving speed when turning in the field.



IMPORTANT: The construction of the machine does not allow you to reverse when the machine is in working position. Therefore, **always** lift the cutting unit from the ground when turning.



IMPORTANT: After heavy collisions with obstacles, always check the machine for any possible damage. Especially supporting parts and the cutting parts.

3. ADJUSTMENTS AND DRIVING

TRANSPORT

When driving on public roads or outside fields, the machine must be raised with the lifting cylinder, and **the transport lock must be correctly fastened** see fig. 2-5.

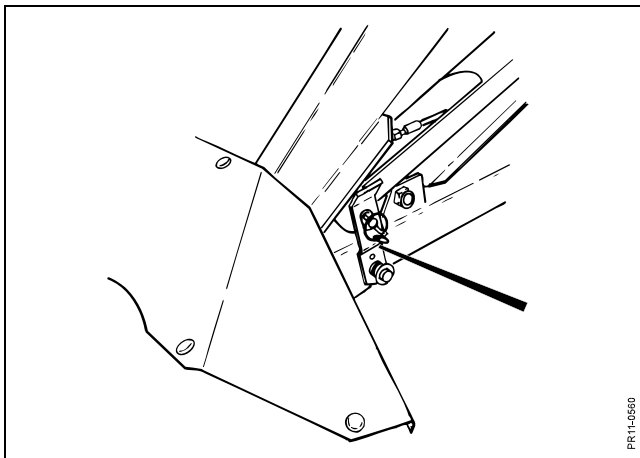
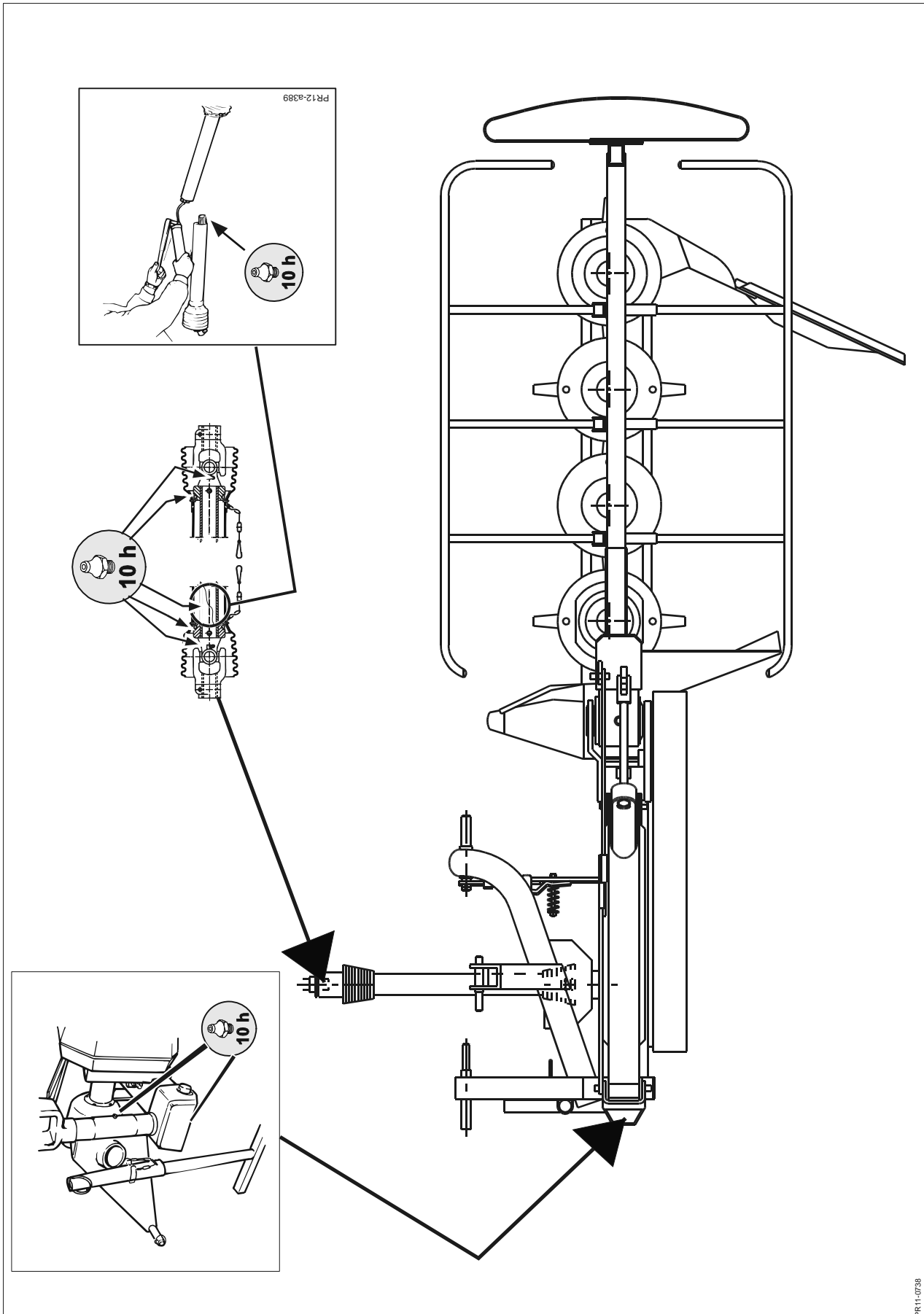


Fig. 2-5

4. GREASING

Lubrication chart for disc mower type **SB 200 / SB 240.**

The indicated lubricating points must be lubricated according to the prescribed operation interval.



4. GREASING

GREASE

Always make sure that the machine has been properly and sufficiently greased before working.

Go through the greasing chart on the opposite page.

Type of grease: Universal grease of good quality.

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



IMPORTANT - REMEMBER: Lubricate the PTO shaft after every 10 working hours. 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 during work.

If you neglect to lubricate the profile tubes sufficiently, it will result in high frictional forces (seizing) which will damage the profile tubes and in time also connecting shafts and gearboxes.

OIL IN THE CUTTERBAR

THE CUTTERBAR

Correct oil content: depends on the size of the cutterbar:

SB 200:	1.7 litre
SB 240:	2.0 litre

4. GREASING

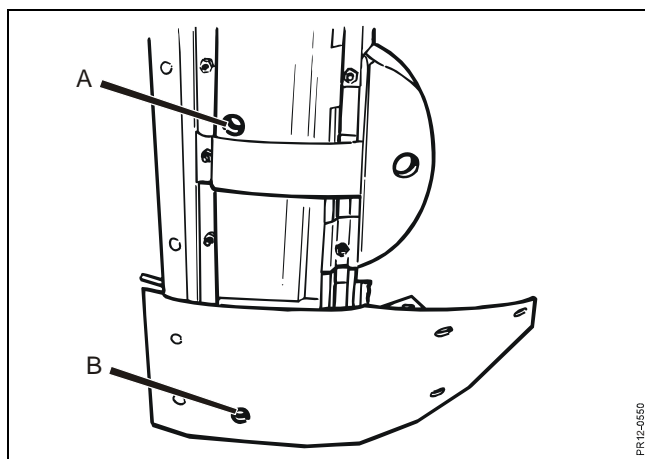


Fig. 4-1

Fig. 4-1 The oil level is correct when the oil is filled to **A** while the machine is in vertical position.

To drain the oil, lower the cutterbar to 45°, dismount the two plugs **A** and **B** and drain the oil.

Oil change: The first change of oil in the cutterbar must be made after 10 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.

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

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

Correct oil type: **Recommended quality: API GL-4 SAE 80W**

In some countries, this oil is not available. In these cases API GL-4 or API GL-5 SAE 80W-90 multi grade oil can be used as an acceptable alternative. Never use pure SAE 90W oil in the cutterbar.



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

OIL IN THE BEVEL GEARBOX

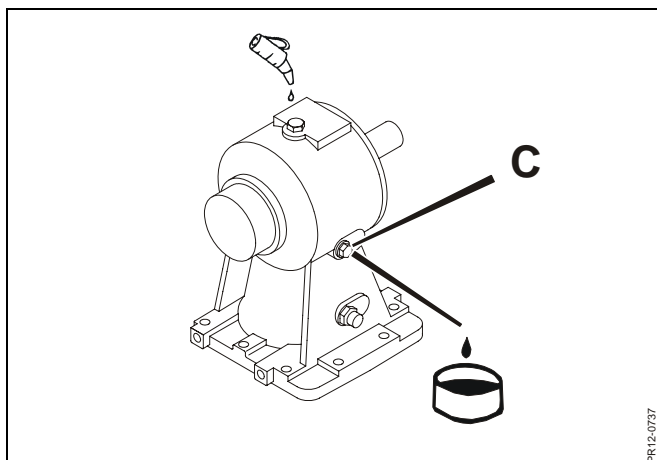


Fig. 4-2

Fig. 4-2 This bevel gearbox drives the cutterbar.

Raise the cutterbar to vertical position to drain the oil.

Correct oil content: 0.7 litres

Correct oil type: API GL4 or GL5 SAE 80W – 90

Oil change: First oil change after 50 hours of operation, and then after every 500 hours of operation or at least once every season.

Correct oil level: The oil level is correct when the oil is filled to **C** while the machine is horizontal.

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 INSTRUCTIONS** items 1-20 in the beginning of this instruction manual.

TIGHTENING OF BOLTS



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

Ma Ø	Class: 8.8 MA[Nm]	Class: 10.9 MA[Nm]	Class: 12.9 MA[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

Correct torque moment M_A (if nothing else stated) for bolts on the machine.

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 rotate with more than 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 JF-STOLL 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.

Bolts at stone protectors and shearbars at the front of the cutterbar should be checked at regular intervals.

V-BELTS

BELT DRIVE

On the machine is a belt drive with 4 belts going from the PIC-shaft to the bevel gearbox above the cutting unit. The belt drive must be checked for correct belt tension before starting, especially when the machine is new and the belts have been replaced.

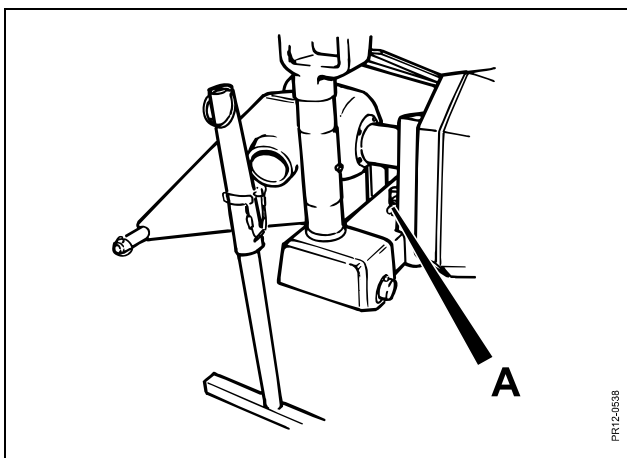


Fig. 5-1

Fig. 5-1 Adjust the tightening of the belt at nut **A**.

5. MAINTENANCE



IMPORTANT: If one of the belts in the belt drive must be replaced, it is necessary to replace all belts to ensure operational reliability.

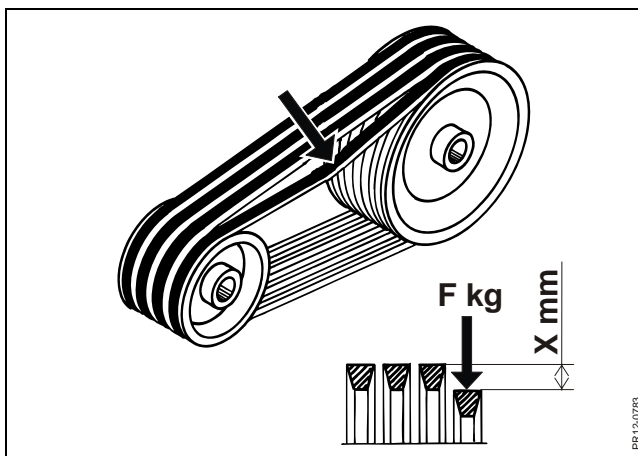


Fig. 5-2

Fig. 5-2 The belt is tightened correctly when a force of $F=7.5$ daN (kg) gives a deflection of $X= 30 - 35$ mm at the middle of the belt.

CUTTERBAR – DISCS AND BLADES

Discs, blade bolts 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, blade bolts and nuts must be replaced by original JF-STOLL 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 bolts, discs and the like.

BLADES

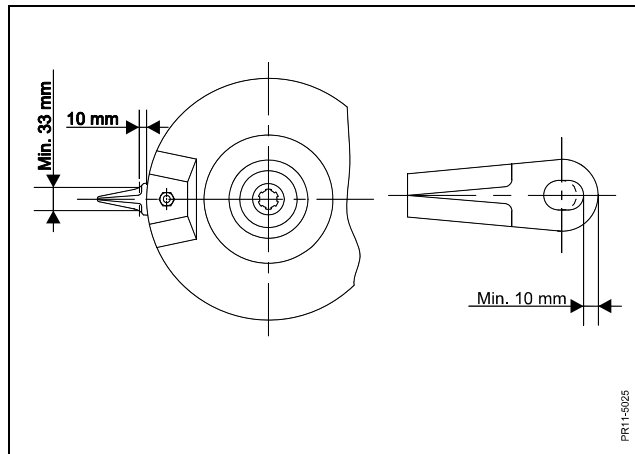


Fig. 5-3

Fig. 5-3 Blades must be replaced if:

- 1) they are 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.

Blade bolts and nuts must also be checked regularly, especially the tightening of the nuts.

Especially after collision with foreign matter, after replacement of blades and the first time you use the machine.

BLADE BOLTS

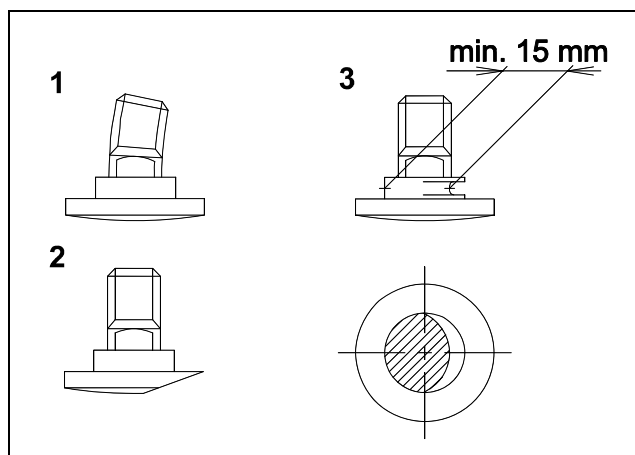


Fig. 5-4

Fig. 5-4 Blade bolts must be replaced if:

- 1) they are deformed
- 2) they are strongly worn on one side
- 3) the diameter is less than 15 mm.

NUTS

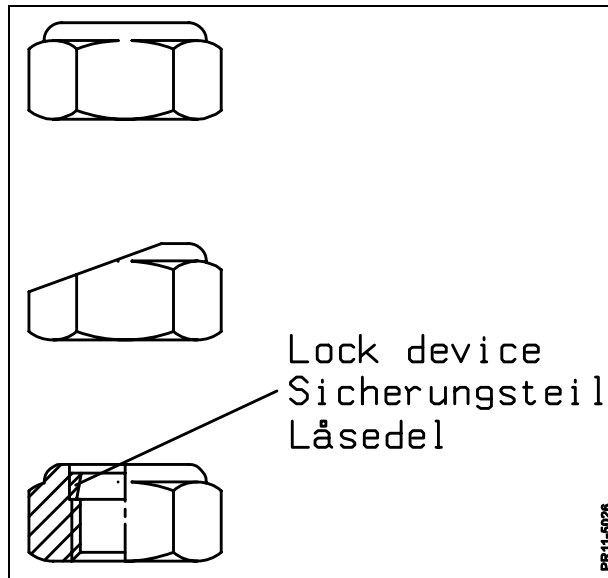


Fig. 5-5

Fig. 5-5 The special nut for the blade bolts must be replaced if:

- 1) it has been loosened and tightened more than 5 (five) times,
- 2) the height of the hexagon is less than half of the original height,
- 3) the lock device is worn or loose.

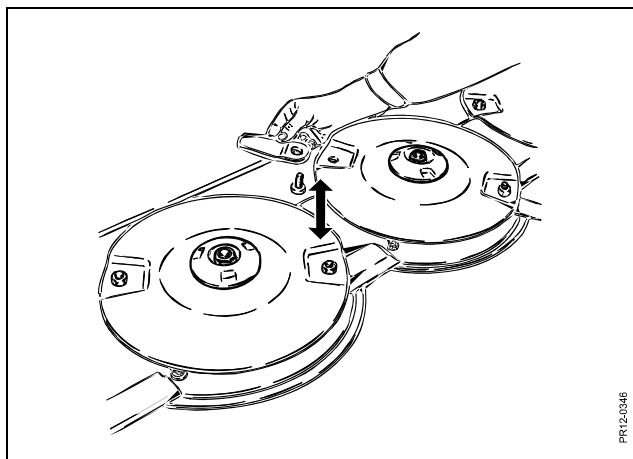


Fig. 5-6

Fig. 5-6 The blades can be used on both sides. To use the blade on the opposite side, simply move the profile blades from one disc to another with opposite direction of rotation, and the twisted blades can be turned.

To obtain a satisfactory performance, it is important that blades and shearbars are intact and sharp. If the blades are not sharp the power requirement will increase unnecessarily and the cut will be unclean resulting in slow regrowth of the grass.

5. MAINTENANCE

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 and the bolt is right above the hole in the stone protector.

Remove the old blade and mount the new one together with the blade bolt.

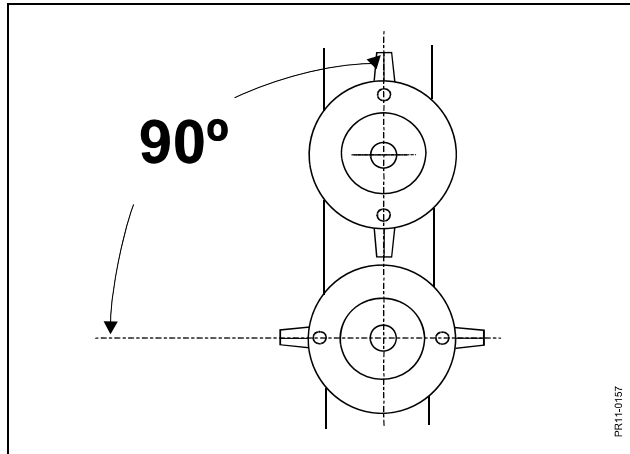


Fig. 5-7

Fig. 5-7 If the discs have been dismounted, they must be mounted again 90 degrees staggered in relation to each other.

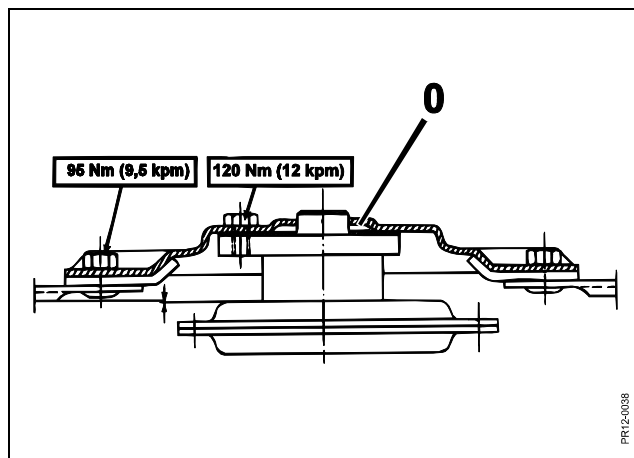


Fig. 5-8

Fig. 5-8 Make sure that the bolts have been tightened as shown.

- Discs fastened with four bolts must be tightened to **120 Nm (12 Kpm)**.
- Blade bolts must be tightened to **95 Nm (9.5 kpm)**.

The height of the disc can be adjusted by mounting fillers **O** under the disc. This may be necessary when replacing the discs if the blades are not at the same height afterwards.

5. MAINTENANCE



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

REPAIRS

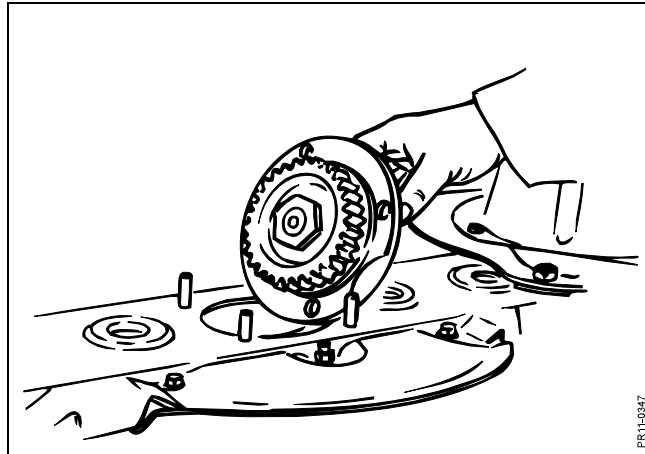


Fig. 5-9

Fig. 5-9 SB has a cutterbar which allows the complete disc bearing housing to be dismantled at the same time, - a so-called Top Service cutterbar.

6. MISCELLANEOUS

DRIVING TIPS AND FAULT-FINDING

Problem	Possible cause	Remedy
Uneven stubble or bad cut	<p>The cutterbar is relieved too much.</p> <p>The number of rpm of the tractor is too low.</p> <p>The number of rpm of the machine 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 reduce the relief if necessary by loosening the spring</p> <p>Check if the number of revolutions on the tractor PTO is 540 rpm, and not 1000. Make sure the number of rpm is constant</p> <p>Check the tightening of the belt</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 cutterbar</p> <p>Accumulation of material in front of the cutterbar</p> <p>Earth and grass around the cutterbar between the discs</p> <p>You are working early in the morning when the grass is still very wet</p>	<p>Extend the top link</p> <p>Increase the driving speed, if possible Mount flow caps on the discs</p> <p>Mount special, sharp shearbars or replace worn shearbars</p> <p>Increase the driving speed, if possible Mount flow caps</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 cutterbar</p> <p>Deformed disc(s)</p> <p>Defective flow caps and intensifiers</p> <p>Earth and grass in flow caps</p>	<p>Replace or move damaged blades and/or mount new blades</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 disc(s)</p> <p>Replace flow caps and intensifiers</p> <p>Clean flow caps</p>
Gear or cutterbar overheated	Oil level not correct	<p>Check the oil level and refill/drain out oil, if necessary</p> <p>NB: Maximum temperature in gearbox 80 °C, Cutterbar 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 cutterbar and discs. Check if the friction clutch is intact.</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 cutterbar with a high pressure cleaner and never spray directly on bearings.

IMPORTANT:

Grease all grease points after cleaning the machine.

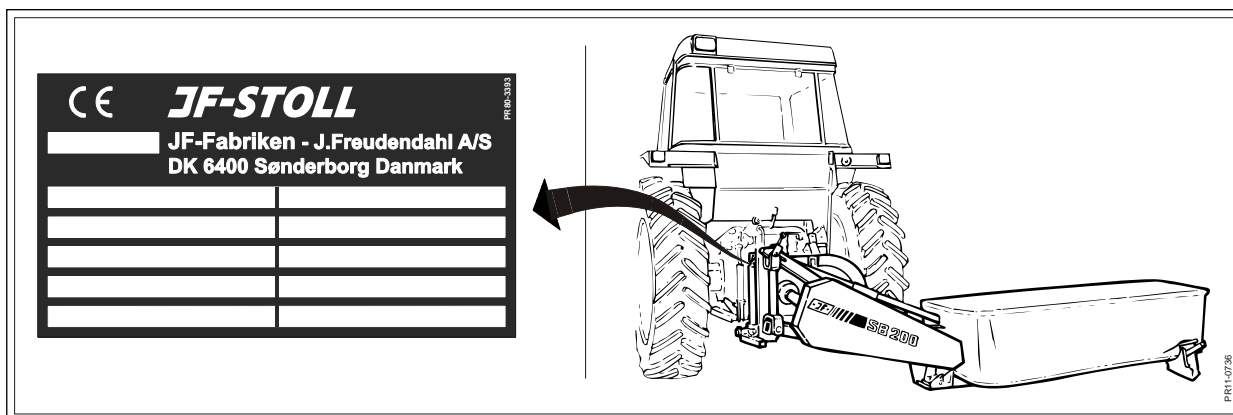
The following points are instructions how to prepare for winter storage.

- Check the machine for wear and other defects.
Note down the wearing parts needed before the next season and order the spare parts.
- Slacken V-belts.
- Dismount, clean and lubricate the PTO shaft. 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.



OPTIONAL EQUIPMENT

Conc. order number: see spare parts list.

TOPPING EQUIPMENT

For topping of fallow fields, guide shoes can be mounted which will give a 7.5 cm higher stubble.

One large and one small guide shoe are used for each disc.

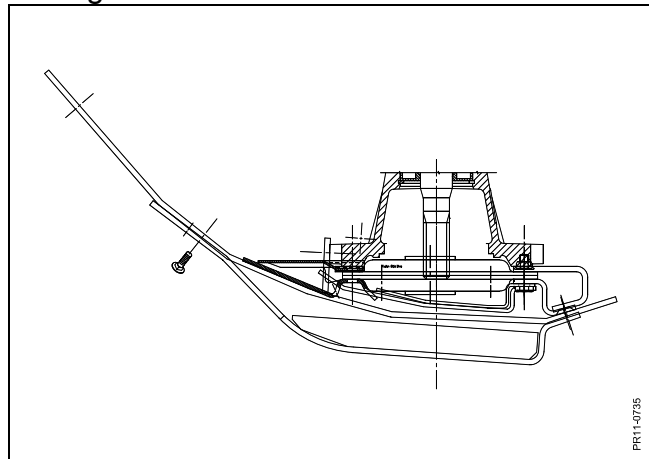


Fig. 6-1

Fig. 6-1 Mount the large guide shoe under the existing guide shoe, under the gearbox.

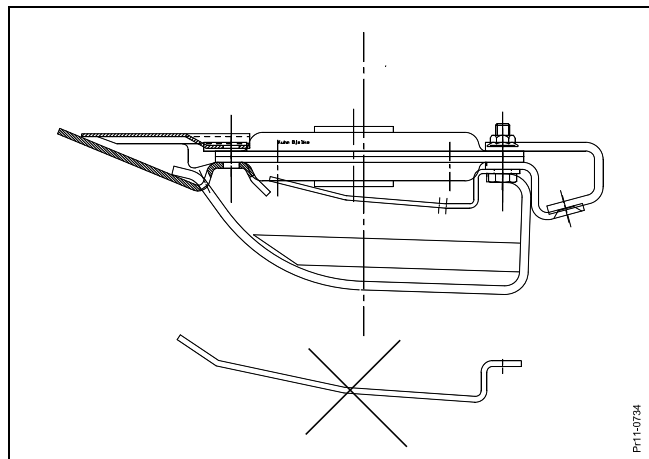


Fig. 6-2

Fig. 6-2 Mount the small guide shoes instead of the original ones under the discs.

LEFT SWATH BOARD

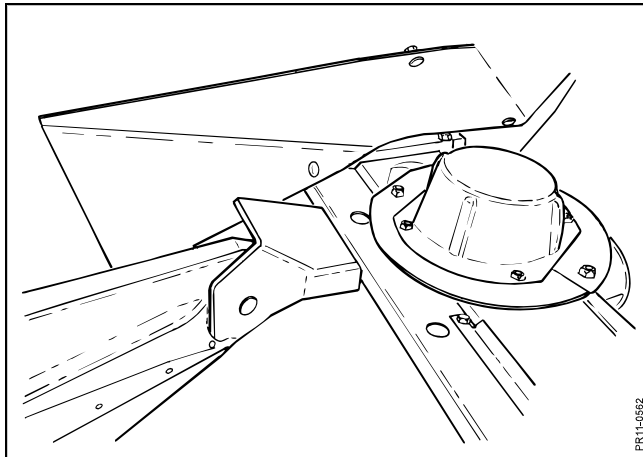


Fig. 6-3

Fig. 6-3: An additional swath board can be mounted at the left-hand side for a more gathered (narrow) swath.

FLOW INTENSIFIERS

If there is a problem transporting the crop across the cutterbar, flow caps can be mounted on all discs. Flow intensifiers are already mounted on the two outer discs. However, this only applies to machines equipped with round discs.

SUPPORT CHAIN

A special support chain can be supplied to secure and stabilise the depth stop of the link arms.

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 cutterbar 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.

WARRANTY

JF-Fabriken - J. Freudendahl A/S, 6400 Sønderborg, Denmark, hereafter called "**JF**", grants warranty to any buyer of new JF-STOLL machines from authorized JF-STOLL dealers.

**The warranty covers remedy of material and production faults.
This warranty is valid within a year after date of sale to end-user.**

The warranty is invalidated in the following cases:

1. **The machine has been used for other purposes than those described in the instruction manual.**
2. **Improper use.**
3. **Damage caused by external sources, e.g. lightning or falling objects.**
4. **Insufficient maintenance.**
5. **Transport damage.**
6. **The construction of the machine has been modified without JF's written permission.**
7. **Unskilled repair of the machine.**
8. **Unoriginal spare parts have been used.**

JF cannot be held responsible for loss of income or legal claim as a result of faults either of the owner or of a third party. Nor is JF responsible for wages beyond current agreements in connection with replacement of warranty parts.

JF is not responsible for the following costs:

1. **Normal maintenance such as expenses for oil, grease and minor adjustments.**
2. **Transport of machine to and from workshop.**
3. **The dealer's travelling expenses or freight charges to and from the user.**

Warranty is not granted on wearing parts unless it can clearly be proved that JF has committed a fault.

The following is regarded as wearing parts:

Protective canvases, blades, blade suspensions, wearing bars, guide shoes, stone protections, discs, rotor skirts, crimper parts, tyres, tubes, brake shoes, chain tightening parts, guards, hydraulic hoses, conveyors, vertical auger and tub, wheel-fixing bolts and nuts, snap rings, sockets, PTO-shafts, clutches, gaskets and seals, tooth belts, V-belts, chains, sprocket wheels, carriers, conveyor chain slats, rake- and pick-up tines, rubber seals, rubber paddles, cutter blades, chute liner and lining for spreading platform, shredding blades incl. bolts and nuts, spreading rotors and vanes for farmyard manure spreaders.

In addition, the user must note the following:

1. **The warranty is only valid if the dealer has undertaken a pre-delivery check and has given instruction to the end user in the use of the machine.**
2. **The warranty cannot be transferred to others without JF's written permission.**
3. **The warranty can be nullified if repair is not undertaken immediately.**



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When it comes to green feed techniques, JF-STOLL has gained a reputation as one of the world's leading suppliers and specialists. As a specialist manufacturer for over 50 years, we have gained a vast amount of experience from right around the world and, more importantly, unique regional requirements.

We also receive important inspiration in our development work through a close and continuous dialogue with customers, dealers and agricultural researchers.

No matter which type of JF-STOLL-machine you chose, you can be sure to obtain the best result to obtain a top result - in the shape of high performance and operational reliability, minimum maintenance, flexible working possibilities and optimal operating economy.

Dealer

JF-STOLL

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