
JF-STOLL

Precision Chop Forage Harvester

FCT 1355



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 :

FCT 1355

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 mainittuja perusturvallisuus- ja terveysvaatimuksia (soveltuvin osin) sekä muita siihen kuuluvia EY direktiivejä: 2006/42/EC



Konstruktion (Design) + Produktion (Production)
Sønderborg, 15.12.2009 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 on the time of publication.

JF-Fabriken 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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INTRODUCTION

INTENDED USE

The precision chop forage harvester **FCT 1355** is **solely constructed and manufactured for the usual work in agriculture, i.e.:** Usual work in fields where you want to cut/gather and chop green crops such as maize, grass or whole crop which are to be used for silage production intended for coarse fodder for cattle.

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.

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.

Intended use also means that the prescriptions given by JF- Fabriken A/S in the instruction manual and the spare parts book are observed and that thorough agricultural knowledge and technically correct use is a matter of course.

The precision chop forage harvester FCT 1355 should only be used, maintained and repaired by persons who, through relevant instructions and after reading the instruction manual, are familiar with the machine and, in particular, are informed of possible dangers.

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.

PERFORMANCE

The precision chop forage harvester FCT 1355 has a very versatile use which, with the right equipment, makes it possible to chop grass, maize and whole crops. At the same time FCT 1355 is capable of working alone or parallel with other machines.

FCT 1355 has a high capacity compared with other corresponding products as it uses the “DIRECT CUT” system. “DIRECT CUT” gives a minimum loss of power when cutting the material and thus ensures maximum utilisation of the accessible tractor power.

Capacity, however, is difficult to define and compare as, for a forage harvester, it will depend not just on which crop is being cut but also how the crop has been treated before it is picked up or cut by the machine and finally which cutting length adjustment the machine is working with.

If we take a forage harvester which, in fresh, not pre-dried grass, can work 100 tons per hour, it is possible to calculate the capacity at different per cents of dry matter depending on the pre-treatment before cutting, as shown in the following table.

	Dry matter	Capacity
Dry matter	100%	18 ton/h
Wet new grass	15%	120 ton/h
Not pre-dried grass	18%	100 ton/h
Pre-dried grass – no outflow of sap from clamp silo	25%	72 ton/h
Pre-dried grass – no outflow of sap from high tower silo	33%	55 ton/h
Very pre-dried grass	50%	36 ton/h
Straw, very dry	90%	20 ton/h

It will probably surprise most people that the capacity can vary between 20 and 120 ton/h, as a result of varying water content.

In practice you want to drive the forage harvester in the highest possible tractor gear without causing frequent blockage. However, the amount of grass in the field will always vary, for instance where the mower conditioner has had to turn, change forward speed or change direction of travel. Therefore it is often appropriate either to drive with a power reserve so that the machine will not block, or to continuously adapt the driving of the forage harvester to the conditions.

The pick-up unit and the feed rollers are both secured against overloading resulting from a blockage by means of a friction clutch. The forage harvester also has a reverse function which makes it possible to remove a blockage without having to leave the tractor seat.

The intention is that the inexperienced user increases the forward speed gradually in the beginning until the pick-up is blocked; releases the blockage again by reversing and chooses a tractor gear at a suitable lower level to remove the risk of blockage.

1. INTRODUCTION

However, it is not the intention that the clutch function of the feed rollers releases. If this happens, the clutch adjustment of the pick-up must be reduced. The same will apply if the main friction clutch between the tractor and the machine releases during normal working. If it is not the pick-up unit which is blocked, the adjustment of the machine is incorrect.

Unfortunately it has been seen before that the torque adjustment of the friction clutch of the pick-up unit has been increased to the point where it is the friction clutch between the machine and the tractor which releases frequently. The main friction clutch is not intended to release frequently but only for starting shock or when foreign matter gets into the machine. The same applies to the friction clutch for the feed rollers. The main clutch simply cannot absorb the heat which is generated during these long releases. The power transmitted at the main clutch will be at least 10 times higher than the power needed to drive the pick-up unit.

Only the pick-up unit can be seen from the tractor and therefore it should be released first when there is a blockage. The experienced user will be able to adapt the driving of the tractor to the amount of grass and thus work with less capacity reserve and, all other things being equal, have a greater output.

The cutting length of the forage harvester can be adjusted and adapted to the crop in question. The cutting length is usually reduced when cutting maize and whole crops to ensure greater damage of the grains. The shorter cutting length will of course require more power for which reason there will be a lower output when cutting maize and whole crop than when cutting grass, though it is difficult to compare.

The power requirements are also increased when the blades are worn and the shearbar adjustment thereby changes. It is necessary to sharpen the blades and adjust the shearbar during the season.

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 forage harvester 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.

As already mentioned the machine is only intended for one purpose, namely:

Chopping of grass and similar green crops for 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.

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 manuals - 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.

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 oneself and others against serious injuries.

1. INTRODUCTION

GENERAL SAFETY INSTRUCTIONS

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 block the wheels before working under the machine.
3. Never start the tractor until all persons are safely away from the machine.
4. Make sure that all tools have been removed from the machine before starting the tractor.
5. Make sure that all guards have been mounted correctly.
6. During work never wear loose clothes or have your hair hang down as it may be pulled in by the moving parts of the machine.
7. Always wear suitable shoes to avoid falling.
8. Do not change the guards or work with the machine when a guard is missing or defective.
9. Always drive with the statutory lights and safety marking during transport on public road and at night.
10. Limit the transport speed to maximum 30 km/h if the machine has not been marked with another maximum speed limit.
11. Do not stand near the machine while it is working.
12. When mounting the PTO drive shaft check that the number and direction of RPM of the tractor matches those of the machine.
13. 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.
14. Never allow anybody to be on the machine during work or transport.
15. Never use the machine for other purposes than what it has been constructed for.
16. Do not allow any children to be near when you are working with the machine.

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17. Never stand between the tractor and the machine during connection and disconnection.
18. Do not feed material into the cutting unit, using hands or feet, while it is working.
19. Do not try to remove material from the cutting unit while it is working.
20. If material must be removed from the forage harvester, the PTO shaft must be disconnected completely. If in doubt stop the tractor engine before removing any material from the forage harvester.

1. INTRODUCTION

LOCKING OF GUARDS

All hinged guards on the machine are equipped with a lock. The lock ensures that the guard cannot be opened without tools. There are two different types of lock. Fig. 1-1 and 1-2 show the two locking principles and the corresponding transfers which indicate and illustrate the locks on the machine.

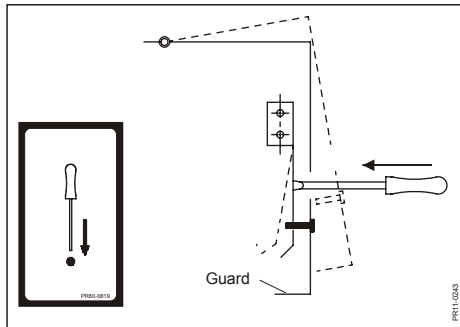


Fig. 1-1

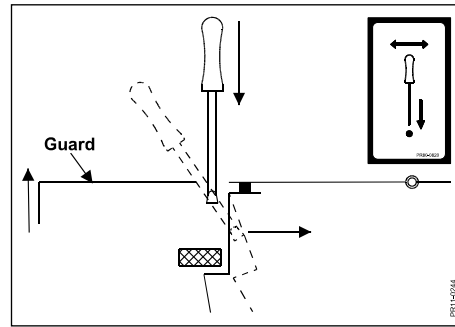


Fig. 1-2

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 which has minimum 90kW/120 HP at the power take-off but cannot deliver more than 165kW/225 HP.

The machine is as standard constructed for 1000 RPM, and is delivered from the factory with 1 3/4" PTO drive shaft with 20 splines yoke. As an alternative 1 3/4" yokes with 6 splines, 1 3/8" yokes with 6 splines and finally 1 3/8" yokes with 21 splines can be supplied for the PTO drive shaft of the machine

A suitable tractor will have a broad range of gears for driving speeds between 5 and 8 km/h.

The tractor hydraulic system should deliver at least 170 bar and the tractor's pressure relief valve should not allow more than 210 bar.

The following hydraulic outlets are necessary depending on the equipment used:

1	Single-acting	Pick-up lifting
1	Double-acting	Hydraulic drawbar/ chute swivelling
1	Double-acting	Reverse function
1	Single-acting	Auto Hitch (Optional equipment)

It is important that there is direct access to the 12-volt battery of the tractor and that it is in a good condition.

The drawbar of the forage harvester is delivered with a drawing eye, for which reason the tractor should preferably have a clevis drawbar. The drawbar pin should be 30 mm diameter.

Always choose a tractor with a closed cabin when working with a precision chopper.

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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 Fig. 1-3). When disconnecting it is important that the ground is even and stable so that the machine does not move and injure persons or cause damage to other equipment.



Fig. 1-3

The same precautions must be taken when connecting/disconnecting trailers by means of the hydraulic hitch at the rear of the forage harvester.

Check that the machine is intended for the number and the direction of rotation of the tractor PTO. (see Fig. 1-4). A wrong number of rotations over a long period may damage the machine and at worst result in ejection of parts through the delivery chute.

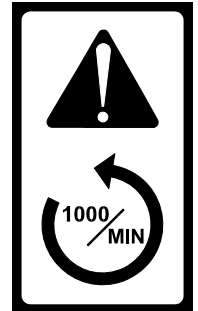


Fig. 1-4

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



IMPORTANT:

Before connecting a trailer with the hydraulic hitch, always:

- Disengage the PTO from the tractor.
- Wait until all moving parts have stopped.



WARNING:

Before using the hitch check that the lock is not rusty. It is possible to connect the trailer without the locking pawl being engaged, but movements during transport might cause the trailer to fall off.

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

When parking the machine and after 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. (see figure 1-5). If, by accident, hydraulic oil under pressure hits you, consult a doctor immediately.

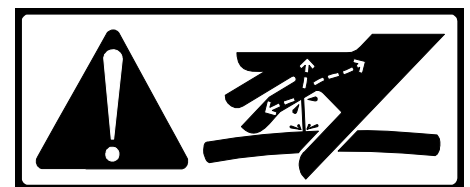


Fig. 1-5



ADJUSTMENT

IMPORTANT: Before adjusting the machine, always:

- Disengage the PTO from the tractor.
- Stop the tractor engine
- Wait until all moving parts have stopped.

It is important not to remove the guards until all revolving parts have stopped. This especially applies to the delivery chute above the blade cylinder.

If the cutting parts in the blade cylinder must be adjusted or replaced, it is important to block the blade cylinder as the sharp blades can easily cause injury.

Before working, check that the feed rollers and the blade cylinder can move freely. Also check that the blades are intact and without cracks. Damaged blades must be replaced to prevent them from blocking or damaging the machine and to avoid metal parts being thrown out from the delivery chute.

Check periodically if blades and blade bolts are worn according to the rules in the instruction manual.

The first time you use the machine the blades and blade bolts may "bed in". For this reason you must check and tighten the blade bolts after the first working hour.

When lifting the delivery chute above the blade cylinder make sure that nobody is in danger of being hit by the guard. When lifting the guard, hold on to the hoop which is fastened to the intermediate guard with both hands.

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TRANSPORT

Limit the transport speed to maximum 30 km/h if the machine has not been marked with another maximum speed limit.

Always check that mechanical transport safety devices are activated before transport. If the machine has equipment for hydraulic transport adjustment, the cylinder is fitted with a hose breach valve replacing the mechanical transport lock. An unintentional operation of the hydraulic handle of the tractor during transport may cause the machine to move to the opposite lane, the bicycle track or the sidewalk. This might also happen if there is air in the hydraulic cylinder.

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 public road.

Check that the mechanical locking devices at the hydraulic hitch are activated before transport. The hydraulic hitch has a pawl which secures the hydraulic cylinder and the hoses are not under high pressure.

The attachments of the forage harvester (pick-up etc.) must also be secured mechanically before transport.

The statutory lighting and traffic markings must be placed correctly, on the forage harvester as well as the trailer.

Reflectors and lighting must be cleaned regularly.

WORKING

Before you start working make sure that no persons are behind the forage harvester due to the danger of being hit by metal parts from damaged blades.

Also make sure that there are no persons in the trailer used for picking up. There is danger of suffocating in the flow of material or getting hit by metal parts.

If the feed rollers or the blade cylinder are blocked, disengage the clutches and stop the tractor engine immediately. Activate the parking brake and wait until the revolving parts have stopped before removing the material or the foreign matter.

Unfortunately, this cannot be said too often: Never remove material blocked in the machine while the machine is running and never feed material into the pick-up with your hands or feet as there is a serious danger of getting caught and pulled into the harvester which would cause dismemberment or death.

Therefore, never allow anyone to stand near the forage harvester while it is working, especially not children who do not know the danger and do unforeseen things.

1. INTRODUCTION

PARKING

Before parking the machine always lock the jack with the locking pin, otherwise the machine may tip over during parking. Also remember to block the wheels if there is a risk that the machine will move after parking

Remember to remove the hydraulic hoses before driving away with the tractor

GREASING

When greasing or maintaining the machine never let more than one person work at the machine at a time. This reduces the risk of getting fingers caught because another person by accident turns the revolving parts while you are still working with them.

Never try to clean, grease or adjust the machine before the PTO has been disengaged, the tractor engine has stopped and the parking brake been activated.

GRINDING

When grinding always follow this procedure:

- Stop the tractor engine
- Activate the parking brake.
- Wait until all moving parts have stopped.

Unfortunately it is necessary to remove some of the guards to change the direction of rotation of the rotor when grinding the blades. As there are chain and belt transmissions your hands may be injured if the revolving parts have not stopped before the guards are removed.

Grinding is performed according to the following procedure:

1. Check if the grindstone is undamaged and if the device is able to move back and forth easily.
2. Lower the guard behind the grinding device to give access to the blade cylinder.
3. Adjust the stone and guard the grinding device again.
4. Remove the guard above the blade cylinder transmission and change the direction of rotation of the rotor.
5. Close the guard again and check that there are no persons near the machine.
6. Start the tractor again and keep the rpm at idle speed.
7. Perform the grinding carefully.

Always use safety glasses when grinding as small particles from the grindstone might hit you.

When grinding has finished, stop the tractor engine, change the direction of rotation to normal working direction and close and fasten all guards.

REMEMBER: Always grind with all guards closed.

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MAINTENANCE

After approx. 2 days of operation all bolts must be re-tightened, especially the blade bolts of the blade cylinder.

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 pick-up rests on the ground and/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.

REPLACEMENT OF WEARING PARTS

Blades, blade bolts and shearbar are made of high-alloyed, heat-treated materials. This heat treatment provides especially hard and ductile material which is able to withstand extreme stress. Damaged blades, blade bolts or shearbars must be replaced by original JF-STOLL spare parts to ensure safe operation.

Blades and blade bolts must be checked every day during the season.

The special blade bolts must be tightened with a torque wrench to 40 kgm.

When the blades have been worn max. 8 mm or approx. 12 mm above the straight piece, they must be replaced (see fig. 1-6).

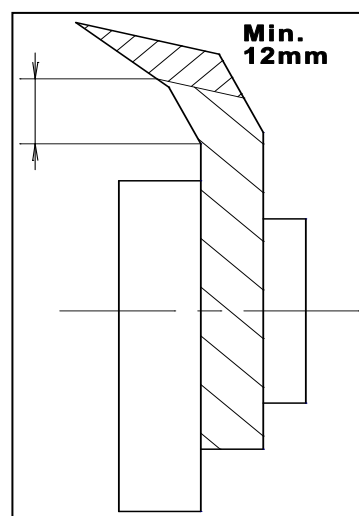
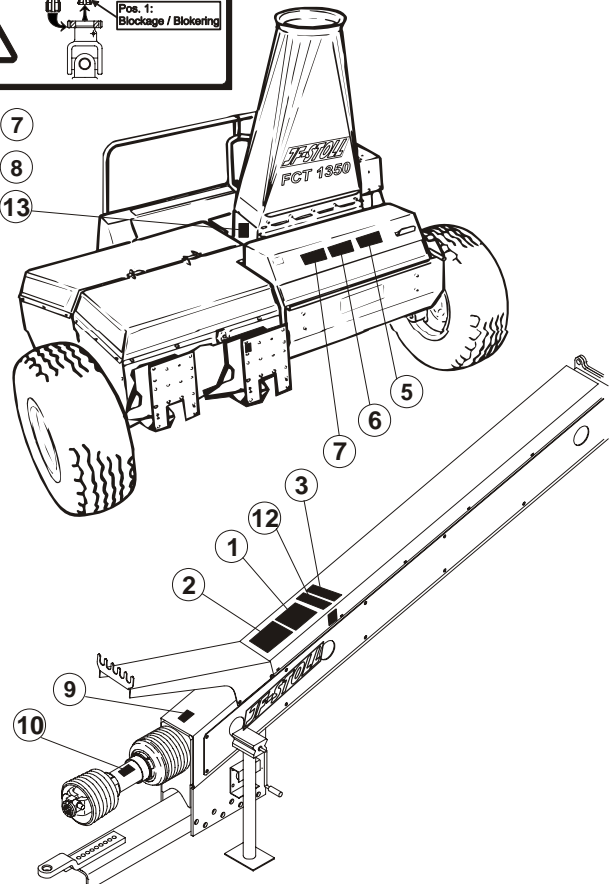
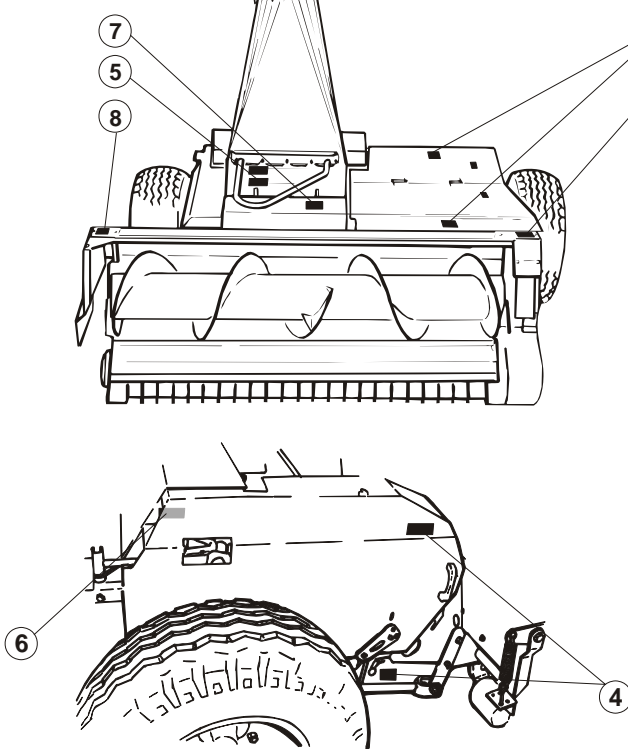


Fig. 1-6

After replacement of blades, blade bolts and the like, check that no tools have been left in the machine.

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1. INTRODUCTION

SAFETY DECALS

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

1. **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.
2. **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.
3. **Children.**
Never let children stand near the machine during operation. Especially not small children as they have a tendency to do unforeseen things.
4. **Chain drive**
One or more chain drives are placed under this guard. Make sure that the tractor engine has stopped before opening the guard.
5. **Risk of cutting.**
There is a risk of getting fingers etc. caught several places on the machine. Be careful when the machine is connected to the tractor and ready to work. The machine can easily crush or cut off any part of the body that might get caught in the machine.
6. **Remember the guards when grinding.**
Remember to close ALL guards before grinding.
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 removing guards for inspection or maintenance.
8. **Risk of getting pulled into the machine**
Do not stand near the attachments or the feed rollers while the machine is running. Make sure that the tractor engine has stopped first.
9. **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.
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. **Remember the transport lock.**
Always remember to check the transport lock before transporting the machine on public road. Errors in the locking 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.
12. **Maximum 210 bar.**
Make sure that all the hydraulic components are not exposed to more pressure than 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.
13. **PTO drive shaft for rotor.**
There is an alternative pin for the PTO drive shaft for the rotor. It is used when the rotor is disconnected during reverse and when the rotor rotates in the opposite direction during grinding. Make sure that you place the PTO drive shaft correctly on the pin when performing these operations.

1. INTRODUCTION

TECHNICAL DATA

TECHNICAL DATA	FCT 1355
Pick-up width	3.1 m
Power requirement	103–165 kW/140-225 HP
Capacity (*)	35 - 100 t/hour
Blade rotor width	0.9 m
Rpm for rotor	1600 rpm
Number of blades, standard	30
HD blades	Standard
Grinding device	Grindstone with quick adjustment
Reverse grinding	Standard
Theoretical cutting length, standard	7, 15, 30 mm
Reversible shearbar, tungsten-coated	Standard
Number of feed rollers	4
Reverse of feed intake	Standard, hydraulic
Electrical functions	Deflector
Hydraulic functions	Pick-up lifting, drawbar, chute swivelling and reverse function
Turning angle for chute	207 degrees
Pick-up, pre-lubricated	Standard
Weight with pick-up	2760 kg
Length, max.	5.0 m
Max. width with pick-up	3.43 m
Height, max.	3.8 m
Tyre dimension standard	19/45 x 17
Freewheeling clutch in PTO shaft	Standard
Friction clutch in PTO shaft	Standard, 3000 Nm
Steel wheels on pick-up	Standard
Rubber wheels on pick-up	Option (width 3.63 m)
Hydraulic Auto-Hitch	Option

(*) Depends on dry matter content, cutting length, the condition and the amount of the crop.

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

2. CONNECTION TO TRACTOR

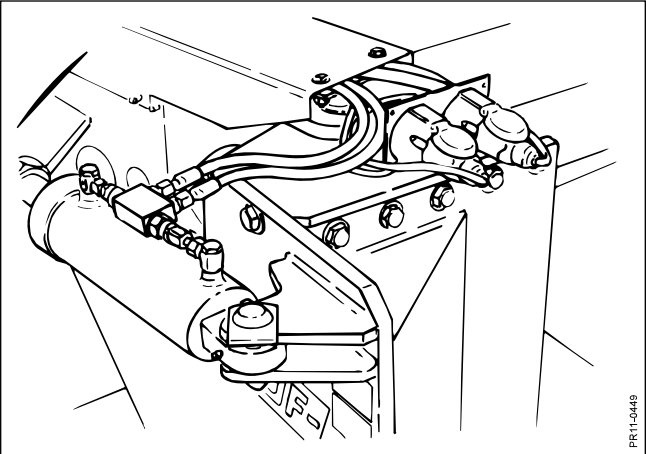


Fig. 2-1

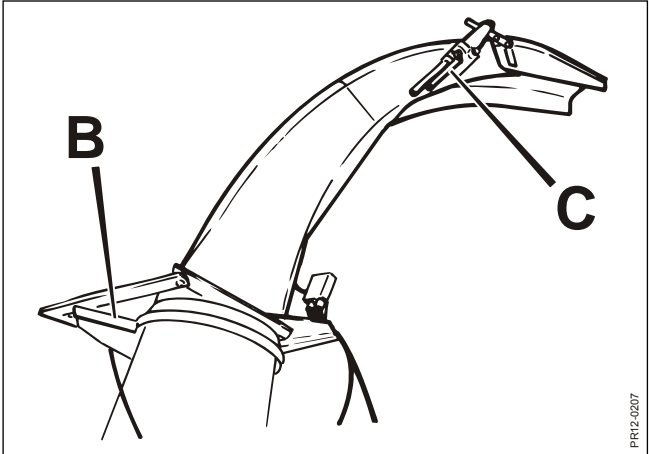


Fig. 2-2

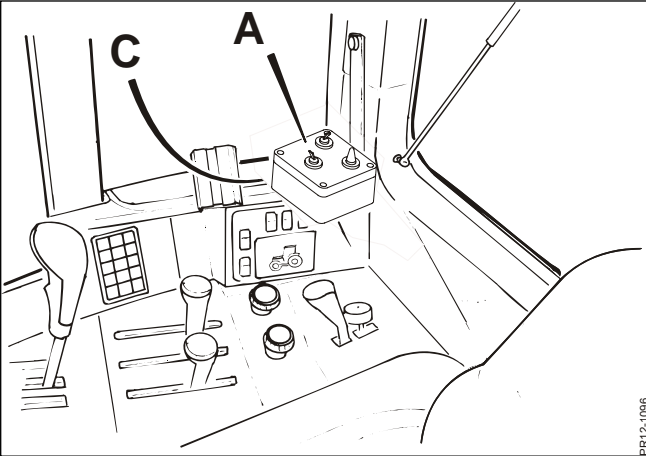


Fig. 2-3

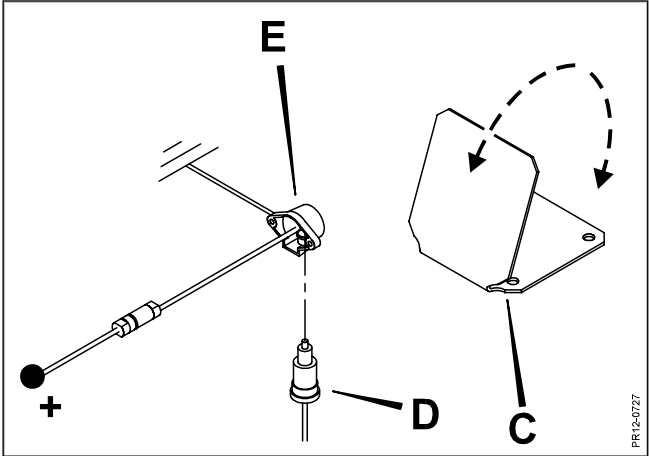


Fig. 2-4

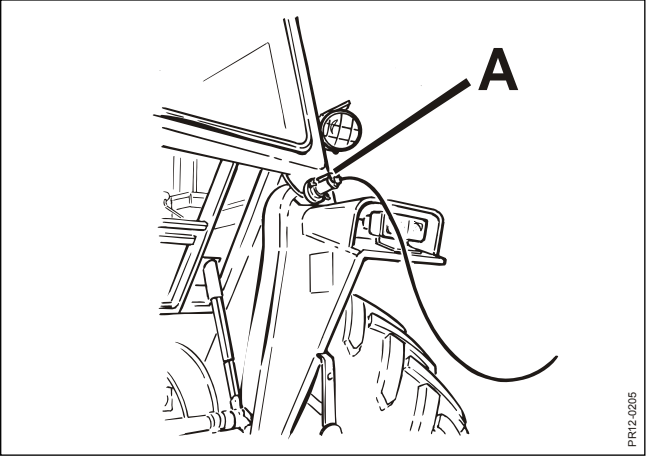


Fig. 2-5

2. CONNECTION TO TRACTOR

HYDRAULICS AND ELECTRONICS

- Fig. 2-1** The machine requires 1 single-acting hydraulic outlet for pick-up, 1 double-acting outlet for the reverse function and one double-acting outlet for the drawbar/chute swivelling. Furthermore a single-acting outlet is needed for the hydraulic hitch which is additional equipment.
Therefore the tractor should have 2 single-acting and 2 double-acting outlets to be able to drive with a fully equipped FCT 1355.

ELECTRONIC AND HYDRAULIC CONTROL OF CHUTE SWIVELLING AND DEFLECTOR

- Fig. 2-1** This machine is equipped with a control box from which you for instance adjust the deflector **C** (Fig. 2-2) electronically and switch between two hydraulic functions: - The drawbar (Fig. 2-1) and chute swivelling **B** (Fig. 2-2). The control box is placed in the tractor cabin. For more information on the control box, chute and deflector see chapter 3 "MOUNTING OF EQUIPMENT".

- Fig. 2-3** Mount the holder **C** in a suitable place within the reach of the tractor driver.
Fig. 2-4 The holder is soft and can be bent to a position that is comfortable for the tractor driver. The control box **A** is fixed to the holder **C** with a magnet. Mount the supplied 1-pole socket **E** on the instrument panel and connect directly to the tractor battery of 12V, (+ = red cable and - = black cable). Connect the plug **D** from the control box to the socket **E**.



CAUTION: If there already is a 1-pole socket, make sure that the middle pole on the socket is connected to + on the tractor battery.
We advise you not to connect this to the wiring of the lights as the wire thickness for these systems is usually not sufficient to transfer the necessary power.

- Fig. 2-5** The 7-pole plug **A** is mounted at the rear of the tractor with the supplied wing nuts. It is now easy to dismount the electric equipment if you are not going to use it for a considerable period of time. The equipment must be kept in a dry place.



CAUTION: Do not expose the control box to direct contact with water.

2. CONNECTION TO TRACTOR

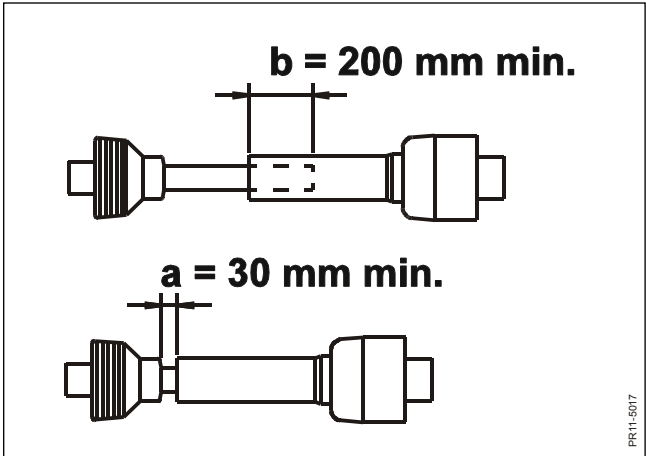


Fig. 2-6

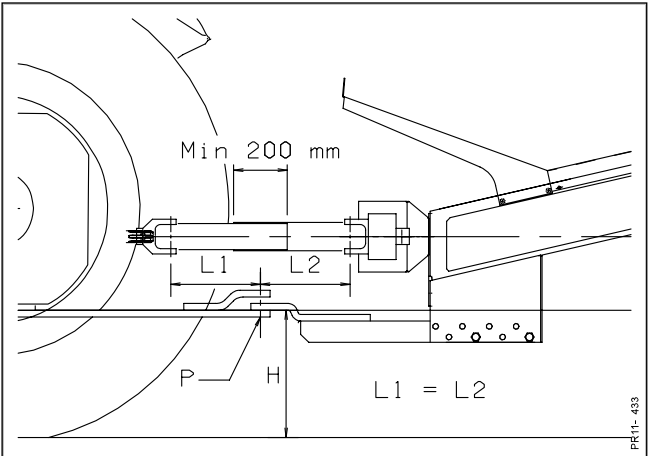


Fig. 2-7

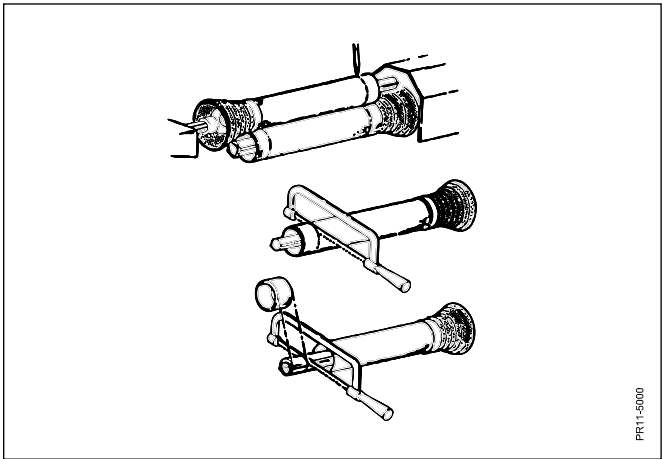


Fig. 2-8

DRAWBAR AND PTO DRIVE SHAFT

Fig. 2-6 Adjust the length of the PTO shaft so that it:

- in working position has minimum 200 mm overlap, see measure **b**.
- is not compressed more than the prescribed 30 mm in order not to bottom the shaft, see measure **a**.

Adjustment of the length can take place by pulling out or pushing in the drawbar of the tractor.

Fig. 2-7 The height **H** of the hitch eye must be adjusted so that the PTO shaft is horizontal. The height can be changed by moving or turning the drawbar bracket. To ensure longest possible life of the PTO shaft the following applies to standard PTO shaft without wide angle: The length **L1** must be equal to the length **L2**, i.e. the centre of rotation **P** for the drawbar must be as close as possible under the centre between the joints. The drawbar bracket on the chopper can be moved back and forth in steps of 25 mm.



IMPORTANT: The drawbar must always be mounted and fastened with 2 bolts.

SHORTENING OF THE PTO DRIVE SHAFT

Fig. 2-8 Fasten the halves of the shaft to PTO and PIC, respectively, when these are right opposite each other with the machine in working position. (The longest distance on this machine). Hold the shaft ends parallel to each other and mark the wanted shortening, minimum 200 mm overlapping. Shorten all 4 tubes equally. The ends of the profile tubes must be rounded off and burrs must be removed carefully. It is very important that the tubes are smooth and clean before greasing. Grease the tubes carefully before reassembling.



WARNING: Never turn so sharply that there are less than the prescribed 30 mm distance in order not to bottom the shaft. See measurement **a** in Fig. 2-6.

With some tractors the PTO drive shaft bottoms when turning sharply whereby the shaft and/or other transmission parts are damaged.

FRICTION CLUTCH

On the PTO drive shaft between tractor and machine there is a friction clutch which ensures that the machine is not overloaded during operation.

Before starting a new machine, the clutch must be "aired". See section concerning the friction clutch in chapter 6 "**MAINTENANCE**".

3. MOUNTING OF EQUIPMENT

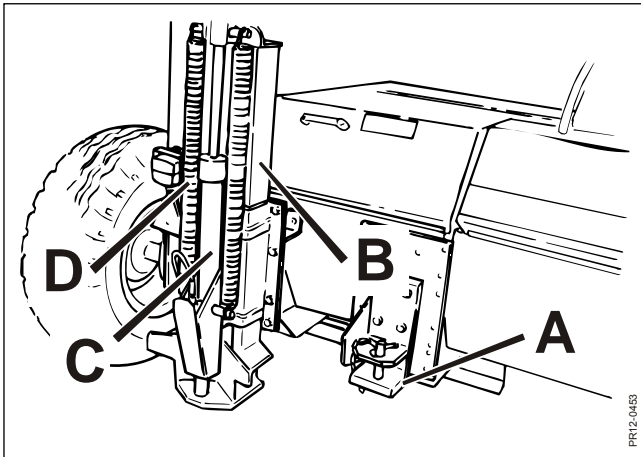


Fig. 3-1

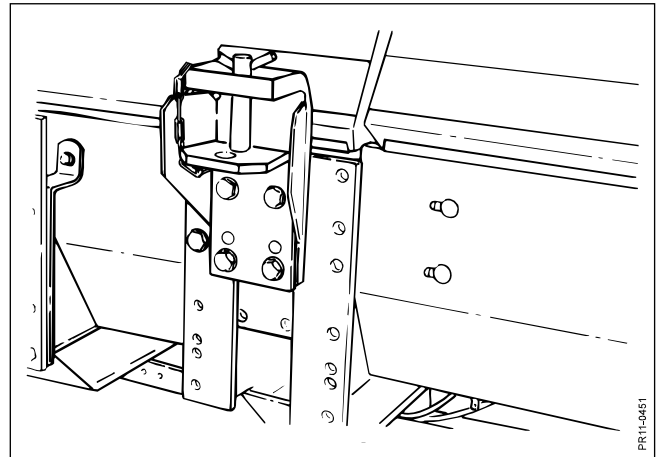


Fig. 3-2

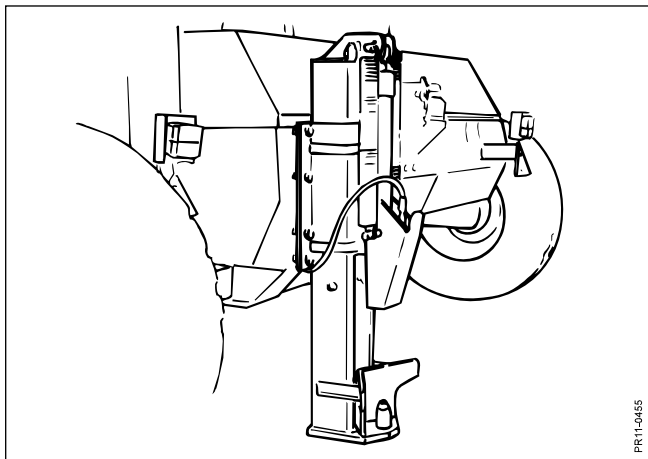


Fig. 3-3

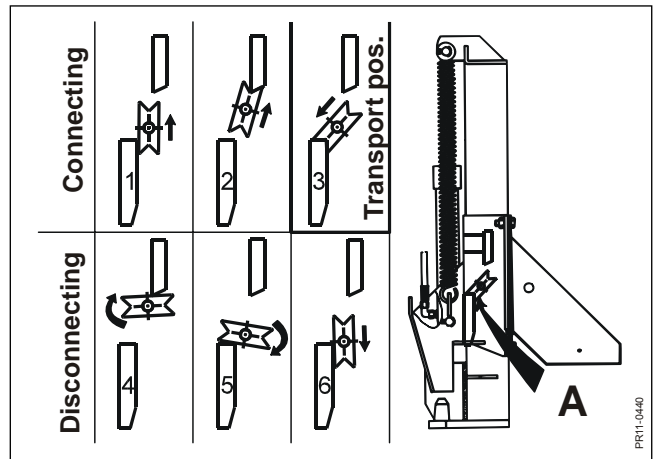


Fig. 3-4

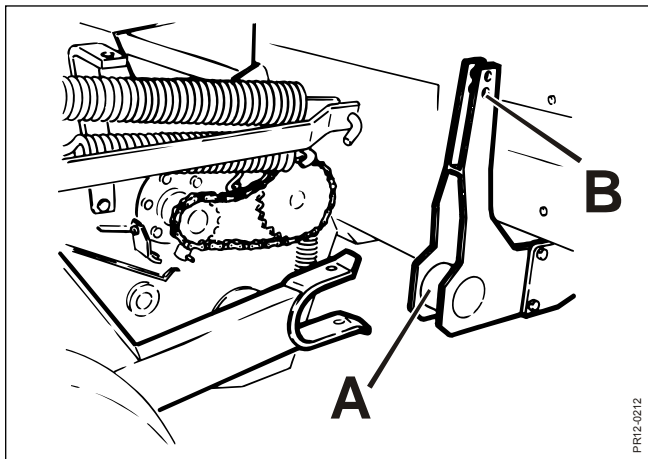


Fig. 3-5

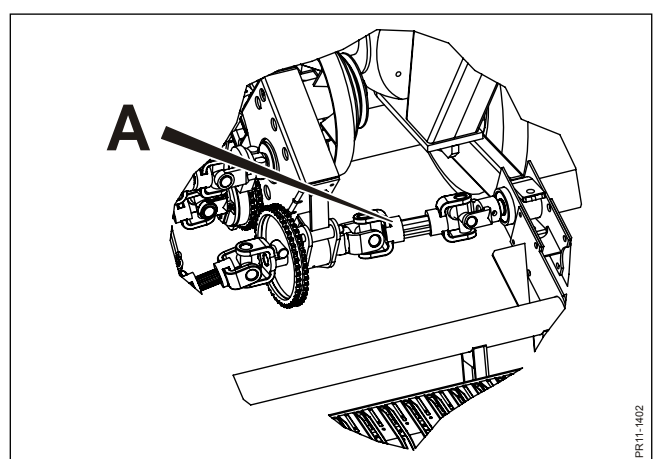


Fig. 3-6

3. MOUNTING OF EQUIPMENT

HITCH FOR TRAILER

The machine can be supplied with combi-hitch or hydraulic hitch for connection of the trailer.

COMBI-HITCH

Fig. 3-1 Combi-hitch **A** mounted in lowest position.

Fig. 3-2 Combi-hitch mounted in uppermost position. This position is used for trailers with overrun brake, e.g. in Germany.

HYDRAULIC HITCH HOOK (AUTO-HITCH)

Fig. 3-1 The hitch **B** mounted on the flange in the left-hand side. The hitch is raised hydraulically by a single-acting cylinder **C**, and 2 tension springs **D** pull the hook down when pressure is relieved from the cylinder.

It is also possible to mount the hitch on the flange closer to the middle (where the combi-hitch is shown). However, this results in increased load on the frame parts of the chopper due to uneven pull from the trailer and through the machine. Therefore, it is recommended to use the left flange when pulling large trailers.

Fig. 3-3 For connection of the trailer the machine must be reversed to the drawbar of the trailer. The hitch hook must be lowered and the hitch eye of the trailer is caught by the hitch hook.

Fig. 3-4 Lift the trailer with the hydraulic cylinder **1** until the pawl **A** is in mesh **2**. Pull the hydraulic handle shortly backwards so that the weight of the trailer rests on the pawl **A** and not on the hydraulic cylinder, and thus locks the hitch system **3**.

When disconnecting the trailer, lift the hitch hook **4** with the hydraulic cylinder and the pawl **A** is automatically disengaged **5**. Then the hitch hook must be lowered by relieving the pressure of the cylinder, and the weight of the trailer and the springs pull the hook down **6**, and the trailer is released.



IMPORTANT: Pos. 3 on Fig. 3-4 is the only allowed position of the hitch for trailer transport, i.e. never drive with pressure in the hydraulic hoses.

PICK-UP

Connection is preferably carried out on firm and even ground.

The basic machine is connected to the tractor according to section 2 "CONNECTION TO TRACTOR".

Fig. 3-5 Wheel the pick-up on the rollers to the machine so that the catch **A** is engaged. Mount the 2 pins to fix the pick-up to the basic machine.

The relief device is attached to the pick-up at **B**.

Fig. 3-6 Mount the PTO drive shaft **A** for the pick-up.

3. MOUNTING OF EQUIPMENT

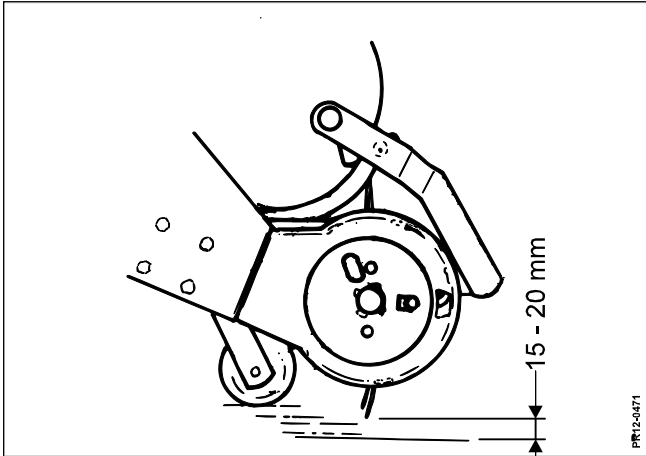


Fig. 3-7

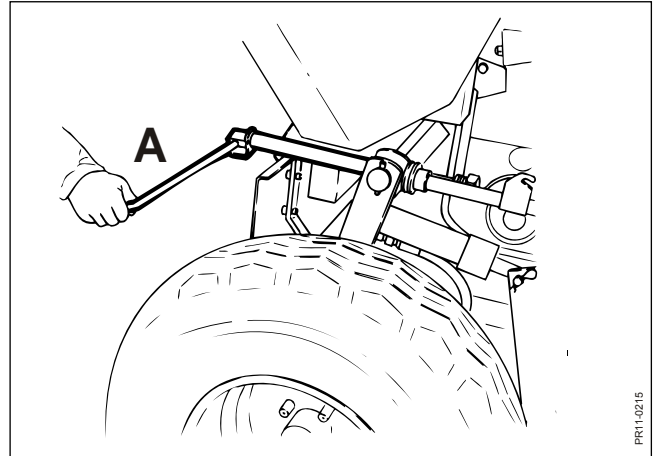


Fig. 3-8

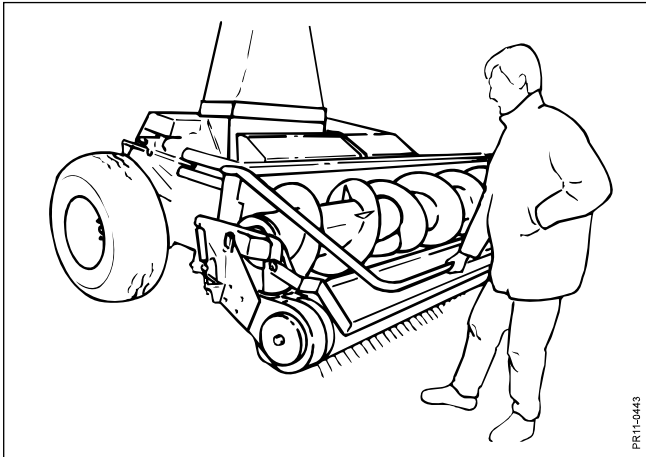


Fig. 3-9

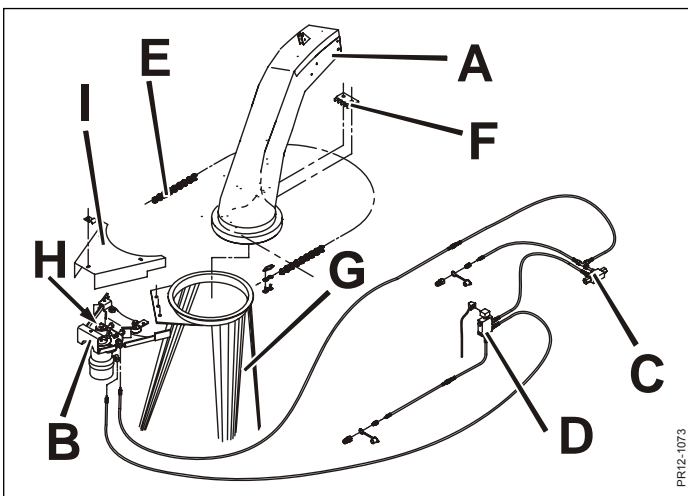


Fig. 3-10

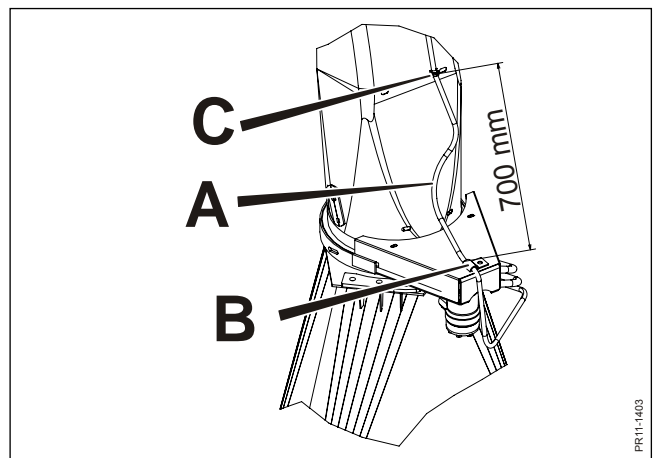


Fig. 3-11

3. MOUNTING OF EQUIPMENT

- Fig. 3-7** The height of the rollers under the pick-up can be adjusted. Adjust the height so that there is 15 – 20 mm distance between the point of the pick-up tines and the ground.
- Fig. 3-8** Tighten the relief springs with the spindle **A** until the ground pressure for the pick-up is maximum 30 kg.
- Fig. 3-9** Check this by standing in front of the pick-up and pull the hoop upwards and estimate the ground pressure.

CHUTE AND DEFLECTOR

MOUNTING OF HYDRAULIC CHUTE CONTROL

- Fig. 3-10** Mount the swivel chute **A**. Grease the swivel ring and check that the delivery chute can turn freely.
Assemble the hydraulic hoses from the check valve **C** and the valve **D**, respectively, with the hydraulic motor.
Mount the assembled motor bracket **B** on the connecting piece **G**. Press the rollers on the motor bracket **B** against the swivel chute **A**.
Mount the chain **E** round the swivel chute **A** and the gear wheel on the hydraulic motor.
Fix the chain to the swivel chute **A** with the chain lock **F** and tighten the chain with the tightening screws at **H**.



IMPORTANT: Remember to loosen the bolted joint between the bracket and the motor before tightening the chain and to tighten the bolted joint again.

Finally the guard **I** is placed on the motor bracket **B**.

MOUNTING OF CABLE FOR THE DEFLECTOR

- Fig 3-11** Mount the cable **A** in the cable holder **B** and on the cable holder **C** (fasten with strips). The cable should not be drawn too tight, it must be loose.
Overlapping 700 mm.

3. MOUNTING OF EQUIPMENT

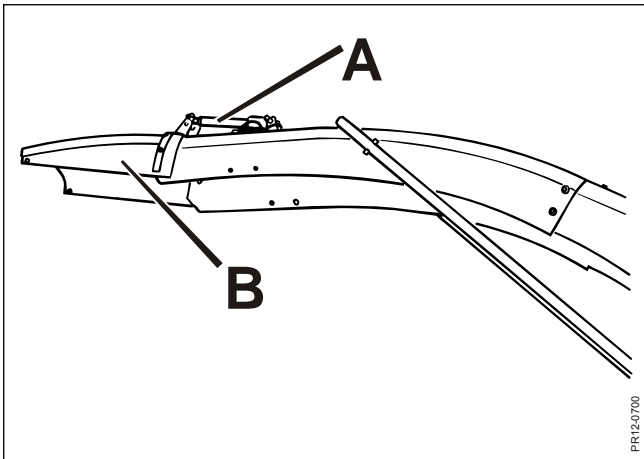


Fig. 3-11

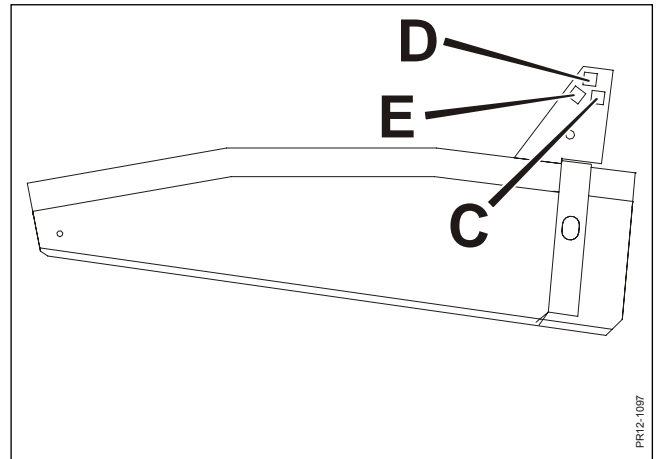


Fig. 3-12

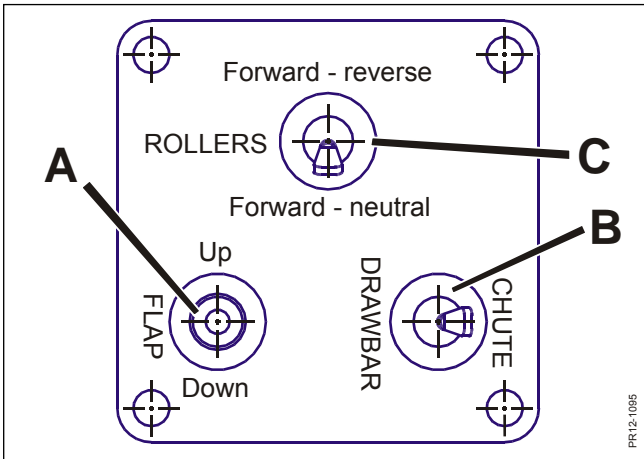


Fig. 3-13

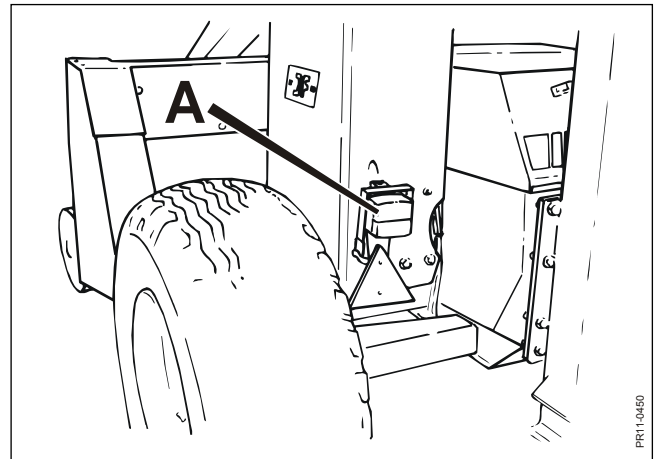


Fig. 3-14

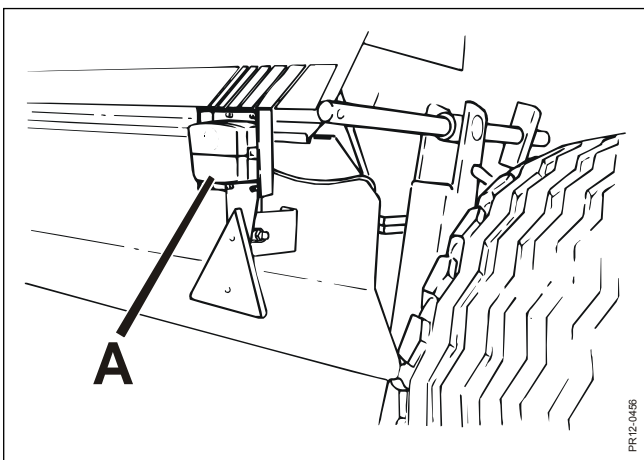


Fig. 3-15

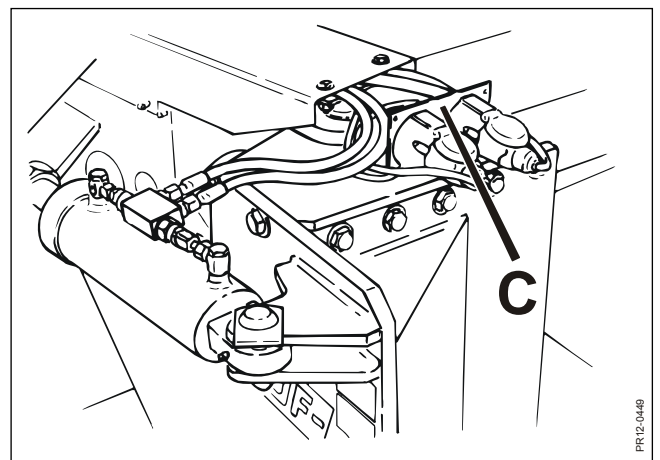


Fig. 3-16

3. MOUNTING OF EQUIPMENT

Fig. 3-11 The electric motor **A** for the deflector **B** must also be mounted.

Fig. 3-12 On the deflector there are 3 mounting possibilities: **C**, **D** and **E**. Mounting at **C** provides the best movement of the deflector when driving with FCT 1355.

Fig. 3-13 The switch **A** on the control box operates the deflector directly and switch **B** operates a change-over valve that makes it possible to use a double-acting oil outlet for **either** chute swivelling **or** the movement of the drawbar. Switch **C** is described in chapter 4. **ADJUSTMENTS.**

The orientation of the switches appears from the text on the control box.
(If it turns out that a switch is placed incorrectly in relation to the text on the control box, loosen the switch from the cover and turn it halfway round. Switch **A**; switch the cables on the electric motor **A** Fig 3-11.)

LIGHTING KIT

The machine can be equipped with universal lighting kit consisting of two light units with tail light and flasher, fittings for assembling plugs and cables and wiring system with plugs to the tractor. The equipment is easy to retro-fit on your machine.

Fig. 3-14 In the left-hand side the light **A** is mounted on the main frame right beside the left wheel.

Fig. 3-15 In the right-hand side the light **A** is mounted on rear lower guard right beside the right wheel.

Fig. 3-16 The fitting **C** with plugs for the 2 light units is placed rearmost at the top of the bracket for the drawbar.
The cable with the plug for the tractor is placed along the drawbar together with the hydraulic hoses.

4. ADJUSTMENTS

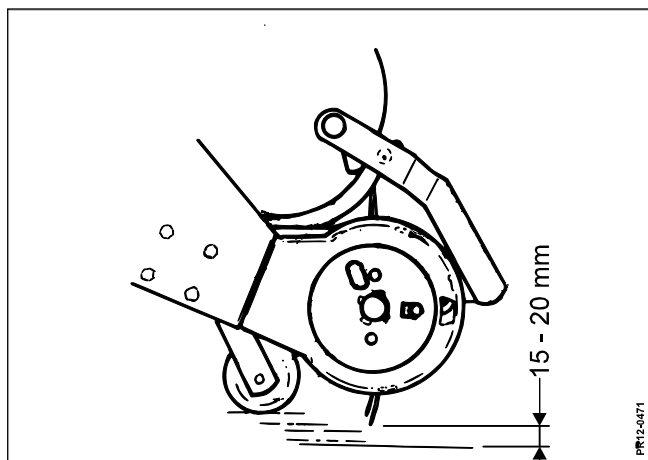


Fig. 4-1

4. ADJUSTMENTS

PICK-UP

Fig. 4-1 The pick-up is equipped with support rollers made of steel which are adjustable in height. You should keep the pick-up at such a height that the tines do not hit the ground and leave earth in the crop and can pick up the grass without waste.

JF-STOLL recommends a distance between the pick-up tines and the ground of 15 to 20 mm.

The auger on the pick-up is equipped with a slip clutch. The slip clutch of the auger is adjusted so that it releases before the other friction clutches in the machine.

The highest capacity is obtained by working at a forward speed where you drive without blockage in the auger. If there is a blockage around the auger you stop and force the crop out of the machine by means of the reverse function. See also chapter 6 "WORKING IN THE FIELD".

A continuous and even flow through pick-up and auger is the best way to avoid blockages inside the machine, and thus avoid long operational stoppages.

The operator should always ensure spare friction discs for the slip clutch on the auger are in the tool box. If this clutch has often been in operation, the coating of the friction discs is worn and it cannot transfer sufficient transmission. It may therefore be necessary to replace the friction discs, but remember they have to be of the same number and quality.

4. ADJUSTMENTS

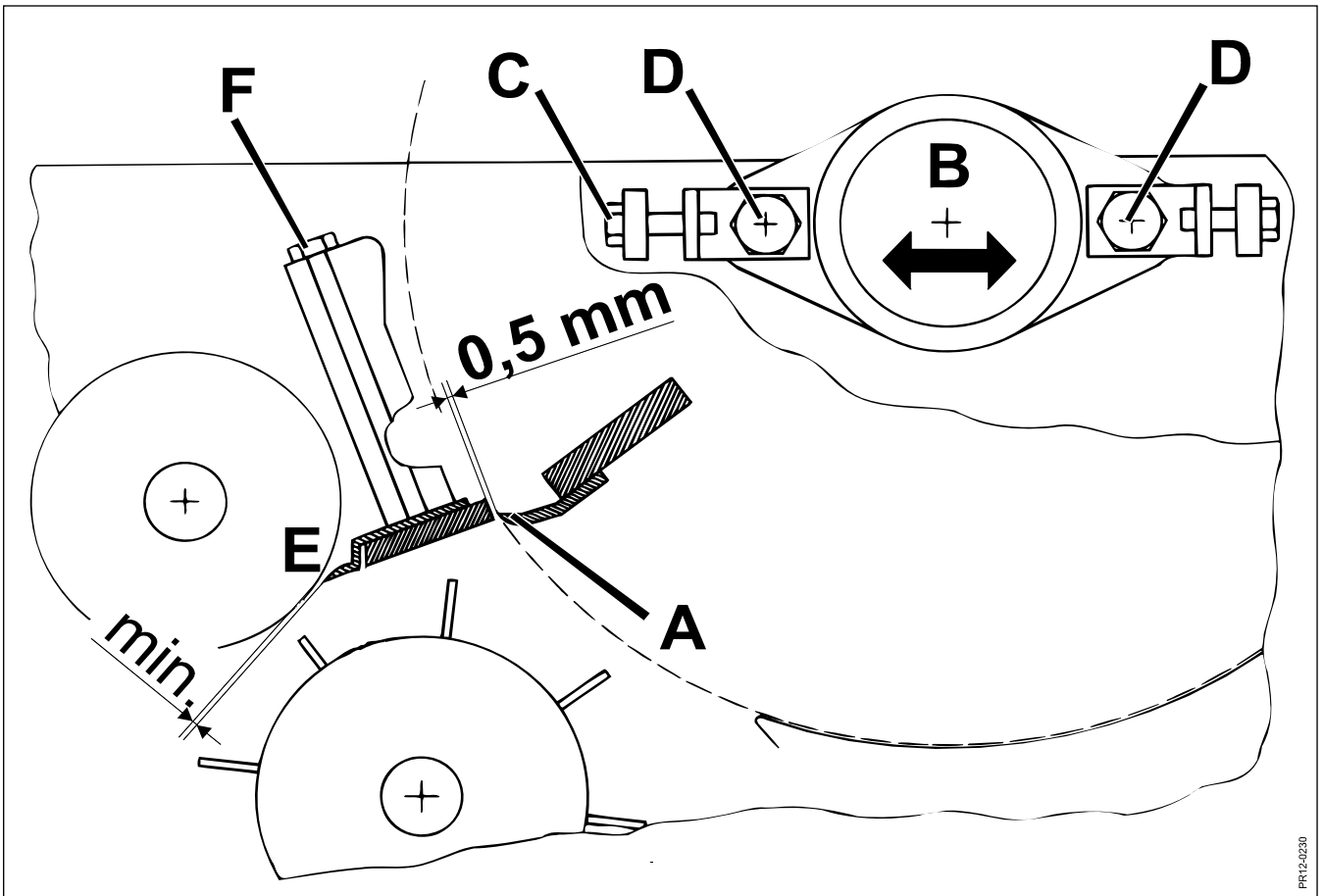


Fig. 4-2

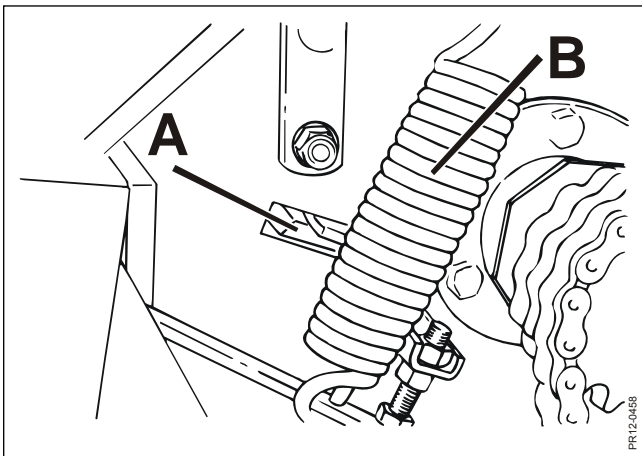


Fig. 4-3

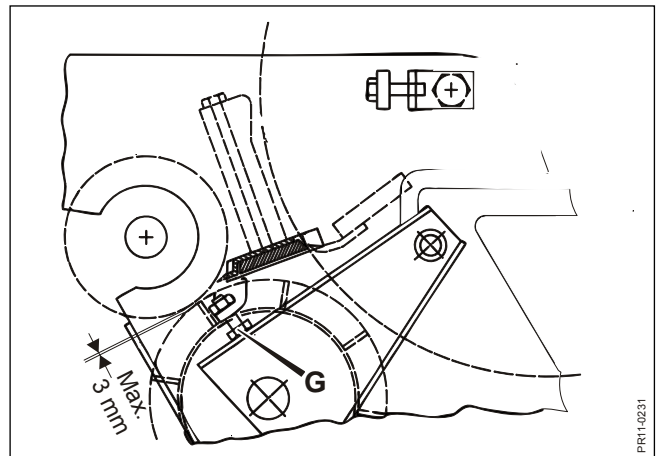


Fig. 4-4

ROTOR AND ROLLER SECTION

Fig. 4-2 The distance **A** between the blades of the rotor and the shearbar must be checked regularly with the delivered gauge (distance measuring device). You should aim at a distance of 0.5 mm. If it is necessary to adjust the distance, loosen the 2 bearing housings **B** and adjust with the screws **C**. When the distance has been checked, the bolts **D** of the bearing housings are tightened with a torque wrench to 40 kgm (400 Nm).

The machine is equipped with a scraper for the smooth roller **E**. The scraper is mounted together with the reversible shearbar just mentioned.

When mounting the scraper place it as close as possible not damaging the smooth roller **E** and then tighten the bolts **F** with a torque wrench to 10-12 kgm (100-120 Nm).

Fig. 4-3 The scraper is dismantled by removing the screws **F** (on fig. 4-2), which also secure the shearbar, after which scraper and shearbar can be pulled out of the opening **A** in the rotor housing. The spring **B** for the serrated roller must be loosened or dismantled to get enough space.

If the shearbar has been worn it can be reversed for a new sharp edge.

Fig. 4-4 The distance between the smooth roller and the serrated roller should be max. 3 mm. Adjustment is made with the bolts **G** at both sides of the rotor housing.

4. ADJUSTMENTS

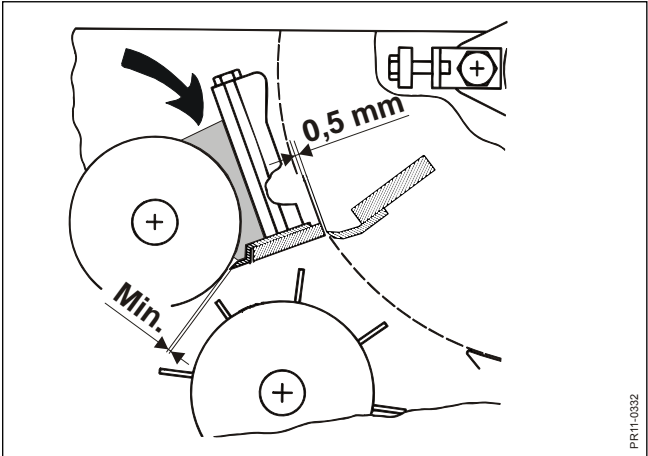


Fig. 4-5

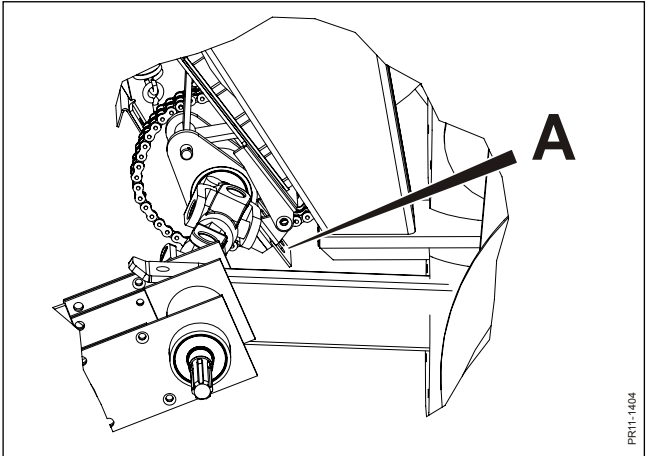


Fig. 4-6

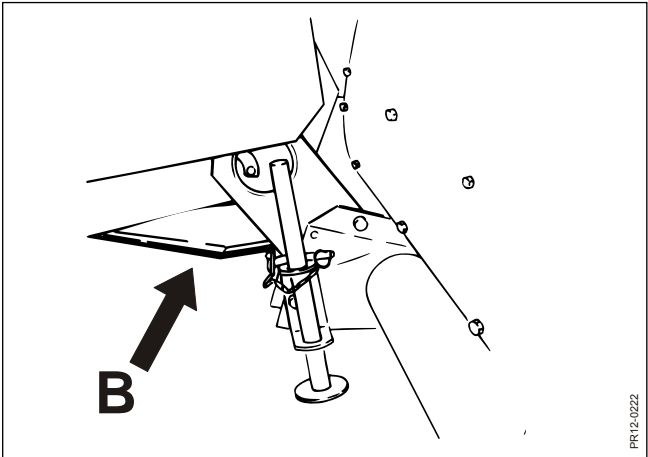


Fig. 4-7

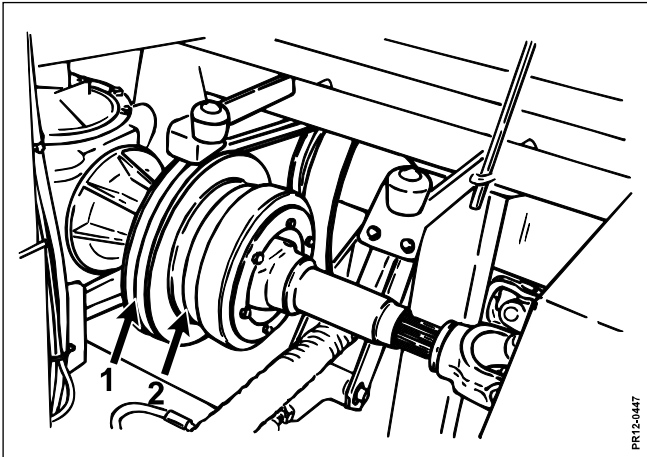


Fig. 4-8

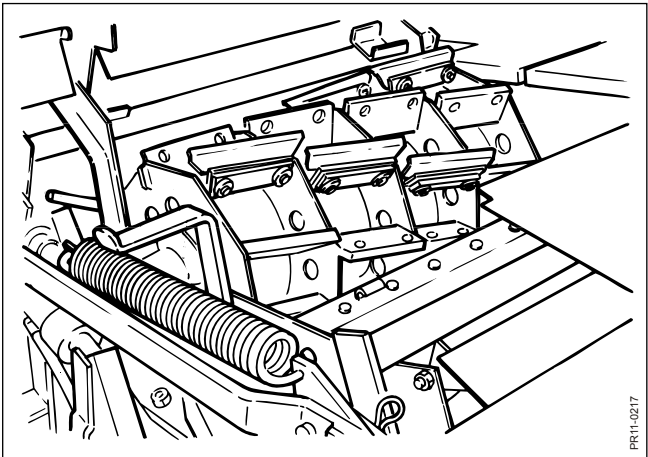


Fig. 4-9

4. ADJUSTMENTS

Fig. 4-5 Under some conditions the crop substance (small particles) can accumulate in the shaded area and this may result in an overloading of the transmission driving the rollers.

Check the area after every 8 hours of operation and remove possible crop remains. Check, and if necessary adjust, the distance between scraper and smooth roller. The checking frequency can be reduced when the operator knows the machine under all conditions.

Fig. 4-6 The roller chain for feed intake and pick-up, front left-hand side, should be kept sufficiently tight. Chain adjustment takes place by means of spacers **A**.

Fig. 4-7 Under the roller section a bottom plate **B** can be mounted as option. This plate can be mounted when working in very dry and/or short crops to avoid waste under the rollers.



IMPORTANT: When working under normal conditions we recommend you to drive without this bottom plate as, otherwise, material can accumulate under the rollers causing reduced capacity and unnecessary overload of the transmission.

However, when driving in a crop where there is an excessive waste under the rollers, the bottom plate should be mounted. Waste material should be removed on a regular basis.

CUTTING LENGTHS

The cutting length depends on the following 2 conditions:

- 1) Number of blades on the rotor where there is
 - 6 row blade rotor which means 30 blades in total (Standard)
 - 8 row blade rotor which means 40 blades in total (Additional equipment)

Fig. 4-8 2) The feed intake speed which is changed by shifting between 2 placements of the V-belts driving the gearbox for the feed rollers:

A \ B	B	30 blades	40 blades
	A		
1		15	11
2		7.5	5.5

The figures in the table indicate the theoretical cutting length in mm.

Fig. 4-9 All cutting lengths can be doubled by removing every second row of blades in the rotor.

4. ADJUSTMENTS

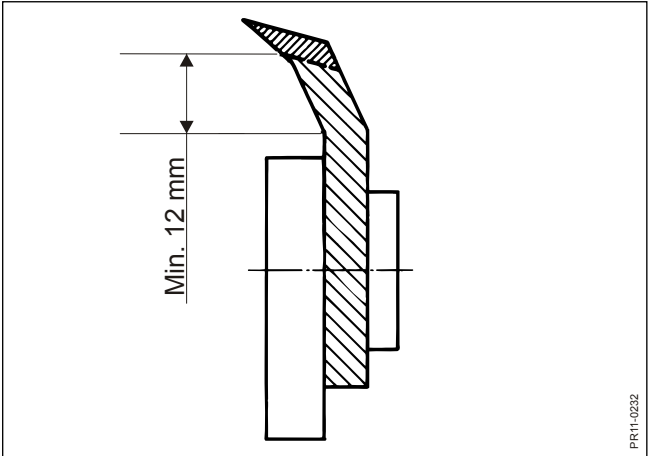


Fig. 4-10

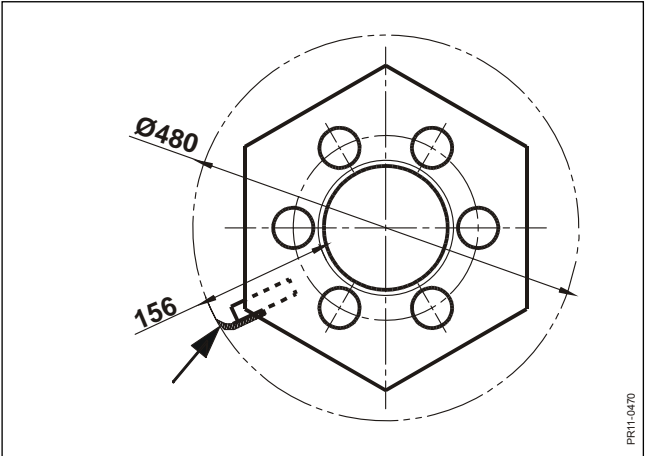


Fig. 4-11

REPLACEMENT AND ADJUSTMENT OF BLADES

When replacing a single blade the blade must be placed at the same distance to the shearbar as the existing blades. To ensure that the rotor is in balance it may be necessary to replace the opposite blade as a used blade has a different weight compared to a new blade.

Even if there is no visible damage to the blade bolts, they should always be replaced together with the blades as they might have been overloaded.



CAUTION: Check the distance between the blade and the shearbar (0.5 mm) with the supplied gauge before the bolts are tightened.



WARNING: Only use original blade bolts when replacing. Tighten the blade bolts with a torque wrench to 40 kgm or with the supplied spanner using approx. 40 kg leverage.

Fig. 4-10 When the blades have been worn max. 8 mm or to the first bend, i.e. approx. 12 mm above the straight piece they must be replaced.



DANGER: When all blades on the rotor have been worn and the rotor adjusted towards the shearbar, it **MUST** be adjusted back again before new blades are mounted. Otherwise there is a risk that the new blades collide with the shearbar when the rotor is turned.

Fig. 4-11 When mounting new blades they must be pulled out so that the outer diameter on the rotor is 480 mm (from rotor tube to blade point = 156 mm).

GRINDING

Adjustment of the PTO drive shaft for the rotor to or from grinding position, respectively, may only take place **when the machine has been stopped and the rotor has come to a complete standstill**. The rotor may only rotate when the grinding device is in grinding position.

Check before grinding:

- that the grindstone is undamaged.
- that the device is easily sliding back and forth.
- that the device is parallel with the rotor.

The grinding device is correctly adjusted from the factory and therefore there is normally no need for adjustment, but if it has been dismantled adjustment can be made at the oblong holes of the lateral guides. The bolts must be tightened firmly after the adjustment.

The stone is fed by turning the handle.

Normally you should grind the blades once a day – but avoid too much grinding.



CAUTION: Protect your eyes – always use safety glasses when grinding. The guard above the grinding device must be closed while grinding.

4. ADJUSTMENTS

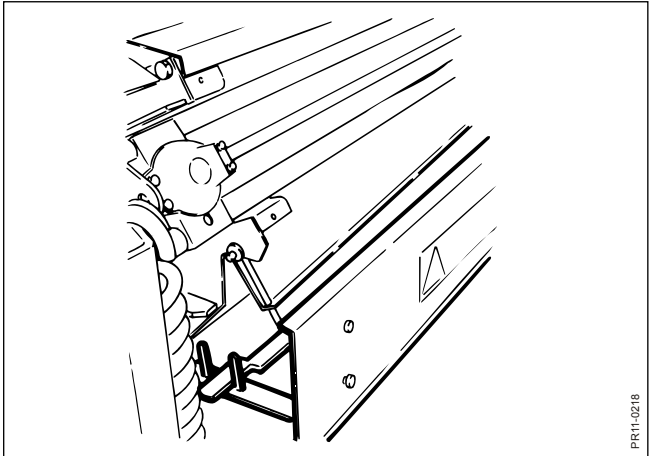


Fig. 4-12

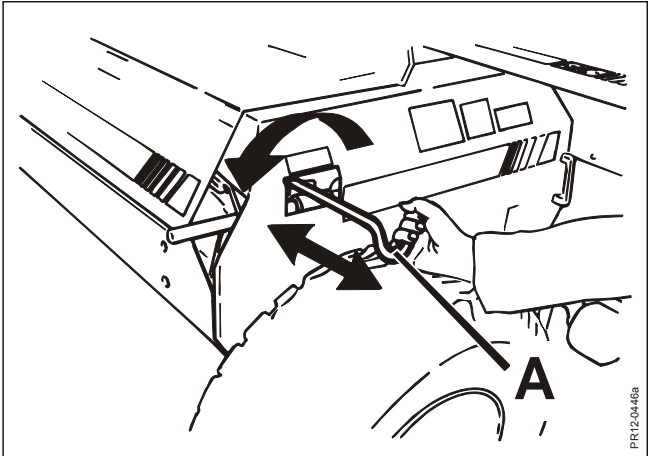


Fig. 4-13

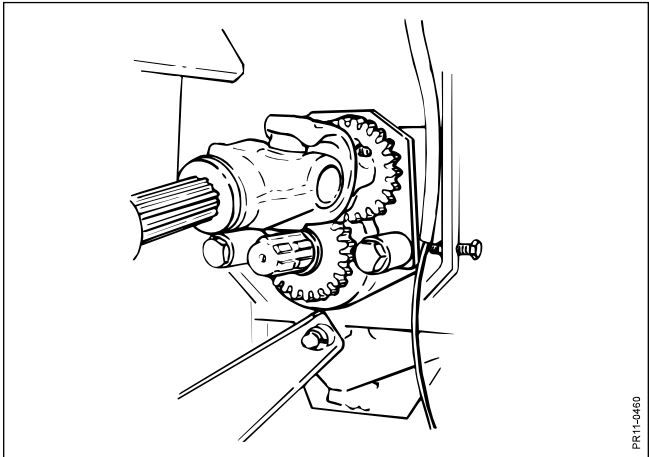


Fig. 4-14

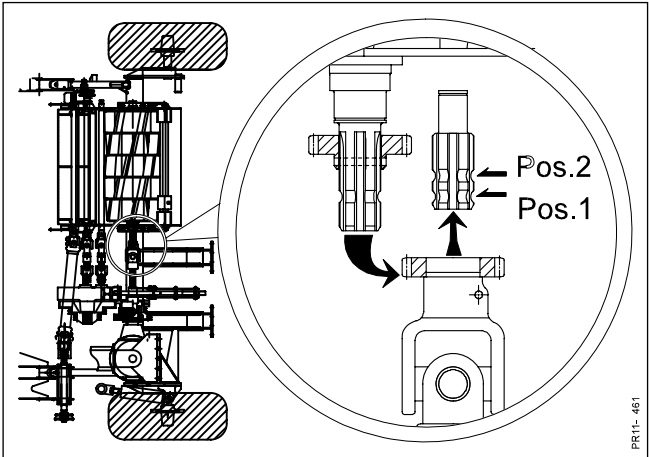


Fig. 4-15

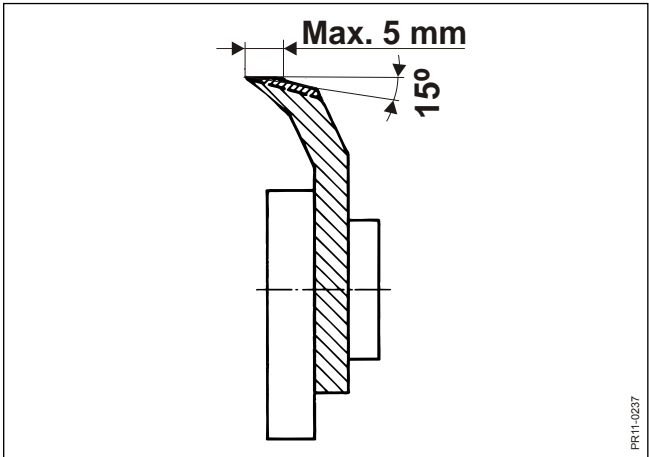


Fig. 4-16

4. ADJUSTMENTS

GRINDING OPERATION

1. Lift the guard above the grinding device.

Fig. 4-12 2. Lower the guard between the grinding device and the rotor so that there is free space between the device and the rotor.

Fig. 4-13 3. Adjust the grindstone so that there is 2-3 mm clearance between the stone and the blades by turning the handle **A**.

Fig. 4-14 4. Mount the PTO drive shaft for the rotor on the free pin on the rotor housing. The
Fig. 4-15 PTO drive shaft must be fixed at pos. 2 whereby the rotor will rotate in the opposite direction.

5. Close all guards.

6. Start the tractor and keep the rpm at a little above idle speed.

Fig. 4-13 7. Feed carefully by turning the handle **A** until the stone touches the blade. Move the stone in a sliding movement across the whole rotor and back again. Feed some more and repeat the movement across the whole width of the rotor.

8. Push the handle in after grinding. Stop the tractor and when the rotor has come to a complete stop, the guard between the device and the rotor must be lifted back into its right position. The PTO drive shaft for the rotor must be moved back to the pin for normal direction of rotation of the rotor.



WARNING: REMEMBER, only grind with CLOSED guards.

For safety's sake check the distance between blades and shearbars again with the gauge.

Check wear of the grindstone regularly. If the stone has been worn down to a thickness of 10 mm it must be replaced.

ROUGH GRINDING

Fig. 4-16 To avoid unnecessary power consumption and excessive wear of the grindstone when working with the harvester, it is necessary to make a rough grinding or adjustment of the blades when the cutting edge is 5 mm wide or more. Grind the rear edge to an angle of approx. 15°.

Rough grinding can be made by means of an angle grinder with the rotor and blades positioned in the machine.



CAUTION: Be careful not to grind down the cutting edge (front edge) of the blades.

Block the rotor with a firm object (a piece of wood or the like) during rough grinding to make sure that the rotor does not move during this operation.

4. ADJUSTMENTS

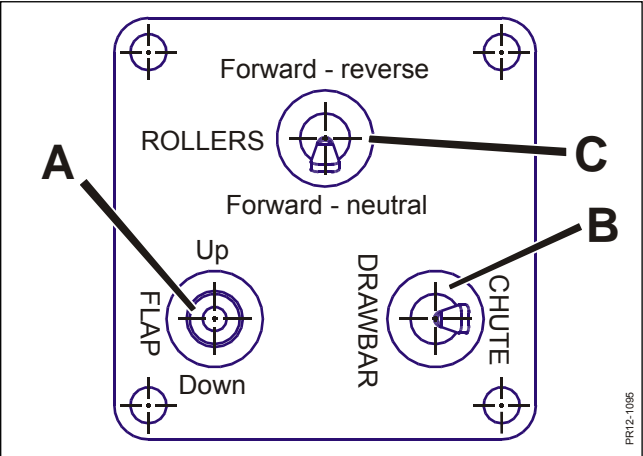


Fig. 4-17

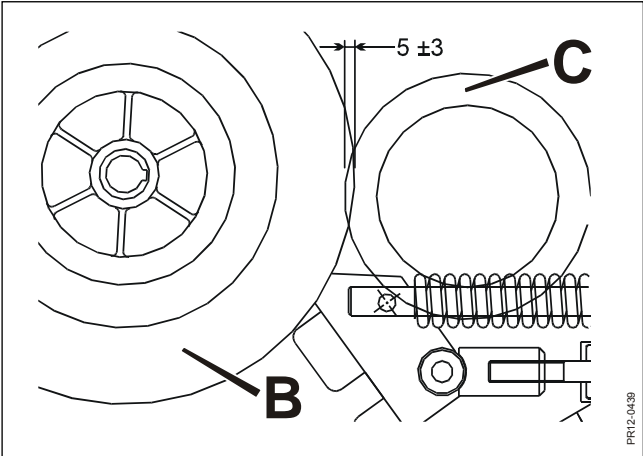


Fig. 4-18

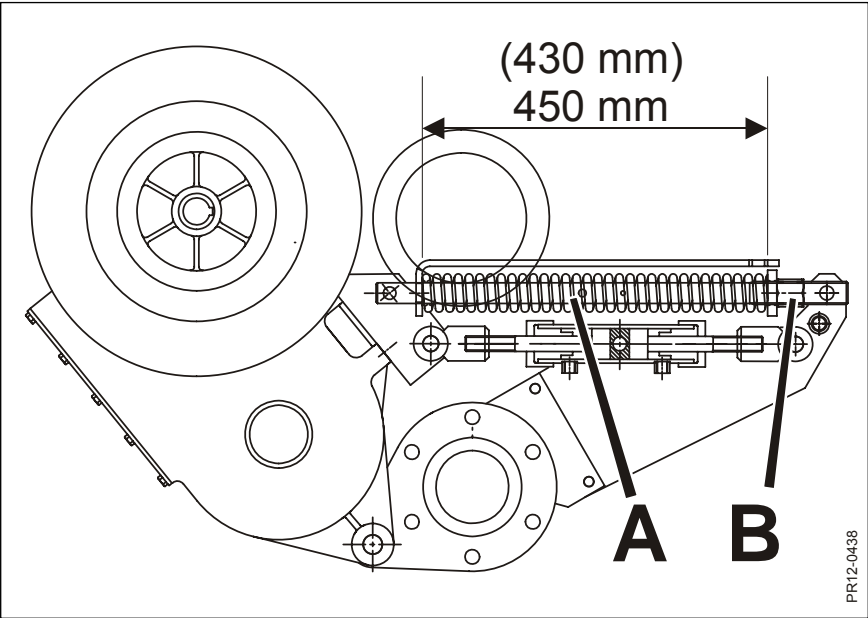


Fig. 4-19

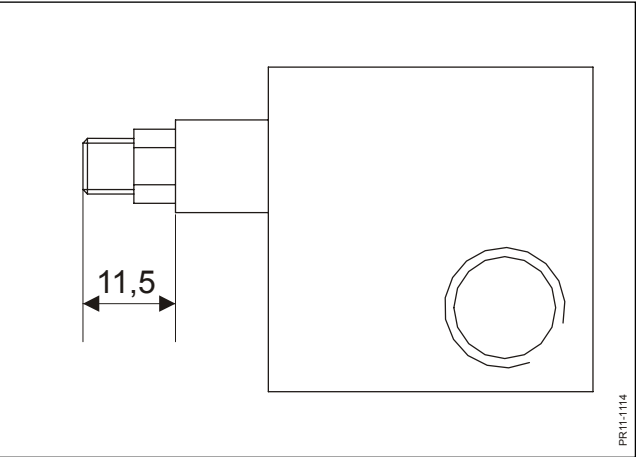


Fig. 4-20

REVERSE

Fig. 4-17 For “normal” reverse the toggle switch **C** on the control box is set to position **Feed intake - reverse**.

Reversing is now carried out with the hydraulic handle which is connected to the reverse cylinder. The reverse function **can** be used at full rpm (1000 rpm on the PTO), but **we recommend you to reduce the rpm** to relieve the machine as much as possible.

Fig. 4-18 The overlap between the steel friction disc **B** and the rubber disc **C** must be 5+/- 3mm.

Fig. 4-20 If the rubber disc is worn, the overlap is adjusted automatically by the pressure relief valve (Fig- 4-20), as the cylinder then always presses with constant pressure and thus ensures a constant pressure between the two parts **B** and **C**. The pressure relief valve is placed to the right of the cylinder and should, when adjusted correctly, have a free length of thread of minimum **11.5 mm**.



CAUTION: Only use the reverse function for short periods to ensure correct functioning and long life of the rubber disc.

Fig. 4-19 The tightening of the V-belt drive is also adjusted automatically. It is determined by the pressure relief spring **A**. The tightening of the V-belt drive can be changed by turning the nut **B** on the spindle in the pressure relief valve until the spring has the correct length:

- In case of long chopping length, 15 mm, the length must be 450 mm.
- In case of short chopping length, 7.5 mm, the length must be 430 mm.



WARNING: The tightening of the spring should **NOT** be increased as this may overload the transmission. The V-belt drive works as a belt clutch and slips if the feed intake is overloaded. With this clutch function the attentive operator can change into a lower gear when the belts slip and thereby avoid blockage in the feed intake section.

4. ADJUSTMENTS

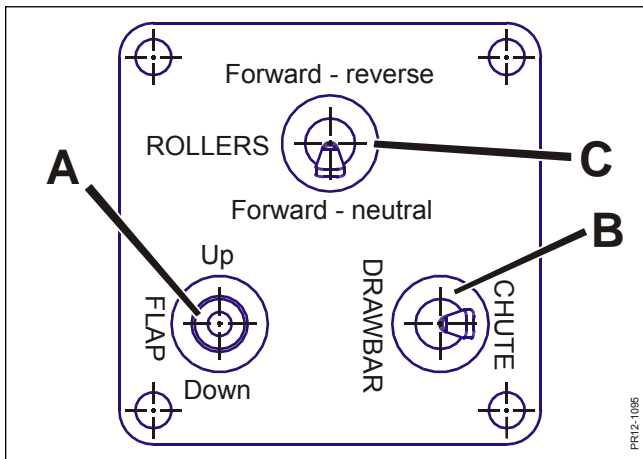


Fig. 4-17

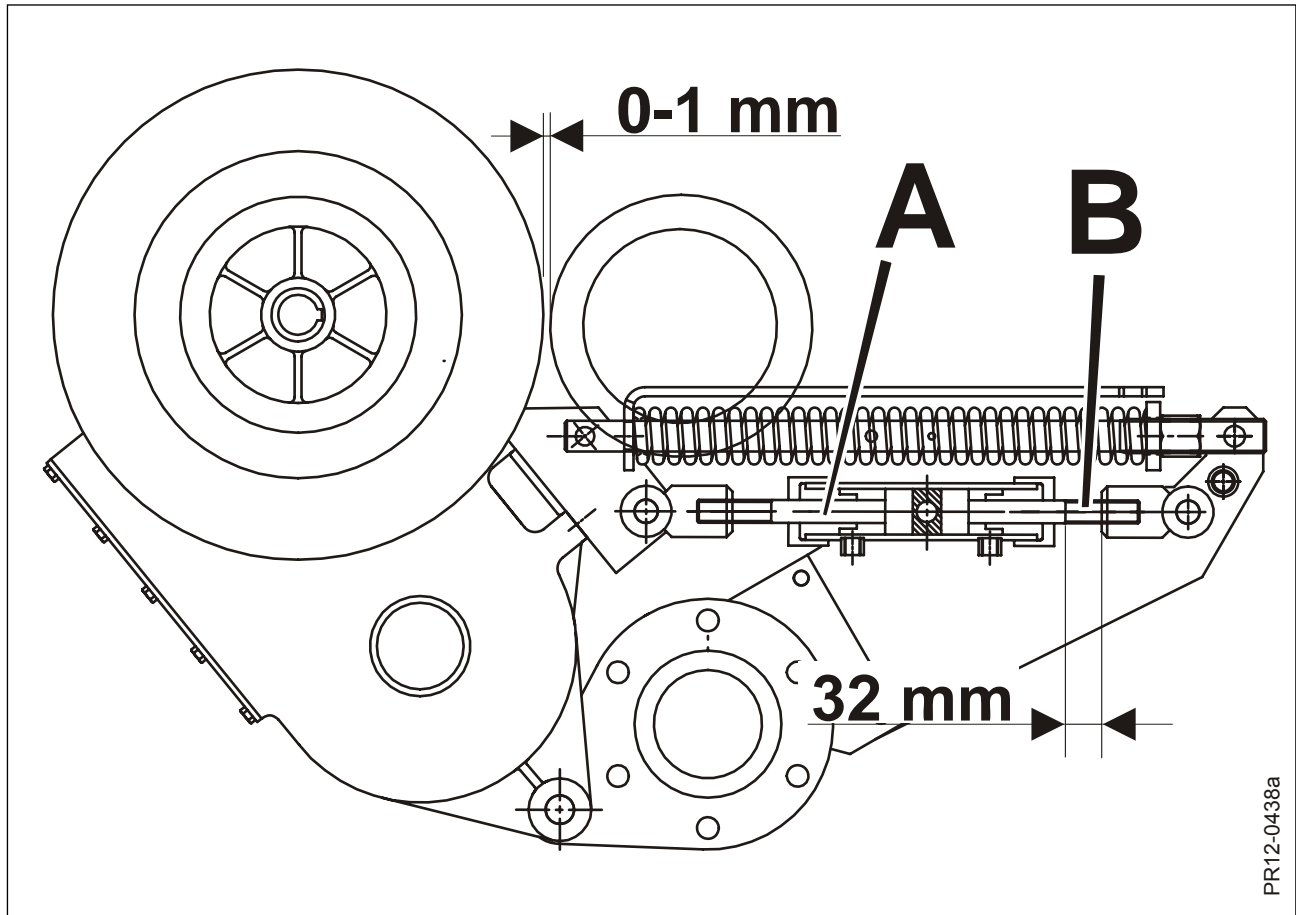


Fig. 4-21

NEUTRAL POSITION

Fig. 4-17 For neutral position set the toggle switch **C** on the control box to position **Feed intake - neutral**.

The reverse function has a neutral position. This neutral position is between the reverse function where the rubber disc and the steel disc are in mesh (fig. 4-18), and normal working position where the belt drive is tightened and drives the feed intake (fig. 4-19).

In neutral position the belt drive for the feed intake section is slackened and it stands still. However, it is not a position which should be considered as standstill of the machine, for instance because the blade rotor still rotates.



WARNING: Do not approach the machine when the feed intake is in neutral position and the rotor is rotating. Neutral position does not guarantee that the feed intake will not start.

Fig. 4-21 In neutral position the distance between the rubber disc and the steel friction disc should be approx. 0-1 mm. Adjustment of neutral position takes place by turning the piston rod at **A**.

After any dismounting of the cylinder it is important that the factory setting of the free thread length at **B** is 32 mm.

5. WORKING IN THE FIELD

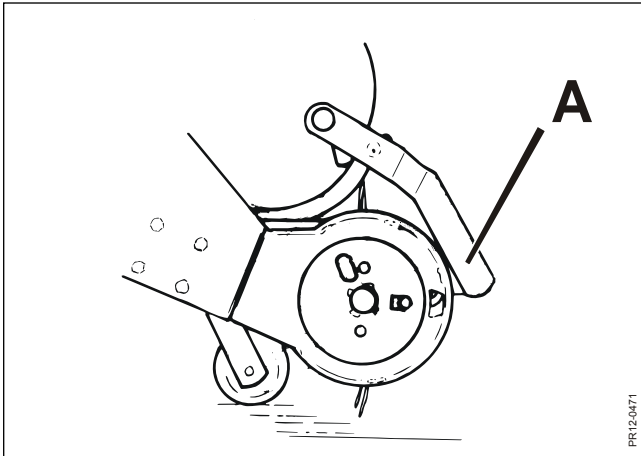


Fig. 5-1

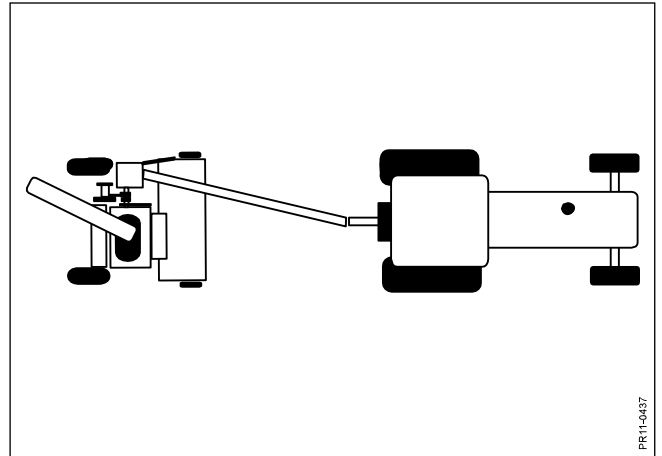


Fig. 5-2

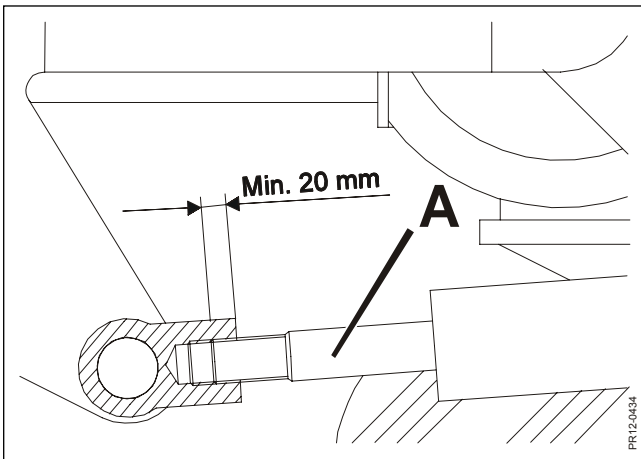


Fig. 5-3

5. WORKING IN THE FIELD

GENERAL CONDITIONS

Adjust the machine to the maximum cutting length acceptable for the crop in question. This will reduce the stress in the feed intake section and the transmission and increase the possibility of working with the machine continuously without blockages.

Always work with sharp blades and correctly adjusted shearbar. Be aware that an adjustment for short cutting length not only demands increased power but also causes increased wear of blades.

Fig. 5-1 The feed intake plate **A** above the pick-up should be dismantled when working in heavy and strong crops as the auger can easily pull the crop into the feed intake section under such conditions. At the same time you will have optimal preconditions for problem-free reverse out of the auger as the feed intake plate **A** usually tends to prevent the crop from being reversed freely out of the auger. See also the section "REVERSE" in chapter 4.

Under difficult conditions we recommend you to bring spare friction discs for the slip clutch on the auger as the pre-adjusted torque on a slip clutch falls gradually when it is activated and the wanted power cannot be transmitted. When replacing discs remember that they must be of the same number and quality so that the wanted torque can be transmitted and to secure maximum life.

SWATHING BEFORE CHOPPING

If it is possible to influence the swathing made before chopping it is important to emphasise that regular and even swaths are optimal for the subsequent chopping and will spare the tractor driver a lot of trouble.

The machine is equipped with a wide pick-up and if you want to use the capacity of the machine through double swathing, it is desirable to place 2 swaths beside each other within the width of the pick-up instead of raking. Raked swaths are often irregular and the crop tangled which may cause blockages in the auger and/or feed intake section.

Therefore, double swaths are optimal for a regular flow of crop through the machine.

TRANSPORT POSITION

Fig. 5-2 In transport position the machine must be placed straight behind the tractor.

Fig. 5-3 The cylinder **A** for the drawbar can be adjusted in length in order to change the position of the machine behind the tractor.



CAUTION:

There must be minimum 20 mm thread in mesh between the piston rod and the threaded piece.

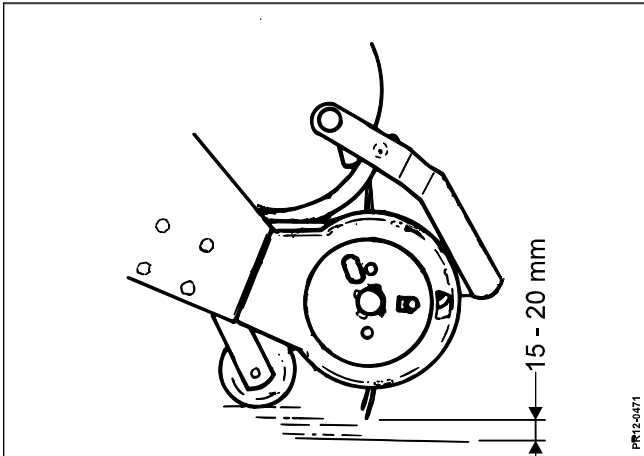


Fig. 5-4

STARTING IN THE FIELD

Gradually increase to the correct number of rpm -1000 rpm on the PTO. Drive slowly into the crop and increase the forward speed as long as the tractor can keep the required number of revolution of approx. 1000 rpm.

An inexperienced operator should always work with a capacity reserve in the machine to avoid problems with the flow through the machine.



IMPORTANT: Always make sure that the tractor can keep the correct number of revolutions of 1000 rpm on the PTO. This ensures a regular load of the machine and you avoid torque increases (in case of reduced rpm) which wears the safety clutches and the transmission.

To obtain optimal pick-up function it is important that:

- The crop enters the machine regularly and that you, if possible, drive in the opposite direction of the mower conditioner.
- The forward speed is adjusted to the amount of crop and is not so high that blockage is frequent.
- You drive as straight as possible into the crop and are aware of this when turning in the field.

Fig. 5-4 The pick-up is fitted with support rollers of steel which are adjustable in height. From the factory the wheels have been adjusted so that there is 15-20 mm space between the tines and an even and firm ground.

Check regularly that the pick-up tines do not reach further down than necessary to be able to pick up the swath efficiently. If the tines hit the ground too hard they are quickly worn and the drive of the pick-up may be overloaded.

BLOCKAGE IN THE MACHINE

Auger and feed intake section:

In case of blockage in the auger or feed intake section, activate the reverse function **immediately**, by moving the switch on the control panel in the tractor to neutral position and reduce the number of revolutions.

Hereby the auger and the feed intake stop immediately, and you can obtain an overview of the situation.



DANGER: Do not approach the machine when the feed intake is in neutral position and the rotor is rotating. Neutral position does NOT guarantee that the feed intake will not start.

Now place the reverse function in reverse position at a low number of rpm, with the toggle switch on the panel, and reverse the material out of the machine.

After reversing move the reverse function back to normal feed intake at a low number of rpm. When the machine runs correctly, increase to correct number of rpm and the work can be continued.

5. WORKING IN THE FIELD

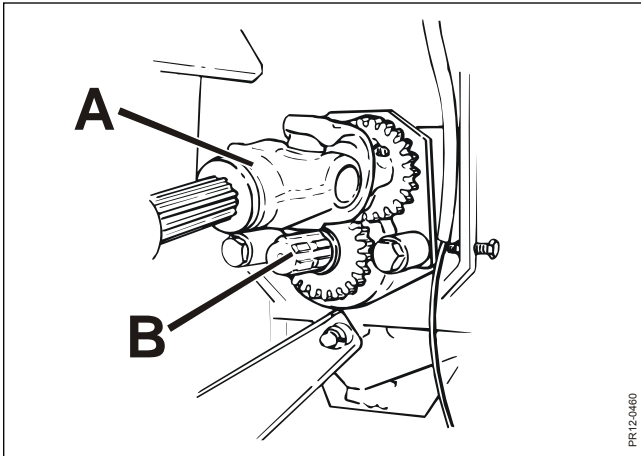


Fig. 5-5

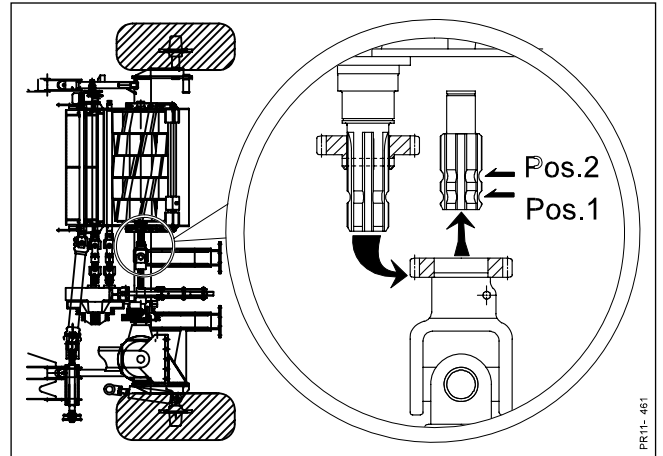


Fig. 5-6

The rotor

In case of blockage in the rotor, activate the reverse function **immediately**, by moving the hydraulic handle for the reverse function to neutral position and reduce the number of revolutions.

To enable the feed rollers to pull the material out of the rotor, it must be disconnected during reverse. The procedure is as follows:

- 1) Disconnect the power take-off and stop the tractor engine, then walk to the machine.



WARNING: Do not approach the machine until the chopping rotor has come to a complete stop and be aware that neutral position does not guarantee that the feed intake will not start.

Fig. 5-5
Fig. 5-6

- 2) Move the PTO shaft **A** for the rotor to the alternative pin in **pos. 1** where the gear wheels are not in mesh. Thereby the rotor is not driven.



WARNING: It is important that the PTO shaft is NOT moved to **pos. 2**, where the rotor rotates in the opposite direction. This position is used for grinding, or for reverse in case of blockage in the auger or the feed intake section.

- 3) Connect the power take-off again at low number of rpm and move the reverse function to reverse position with the toggle switch on the control panel and reverse the material out of the machine.

Fig. 5-5

- 4) After reversing disconnect the power take-off again, and when the rotor has come to a complete stop, move the PTO shaft **A** for the rotor back to the pin **B** for driving the rotor.

- 5) Move the reverse function back to normal feed intake at a low number of rpm.

- 6) When the machine runs, increase to correct number of rpm and the work can be continued.

5. WORKING IN THE FIELD

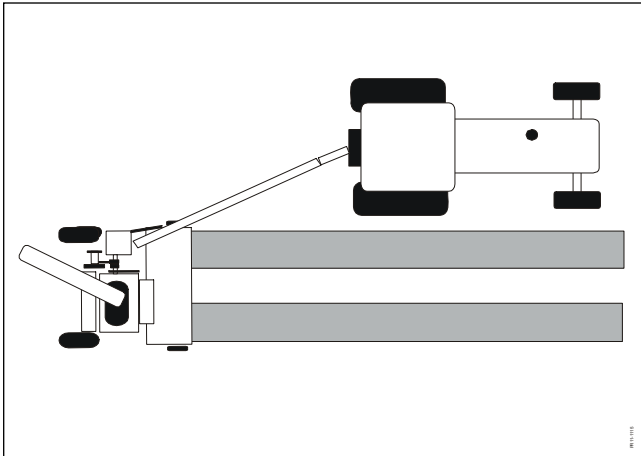


Fig. 5-7

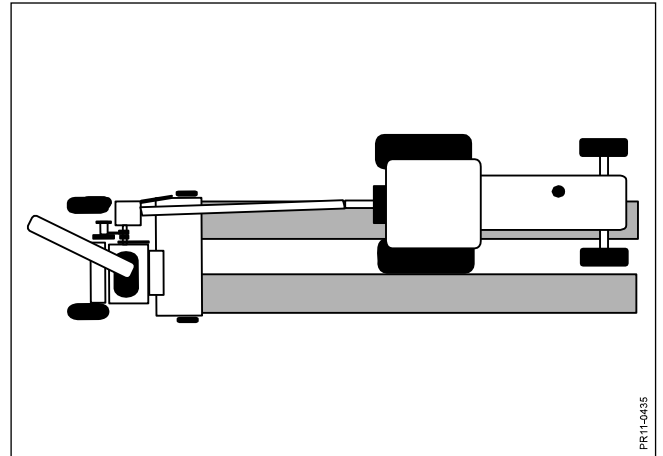


Fig. 5-8

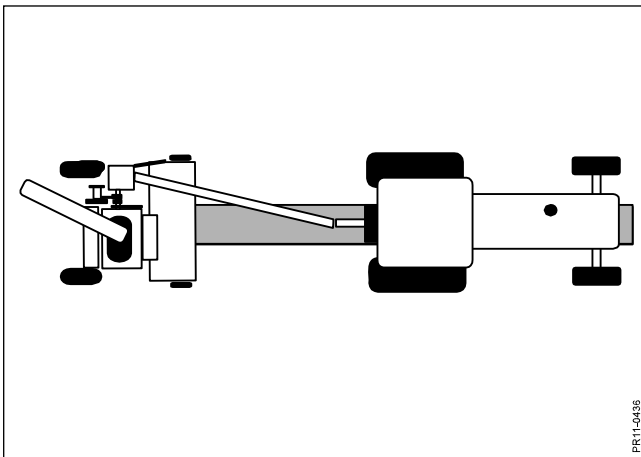


Fig. 5-9

WORKING POSITIONS

The position of the drawbar is adjusted continuously with the hydraulic cylinder. To avoid an obstacle etc. in the field you can easily adjust the position of the drawbar during working since the drawbar is above the pick-up.

With the wide pick-up on the machine it is possible to work with the chopper in several positions in relation to the tractor:

- Fig. 5-7** 1) The chopper picks up grass beside the tractor, working offset. The machine can pick up wide single swaths and double swaths, which are very suitable for the chopper. A good driving technique when unloading into a trailer at the right-hand side of the chopper.
- Fig. 5-8** 2) The chopper now works semi-offset as the tractor drives with one set of wheels between the swaths. This technique results in a straight drive line and is suitable for unloading to both sides. The parallel driving tractor can get closer to the chopper and it is easier to control the loading of the trailer.
- Fig. 5-9** 3) Here the chopper works in-line as the tractor drives over the swath. This technique is of course very suitable for picking up single swaths as you avoid that the tractor drives on the crop. The technique is still suitable for unloading to both sides and brings the tractors close to each other.



CAUTION:

The PTO shaft should work with a deviation of maximum 20°. For sharp turns to the right it is therefore recommended that the drawbar is swung to transport position or a position corresponding to working in-line (see Fig. 5-6.)

6. MAINTENANCE

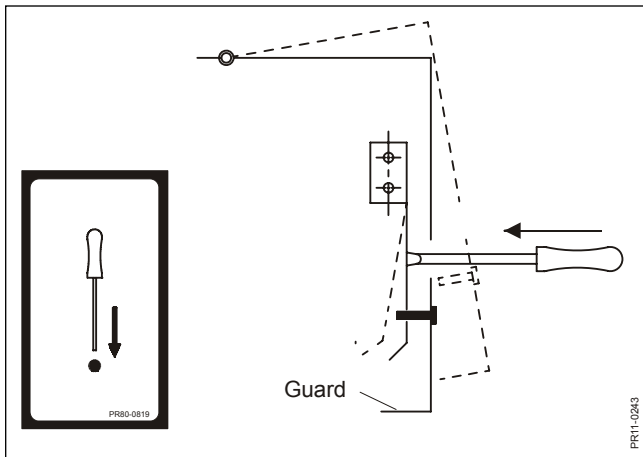


Fig. 6-1

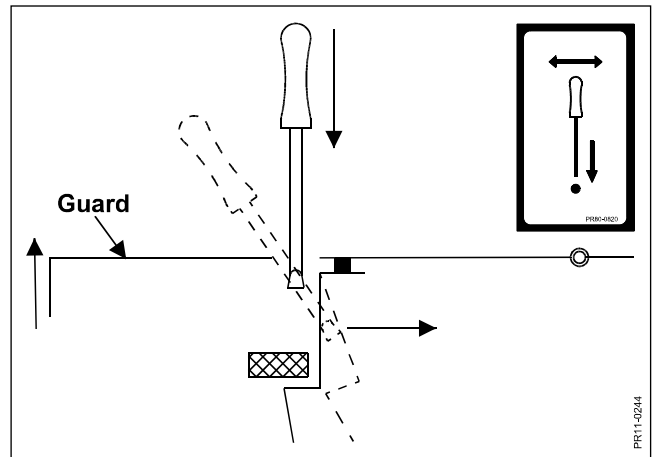


Fig. 6-2

6. 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.



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

Torque moment M_A for bolts on the machine (if nothing else stated in this instruction manual).

A Ø	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 24	640	900	1100
M 24x1,5	690	960	1175
M 30	1300	1800	2300

GUARDS

Fig. 6-1 When maintaining the machine you often need to open or remove guards.

Fig. 6-2 For safety reasons all guards have been equipped with a lock. The lock ensures that the guard cannot be opened without tools. There are two different types of lock. Fig. 6-1 and 6-2 show the two locking principles and the corresponding transfers which indicate and illustrate the locks on the machine.

6. MAINTENANCE

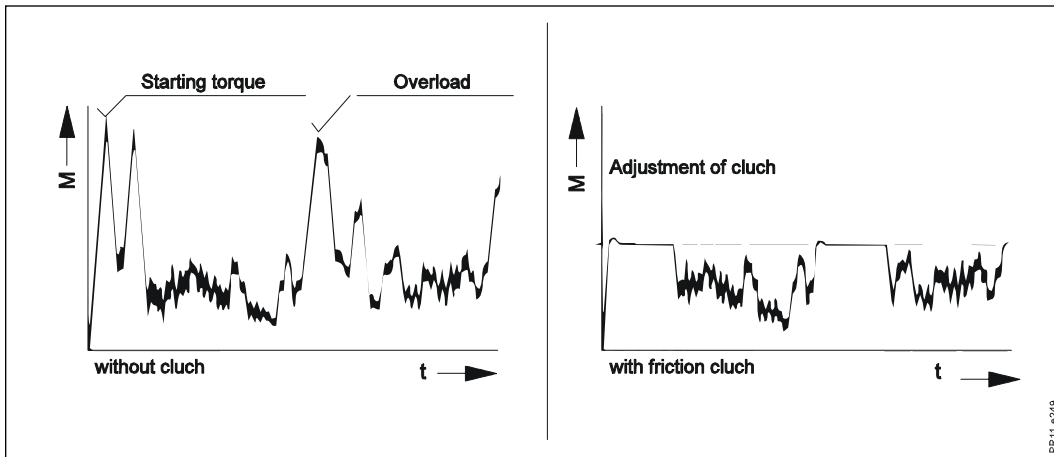


Fig. 6-3

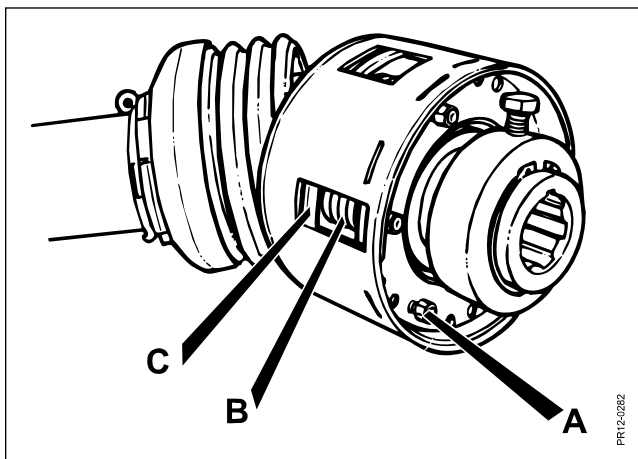


Fig. 6-4

REPLACEMENT OF BLADES

See description for replacement of blades in the rotor and the subsequent adjustment in the section REPLACEMENT AND ADJUSTMENT OF BLADES in chapter 4 "ADJUSTMENTS".

TYRE PRESSURE

FCT 1355 is as standard equipped with wide low profile tyres which provide a good carrying capacity and thus a low ground pressure.

The below table indicates the recommended tyre pressure. The machine is delivered from the factory with these pressures.

FCT 1355	Tyre dimension	Tyre pressure [bar]
Machine, standard	19.0/45-17/10	2.25
Machine, option	14.0/65-16/10	2.80
Rubber wheels for pick-up, optional equipment	3.50-6/4	3.00

A reduced tyre pressure for the machine can be used in extreme cases when driving in areas where extra large carrying capacity is required (meadows, sandy areas or the like)



CAUTION: Check the tyre pressure regularly and make sure that the wheel-fixing bolts are tightened correctly.

FRICTION CLUTCH

Fig. 6-3 In order to ensure a long life for your tractor and machine, the machine is delivered with a **friction clutch** on the front PTO drive shaft. The figure illustrates how the clutch protects the transmission against high torque peaks and at the same time is capable of transmitting the torque while it is in function (slips).

In order to ensure that the clutch works as intended it must be "aired" at regular intervals **as dirt and moisture may cause the clutch to get "stuck"**.

Fig. 6-4 Before the start of a new machine and after a long period of standstill, e.g. winter storage, **the clutch is "aired" in the following way:**

- 1) The six nuts **A** on the flange are tightened. Hereby the springs **B** are compressed so that they do not press on the clutch plates **C** and the clutch can rotate freely.
- 2) **Have the clutch rotate for half a minute** to remove dirt and possible rust on the plates.
- 3) **The nuts A are loosened again** until they are at level with the threads of the bolts, and the springs **B** can press on the clutch plates **C**.

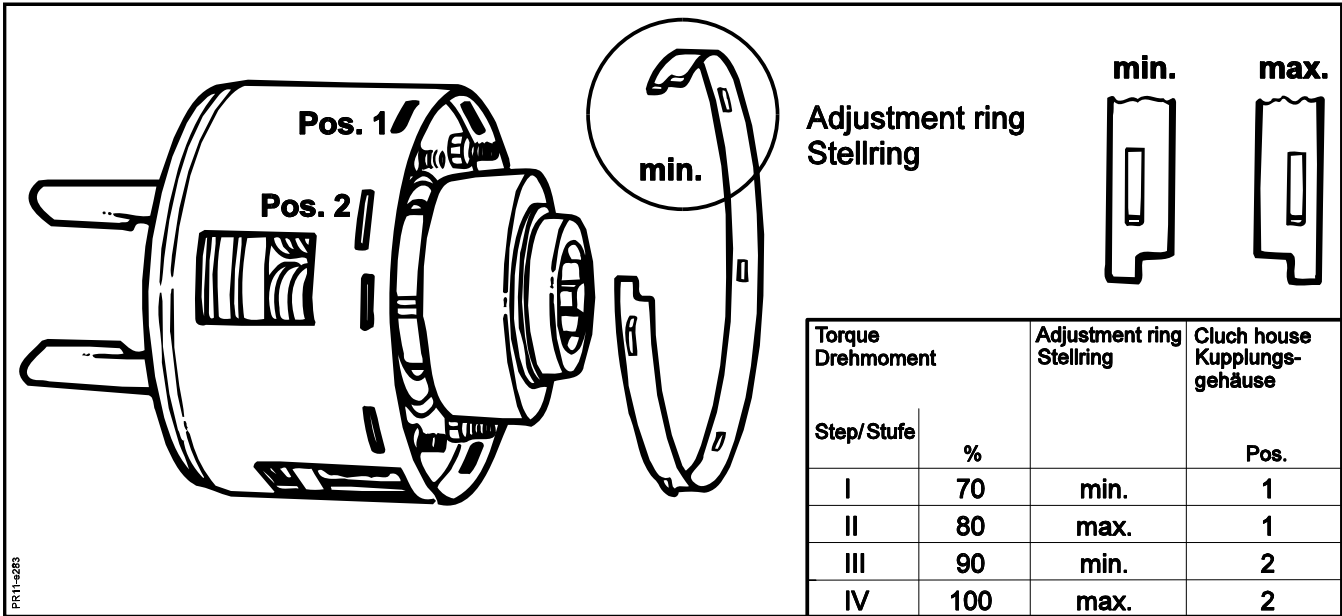


Fig. 6-5

6. MAINTENANCE

Fig. 6-5 The torque in the friction clutch is adjustable. However, you should not change the factory-set adjustment until you have contacted the dealer at JF-STOLL's Service Department.

The friction clutch has 4 different torque adjustments. The adjustment can be changed by turning the adjustment ring **D** and by choosing between 2 different positions in the clutch housing.

1. The adjustment ring has a **minimum** and a **maximum** position.
2. The clutch housing has two different sets of slots **E** in the height into which the adjustment ring **D** can be mounted, **pos. 1** and **pos. 2**.

TORQUE ADJUSTMENT GUIDE

PTO	Torque	Adjustment
1000	2700 Nm.	Step I
1000	3000 Nm.	Step II
1000	3300 Nm.	Step III
1000	3600 Nm.	Step IV

From the factory the clutch is delivered with adjustment II, corresponding to 3000 Nm and should not be adjusted higher!

Adjustment of the torque can **only** be made when the nuts **A** (on Fig. 6-4) are tightened. After the adjustment the nuts are loosened again to the end of the bolt.



WARNING: If the clutch is overloaded by slipping for some time, it will get heated and thus be worn quickly. Overheating will damage the friction plates. If the clutch is blocked or partly put out of function in other ways, the factory guarantee will be discontinued.

6. MAINTENANCE

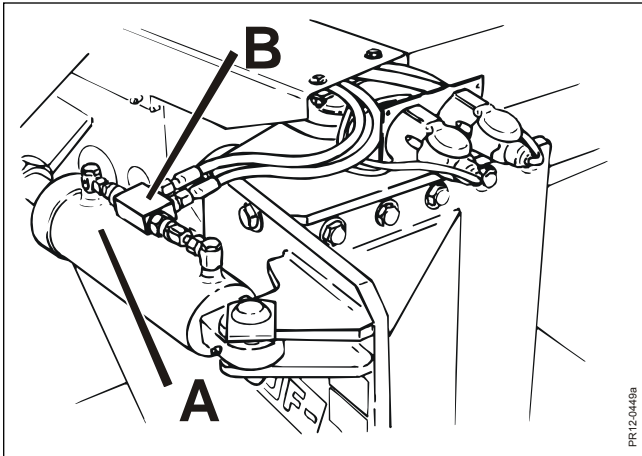


Fig. 6-6

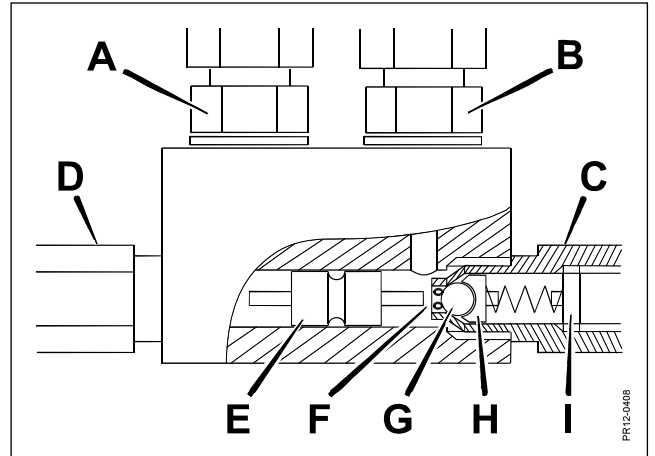


Fig. 6-7

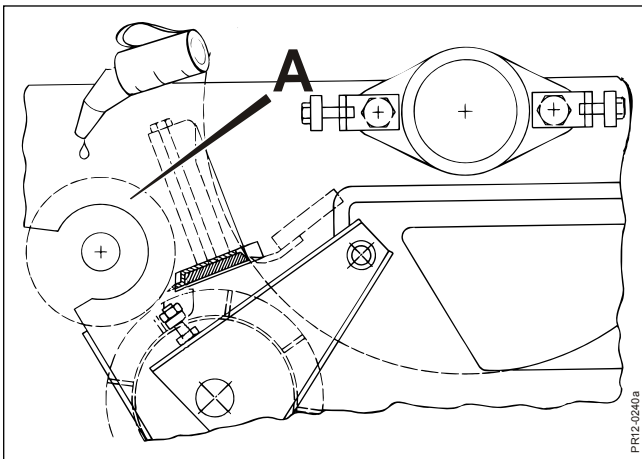


Fig. 6-8

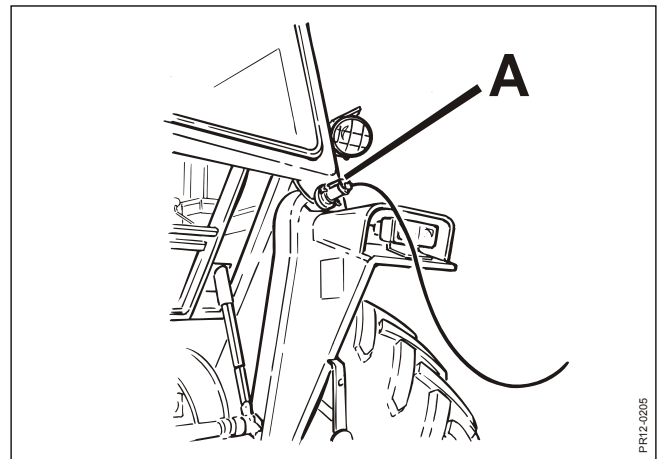


Fig. 6-9

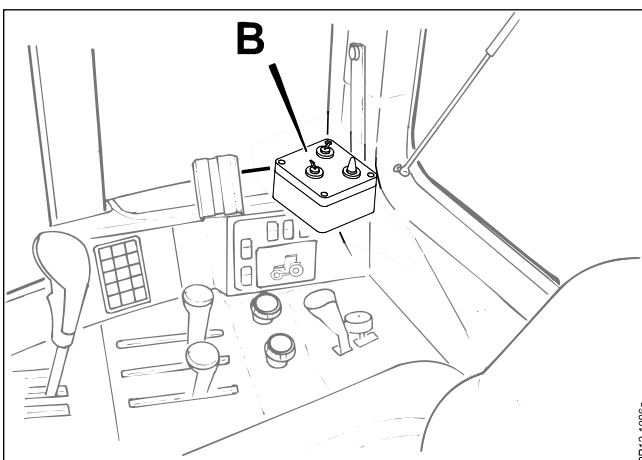


Fig. 6-10

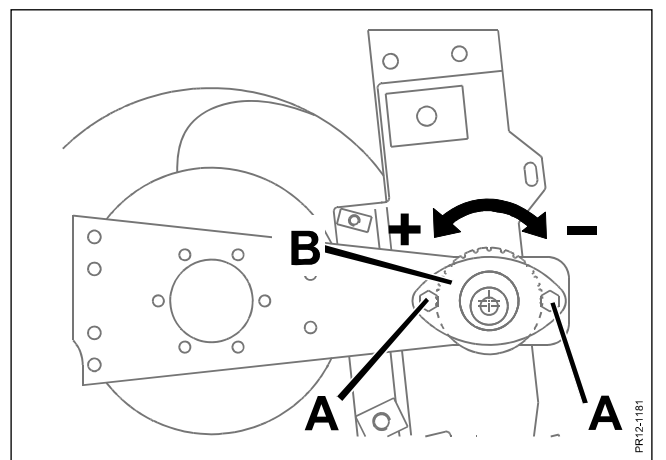


Fig. 6-11

VALVE ON THE SWIVEL CYLINDER

Fig. 6-6 Operating troubles on the swivel cylinder **A** for the drawbar may appear if impurities from e.g. dirty quick-release couplings get into the valve, a pilot operated check valve **B** which is mounted in-line on the swivel cylinder.

The valve is easily disassembled so that the slider can be taken out. The valve box and parts can then be cleaned with clean cloths and compressed air, if necessary.



WARNING: Beware of outflow of hot oil when disassembling the valve

Procedure for cleaning the valve:

- Fig. 6-7**
- 1) Dismount the hose connection at **A** and **B**.
 - 2) Dismount the two check valves **C** and **D** from the valve box.
 - 3) Take out the slider **E** and clean the parts.
 - 4) With a screwdriver or the like check at **F** that the ball **G** and the ball guide **H** can move freely and that the spring return is okay. The parts can with advantage be cleaned with compressed air.
 - 5) If the ball can still not move freely, the flow screw **I** can be screwed out of the check valve **C**.
 - 6) The parts can now be checked and cleaned.
 - 7) With clean fingers and cloths the parts can now be reassembled in reverse order.
 - 8) Check the system.



CAUTION: Make sure that no persons are in the radius of action when activating the machine.

MISCELLANEOUS

Rollers

Fig. 6-8 The upper rear feed roller, the smooth roller **A**, should be secured against formation of rust on the surface. If the machine is not in use for more than one day, the whole surface should be lubricated with some oil.

Electric motors

If the machine is not in use for a longer period, and in the winter time, it is recommended to pull the spindle on the electric motor for the deflector in to avoid formation of rust.

Fig. 6-9 When dismantling the 7-pole plug **A** at the rear of the tractor and the control box **B** in the cabin which is released at the 2-pole plug on the control panel, all parts should be placed on the machine and protected against water and dirt.

Fig. 6-10

Chain tightener for pick-up auger

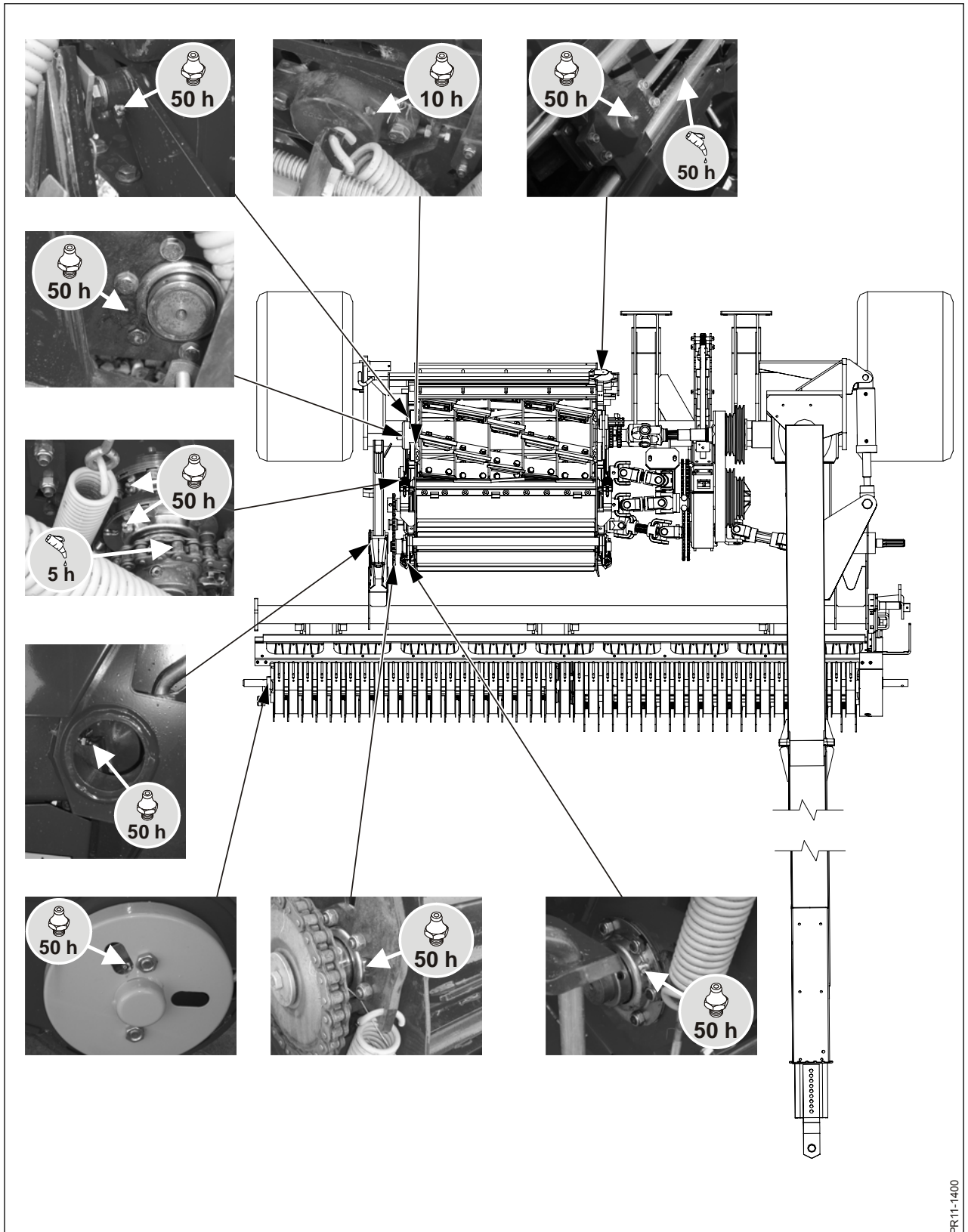
Fig. 6-11 Two bolts **A** are loosened after which the eccentric **B** can be turned with a screwdriver or the like. It is turned in + direction for tightening and in – direction for loosening.



CAUTION: It should always be possible to move the chain at least 20 mm up and down in the middle.

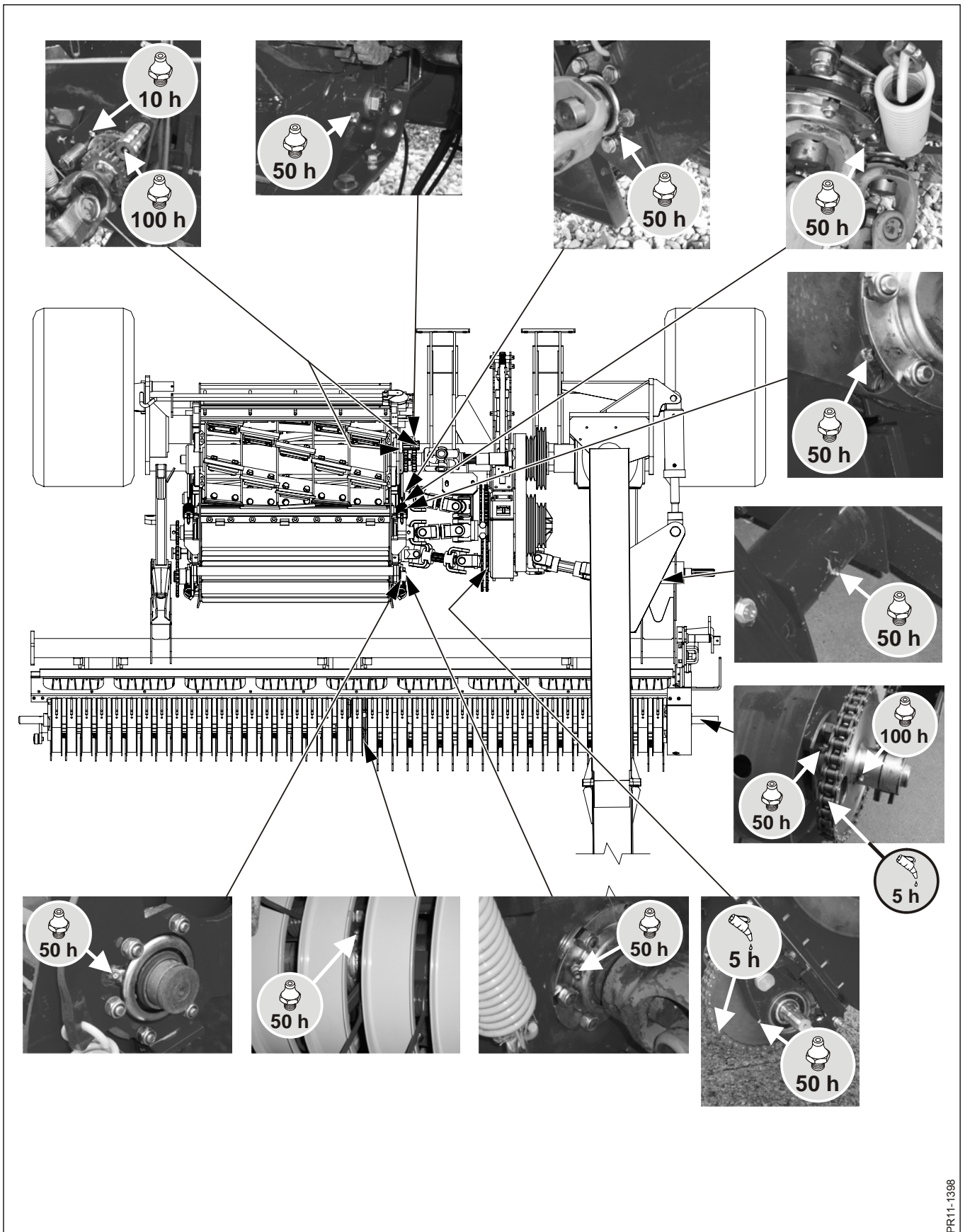
7. GREASING

RIGHT-HAND SIDE



7. GREASING

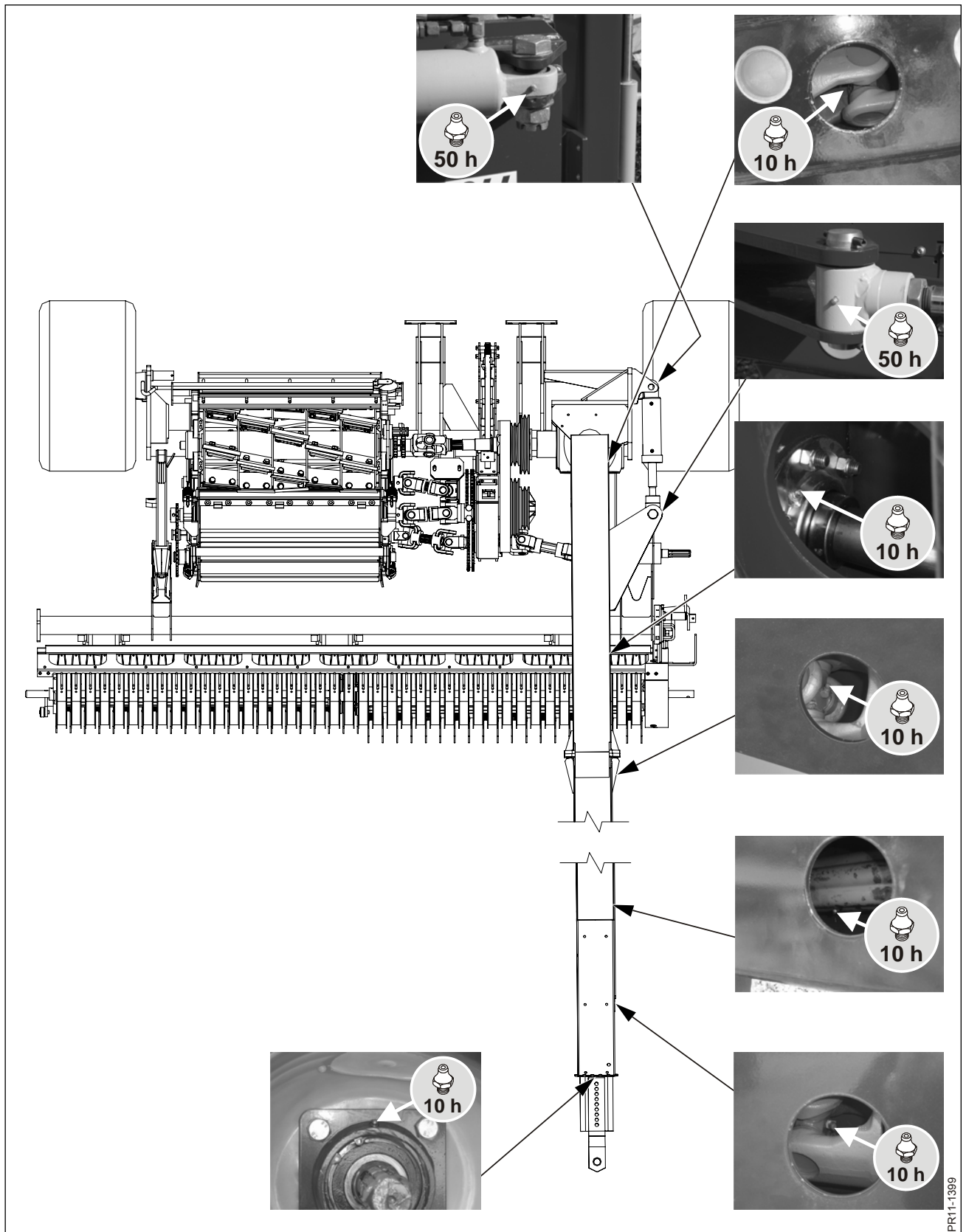
LEFT-HAND SIDE



PR11-1398

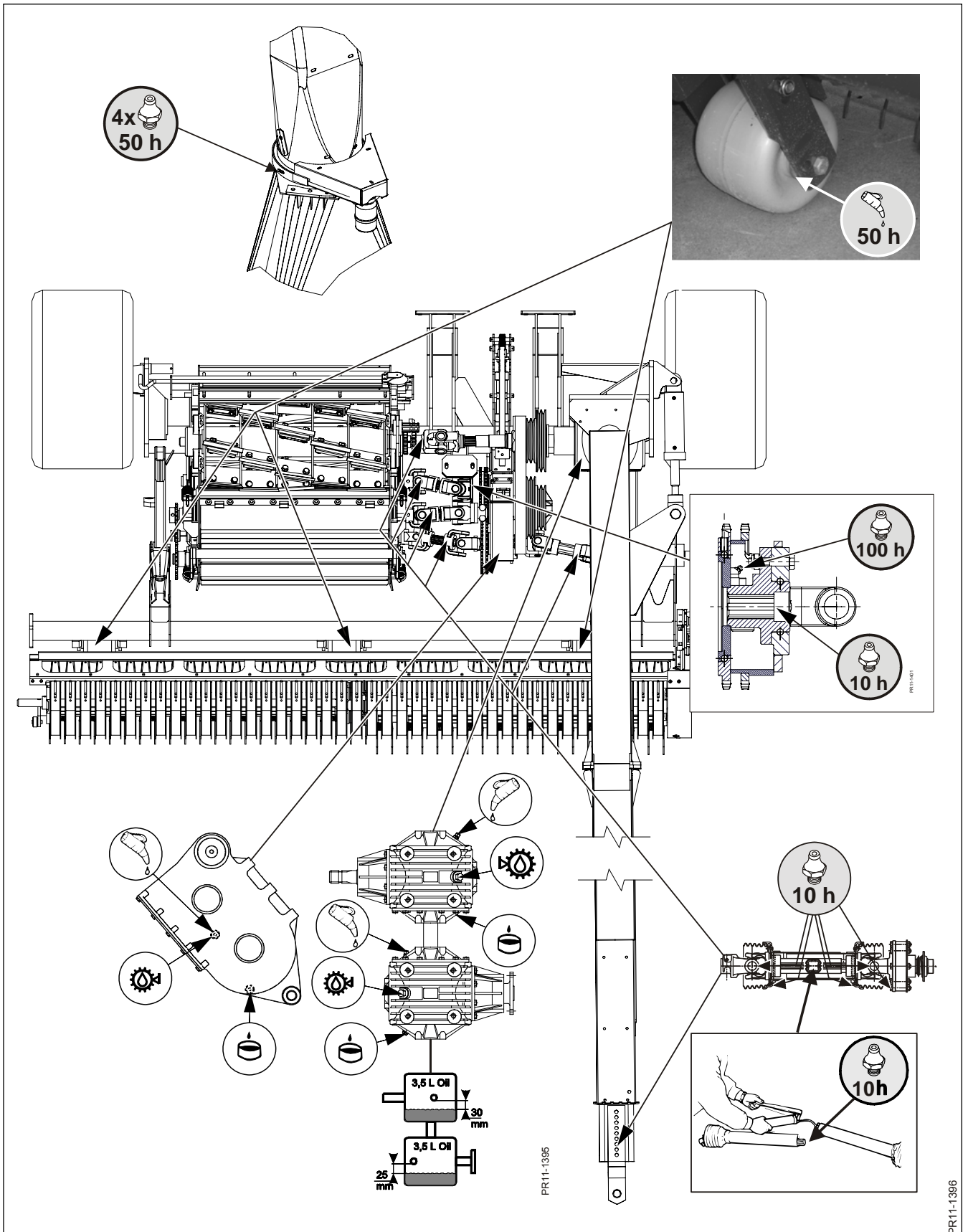
7. GREASING

DRAWBAR



7. GREASING

GEARBOX AND PTO



7. GREASING




- **Oil type:** Quality API GL4 or GL5 SAE 80W-90
- **Oil content:**

Swivel gearbox, upper part	3.5 l
Swivel gearbox, lower part	3.5 l
Feed intake gearbox	2.4 l



IMPORTANT: The oil level must in the upper and lower part be 30 and 25 mm lower than the check plugs at the side of the swivel gearbox, as shown on the figure.

- **Oil change:** After the first 10 working hours and then once a year.

Icons:  Filling plug  Drain plug and  Check plug / Level plug

8. STORAGE (WINTER STORAGE)

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



CAUTION: Be careful when cleaning with a high pressure cleaner. Never spray directly on the bearings and grease all grease points carefully after cleaning so that possible water is pressed out of the bearings.



IMPORTANT: Grease all grease points after cleaning the machine.

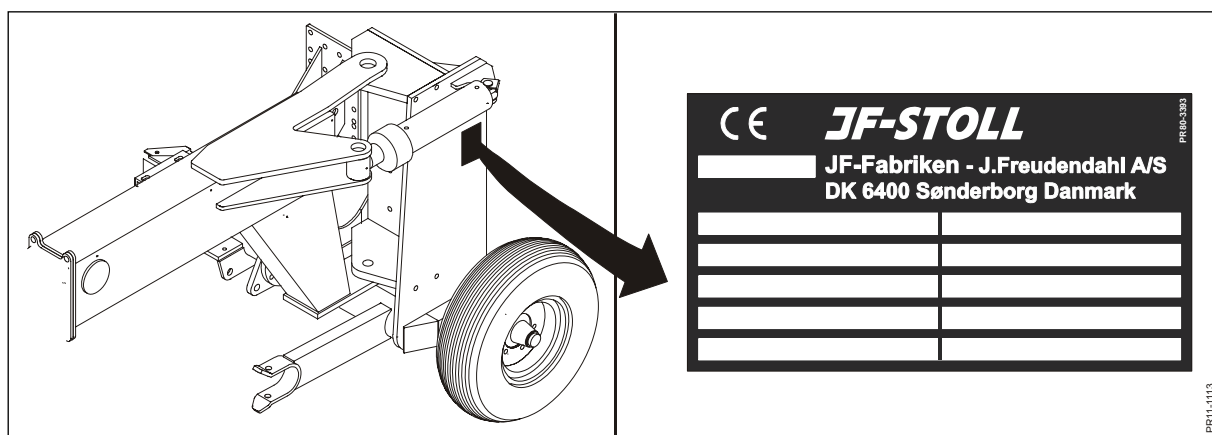
The following points are instructions how to prepare for winter storage.

- Check the machine for wear and other defects – note down the necessary parts you will need before the next season and order the spare parts.
- Dismount the PTO drive shafts, lubricate the profile tubes and keep them 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.
- Change the oil in the hydraulic system and the gearboxes.
- Store the machine in a ventilated engine house.
- Lay up the machine to unload the tyres.

9. SPARE PARTS ORDER

When ordering spare parts please state machine type and serial number.

This information is printed on the machine plate. 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.



10. MACHINE 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.
- Gearboxes, cylinders, and hoses 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 drive shafts, tyres, hydraulic components etc.
- 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 machines from authorized JF-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, shearbars, guide shoes, stone protections, discs, rotor skirts, crimper parts, tyres, tubes, brake shoes, chain tightener 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, wearing plates 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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