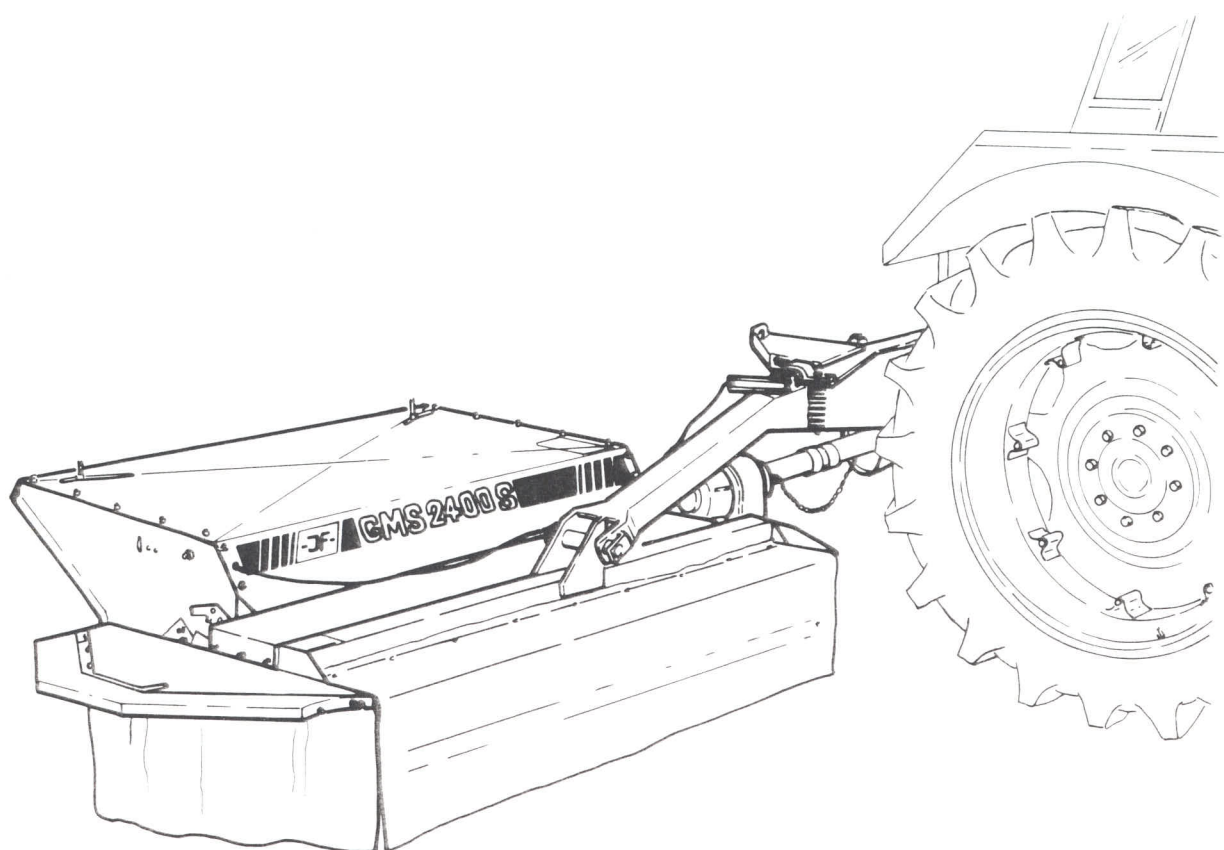




GMS 2000 S
GMS 2400 S

Disc Mower

Instruction Manual





W A R N I N G

Most accidents happen during work or when handling the machine and, unfortunately, the accidents happen when protective measures are disregarded.

The machine has been developed in great consideration of your protection - but nevertheless the machine must be used with caution and below regulations must be observed.

Never adjust or lubricate the machine while it is running.

Use original spare parts only. Especially flails, blades, and blade bolts.

Never leave the tractor seat without disconnecting the PTO.

The machine may fling stones. Never stay in front of or behind the machine when it is working. Be careful when harvesting close to public road.

Keep all guards in place and in order.

Before transport check that the transport lock is in mesh.

Never bring anybody along on the tractor or the machine.

The protective canvas in front of the cutterbar is a wearing part and must be replaced when required.

<u>TECHNICAL DATA</u>	<u>GMS 2000 S</u>	<u>GMS 2400 S</u>
Own weight	550 kg	625 kg
Power requirements at 540 RPM on PTO	35 kW (48 HP)	40 kW (60 HP)
Swath width	0.8 - 1.2 m	0.8 - 1.6 m
Working width	2.0 m	2.4 m
Transport width	Tractor width	Tractor width
Driving speed	5 - 12 km/h	5 - 12 km/h
Crimper speed	Variable	Variable
Stubble height	Variable	Variable

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

INSTRUCTION MANUAL FOR DISC MOWER WITH CRIMPER GMS 2000 S - GMS 2400 S

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Machine noise

The JF-Disc Mowers SB1600/2000/2400 and Mower Conditioner GMS/GCS 2000/2400/2800/3200 have a noise level in the range of 90-95 dB (A) measured by the tractor driver's ear when the rear window is open.

According to "The Noise at Work Regulations 1989" the employer shall ensure that the employee is provided with suitable and efficient personal ear protectors.

The noise is reduced when the rear window is closed, when the machine is in crop, when the rpm is reduced by turning at the headland.

Further information is available from JF (UK) Ltd.

IMPORTANT!

Retighten the bolts of your new machine after a few hours work.

ASSEMBLING

The machine has been assembled and a test driving made at the factory, but it is delivered slightly disassembled to reduce transport costs.

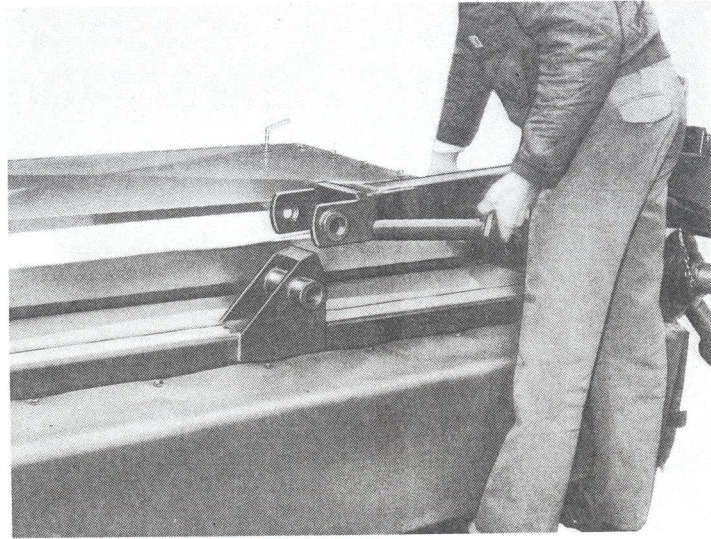


Fig. 1

The machine's suspension with spinnaker boom is placed in transport position on the jack.

The spinnaker boom is taken down to the connection point on the middle of the machine - a small wooden block under the boom will be of great help for maintaining the boom in the correct height in level with the connection point. The dowel is driven in and locked by the special pin so that the dowel cannot turn round.

CONNECTION TO TRACTOR

Before connecting is started the draft links are adjusted to the same height above the ground and the tractor is reversed to the machine. The draft links are connected by means of the dowels which are secured by lock pins. The dowel A can be adjusted according to the tractor's width by loosening the lock bolt.

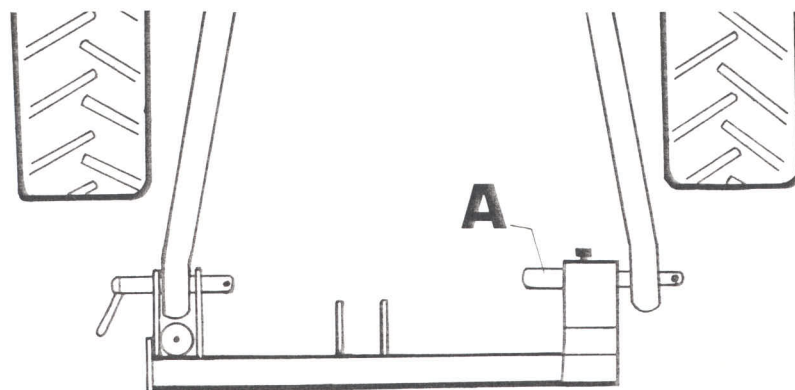


Fig. 2

Use the position where the machine is as close as possible to the side of the tractor's rear wheels. This means that the tractor's draft links should be stabilized so that the machine has full swath width.

The top rod is mounted parallel to the draft links to avoid that the inclination angle is changed when the machine is raised with the tractor lift.

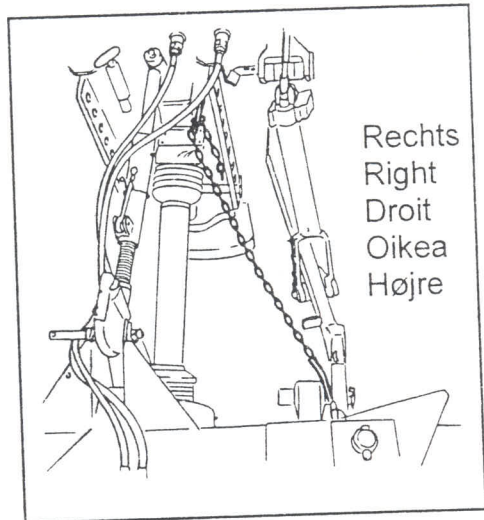
The PTO-shafts are mounted. The shaft with free wheeling must be mounted between the tractor and the machine bevel gears. It is turned with the free wheeling to the machine side.

The length of the PTO-shaft is checked.

The tubes must not touch in working position or when the machine is raised. A shortening should not be larger than necessary. The tubes must have a mesh of at least 200 mm.

Now the machine is raised with the tractor hydraulics and the support is raised. It is swivelled into working position by releasing the stop pawl with a pull in the string.

ADJUSTMENTS



If the tractor hydraulics can not maintain the machine in the correct position or if the control handle can not be locked the locking chain must be used for maintaining the machine in the correct position.

Fig. 3

The machine's field pressure against the ground is unloaded by 1 spring on the carrying frame.

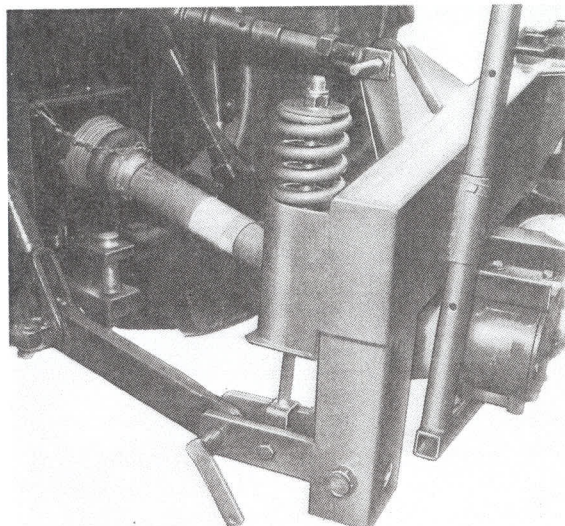


Fig. 4

The spring is tightened so much that the machine's (the guide shoes') pressure against the ground is 20-30 kg (44-66lbs). Check the pressure by lifting manually in the machine's right side.

STUBBLE HEIGHT

The stubble height can be adjusted by the machine's guide shoes A.

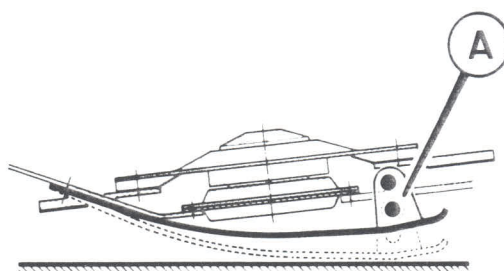


Fig. 5

- and possibly by adjusting the top rod a little.

CRIMPING

The crimping can be varied both by modifying the rotor speed and by adjusting the crimper plate over the rotor.

The driving and the rotor speed should be adapted to the sort of crop and its condition.

Optimum CRIMPING is obtained by below adjustments:

If you have a:	— — — — —	Succulent, green crop	or	Strawy, more ripe crop
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If you want to drive:	— — — — —	above 8 km/h	under 8 km/h	above 8 km/h	under 8 km/h
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The following adjustment
of GMS is recommended:

CRIMPER ROTOR SPEED	High				X	X
	Low	X	X			
CRIMPER PLATE	Raised		X			
	1/2	X				X
	Lowered				X	

ROTOR SPEED

The rotor speed is modified by replacing the 33 teeth chain wheel (low speed) on the rotor shaft by the 27 teeth chain wheel (high speed) supplied with the machine.

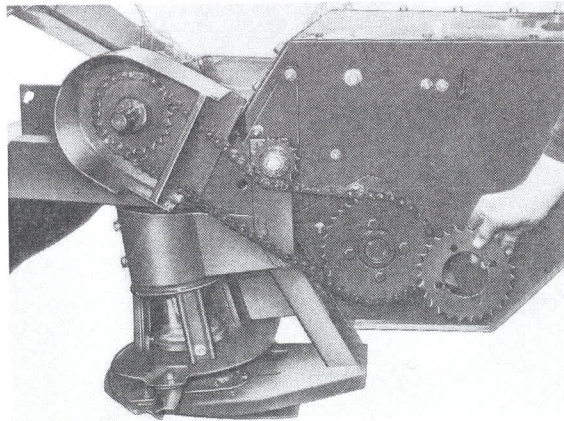


Fig. 6

In ripe, grassy crops the 27 teeth chain wheel is used.
In green, leafy crops where crimping is easy the 33 teeth chain wheel is used.

CRIMPER PLATE

The plate is adjusted by 2 nuts A on the front of the machine under the canvas.

The distance between the crimper plate and the rotor is adapted to the driving speed so that the opening is smaller at a high speed.

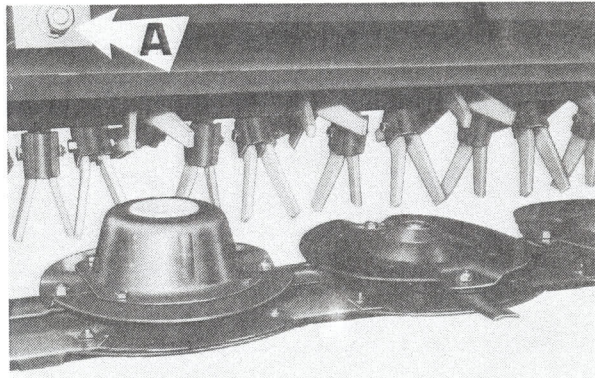


Fig. 7

SAFETY RELEASE

GMS 2400S is equipped with a safety release allowing the machine to swing backwards when the pressure from the front gets too large, for instance when driving against firm objects such as a tree, a pole, earthfast stones etc.

The safety release is brought into mesh again by backing the tractor with a jerk.

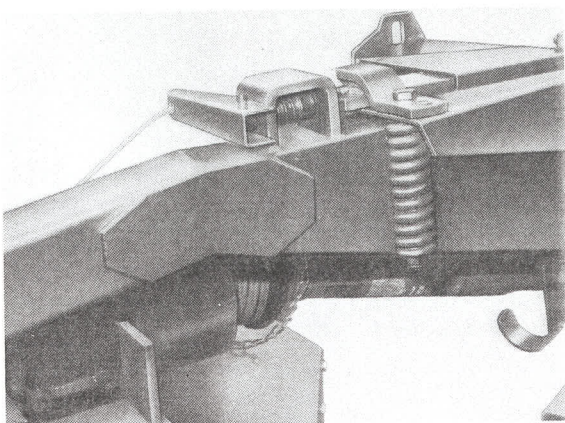


Fig. 8

The spring is tightened 5 mm = 3 turns on the nut.
Do not tighten the spring so hard that the release is blocked.

LUBRICATION

The grease nipples are marked with triangles and the lubrication spots for oil are marked by a circle.

These indications are marked on the lubrication figure and must be lubricated at the intervals stated.

Before a long time of stand-still the machine is lubricated all through and a thin coating of rust-preventing oil is applied.

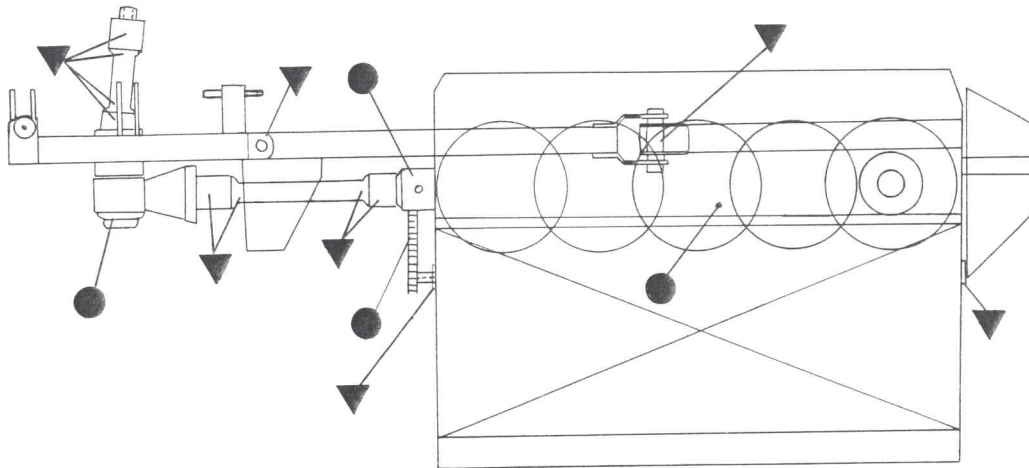


Fig. 9

Lubricate twice a day:

WITH GREASE:



Rotor bearings	2 nipples
PTO-shaft	5 -
Protection tubes	4 -
Countershaft	1 nipple
Frame	4 nipples

WITH OIL:



Roller chain	1 nipple
Bevel gears	2 nipples
Cutterbar	1 nipple

The chain should always be covered by an oil film. Use oil with a viscosity of approx. 30 SAE, for instance felling saw chain oil, motor oil or very thin gear oil can be recommended. - Do not use grease or very thick lubricant which will have difficulties getting through the rollers.

The profile tubes of the PTO-shafts must be kept well greased.

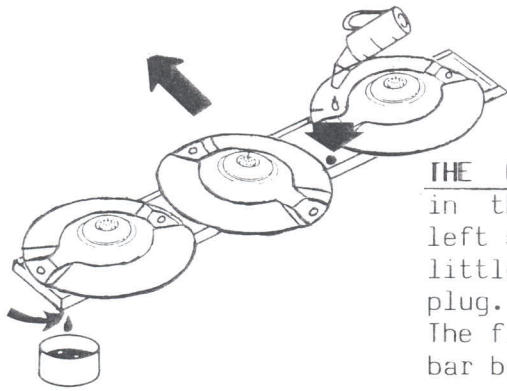


Fig. 10

THE OIL IN THE CUTTERBAR is drained off by a plug in the bottom right under the bevel gears in the left side. Loosen the guide shoes and swing them a little to the right to have access to the drain plug.

The filling plug is placed on the upper side of the bar between the 2nd and the 3rd disc.

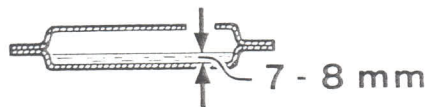


Fig. 11

Oil type: SHELL SPIRAX 80 EP

Oil level: 7-8 mm when the bar is horizontal. The oil level must be checked at regular intervals.

OIL RENEWAL: First renewal of oil after approx. 10 working hours and then after every 100 working hours, or at least once a year.

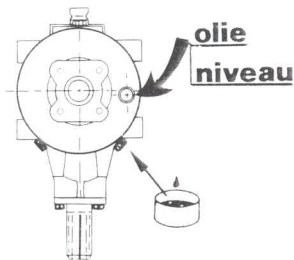


Fig. 12

OIL CONTENTS: 1,1 litres SHELL SPIRAX 90EP
Check/refilling after every 100 working hour.

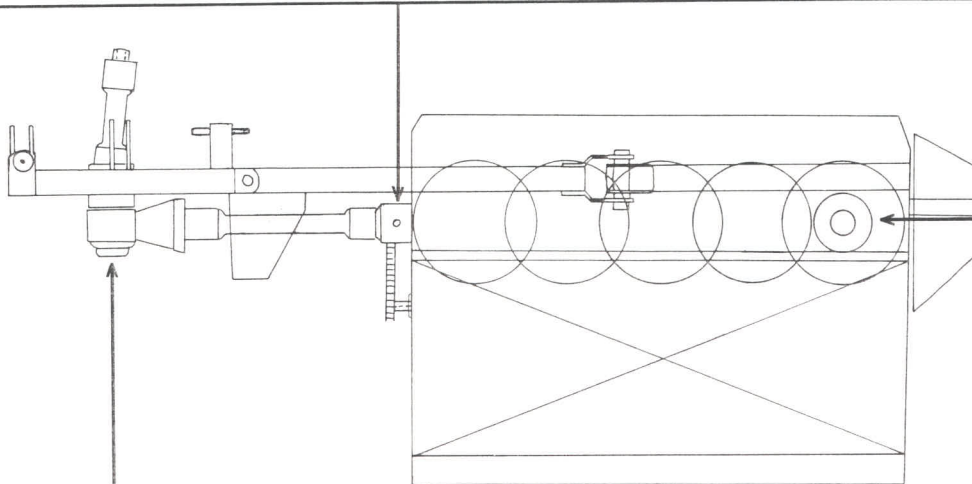


Fig. 13

THE OIL IN THE BEVEL GEARS is renewed after the first 10 working hours and then once a year, however, at least after 75 ha of driving.

OIL: 1 litre SHELL SPIRAX 90EP.
Check at regular intervals that the oil is level with the control plug.

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niveau

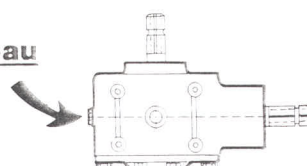


Fig. 14

FLOW REINFORCEMENT

In difficult crops a flow reinforcement may be mounted (ordering no. 4220-1006).

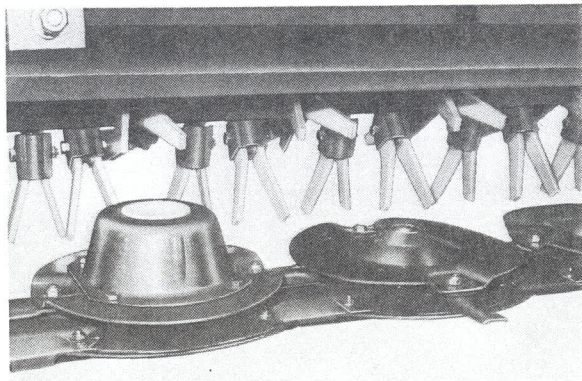


Fig. 15

REPLACEMENT OF BLADES

To obtain a satisfactory harvest it is important that the blades are in order and sharp.

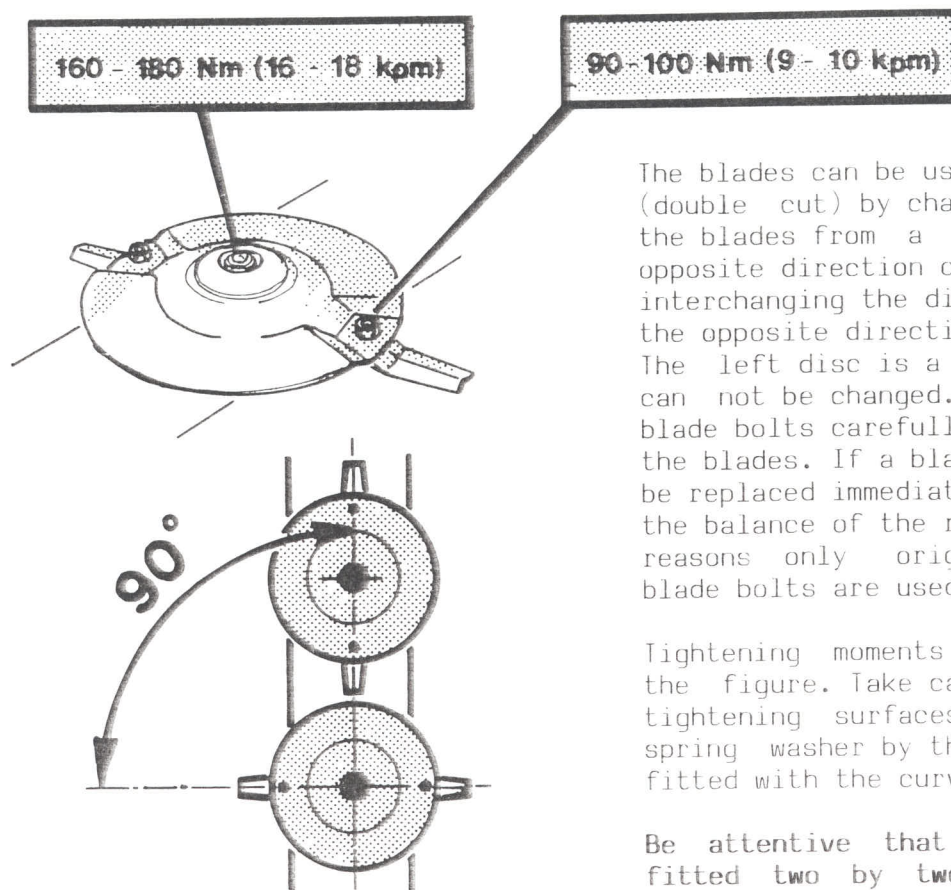


Fig. 16

The blades can be used on both sides (double cut) by changing them with the blades from a rotor with the opposite direction of rotation or by interchanging the discs two by two to the opposite direction of rotation. The left disc is a special one and can not be changed. Re-tighten the blade bolts carefully after changing the blades. If a blade brakes it must be replaced immediately - to maintain the balance of the rotors. For safety reasons only original blades and blade bolts are used for replacement.

Tightening moments are indicated on the figure. Take care to clean the tightening surfaces of dirt. The spring washer by the rotor shafts is fitted with the curved side upwards.

Be attentive that the discs are fitted two by two as shown (90° displacement of the blades).

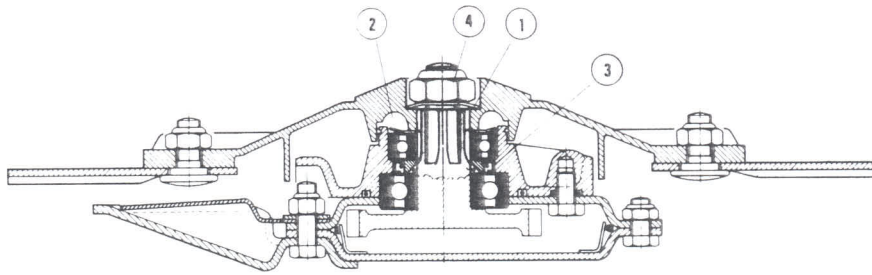


Fig. 17

MOUNTING OF COLLAR BEARING

1. The spring washer is placed with the curved side upwards.
2. The protection cap is placed as shown on the figure (the curved side downwards).
3. The oil seal ring is placed as shown on the figure.
4. Tighten the nut to 160-180 Nm (16-18 kpm).

TEST DRIVING

Before the machine is started all lubrication spots are lubricated according to the lubrication chart.

When all guards are in place and the chain sufficiently tightened a test driving is made.

Before coupling check that all tools have been removed from the machine and that nobody is staying too close to the machine.

Couple with care and have the tractor run at a low number of revolutions for some minutes. If there are no jarring sounds and no unnatural shakings the speed can be increased to the normal number of revolutions. PTO 540 RPM.

MAINTENANCE

After about half a day of driving all important bolts must be retightened. Check the bolts at the cutterbar at regular intervals. Also check the tightening of the chain frequently. The chain is tightened at the chain wheel A.

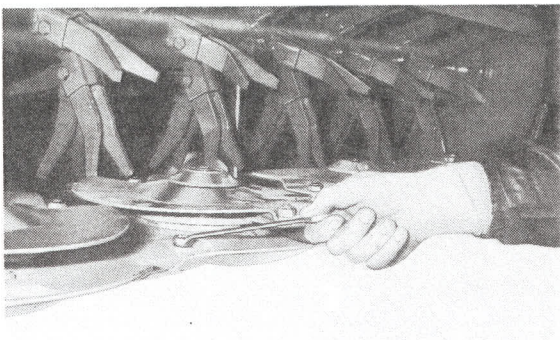


Fig. 18

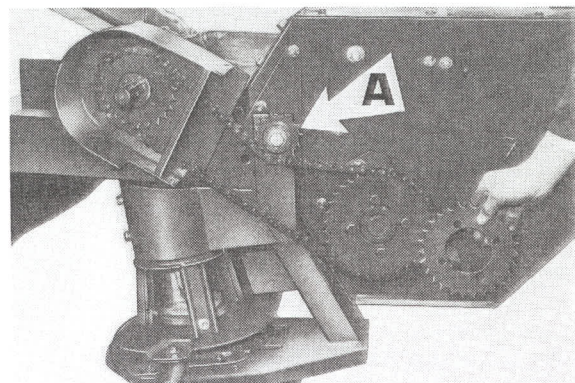


Fig. 19

DRIVING IN THE FIELD

The stubble height is determined by the adjustment of the guide shoes. The swath width is adjusted with the handles A.

The driving speed depends on the crop and the conditions - approx. 5 - 12 km/h.

The PTO must work at 540 RPM.

Couple with care and bring the machine to the correct number of revolutions before driving into the crop.

Never drive at more than 540 RPM as this will give unnecessary wear of the machine's transmission and gear box.

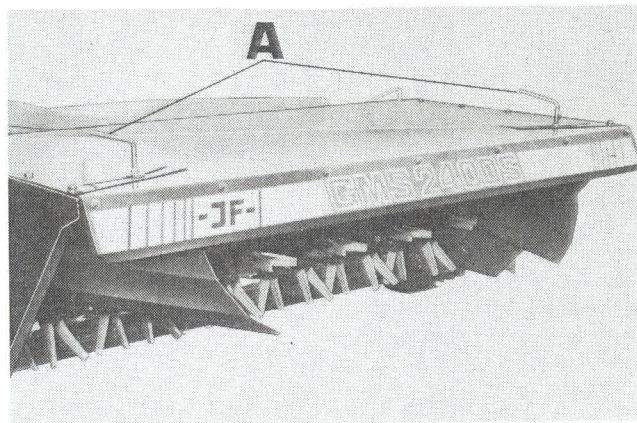


Fig. 20

Clean the machine carefully before winter storage. Dust and dirt absorb moisture which furthers rusting. **Be careful when cleaning with a high pressure cleaner.** Never spray directly on bearings and lubricate all lubrications spots carefully after cleaning.

Then apply a coating of rust-preventive oil (acid free).

READJUSTMENT TO TRANSPORT POSITION

Before the machine is swivelled into transport position the PTO-shaft between bevel gears and machine is taken off in the machine side. The shaft is placed in the hoop under the carrying frame.

Then the locking pawl is released by a pull in the string and the machine is swivelled backwards until the pawl is in hole for transport again.

Connection and disconnection from the tractor must always take place in transport position.

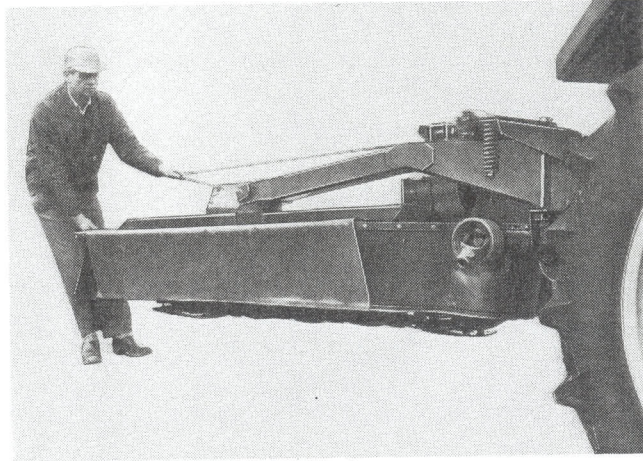
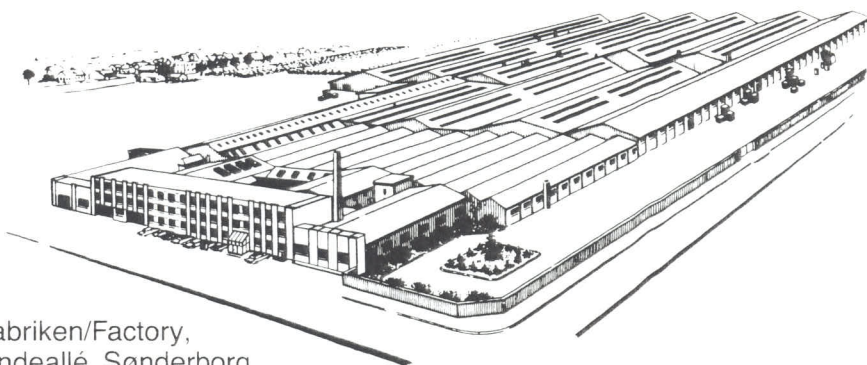
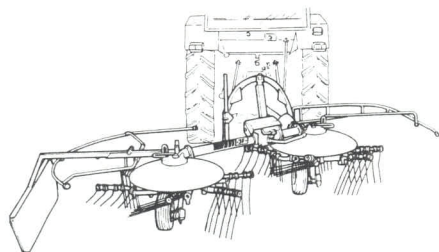
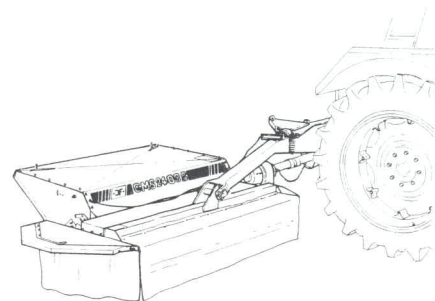
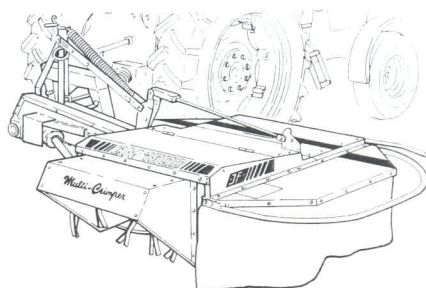
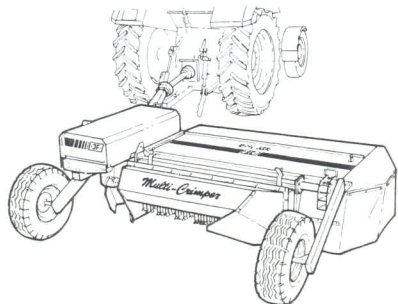


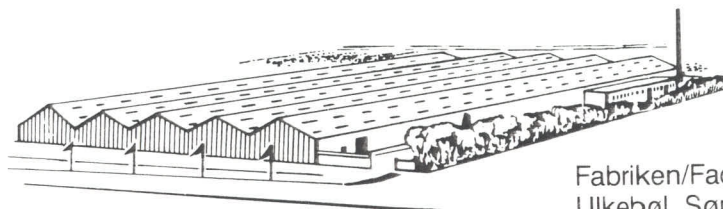
Fig. 21



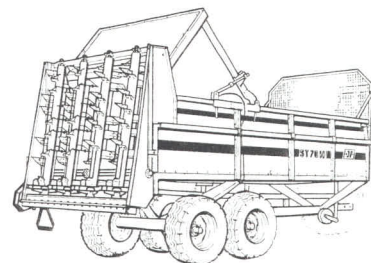
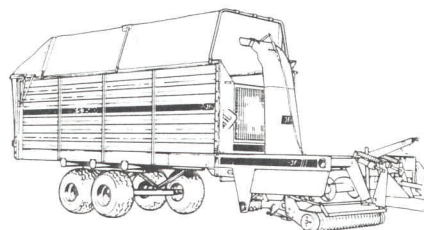
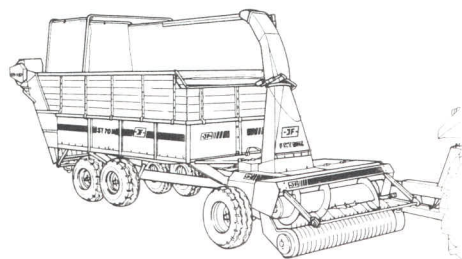
Et omfattende maskinprogram
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