



# *NORDSTEN NS 5100*



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## Foreword

**KONGSKILDE** would like to congratulate you on your new NS 5100, which we are convinced will serve you well in your work.

In order to use the machine correctly and safely, we recommend that you familiarise yourself with it by studying this instruction manual.

The correct use of the machine, along with careful maintenance, lubrication and storage, will help to keep it in good working order.

## Technical data

Machine type	<b>NS 5130</b>	<b>NS 5140</b>	<b>NS 5145</b>	<b>NS 5150</b>	<b>NS 5160</b>
Working width, m	3,00	4,00	4,50	5,00	6,00
Number of Euro coulters	24	32	36	40	48
Number of disc coulters	24	32	36	40	48
Distributors	2x12	2x16	2x16/4x10*	4x10	4x12
Distance between rows,Euro coulters	125	125	125	125	125
Distance between rows,Disc coulters	125	125	125	125	125

\* 2 outlets/distributor blocked

Front Tank type	<b>NS 1500</b>	<b>NS 1900</b>
Overall width	2,32 m	2,32 m
Overall height	1,63 m	1,78 m
Filling height	1,48 m	1,63 m
Hopper capacity	1500 l	1900 l
Hopper capacity, wheat	1125 kg	1425 kg
Total weight of machine	450 kg	475 kg
Total weight of machine with wheat	1.575 kg	1.900 kg

### Mechanical version:

Transmission	Chain drive from drive wheel	Chain drive from drive wheel
Gearbox	Vario-K	Vario-K
Sowing system	Peg rollers/fluted rollers	Peg rollers/fluted rollers

### Electrical version (NS 5100)

Transmission	Sensoring from drive wheel	Sensoring from drive wheel
Gearbox	Computer controlled electric motor	Computer controlled electric motor
Sowing system	Peg rollers/fluted rollers	Peg rollers/fluted rollers
Hydraulic driven rotary airlock for long transportation over 8 m	Optional	Optional.This also applies to mechanical version.

## Accessories

The seed drill can be fitted with the following accessories:

Following harrow type Max-Flow.

The following harrow has rearward facing tines which ensure that plant residue, such as straw and similar materials, is less likely to drag.

Following harrow type Wing-Flow. The following harrow has rearward-curving tines. Recommended in connection with disc coulters since dragging and visible stress is avoided.

Electronic level control indicator for hopper capacity. Used in connection with AGRO TRAM 2100.

Electronic acremeter. Used in connection with AGRO TRAM 2100.

Extension cable for AGRO TRAM 2100.

Depth limiters for Euro coulters.

Depth limiters for disc coulters.

# Safety Precautions

This instructions and safety notes in this instruction manual must be followed.

## Safety distances

The safety distance to the seed drill while in operation is 4 metres. Persons must under no circumstances be on the seed drill while it is running.

## Safety when lifting the seed drill

The marked cutting eyes should be used when lifting the seed drill and when carrying out repair of the seed drill's main frame.

## Safety precautions concerning guards

Guards for chains, gear wheels and rotating shaft ends etc. must be fitted to comply with the required safety regulations.

Loose guards, which include calibration trays and seed hopper lid, should be fitted and closed when the machine is running.

The agitator shaft in the hopper is not shielded. Therefore, to avoid injury, manual stirring of the sowing material whilst the machine is running must be avoided.

Fixed guards should be removed and fitted using tools.

## Safety precautions whilst driving

When driving on public roads, road traffic laws concerning lights, safety, etc. should be followed. Lift arm pins and top link pins should be properly secured in order to avoid accidents.

## Safety precautions when parking

Always place the seed drill on firm, horizontal ground when it is removed from the tractor.

## Safety when cleaning

Cleaning and maintenance of the seed drill should only be carried out when the machine is not running.

## Safety precautions concerning hydraulics

Hydraulic systems with a working pressure of up to 200 bar must be treated with care. When carrying out repairs, the hydraulic system must be without pressure. Air in the hydraulic system can lead to incorrect functioning of the machine, and thus should be expelled before the machine is used.

## Safety precautions concerning tightening

Tighten all bolts after the first 25 hours of operation. All bolts should be subsequently tightened before the start of each season.

## Product liability

Kongskilde's product liability covers machines which are defective on delivery. Product liability no longer applies if modifications are made to the seed drill or its accessories without Nordsten's explicit written permission.

It is also a condition of the product liability that the seed drill is only used for purposes described in this instruction manual or for purposes which have Kongskilde's permission.

Finally, it is also a condition that the seed drill is used with all fixed guards fitted.

## **Mounting and adjustment**

### **Commissioning**

Immediately after receiving the machine, it and any extra equipment should be checked to ensure that the items received are in accordance with the order and that there are no defects or missing parts.

Any claims should be immediately forwarded to the dealer. In the case of damage occurring during transport, claims should be forwarded to the transport firm used.

Otherwise reference is made to Kongskilde's usual terms of sale and delivery.

Check that the chains between the driving wheel, gearbox, agitator shaft and sowing shaft are correctly adjusted.

Any necessary adjustments should be carried out as described in pages: 21-22.

Chains and linkages should be lubricated with oil.

# Mounting and adjustment

## Mounting

The tank is mounted in the tractor's front linkage or on a special support.

If the tank is secured on brackets the tank must be mounted at a height to allowing the air hoses to be mounted as a horizontal as possible.

Also the tank should – if it is placed in a front linkage during work – be lifted/lowered to a height level making a horizontal air hose routing possible.

Supply pipes and hydraulic pipes are mounted under the tractor by means of the supplied rigid pipe and bends.

The pipes can be placed united or separated in consideration of the driver's cab and the movable parts on the tractor.

Be aware of the front wheels of *Fig. 2A. Hydraulic connections*. He tractor, which should have free movement.

Two 22 mm hydraulic pipes are used for the oil supply to the fan. On the return line from the fan the pipe is mounted with 3/4" quick couplings and hoses (A). See fig. 2B.

The oil shall be routed to a pressureless return to the tractor, i.e. the 3/4" hose/quick coupling must be connected to a pressureless return on the tractor – if this does not exist, a pressureless return should be established by an authorized dealer. Connect the hose to this (1). See fig. 2C.

On the pressure side the pipe is mounted with 1/2" quick couplings (B), see fig. 2B and hose (2), see fig. 2C.

For the lifting/lowering function of the drive wheel on the tank a 12 mm hydraulic pipe with 1/2" quick coupling (C) is used, see fig 2B and a 1/4" hose (3), see fig. 2C, which are connected to a single acting outlet on the tractor (C) and (3).

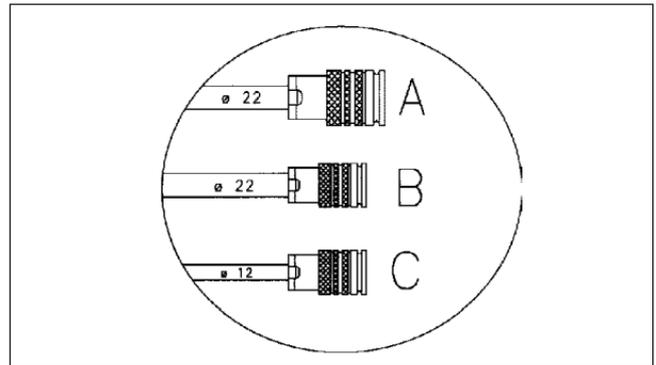


Fig. 2B. Quick couplings.

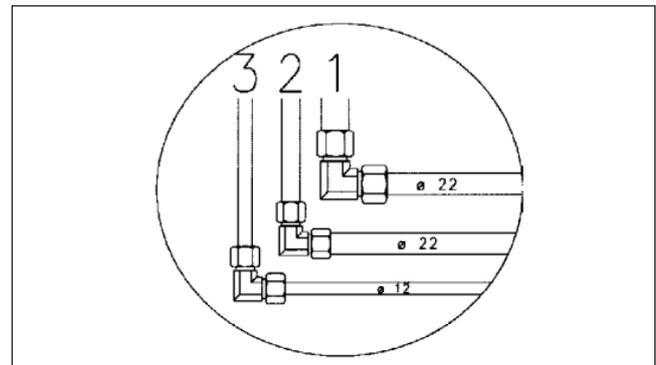


Fig. 2C. Pipes/hoses.

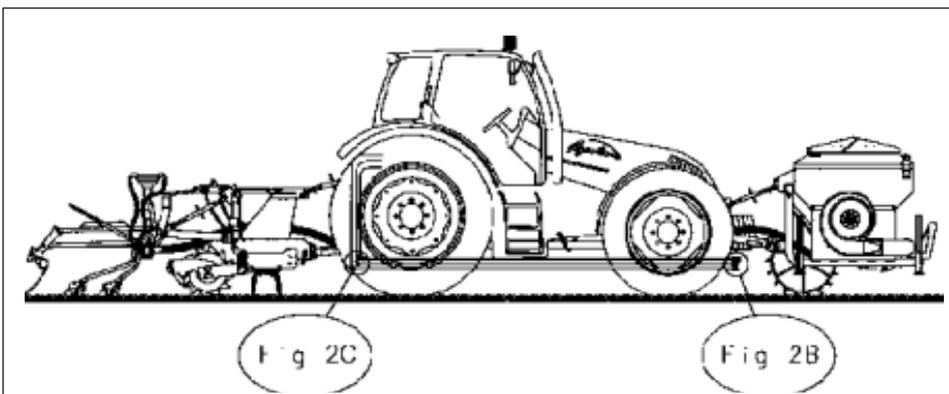


Fig. 2A. Hydraulic connections.

## Mounting and adjustment

### Coupling

Hydraulic driven fan makes the following demands on the tractor's hydraulic system:

The fan requires up to 30 l/min at a pressure of about 125 bar. The hydraulic system of the tractor must be producing continuously 8 kW for the operation of the fan.

On newer tractors it is possible to adjust the oil rate on the individual oil outlets. The oil rate is controlled to observe the stated values for relief pressure.  
Max. 80 mbar.

On tractors without possibility for quantity adjustment on the oil outlets the pressure is adjusted by turning the button A on the quantity adjusting valve, which is placed on the fan console.  
See fig. 2D.

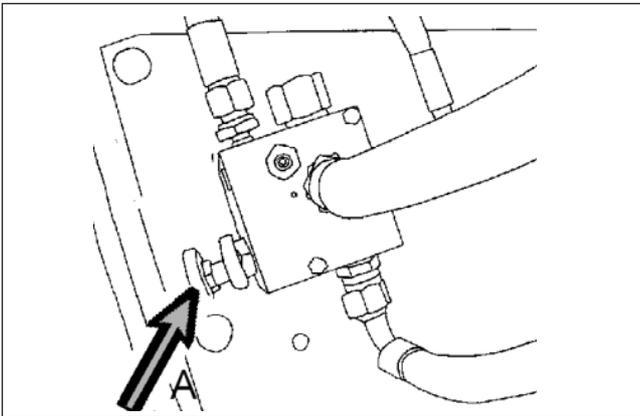


Fig.2D. Quantity adjusting valve.

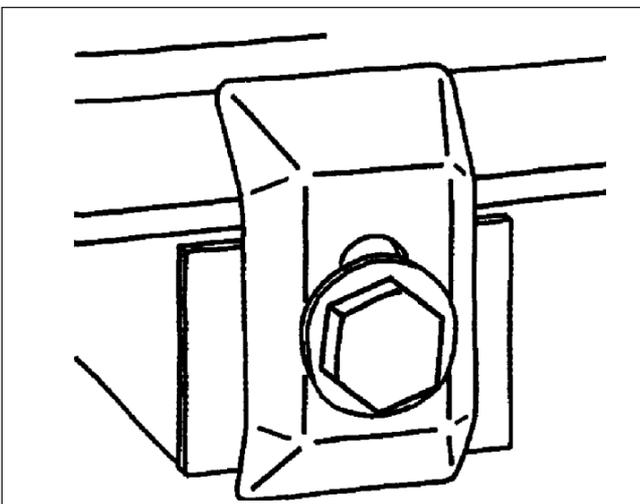


Figure 2E. Clamp with bolt.

## Row spacing

### Row spacing

Changing and adjusting the row spacing can be carried out by moving the suspension arms and clamp for each coulter sideways on the coulter bar. This can be done after the bolts under the clamps have been loosened.

See figure 2E.

The distance between the coulters is measured directly on the coulters themselves - and thus not on the suspension arms. The use of a measuring implement with the actual row spacing marked is recommended.

When changing the row spacing, measurement should be made from the central coulter, which should be placed in the exact centre of the seed drill. Each coulter can then be adjusted to the desired distance from the centre coulter. See figure 2F.

Remember to tighten all bolts after adjustment.

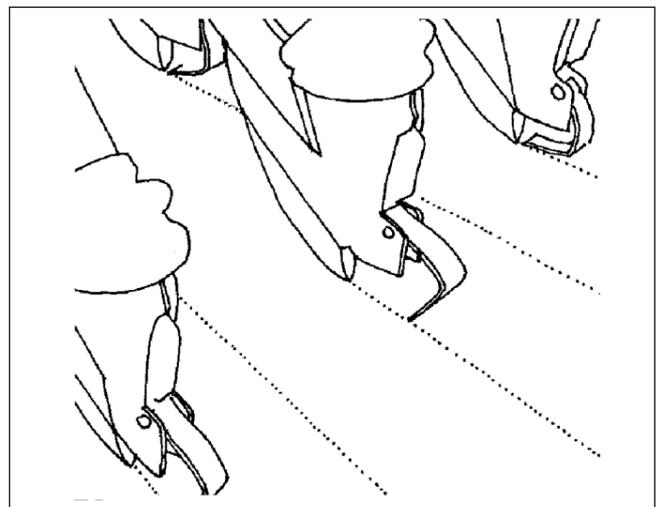


Figure 2F. The row spacing is measured from the centre coulter.

## Marker shifter

### Markers

The NS5100 is fitted with hydraulic markers.

On 4,0 and 4,5 m machines a double-acting hydraulic take-off is used. On 6,0 m machines a single-acting hydraulic take-off is used. The marker shifter valve (see fig. 3A) is activated in the following way:

On supplying hydraulic pressure to the marker system, both markers go to parking position.

By removing hydraulic pressure from the marker system, one marker will move into its working position.

Shifting between the markers (i.e. between left and right) is done by supplying, and then removing, hydraulic pressure from the system.

If both markers are required in their working position, the marker system is activated in the following way:

The marker which is in its working position is raised about 1 metre. The hydraulic pressure is then removed from the system, after which both markers will move into their respective working positions.

### Marker arms, shear bolt

The marker arms are equipped with a shear bolt which is released when overloaded. Carrying an extra shear bolt (M6 x 75 grade 8.8) is recommended.

See fig. 3B.

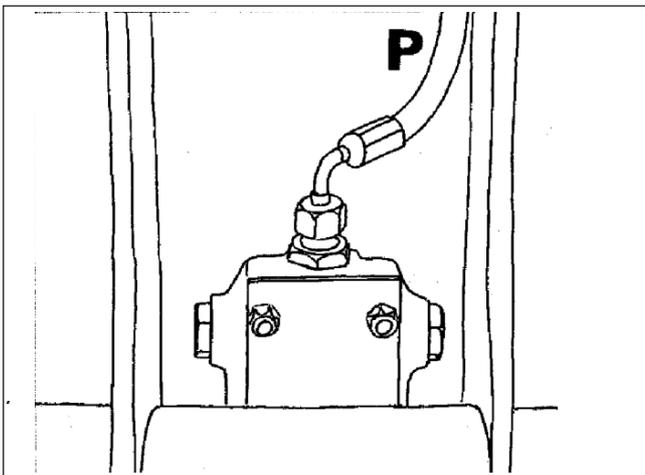


Figure 3A. Shuttle valve for marker

### Marker arms in transport position

When transporting the combi-seeder on public roads, the marker arms must be locked in position.

They can be secured using lock fittings, which are fitted to the lock pin and secured with a ring pin. This only applies to 6,0 m machines. See figure 3C.

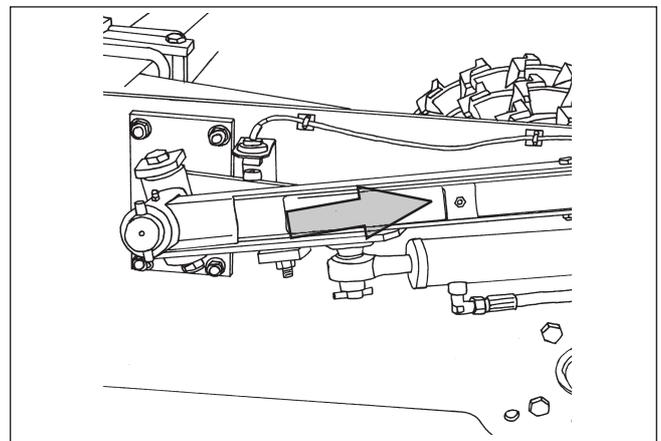


Figure 3B. Shear bolt.

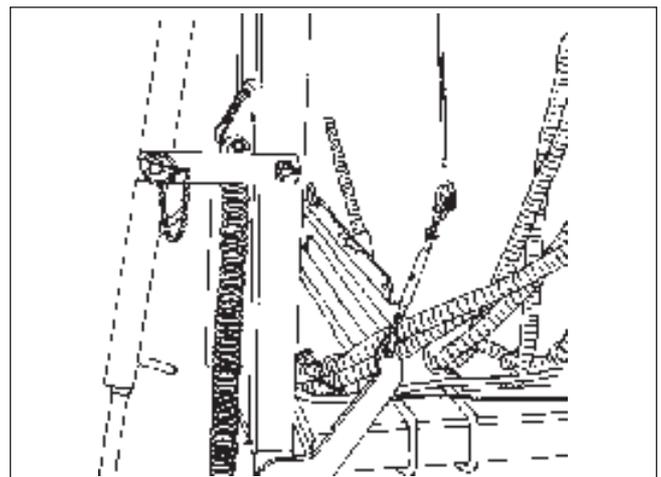


Figure 3C. Lock fittings for transport.

## Test sowing

### Test sowing of the drill

Test sowing includes both a calibration depending on the weight/size of the seed (1000 corn weight), and the adjustment of the sowing rate per unit.

The test sowing is carried out point by point according to the following instruction.

### Agitator shaft

The agitator shaft shall always be engaged. It is not necessary to disengage the agitator shaft when sowing large large such as peas and beans.

If you still want to disengage the agitator shaft this is done by taking off the ring pin A in the chain wheel at the end of the shaft. See fig. 4A.

### Bottom flaps

The bottom flaps should be as close as possible to the seed wheels without damaging or squeezing the seed. The bottom flaps can be adjusted using the handle at the end of the hopper. See figure 4B.

The scale setting should be as follows:

Fine seed	:	1
Corn/fertilizer	:	2
Peas, etc.	:	3 - 6

Table: Adjustment of bottom flap positions.

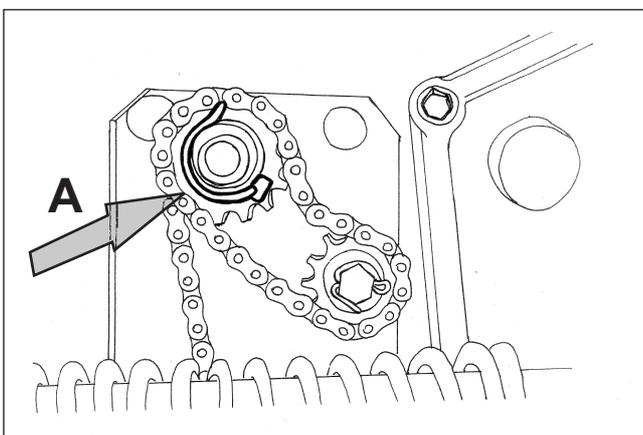


Fig. 4A. Chain wheel at the end of the shaft.

### Seed housing shutters

The shutters must not be used for adjusting of the rate of sowing. The shutters should always be completely open or closed. See fig. 4C.

If you want to start sowing with half the sowing width, the shutters at one side can be closed.

### Emptying of machine

The calibration tray is placed under the seed housings and the bottom flap handle is turned backwards.

### Exchange of seed wheel

See special crops page: 14.

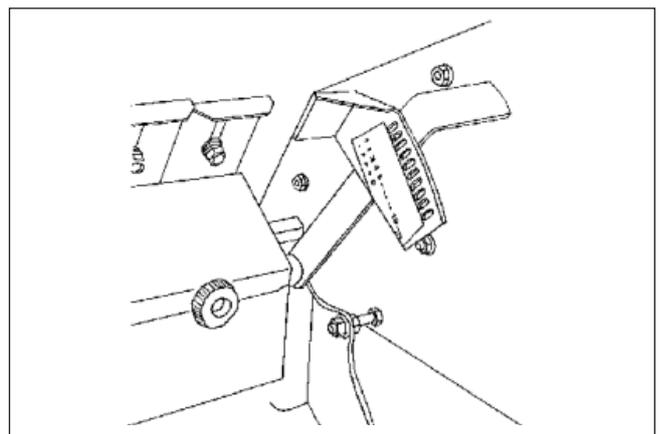


Fig. 4B. Handle for bottom flaps.

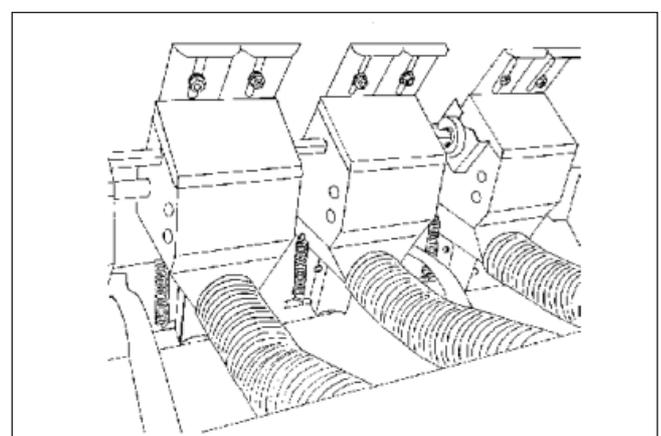


Fig. 4C. Seed housing shutters

# Test sowing

## Test sowing

The test sowing is carried out to ensure the correct sowing rate, and is carried out as follows:

The correct sowing rate can be adjusted using the formula:

$$\frac{\text{NO. OF PLANTS PER M}^2 \times \text{TCW}}{\text{SPROUTING PERCENT IN THE FIELD}} = \text{KG / HECTARE}$$

TCW = 1000 corn weight

A preliminary adjustment of the seed drill is carried out according to Nordstens sowing table with a starting point in the required sowing rate/fertilizer rate per hectare.

After this preliminary adjustment the test sowing is carried out.

## Scale setting, Vario-K gearbox

Initially, the scale should be set to the correct sowing rate according to previous records or to the sowing tables on pages: 23-26 in this instruction manual.

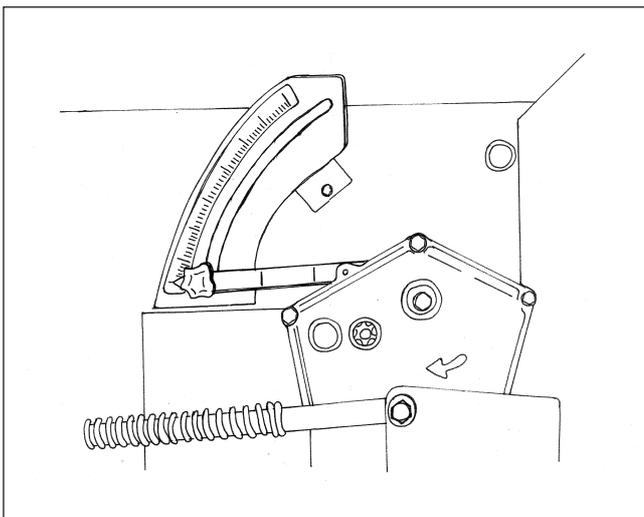


Fig. 4E. Scale setting.

## Blower

The blower must not be run during the calibration. Bottom flaps under seed housings.

The spring loaded bottom flaps under each seed housing are opened. See fig. 4F.

The calibration tray is placed under the seed housings. See fig. 4G.

## Filling of seed/fertilizer

Fill sufficient seed/fertilizer in the hopper such that the agitator shaft is still covered after a test sowing has been carried out.

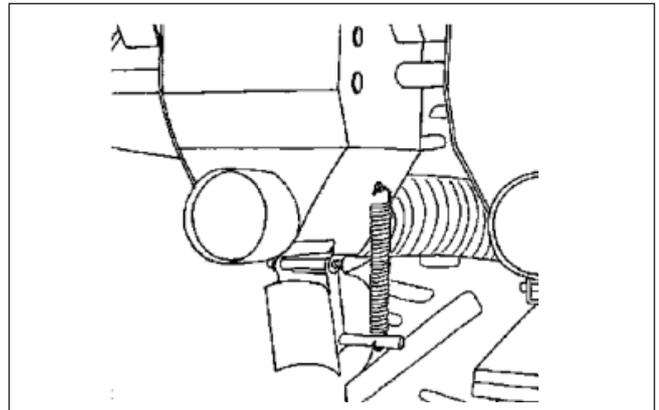


Fig. 4F. Bottom flaps under seed housings.

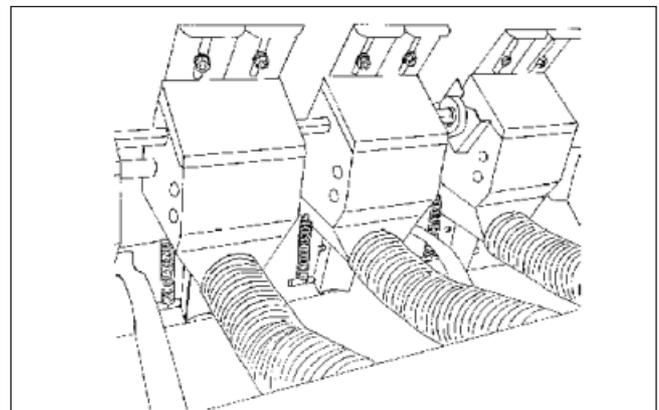


Fig. 4G. Calibration tray.

## Test sowing

### Starting the seed flow

Attach the test sowing handle (A) - see fig. 4H and turn it clockwise until the seed/fertilizer flows from all of the outlets.

The drive wheel should be raised from the ground.

Empty the contents of the calibration tray into the seed hopper.

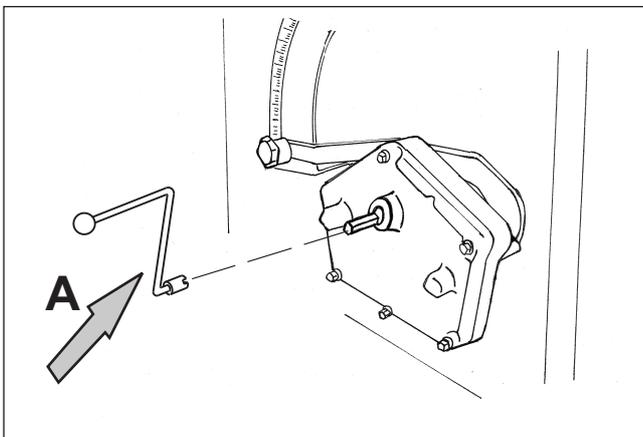


Fig. 4H. Test sowing handle.

### Turning the test sowing handle

Turn the test sowing handle the following number of revolutions.

For seed drills with relevant working widths the following number of revolutions are valid at the calibration.

3,0 m = **78** rev.=1/40 ha  
 4,0 m = **59** rev.=1/40 ha  
 5,0 m = **47** rev.=1/40 ha  
 6,0 m = **39** rev.=1/40 ha

If the tank is used for seed drills with another working width or for placing fertilizer in connection with potatoes, maize or something else the number of revolutions for calibration are calculated in the following way:

n = number of coulters.  
 a = spacing between coulters.  
 If the spacing is not the same between all the rows, a calculated average is used.  
 (See fig. 4J).

Effective working width = n x a.

Example

4 rows potato planter.  
 Average row spacing = 82,5 cm

Effective working width: 4 x 82,5 = 3,30 m

Number of revolutions:

$$\frac{235}{\text{Eff.work.width}}$$

Example.

Potato planter with effective working width 3,30 m.

$$\frac{235}{3,30} = 71 \text{ rev.}$$

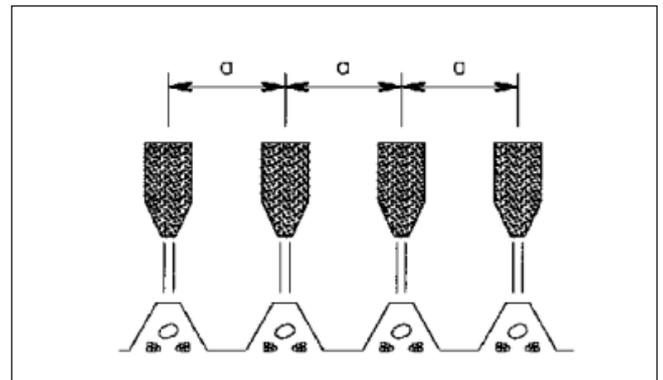


Fig. 4J. Placing of fertilizer.

## Weighing

Weigh the seed from the sowing tray on an accurate pair of scales.

## Calculation of the sowing rate

To obtain the sowing rate for 1 ha, the measured weight must be multiplied by 40.

## Adjusting the sowing rate

If the calculated sowing rate corresponds to the required rate, then the machine is correctly adjusted. If the sowing rate is not correct, the following adjustment on the Vario-K gearbox can be made by changing the scale setting.

See fig. 4E.

## Special crops

If a larger sowing rate is required, the regulating handle's indicator should be adjusted to correspond to a higher value on the scale.

After adjustment of the scale setting, a new test sowing should be carried out.

### Discrepancies in the sowing rate

If the test sowing has been carried out carefully, the actual and calculated sowing rates should correspond exactly.

If this is not the case in practice, then the cause could be that the test has not been carried out correctly or that an inaccurate pair of scales has been used.

However, another potential cause of discrepancies is unusual soil conditions. Very wet or very loose soil can cause inaccurate rolling of the drive wheel.

If problems are caused by the soil conditions, then a supplementary calibration test in the field is recommended.

Test sowing in the field follows essentially the same procedure as the standard test sowing.

However, instead of turning the test sowing handle through a specified number of revolutions, the front tank is driven in normal working position a specified distance in the field with the calibrations tray mounted.

Number of meters to drive for 1/40 hectare:

$$\frac{500}{\text{effect.work.width}}$$

### After test sowing

The calibration tray is removed.

The bottom flaps under the seed housings are closed.

## Blower

The blower is engaged and the working pressure - read on the pressure gauge (fig. 4K) - is adjusted according to tables page:23-26.

### Special crops

When sowing special crops, certain precautions may have to be taken.

### Sowing of grass seed

Sowing of grass seed requires special attention since the seeds can „bridge“ in the hopper, thus affecting the actual sowing rate.

This problem will be particularly acute if the hopper is exposed to vibration.

It is therefore advisable to carry out test sowing with a limited amount of seeds in the hopper, and to avoid filling the hopper completely until in the field where sowing is due to take place.

In addition, regular stops to manually stir the hopper contents is recommended in order to achieve uniform sowing.

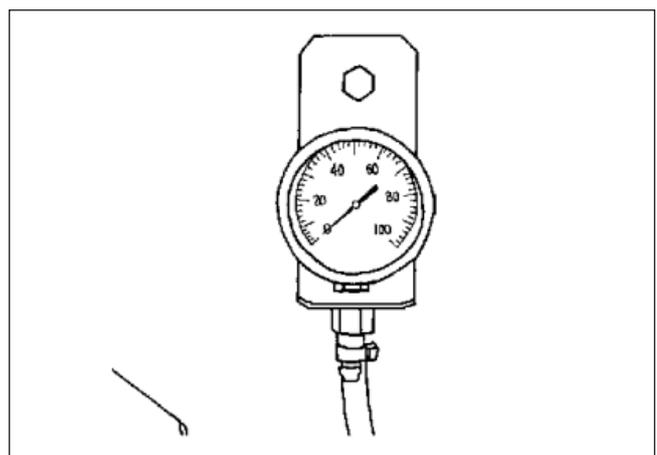


Fig. 4K. Manometer, air pressure.

## Special crops

### Warning

Owing to the agitator shaft, stirring of the hopper contents should only be carried out when the machine is switched off.

### Sowing of small round seeds

When sowing small, round seeds, such as turnip, white mustard and rape the fluted sowing wheels are exchanged for peg wheels with fine seed fingers.

The sowing rate is reduced to 1/9 and at the same time waste is avoided since the seeds are only fed out by the pegs.

### Mounting of fine seed fingers

The fine seed fingers are fitted by pressing them over the rollers. As the roller is turned, the fine seed fingers are pulled round to cover the roller. The fine seed fingers are shaped so that they are held in place. See figure 4L.

### Disengagement of sowing wheels

The covers above the seed wheels are disengaged by loosening the black thumbscrew at the front of the seed housing.

The shaft connections on both sides of the seed housings are removed. The R-clips are removed.

The R-clip at left side of the seed housing (at bearing) is removed and the bearing is pushed sideways out of the bearing retainer.

The sowing shaft can now be pushed fully to the right, and the bearing at right side comes out of the bearing retainer. The sowing shaft can now be lifted out of the seed housing. See fig. 4M.

### Mounting of peg wheels

The sowing shaft is put down onto the seed housing and the seed wheels are slid down into the seed housing.

The bearings are pushed back in position and locked by an R-clip. The shaft connections are now completed.

When peg wheels with fine seed fingers are used the bottom flap handle is placed in position 1.

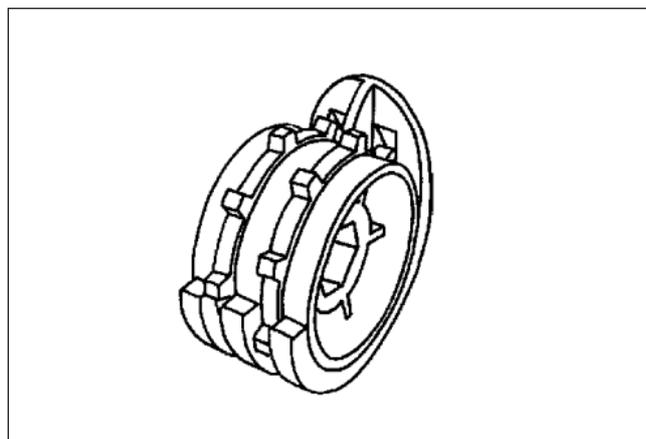


Fig. 4L. Mounting of fine seed fingers.

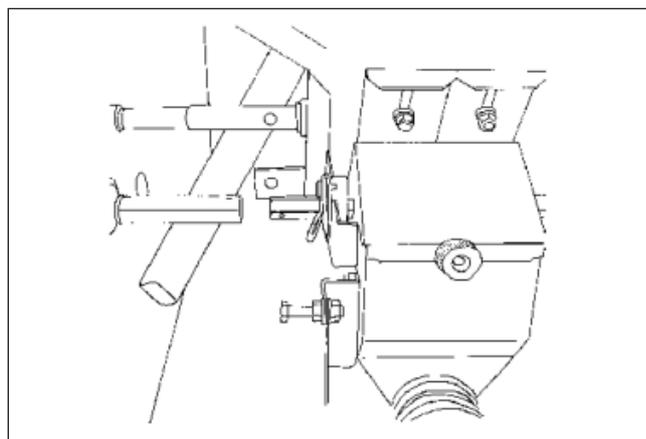


Fig. 4M. Disengagement of sowing wheels..

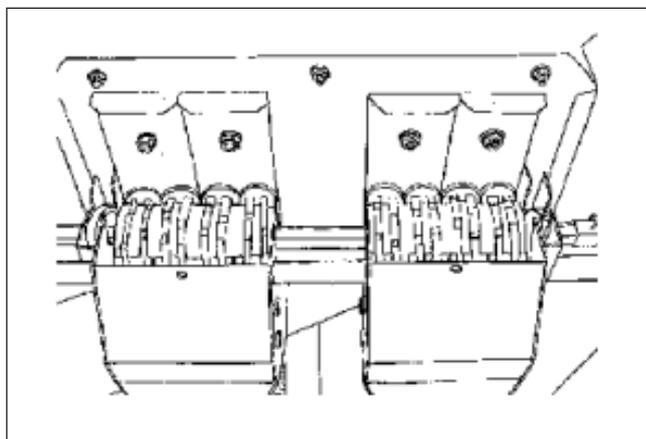


Fig. 4N. Sowing shaft with fine seed fingers.

## Coulter tightening

### Drive wheel, spring tightening

The rotation of the sowing wheel is partly depending on the adjustment of the gear box and partly on the run of the drive wheel in the field.

To ensure the right sowing rate the drive wheel must therefore during sowing be lowered to working position, and the pressure is adjusted by turning the spring. See fig. 4P.

The lift/lower function is hydraulic and connected to a single acting outlet.

At correct spring tension the wheel will run effortless in the soil without going too deep and without "slipping".

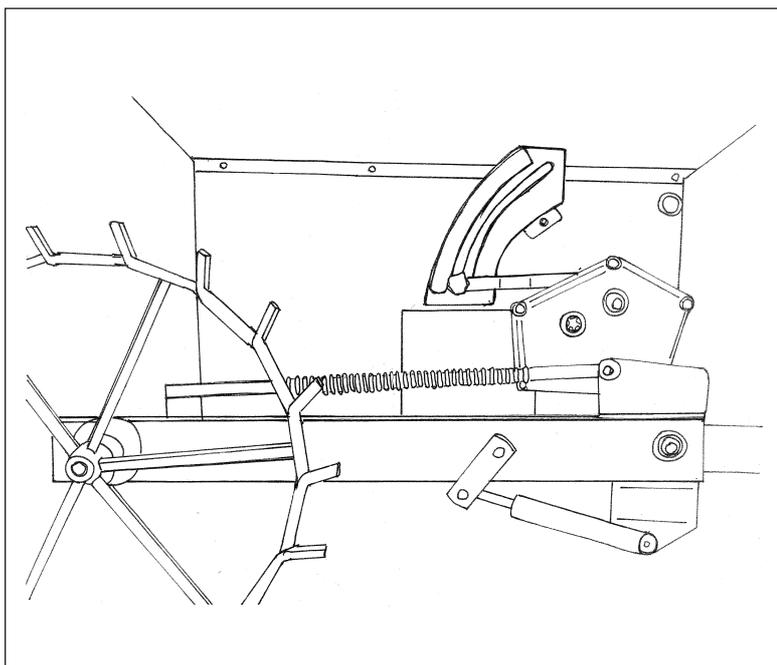


Fig. 4P. Drive wheel.

## Coulter pressure /sowing depth

### Coulter pressure/sowing depth

In order to achieve the desired sowing depth on all coulters, it is necessary to adjust both the coulter pressure and the telescopic arms correctly.

### Coulter tightening

The tension of the spring determines the sowing coulter's working depth in the soil. Note also that a too-high forward driving speed can also result in nonuniform sowing depth.

Central coulter adjustment can be carried out on all coulters at the same time. Machines with a working width of 4,0 m are provided with two spindles.

Central coulter adjustment is carried out by turning the spindle with the calibration handle or openend spanner. See fig. 4N.

The coulter adjustment can be adjusted individually for each coulter. This is done by changing the position of each spring by moving the chain one or more links on the coulter arm.

With this individual adjustment it is possible to obtain an increased coulter pressure on the coulters working behind the tractor wheels. See fig. 4O.

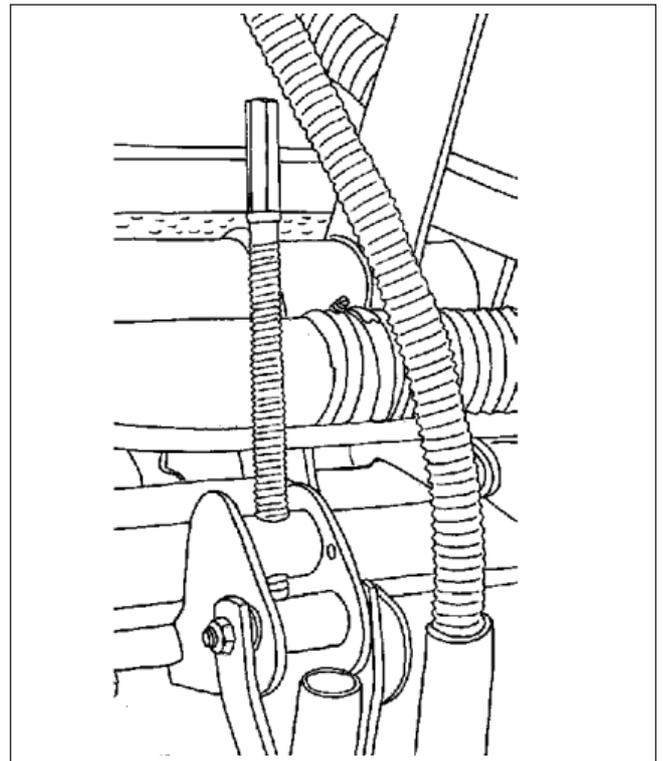


Figure 4N Central coulter adjustment.

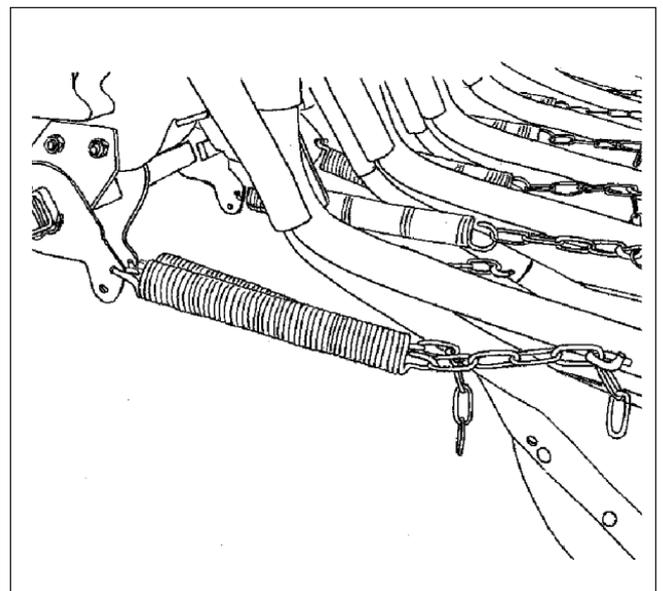


Figure 4O. Individual coulter pressure.

# Markers

## Adjustment of markers

The markers are used to make a marker track. The track ensures that the outer coulter in one row is both parallel to and correctly spaced with respect to the previous row.

## Centre marking

The seed drill has centre marking. Thus the distance from the outer coulter track to the marker track should be half the width of the seed bed plus half a row spacing.

This adjustment can be carried out most easily by driving forward a few metres with the markers and the sowing coulters lowered into their working positions, such that the tracks can be clearly seen in the soil. See figure 4P.

Alternatively, the marker is set 3.0 m out, as measured from the centre of a 3.0 m seed drill, 4.0 m out on a 4,0 m machine etc.

## Marking track

The marking track's width can be regulated by turning the „skew“ marker shaft. See figure 4R.

The narrowest track is obtained by turning the shaft downwards such that the marker is parallel to the direction of travel.

The widest track is obtained by turning the shaft such that the marker is angled backwards with respect to the direction of travel.

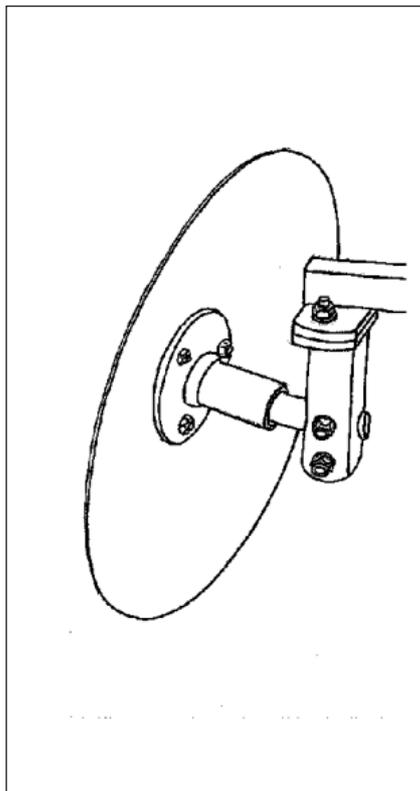


Figure 4R. Cranked marker shaft.

The shaft should not be turned upwards or angled forwards with respect to the direction of travel as this can damage the shaft and give a poor track.

The marker arms can be locked in a vertical position when driving on public roads or when driving close to fences, etc.

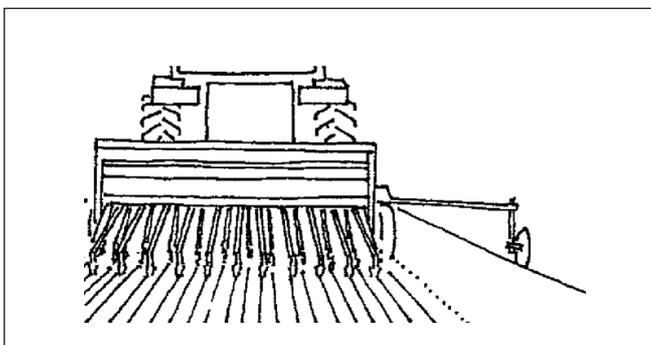


Figure 4P. Centre marking.

## Following harrow

### Adjustment of following harrow (Optional)

The following harrow is mounted by fixing the arms into the brackets fitted on each side of the NS 5100  
See fig.4S.

The following harrow can be set to light or heavy harrowing, or placed in transport position.

Adjustment is carried out by turning the entire following harrow on its arms. The desired position can be secured by setting cotter bolts under the arms.

The cotter bolts must always be locked with the "R" pins.

The following harrow is equipped with compression springs, which gives the possibility of a more intensive cultivation. The pressure on the cultivator is adjusted by turning the compression spring.  
See fig. 4T.

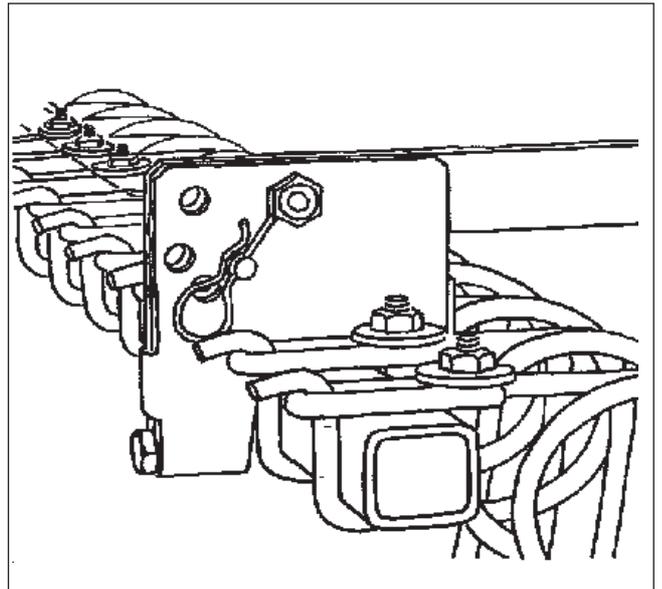


Figure 4S. Adjusted for heavy harrowing.

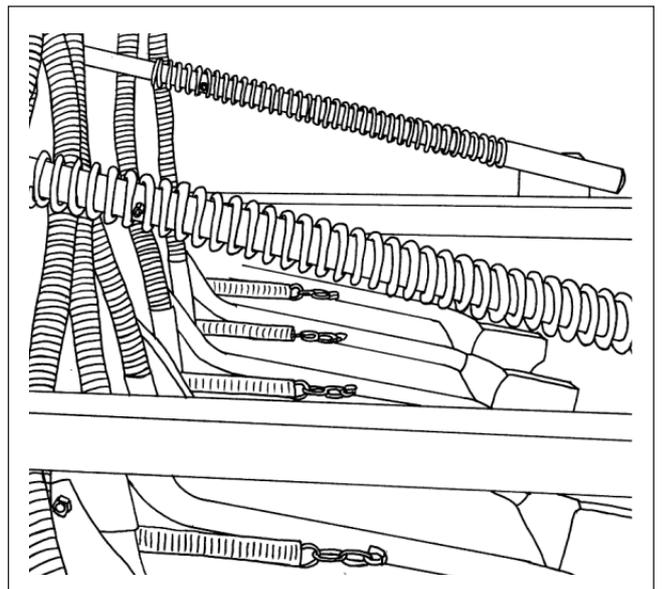


Figure 4T. Compression spring.

## Generally

Regularly check the level indicator in the hopper to ensure that there is sufficient sowing material present

.Regularly check whether the actual sowing rate corresponds to the calculated rate.

Both before and during sowing work, attention should be paid to the following.:

that the driving wheel of the seed drill is correctly working.

that the gearbox is in a good condition.

that the oil level in the gearbox is visible in the oil-level glass (Vario-K).

that the chain drive is correctly adjusted.

that seed rollers and bottom flaps are intact.

that bottom flaps are able to move freely - this can be checked using a finger or a thin shaft.

that the air pressure is correct during working.

## Driving speed

During the sowing work the speed should be 5-8 km/h. In general speed should depend on the prevailing conditions and, in particular, oscillation of the machine should be avoided.

## Emptying of seed hopper

The seed hopper is emptied by opening the calibration flaps as if carrying out a test sowing.

The handle for the bottom flaps should then be pulled back completely such that any excess sowing material is emptied into the tray(s).

## Maintenance and lubricating

### Adjustment of chains

Sprocket wheels for the adjustment of the chain should be loosened. The sprocket wheels should then be pushed upwards until the chains are at the correct tension, at which point the sprocket wheels should be tightened again.

See figure 6A.

### Fine adjustment of bottom flaps

The bottom flaps should be set to the highest position (position 1). Adjustment can then be carried out by turning the screw on the rear face of each bottom flap until the distance between the flap and the seed roller is 1 mm.

See figure 6B.

### Cleaning of seed outlets and sowing rollers

Cleaning the seed outlets and seed rollers can be facilitated by removing the sowing shaft.

See page 15.

### Lubrication

The gearbox oil must be visible in the level eye, otherwise it must be refilled with one of the following types of oil:

#### HYDROL L-HL 60

All chains should be lubricated regularly. After each season, the chains should be cleaned in petroleum and then lubricated with oil.

Before each new season all linkages and chain tighteners should also be lubricated.

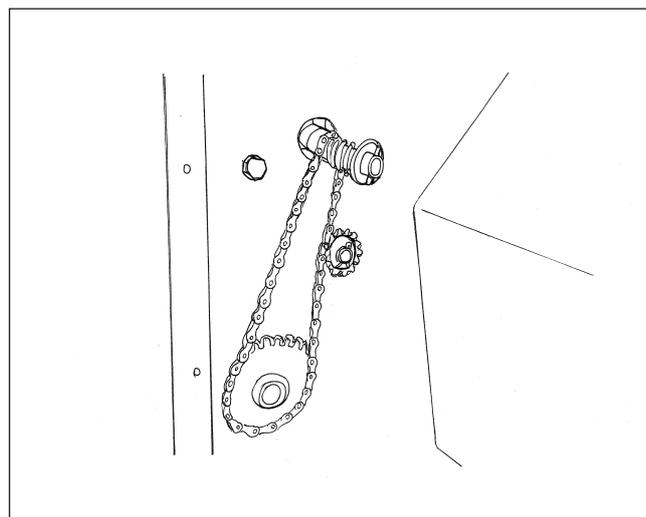


Fig. 6A. Sprocket wheel.

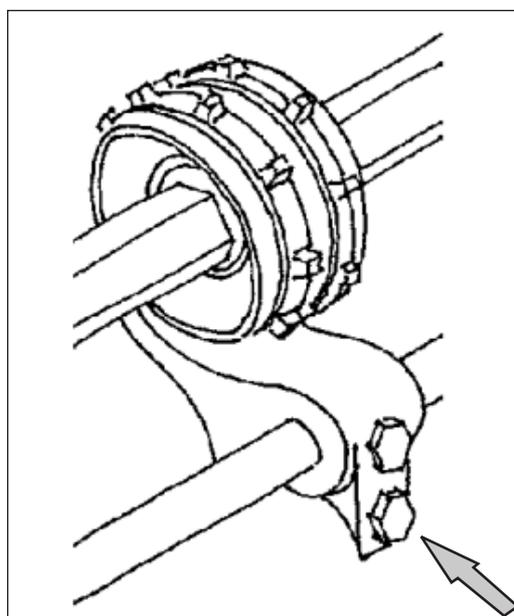


Fig. 6B. Screw for adjustment of the bottom flaps.

## Maintenance and lubricating

Marker arms should be regularly greased.

Two lubricator nipples (A) can be found on the bush sitting on the inner side of the wheel arm.  
See fig. 6C.

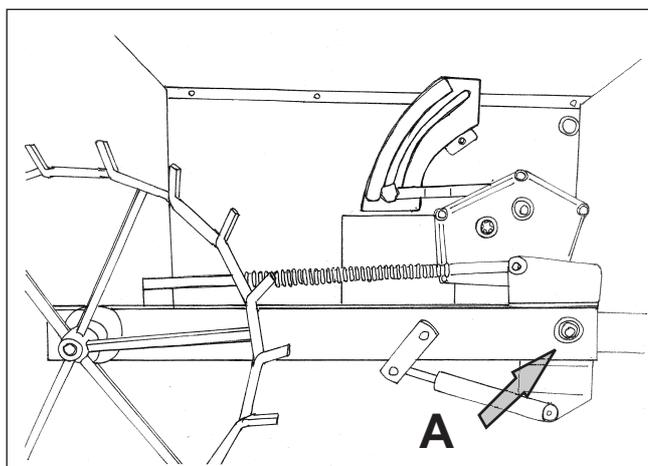
All bearings are selfsealed and do not require lubrication.

## Winter storage

Careful cleaning of the machine after each season is recommended.

The machine should also be prepared in plenty of time before the start of the new season.

The machine should be protected from the elements during storage.



*Fig. 6C. Lubrication of wheel arm*

## Sowing table for the Vario-K gearbox.

The sowing table shows the calibration of the drill and the scale setting for the desired amount of sowing per hectare. Note that the sowing table is only a guide; a test sowing should always be carried out to check the scale

Sowing table kg/ha					
Seed		barley			
Pos. of bottom flaps		2			
Seed housing shutters		open			
Seed rollers		nr. 7002156398			
Row distance		12,5 cm			
		NS 5130	NS 5140	NS 5150	NS 5160
		NS 1502	NS 1502	NS 1504	NS 1504
		NS 1902	NS 1902	NS 1904	NS 1904
Scale setting	5				
	10				
	15				
	20				
	25	76	57	91	76
	30	91	68	109	91
	35	108	81	130	108
	40	125	94	150	125
	45	141	106	169	141
	50	160	120	192	160
	55	178	134	213	178
	60	198	148	238	198
	65	218	164	263	218
	70	240	180	289	240
	75	263	197	316	263
	80	287	215	345	287
	85				
90					
95					
100					

## Sowing table

Sowing table kg/ha					
Seed		wheat			
Pos. of bottom flaps		2			
Seed housing shutters		open			
Seed rollers		nr. 7002156398			
Row distance		12,5 cm			
		NS 5130	NS 5140	NS 5150	NS 5160
		NS 1502	NS 1502	NS 1504	NS 1504
		NS 1902	NS 1902	NS 1904	NS 1904
Scale setting	5				
	10				
	15				
	20	69	52	84	69
	25	88	66	106	88
	30	106	80	128	106
	35	123	92	147	123
	40	143	107	171	143
	45	161	121	194	161
	50	182	137	219	182
	55	203	153	244	203
	60	225	169	171	225
	65	249	187	299	249
	70	273	205	328	273
	75	299	224	359	299
	80	327	245	393	327
	85				
	90				
	95				
	100				

## Sowing table

Sowing table kg/ha					
Seed		peas			
Pos. of bottom flaps		4-6			
Seed housing shutters		open			
Seed rollers		nr. 7002156398			
Row distance		12,5 cm			
		NS 5130	NS 5140	NS 5150	NS 5160
		NS 1502	NS 1502	NS 1504	NS 1504
		NS 1902	NS 1902	NS 1904	NS 1904
Scale setting	5				
	10				
	15				
	20	107	80	128	107
	25	133	100	161	133
	30	160	120	192	160
	35	189	142	227	189
	40	220	165	264	220
	45	249	187	299	249
	50	282	212	338	282
	55	316	237	379	316
	60	334	250	401	334
	65	378	283	454	378
	70				
	75				
80					
85					
90					
95					
100					

## Sowing table

Sowing table kg/ha					
Seed		rapeseed			
Pos. of bottom flaps		1			
Seed housing shutters		15 mm			
Seed rollers		nr. 7000025839 + fine seed fingers			
Row distance		12,5 cm			
		NS 5130	NS 5140	NS 5150	NS 5160
		NS 1502	NS 1502	NS 1504	NS 1504
		NS 1902	NS 1902	NS 1904	NS 1904
Scale setting	5	1,1	0,9	1,5	1,1
	6	1,4	1,0	1,6	1,4
	7	1,7	1,3	2,0	1,7
	8	2,0	1,5	2,4	2,0
	9	2,2	1,6	2,6	2,2
	10	2,4	1,8	2,9	2,4
	11	2,7	2,0	3,3	2,7
	12	3,0	2,2	3,6	3,0
	13	3,3	2,4	3,9	3,3
	14	3,5	2,7	4,2	3,5
	15	3,8	2,9	4,6	3,8
	16	4,1	3,1	5,0	4,1
	17	4,4	3,3	5,3	4,4
	18	4,7	3,5	5,6	4,7
	19	4,9	3,7	5,9	4,9
	20	5,3	4,0	6,3	5,3
	21	5,5	4,2	6,7	5,5
	22	5,8	4,3	6,9	5,8
	23	6,1	4,6	7,3	6,1
	24	6,3	4,7	7,6	6,3
	25	6,6	4,9	7,9	6,6
	26	6,9	5,2	8,3	6,9
	27	7,2	5,4	8,7	7,2
	28	7,5	5,6	8,9	7,5
	29	7,8	5,8	9,3	7,8
	30	8,0	6,0	9,6	8,0



