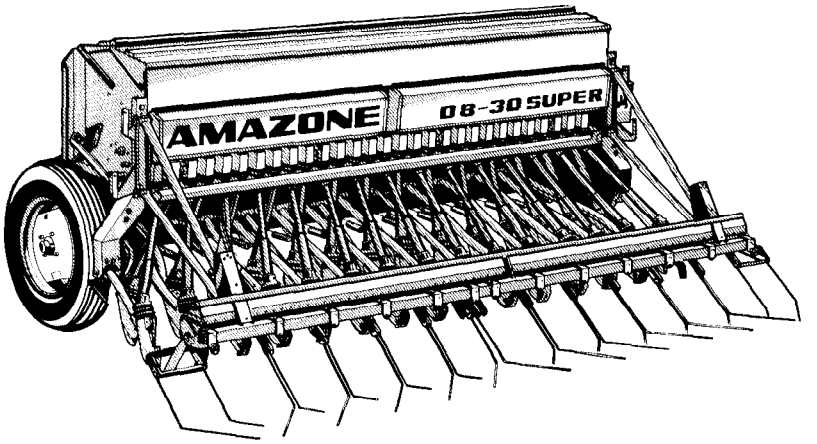
Instruction Manual

Seed Drill

AMAZONE

D8-25 SUPER
D8-30 SUPER
D8-40 SUPER
(Incl. SUPER R)



AMAZONEN-WERKE H.DREYER GmbH & Co.KG

D-4507 Hasbergen-Gaste
Tel.: Hasbergen (0 54 05) *5 01-0
Telex: 9 44 895

D-2872 Hude/Oldbg.
Tel.: Hude (0 44 08) *801-0
Telex: 2 51 010

AMAZONE-Machines Agricoles S.A.
F-57602 Forbach/France · rue de la Verrerie
Tel.: (8) *787 63 08 · Telex: 86 04 92

Factories for: Fertilizer-spreaders, -storage halls, -handling systems. Seed drills. Soil cultivation machines. Field sprayers. Potato-graders, -sorters.

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The AMAZONE tractor mounted seed drill of the type D8 SUPER is one machine from the AMAZONE-range of farm machinery.

The engineering technology in connection with the correct operation ensures optimum use and longevity.

To ensure that you will get the best possible results from your "AMAZONE" we would ask you to read and observe these instructions carefully. You will, of course, appreciate that we will not be able to accept claims under the guarantee if any damage is caused due to incorrect operation.

Please enter the serial number of your seed drill here. You will find this number in front of your seed drill at the left side of the central hopper supporting bracket. Additionally the serial number is painted to the front of the drill's seed box.

Please always quote the serial number when ordering spares or asking technical questions:

Seed drill D8-..... SUPER

Serial-No. .....

Your seed drill complies only with the regulations of the agricultural health and safety authorities if in case of repair original spareparts of the AMAZONEN-WORKS are being used for replacement.

CAUTION!

Whenever the machine is moved, the agitator shaft turns even if the gearbox is set at "0". Therefore, make sure that no parts are left inside the seed box before moving the drill. Otherwise damage could occur to the agitator shaft.

Never put your hands inside the seed box while the machine is moving as serious injury may be caused by the rotating agitator shaft (never try to level the seed inside the seed box while the machine is in drilling operation).

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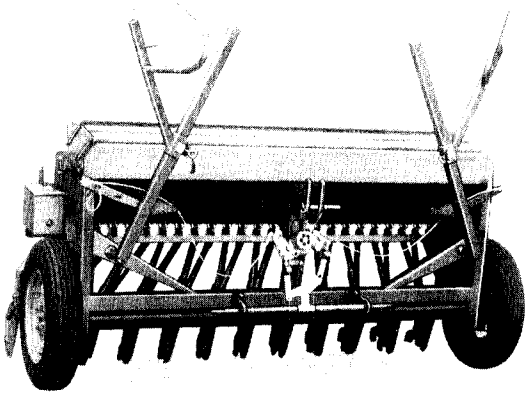


Fig. 1 **D8-25 SUPER**

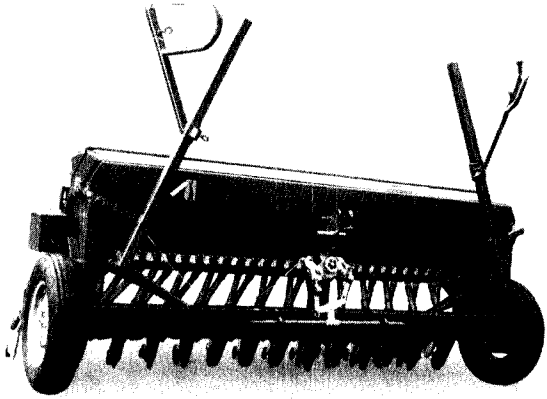


Fig. 2 **D8-30 SUPER**

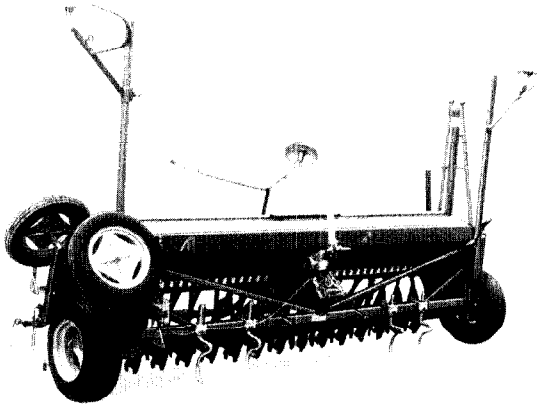


Fig. 2a D 8-40 SUPER with road transport kit

1 Details about the machine

1.1 Manufacturer

AMAZONEN-WERKE H. Dreyer GmbH & Co. KG, P. O. Box 51, D-4507 Hasbergen-Gaste.

1.2 Technical data

Type	**D8-25 SUPER**	**D8-30 SUPER**	**D8-40 SUPER**
Working width	2.50 m	3.00 m	4.00 m
Available number of roll coulters	15–23	17–27	25–35
Minimum row spacing	10.9 cm	11.1 cm	10.8 cm
Available number of "K"-coulters	15–23	17–29	25–37
Minimum row spacing	10.9 cm	10.3 cm	11.4 cm
Net weight	440 kgs	485 kgs	596 kgs
at max. number of "K"-coulters	23	29	37
Seed box capacity	400 litres	505 litres	700 litres
Tyres	6.00-16 730 mm diam. 180 mm wide	6.00-16 730 mm diam. 180 mm wide	10.0/75-15 750 mm diam. 280 mm wide
If wheels fitted with inward cranked rims:			
Transport width	2.50 m	3.00 m	4.32 m
Track width	2.50 m	3.00 m	4.05 m
If wheels fitted with outward cranked rims:			
Transport width	2.66 m	3.16 m	–
Track width	2.50 m	3.00 m	–
Total height	1.22 m	1.22 m	1.23 m

2 On receipt of the machine

Immediately check for damage during transport or for missing parts. Claims are only entertained following immediate complaint to your distributor. Please also check that all parts listed in the freight note are present.

CAUTION!

When the machine is moved, the agitator shaft rotates even if the gearbox is set to "0". Do not leave anything in the seedbox – it can lead to the agitator being damaged.

Never place your hands in the seedbox while the machine is moving as there is a danger of severe injury from the rotating agitator. Never try to level the seed inside the seedbox while the machine is in forward movement for the very same reasons.

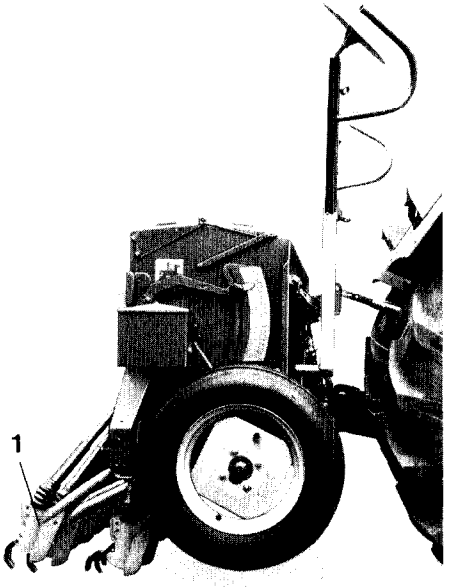


Fig. 3 + Fig. 4

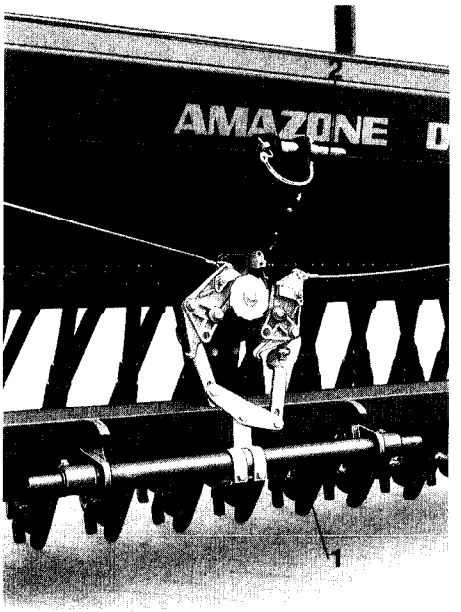


Fig. 5

3 Before the first operation

The outer coulters (Fig. 3/1) running in the drill's wheelmarks receive a high pressure by leaf springs. When putting the seed drill to rest it is braced against tipping over by the outer coulters and thus the fitting of a separate resting support is not needed.

3.1 Mounting of seed drill to the tractor

The tractor lower link arms are pushed onto the lower connecting rod ends (Fig. 4, Fig. 5/1) of the seed drill and secured with lynch pins.

The seed drills of the type D8 SUPER are equipped with cat. II lower link pins as standard.

If the D8 SUPER is to be connected to tractors with cat. I lower link arms the cat. II bushes of the seed drill's lower link arms are to be removed. Upon special request a lower link rod cat. I is available for your drill.

The tractor lower link arms are adjusted so that in the raised position they have only slight lateral play, in order that the drill always travels centrally behind the tractor and does not move to and fro in the raised position when turning at the headlands.

Next, the special top link pin suitable for cat. I and II (Fig. 4, Fig. 5/2) is to be inserted and secured. Now rotate the turnbuckle of the top link until the rear wall of the seedbox stands vertical.

The seed drill should be filled with seed only after coupling to the tractor and should be emptied only while it still is mounted to the tractor.

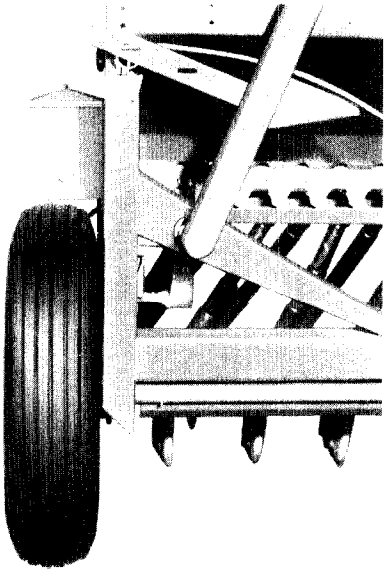


Fig. 6

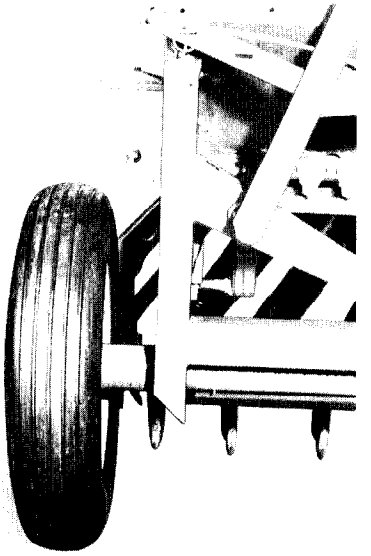


Fig. 7

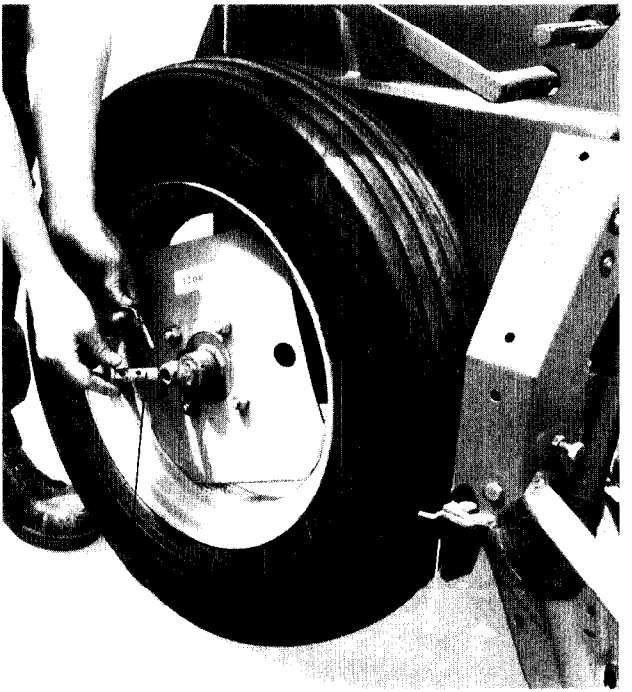


Fig. 8

3.2 Choice of wheel positioning with regard to the following bouts

The wheels of the seed drills are supplied with mounted inward cranked rims (Fig. 6) which results in the following effective widths:

Type of seed drill	Transport width	Track width
D8-25 SUPER	2.50 m	2.34 m
D8-30 SUPER	3.00 m	2.84 m

Each two coulters run in the wheel marks of the seed drill and when sowing the following bout the drill wheel marks are running next to one another.

By turning the wheels, i. e. with outward cranked rims (Fig. 7) the following widths result:

Type of seed drill	Transport width	Track width
D8-25 SUPER	2.66 m	2.50 m
D8-30 SUPER	3.16 m	3.00 m
D8-40 SUPER	4.32 m	4.05 m

This way of setting the wheels is mainly recommended when the seed drill is used on very heavy and sticky soils to prevent any accumulation of soil between the drive chain cover and the tyre of the seed drill as the distance is increased.

Now only the outer coulters are running in the seed drill's wheelmark. When driving the next bout the seed drill wheels are running twice the same wheelmark. Therefore only half the number of the seed drill's wheelmarks are noticed on the field.

When turning the rims also the position of the wheel-scrapers (Fig. 8/2) has to be changed by unbolting. The gap between the wheel-scraper and the tyre must become wider from the inside (about 1 cm) to the outside (about 2 cm).

For **transporting on public roads** the seed drill type D8-30 SUPER may only be transported with the wheels having inward cranked rims so that the maximum permissible transporting width of 3.0 m is not exceeded.

3.3 Dual wheel drive

The seed drill is equipped as standard with a double wheel drive. This means that the drive of the metering units and the agitator shaft can be taken from both **wheels. To achieve this push the** coupling pin (Fig. 8/1) at the left wheel hub inwards and secure it by the clip pin. Hereby the wheel is linked with the axle.

When manouvering of the machine in the farm yard the coupling pin should be disengaged by pushing it outwards again.

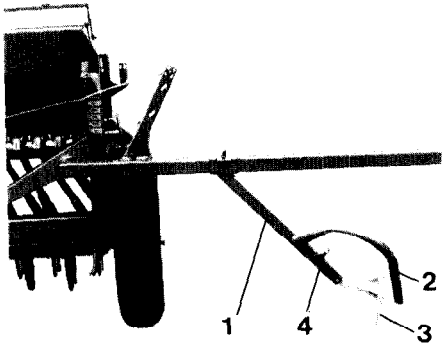


Fig. 9

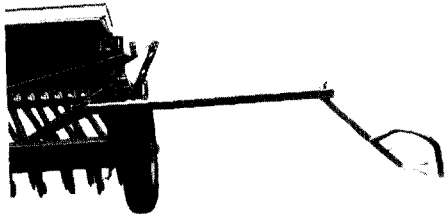


Fig. 10

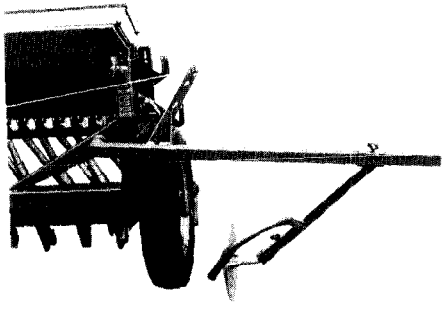


Fig. 11

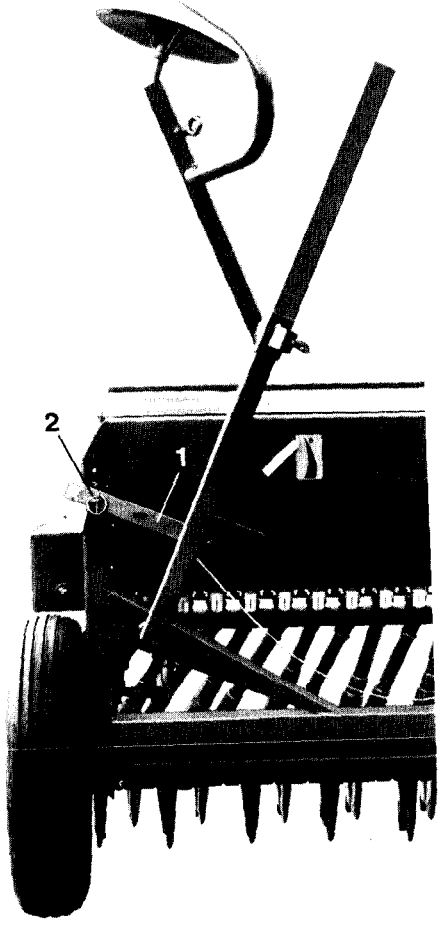


Fig. 12

3.4 Track marker

The AMAZONE-seed drills type D8 SUPER are fitted with extra long track markers (Fig. 9/1) so that it is long enough to create either a track mark for the tractor wheel (Fig. 9 and Fig. 11) or in the tractor centre (Fig. 10). If it is required to have the tractor wheel-mark close by the seed drill's wheels the right hand and left hand marker arms are to be exchanged (Fig. 11). Before transporting the seed drill, the marker arms should be fixed as shown in Fig. 12 with the aid of the securing rod (Fig. 12/1) at the take-up bracket (Fig. 12/2) and secured with a lynch pin.

When lifting the seed drill for transporting on the tractor's three-point linkage it can happen with some tractors that the markers damage the opened rear window of the tractor. In those cases it is possible to fix the markers with a slightly outward facing angle by using the centrally located slotted hole of the fixing bar so that the markers no longer hit the tractor's rear window.

CAUTION!

This position of the markers slightly angled outwards is only allowable when driving on the field. When driving on public roads the markers should be fixed according to Fig. 12.

The protective skid tube (Fig. 9/2) in front of the marker discs prevents bending of the markers by lateral furrows, coarse clods or stones.

Before commencing work the markers should be folded downwards. After removing of the clip-pin (Fig. 12/2) fold the securing rod (Fig. 12/1) outwards and lower the marker arms.

On light soils the marker discs (Fig. 9/3) should after loosening of the eye bolts (Fig. 9/4) run in such a way that the marker discs are running nearly parallel with the seed drill's wheels. On heavy soils the marker discs, however, should be set "on grip" so that they work more aggressively to create a clearly visible mark.

Please do not forget to re-tighten the eye bolts after setting of the markers.

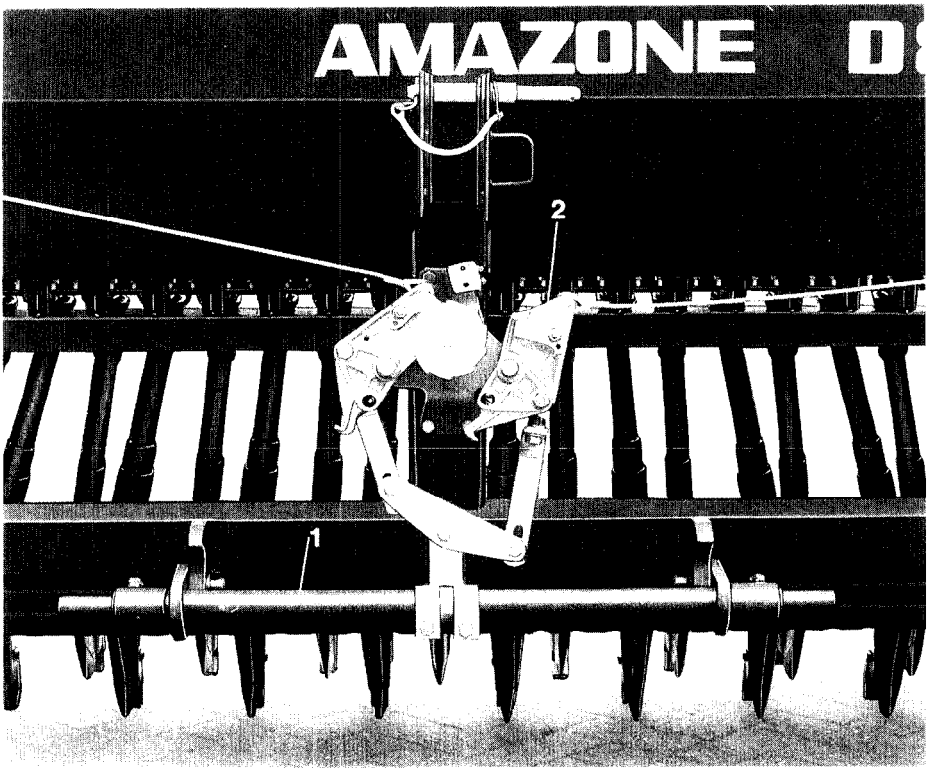


Fig. 13

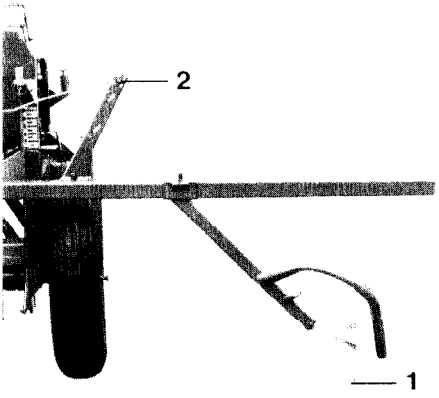


Fig. 14

3.4.1 Automatic marker changeover

The automatic marker changeover (Fig. 13) automatically changes the seed drill's markers at the headlands. When lifting the machine prior to turning in the headlands the swivelling lower link bar (Fig. 13/1) is raised. Hereby the switching mechanism is actuated.

In the lifted position of the seed drill both markers are lifted off the ground. After the lowering of the machine and before the beginning of the new bout that marker will be automatically lowered which had not been in action during the previous bout.

3.4.2 Setting of the markers

The seed drill should be mounted to the tractor. For example when the machine is lowered to the ground the left trip plate (Fig. 13/2) with the left marker (Fig. 14/1) is lowered. The end of the steel cable (Fig. 14/2) should be fixed in one of the five holes of the securing bar in such a way that the rope slackened slightly as soon as the marker discs are lying in the level of the wheels. This limits the working depth of the markers to 60 to 80 mm.

The seed drill is lifted and lowered by the tractor hydraulics. The left trip plate (Fig. 13/2) swivels inwards and the right trip plate swivels outwards. Now the right hand end of the steel cable is fixed to the track markers in the same manner as described above.

In the raised position of the seed drill please check whether both markers are sufficiently raised. If not the steel cables should be adjusted in the holes of the securing rods.

CAUTION!

If the marker discs are operating too low the markers are susceptible to damage.

The **correct length setting of the markers** for creating a mark in the tractor's centre as well as in the tractor's wheel marks shall be explained under para 30 of this instruction book.

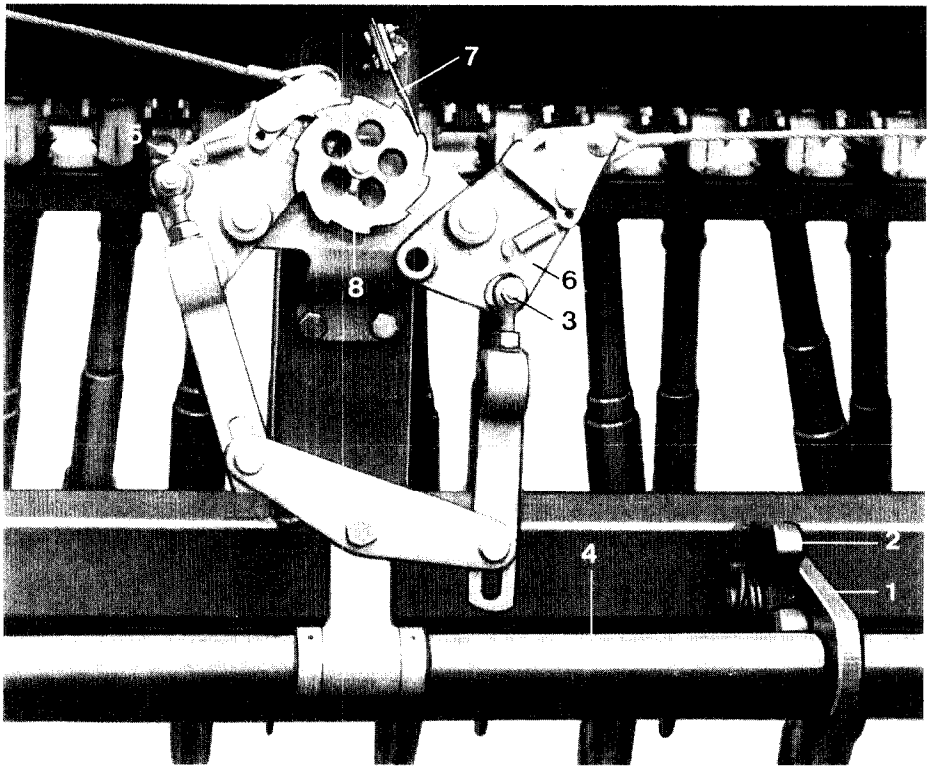


Fig. 15

3.4.3 Setting of the automatic marker changeover

In case the automatic marker changeover does not change properly please check the following points:

Can the two swivelling lower link mounting arms (Fig. 15/1) move freely to the upper stop (Fig. 15/2) or is this movement limited by soil sticking in between? If this is the case the function of the marker changeover can be regained by cleaning of the lower link mounting arms.

If the automatic marker changeover after this inspection still does not change over regularly its adjustment should be checked. The nut and the lock nut on the ring bolt (Fig. 15/3) should be loosened. The upper nut should be turned upwards, the lock nut on the ring held downwards. Push the lower link rod (Fig. 15/4) by a winch or a car-jack upwards against the two stops (Fig. 15/2). Now the right hand trip plate (Fig. 15/5) is locked and the left hand trip plate (Fig. 15/6) is swivelled outwards. If now the nut on the ring bolt (Fig. 15/3) is driven downwards the left hand trip plate (Fig. 15/6) swivels upwards until the leafspring (Fig. 15/7) can be heard to locate into a groove of the trip wheel (Fig. 15/8). The changeover procedure now is terminated. The upper nut should now be rotated one complete turn further downwards and the counter nut be locked against it.

Now mount the seed drill to the tractor and check the function of the automatic marker changeover.

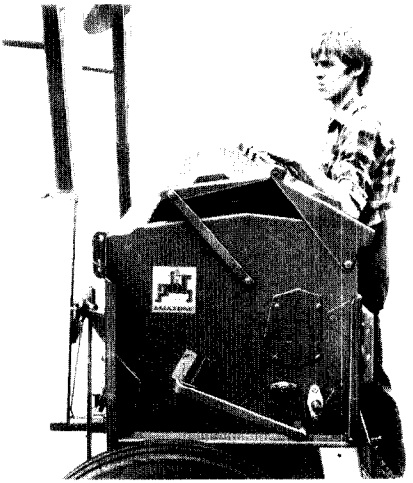


Fig. 16

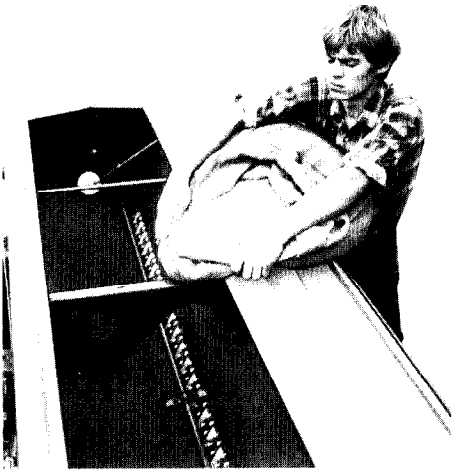


Fig. 17

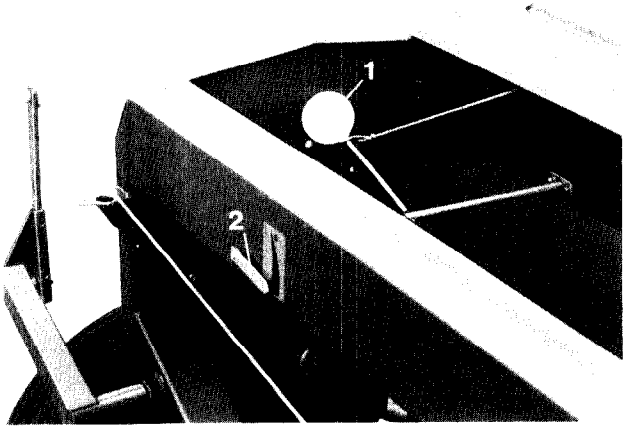


Fig. 18

3.5 Filling of the seed box

Before filling the seed box the seed drill should be mounted to the tractor and the folding lid be pulled backwards at the knob (Fig. 16). The lid design is strong enough to put heavy sacks on it or to step on the opened lid from a trailer positioned alongside in order to fill the seed box (Fig. 17).

The floating body of the seed level indicator (Fig. 18/1) automatically is lifted when opening the lid. When filling the seed box please take care that no heavy items are dropped on the floating body.

Whenever the pointer (Fig. 18/2) at the front wall of the seed box is coming close to the "0"-mark the seed drill has to be refilled. Never should the seed drill be emptied completely during operation as otherwide irregular seed rates may occur by the uneven distribution inside the seed box.

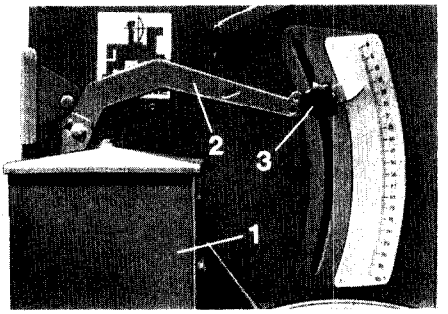


Fig. 19

geschlossen	3/4 offen	offen
closed	3/4 open	open
fermé	3/4 ouvert	ouvert

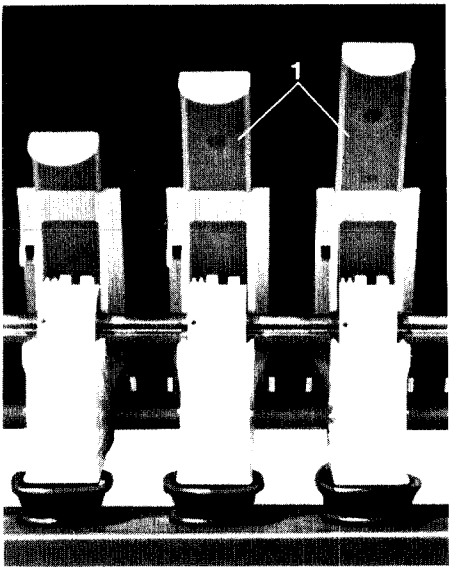


Fig. 20

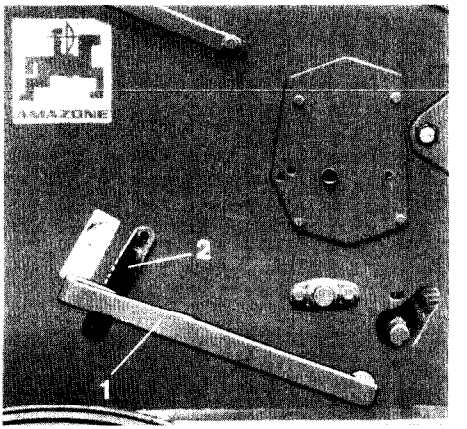


Fig. 21

3.6 Setting of the seed rate

To obtain the desired seed rate the following three settings should be performed according to the setting chart for every individual type of seed:

a) **gearbox setting**
b) **shutter slide position**
c) ***bottom flap setting***

The setting table may be found at the end of this instruction book.

3.6.1 Setting of the stepless variable metering transmission (gearbox)

For setting of the gearbox (Fig. 19/1) the star-knob (Fig. 19/3) of the setting lever (Fig. 19/2) is loosened by turning to the left and the lever being pushed into the position required according to the setting chart. The setting lever (Fig. 19/2) should always be pushed from below into the desired position. Afterwards the star-knob has to be tightened firmly again.

CAUTION!

The seed rated shown in the setting table can only serve as reference values. Size and shape of the seed, its bulk density and dressings may cause considerable deviations. Therefore it is necessary to perform a **calibration test.**

3.6.2 Setting of the individual coulter seed supply

The shutter slides (Fig. 20/1) can be set in three different positions at the metering wheel housing: "closed", "¾ opened", and "open".

The setting chart mentions exactly the required position for every seed.

3.6.3 *Setting of the bottom flaps*

The lever (Fig. 21/1) for setting of the bottom flaps may be found on the left hand side of the machine (as seen by looking in the driving direction). By means of the notched plate (Fig. 21/2) the lever can be placed in eight different positions.

The seed rate table gives the required position for each type of seed.

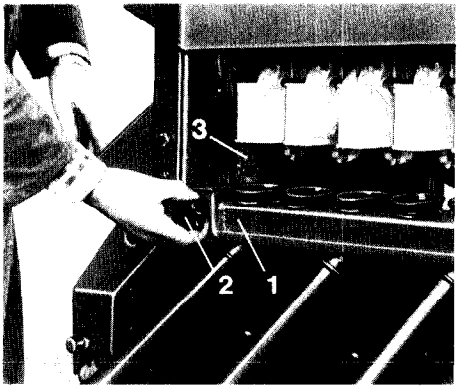


Fig. 22

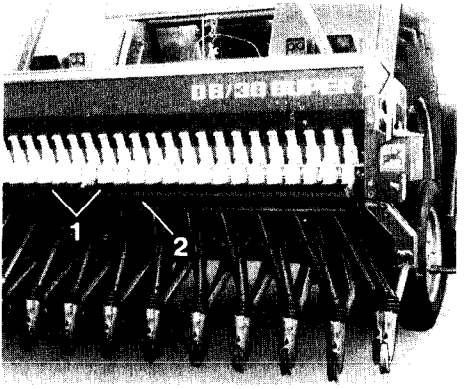


Fig. 23

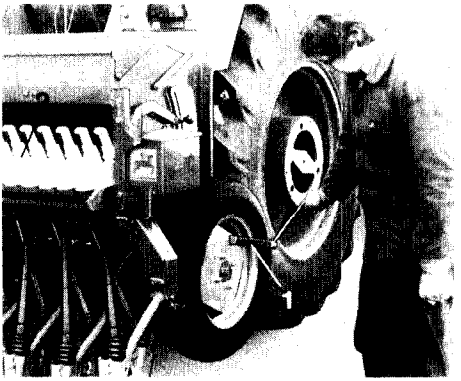


Fig. 24

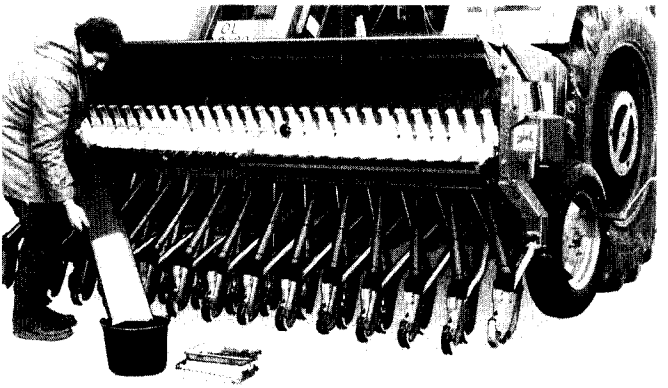


Fig. 25

3.7 Calibration test

The calibration test should be done to ascertain whether the required seed rate really is achieved. First the three basic settings (see para 3.6 "Setting of the seed rate" should be set according to the setting chart:

a) gearbox setting
b) shutter slide position
c) bottom flap position

The seed box should only be half filled with seed as the calibration crank may then be turned easier than when the seed box is full.

For the calibration test the seed tube mounting rail (Fig. 22/1) should be brought to the middle or lower position. To do this the spring loaded locking pins (Fig. 22/2) to the left and to the right of the seed tube mounting rail should be retracted, the seed tube mounting rail be lowered and pushed into the required position. The locking pins (Fig. 22/2) automatically rest in the middle position and the seed tube mounting rail (Fig. 22/1) is fixed.

The seed tube mounting rail (Fig. 22/1) can be fixed in three positions at the side for height adjustment (Fig. 22/3):

- upper position of the seed tube mounting rail: for sowing
- middle position of the seed tube mounting rail: for calibration tests
- lower position of the seed tube mounting rail: for emptying of the seed box and for calibration tests if in the middle position the calibration tray is filled with seed so much that the seed would come into contact with the metering wheel housing.

The calibration trays (Fig. 23/1) should be placed onto the seed tube mounting rail (Fig. 23/2). The seed drill should be raised on the tractor hydraulics until the drill wheels can be turned freely (Fig. 24).

The calibration crank (Fig. 24/1) should be inserted into the square hole of the right hand wheel. This calibration crank can also be used for turning the spindle of the coulter pressure adjustment. For quicker access normally this crank is placed on the coulter pressure adjustment spindle at the lefthand side of the seed drill. For preparing the calibration test place the calibration crank (Fig. 24/1) into the right hand seed drill wheel and turn it a few times until the seed leaves all metering wheel housing equally (Fig. 24/2). All metering wheels have then been filled with seed. Now empty the calibration trays (Fig. 23/1) into the seed box.

The seed drills D8 SUPER have especially short calibration trays. When filling the seed into another container (Fig. 25) short calibration trays may be emptied easier without spilling any seed.

Now the **calibration test** may begin:

The number of wheel turns to be performed is equivalent to an area of 1/40 ha (250 sqm) and depends on the tyre size and width of the seed drill.

In the following table the number of wheel turns are mentioned for the various available seed drill widths:

Tyres	6.00–16		10.0/75–15 31 x 15.50–15	
Working width	1/40 ha.	1/10 ha.	1/40 ha.	1/10 ha.
2,50 m	44,0	176,4	–	–
3,00 m	36,7	147,0	34,0	136,3
4,00 m	–	–	25,5	102,3
Conversion factor	110	441	102	409

For other working widths the number of wheel turns can be calculated when using the mentioned tyre sizes as follows.

Take the conversion factor of the above table.

Wheel turns on 1/40 ha (250 m^2) = $\frac{\text{Conversion factor}}{\text{working width (m)}}$

Wheel turns on 1/10 ha (1000 m^2) = $\frac{\text{Conversion factor}}{\text{working width (m)}}$

For determination of the wheel turns a mean wheel ship of 7 % has been allowed.

The collected seed shall be weighed (Fig. 25) and the weight be multiplied by the factor 40 (at 1/40 ha) or factor 10 (at 1/10 ha) respectively. This calculated seed rate is equivalent to the actual seed rate in kg/ha.

At 1/40 ha (250 sqm) calibr. seed rate x 40 = actual seed rate kg/ha

At 1/10 ha (1000 sqm) calibr. seed rate x 10 = actual seed rate kg/ha

If a higher seed rate is desired a higher figure should be chosen at the scale of the gearbox lever and vice versa. The calibration test is repeated until the exact desired seed rate has been obtained.

3.7.1 Deviations between the calibration test and the actual seed rate

When turning the wheel crank for the calibration test a drive on the field is simulated. As the seed drill wheel turns less on a prepared seed bed than on a firm road of the same distance one has for determination of the number of wheel turns taken that the seed drill wheel has a wheel slip on the field of 7 %. This value has been determined by long years' experience and is found to be applicable in most of the cases.

On extremely light and loose soils, however, the wheel slip at the seed drill wheel may also become higher. On very firm, cloddy soils the wheel slip may become smaller than 7 %.

Therefore should larger deviations between the calibration test and the actual seed rate be noticed it is necessary to recalculate the number of wheel turns for the calibration test.

Herefor one measures on the field 250 sqm. This is equivalent at a seed drill with:

2.50 m working width = 100.0 m driving distance
3.00 m working width = 83.3 m driving distance
4.00 m working width = 62.5 m driving distance

The number of wheel turns must now be counted when driving the pre-determined distance. With this number of wheel turns the calibration test should be performed. The AMAZONE seed drill D8 SUPER has considerably larger tyres than presently common on this kind of tractor mounted seed drills. For this reason the influence of the soil condition is comparatively small, less than with drills with smaller tyres. The described deviations can only occur in especially unfavourable situations.

The seed rate can be influenced considerably not only by the wheel slip but also by residue of seed dressings in front of the outlets of the metering wheel housings and on the bottom flaps. Should such residue be noticed, the calibration test should be repeated after 2–3 sown seed box fillings. Thereafter a state of equilibrity is reached and the seed rate does not drop any further irrespective of existing dressing residue.

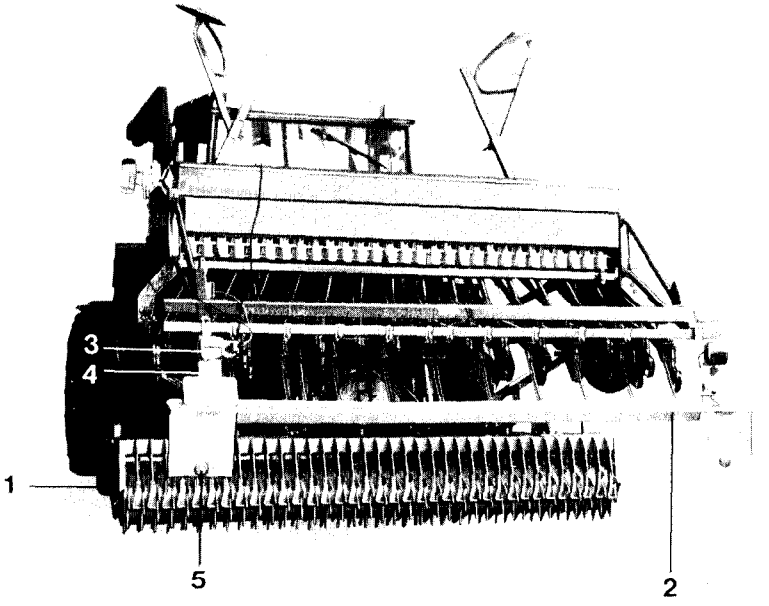


Fig. 26

3.8 En route to the field (transport on public roads)

If public roads are used en route to the field, ensure the tractor and drill conform to the traffic regulations. In particular this means:

The maximum transport width of 3 m may never be exceeded. Herefor it may be necessary to turn the wheels of the D8-30 SUPER in such a way than the rim cranks are facing inwards. Also the outer harrow elements of the extra coverage following harrow must be pushed inwards on the square tube after having loosened the ring nut on the key bolt which holds these harrow elements to the harrow boom. The calibration crank may be used for this as an aid.

If the seed drill is used in combination with an AMAZONE power harrow, the side dam levellers (Fig. 26/1) of the power harrow must be turned inwards in transport position (see instruction book of the power harrow RE).

The track markers must be placed in transport position as shown in Fig. 12.

The marker carriers (Fig. 77/1) of the hydraulic pre-emergence markers should be removed from the carrying arm by removing of the pin (Fig. 77a/1). Use always a rear light which is in compliance with the traffic regulations on the light carriers of the seed drill. The upper one for the light the in driving direction and the lower one for the rear light. The following harrows with pendulum balance and the single coulter stilt harrows have to be marked with two red/white stripe warning plates on the right hand and left hand outer side of the seed drill.

The backwards facing tines of the extra coverage harrow must be equipped with the traffic security board (Fig. 26/2 – option). On this traffic security board also two light carriers are mounted to which the rear lights (Fig. 26/3) with reflectors (Fig. 26/4) are fixed.

In the transporting position the combination of the seed drill/power harrow may only be lifted to such a height that the rear lights (Fig. 26/4) are not higher than 900 mm from the ground. This distance must also be observed for the rear reflectors (Fig. 26/5) below the transport security board when the seed drill is used in combination with an AMAZONE system "liftpack" and the rear lights at the transport are lifted above the pre-described level. The seed drill should only be lifted to such an extent that the distance of the rear light upper edge to the road does not exceed 1,550 mm.

Also please do not forget to check the lights for proper functioning.

The front axle weight of the tractor during transport of a machinery combination or a seed drill alone must be in minimum 20 % of the tractor's net weight. Otherwise the tractor cannot be steered with sufficient safety. If necessary install front weights or fill the tractor front wheels with water.

Furthermore note that the tractor's allowable rear axle load is not exceeded. By no means a seed drill, if it is operated in combination with a soil tilling implement should be transported with a filled seed box since then the maximum axle load allowable for public traffic will in nearly all cases be exceeded. Additionally, please mind the allowable total weight of the tractor.

Please adhere to these hints especially in traffic. They help to prevent accidents.

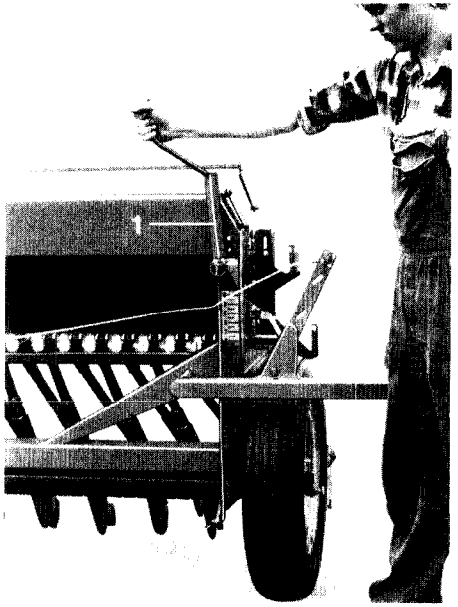


Fig. 27

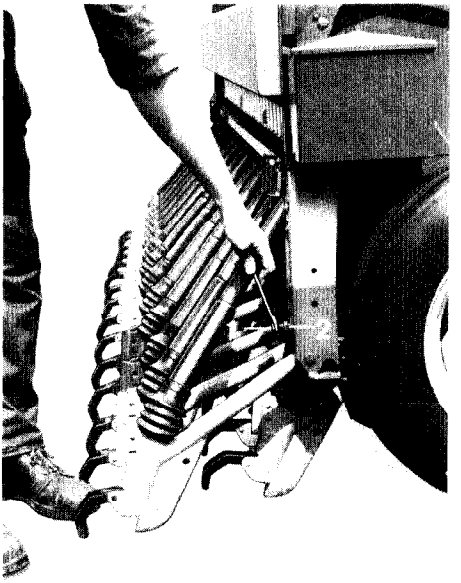


Fig. 28

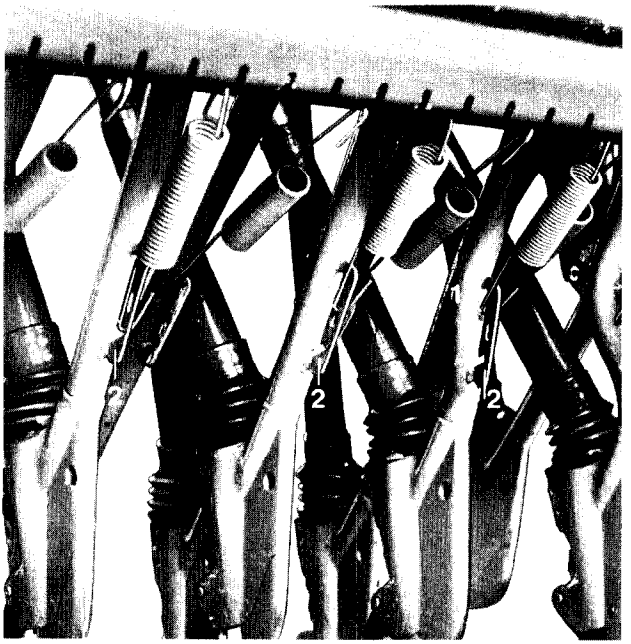


Fig. 29

3.9 On the field

On the field, remove the rear lights and lower the track markers. Move the track markers backwards and forwards a few times, checking to see whether the track marker steel cables have the correct length between the automatic changeover trip and the marker arms. Ensure on the first run that the marker operates on the correct side.

4 Central coulter pressure adjustment

The coulter pressure determines the planting depth of the seed. The accurate maintaining of the required planting depth is one of the most important preconditions for a higher yield. The seed drills D8 SUPER therefore are equipped **as standard** with a central coulter pressure adjustment.

4.1 Setting of the coulter pressure

For checking the accurate planting depth, it is necessary to drive with the seed drill a distance of 20 to 30 m on the field at that speed at which the seed drill shall be operated lateron; thereafter the planting depth should be checked. With increasing operating speed the planting depth becomes shallower; with slower operating speed it becomes deeper. If the seed has been placed too deeply, the coulter pressure should be reduced or vice versa.

By the central coulter pressure adjustment the coulter pressure of all coulters may be set stepless at once. The adjustment is done by placing the calibration crank (Fig. 27/1) onto the spindle on the left side of the seed drill. The calibration crank may be found easily reachable for the tractor operator on the side of the spindle on the left side part of the seed drill. One clockwise turn increases the coulter pressure.

It is recommended to increase the coulter pressure of those coulters which are running in the tractor's wheel marks.

The coulter pressure of the individual coulters may be changed individually by hanging the spring (Fig. 29/1) into another hole (Fig. 29/2) at the coulter tube.

The depth of the left hand and right hand outer coulters is set by a hexagon bolt (Fig. 28/1). The further this bolt is turned inwards, the shallower the outer coulter will run in the wheel mark. With the lock nut (Fig. 28/2) the position of the hexagon bolt is fixed.

Even without additional coulter pressure the planting depth may become too big by the own weight of these coulters when operating in extremely light soils. In such a case all "K"-coulters should be equipped with the band sowing shoe or with depth limiters (see options).

Furthermore a hydraulic coulter pressure adjustment is available as option.

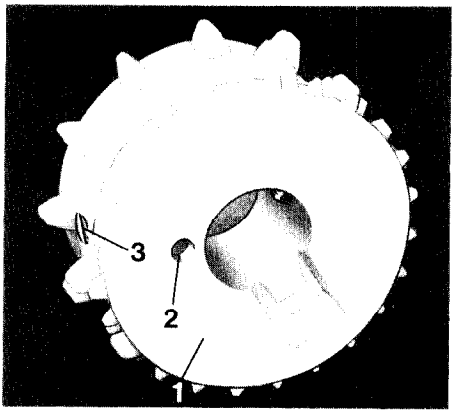


Fig. 30

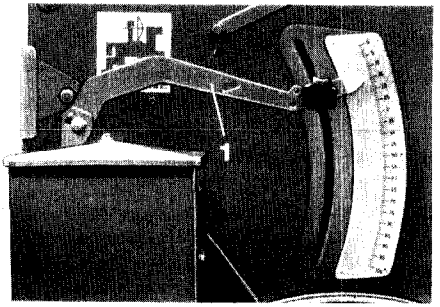


Fig. 31

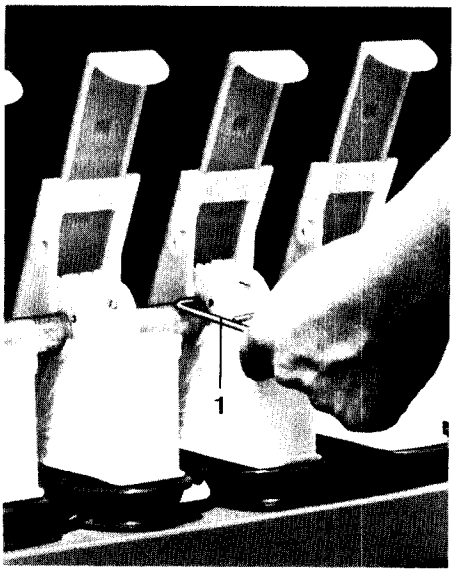


Fig. 32

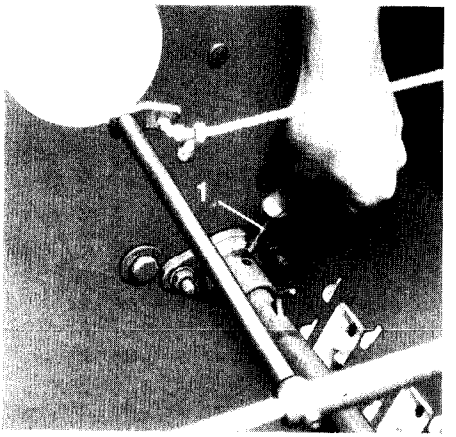


Fig. 33

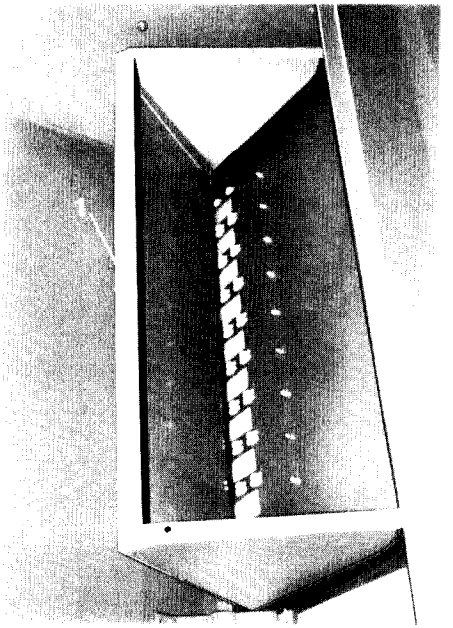


Fig. 33a

5 Sowing of fine seeds

For sowing fine seeds each AMAZONE D8 SUPER is equipped as standard with the combined standard and fine seed metering wheel (Elite metering wheel, Fig. 30/1). During grain sowing standard and fine seed metering wheels are coupled and both rotate.

In order to convert the drill to fine seed move the gearbox setting lever up and down a few times until the pin holes (Fig. 30/2) of the metering shaft are visible. Push the pin out of the pin hole with the supplied key (Fig. 32/1) until the normal metering wheel can be moved freely on the metering shaft. The brass screw (Fig. 30/3) should never be removed! Also shut off those shutter slides that will not be used for sowing fine seeds.

For re-engaging the normal metering wheels first bring the metering shaft into such a position, that the pin holes at the fine seed metering wheels are seen. Thereafter turn the normal seed metering wheels slightly by hand and press the locking pin back into the fine seed metering wheel.

5.1 Rape seed

The fine seed metering wheel used in the AMAZONE-seed drills is especially suited for rape seed. Due to the intensive agitating action of the agitator shaft is may be that during the sowing operation the rape seed sticks (glues) together and hence may cause irregular sowing. To avoid this we recommend to disengage the drive of the agitator shaft for rape sowing. To achieve this, remove the connecting bolt (Fig. 33/1) on the right hand side inside the seed box which links the agitator shaft with the drive sprocket.

Deviations between the calibrated and the actually sown seed rate can occur then when residue of the dressing agent sticks to the bottom flaps and thus slows the flow of the rape seed. To take this possibility immediately into account, we recommend to proceed as follows: Before beginning with the actual calibration test, fill the calibration tray by turning the crank at a high gearbox setting (approx. "80"). This will cause immediately the dressing agent to stick to the bottom flaps to its final amount. Now, return the contents of the calibration tray and start with the actual calibration test. Due to the residue on the bottom flaps this test will be performed under the same conditions as during later sowing. Deviations between the calibrated and the actual sown seed rate will then no longer occur.

To avoid weighing errors make the calibration test according to $^1/_{10}$ ha (1,000 sqm) or $^1/_{40}$ ha (250 sqm). Please use a suitable weighing scale (no spring scale please).

NOTE:

Please do not forget after sowing rape or green peas/bean seed to engage the agitator drive again by inserting the connecting bolt (Fig. 33/1) again. Otherwise problems would occur especially when sowing seeds with beards of ears in that the seed may cause bridging and thus a faulty seed rate results.

A special rape seed box insert (Fig. 33a/1) is available for the AMAZONE seed drill D8 SUPER which may then only be fitted after having stopped the agitator drive. This rape seed insert reduces the seed box volume considerably so that this expensive rape seed can be sown out almost completely.

The rape seed box insert, of course, may also be used for other easy running seeds which are sown in small seed rates (at a stopped agitator shaft) i. e. for kale.

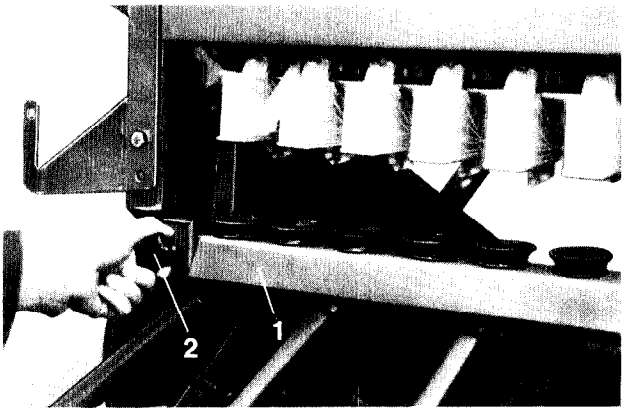


Fig. 34

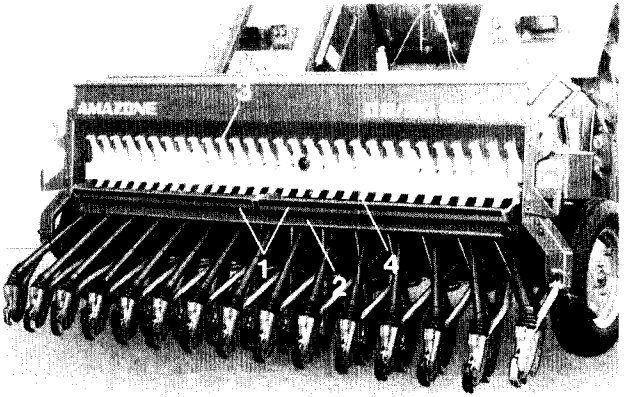


Fig. 34a

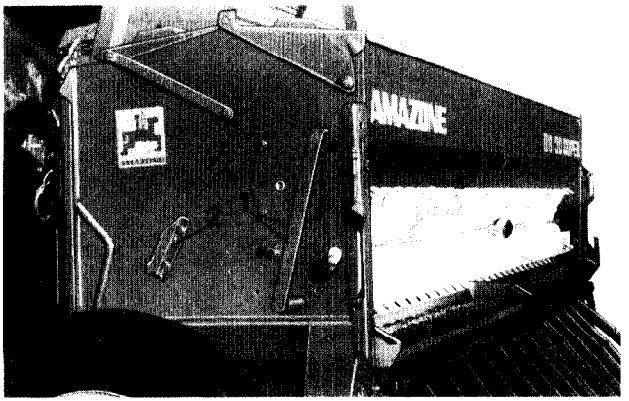


Fig. 34b

6 After use care – emptying of the seed box

For emptying the seed box lower the seed tube mounting rail (Fig. 34/1) and bring it into the lower resting position. For this the locking pins (Fig. 34/2) at the right and left side of the seed tube mounting rail have to be pushed to the sides. Now place the calibration trays (Fig. 34a/1) onto the seed tube mounting rail (Fig. 34a/2).

Open up all shutter slides (Fig. 34a/3) and pull the bottom flap lever (Fig. 34b/1) at the left hand side of the seed drill over the notched locking plate (Fig. 34b/2) all the way to the rear. Now the remainder of the seed runs out of the seed box into the calibration trays. If the calibration trays are filled, close the bottom flaps (Fig. 34a/4) in the same way with the bottom flap setting lever (Fig. 34b/1) again and empty the calibration trays. *This procedure should be repeated until the seed box is completely emptied and* cleaned.

The machine can be cleaned with a jet of water or compressed air. If you intend to clean the seed box with compressed air please remember that the dust from the dressing agent is poisonous – do not inhale this dust!

When the machine is put away, leave the bottom flaps fully open. Where these are left closed, the danger exists that mice will try to enter the seed hopper since even when empty, the smell of grain persists. When the bottom flaps are closed, mice will gnaw at the bottom flaps and metering wheels. **Therefore – bottom flaps open!**

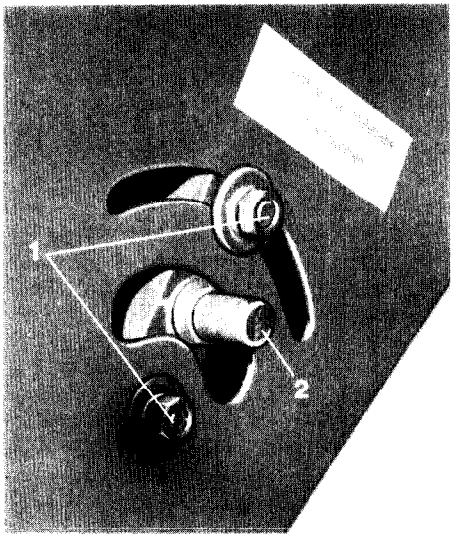


Fig. 35

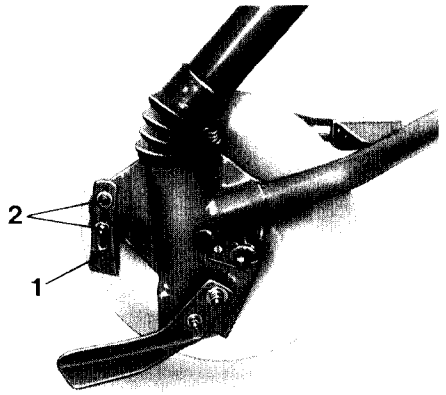


Fig. 36

7 Care and maintenance

The AMAZONE seed drill D8 SUPER is free of maintenance, however the following points should be noted:

7.1 Oil level in the stepless variable transmission

Check the oil level on the gearbox using the sight glass. An oil change is not required. When it is necessary to top-up the oil, remove the cover and refill with hydraulic fluid WTL 16.5 cSt/50 °C. The maximum fluid quantity is 1.8 litre.

7.2 Tyre air pressure

The air pressure in the tyres should be checked regularly. The seed drill D8-25 SUPER and the D8-30 SUPER are standardly equipped with tyres 6.00-16. The tyres 6.00-16 receive an air pressure of 1.2 bar by the factory.

Due to the relatively large tyre size it is also possible to operate the seed drill with a lower tyre air pressure of 0.8 to 1.0 bar, so that this results in less soil compaction in the wheel marks and less deep wheel marks. The seed drill AMAZONE D8-40 is equipped as standard with tyres 10.0/75-15 (available as option for D8-30 SUPER), the tyre air pressure of which may be lowered down to 0.6 bar if required.

7.3 Drive chain tensioning

The drive chain which drives the stepless variable oil bath transmission from the ground wheel should be re-tensioned at the chain tensioner (Fig. 35/1) after approx. the first twenty hours of operation. For this the two nuts (Fig. 35/1) should be loosened and the shaft of the chain sprocket (Fig. 35/2) be pressed to the rear. The next re-tensionings may then be done after every 200 hours of operation.

7.4 Coulters

All coulter bearings of the "K"-coulters and roll-coulters are free of maintenance.

7.5 Re-adjustment of the roll coulter scrapers

The scrapers (Fig. 36/1) of the roll coulters are set at the factory in such a way that they just touch the outer edge of the disc without any perceptible breaking effect.

After extensive use of the roll coulters wear can take place at the scrapers. Adjust the scraper by means of the bolt (Fig. 36/2) until the scraper once more as described above just comes into contact with the coulter.

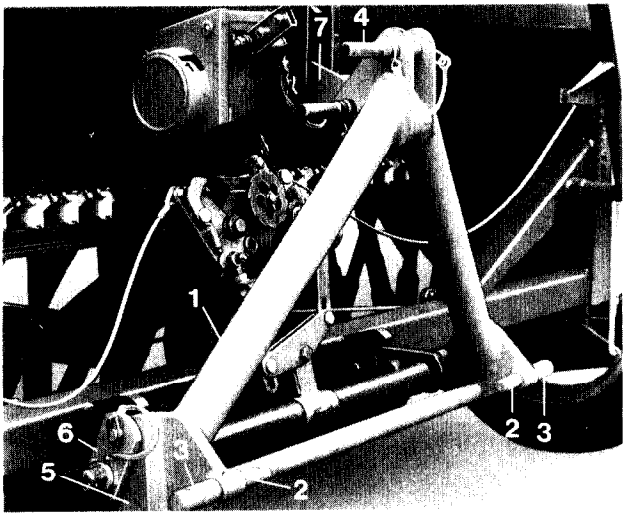


Fig. 37

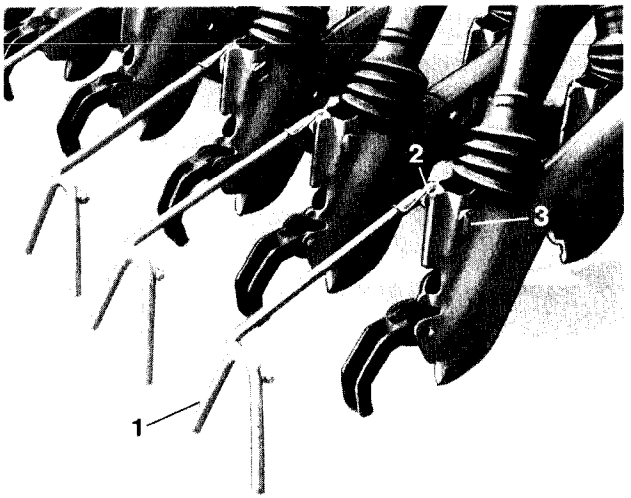


Fig. 38

8 Special accessories (options)

All components listed under this heading are extras which do not form part of the standard fitment and must be separately ordered. They can all, however, retrospectively be fitted, all mounting holes and fixtures being available on the standard production machines.

9 Quick coupler

As the name says, the quick coupler was designed for a quick and easy coupling of the seed drill to the tractor. This quick coupler (Fig. 37/1) can also be used to increase the distance between the seed drill and the tractor if necessary.

First the quick coupler should be mounted to the tractor's three point linkage. If the tractor is equipped with a three point linkage cat. I this linkage should be attached to the pins (Fig. 37/2) inside of the quick coupling frame and at tractors with cat. II with the pins (Fig. 37/3) being located outside of the quick coupler frame and they should be secured by lynch pins.

The top link is connected with the special dual connecting pin for cat. I and cat. II (Fig. 37/4) and to be secured by lynch pins.

For coupling of the seed drill the lower link catch hooks (Fig. 37/5) have to catch the seed drill's lower link pins on both sides. Thereafter push the securing plates (Fig. 37/6) over the pin ends and secure with lynch pins.

The top link pin of the seed drill should be connected with the connecting bracket (Fig. 34/7) at the quick coupling frame. The upper link length should be adjusted until the seed drill's rear wall is positioned vertically.

10 Single coulter stilt following harrow

The sprung single coulter stilt following harrows (Fig. 38/1) are mounted to the "K"-coulters and are secured with a washer (Fig. 38/2) and an end lock (Fig. 38/3).

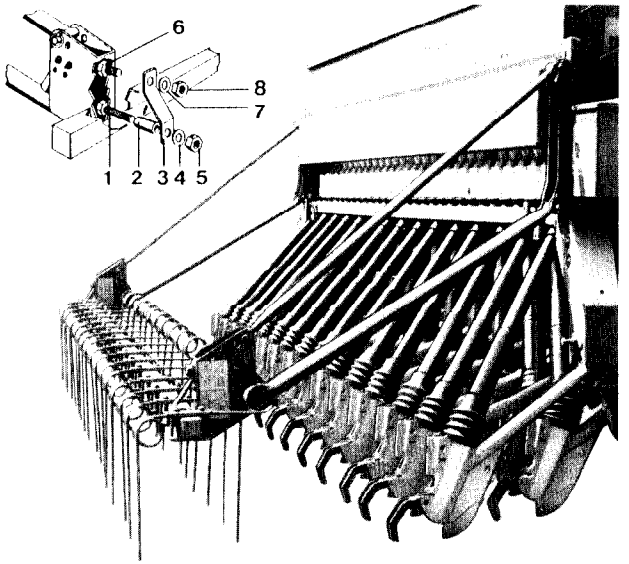


Fig. 39

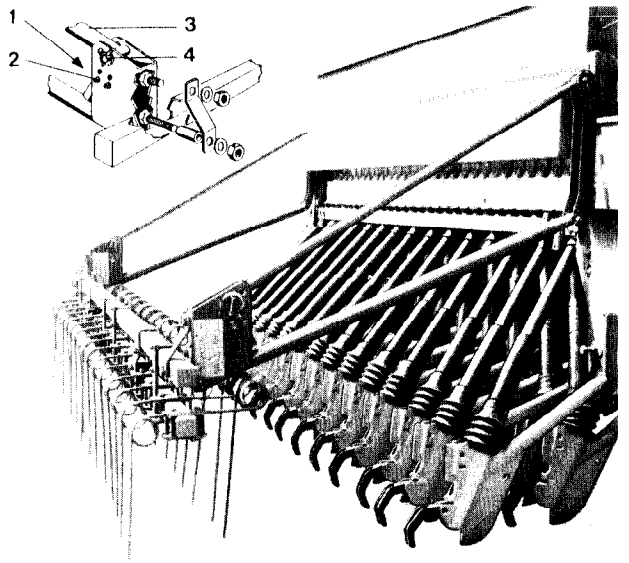


Fig. 40

11 Following harrows

On heavy soils the following harrow with pendulum compensation or the two-section following harrow with pendulum compensation should be used.

11.1 Following harrow, one-section with pendulum compensation

The following harrow is mounted to the seed drill with the aid of a parallelogram frame. The bolts (Fig. 39/1) are put on the distance tube (Fig. 39/2). The cranked bar (Fig. 39/3) should be mounted on both sides with the bolt (Fig. 39/1), the spring washer (Fig. 39/4), the nut (Fig. 39/5) as well as the bolt (Fig. 39/6), the spring washer (Fig. 39/7) and the nut (Fig. 39/8).

11.2 Following harrow, two-section with pendulum compensation

The two section following harrow is mounted to the seed drill in the same way as the one section following harrow. The rubber buffer (Fig. 40/1) is mounted to the lower hole (Fig. 40/2) and the connecting rod (Fig. 40/3) is fixed to the second hole (Fig. 40/4).

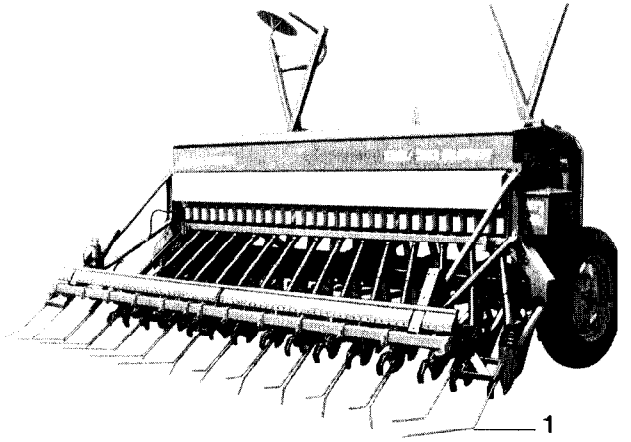


Fig. 41

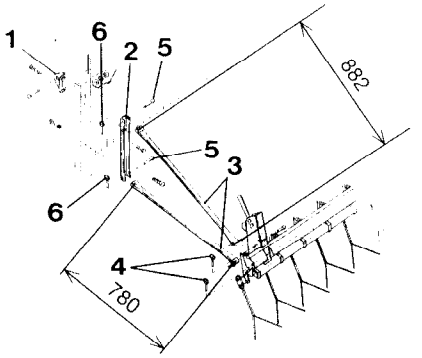


Fig. 42

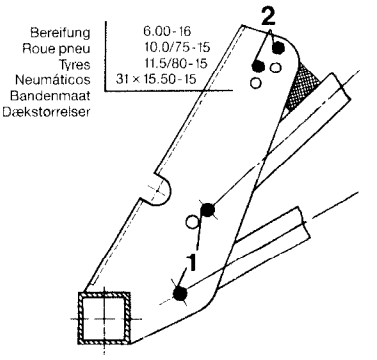


Fig. 43

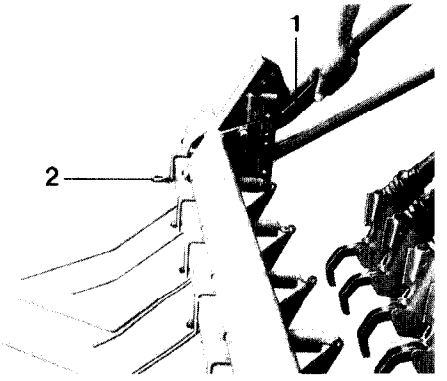


Fig. 44

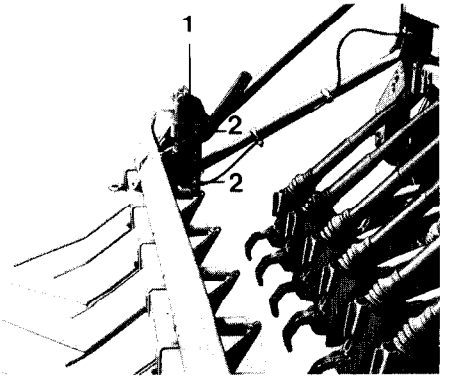


Fig. 45

12 Extra coverage following harrow

12.1 Fitting and setting of the extra coverage following harrow

After sowing, the seed is evenly covered with soil by the extra coverage harrow (Fig. 41/1). Like the roll coulters, the extra coverage following harrow (Fig. 41/1) operates totally without blocking, even where there are large amounts of organic material (trash) on the field.

Fitting of the extra coverage harrow:

- The reinforcement angle (Fig. 42/1) is already fixed to your seed drill.
- Attach the upper mounting brackets (Fig. 42/2) to the seed box.
- The extra coverage harrow has to be bolted with two bolts according to Fig. 43/1 to the carrying tubes (Fig. 42/3) and to be secured by lynch-pins (Fig. 42/4).
- The swing metal buffer has to be fitted according to Fig. 43/2.
- The carrying tubes (Fig. 42/3) now should be fitted to the upper channel iron (Fig. 42/2) with pins (Fig. 42/6) and secured with lynch pins.

In the operating position, the V-shaped ends of the harrow tine elements (Fig. 41/1) should lay approximately horizontally on the soil. They should possess some 5–8 cm freedom of movement downwards so that they can also function where the ground level in the field is somewhat lower. This working position must be set up on the field by either lengthening or shortening of the top link.

There are no disadvantageous consequences, should it be necessary in this regard to slightly tilt the drill forwards or backwards. Tilting the drill forwards or backwards has no effect on the coulter pressure because on the AMAZONE-drills the coulter pressure is independent of the coulter position.

The operating intensity of the harrow tine elements or the pressure which they exert on the soil, must be set according to the soil conditions by means of the central coulter pressure adjustment (Fig. 44/1). The setting is to be such that no ridges are to be found behind the harrow.

For road transport it is necessary to slacken off the outer harrow elements and to push them inwards towards the square profile tube so that the maximum permissible transport width is not exceeded. The crank handle can be used for slackening the ring bolt (Fig. 44/2).

12.2 Hydraulic pressure control of the extra coverage following harrow

With very changeable soil conditions it is practical – together with coulter pressure – to also change the pressure of the extra coverage following harrow (see para. 14).

With the same hydraulic control valve simultaneously with the hydraulic coulter pressure adjustment also the following harrow tine pressure can be adjusted. For this purpose a hydraulic ram (Fig. 45/1) is mounted to the extra coverage following harrow. Then the pressure will be increased on the harrow at the same time as on the coulters.

For the pressure control one single acting control valve at the tractor is necessary. By inserting of two pins (Fig. 45/2) into the pre-selection hole-plate a maximum and a minimum harrow pressure is pre-selected.

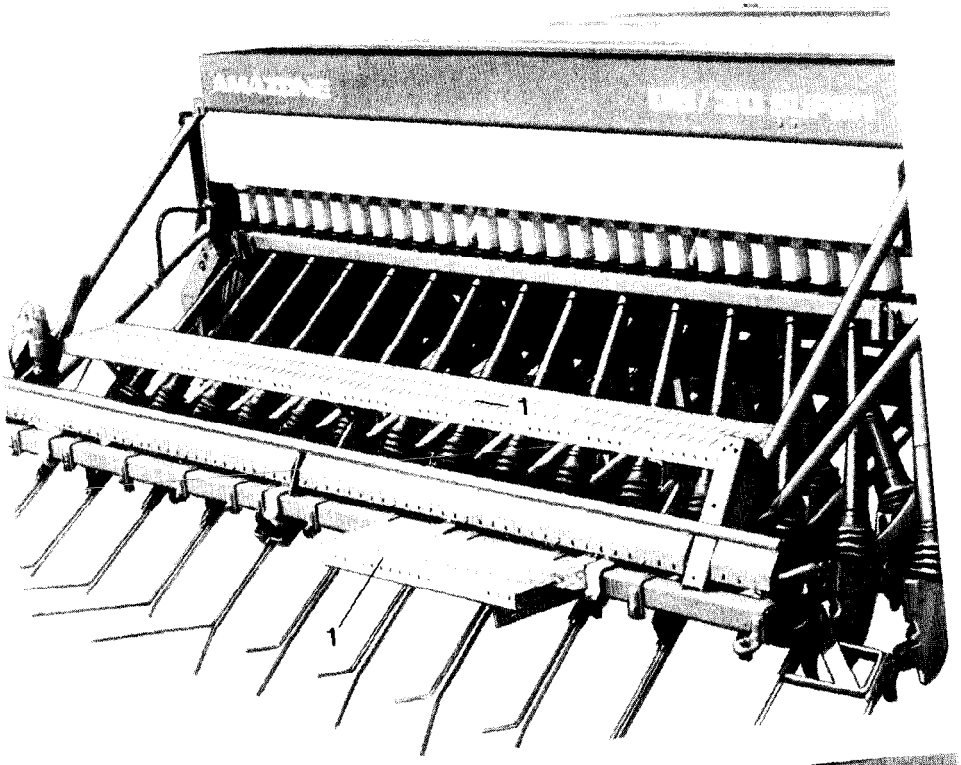


Fig. 46

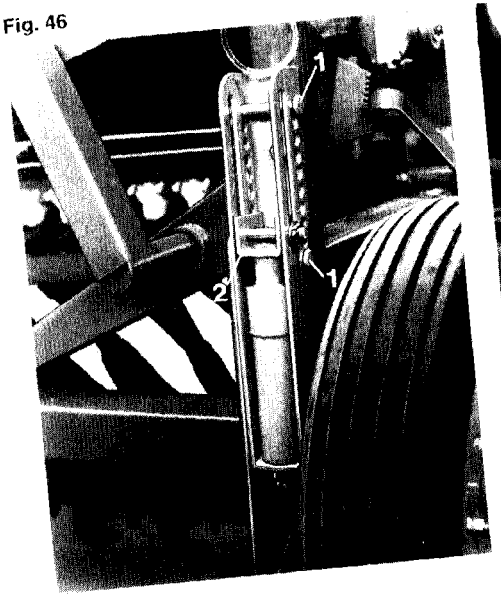


Fig. 47

Fig. 47a

13 Loading step

For easier access to the seed box for filling this loading step (Fig. 46/1) may be attached to an existing extra coverage following harrow.

NOTE:

The loading step may only be used for the re-filling of the machine. Never allow any persons to stay on it during the sowing operation.

14 Hydraulic central coulter pressure adjustment

The seed drill AMAZONE D8 SUPER may be retrofitted with the hydraulic central coulter pressure adjustment. For operating it, a single acting control valve at the tractor is necessary.

By placing two pins (Fig. 47/1) into the ram guide brackets a maximum and minimum coulter pressure may be pre-selected. If the hydraulic ram is not put under pressure it rests on the stop (Fig. 47/2) at the lower pin. When sowing on the field at patches with heavier soils the hydraulic ram will be put under pressure and thus the coulter pressure is increased. The stop then rests at the upper pin. After the heavy soil patch has been passed, the pressure at the hydraulic ram is reduced and it returns automatically to the lower pre-selected coulter pressure. The minimum coulter pressure is achieved by placing the lower pin into the lower most hole.

The depth control of the outer right and left hand coulters is set at the hexagon bolt (Fig. 47a/1). The more this bolt is driven inwards, the shallower the outer coulter runs through the soil. With the lock nut (Fig. 47a/2) any pre-selected position of the hexagon bolt is fixed. At the outer coulters a change of the pressure when driving over patches of heavy soil is not necessary as the planting depth of the outer coulters remains constant once set.

For checking of the planting depth it is required to drive about 30 metres on the field at that speed which will be used for sowing lateron. Thereafter check the planting depth. If the seed has been placed too deeply, the coulter pressure should be reduced or vice versa. Without additional coulter pressure a too deep a planting depth may occur on extremely light soils already by the own weight of the coulters. In such a case, the "K"-coulters should under all circumstances be equipped with the band sowing shoe in conjunction with the extra coverage following harrow or with the depth limiters (see options). With the hydraulic central coulter pressure adjustment it is also possible to operate simultaneously on the same circuit the hydraulic remote seed rate adjustment and the hydraulic extra coverage following harrow pressure adjustment.

The result of this hydraulic control circuit is, that whenever on heavier soils the coulter pressure is increased more seed is being sown and the extra coverage following harrow covers those patches with heavier soil by increased following harrow pressure more evenly with soil.

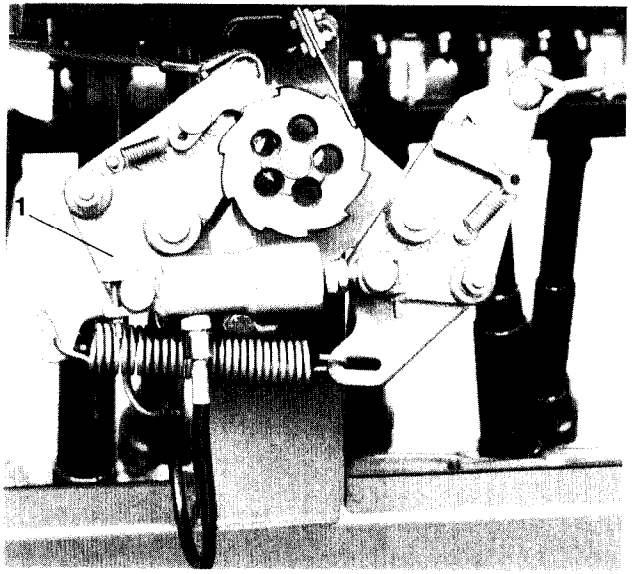


Fig. 48

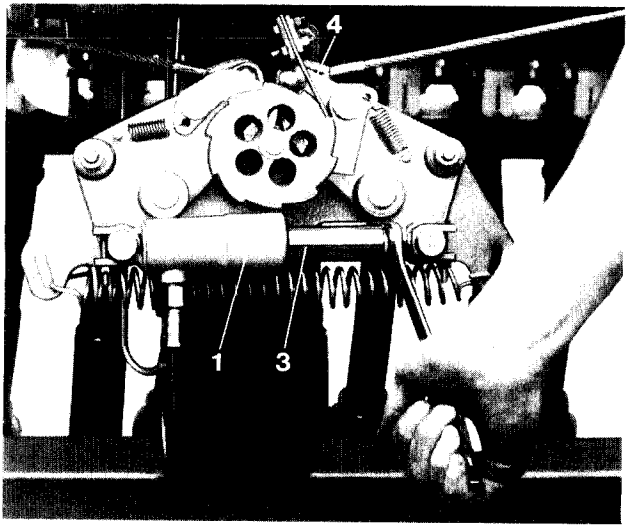


Fig. 49

15 Hydraulic marker changeover

The automatic marker changeover (Fig. 48/1) may also be actuated hydraulically. The hydraulic ram of the automatic marker changeover is connected with a single acting control valve of the tractor.

For changing over the markers at the headlands, the control valve of the tractor is set to "lifting position". Both markers then are at the turning operation lifted off the ground. After the turning at the headlands the control valve is pushed to "lowering" so that thereafter the correct marker disc is automatically lowered.

15.1 Setting of the marker's automatic system

On delivery the automatic marker is adjusted for correct tripping. After the run-in period of the new machine, it may become necessary to re-adjust the automatic marker slightly if the tripping is not regular and proper. Therefore the hydraulic ram (Fig. 49/1) is put under pressure. Loosen the lock nut (Fig. 49/2) of the yoke bolt and turn the piston (Fig. 49/3) of the hydraulic ram with a fork spanner until the leaf spring (Fig. 49/4) rests onto the sprocket of the automatic marker and until a play of 1–2 mm between the leaf spring and the tooth is set.

Now check by trial lifting whether the automatic marker changeover is correctly set. If everything functions allright, please do not forget to tighten the counter-nut on the yoke of the hydraulic ram again firmly.

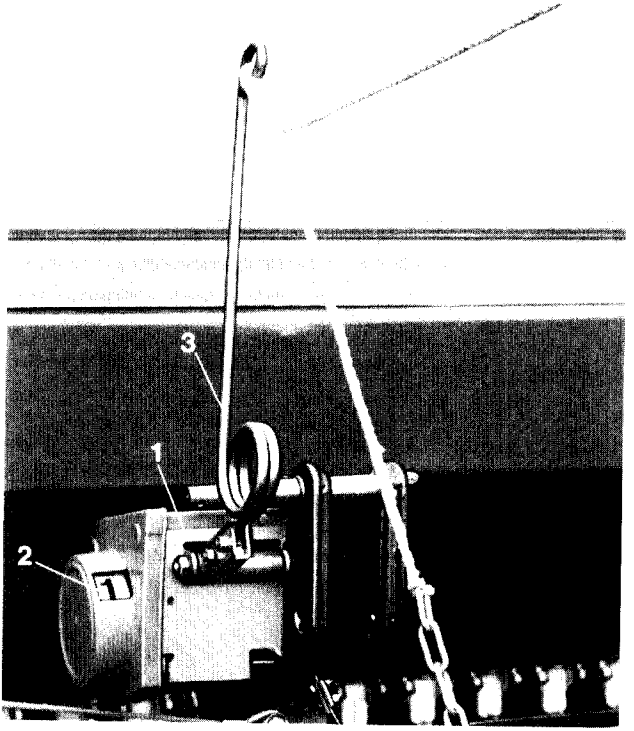


Fig. 50

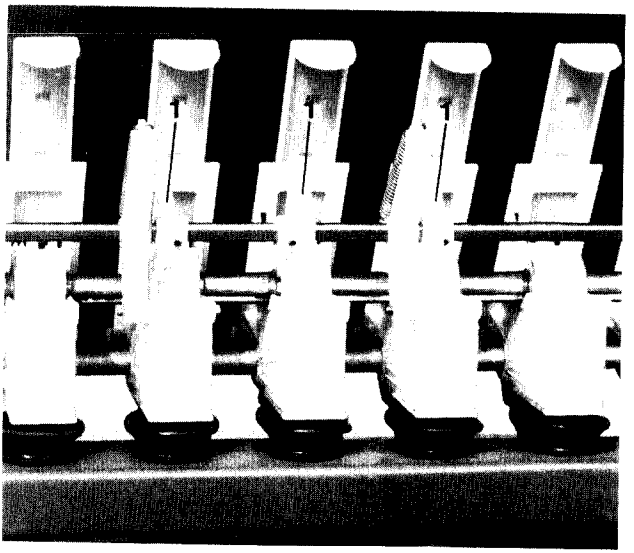


Fig. 51

16 Metering wheel tramlining control with wrap spring coupling

With the aid of the tramlining unit on the seed drill it is possible to create at certain distances so-called "tramlines" by which some rows behind the tractor's wheel marks are not sown. The spacings depend on the working width of the following operations (fertilizer spreader, sprayer etc.). In para. 17 you may find some examples.

For creating tramlines it is possible to close down simultaneously up to three, in exceptional cases up to four or five metering wheels (Fig. 51/1) in the desired switching rhythm.

A tramline indicator wheel (Fig. 50/2) at the switch box (Fig. 50/1) is visible from the tractor seat to show which position the automatic tramlining kit is actually on. As soon as the indicator number "0" can be seen, the drive sprockets and the metering wheels (Fig. 51/1) come to a standstill. Due to this interrupted flow of seed a tramline is created.

When beginning the operation, the tramline unit has to be shifted by pulling by hand the overriding lever (Fig. 50/3) until the correct number (Fig. 50/2) can be seen in the switch box. Further details you may see in para. 17 explaining some examples of the creation of tramlines. Also note when beginning that the marker changeover has been set correctly and that the track markers are lowered on the correct side.

A dividor wheel (Fig. 59/1) inside the switch box controls the rows, in which the tramlines are being created. For the 2-, 3-, 4-, and 6-fold switching the dividor wheel is the same. For conversion of the switch box to another switching rhythm simply place the trip rollers (Fig. 59/2) as described at the end of this para. into other holes and add, if necessary. For all further switching rhythms corresponding dividor wheels can be supplied.

The following table indicates which dividor wheel corresponds to which seed drill bout width and to which tramline spacing:

Dividor wheel for	Bout width	Spacing of the tramlines
2-fold-rhythm	2.50 m 3.00 m	10 m 12 m
3-fold-rhythm	3.00 m	9 m
4-fold-rhythm	2.50 m 3.00 m	10 m 12 m
5-fold-rhythm	3.00 m	15 m
6-fold-rhythm	2.50 m 3.00 m	15 m 18 m
7-fold-rhythm	3.00 m	21 m
8-fold-rhythm	3.00 m	24 m
9-fold-rhythm	3.00 m	27 m

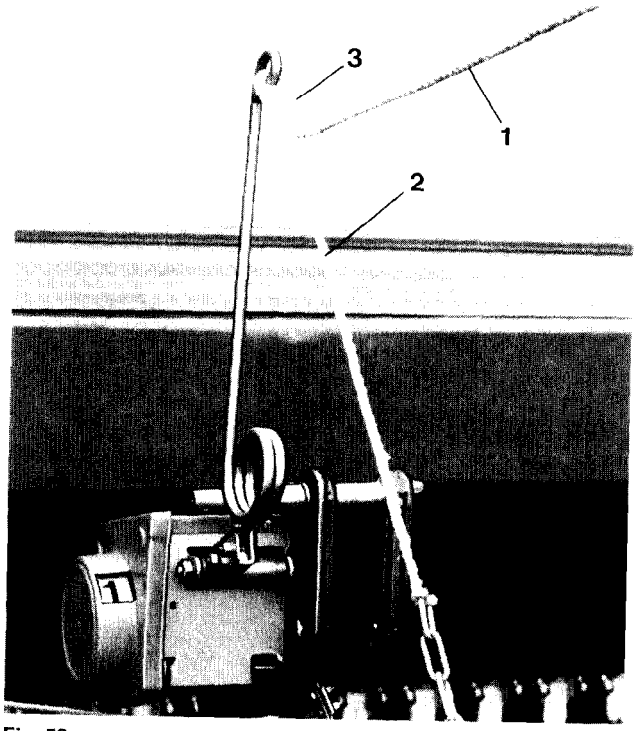


Fig. 52

16.1 Semi-automatic control

The semi-automatic metering wheel tramlining control is actuated by a rope (Fig. 52/1). This rope can be pulled at each turn from the tractor seat to trigger off the tramlining switching.

16.2 Fully automatic control

The fully automatic tramlining control can be achieved if the free end of the rope (Fig. 52/2) is fixed beneath the tractor to a suitable place at a firm point.

When the machine is now lifted by the tractor's three point linkage automatically the rope is tensioned so that the tramlining changeover is triggered off. The free end of the rope is brought to the tractor seat and can be used for correction whenever it is necessary to override any tramline switchings.

For automatic operation the length of the rope should be adjusted in such a way that, whenever the machine is fully lifted, the rope is tensioned so far at the setting bracket (Fig. 52/3) that it triggers off the switching action.

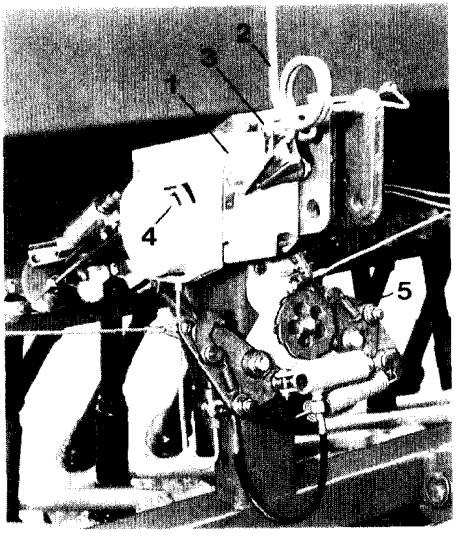


Fig. 53

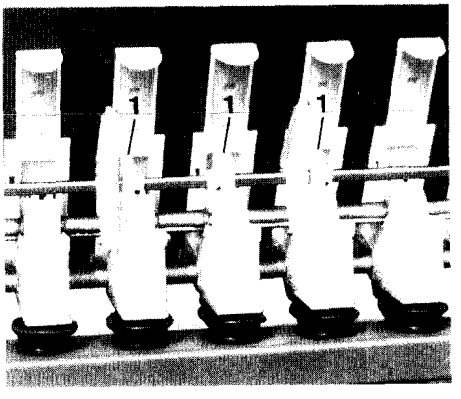


Fig. 54

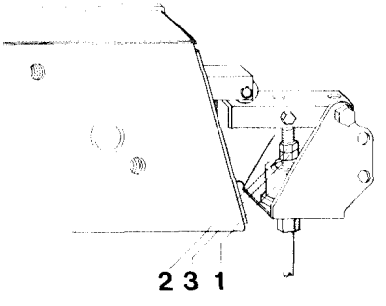


Fig. 55

16.3 Hydraulic metering wheel tramlining control with wrap spring coupling

The hydraulic operated tramlining unit (Fig. 53/1) of the AMAZONE seed drill D8 SUPER is coupled to the hydraulic marker changeover (Fig. 53/5) (if already existing) so that, when changing the boutmarks with a single acting control valve also the tramlining unit is switched one section on.

A tramline indicator wheel (Fig. 53/4) is visible from the tractor seat to show which position the automatic tramlining kit is actually on. As soon as the indicator number "0" can be seen, the drive sprockets (Fig. 54/1) come to a standstill and the metering wheels discontinue to run so that they cannot deliver any further seed, in order to create tramlines. A shifting sprocket inside of the switch box (Fig. 53/1) controls the bout in which the tramlines are created.

When beginning with the operation the tramline unit has to be shifted by pulling by hand the overriding lever (Fig. 53/2) until the correct number (Fig. 53/4) can be seen in the switch box. Further details you may see in para. 17 explaining some examples of the creating of tramlines. Also note when beginning, that the hydraulic marker changeover (Fig. 53/5) has been set correctly and that the wheel markers are lowered on the correct side.

Should it be desired to discontinue the tramlines but still create bout marks, the tramlining unit has to be overriden by moving the clamping bolt (Fig. 53/3) so far downwards until any movement of the shifting lever becomes impossible.

NOTE:

Now the figure (Fig. 53/4) in the switch box **must not show "0",** as otherwise continuously tramlines would be created.

The hydraulic metering wheel tramlining control requires only a single acting control valve at the tractor. Please check the hydraulic circuit for any leaks.

Should the hydraulic ram (Fig. 55/1) of the switch box fail to trip over, the following adjustment should be performed on the expanded ram.

- Loosen lock nut (Fig. 55/2).
- Turn nut (Fig. 55/3) so far to the left until it can be heared that the trip inside the switch box has changed over, thereafter turn the nut two further turns and fix it in that position by tightening the lock nut against it.
- Tighten lock nut (Fig. 55/2) firmly.

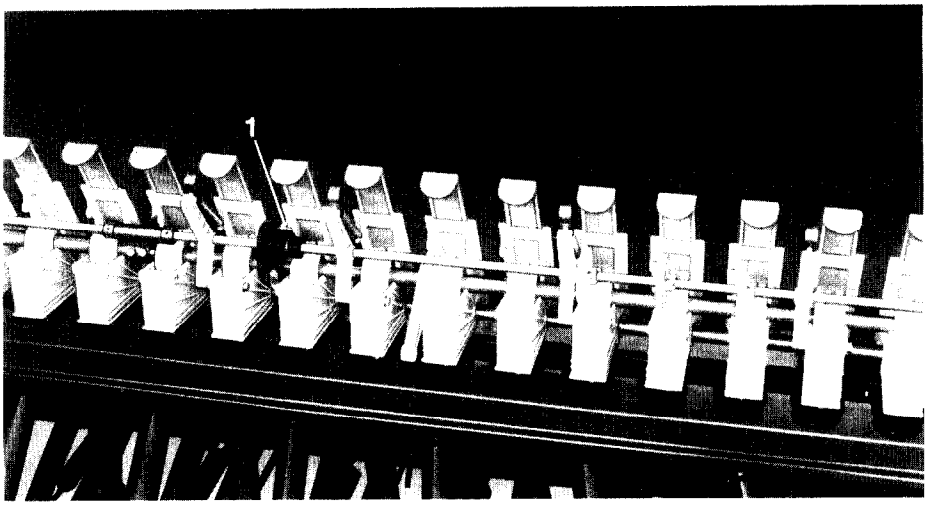


Fig. 56

16.4 Checking the function of the metering wheel tramlining control

Actuate the tramlining control several times to check whether in position "0" the coupling lever (Fig. 56/1) holds back the wrap spring coupling so that the drive of the tramlining metering wheels is interrupted. After switching from "0" to "1" the coupling lever of the wrap spring coupling is withdrawn so that the tramline metering wheels are driven by the drive sprockets on the counter shaft.

If your seed drill has not been in use for a longer period, please check, whether the tramline metering wheels can be moved freely on the shaft. Some residue of seed dressings may cause a firm seating of the tramline metering wheels on the metering shaft. In such a case the tramlining unit is no longer functioning properly.

Disengageable tramline metering wheels which have, due to seed dressing residue, got stuck on the metering shaft can be freed by turning these metering wheels by hand. Never use oil as this would very quickly soak up the seed dressing powder and cause a very quick blockage of the metering wheels.

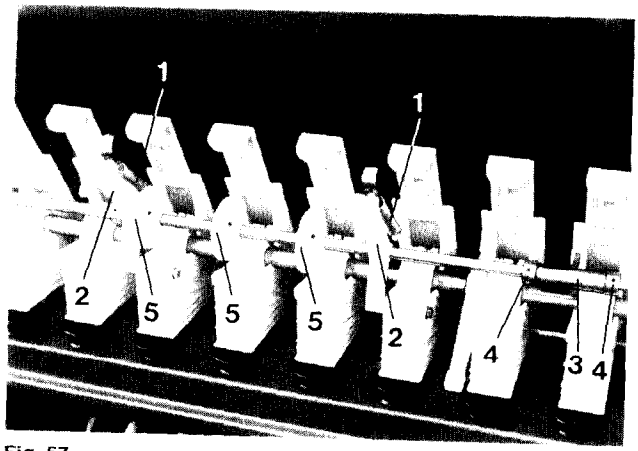


Fig. 57

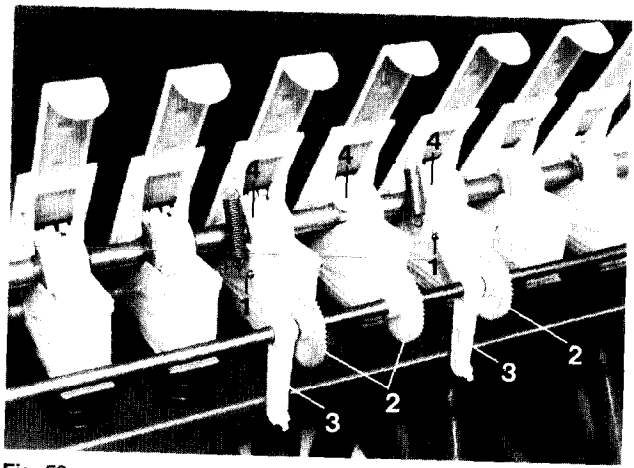


Fig. 58

16.5 Matching of the tramline width to another tractor track width

Should the purchase of a new tractor make it necessary to change the tractor track width in the tramline system, proceed as follows:

- Loosen pulling springs (Fig. 57/1) between the metering wheel housings and the swivel bearings (Fig. 57/2) and fold backwards the counter shaft (Fig. 58).
- One mounting (Fig. 57/3), which secures the counter shaft from axial movement, hooks into a hole at the metering wheel housing. This fixing has to be pulled out of the mounting hole at the metering wheel housing for folding the counter shaft backwards and it must be fixed in the same way again after re-fitting in the same or in the hole of an adjacent metering wheel housing. The fixing (Fig. 57/3) is secured from axial movement on the counter shaft by set rings (Fig. 57/4).
- Loosen the hexagon bolts (Fig. 58/1), with which the swivel bearings to the right and to the left next to the tramlining metering wheel housings are fixed.
- Slide the swivel bearings (Fig. 58/3) and the PVC-drive sprocket (Fig. 58/2) to the desired position on the counter shaft.
- Loosen the fixing bolts (Fig. 58/4) of the new tramlining metering wheels until these can be turned freely.
- Now affix the swivel bearings (Fig. 58/3) to the right and the left next to the tramlining metering wheel housings and hang in the pulling springs between the swivel bearings and the metering wheel housings.
- Let the keys of the PVC-drive sprocket and those of the fine seed metering wheel mash and fix the drive sprocket onto the counter shaft.
- Now connect the formerly used tramlining fine seed metering wheels with the metering wheel shaft again. The threaded pin should be driven into the fine seed metering wheel until it is engaged with a little play. Never tighten the threaded pins too much as this will cause a buckling of the metering wheels.

16.6 Sowing with the two-fold tramlining control

If started on the right hand side of the field:

The fitting of the PVC-drive sprocket (Fig. 57/5) is done as described under para. 16.5. Now the counter shaft should be equipped with PVC-drive sprockets only on the right side of the machine. The drive sprockets are to be mounted to the counter shaft in such a way, that the distance of the tramlining metering wheels is equivalent to half a tractor's track width if measured from the right hand outer edge of the machine. If also a pre-emergence marker is used, the left hand marker disc should be removed.

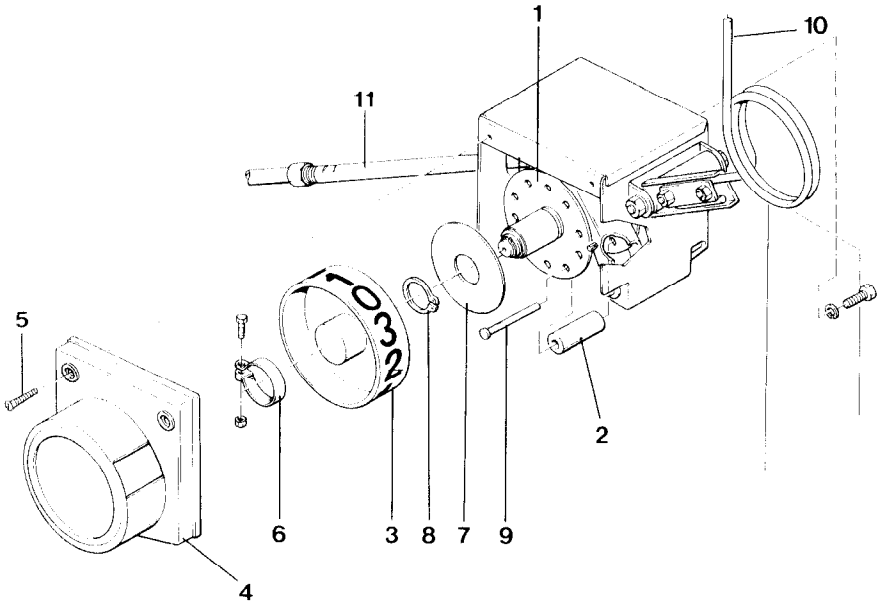


Fig. 59

16.7 Converting of the control box to another tramline frequency

The dividor wheel (Fig. 59/1) is the same for the 2-, 3-, 4- and 6-fold sequence. Should the order of the sequences be changed, only the shift rollers (Fig. 59/2) at the dividor wheel (Fig. 59/1) need to be re-positioned or added.

For the 5-, 7-, 8- and 9-fold sequence it is necessary to exchange the existing dividor wheel (Fig. 59/1) against a corresponding dividor wheel.

When changing the control box to another sequence, it is necessary to also put on the correct self-adhesive number strips on the counter wheel (Fig. 59/3).

Changing from a 2-, 3-, 4- or 6-fold-sequence to another sequence within this group:

It is only necessary to change the position of the switch rollers (Fig. 59/2) or to add them. This change is also possible if the switch box still is mounted to the seed drill:

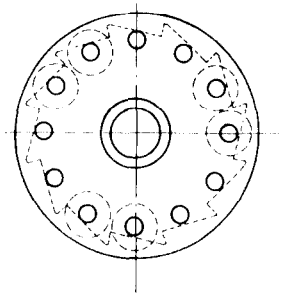
- Remove protective cover (Fig. 59/4) after taking off two of the screws (Fig. 59/5).
- Remove clamp (Fig. 59/6) and pull off together with the counter wheel.
- Remove the securing disc (Fig. 59/7) after removing the circlip 24x1.2 (Fig. 59/8).
- Now the position of the free accessible shifting rollers (Fig. 59/2) may be changed according to Fig. 60 after having pulled out the pins (Fig. 59/9).

The assembly of the switch-box is done in the opposite order:

- Mount the securing disc (Fig. 59/2) and circlip (Fig. 59/8).
- Apply new number tape (Fig. 61) to the counter wheel (Fig. 59/3) and mount it with the aid of the clamp (Fig. 59/6) onto the dividor wheel.
- Now shift a few times the operating lever (Fig. 59/10) at the switch box until the clamping tube (Fig. 59/11) is pulled by a switch roller (Fig. 59/2) and held in that position. The protective cover (Fig. 59/4) is held to the switch box and the number wheel (Fig. 59/3) is turned until the number "0" shows up in the window of the protective cover.

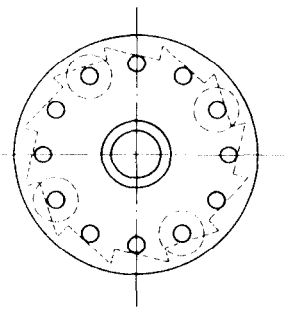
At the two-fold sequence again a "0" must show up due to the two consecutive following switch rollers, and the clamping tube (Fig. 59/11) must stay in the pulled position due to the second switching roller:

- Fit the counter wheel (Fig. 59/3) with the clamp (Fig. 59/6) and the protective cover (Fig. 59/4).
- Switch the dividor wheel by the pulling lever (Fig. 59/10) a few times until the counter wheel (Fig. 59/3) has at least made three times a complete turn and check whether the switch box operates properly, i. e. whether in every "0"-position the clamping tube (Fig. 59/11) is being pulled properly.



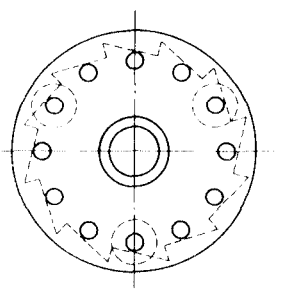
Dividor wheel for 2-fold sequence:
Division 12, 6 switching rollers

Dividor wheel cpl.	Order-No. 30574
Dividor wheel	Order-No. 30734
Switching roller	Order-No. 30794
Pin	Order-No. 30804
Collar bush	Order-No. 34931



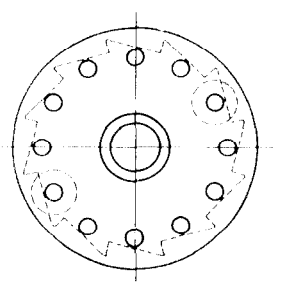
Dividor wheel for 3-fold sequence:
Division 12, 4 switching rollers

Dividor wheel cpl.	Order-No. 30584
Dividor wheel	Order-No. 30734



Dividor wheel for 4-fold sequence:
Division 12, 3 switching rollers

Dividor wheel cpl.	Order-No. 30594
Dividor wheel	Order-No. 30734



Dividor wheel for 6-fold sequence:
Division 12, 2 switching rollers

Dividor wheel cpl.	Order-No. 30614
Dividor wheel	Order-No. 30734

Fig. 60

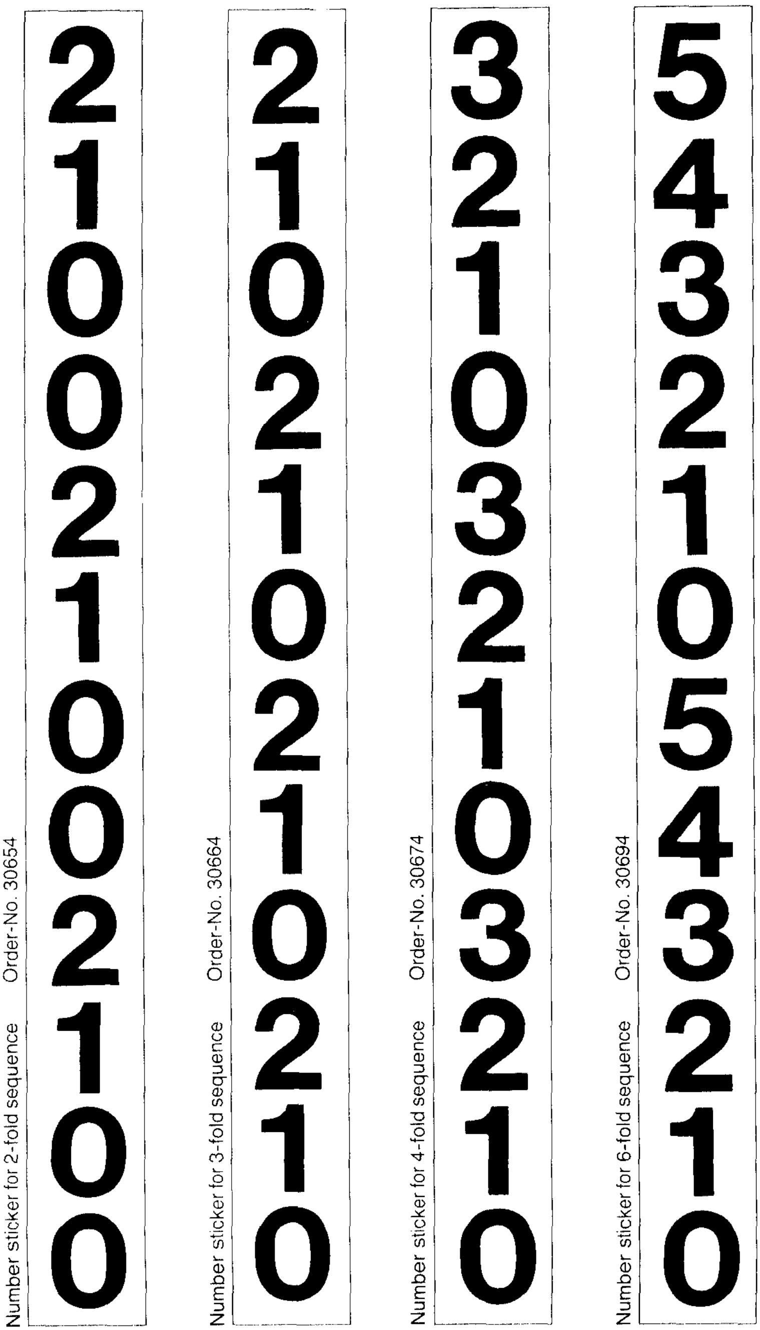
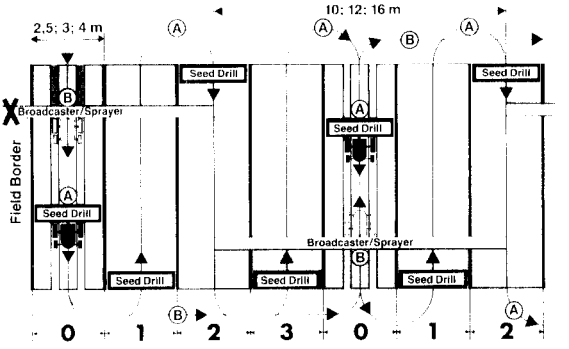

Number sticker for 2-fold sequence Order-No. 30654
2 1 0 0 2 1 0 0 2 1 0 0
Number sticker for 3-fold sequence Order-No. 30664
2 1 0 2 1 0 2 1 0 2 1 0
Number sticker for 4-fold sequence Order-No. 30674
3 2 1 0 3 2 1 0 3 2 1 0
Number sticker for 6-fold sequence Order-No. 30694
5 4 3 2 1 0 5 4 3 2 1 0

Fig. 61

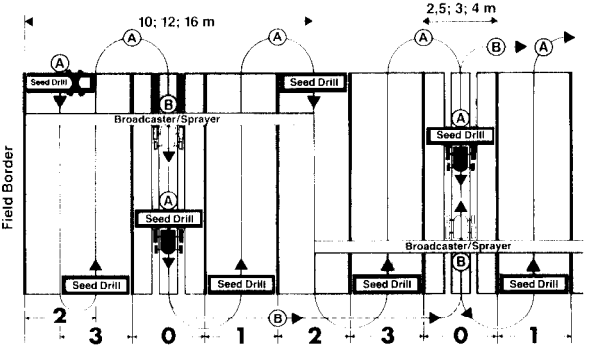
17 Examples for tramline bout widths

4-sectioned shifting, i. e. 1 time with tramliner, checking No. ⓪
3 times without tramline, checking No. ❶, ❷, ❸

Seed Drill:	2.5 m	3 m	4 m	Bout width
Fertilizer spreader and sprayer:	10 m	12 m	16 m	Bout width



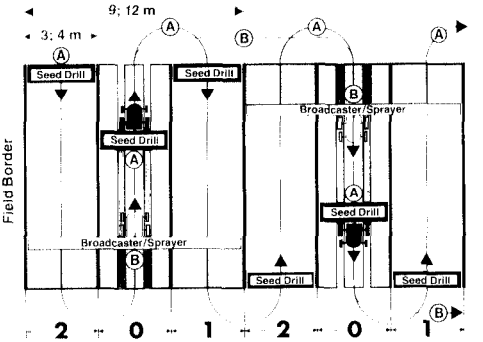
At the boundary/hedge: **Seed drill sows with full bout width**
Seed drill AMAZONE D 8
Fertilizer broadcaster spreads to one side only
Fertilizer broadcaster AMAZONE ZA-F with boundary spread device
Fertilizer broadcaster AMAZONE ZA-U with boundary spread device
Sprayer (one boom half folded and stopped)
Field sprayers AMAZONE S and US



At the boundary/hedge: **Half of bout width with closed shutter slides**
Seed drill AMAZONE D 8
Fertilizer broadcaster spreads with full working width
Fertilizer broadcaster AMAZONE ZA-F
Fertilizer broadcaster AMAZONE ZA-U with border spread disc
Pneumatic fertilizer broadcaster AMAZONE JET
Sprayer works with full boom width
Fieldsprayers AMAZONE S and US

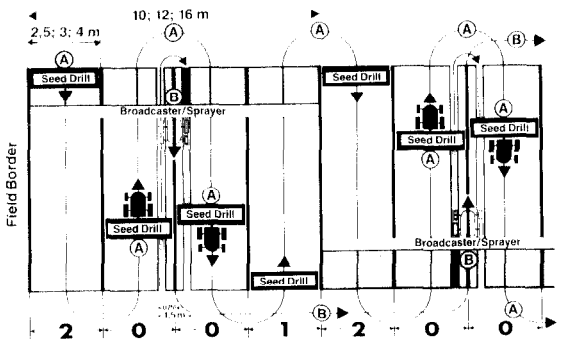
3-sectioned shifting, i.e. 1 time with tramline, checking No. ⓪
2 times without tramlines, checking No. ❶, ❷

Seed Drill:	3 m	4 m	Bout width
Fertilizer spreader and sprayer:	9 m	12 m	Bout width



2-sectioned shifting, i.e. 2 times with tramline, checking No. ⓪, ⓪
2 times without tramline, checking No ❶, ❷

Seed Drill:	2,5 m	3 m	4 m	Bout width
Fertilizer spreader and sprayer:	10 m	12 m	16 m	Bout width



Shift-sprockets for other shifting sequences (5-, 6-, 7-, 8-, 9 sectioned) are also available.

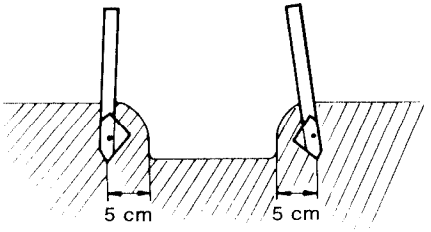


Fig. 62

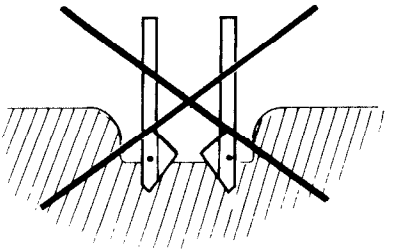


Fig. 63

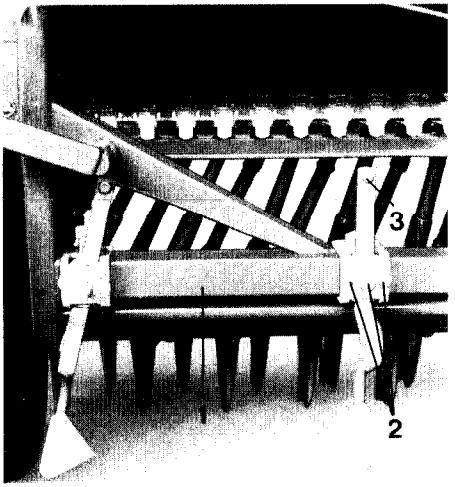


Fig. 64

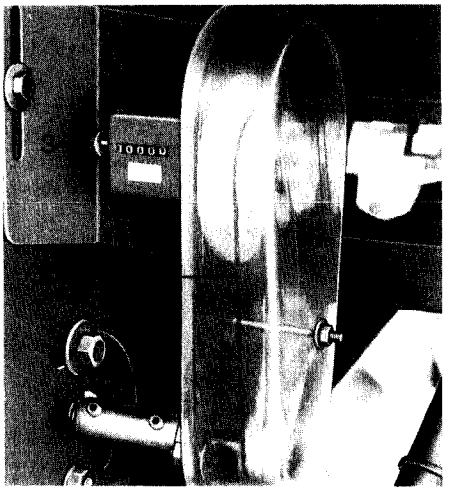


Fig. 65

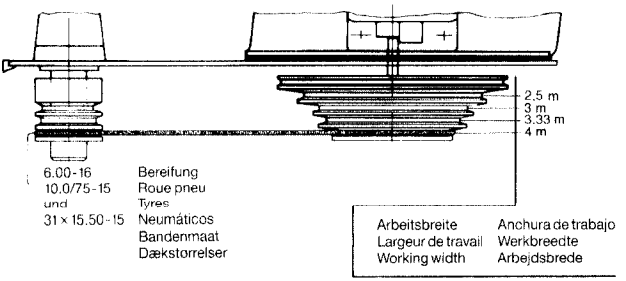


Fig. 66

18 Tractor wheelmark eradicators

The purpose of the AMAZONE wheelmark eradicators is less for loosening of the tractor wheelmarks but mainly for covering and levelling of the tractor wheelmarks.

As shown in Fig. 62 the wheelmark eradicators are to be mounted so that they work in the loose soil approx. 5 cm right and left of the tractor wheelmark. This provides for the most effective levelling of wheelmarks obtaining adequate loose soil for covering the seed and reducing the risk of damage to the track looseners due to stones being present in the compacted wheelmark.

Never mount the wheelmark eradicators as shown in Fig. 63.

The tractor wheelmark eradicators are to be fixed to the main square tubular frame section (Fig. 64/1) of the seed drill. The tractor wheelmark eradicator tines may be mounted all across the main frame member. Additionally, the swivelable mounting enables any desired point to be reached and setting even right next to the seed drill wheels.

After setting, the prismatic clamping piece of the marker mounting should be fixed with the three hexagon bolts (Fig. 64/2). The securing bolt (Fig. 64/3) prevents the possible loss of the wheelmark eradicator tines if the fixing bolt (Fig. 64/2) becomes loose as due to the securing bolt (Fig. 64/3) these cannot fall through the fixing bracket.

19 Hectare meter

The hectare meter (Fig. 65/4) is mounted on the inside of the right side panel below the drill's seed box. For its function it is important that the chain from the drill wheel to the gearbox is correctly tensioned with the tensioning plate as this chain provides the drive to the counter.

When retrospectively fitting the hectare meter, ensure that the round section belt (Fig. 65/2) is fitted according to the sticker (Fig. 66) which has been applied to the transparent cover (Fig. 65/1).

By turning at the knob (Fig. 65/3) at the left side of the counter (Fig. 65/4) the hectare meter is set on "0".

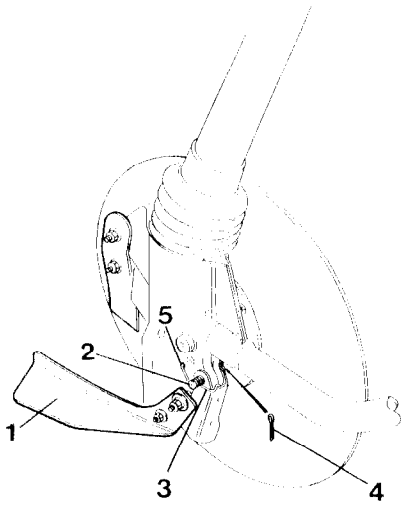


Fig. 67

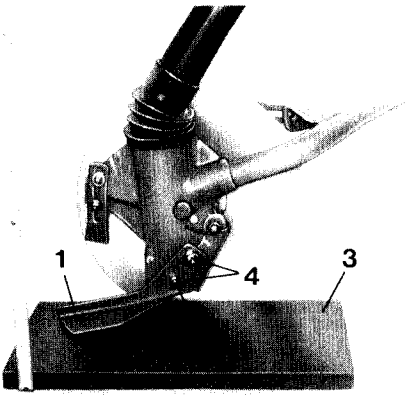


Fig. 68

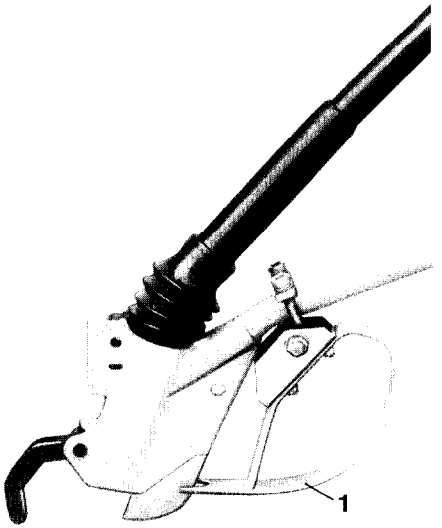


Fig. 69

20 Sowing depth limiter

20.1 *Sowing depth limiter for roll disc coulter*

When using roll disc coulters with depth limiters (Fig. 67/1) the desired planting depth is always maintained precisely. Therefore the roll disc coulters of the AMAZONE D8 SUPER are **standardly** equipped with depth limiters. The depth limiters are fixed to the roll disc coulter body by a rivet (Fig. 67/2) with side spring (Fig. 67/3) and secured with a cotter pin (Fig. 67/4). The long spring arm (Fig. 67/5) is fixed in the designed hole at the coulter body and the short spring arm is clamped behind the depth limiter according Fig. 67. This way, the depth limiters are permanently kept in working position.

To obtain a sowing depth on medium soil types of approx. 2.5 cm – i. e. with grain sowing – the roll coulter disc is placed on level ground and an approx. 1 cm thick plank (Fig. 68/3) is laid beneath a depth limiter (Fig. 68/1). In this position the bolts with nuts (Fig. 68/4) which connect the skid with upper part of the depth limiters are tightened. The depth limiter is standardly adjusted to a sowing depth of 2.5 cm.

To achieve a slightly greater sowing depth it is normally sufficient to increase the coulter pressure only. On heavy soils it can, however, be necessary – when setting up the depth limiters – to use a thicker plank, e. g. one with approx. 2 cm thickness.

If on the other hand, a lesser sowing depth is required, i. e. on extremely light soils, the skid and the roll coulter disc must be set to uniform height. In extreme cases, it is even possible for the skid to be lower than the roll coulter disc. In order to attain the required position place the M 6 hex. bolt (Fig. 68/5) in the second hole on the top of the depth limiter.

On sticky soils which tends to build up on the front surface of the disc, it is advisable to use the depth limiters and operate with a higher coulter pressure. Then – independent whether the soil sticks to the front surface of the disc or falls off – the sowing depth will always remain constant.

Especially with very changeable soil conditions, the use of depth limiters provides a very constant sowing depth.

20.2 Sowing depth limiter for "K"-coulters

On very light soils it is possible, that the "K"-coulters even without the use of any coulter pressure, will be running too deep through the soil. This can be avoided by the use of depth limiters (Fig. 69/1).

Also in frequent changing soil conditions, the use of depth limiters in connection with the central coulter pressure adjustment is practical.

On heavy soils the necessary sowing depth can be attained by an increased coulter pressure, whereas the coulter pressure on lighter soils will have to be reduced.

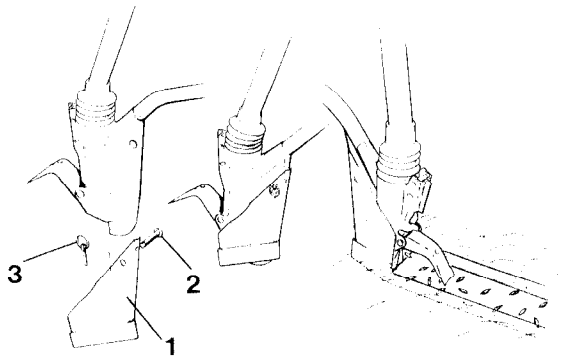


Fig. 70

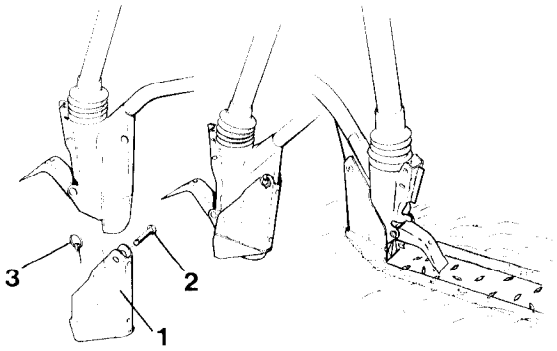


Fig. 71

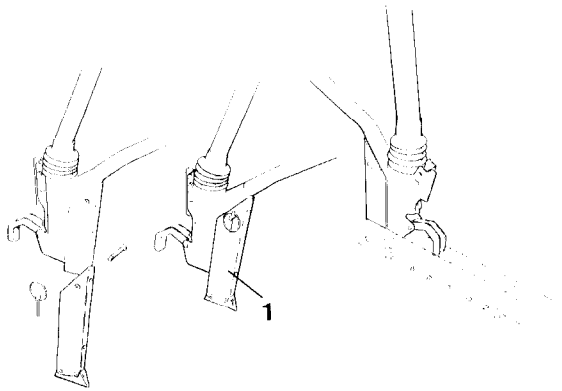


Fig. 72

21 Band-sowing shoes for "K"-coulters

Band-sowing improves the individual growing area of the grain plant compared with the ordinary row sowing. Therefore, yield increases result over row placement of grain. Comparison tests over many years with various Chambers of Agriculture, Agricultural Institutes and Consultancy Groups have shown that yield increases of between 4 and 8 % over the row placement at the same coulter spacing may result.

Precondition for the usability of the band-sowing shoe is a seed bed with fine tilth and a clean surface. In such cases, the band-sowing shoe (Fig. 70, Fig. 71/1) can be clipped on the "K"-coulters and fixed with the pin (Fig. 70, Fig. 71/2) and secured with lynch pins (Fig. 70, Fig. 71/3).

Should these preconditions not be available, i. e. on heavy, sticky soils in winter corn, the band-sowing shoes can be quickly removed again.

For the proper covering of the band-sown seed bed, the use of the extra coverage harrow (see para. 12) is imperative. The extra coverage harrow works under all conditions absolutely free of plugging up and, of course, also behind the normal "K"-coulters without band-sowing shoe.

21.1 Band-sowing shoe I

The band-sowing shoe I (Fig. 70/1) is used preferably on heavy soils. The wedge clears the band furrow of clods.

21.2 Band-sowing shoe II

The band-sowing shoe II (Fig. 71/1) works especially well on light and medium heavy soils. The tapered skid shoe compacts the sowing surface and reduces the planting depth.

22 Deep sowing shoe for "K"-coulters

For sowing beans extreme sowing depths of between 6–8 cm are necessary. The deep sowing shoe (Fig. 72/1) is clipped on to the "K"-coulter in the same manner as the band-sowing shoe (Fig. 70, Fig. 71/1) and is fixed with a pin and secured by a lynch-pin.

The deep sowing shoe has been used successfully on specially hard and cloddy soils. On moist soils with much straw and root trash it is recommended to sow only with the front row of coulters to achieve better penetration, i. e. for bean sowing. This way with the rear row of coulters soil is being thrown onto the slits created by the front row of deep sowing shoes as a coverage. In such a case the following harrow should not be used.

When sowing especially large beans the additional use of special bean metering wheels and a bean agitator shaft is recommended as these two components secure a very even and gentle sowing of the large beans.

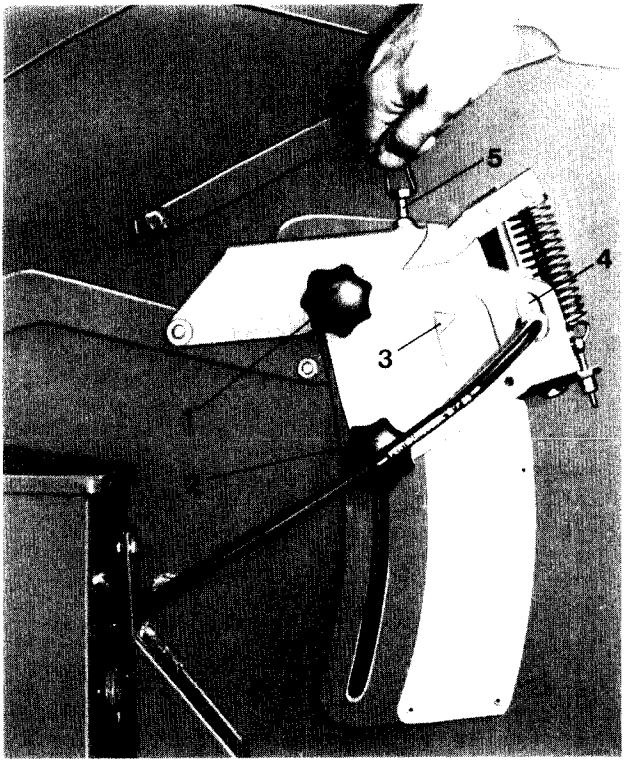


Fig. 73

23 Hydraulic remote controlled adjustment of seed rate

This can become of interest when wanting to sow in soils with frequently changing soil conditions on the same field whereby one wants to set a higher seed rate on patches of heavier soil or when wanting to sow on hill tops with a minimum of top soil, etc. With the aid of the hydraulic remote controlled adjustment of seed rate (Fig. 73) it is possible to change the seed rate within a pre-selected range from the tractor seat.

The hydraulic remote controlled adjustment of the seed rate is coupled with the coulter pressure setting. If the coulter pressure is increased, the seed rate will also be increased automatically.

After having passed the patch with heavy soil on which the higher seed rate was sown, the pressure to the hydraulic ram is taken back so that the machine returns to sowing a smaller seed rate again.

23.1 *Setting of the seed rate*

For setting of the normal seed rate both star knobs (Fig. 73/1 and Fig. 73/2) should be loosened and the pointer (Fig. 73/3) be moved to the desired gearbox setting. Hereafter tighten the star knob nuts again and perform a calibration test, as described in para. 3.7.

If simultaneously with the increase of the coulter pressure also the seed rate is to be increased, the higher seed rate should be set as follows:

Pressurize the hydraulic ram (Fig. 73/4). Screw the adjuster bolt (Fig. 73/5) into the welded-on nut. This will push the gearbox setting lever down via the lever mechanism. The adjuster screw is turned until the pointer position for the desired increased seed rate is reached on the scale. By means of a calibration test in this position – i. e. with pressurized hydr. ram – a calibration test is carried out to see if the desired higher seed rate has been attained.

If on places with heavy soil, the coulter pressure is increased but no increase in the sowing quantity is desired, the adjusting screw (Fig. 73/5) is turned fully out. Then an increase in coulter pressure will not be accompanied by an increase in seed rate.

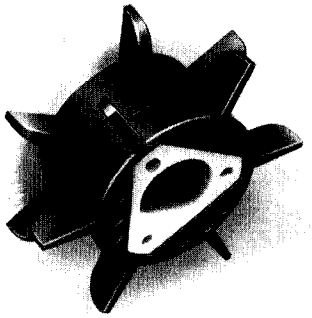


Fig. 74

Fig. 74a

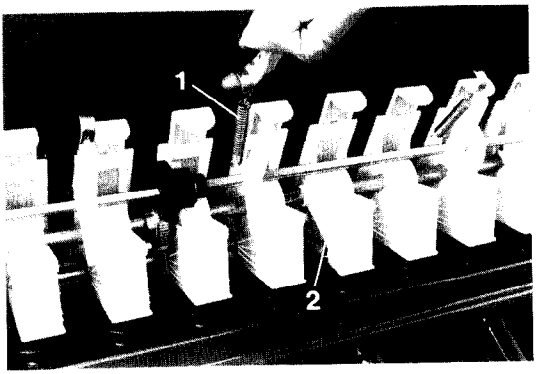


Fig. 75

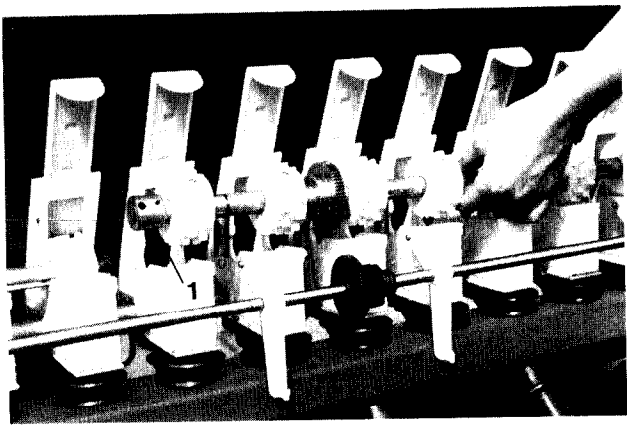


Fig. 76

24 Bean metering wheel – Bean agitator shaft

The sowing of extreme large seeds such as thick beans, may cause the standard metering wheel some trouble as the studs of the metering wheel do not reach down to the bottom flap in its position "8". This in consequence would result in an uneven flow of seed.

Instead of the standard metering wheels with fine seed metering wheels then the special bean metering wheels (Fig. 74) with elastic studs are used. These elastic studs are long enough to reach down to the bottom flap at the bottom flap position "8" and thus guarantee an even flow of seed. As the studs are elastic it is insured that the seed is not damaged (planting depth of the bean seed, please refer to para. 21).

For fitting of the bean agitator shaft the standardly supplied agitator shaft should be detached. For this remove the hexagon bolt nut on the righthand side of the seed drill. On the left hand side of the seed drill the expansion pin should be punched out of the agitator shaft and the complete bearing should be dismantled. The agitator shaft bearing in the seed box centre also should be dismantled and the standard agitator shaft can after removing the seed level indicator be taken out of the right hand side of the seed drill's seed box.

The fitting of the bean agitator shaft is done in the vice versa order.

24.1 Exchanging of the complete sowing shaft

For a quicker and easier exchange of the bean seed metering wheels it is recommendable to use a second metering shaft onto which the bean metering wheel are mounted in their required spacings. The divided metering shaft enables a quick exchange:

The counter shaft of the metering wheel tramlining kit (if existing) is folded downwards after removal of the pulling springs (Fig. 75/1).

The fixing (Fig. 75/3) which secures the coulter shaft against axial movement locks in a hole of the metering housing. This fixing is pulled out of its hole when folding downwards the counter shaft and after the metering wheel shafts have been exchanged it is returned and fixed in its original position. The fixing (Fig. 57/3) is secured against axial movement by the set rings (Fig. 57/4) on the counter shaft.

The pressure bearing (Fig. 75/2) is removed after detensioning of the pulling springs.

Slide the connecting bushings (Fig. 76/1) after removal of the hexagon bolts on the metering shaft and withdraw the metering shaft with metering wheels to the rear and exchange.

The fitting is done in the vice-versa order.

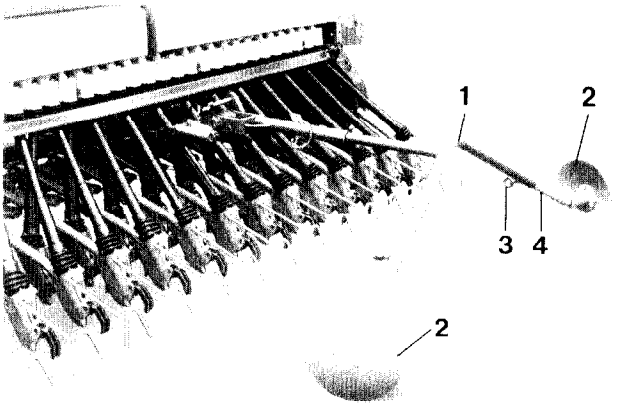


Fig. 77

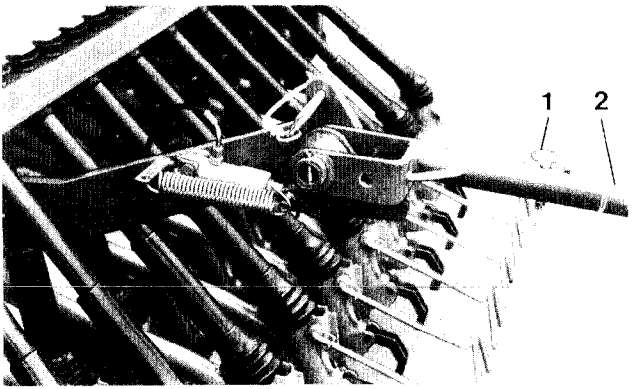


Fig. 77a

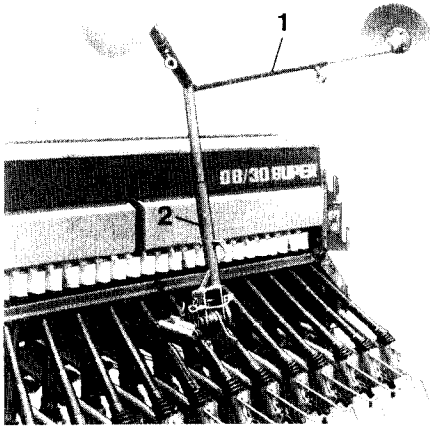


Fig. 78

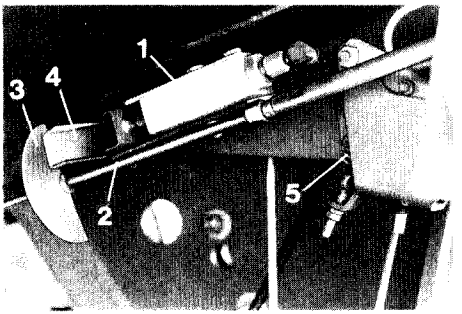


Fig. 79

25 Hydraulic remote controlled pre-emergence marker

A hydraulic pre-emergence marker (Fig. 77/1) can be combined with the automatic tramlining system. If the drive to the metering wheels is cut off for laying out tramlines, the two large pre-emergence marking discs (Fig. 77/2) are lowered, marking the wheel marks of the tractor so that it is visible before the appearance of the crop.

Following sowing it is possible to drive along the not yet visible tramlines to pre-emergence spray. The discs are raised if all metering wheels are in operation, that is to say, when no tramline is created.

The marker discs can be set to the tractor wheel base with the aid of the ring bolts (Fig. 77/3).

On lighter soils the marker discs can be set by turning the disc axle (Fig. 77/4) so that the marker disc runs approx. parallel to the seed drill wheel. On heavy soils, however, the marker discs are turned to stand on "grip" so that they work more aggressively and a clearly visible trace is left behind.

If a tramlining unit with a 2-bout ratchet is used only one marker disc has to be used. This marker disc has to be set in such a way that a tramline is created in a to and fro bout of the field (see para. 17).

The marker disc carrier (Fig. 77/1) should after removing the securing pin (Fig. 77a/1) be angled to that side on which the marker disc is mounted. Thereafter the marker carrier (Fig. 77/1) and the carrier arm (Fig. 77a/2) should be mounted in the hole plate with the fixing pin (Fig. 77a/1) and secured by the lynch pin.

In transport position the marker carriers (Fig. 78/1) and carrying arms (Fig. 78/2) should be mounted with the pin (Fig. 78/3) and secured.

When travelling on **public roads** the marker carriers (Fig. 78/1) with the marker discs should be taken off.

The pre-emergence markers are controlled by a one-way control valve (Fig. 79/1) which in return is controlled by the tramlining ratchet kit. A steering disc (Fig. 79/3) on the pulling rod (Fig. 79/2) of the switch box presses in position "0" against the control valve lever (Fig. 79/4) and the marker discs are lowered. After the further shifting of the tramlining kit into pos. "1", the steering disc (Fig. 79/3) returns and thus the pre-emergence marker discs are lifted again.

The steering disc (Fig. 79/3) is set on position "0".

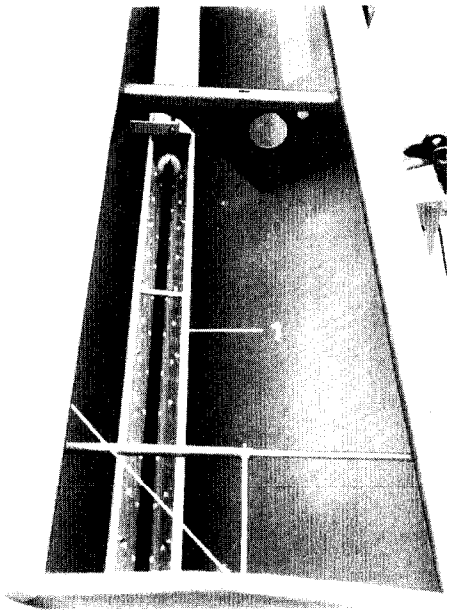


Fig. 80

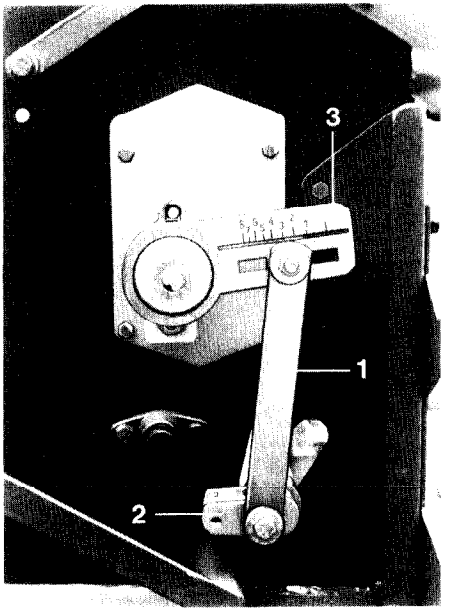


Fig. 81

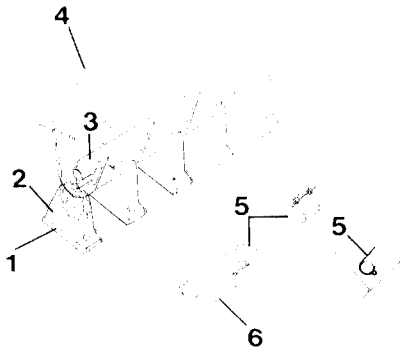


Fig. 82

geschlossen	3/4 offen	offen
closed	3/4 open	open
fermé	3/4 ouvert	ouvert

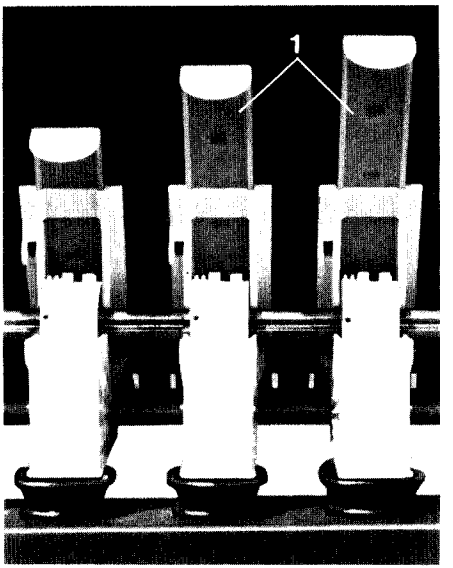


Fig. 83

26 Seed dressing attachment II

The AMAZONE seed dressing unit II (Fig. 80/1) can be used for corn dressing using non mercury and mercury containing agents. Also powder can be applied with the dressing unit II.

The unit applies exactly the required amount at a continuous even flow into the stream of corn passing to the metering wheels.

The agitation action of the fast running agitator shaft is intensified by additional stirrer clips (Fig. 82/5). Hereby the dressing agent is "rubbed on" the corn. Every agitating clip (Fig. 82/5) is secured with a split pin (Fig. 82/6).

26.1 Setting of the seed dresser

a) Removal of the shutter plates

Remove the shutters (Fig. 82/1) below the metering housings (Fig. 82/2). Shutters should not be removed from the metering housings which where not to be engaged.

b) Filling of the seed dressing unit

Here one must take care that the rubber agitator shaft (Fig. 82/3) is left in an upright or vertical position in the dressing hopper for filling. After filling close the seed dresser with the lid (Fig. 82/4).

c) Filling of seed box until upper edge of seed dresser

Fill the seed hopper with corn approximately up to the upper edge of the dresser. Filling to a higher level will leave it harder to crank the agitator shaft and may hamper the calibration test.

d) Rough setting of the seed dresser

For setting of the dressing rate the push rod (Fig. 81/1) at the crank (Fig. 81/2) should be set according to the seed dresser setting chart into the positions "0", "A", "B" or "C". In position "0" the seed dresser is out of operation. Positions "A" and "B" are medium positions whereas in position "C" the maximum possible dressing rate is applied.

e) Fine adjustment of the seed dresser

The further fine adjustment is done at the swing arm (Fig. 81/3) as follows: Adjust the seed dresser 5 markings higher than shown on the chart.

Example: Table A 3 Setting A 8
or Table A 8 Setting B 5

This overdosing is only necessary in the beginning to achieve a faster dressing.

f) Setting the shutter slides onto position "3/4"

Bring the shutter slides (Fig. 83/1) onto position "3/4" even if in the setting chart the position "open" is stated. Through the intensive agitating action of the agitator clips (Fig. 82/5) some corn may get discharged unchecked over the metering wheels.

g) Calibration test

Place the calibration tray below the metering wheels and turn the seed drill wheels to deliver seed. Hereby it can be clearly noticed how the seed becomes more intensively dressed. After dressed seed is leaving all metering wheels the setting of the seed dresser should be performed as recommended in the setting chart, i. e. reduce the metering mechanism setting by 5 markings onto the settings mentioned in the setting chart. Empty the calibration tray into the seed box and now the actual calibration test can be performed as described above.

h) Filling of the seed box

Table for Dressing unit II
Setting at crank (on metering-shaft) indicated by A–B–C.
Setting at the swingarm (on dressing-device) indicated by 1. 2. 3. 4. 5. 6. 7 and 8.

Mercury-containing dressing agents and powder	Wheat			Barley			Rye			Oats			Bulk weight
	–	–	gr/kg	–	–	gr/kg	–	–	gr/kg	–	–	gr/kg	kg/litres
Aagrano	B	1	2	B	1	2	A	8	2	B	2	3	
Aagrano Krähex	B	1	2	B	1	2	A	8	2	B	2	3	
Abavit	A	3	2	A	4	2	A	4	2	A	6	3	
Aagrano Plus K	A	8	2	A	8	2	B	1	2	B	3	3	
Ceresan Gamma M	A	6	2	A	7	2	A	7	2	B	1	3	
Ceresan Special	A	2	2	A	3	2	A	3	2	A	5	3	
Fusariol	A	8	2	A	8	2	B	1	2	B	2	3	
Germisan	A	8	2	B	1	2	B	1	2	B	3	3	
Vitavax Combi	A	8	3	A	8	2,5	–	–	–	–	–	–	
Nexion Seed-powder	B	6	2,5	B	5	2,5	B	6	2,5	B	4	2,5	0.350
Mercury-free dressing agent													
Aarbosan UT	B	4	2	B	2	2	B	3	2	A	4	2	0,520
Drawigan plus	C	3	3	C	1	3	B	8	2,5	A	5	1	0,490
Baytan Spezial	A	6	1,5	–	–	–	A	6	1,5	A	4	1,5	0,530
Baytan Universal	A	6	1,5	A	5	1,5	A	6	1,5	A	4	1,5	0,530
Aagrano 2000 UT	B	5	2	B	3	2	A	7	1	A	6	1	0,460
Panoctin TB	C	1	3	B	7	3	B	8	3	B	3	3	0,620
Derosal	B	2	1	A	6	1	A	7	1	A	6	1	0,390
Voronit Special	A	6	2	–	–	–	A	7	2	–	–	–	0,900
Sibutol	A	2	2	–	–	–	–	–	–	–	–	–	0,550

These setting rates refer to rates prescribed by the manufacturers

26.2 Emptying of the seed dresser

For emptying the seed dresser the rubber agitator shaft (Fig. 82/3) should be placed in a vertical position. Undo the eye-bolt and turn the unit upside down on its own bearings. Remaining dressing material will thereby collect in the hopper cover (Fig. 82/4) and can then, by removing the hopper cover, be easily disposed off.

26.3 Checking possibilities of the seed dresser

In order to operate the seed dresser correctly the following points should be checked:

a) Checking of the bulk weight

The volume density of non-mercury dressing can distinctly vary from the average rate shown on the chart of page 74. It is therefore advisable to check the bulk weight of the material. If it is found that there is a variation between the established weight and the weight given on the chart, then it will be necessary to correct the setting.

Weigh one litre measure of dressing agent. If you establish that the weight is for example 10 % lower than shown on the chart (page 74) then you must increase the amount of dressing agent by re-adjusting the setting by 10 % for example from "A 2" to "A 3".

A changing of the seed dresser's setting at the swing arm (Fig. 81/3) for one number, for example from "A 2" to "A 3" or from "A 8" to "B 1" results in an increase or decrease of the dressing rate by 10 %.

At the above mentioned two examples the dressing rate setting is increased by 10 %. If, on the other hand, the setting at the swing arm is set by one smaller number, the dressing rate is reduced by 10 %.

b) Calibration test of the dressing agent

The highest security for obtaining the accurate dressing rate setting can only be attained by a calibration test. Herefor the seed box should be completely emptied. By turning the calibration crank one can establish if the dressing agent is being discharged correctly through all metering housings. After this trial, one must close all shutter plates (Fig. 82/1) of the dresser's metering housings.

The same number of crank turns must be applied as when performing the corn calibration test. The dressing material will collect on the closed shutter plates (Fig. 82/1) beneath the metering housings (Fig. 82/2).

Carefully remove each shutter plate (Fig. 82/1). Care must be taken not to spill any of the dressing material. Collect the material on a sheet of paper and weigh it on a letter scale.

The corn calibration test has already given us the calibrated seed rate of corn. The required amount of dressing material resulting from the calibration test at correct settings can now easily be established:

150 g of dressing agent on 100 kgs of corn equals for example: 1.5 g dressing agent on 1 kg of corn.

If, for example, the result of the calibration test showed 5 kgs of corn, then the calibration result of dressing should show 5 x 1.5 g = 7.5 g dressing agent.

Correction of settings can easily be made at the setting of the push rod (Fig. 81/1) and the calibration test be repeated.

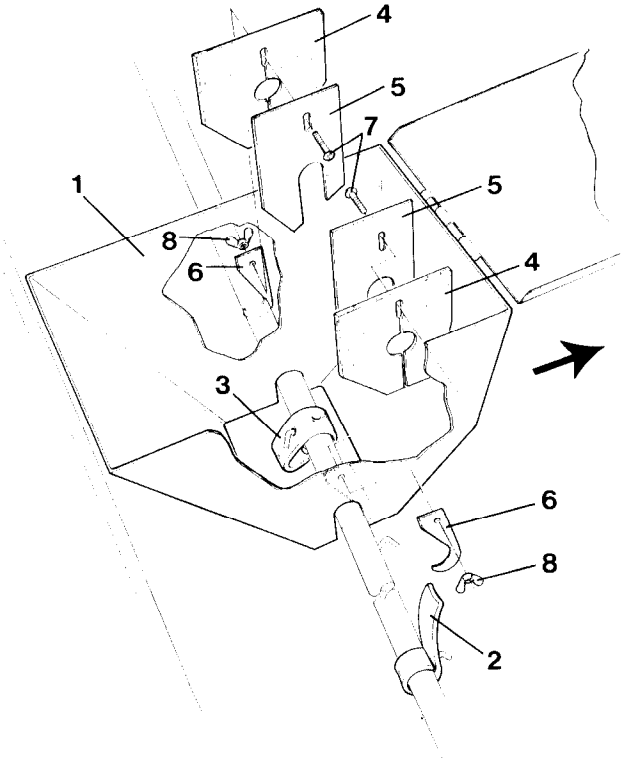


Fig. 84

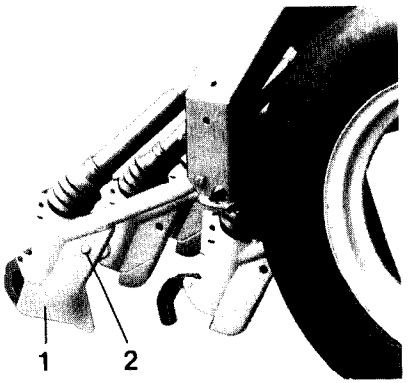


Fig. 85

27 Hopper insert boxes

The hopper insert boxes (Fig. 84/1) are designed to save costly seed in those cases where a smaller seed rate should be brought out at larger row spacings. Hereby also the remaining amount of seed which is left over after sowing can be reduced to a minimum.

The hopper insert boxes are always installed in front of those metering wheel housings which are used for sowing of fine seeds. As it is impossible to fit the hopper insert boxes to the two extreme outer metering wheel housings, it is recommended to connect the seed tubes of the outer coulters to the second inner metering wheel housing. This requires to dismantle the telescopic tubes from the mounting rail. This can be eased if the upper bellows are heated up by either hot water or hot air (i. e. a hair-dryer).

When sowing badly flowing seed it is necessary before fitting the hopper insert boxes to fit a agitator rubber according to Fig. 84/2 or Fig. 84/3 so that also the last remainders of seed are sown out of the hopper insert boxes.

Position the hopper insert boxes (Fig. 84/1) inside the seed box. Fit the rubber covering tongue (Fig. 84/4) with the cover plate (Fig. 84/5) within and the fixing plate (Fig. 84/6) from the outside of the hopper insert boxes by flat head bolts M 6 (Fig. 84/7) and wing nuts (Fig. 84/8). The fixing plate hooks under the agitator shaft.

28 Wheelmark eradicator shoe for the drill's wheels

The drill wheelmark eradicator shoe (Fig. 85/1) is clipped onto the outer coulters and fixed with pins (Fig. 85/2) and secured with lynch pins. The drill's wheel mark will be loosened and the seed be sown on a band of approximately 8 cm width. This results, if compared with the operation without wheelmark eradicator shoe, in a better germination and increased yields, same as with the use of band-sowing shoes.

These wheelmark eradicator shoes are only removed if straw or trash or extreme moist soil tend to congest the outlet of the shoe.

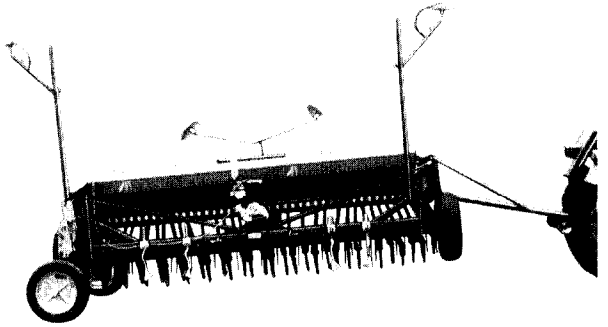


Fig. 86

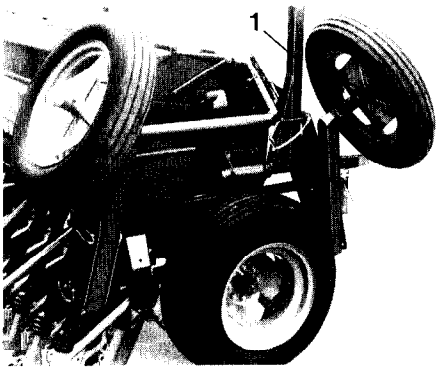


Fig. 87

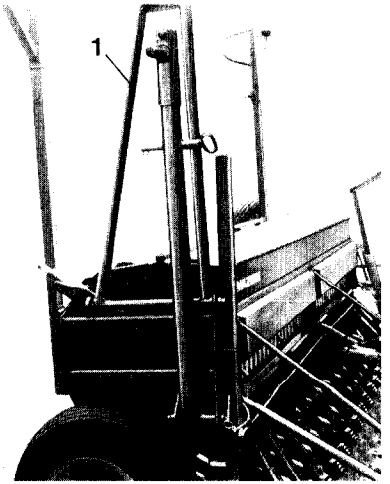


Fig. 88

29 Road transport kit for D8-40 SUPER

If the D8-40 SUPER is to be transported on public roads it would exceed the allowable width if mounted in the tractor's three point linkage. Therefore it has to be transported lengthwise. For this purpose a transport kit is available (Fig. 86). A retrospective fitting is possible.

29.1 Fitting of the transport kit to the D8-40 SUPER

As seen in Fig. 87, the mounting arms for the two transport wheels are fitted to the right hand side plate of the seed drill. In field operation position these two transport wheels are laying close to the seed box. However, the lid can still be opened unhindered. The right hand marker arm (Fig. 87/1) is removed for road-transportation and put into a retainer of the transport kit.

The drawbar (Fig. 88/1) is fitted to the left side bracket of the seed drill. It is designed to be attached to the lower link arms of the tractor. For operation on the field, the drawbar (Fig. 88/1) is vertically positioned.

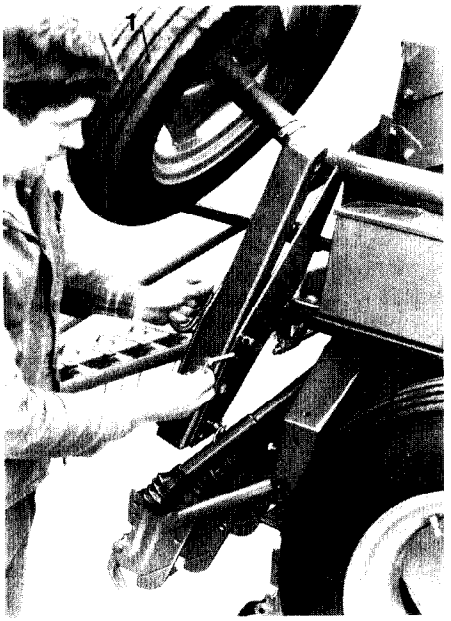


Fig. 89

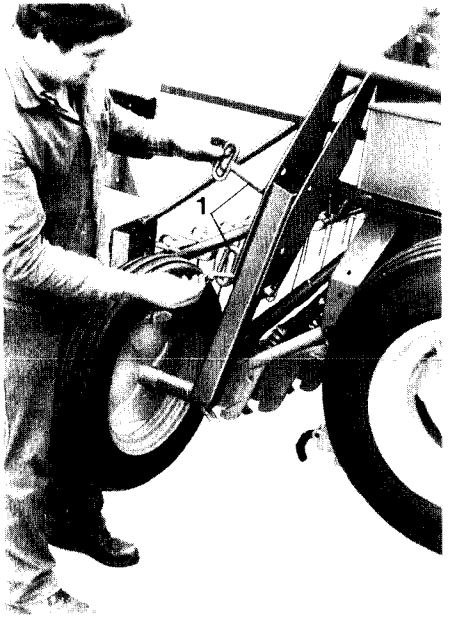


Fig. 90

Fig. 91

Fig. 92

For road transport first only swivel the rear **wheel (Fig. 89/1)** of the transport device at the lifted seed drill downwards into the transporting position. It is important that always both locking pins (Fig. 90/1) are inserted and secured with lynch pins.

Now lower the support (Fig. 91/1) at the left side part of the drill. Hereafter the seed drill is lowered until it is resting on the support and the rear transport wheel. In this position, the upper link of the tractor may be disconnected without problems.

Hereafter the seed drill is lifted again by the tractor's hydraulic until also the front transport wheel can be folded downwards and fixed by pins and lynch pins.

Now also the lower links of the tractor hydraulic may be disconnected and the drill stands on its two wheels and the support.

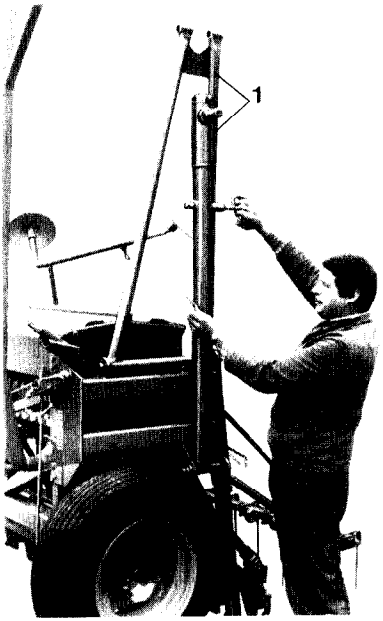


Fig. 93

Fig. 94

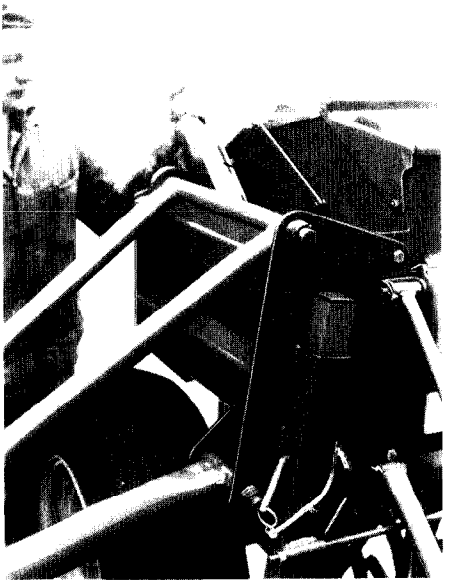


Fig. 95

Fig. 96

Now the drawbar (Fig. 93/1) is lowered and secured in the transport position (Fig. 94).

The lower link rod (Fig. 95/1) for coupling the drawbar to the tractor lower links is taken off the retainer and attached to the drawbar's front end (Fig. 96).

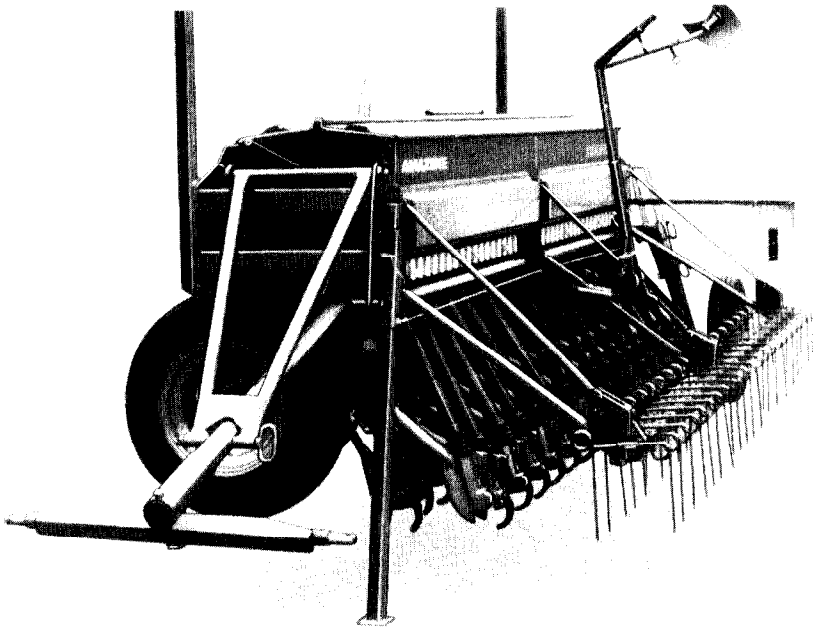


Fig. 97

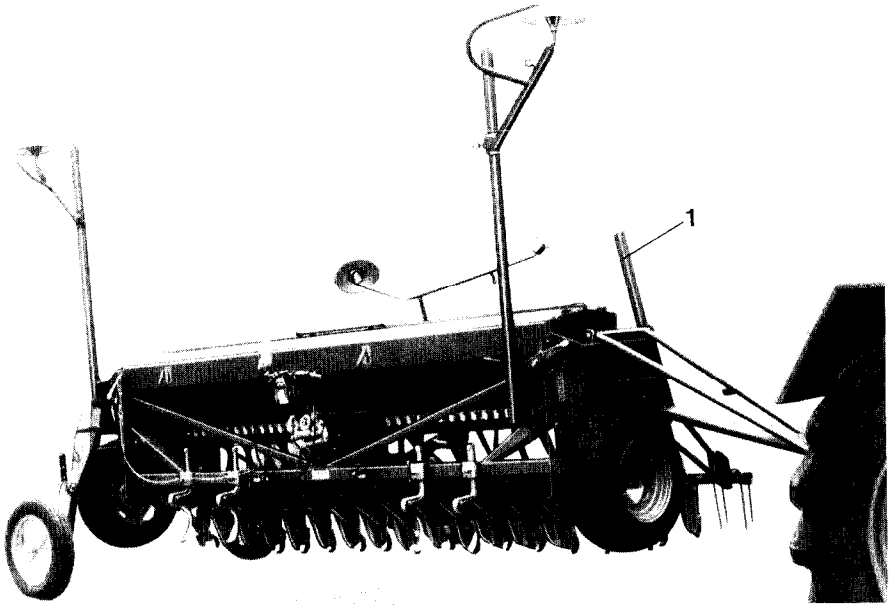


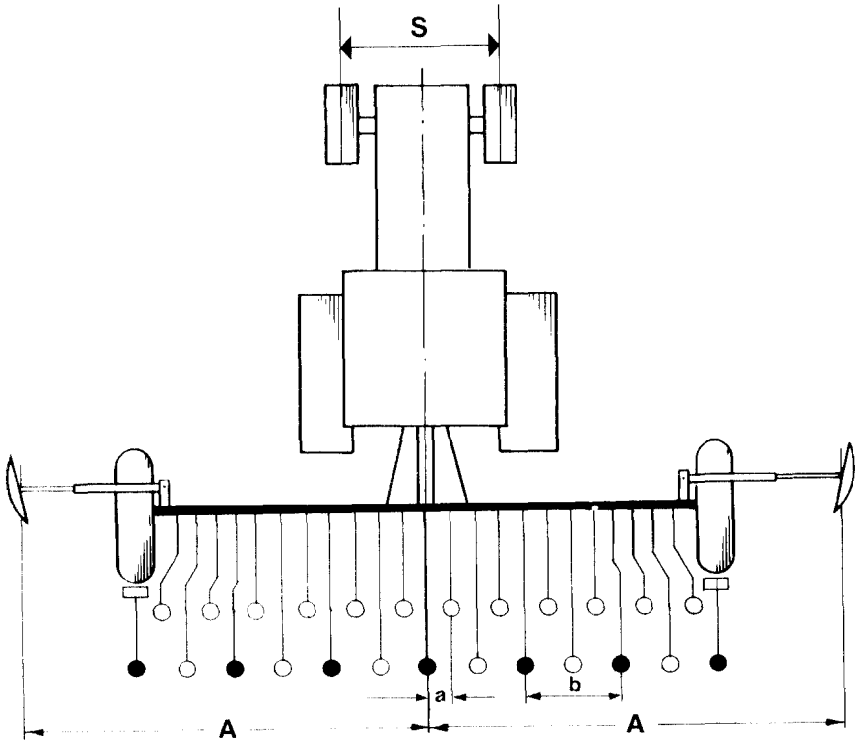
Fig. 98

Now the seed drill is ready for road transportation (Fig. 97).

The tractor now backs up to the drawbar, couples the lower links to the lower link connecting rod and lifts the seed drill until the support (Fig. 98/1) can be pushed upwards. After the tail light with indicator lights is connected, the AMAZONE seed drill D8 SUPER is ready for road transport.

Transport kit with tyres 5.00-16 and hitch for coupling to the tractor lower link arms for AMAZONE D8-40 SUPER:
Order-No. 33620

Fig. 99



30 Setting of the marker arm lengths with examples

a) Carving a mark in the centre of the tractor wheelmarks

The distance of the coulter discs, measured from the disc contact on the soil to the centre of the machine should be at the seed drills:

D8-25 SUPER	2.50 m
D8-30 SUPER	3.00 m
D8-40 SUPER	4.00 m

b) Carving of a mark in the tractor track

Depending on the tractor track, working width and number of coulters of the seed drill, different marker setting measurements result, i.e. distances of the marker disc contacting edge on the ground to the centre of the drill.

The following formulas may be used for calculating the correct marker setting measurements at symmetrical placement of the coulters from the centre of the seed drill:

Working width = number of rows x row spacing

$$\text{Marker setting measure A} = \text{working width} - \frac{\text{tractor track}}{2}$$

Example 1:

If all coulters as shown in Fig. 99 are sowing, the working width at corn is:

Working width: 3.0 m — Row spacing a = 12.0 cm
Number of rows: 25 — Tractor track width: 1.5 m

$$\text{Marker setting measurement } A = 300 \text{ cm} - \frac{150 \text{ cm}}{2} = 225 \text{ cm}$$

Example 2:

If only the coulters marked in black on Fig. 99 are used for sowing, working width for beets:

Working width: 3.36 m — Row spacing b = 48.0 cm
Number of rows: 7 — Tractor track width: 1.5 m

$$\text{Marker setting measurement } A = 336 \text{ cm} - \frac{150 \text{ cm}}{2} = 261 \text{ cm}$$