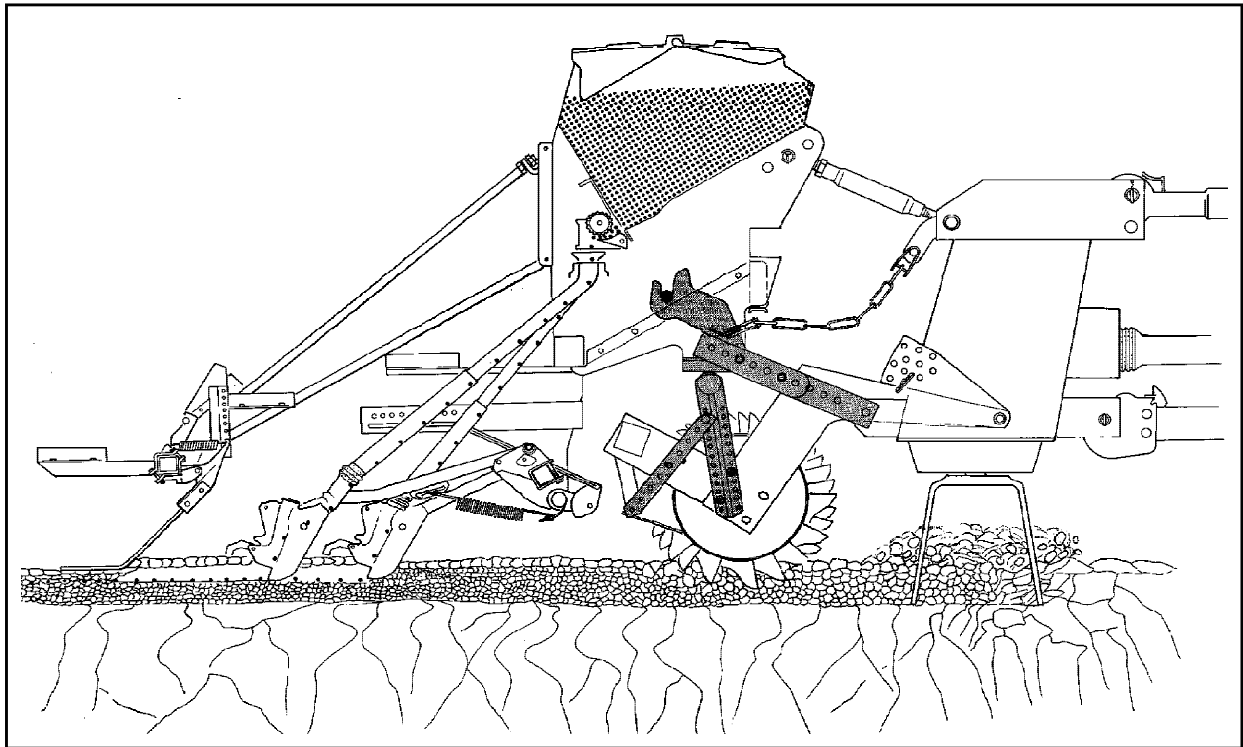


Annex

for instruction manual

AMAZONE Pack Top Seed Drills AD

**Mounting the AMAZONE Pack Top Seed Drill AD
to Soil Tillage Implements of other Manufacturers**



MG1354
DB 2000-1 GB 11.01
Printed in Germany



**Before starting operation
carefully read and
adhere to this instruction
manual and the safety
advice!**



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1.0 Fitting AMAZONE-Pack Top seed drills AD on to Soil tillage implements of other manufacturers

With the aid of especially matched coupling parts AMAZONE-Pack Top seed drills AD can be fitted to nearly all soil tillage implements available on the market. The soil tillage implement must be designed in such a way that it is able to bear the additional weight resulting from mounting AMAZONE Pack Top seed drill AD to it.



Prior to fitting the coupling parts and mounting the seed drill AD on to the soil tillage implements of other manufacturers, please observe the safety advice given in your instruction manual for the Pack Top seed drill.

1.1 Equipment of the Pack Top seed drill

By using hex. bolts M12 x 30 DIN 933 (Fig. 1.1/2) bolt on the Pack Top seed drill on the side walls below the seed box with two bracing supports (Fig. 1.1/1). Fig. 1.2 shows the bracing support mounted to the side wall.

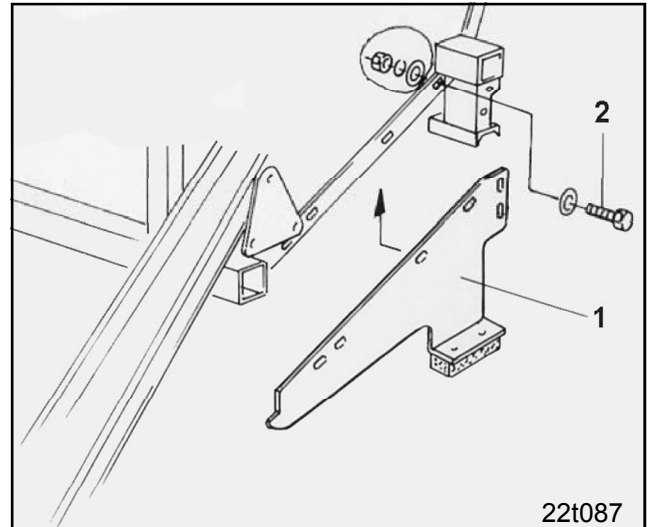


Fig. 1.1



Fig. 1.2

1.2 Equipment for the soil tillage implements of other manufacturers

The soil tillage implement and the packer roller must be equipped with implement specific coupling parts (Fig. 1.3).

In the main, these coupling parts consist of the parts listed up in the table of Fig. 1.4.

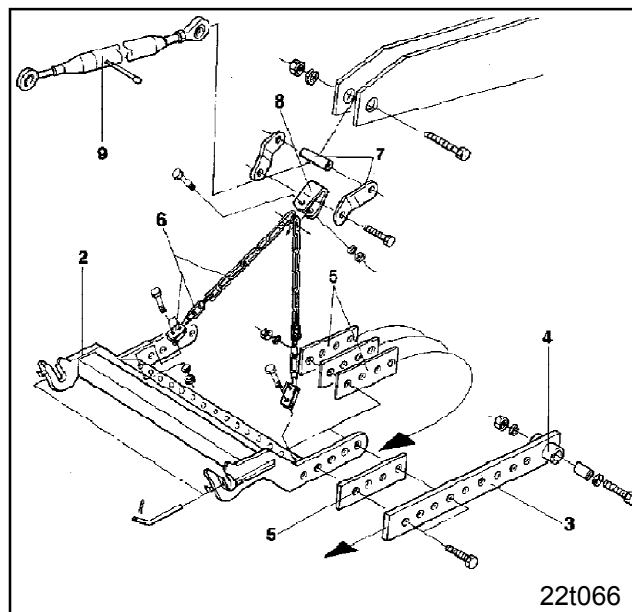


Fig. 1.3

No.	Description	Qty.
	Resting support (see Fig. 1.1)	2
2	Coupling frame	1
3	Linking plate	2
4	Bushing* with 2 securing rings	2
5	Spacer plates	8
6	Turnbuckle with chain and tensi-ning bracket	2
7	Extending bracket	2
8	Hinged bracket	1
9	Turnbuckle M27 ** for top link	1
	<p>* Adapt the inner diameter of the bushing to the fixing pin or the fixing bolt!</p> <p>** Observe the correct length of the turnbuckle (see Table Fig. 1.6).</p>	

Fig. 1.4

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Mounting the coupling frame

Before mounting the coupling frame (Fig. 1.5/1) determine the spacings "A", "B", and "C" (see Fig. 1.5 and Fig. 1.7).

Determining the spacings "A" and "B":

Measure the spacing "A" (Fig. 1.5) of the rear lower link points of your soil tillage implement.

Spacing "A" = mm

Spacing "B" corresponds to the measured spacing "A"

Determining spacing "C":

Take spacing "C" from table (Fig. 1.6) (please also refer to Fig. 1.7).

Spacing "C" = mm.

In case, your soil tillage implement has not been mentioned in this table, determine "C" as described on the following page.

Mounting the coupling frame:

Bolt together coupling frame (Fig. 1.5/1), linking plates (Fig. 1.5/2) and spacing plates (Fig. 1.5/3) on each side of the coupling frame by using at least two hex. bolts (Fig. 1.8/6).

Adjust the spacing "B" by shifting the linking plates (Fig. 1.5/3).

In general the determined spacing "C" cannot be set absolutely accurately. Due to the quadrant plates in the coupling frame (Fig. 1.5/1) and in the linking plates (Fig. 1.5/2) only lengths in steps of approx. 50 mm can be set.

If the determined spacing "C" cannot be set accurately, choose the next larger spacing "C".

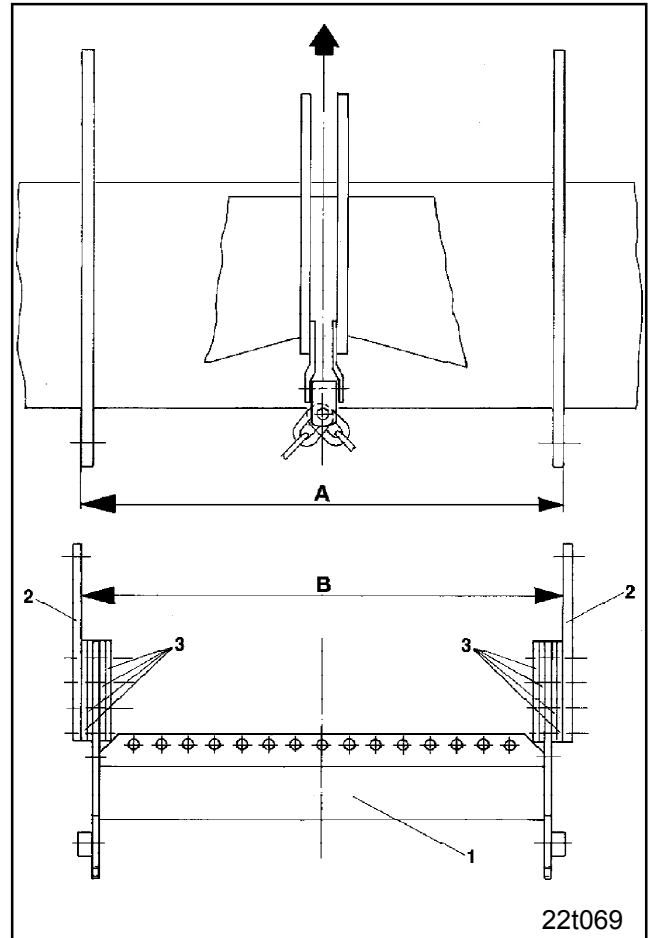


Fig. 1.5

Manufacturer - Type	Spacing „C“ of the coupling frame	Top link arm length
EBERHARDT KE	550 mm	approx. 390 mm
FROST-FERABOLI	600 mm	approx. 590 mm
HOWARD	550 mm	approx. 675 mm
KRONE KES	500 mm	approx. 520 mm
KUHN HR	550 mm	approx. 850 mm
LANDSBERG-SICMA	550 mm	approx. 640 mm
LEMKEN-LELY	750 mm	approx. 580 mm
MASCHIO DS-DC	650 mm	approx. 850 mm
MASCHIO DM	750 mm	approx. 800 mm
NIEMEYER	600 mm	approx. 415 mm
RABE MKE	550 mm	approx. 450 mm
RABE WMKE	550 mm	approx. 520 mm
RABE PKE	500 mm	approx. 420 mm
VIGOLQ	600 mm	approx. 440 mm

Fig. 1.6

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Determining the spacing "C" for soil tillage implements which are mentioned in table (Fig. 1.6).

In case your soil tillage implement is not mentioned in table (Fig. 1.6), the figure can be determined as follows:

The spacing "C" (Fig. 1.7) is the distance between the lower link point of the soil tillage implement and the theoretical coupling point "P₁" of the seed drill. Therefore, first determine the theoretical coupling point "P" as follows:

Place soil tillage implement with packer roller on a level ground.

Point "P₁" is 800 mm above the ground and 150 in front of the rear outer edge of the packer roller frame (Fig. 1.7/1).

This is the position which point "P" will have during the later operation in the field. As an aid to determine point "P" you can use, e. g. two wooden lathes (Fig. 1.7/2) with the given length and an angle.

The distance "C" then results from the spacing between point "P" and the lower link point.

With the determined measures "B" and "C" (see above) the coupling frame can be fully mounted.

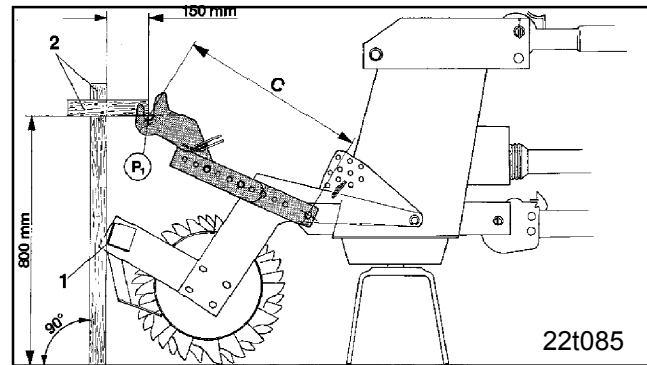


Fig. 1.7

1.3 Fixing the coupling frame on the soil tillage implement

Fix the coupling frame (Fig. 1.8/1) centrally to the rear lower link points of the soil tillage implement. Fix the coupling frame (depending on its manufacturer) as shown in Fig. 1.8 and Fig. 1.9, either by using bolts (Fig. 1.8/7) or pins (Fig. 1.9/1) movable, e. g. not rigid, on the lower link arms.

Fix two chains (Fig. 1.8/2) Together with the turn buckle (Fig. 1.8/3) onto the top link. The chain ends are provided with clevises. Fix each one turn buckle (Fig. 1.8/4) on each clevis. Bolt on the turn buckles as far as possible on to the outer end of the hole rail (Fig. 1.8/5) with the aid of tensioning latches (Fig. 1.8/8). The tensioning latches should only then be fixed in a more central position, if interfering machine parts prevent the fixing in the outer area.

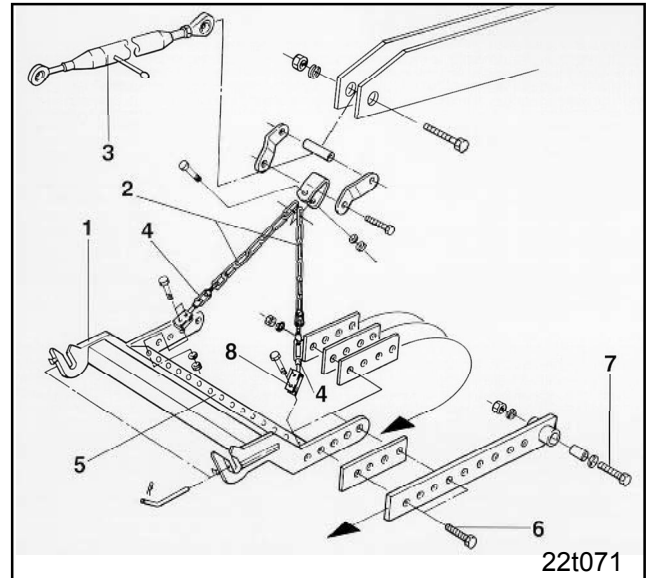


Fig. 1.8

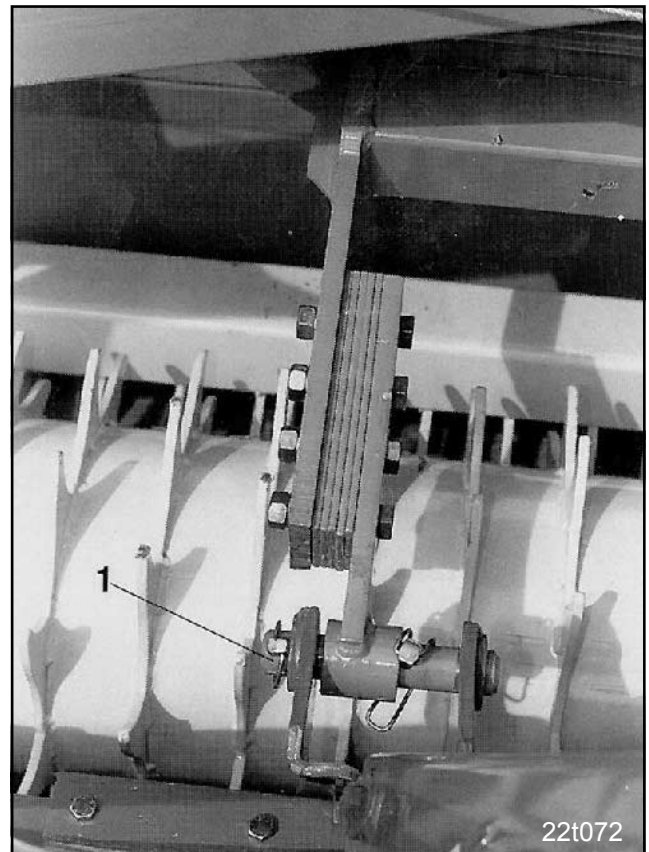


Fig. 1.9

1.4 Fixing the bracing rails to the packer roller

Equip the packer roller with bracing arms (Fig. 1.11/1). The Pack Top seed drill will then rest on them during operation.

Before fitting the bracing arms (Fig. 1.10/1) determine the resting point "P₂". The resting point "P₂" has a given distance from the coupling point "P₁". Therefore, it is necessary to set the coupling point "P₁" first accurately. For this, lift the coupling frame (Fig. 1.10/2) and lock it at an accurate measure (800 mm above ground) (see Fig. 1.10). In this position fix the coupling frame, e. g. by tensioning the chains (Fig. 1.10/3

The resting point "P₂" is 600 mm above the ground and 160 mm in front of the coupling point "P₁" (see Fig. 1.10).

Bolt on bracing arms (Fig. 1.10/1).



Fix the broad bracing arm with the double row of holes to the packer roller by using at least two hex. bolts (Fig. 1.10/4).

1.5 Setting the chain length to the correct measure

After having fitted all coupling parts to the soil tillage implements adjust the length of the chains (Fig. 1.10/3) to the final length. Set the chain length in such a way that the distance between the ground and point "P₁" is only 700 mm instead of the former 800 mm (see measure in brackets in Fig. 1.10). Hereby the chains will slightly sag when later on operating in the field and thus ensure the optimum stone safety for your soil tillage implement. You will find the exact description of function in para. 1.7.

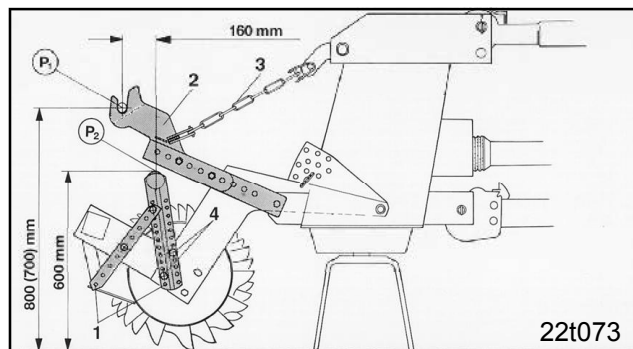


Fig. 1.10

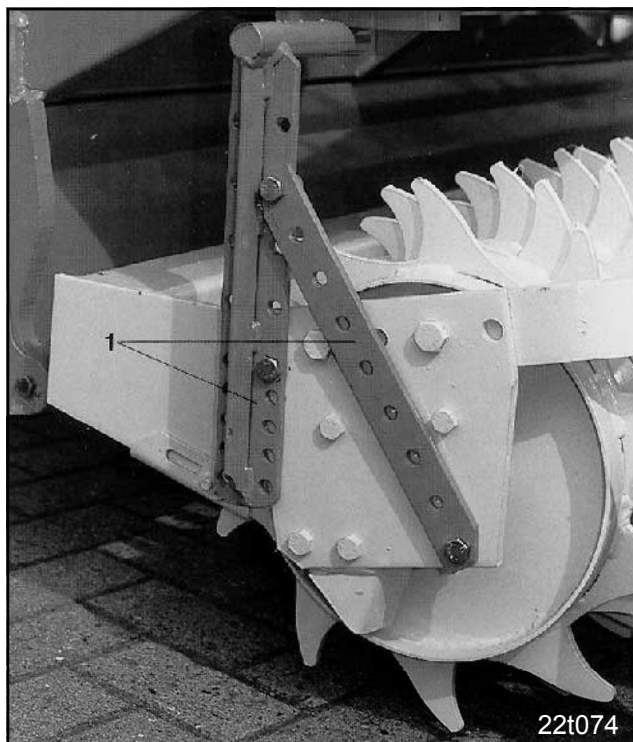


Fig. 1.11



Fig. 1.12

1.6 Coupling the Pack Top seed drill to the soil tillage implement

Before coupling the Pack Top seed drill lift the soil tillage implement and the packer roller with the aid of the tractor's hydraulics.

Back up with the combination to the Pack Top seed drill resting on its supports (see Fig. 1.12).

With the aid of the coupling frame pick up the coupling shaft (Fig. 1.13/1) of the seed drill underneath the seed box and secure by using two pins (Fig. 1.13/2) with clip pins.

Lock the turnbuckle (Fig. 1.14/1) on the seed drill and on the soil tillage implement by using pins and secure with clip pins.

Lift the entire combination and remove the storing (Fig. 1.12).

Set the upper link arm length (Fig. 1.15/1) in such a way that the seed drill's rear wall is in about vertical position within the range "B" (Fig. 1.15).

Uncoupling the Pack Top seed drill is done in reverse order.

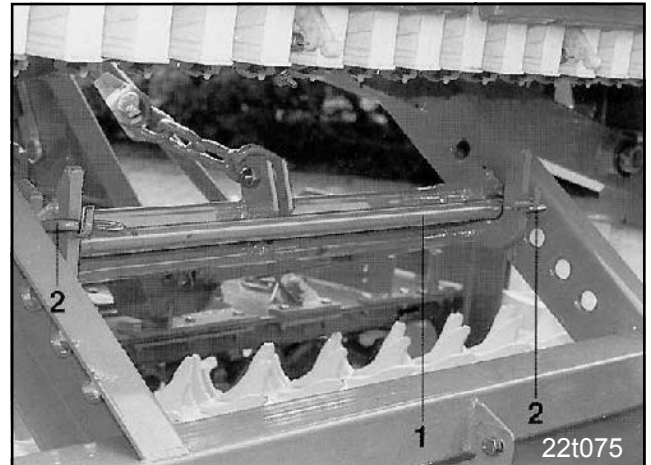


Fig. 1.13

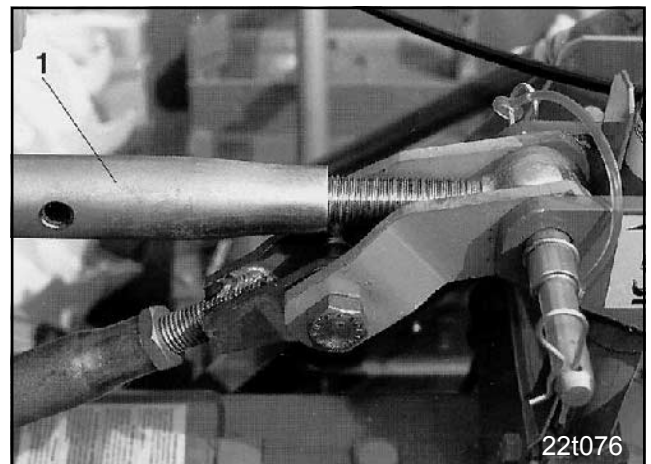


Fig. 1.14

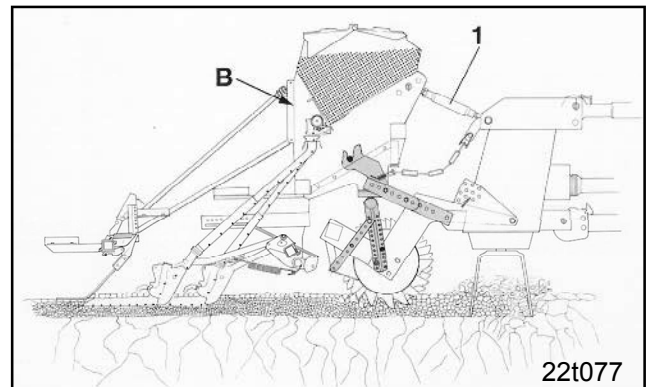


Fig. 1.15

1.7 Functioning of the coupling parts

General description for all types

In combination with AMAZONE soil tillage implements the Pack Top seed drill rests on the solid frame of the AMAZONE packer roller, in operating position (Fig. 1.16) as well as in transport position.

During operation on rotary harrows of other manufacturers the AMAZONE-Pack Top seed drill also rests on the packer roller. However, in general the stability of the packer roller of other manufacturers is not sufficient to resist the burden by the weight of the Pack Top seed drill in transport position. Therefore, in combination with the soil tillage implement of other manufacturers it is necessary to transfer the forces of the raised Pack Top seed drill to the more solid frame of the soil tillage implement. For this, AMAZONE developed a special coupling system, especially for the soil tillage implements of other manufacturers, the function of which is explained in the following.

1.8 Stone safety device

In operating position (Fig. 1.16) the soil tillage implement rests on the packer roller and thus always accurately maintains the working depth.

If during operation the soil tillage implement hits stones in the field (Fig. 1.17/1) or other rigid obstacles in the soil, the soil tillage implement can only give way in upward direction to pass the obstacle. Hereby the full burden of the soil tillage implement lies on the tine which has hit the obstacle. In general, the elasticity and the elastic fixing of the tine is just sufficient to bear the weight of the soil tillage implement without breaking the tine. Therefore, when passing obstacles, the soil tillage implement may not be burdened with the weight of the Pack top seed drill. Hereby, tine breakage would be pre-programmed. Therefore, the Pack Top seed drill is not rigidly combined neither with AMAZONE soil tillage implements nor with the makes of other manufacturers.

Therefore AMAZONE had to design a coupling system for makes of other manufacturers which corresponds to the demands on the stone safety device and – when in transport position - additionally transfers the weight of the Pack Top seed drill in the more solid frame of the soil tillage implement. Therefore, the coupling system for makes of other manufacturers in the main consists of a coupling frame (Fig. 1.18/1) which is fixed on the lower link points of the soil tillage implement. In addition the coupling frame is connected with the upper linking point of the soil tillage implement via chains (Fig. 1.18/2). In operating position (Fig. 1.18) these chains slightly sag. Thus the weight of the Pack Top seed drill rests on the packer roller. When passing an obstacle the unburdened soil tillage implement can give way in upward direction until the chains are tensioned.

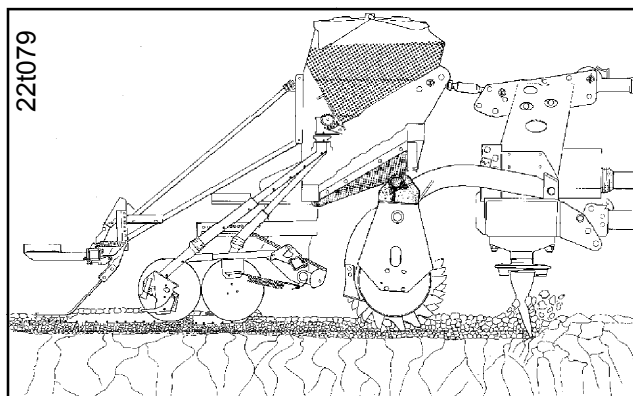


Fig. 1.16

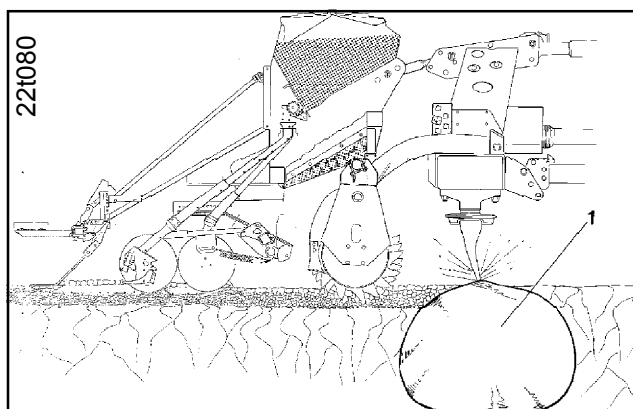


Fig. 1.17

1.9 Transport of the Pack Top seed drill in combination with soil tillage implements of other manufacturers

With soil tillage implements of other manufacturers it is necessary to transfer the forces of the lifted Pack Top seed drill to the more solid frame of the soil tillage implement. In general the stability of the packer rollers of other manufacturers is not sufficient to resist to the burden by the weight of the Pack Top seed drill in transport position (Fig. 1.19). Therefore the packer roller must be released from weight in transport position.

When turning at the headlands or for transport the tractors' hydraulics first lifts up the soil tillage implement. With increasing lifting height the chains (Fig. 1.19/1) are tensioned. When the chains are entirely tensioned, the Pack Top seed drill is raised from the coupling frame and the packer roller is relieved of the weight of the Pack Top seed drill. Only when the spacing "D" (Fig. 1.19) between packer roller and Pack Top seed drill is getting clearly visible, also the packer roller is lifted.

After transport or after turning at the headlands the individual implements of the soil tillage combination are getting again into operating position in the reverse order.

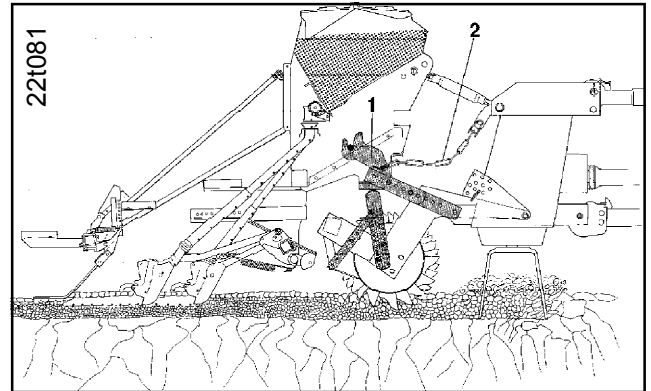


Fig. 1.18

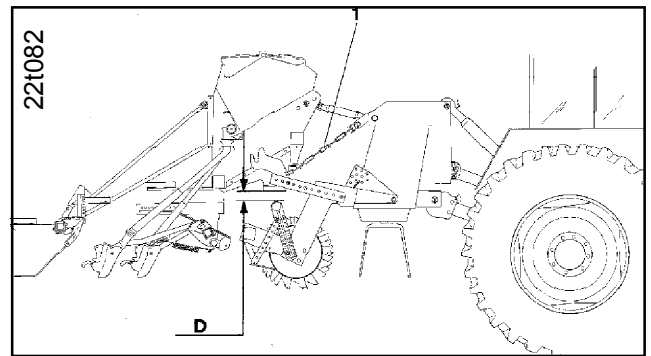


Fig. 1.19

1.10 Soil tillage implement with rigidly fixed packer roller

The principle to avoid damage on tines and gear box elements of the soil tillage implement as described in para. 1.9 only works when the soil tillage implement and the packer roller are not rigidly combined with each other.

Some manufacturers have fixed the packer roller rigidly on to the soil tillage implement. That means that also the rigidly fixed packer roller and thus the Pack Top seed drill will be raised together with the soil tillage implement when passing obstacles. The stone safety device as described in para. 1.8 will not work on soil tillage implements of this design.

For this reason, the Pack Top seed drill cannot be lifted from the packer roller in transport position. There will not result a visible spacing "D" (Fig. 1.19) between packer roller and Pack Top seed drill.



AMAZONEN-WERKE **H.DREYER** **GmbH & Co. KG**

D-49202 Hasbergen-Gaste
Tel.: Hasbergen (0 54 05) *501-0
Fax: (0 54 05) 50 11 93

<http://www.amazone.de>

D-27794 Hude/Oldbg.
Tel.: Hude (0 44 08) *927-0
Fax: (0 44 08) 92 73 99

email: amazone@amazone.de

AMAZONE-Machines Agricoles S.A.
F- 57602 Forbach/France . rue de la Verrerie
Tél.: (0033) 38 78 46 57 0
Fax: (0033) 38 78 46 57 1

