

Operating instructions



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Rotary Rake

RS 300-D

RS 320-D

RS 340-D

RS 340-DA

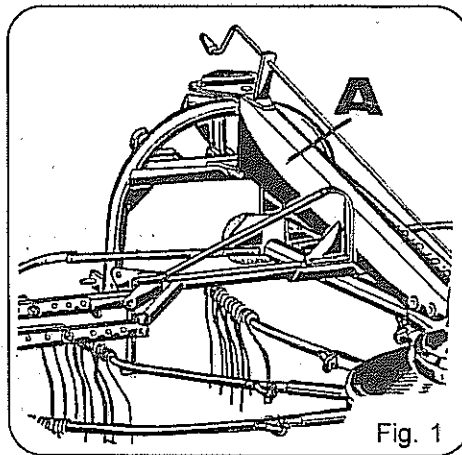
TWIN 345-DA

This Operating Instruction contains valuable and important information. Read this instruction before using the machine and observe the instructions provided in order to ensure effective and safe working.

Keep this Operating Instruction in a safe place. Every user of the rotor hay tedder must first familiarize himself or herself with the contents before beginning work.

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Each machine is provided with a serial plate (see fig. 1, pos. A) which contains the details about Model (fig. 2, pos. C), Serial No.(fig. 2, pos. D) and year of manufacture (fig. 2, pos. E).

This information must be communicated for customer service or when reordering spare parts.

The weight indicated on the identification plate gives you an indication of the lifting unit required when the machine has to be raised. The raised weight may be increased by the use of accessories.

Pos. F= Direction of rotation of the power take-off in driving direction, right (clockwise)

or

Pos. G = Direction of rotation of the power take-off in driving direction, left (anti clockwise).

The rate of revolution and direction of rotation not crossed out are applicable.

Pos. H = The max. indicated driving speed of the tractor power take off should not be exceeded.


NIEMEYER			
C	Typ:		
D	Masch.-Nr.	Gewicht	kg
E	Baujahr:	Max. Drehzahl (min ⁻¹)	
			<input type="checkbox"/> F <input type="checkbox"/> G
	<input type="checkbox"/> H		
	NIEMEYER Landmaschinen GmbH Postfach 1165 • D-48466 Hörstel		

Fig. 2

Scope of delivery

1 Rotary rake RS 300-D

1 Operating instruction

1 EC Declaration of Compliance

1 Rotary rake RS 320-D

1 Operating instruction

1 EC Declaration of Compliance

1 Rotary rake 340-D

1 Operating instruction

1 EC Declaration of Compliance

1 Rotary rake RS 340-DA

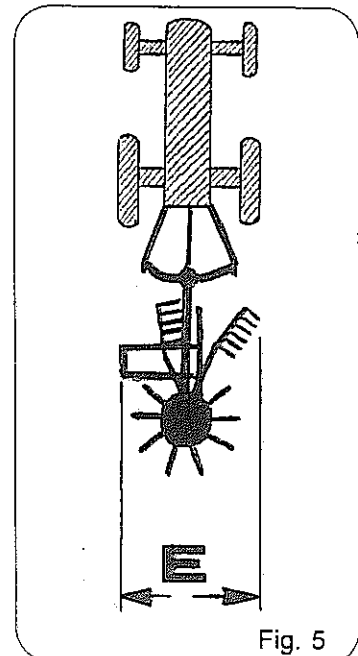
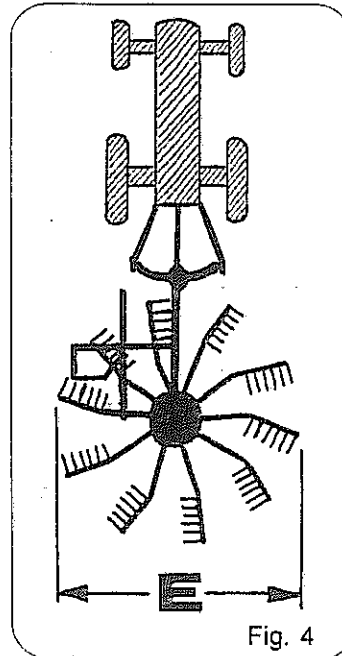
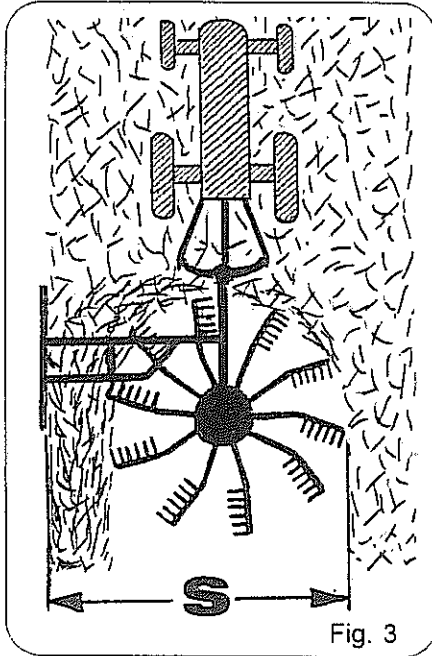
1 Operating instruction

1 EC Declaration of Compliance

1 DRS-Rotary rake TWIN 345-DA

1 Operating instruction

1 EC Declaration of Compliance



Technical data

1. Machine(s):	RS 300-D	RS 320-D	RS 340-D	RS 340-DA	TWIN 345-DA
Weight approx.* kg basic machine	315	355	395	430	470
Max. permissible drive speed rpm (opening-speed of the pto-shaft)	540	540	540	540	540
Working width approx. (Fig. 3, pos. S) m	3,00	3,20	3,40	3,40	3,40
Transport width approx. (Fig. 4/5, Pos. E) m	2,50	2,95	2,95	1,55	1,55
Noise emission-value L_{pA} db(A)	< 70	< 70	< 70	< 70	< 70
Area capacity up to approx. ha/h	2,4	3,7	5,0	5,0	5,8
2. Tractor:					
Min. power requirement approx. kW (bhp) (Engine power)	18 (25)	18 (25)	26 (35)	26 (35)	26 (35)
Rear-three point mounting CAT after ISO 730 or DIN 9674	2	2	2	2	2
Pto-shaft speed rpm	540	540	540	540	540
Pto-shaft direction (right to ISO 500 or DIN 9611)	right	right	right	right	right

* The given weights may be increased by the use of accessories.

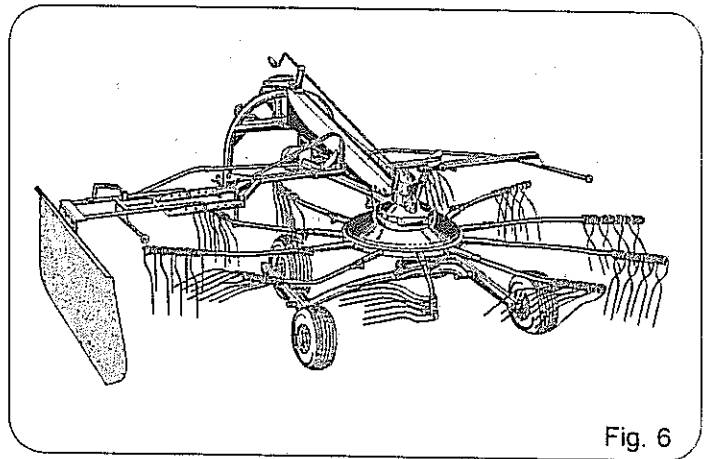
Safety Instructions



We have indicated all those instances in these operating instructions involving your safety with this symbol. Please let other users also know about all these safety instructions.

Proper use

The swivel rake may only be used for the purposes intended (to handle mown straw lying on the ground). Otherwise the manufacturer accepts no liability whatsoever for resulting damage. Any other or additional use, such as the raking together of pieces of wood, is considered not to be proper use. Use of the machine in accordance with its intended purpose also includes observance of operating conditions specified by the manufacturer and the undertaking of necessary care and maintenance work at the specified intervals.



The swivel rake may only be used, maintained and repaired by persons familiar with it and cognizant of the risks involved. The pertinent accident prevention regulations as well as all the other generally recognized industrial-medical, safety and traffic regulations shall be observed.

All machines must be provided with appropriate lighting when being transported on public highways in accordance with the valid Road Traffic Act. The corresponding holders can also be supplied by us when required.

Basic rule



Please read the operating and safety instructions prior to initial start-up (see warning symbol on page 20, pos. C).

Check the swather for traffic and operational safety each time before use.

Safety and Accident Prevention Regulations

General

1. As well as this Operating Instruction, also observe the generally valid safety and accident prevention regulations.
2. The attached warning signs and notices provide important information for safe operation; observance of the instructions contained on them is for your own safety!
3. When using public roads, observe all local road traffic regulations.
4. Before beginning work, familiarize yourself with all the features and control elements of the machine and their functions. It is too late to do this during operation !
5. The user's clothing should be tight-fitting. Avoid loose-fitting clothing!
6. To prevent the risk of fire, keep the machine clean!
7. Before the machine is lifted and the tractor sets off, check the immediate vicinity. Make sure you have sufficient visibility and watch out for children!
8. The carrying of passengers on the machine when working or in transit is not permitted.
9. Hitch the machine in accordance with regulations and only attach and secure it to the appliances for which it is intended.
10. When hitching and unhitching, set the support components to the appropriate positions! (stability!)
11. Particular care and attention is required when hitching and unhitching appliances to and from the tractor!
12. Always mount ballast weights in accordance with regulations and at the securing points provided!
13. Observe permissible axle loads and maximum laden weights!
14. Observe permissible transport dimensions!
15. Check and affix the necessary transport equipment, such as lighting, hazard warning signs and protective devices and guards!
16. Operating elements (cables, chains, linkages etc.) of remote-controlled devices must be aligned in such a way that they do not cause unintentional motion in any transit or working positions!
17. Make sure that the machine is in the specified condition for road travel, and secure it in accordance with manufacturer's regulations!
18. Never leave the driver's station whilst the machine is in motion!
19. The running speed of the machine must always be adapted to the environmental conditions! Avoid sudden cornering movements when driving up or down hill, or when driving transverse to the slope of the hill!
20. The handling, steering and braking characteristics of the tractor are affected by hitched machinery and ballast weights! You should therefore make sure of sufficient steerability and braking capability!
21. When cornering, take into account the overhang and the centrifugal mass of the machine!

22. The machine may only be started up when all protective devices and guards have been mounted and are in position!
23. Keep away from the working area and the danger areas of the machine!
24. Keep away from the rotating and swivelling areas of the machine!
25. Danger of crushing and shearing on (hydraulically) powered components!
26. Secure the machine before leaving the tractor! Fully lower all hitched appliances! Turn off the engine and remove the ignition key!
27. No one must enter the area between the tractor and the machine unless the vehicle is secured against rolling by means of the parking brake and/or chocks.
28. Where, when fitted with front-mounted appliances, the front mounting dimension of 3.5 m (measured from the center of the steering wheel to the front point of the machine) is exceeded, the operator must ensure that the restricted field of vision when exiting from farmyards, pulling onto roads and at crossroads is compensated by suitable measures. This may be achieved, for example, by an accompanying person acting as lookout for the driver in such situations.

Hitched appliances

1. Before hitching and unhitching to and from the three-point linkage, set the operating device to a position which guards against unintentional raising or lowering!
2. In three-point hitching, it is essential that the hitching categories of the tractor and the machine are identical or adapted to each other!
3. There is risk of injury resulting from crushing and shearing in the vicinity of the three-point linkage!
4. When the external control for the three-point hitching is operated, do not enter the area between the tractor and the machine!
5. In the transit position of the machine, always ensure sufficient lateral arresting of the tractor three-point linkage!
6. When driving on the road with the machine lifted, the operating lever for the three point hydraulic must be secured against lowering!

Towed machinery

1. Secure the machines against rolling!
2. Observe max. permissible support load of trailer coupling, drawbar or hitch!
3. With drawbar towing, ensure adequate mobility at the drawbar connection point!

Power take-off shaft operation

1. Only the powershafts specified by the manufacturer may be used!
2. The protective pipe and funnel guard of the powershaft and the power take-off shaft guard must always be fitted and fully functional!
3. In the case of powershafts, ensure observance of the specified pipe overlaps in transit and working positions!

4. The powershaft must only be mounted and removed with the power take-off shaft and the engine switched off, and with the ignition key removed!
5. When using powershafts with overload or freewheel clutches which are not covered by the protective guards on the tractor, overload or freewheel clutches must be attached on the machine side!
6. Always ensure correct assembly and securing of the powershaft!
7. Secure the powershaft guard against being pulled along by attaching the chain!
8. Before switching on the power take-off shaft, ensure that the selected speed and direction of rotation of the tractor power take-off shaft correspond to those of the machine, as shown on the serial plate!
9. Before switching on the power take-off shaft, ensure that no one is in the danger area of the machine!
10. Never switch on the power take-off shaft with the engine switched off!
11. When working with the power take-off shaft, no one must be allowed in the area of the rotating shaft or the powershaft!
12. Always switch off the power take-off shaft if excessive offset angles of the pto-shaft occur, or when it is not required!
13. Caution: when the power take-off shaft has been switched off, danger from running-on as a result of centrifugal mass! During this time the machine must not be approached too closely. Work may only be carried out on the machine when all machine parts have come to a standstill!
14. Cleaning, lubrication or setting of the power take-off shaft driven machine or of the powershaft only with the power take-off shaft and the engine switched off, and with the ignition key removed!
15. Place the decoupled powershaft on the mounting provided!
16. After removing the powershaft, push the protective sheath onto the stump of the power take-off shaft!
17. Damage to the machine is to be rectified immediately, and the machine should not be used until this has been done!

Hydraulic system

1. The hydraulic system is under high pressure!
2. When connecting hydraulic cylinders, attention must be paid to ensure the prescribed connection of the hydraulic hoses!
3. When connecting hydraulic hoses to the tractor hydraulics, ensure that pressure is switched off both on the tractor side and on the machine side!
4. On hydraulic functional links between the tractor and the machine, the coupling sleeve and coupler plug should be clearly marked in order to prevent incorrect operation! If the links are wrongly connected the reverse function results (e.g. raising/lowering) - danger of accidents!
5. Regularly check hydraulic hose lines and replace if damage or ageing has occurred! The replacement lines must meet the technical requirements of the machine manufacturer! The service life of the hose lines should not exceed 6 years, including a storage life of not more than 2 years.
6. When searching for leaks use the proper equipment, otherwise there is danger of injury!

7. Fluids emerging under high pressure (hydraulic oil) may penetrate the skin and cause serious injury! If an injury occurs, see a doctor immediately! Danger of infection!
8. Before working on the hydraulic system, lower all appliances/assemblies, remove the pressure and switch off the engine!

Tyres

1. When working on the tyres it should be ensured that the machine is safely parked and secured against rolling (chocks)!
2. The fitting of tyres and wheels requires adequate knowledge and the proper tools!
3. Repair work to tyres and wheels may only be carried out by specialists using the appropriate tools and equipment!
4. Regularly check the air pressure! Observe specified air pressure!

Maintenance

1. Repair, maintenance and cleaning work, as well as the rectification of malfunctions, should only be carried out with the drive switched off and the engine at a standstill!- Remove the ignition key!
2. Regularly check nuts and screws for tightness, and retighten as necessary!
3. During maintenance work on raised appliances/assemblies, always secure with suitable support elements!
4. When replacing working equipment, use suitable tools and gloves!
5. Properly dispose of oils, greases and filters!
6. Before working on the electrical system, always disconnect the power!
7. If protective guards are subject to wear, they must be checked regularly and replaced at the appropriate times!
8. Spare parts must at least meet the technical requirements specified by the machine manufacturer! This is ensured, for example, by the use of original spare parts!
9. When carrying out electrical welding work on the tractor and hitched appliances, detach cables on the alternator and battery!

Haymaking machinery

1. The haymaker is designed, and suitable for, the processing of mown crop material lying on the ground!
2. When swivelling the drawbar from the transit position to the working position and vice versa, danger of crushing and shearing occurs at specific points! Particular care should be taken during swivelling!
3. Repairs to preloaded energy stores (springs, pressure accumulators etc.) require adequate knowledge and the proper tools, and may only be carried out in specialist workshops!

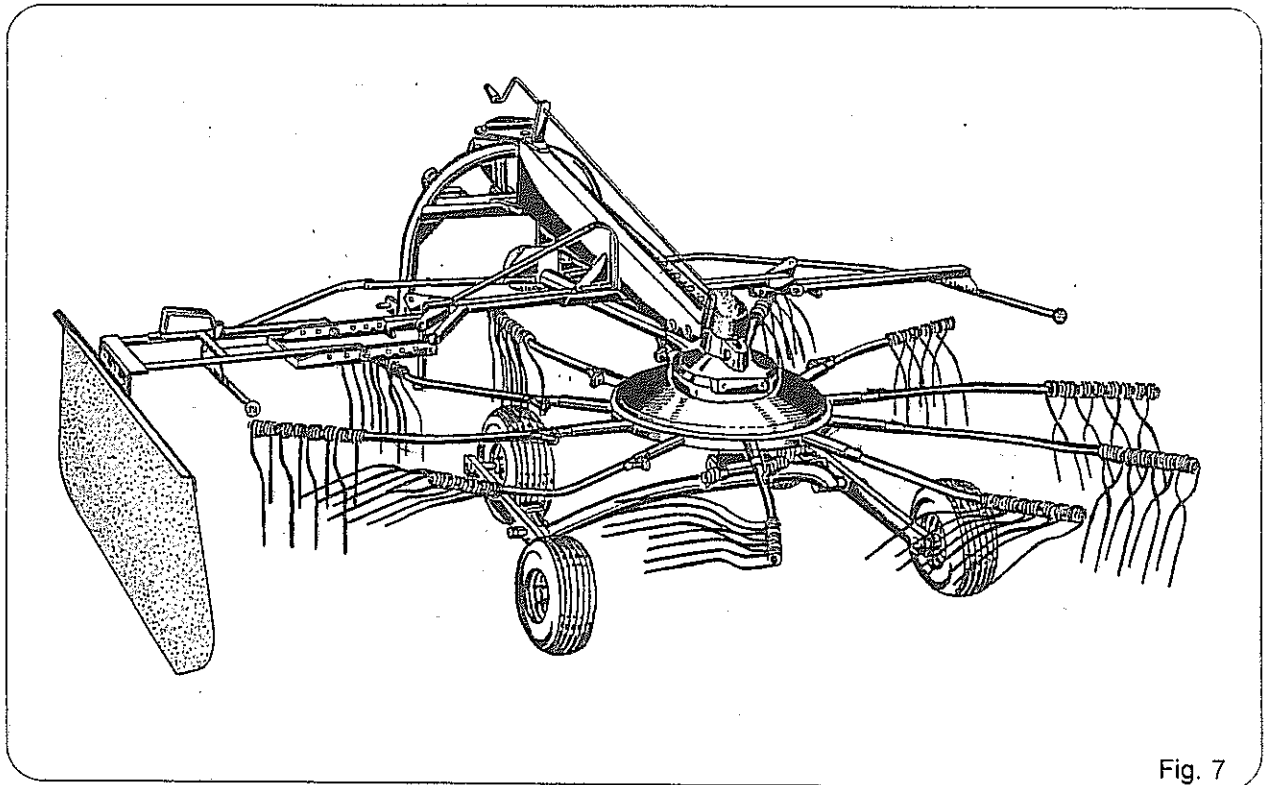


Fig. 7

Please observe the following before starting the rake:

1. Attach the protective equipment and move into protective position.
2. N.B. Change any damaged or deformed prongs, as they increase the risk of accidents.
3. The parts turning in the swivel rake work at high speed. Always bear this in mind. Lubricate all the bearings and moving parts frequently and thoroughly. The rakes operation and service life depend directly on good lubrication and maintenance.
4. Keep all persons well away from the hazard zone, since there is the danger of objects being picked up and thrown by the rake. (see warning symbol on page 20, pos. A). Take special care when operating in the vicinity of highways.
5. If there is to be a high braking force on the tractor power take-off shaft, it is recommended to use a cardan shaft with overload cut-out and free-wheel.
6. The following details in these operating instructions are to be observed precisely in order to prevent any human error.
7. The user has to replace the warning symbols which are fallen off or are unreadable.

Only use ORIGINAL NIEMEYER SPARE PARTS. Incorporation of other marks may cause serious damage and lead to the guarantee being declared invalid.



Parts copied from the original, especially wearing parts, seldom meet the requirements made of them, and it is not possible to check the material quality by sight.

Therefore, always use ORIGINAL NIEMEYER parts only !

Assembly

Maximum retaining torque for hexagonal screws with metric ISO course-pitch thread.

Gewinde- durch- messer	Anzugsmomente M in Nm				
	5.6	6.9	8.8	10.9	12.9
M 5	2,8	5	6	8,5	10
M 6	4,7	8,5	10	14	17
M 8	12	21	25	35	41
M 10	23	41	49	69	83
M 12	40	72	86	120	145
M 14	64	115	135	190	230
M 16	100	180	210	295	355
M 18	135	245	290	405	485
M 20	190	345	410	580	690
M 22	260	465	550	780	930
M 24	330	600	710	1000	1200
M 27	500	890	1050	1500	1800
M 30	670	1200	1450	2000	2400

It is essential that screws and nuts are sufficiently securely fastened to ensure correct seating. They should be fastened with a torque wrench. See the table for the correct torque for screws.

Example: An M8 screw of property class 8.8 must be screwed to a torque of 25 Nm = 2.5 mkg. The mechanical property is stated on the head of the screw.

For the sake of safety, all screws and nuts should be re-fastened after an operating period of approximately 2 hours.

Mounting the tine arms



Caution! The tine arms must be mounted with the machine raised and in the working position. It is essential that the swather is supported and immobilised for this operation.

For RS 300-D / RS 320-D / RS 340-D

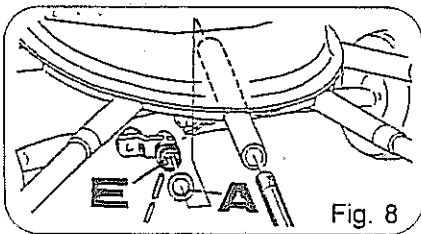


Fig. 8

Note on mounting:

Before mounting the tine arms, push the guide levers on to the tine arms. Then rotate the guide levers on to the tine shafts. This will smooth off manufacturing grooves and burrs and the guide levers can be mounted more easily under the bearing dome.

First, insert a tine arm in one of the insertion openings on the rotor (but not as far as the end point). Then insert the guide lever under the rotor so that the roller runs in the curved track. Place the supporting disc (Fig 8 Ref. A), dimensions 40/50 x 2.5, on the carrier (Fig 8 Ref. E) of the guide lever. Then slide the tine arm further into the sleeve of the guide lever until the end point is reached and insert the spring pins (Fig. 8). Repeat the operation for the rest of the tine arms.

For RS 340-DA-Super / TWIN 345-DA

Insert the push-in tine arms in the remaining openings and secure with linch pins (Fig. 9).

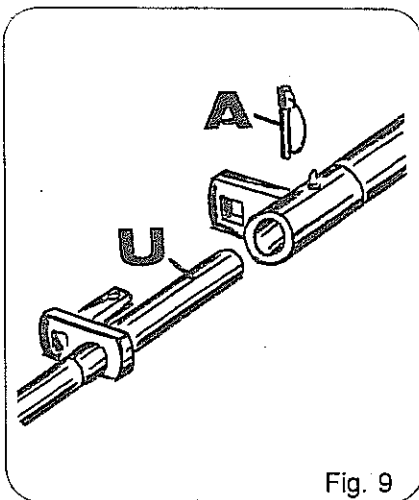


Fig. 9



The linch pins (Fig. 9, Ref. A) must be checked for wear at regular intervals and, if necessary, replaced with ORIGINAL NIEMEYER linch pins. Original NIEMEYER linch pins are hardened.

Before the machine is put into operation, and during the period of operation of the machine, the lubricating nipples of the tine arm bearings must be lubricated so that the grease emerges from both sides.

The pneumatic running wheels must be checked for correct inflation pressure of 1.5 bar.

Mounting the protective devices

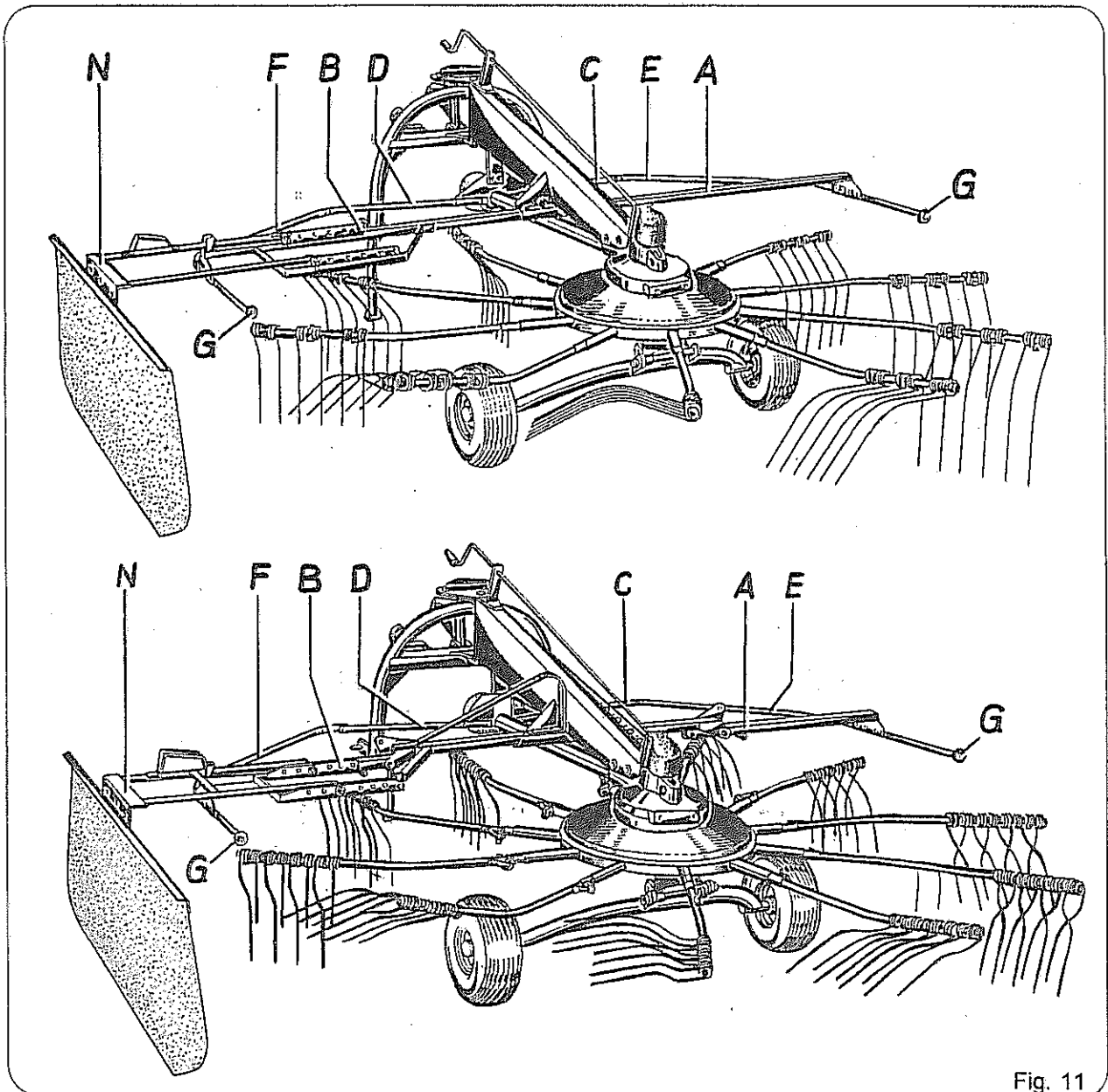


Fig. 11

The protective devices must be mounted as shown in Fig. 11, in the sequence Ref. A, B, C, D, E and F. The rear reflectors are to be screwed on to the rear ends of the hoop guards (Ref. G).



For RS 340-DA and TWIN 345-DA

The transport safety lock must be secured by means of nuts and 4 disc springs underneath, so that the safety lock cannot swivel downwards by itself, even with shaking on uneven grassland (Fig. 12).

Otherwise, there is a danger of breakage!

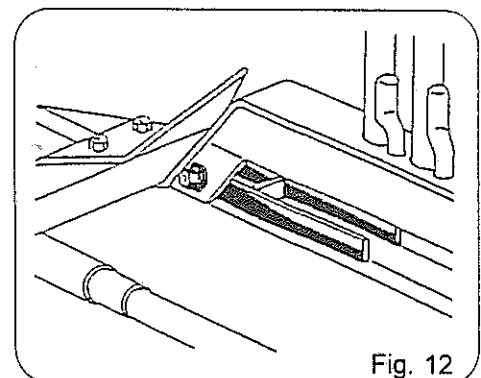
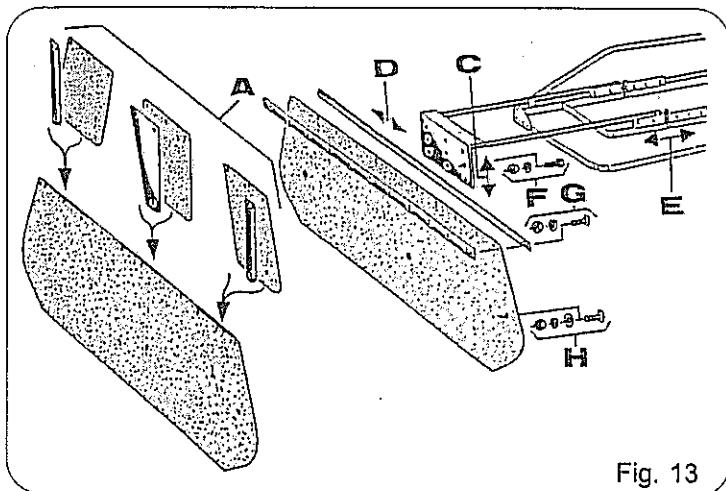


Fig. 12

Mounting the swath former



The swath cloth carrier is mounted as shown in Fig. 11, Ref. N (see Page 13). Insert the stabilising support (Fig. 13, Ref. A) in the swath cloth.

The swath cloth is mounted on the swath cloth holder using the screws, with the thicker layer towards the inside of the machine, together with the mounting bar and the stabilising support, see Fig. 13.

Fig. 13

Pos. F = Hex. screw M 8 x 30 with spring lock washer and nut

Pos. G = Pen head bold M 8 x 25 with spring lock washer

Pos. H = Pen head bold M 8x20 with washer 8,4/25 x 2, spring lock washer and nut

The side swath former is adjustable for height (pos. C) as well as backwards or forwards (pos. D) by changing the screws on the swath cloth holder.

It is recommended that the swath cloth is not set too near to the ground so as to prevent premature wear of the underside of the cloth.

The required swath width can be achieved by changing the swath cloth holder or by loosening the capstan-head screw and sliding the swath cloth holder (pos. E).

Assembly of the pto-shaft

The supplied main PTO-shaft connects the rake to the tractor. The end with the overload protection must be attached to the rake.



Prior to initial operation check the length of the pto-shaft - particularly when going around bends and stripping with the tractor hydraulic unit - and shorten where necessary.

The pto-shaft must not be wedged into its end position nor be too short: The metal pipes of the pto-shaft must enmesh by at least 400 mm.

N.B. Otherwise there is the risk of the pto-shaft facturing.

Measures to shorten the pto-shaft are described in the pto-shaft operating instructions.

When shortening the pto-shaft use a steel saw to saw off the sliding and protective pipes. Grinders and the like would damage the sliding pipes due to the heat generated. Completely remove the burrs and chips after shortening.

Lubrication: After the pto-shaft has been shortened and during operation the outer sliding pipe must be lubricated regularly from inside.

To prevent accidents the outer protective pipes of the pto-shaft must, under all circumstances, be attached to the frame with chains.

The manufacturer gives important tips and instructions as to how the pto-shaft should be used in the pto-shaft operating instructions.

A cardan shaft with a free-wheel is necessary for tractors with a power take-off shaft brake. The cardan shaft is obtainable from Niemeyer.

Mounting on the tractor

The rotary swather is mounted on the three-point linkage of the tractor. After raising the machine, the parking support must be inserted and secured.

Transport

Mount the rotary swather and raise using the tractor hydraulics. Turn the locking lever on the carrying frame to the horizontal position (Fig. 14, Ref. D). This secures the machine for transportation so that it cannot swing out sideways unexpectedly.



Beware of sideways movement of the rotor/carrying frame (see Warning Signs on Page 20, Ref. N). Never stand within the swivelling or working range of the machine (see Warning Signs, Page 20, Ref. D and E).

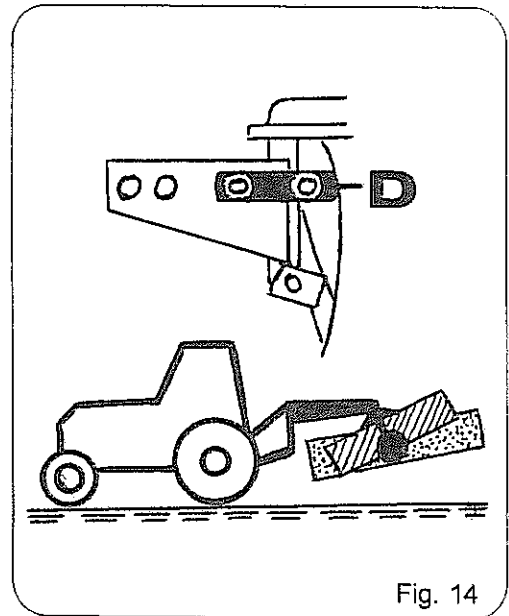


Fig. 14

During transport on public roads the swath board holder must be folded in. Otherwise the maximum permissible transport width would be exceeded.



Take particular care when folding back the swath cloth carrier - cutting and crushing hazard.

Transport

For RS 340-DA and TWIN 345-DA only

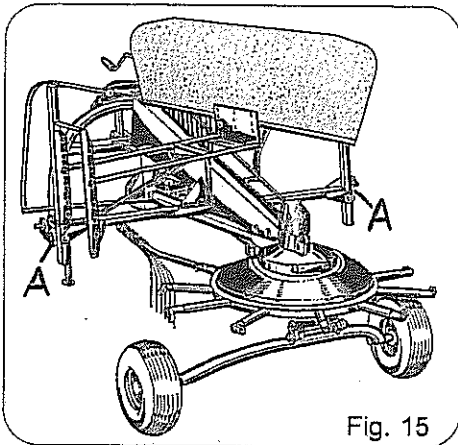


Fig. 15

Fold up the hoop guards on both sides and secure with leaf-spring pins (Fig. 15, Ref. A).

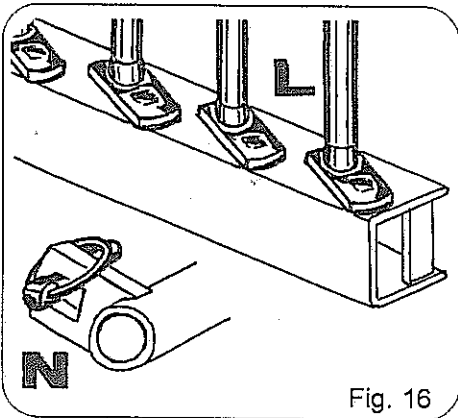


Fig. 16

The push-on tine arms can be removed for transportation on public roads and streets. They are then inserted in the perforated rail provided for this purpose (Fig 16, Ref. L).

Re-insert the linch pins in the bearing arms of the rotor (Fig. 16, Ref. N.).

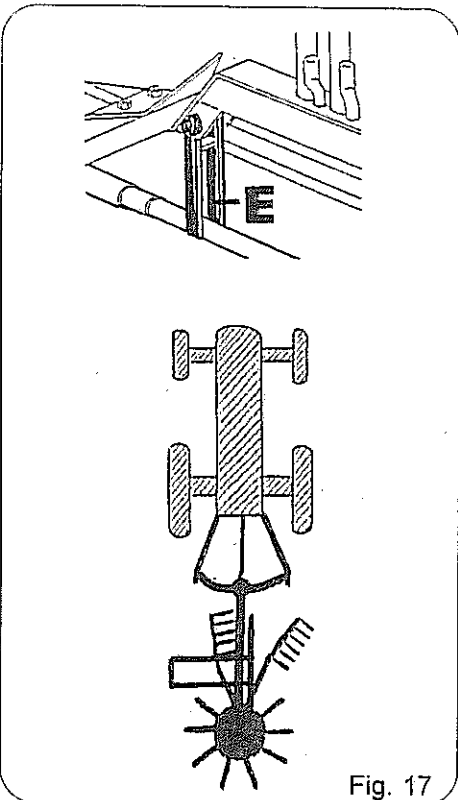


Fig. 17

If the tine arms are removed for transportation, the rotor must be secured to prevent it from turning. Fold down the locking fork (Fig. 17, Ref. E) so that one tine arm is located inside the fork. This will immobilise the entire rotor to prevent it from rotating during transport.



Remember to fold the locking fork back up before commencing work. Otherwise there is a risk of breakage.

Operation

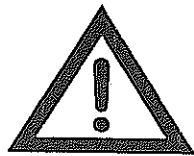
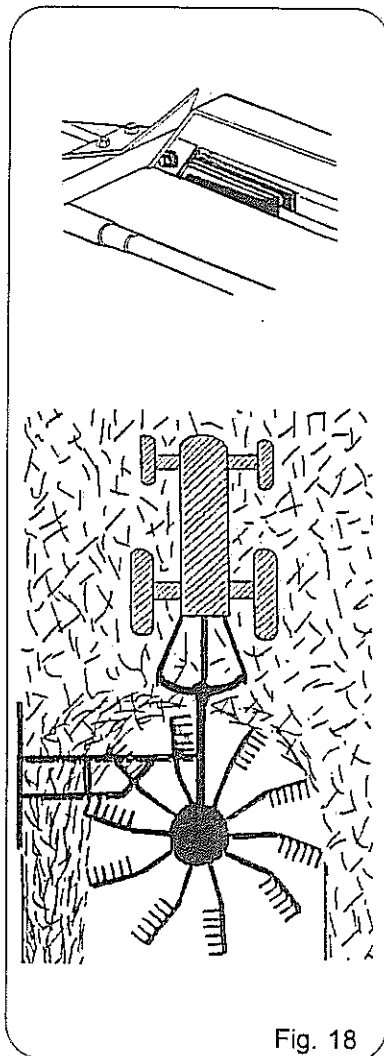
Before starting work:

For all rotary swathers

- Fold down swath cloth carrier

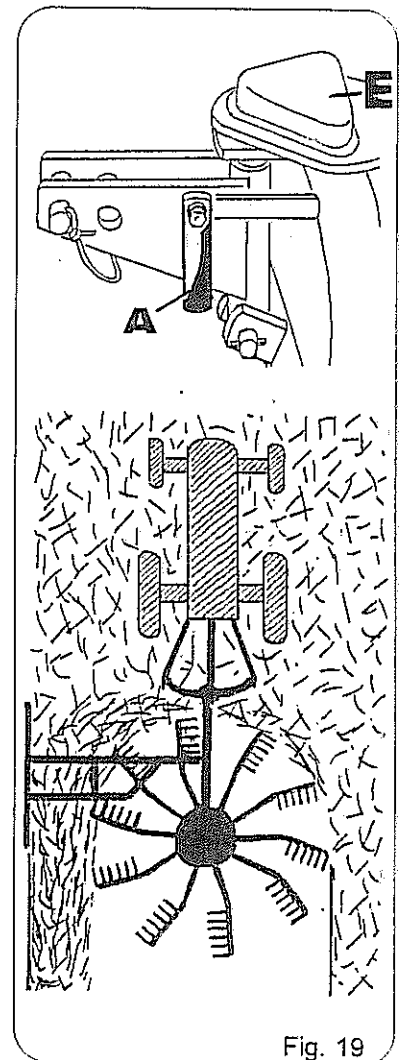
For RS 340-DA and TWIN 345-DA only

- Fold up locking fork (Fig. 18, Ref. F).
- Insert tine arms in the plug-in openings on the rotor and secure with linch pins.
- Fold down hoop guards on both sides and secure.
- Fold down swath cloth carrier.



Exercise care when folding down the swath cloth carrier - cutting and crushing hazard (see Warning Signs, Page 20, Ref. N).

Turn the locking lever on the carrying frame downwards (Fig. 19, Ref. A). This releases the otherwise rigid coupling between the three-point frame and the machine in the working position.



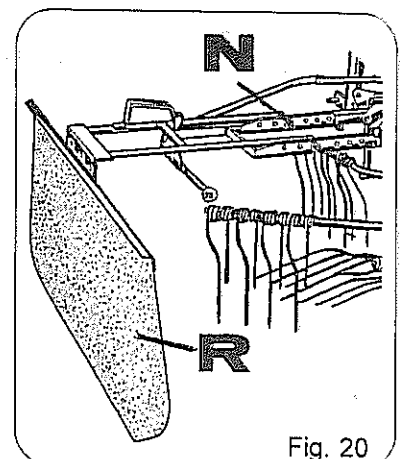
Then lower the three-point hydraulics until the pin rests in the catch (Fig. 19, Ref. E), at the back.

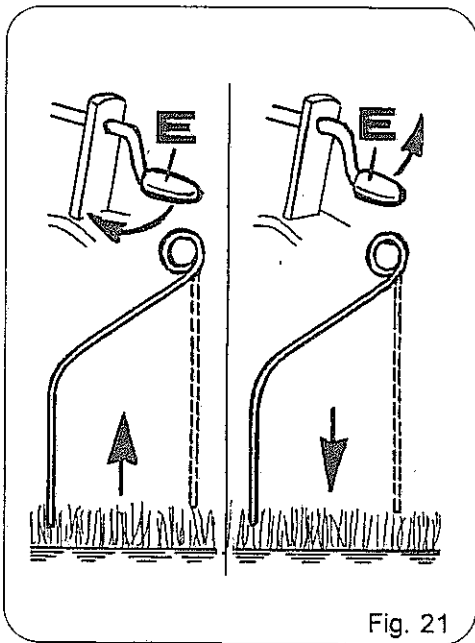
In operation, the rotor should be horizontal in relation to the ground, or tilted very slightly forwards if necessary.

The required swath width can be set by changing the position of the swath cloth carrier (Fig. 20, Ref. N).

The swath cloth can be adjusted upwards or downwards, as well as backwards or forwards, by changing the positions of the fastening screws (see Page 12 and Fig. 20, Ref. R).

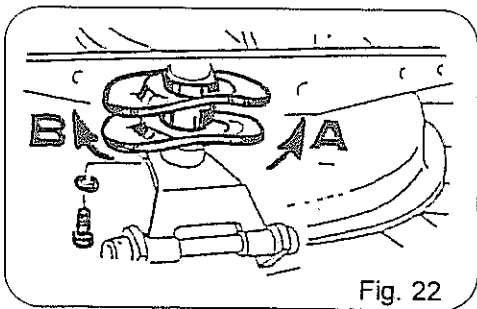
It is recommended that the swath cloth should not be set too close to the ground, as this will result in premature wearing of the edge of the swath cloth.





Using the crank handle above the three-point frame (Fig. 21, Ref. E), set the height of the rotor so that the tines are just clear of contact with the ground (Fig. 21).

The swath lay can be changed by turning the cam plate. This can be necessary for swathing forage which is difficult to work. To turn the cam plate, screw out the hexagon head screw under the cam plate (Fig. 22). The cam plate can then be turned using an SW 19 open-end or ring wrench on the welded-on hexagonal lug. To facilitate adjustment of the cam, raise the swather using the three-point hydraulics.



Turning the cam plate (as viewed from above) to:

- the left (A) = later laying of the forage
- the right (B) = earlier laying of the forage

After turning the cam plate, re-secure using the hexagon head screw.



If the adjustment of the cam plate is done with the machine raised, this must be supported and secured against accidentally dropping down.

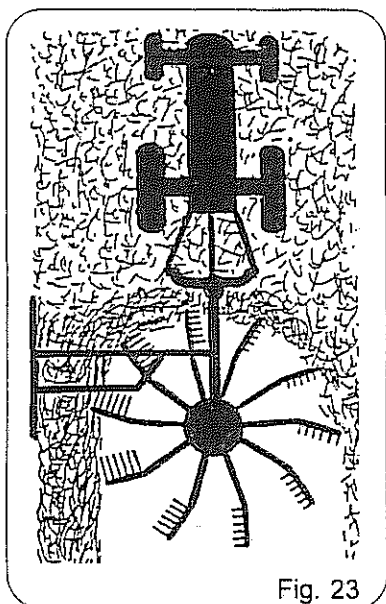


Fig. 23

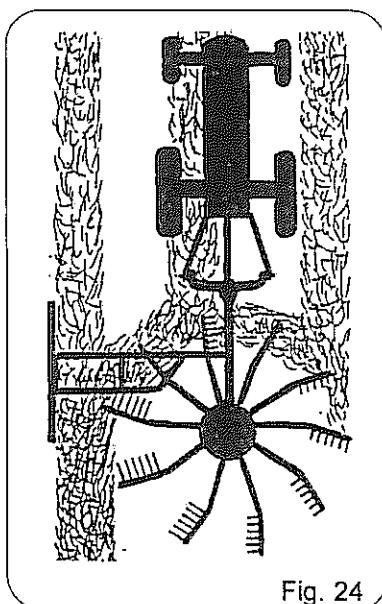


Fig. 24

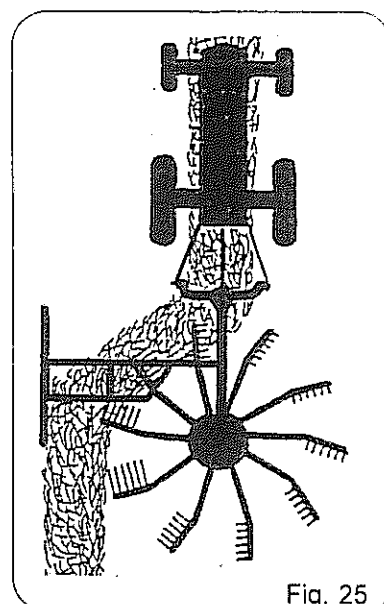


Fig. 25

Select the speed of travel and the rate of revolution of the power take off so that all harvested crop is collected cleanly by the tines. The method of travel is chosen in accordance with Figures 23, 24 and 25.

For optimal swathing the pto-shaft speed is approx. **450 U/min.**

If the overload protection of the drive shaft trips in repeatedly (e.g. too much fodder), switch to a slower pace. If the overload protection translates for longer than 10 seconds, stop immediately and discover the reason so as to prevent damage to the overload protection.



Do not stop in the work area of the machine (see warning symbols page 20, pos. E).

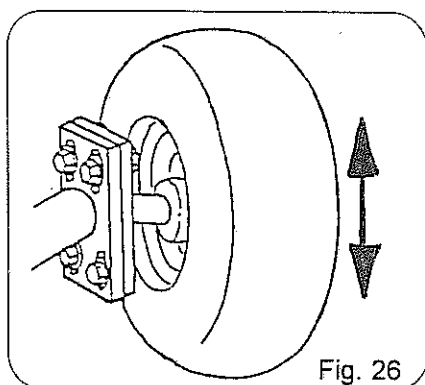


Fig. 26

If the understructure beneath the rotor is fitted on one side with a flange connection, then the rotor can be infinitely adjusted by about 1.5 cm upwards and pushed downwards into the oblong holes.

By this means an even raking from the left to the right side of a rotor can be adapted correspondingly to the fodder ratios (see fig. 26).

After adjustment the screws are screwed up again tightly.

Anzugsmoment = 41 Nm.



The adjustment should be made with the machine raised. Here the rake must be secured against accidentally dropping down.

Storage of the rake

The rake should be stored only on even and solid ground.

Before uncoupling the swather the storage device is to pull out and to lock. The swath board is to fold in.

The models RS 340-DA and TWIN-345-DA can be stored space saving by taking off the tine arms (see page 14).

Care and maintenance

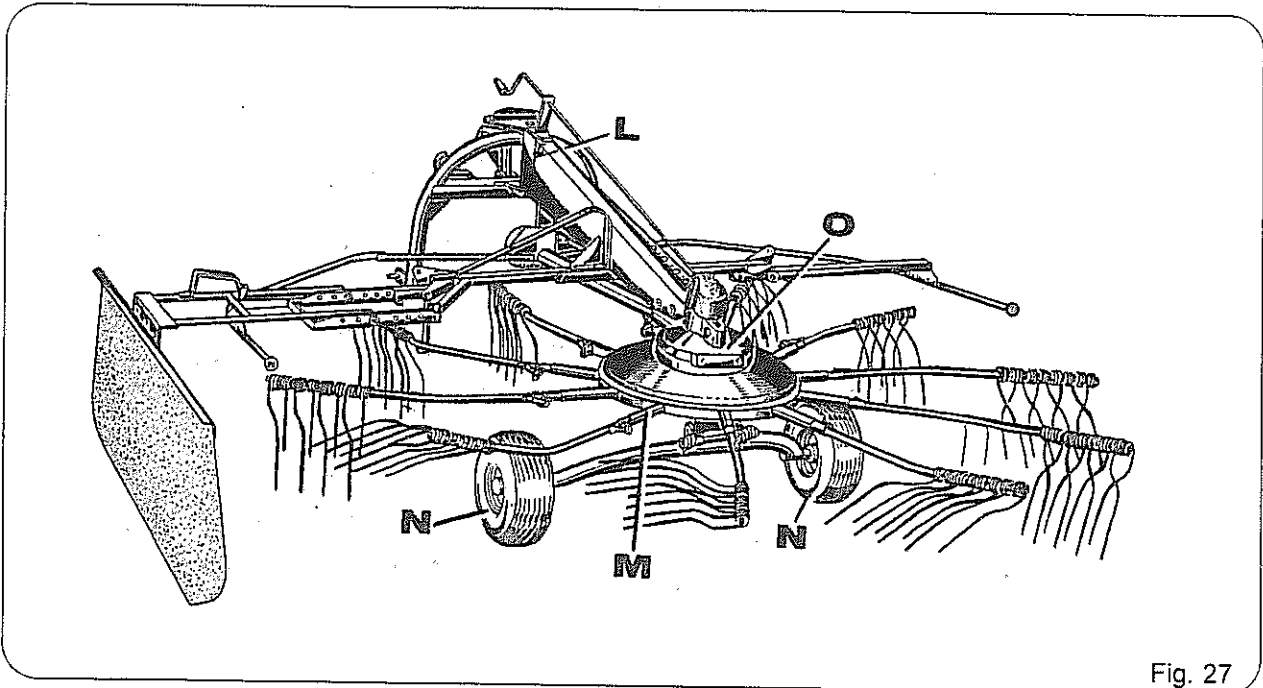


Fig. 27



Before performing maintenance and repair work, stop the tractor motor and remove the key (see warning symbol on page 20, pos. F).

If the rotary rake is raised, it must be secured against accidentally dropping down.

Lubricate the swather gear (fig. 27, pos. L) prior to initial operation with high quality grease (lubrication nipple on the gear). To distribute the grease better turn the rotary slowly by hand. Re-lubricate approx. every 10 operating hours.

Before putting the swather into operation, lubricate all tine arm bearings so that the grease emerges from both sides of the bearings (Fig. 27, Ref. M).

During the period of operation of the machine, all lubrication points with lubrication nipples must be adequately greased on a weekly basis (Fig. 27, Refs. L and M). It is also necessary to lubricate the rollers on the catch on the three-point frame. All locking and swivelling pins and spindle bearings must also be oiled weekly.

The running wheels have pneumatic tyres which require an inflation pressure of 1.5 bar (Fig. 27, Ref. N). The wheels must be checked regularly for correct tyre pressure.

Following the first operation of the machine, all screws and nuts must be checked for correct seating and tightened if necessary.

For increasing the life of the machine, it is advisable to use a thick sticking type grease applied to the roller track guide when assembling the crank lever and at regular intervals thereafter.

If the RS 340-DA or TWIN 345-DA rotary swather is to be parked in the transport position for a fairly long period of time, the tine arms located in the perforated rail should be greased at the end inserted in the hole.

Spare parts

Front roller feeler

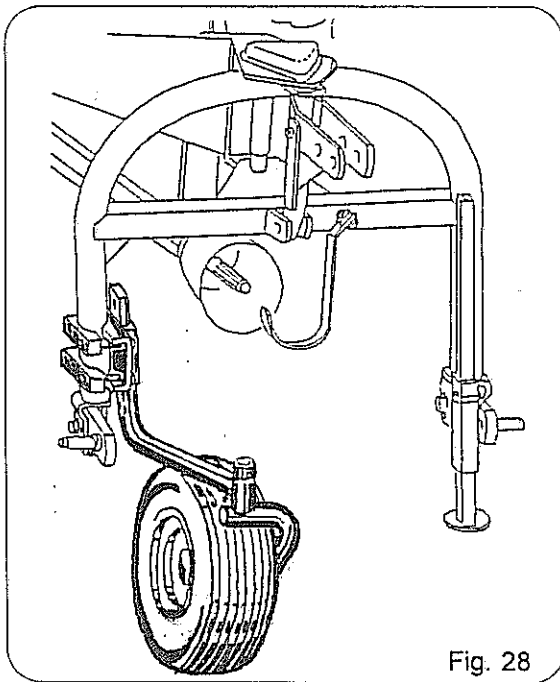


Fig. 28

The guide wheel is mounted as shown in Fig. 28.

A chain upper link is recommended for working with the guide wheel.

Quadro chassis

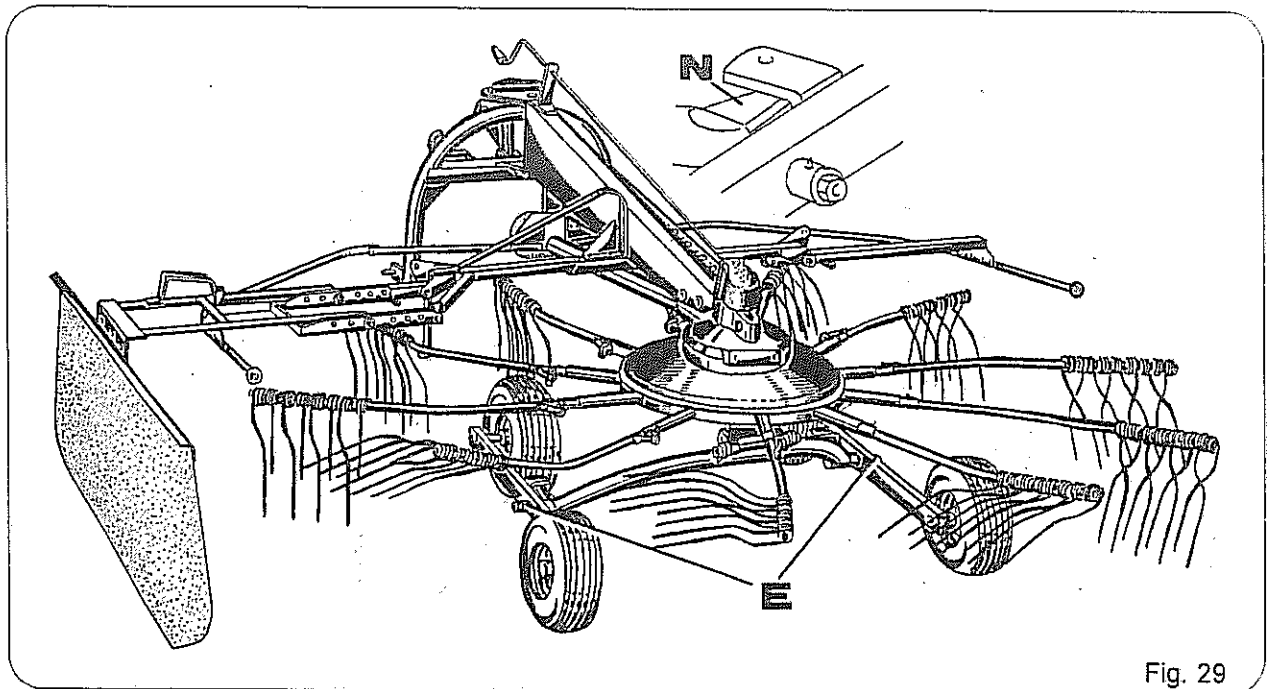


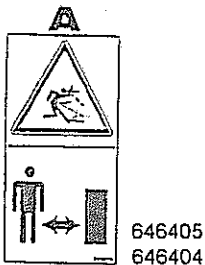
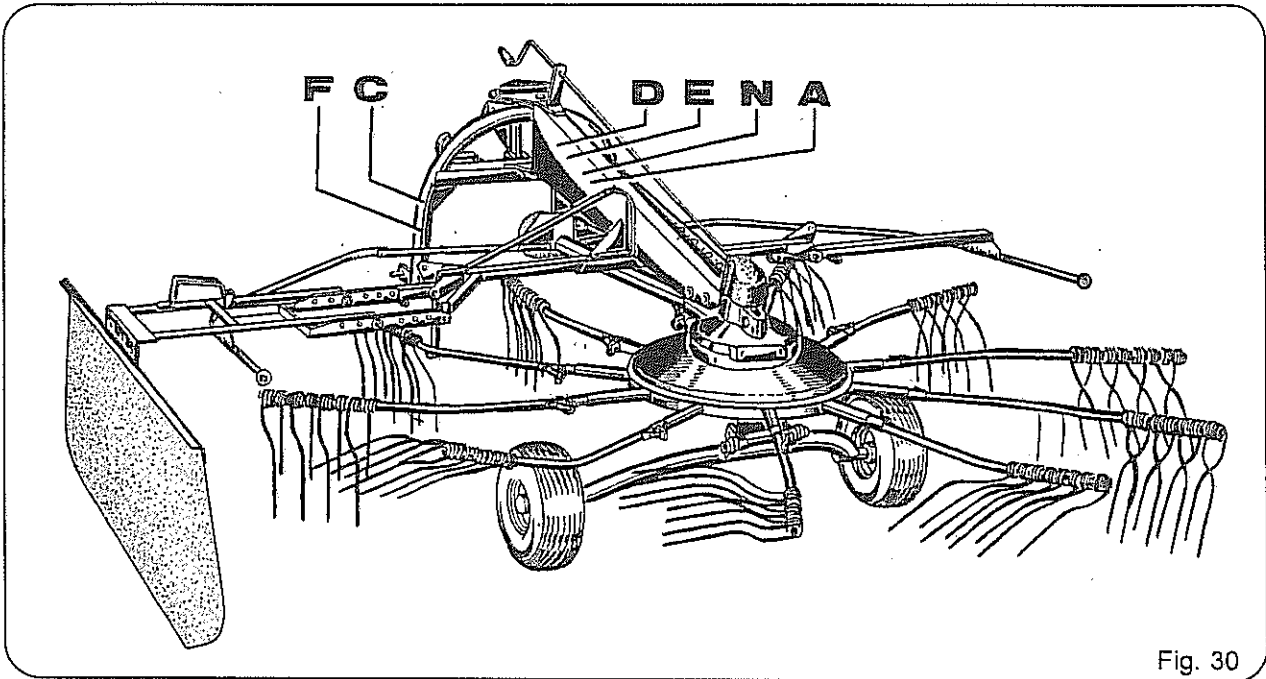
Fig. 29

Pay attention to proper of the Quadro chassis!

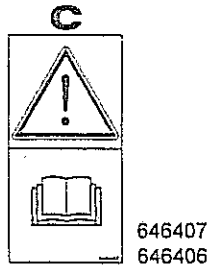
The axles of the Quadro chassis are placed on the wheel of the chassis instead of the running wheels (see fig. 29). The stops (fig. 29, pos. F) must lie in the clamps. The nuts must then be tightened securely on the wheel axles again. During operation, lubrication nipples (fig. 29, pos. E).

Warning symbols

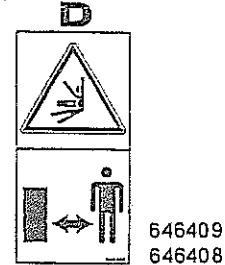
The user has to replace the warning symbols which are fallen off or are unreadable. The warning symbols can be ordered. The art.-no. are next to the symbols, straight numbers (646404) = vertical format, not straight numbers = oblong format.



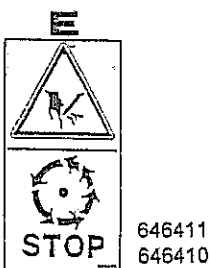
Keep distance with motor running.



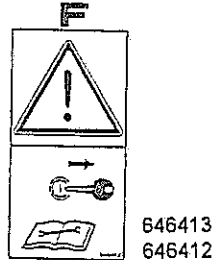
Read and pay attention to operating instructions and safety information before starting for the first time.



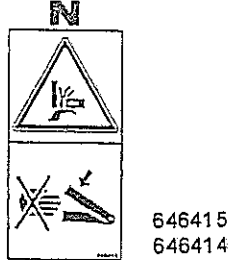
Maintain adequate safety distance to the swing area of the machine.



Do not touch any moving machine parts. Wait until they have come to a complete standstill.



Before maintenance and repair work, stop the motor and remove the key.

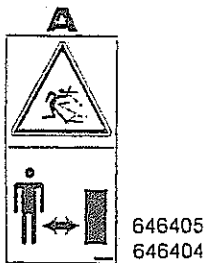
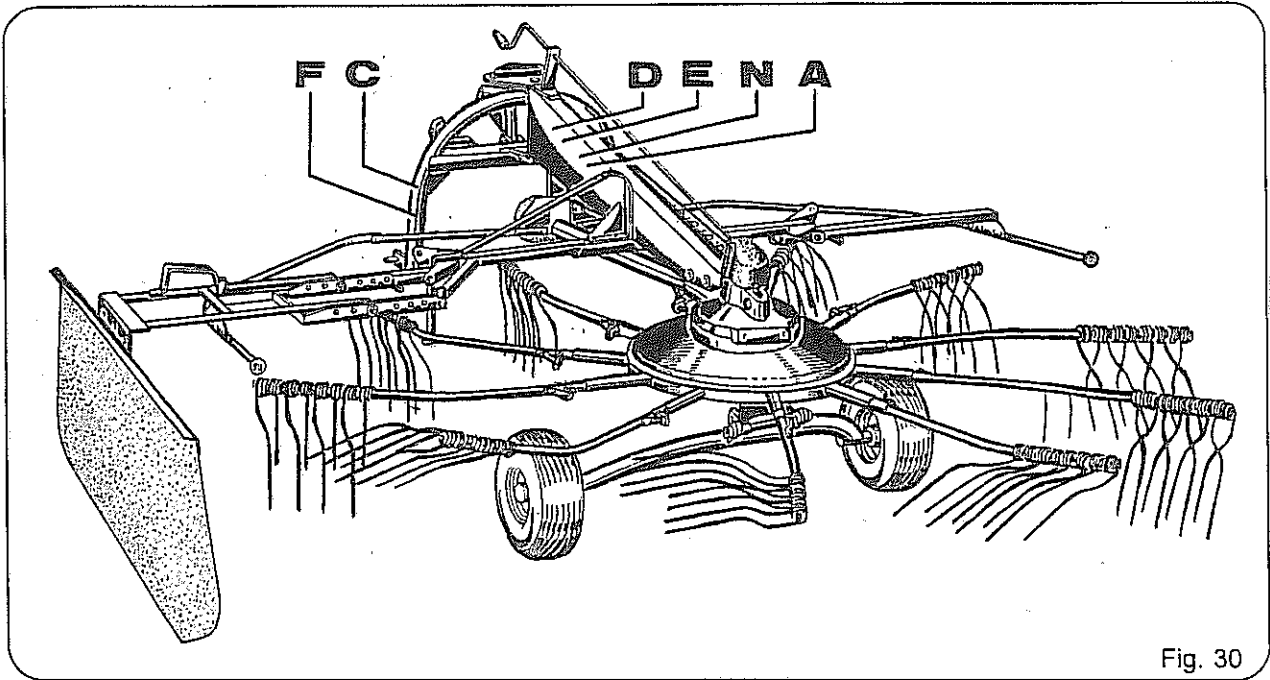


Never reach into the crushing danger zone as long as parts are moving there.

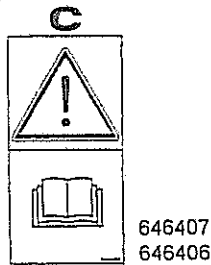
RS 300-D / RS 320-D / RS 340-D 1289 →
 RS 340-DA 1192 →
 TWIN 345-DA 0958 →

Warning symboles

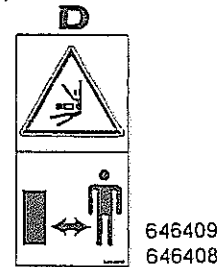
The user has to replace the warning symbols which are fallen off or are unreadable. The warning symbols can be ordered. The art.-no. are next to the symbols, straight numbers (646404) = vertical format, not straight numbers = oblong format.



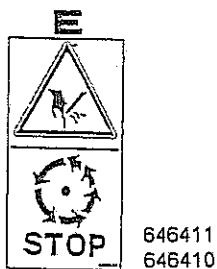
Keep distance with motor running.



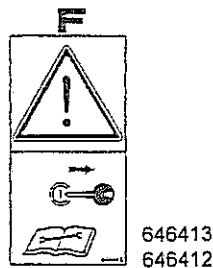
Read and pay attention to operating instructions and safety information before starting for the first time.



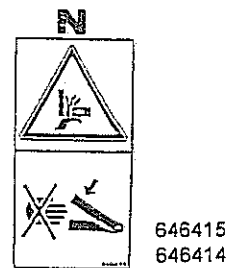
Maintain adequate safety distance to the swing area of the machine.



Do not touch any moving machine parts. Wait until they have come to a complete standstill.



Before maintenance and repair work, stop the motor and remove the key.



Never reach into the crushing danger zone as long as parts are moving there.