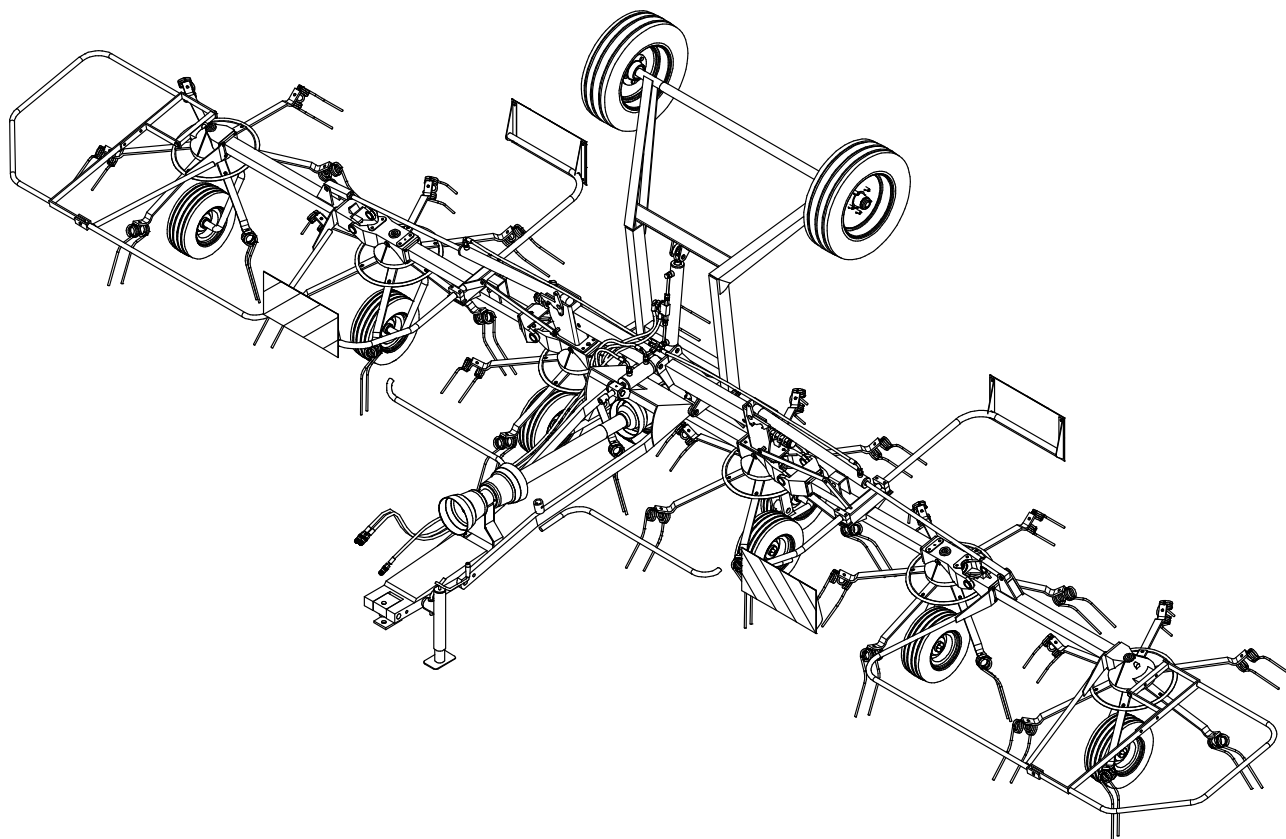


AGRICULTURAL MACHINERY  
**sitrex**®  
Spa

**ASSEMBLY, USE AND MAINTENANCE**

**ST 780 H**



**ROTARY TEDDER**

05/2006

# **WARRANTY**

SITREX spa warrants new SITREX machinery at the time of delivery to the original purchaser to be free from defects in material and workmanship if properly set up and operated in accordance with this Operator's Manual.

SITREX undertakes to repair or replace free of charge any defective part which should be returned by the purchaser (freight prepaid) and found to be defective by inspection authorized by SITREX during the warranty period.

This warranty will be valid for 12 (twelve) months from the delivery of goods to the original purchaser .

In case the customer is not in a position to return the defective part to the manufacturer , the manufacturer cannot be held responsible for any cost due for repair or replacement of any part of the machine , he will only supply the part(s) required for the repair and/or replacement.

The warranty is null and void when it is evident that the machine has been improperly used or however repaired without authorization.

SITREX undertakes no responsibility for any obligation or agreement reached by any SITREX employers,agents or dealers, which are not in compliance with the above warranty . The manufacturer cannot be held responsible for the consequent damages. This warranty substitutes any other warranty , express or implied , and any other manufacturer's obligation.

## **CHAPTER**

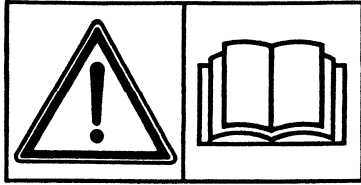
- 1) GUIDE TO THE SIGNS**
- 2) General summary of safety and accident-prevention instructions**
- 3) PRODUCT IDENTIFICATION**
- 4) DELIVERY AND ASSEMBLY**
- 5) ADJUSTMENT, PREPARATION AND USE**
- 6) TRANSPORT BY ROAD**
- 7) USE IN THE FIELD**
- 8) MAINTENANCE**

# GUIDE TO THE SIGNS AND SYMBOLS USED THIS MANUAL AND THEIR LOCATION ON THE MACHINE

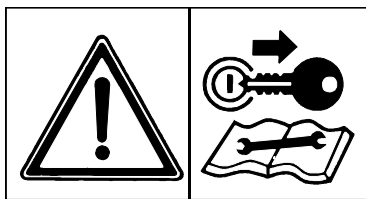
## IMPORTANT

These signs and symbols give information to the operator on how to make the best use of the machine so as to prolong life, avoid damage, optimise work and, above all, to avoid injury to the operator and anyone within range of the machine.

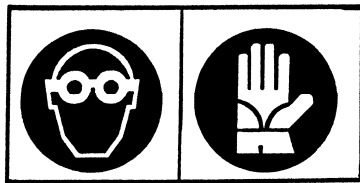
## WARNING SIGNS



1) Before beginning operations, read the instruction manual carefully.

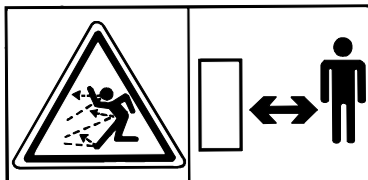


2) Before doing any maintenance or repair work, stop the machine at a suitable spot. Turn off the tractor motor, apply the brake, remove the key from the ignition and consult this manual.

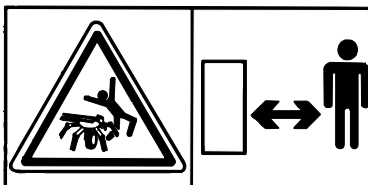


3) This is a warning to use proper accident protection when carrying out maintenance and repairs

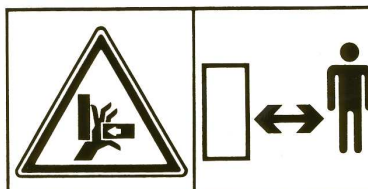
## DANGER SIGNS



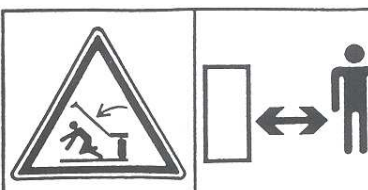
4) Risk of possible ejection of blunt objects. Keep a safe distance from the machine



5) Indicates that anyone coming within range of the moving tine arms will be seriously injured. Keep a safe distance from the machine.



6) Indicates that there is a risk of crushing your hands. Keep your distance.



7) Indicates danger caused by accidental fall of suspended arms. Keep safe distance.



8) Indicates that it is dangerous to touch the cardan (P.T.O.) shaft.  
For all the other information regarding the cardan shaft, see the use and maintenance booklet specifically for the cardan shaft which, together with this manual, makes up the documentation on safety, use and maintenance of the machine.

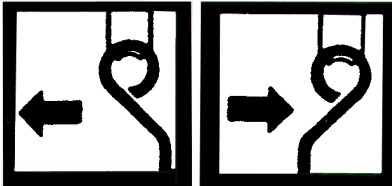
### INDICATION SIGNS



9) Indicates a greasing point .



10) Shows the direction of rotation of the power takeoff and the maximum number revolutions.



11) Indicates position of the tines on the rotors and their direction of rotation.

### MANUAL SIGNS.

**DANGER**



Indicates an impending dangerous situation which, if not avoided, will cause death or severe personal injury.

**ATTENTION**



Indicates a potentially dangerous situation which, if not avoided, could cause death or severe personal injury, including dangers which are present when protection is removed.

**CAUTION**



indicates a potentially dangerous situation which, if not avoided, can provoke less severe or minor injuries.

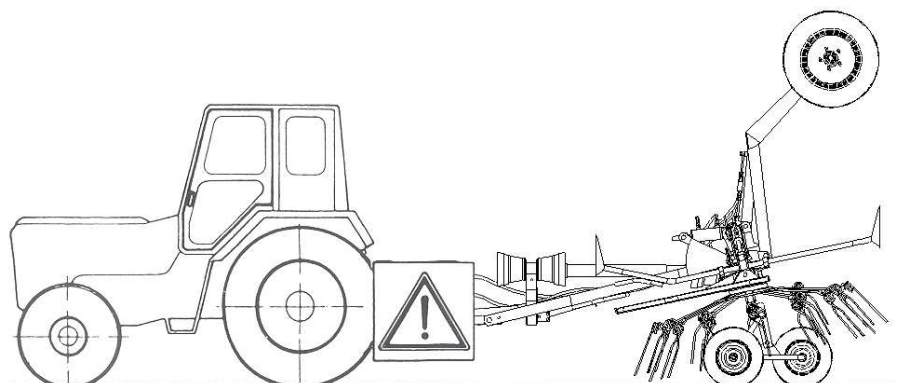
# GENERAL SUMMARY OF SAFETY AND ACCIDENT PREVENTION INSTRUCTIONS

Read all the instructions carefully before using the machine. When in doubt seek advice from the manufacturing company.

The manufacturing company declines all responsibility for non-compliance with the following safety and accident prevention instructions.

1. Pay attention to the danger signs and symbols in this manual and on the machine.
2. Do not touch moving parts.
3. All work on the machine (including adjustments) must always be carried out with the tractor immobilised and the engine switched off.
4. On no account may persons or animals be carried on the machine.
5. Driving the tractor with the machine connected is absolutely forbidden to persons lacking suitable experience, or who are in poor health, or who are too young or do not have a suitable driving licence if travelling on the highway.
6. All accident prevention measures recommended in this manual should be scrupulously observed.
7. Connecting the machine to the tractor creates a different weight distribution on the tractor axles and so it is essential to ensure that the tractor-machine combination is stable in all anticipated working condition. It is therefore necessary to have exact instructions from the tractor manufacturers. If such instructions are not available, suitable tests should be conducted in safe conditions in order to assess stability.
8. Once the machine is connected it can only be controlled through a Cardan (P.T.O.) shaft complete with the required overload protection and guard secured with the appropriate small chains. Be aware of the rotational direction of the Cardan (P.T.O.) shaft.
9. Before operating the tractor and machine, check that all transport and operational safety devices are complete and working.
10. When driving on public roads, you should comply with the highway code regulations for the country concerned.
11. Do not exceed the tractor axle maximum weight and the total mobile weight.
12. Before starting work, familiarise yourself with the control devices and how they work.
13. Wear suitable clothes. Do not wear clothing which is loose or which could become entangled in rotating or moving parts.
14. Connect the machine to a suitably powerful tractor by using an appropriate lifting unit and in accordance with instructions.
15. Take maximum care when connecting and disconnecting the machine to and from the tractor.

16. The machine and any road transport attachments must bear the appropriate signs and symbols and have suitable protection.
17. Never leave the driving seat when the tractor is running.
18. It is extremely important to appreciate that road-holding, steering and braking may be significantly affected with the machine attached.
19. When turning corners with the machine attached, be aware of the fact that the centrifugal force will alter due to the change in the centre of gravity.
20. Before engaging the power takeoff, check the pre-set revolution speed, **MAXIMUM 540rpm.** Do not use 1000rpm drive.
21. Under no circumstances should anybody stand near the machine or any moving parts. It is the duty of the operator to ensure that this requirement is respected.
22. Before leaving the tractor, lower the machine with the lifting unit, stop the engine, apply the parking brake and remove the ignition key from the instrument panel.
23. Under no circumstances should anybody go between the tractor and the machine (Fig.1) when the engine is running and the Cardan (P.T.O.) shaft is engaged, especially without first having applied the parking brake and placed chocks against the wheels.
24. Before connecting or disconnecting the machine to or from the 3-point linkage, put the lifting unit lever into the locked position.
25. The connection pins on the machine must match the connection sockets on the lifting unit.
26. During transport, stop machine sway, secure the lower lift arms with the stabilisers or check chains.
27. When the machine is raised during road transport, put the tractor's hydraulic lift control lever into the locked position.
28. Only use the Cardan (P.T.O.) shaft provided by the manufacturer and, in case of replacement, substitute it with one having the same characteristics.
29. Regularly check all protection guards on the Cardan (P.T.O.) shaft. These should always be in excellent condition and securely fixed.
30. It is important to ensure that the protection on the Cardan (P.T.O.) shaft is complete.
31. Connection and disconnection of the Cardan (P.T.O.) shaft must be carried out with the engine stopped and switched off.
32. Pay particular attention to the correct connection and safety of the Cardan (P.T.O.) shaft and the power takeoffs on the machine and the tractor.



- 33. Prevent the Cardan (P.T.O.) shaft protection from rotating using the chains supplied.
- 34. Before engaging the power takeoff, make sure that there are no people or animals in the vicinity and that the selected engine speed corresponds to the Cardan (P.T.O.) speed permitted. 540rpm **MAXIMUM**.
- 35. Do not engage the power take-off when the engine is not running.
- 36. Always disengage the power take-off when the Cardan (P.T.O.) shaft is at too wide an angle (it should never be more than 35° - Fig.2) and when it is not in use.

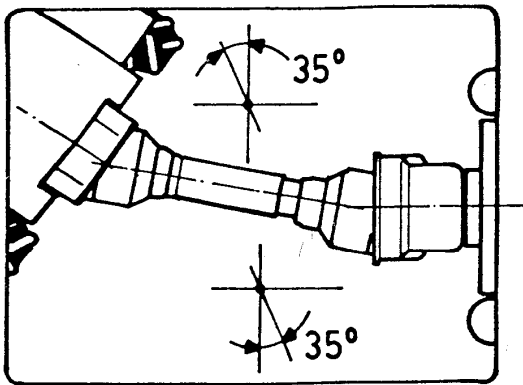
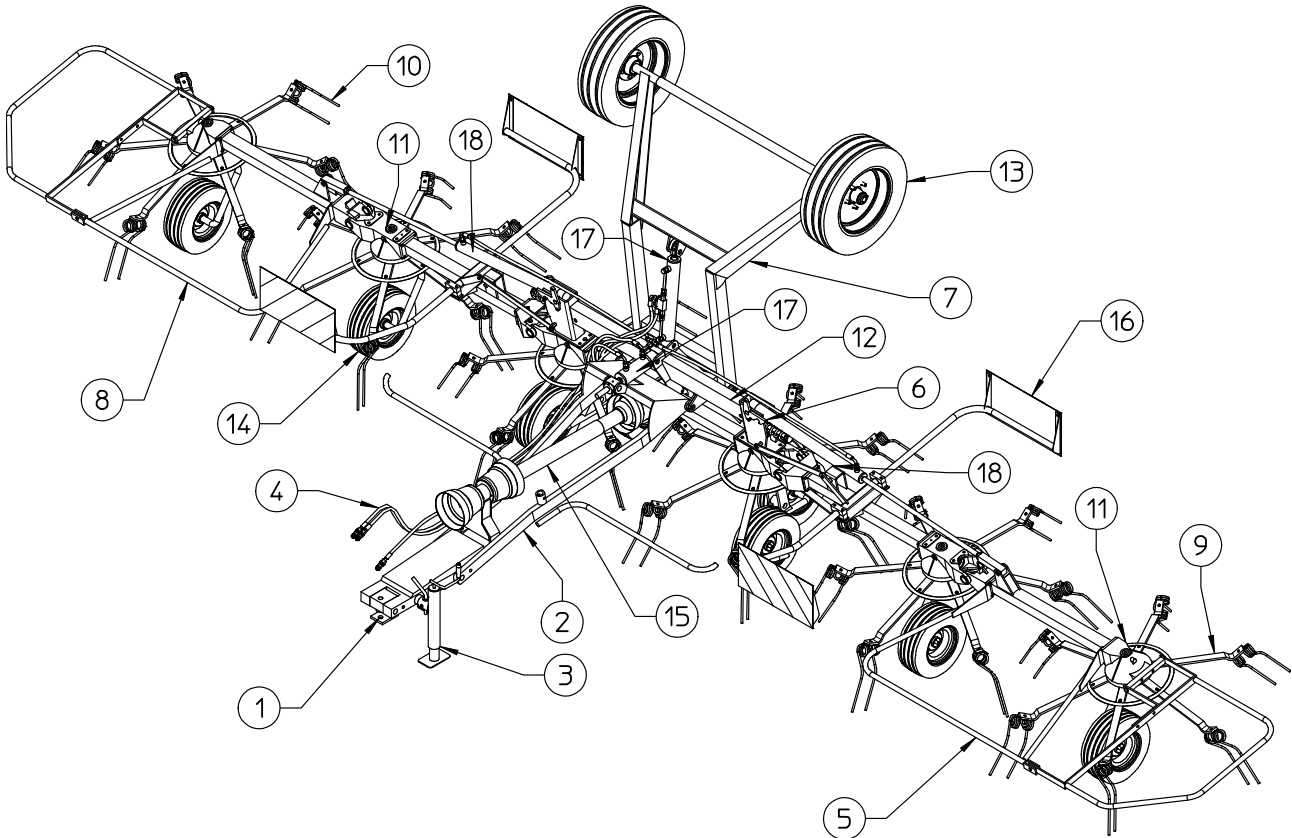


FIG.2

- 37. Only clean and grease the Cardan (P.T.O.) shaft when the power takeoff is disengaged, the engine is off, the parking brake is applied and the ignition key is removed.
- 38. When the Cardan (P.T.O.) shaft is not in use, rest it on the support provided.
- 39. On disconnecting the Cardan (P.T.O.) shaft, replace the protective cover on the power input (gearbox) shaft.

- 40. Prolonged use of the machine can cause the drive boxes (Fig.4) to become hot. To avoid any risk of getting burnt, avoid touching these areas both during use and some time afterwards.
- 41. Periodically check screws and nuts for tightness and grip. Tighten as necessary.
- 42. When the machine is raised for maintenance work and tine replacement, put suitable supports under the machine as a safety precaution.
- 43. Ensure that the recommended grease is used.
- 44. Spare parts must meet the requirements as defined by the manufacturer. Use only original spare parts.
- 45. Safety decals must always be clearly visible. They must be kept clean and replaced if they become too illegible (they can be ordered from the dealer if necessary).
- 46. The instruction booklet must be available to all users for the lifetime of the machine.

## PRODUCT IDENTIFICATION



### MAIN PARTS

- 1) BRACKET
- 2) DRAWBAR
- 3) PARKING STAND
- 4) HYDRAULIC KIT
- 5) L.H. GUARD
- 6) RATCHET
- 7) AXLE
- 8) R.H. GUARD
- 9) TINE ARM
- 10) TINE
- 11) GEARBOX
- 12) FRAME
- 13) TRANSPORT TYRES
- 14) WORKING TYRES
- 15) CARDAN SHAFT
- 16) LIGHTING BRACKET
- 17) CYLINDER
- 18) CYLINDER



IDENTIFICATION PLATE

| Rotors | Arms for Rotor | RPM Rotors | RPM Tractors       | Tyres Working   | Maximum Width     | Transport Width | Working Width    | Working Width DIN | Power Required | Operating Speed   | WEIGHT              |
|--------|----------------|------------|--------------------|-----------------|-------------------|-----------------|------------------|-------------------|----------------|-------------------|---------------------|
| 6      | 6              | 130        | 350-450<br>max 540 | 16X6.50<br>8PLY | 8,05 Mt<br>26' 5" | 3 Mt<br>10'     | 7,8 Mt<br>25' 7" | 7,5 Mt<br>24' 7"  | HP 70<br>KW 50 | 16 Km/h<br>10 MPH | Kg 1120<br>lbs 2470 |



## **DELIVERY AND ASSEMBLY**

### Checking the machine on delivery

All parts are carefully checked before dispatch or delivery.

On receiving the machine, ensure that it has not been damaged during transport. If damage has occurred, contact the dealer concerned.

Details of packing are given below.

### **UNPACKING THE MACHINE**



**DANGER !!!**

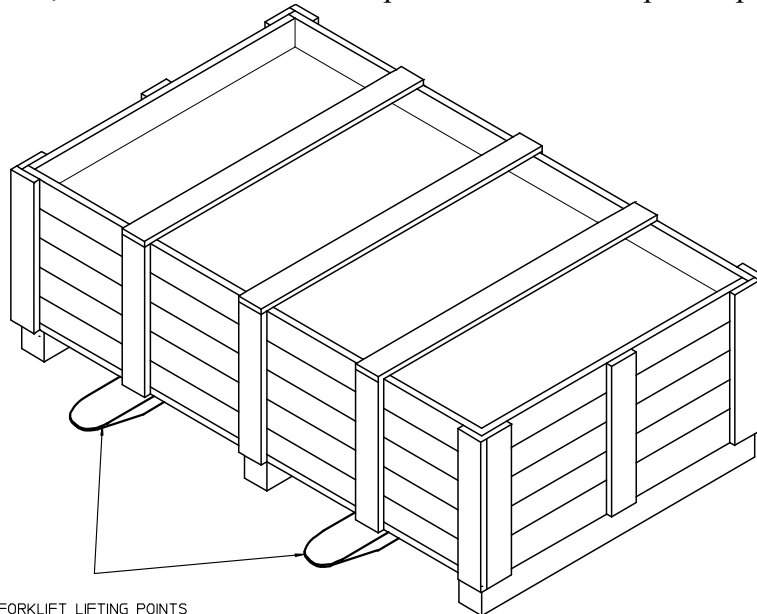


Lift the machine using a forklift truck, crane or other suitable equipment of sufficient capacity after first checking the weight of the configurations in the table given below.

Check the stability and positioning of the load on the forklift truck forks or crane hook.

Keep the load as low as possible during movement for maximum stability and to ensure that the operator has maximum visibility.

If a forklift truck is used, ensure that the forks are positioned as wide apart as possible.



FORKLIFT LIFTING POINTS

|            | <b>WEIGHT PACKING</b> | <b>WEIGHT</b> |
|------------|-----------------------|---------------|
| <b>KG</b>  | <b>1250</b>           | <b>1120</b>   |
| <b>LBS</b> | <b>2750</b>           | <b>2470</b>   |

#### NOTE:

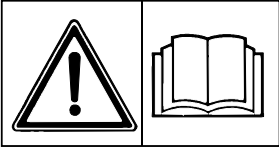
1) The packing consists mainly of wood, which should be disposed of according to the laws in force in the country where the machine is used.

The plastic film should also be disposed of according to the laws in force in the country where the machine is used.

2) When storing, it is permissible to stack 2-3 crates on top of each other. Make sure that they are perfectly aligned cortically.

3) In the event of further transport, ensure that the machine when on the transporting vehicle.

# Assembly instructions



**DANGER !!!**

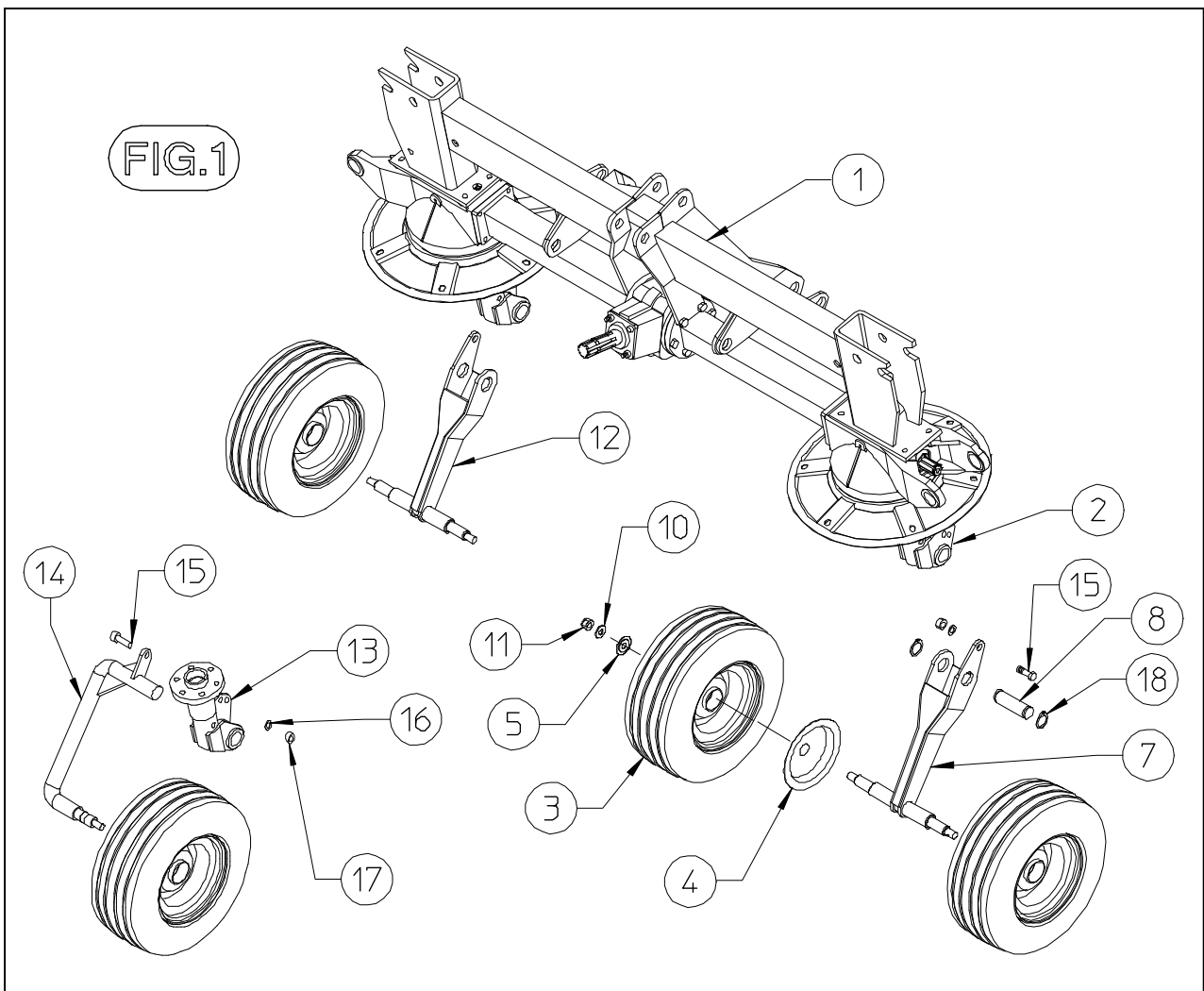


Assembly is highly dangerous and must be carried out in strict accordance with the following instructions. We recommend that qualified personnel perform assembly. We also recommend that assembly be carried out in a flat, solid surface, open area with no people (particularly children) nearby who could be severely injured if they were to touch or move any parts of the machine.

Assemblers must provide suitable lifting mechanisms and supports for stabilizing the partially assembled units, so as to prevent them from falling and causing damage or injury. The steps for assembly are illustrated in following. Depending on the experience of the assemblers and the tools available, it is not necessary that the instructions be followed in the exact order given here, but the safety precautions described above must always be followed carefully and scrupulously.

## Assembly sequence:

Fig. 1 - Place the rotor axle (1) in a stable position and then mount the tyres support (6). Use the pivot (8) and the Seeger circlips (18) to mount support (7) and (12) on to the support so they are facing in the direction shown in the figure. Use the washer (10) and nut (11) to assemble the wheels with their guards (4) and (5) on to the tandems. Make sure that, when the wheel brackets (14) are mounted on to the supports (13), the bracket plate matches the plate divided into sectors for the various supports. Use the screw (15), the nut (17) and the washer (16) to fasten the wheel bracket into position..



The wheels should face in the direction shown in the drawing.

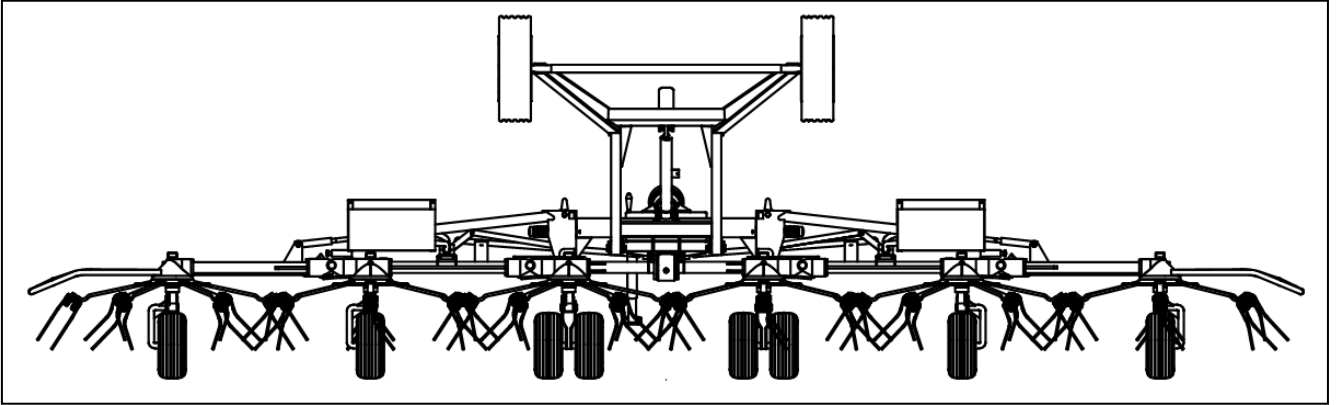
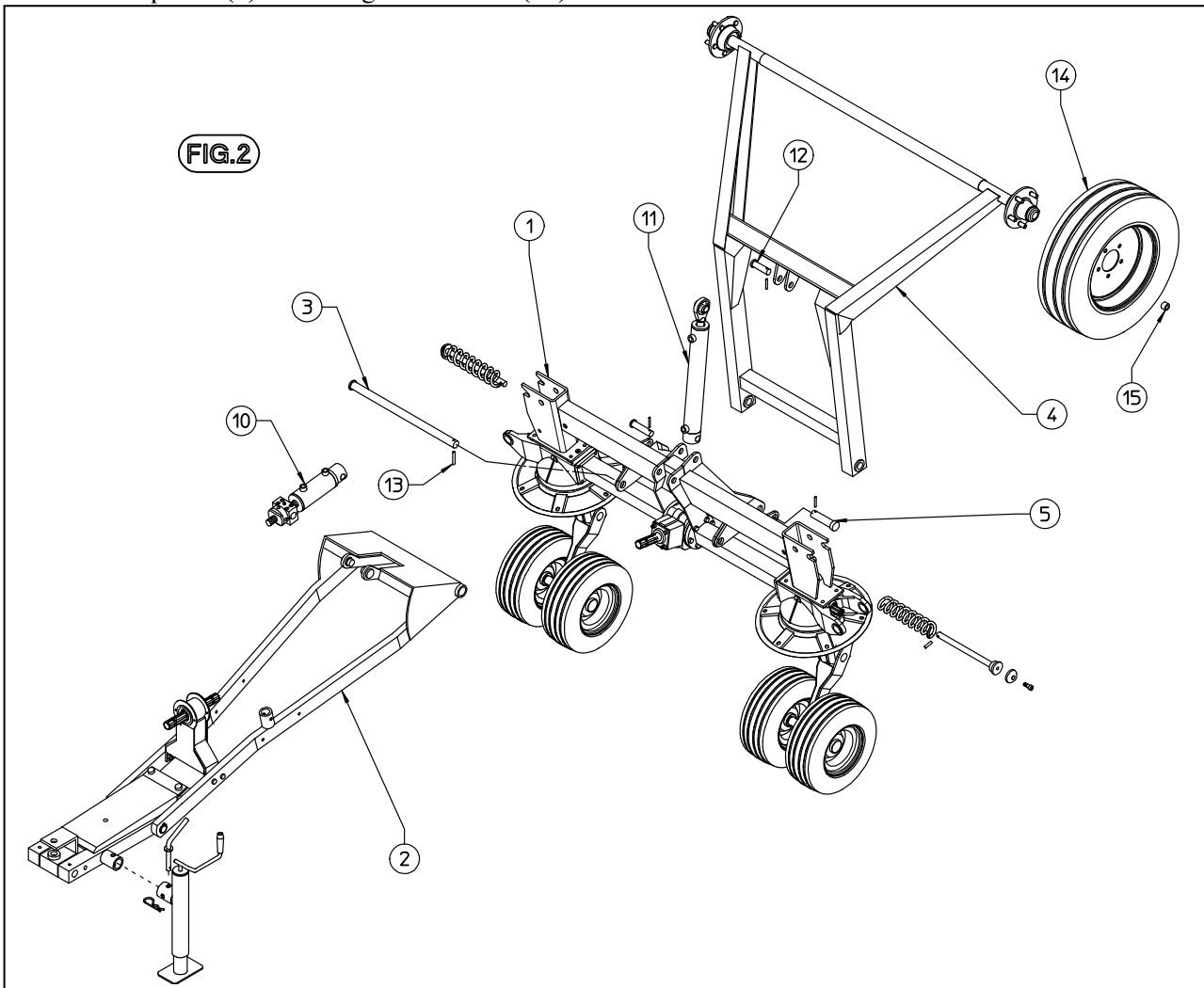
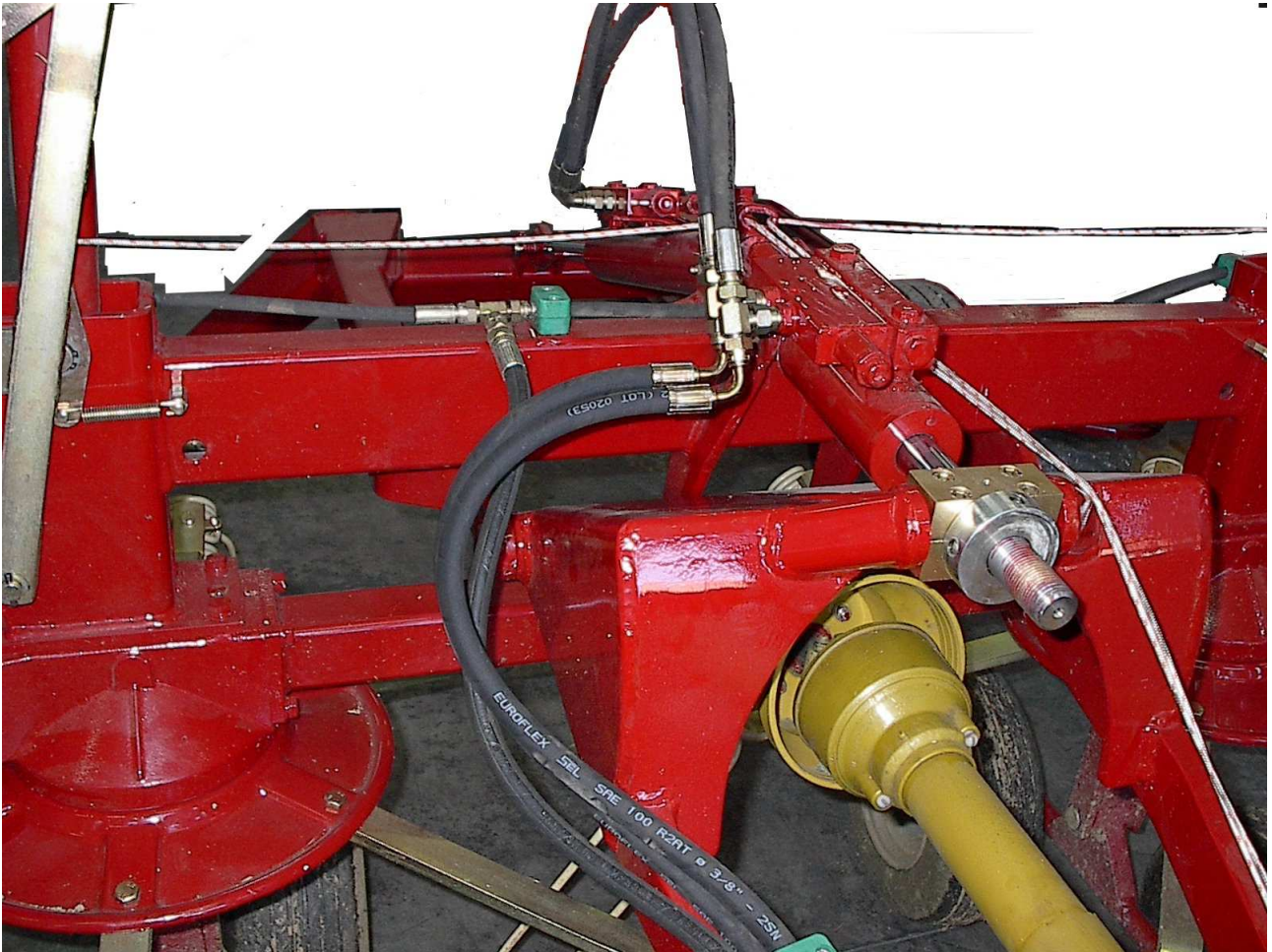


Fig. 2 - Use the pivot (3) and the elastic pin (13) to assemble the rotor group. Now assemble the transport axle with the pivots (5). Use the grommet nuts (15) to fasten the wheels on to the rear axle.



After assembling the front drawbar and rear axle, mount the master cylinders (10) and (11). Use the two pivots to fasten the axle cylinder, whereas the drawbar cylinder has first to be screwed on to the support already assembled on the drawbar, and then the rear pivot is inserted. Fasten the screwing block plate over the cylinder screw, as shown in the photo.



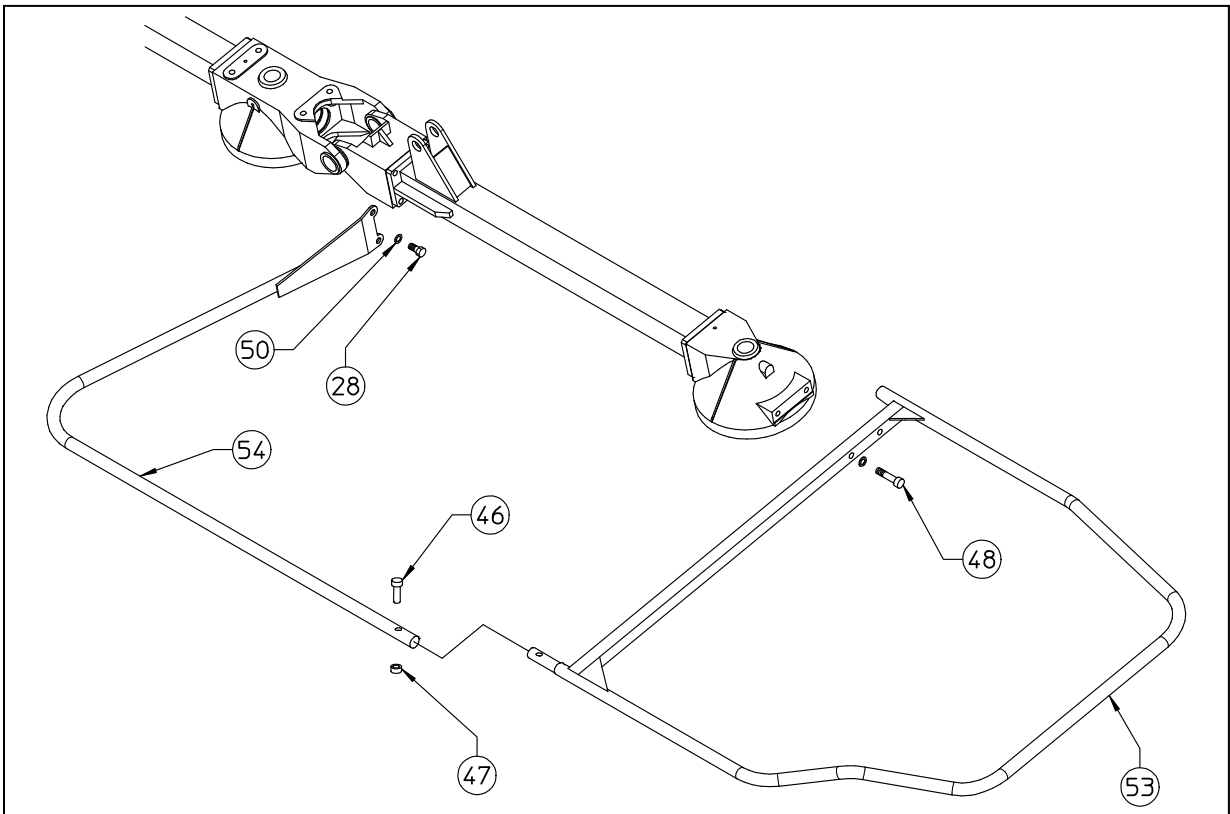
Assemble the oleodynamic system so that the tubes are arranged as shown in the following photo. Pipes should be released in this phase (the hose clamps must not be tightened). After connecting machine to tractor, lift the machine, place hoses so that they do not force and then tighten hose-clamps.



In order to assemble the spring rods, proceed as follows:  
open the machine in its working position and connect the oleodynamic system to the tractor.  
Insert the spring rod into position and then raise the side arms. As the arm rises, it compresses the spring.  
Use the hole in the tube to uncover the hole on the spring guide rod. Stop the cylinder and insert the elastic pin through the hole in the rod so that the pin does not touch the tube. The following photos show the entire sequence.



Use the flat drawrod to assemble the road sign plate supports. Once assembled, the sign plates should be parallel to the ground. If not, adjust the support already assembled on the machine by unscrewing it and moving it slightly in order to get the correct position.



Assemble the guards with screws 28 and 48. Attach the lateral guard 54 and 53 (LH) to machine body using screws 28-46-48, nut 47 and washers 50.

In this step, you will use:

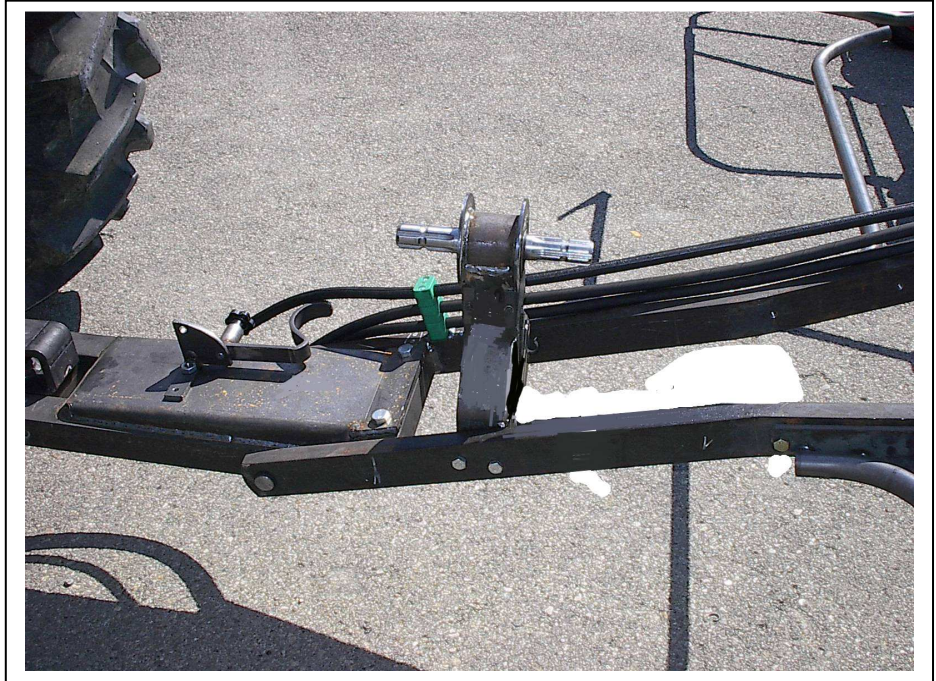
Item 46 : 1 screws M10x45

Item 47 : 1 nuts M10

Item 48 : 2 screws M12x50

Item 50 : 4 washers  $\varnothing 13$  ( $\varnothing 0.51''$ )

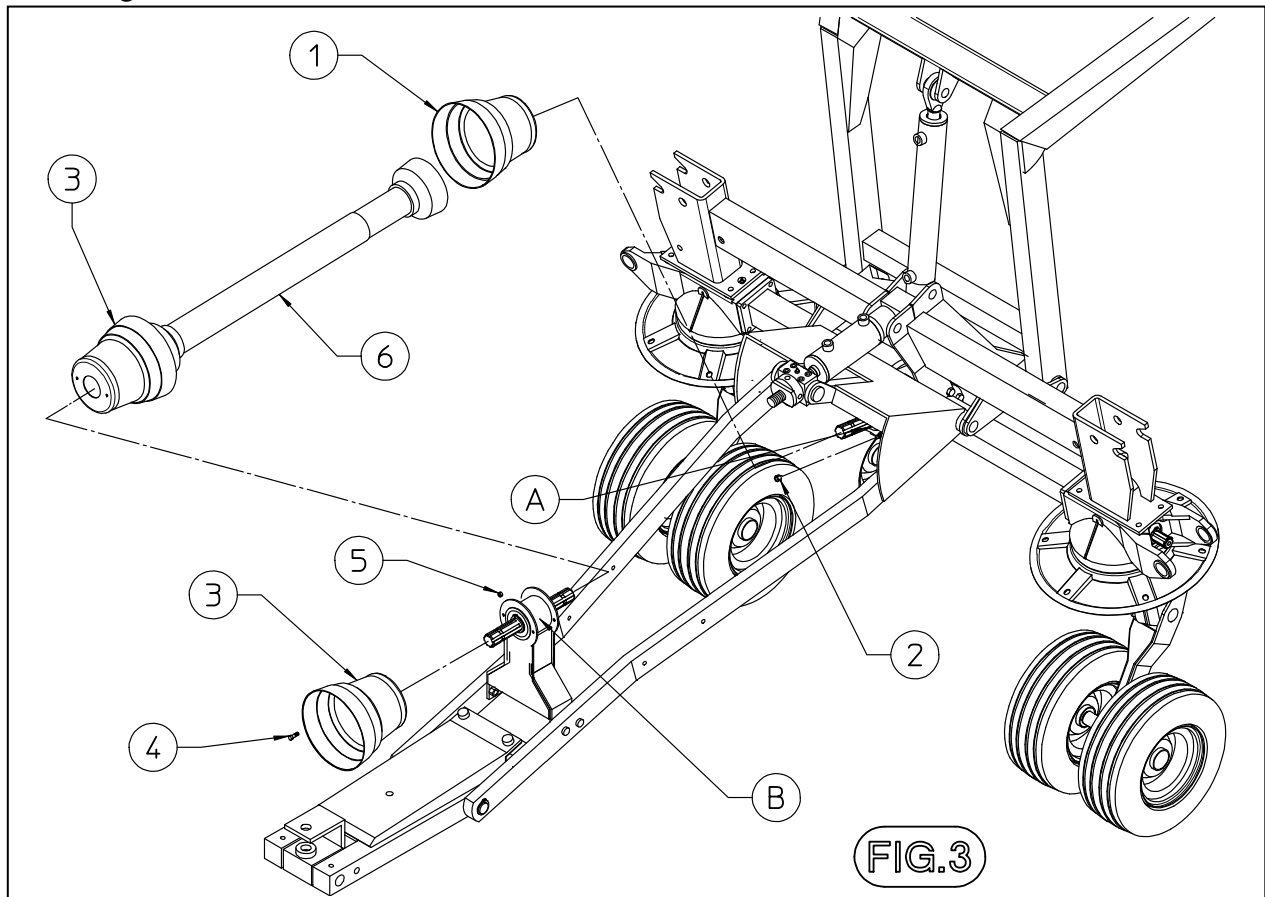
Assemble the cardan support.

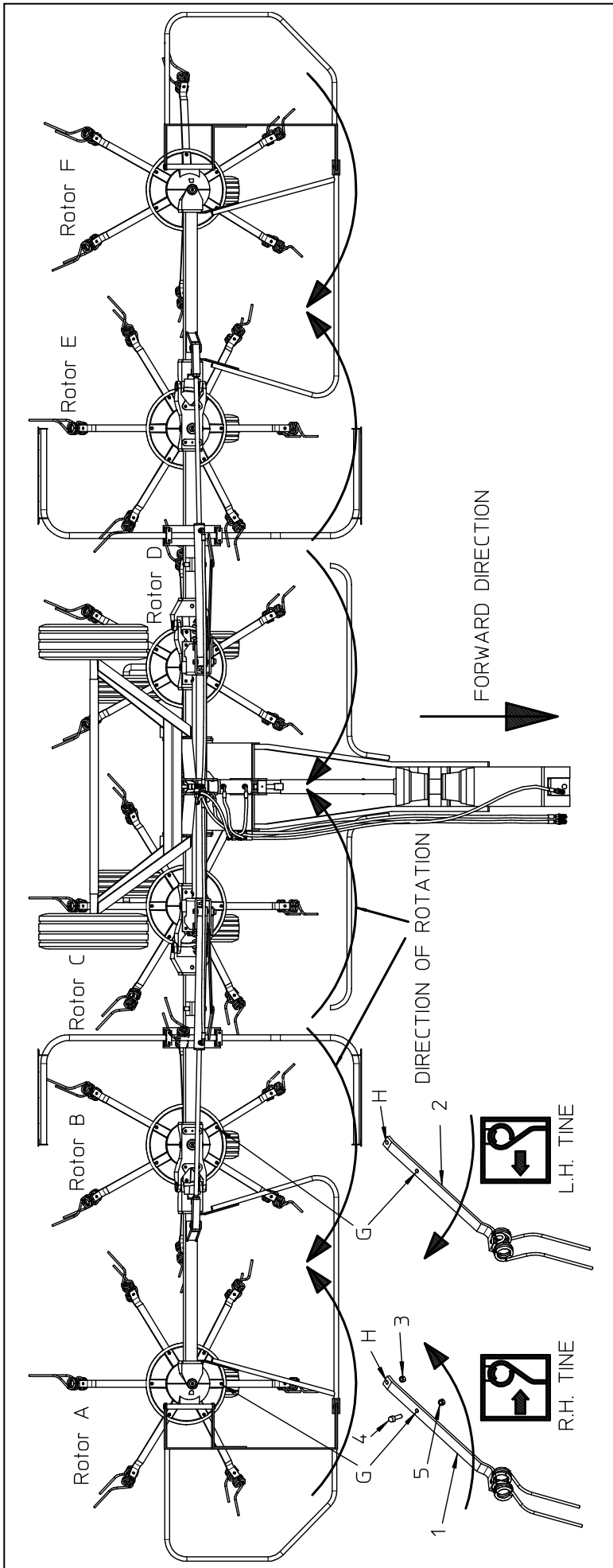


Attach casing 1 to the central housing A and fasten using nuts 2.

Attach casing 3 to the support B and fasten using screw 4 and nuts 5.

Mounting cardan shaft 6





**DIAGRAM OF TINE ASSEMBLY**

Tine bars 1 (R) are attached to rotors A - C - E. Tine bars 2 (L) are attached to rotors B - D - F.

Attach tine bars 1 - 2 (R-L) to the respective rotors, placing holes H of tine bars 1 - 2 over the screws already in place on the lower central part of rotors A - B - C - D - E - F and fasten with nuts 3.

Insert screws 4 in the holes G indicated on rotors A - B - C - D - E - F and in tine bars 1 - 2 (R - L) and fasten with nuts 5.

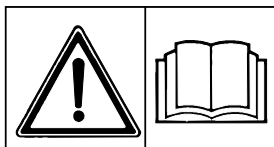
**Assembly is now completed.**



## ADJUSTMENT, PREPARATION AND USE



**DANGER !!!**



Connection to the tractor is highly dangerous. Take great care and carry out the entire operation in strict compliance with the following instructions.

Nobody should go near the area between the tractor and the machine.

Check that the tractor is in good running order. Check the engine oil, gearbox oil, brake fluid and cooling water levels as well as the tyre pressures.

Refer to the tractor operator's manual.

### ATTACHMENT MACHINE TO THE TRACTOR

The attachment of pull-type machines to the tractor is very simple, as it is only necessary to couple the drawbar hitch (3) to the tractor hitch using a pin of appropriate size, strength and shape. Always use extreme care when reversing the tractor towards the machine.

The drawbar hitch (3) can be set in different positions, using pin (4) turning the hitch upside-down from (A) to (B), to allow coupling to all tractor types.

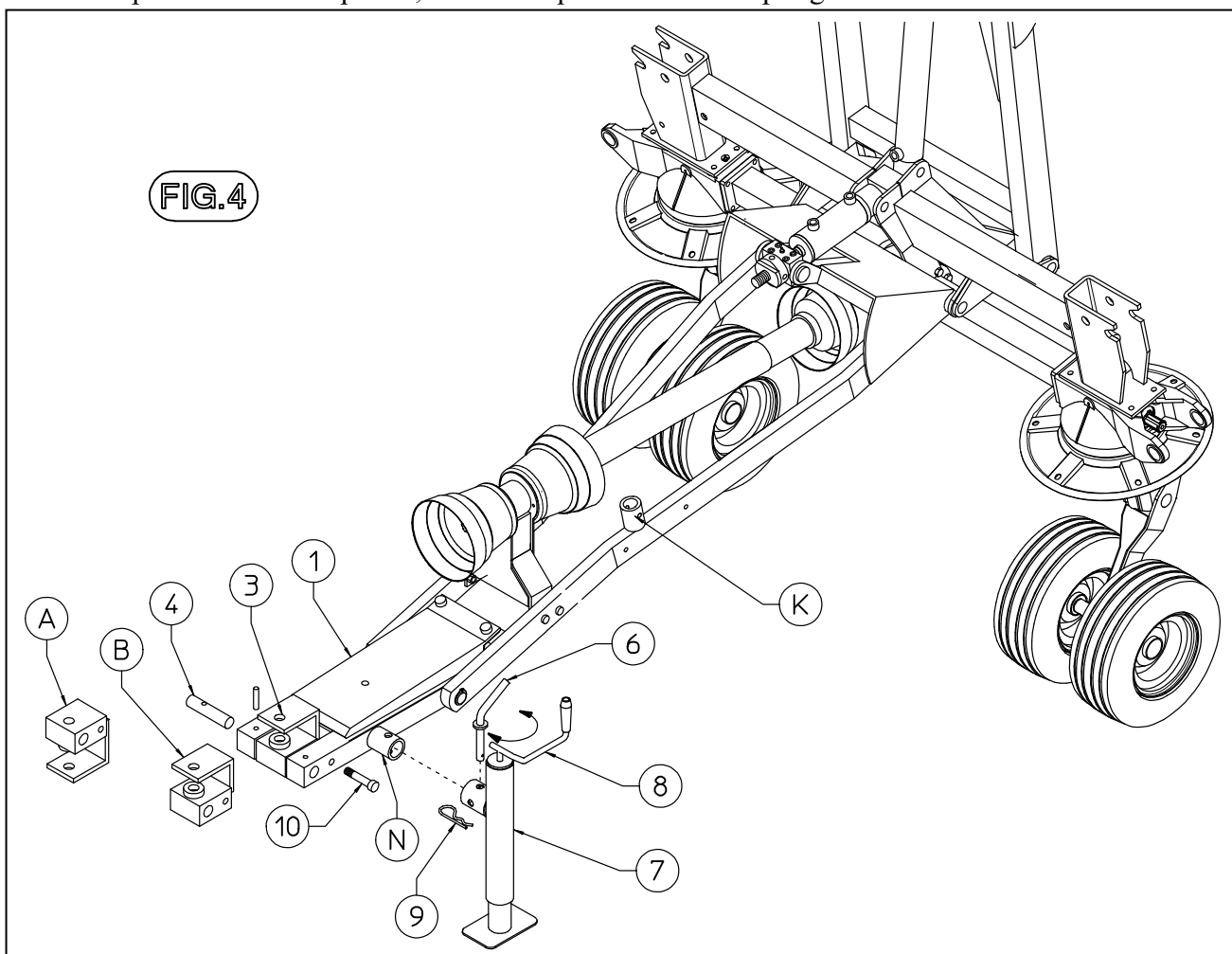
If the two-point crosspiece is used, lock the drawbar hitch (3) using the optional screws (10).

**Attention: do not use screws (10) if the machine is hitched to the drawbar.**

During transport and working the parking stand (7) must be shifted from position "N" to position "K". This is done by removing clip (9) and pin (6) and moving stand (7) out of the parking position.

Fasten parking stand (7) into the transport position using pin ((6) and clip (9).

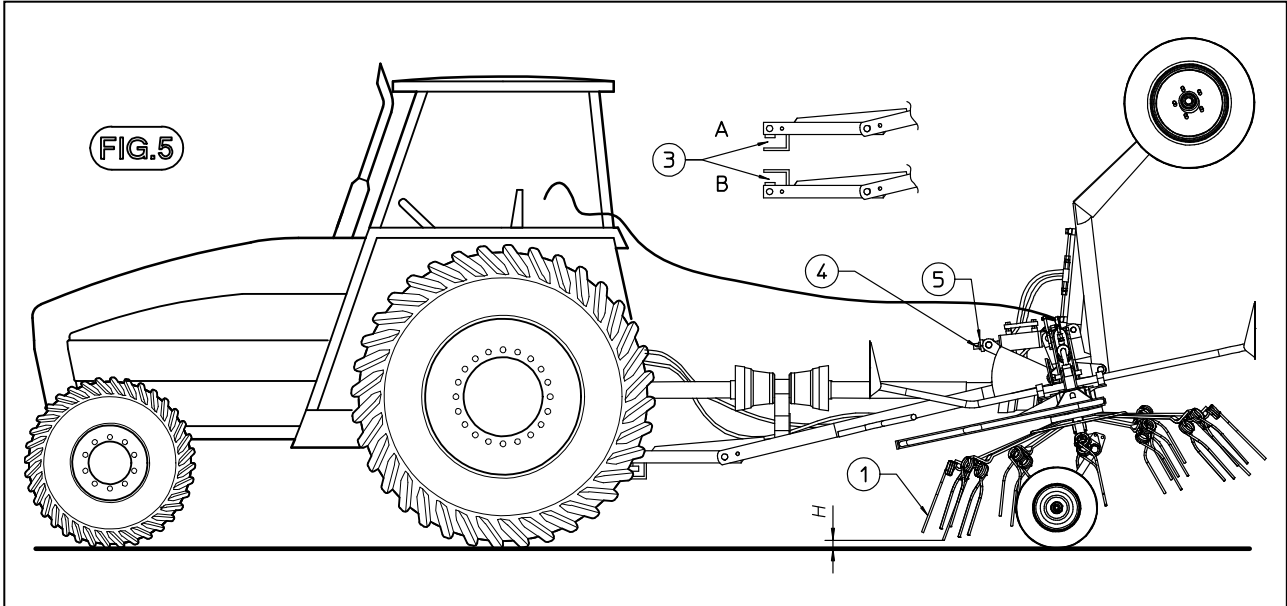
Once this procedure is completed, insert the quick-release coupling the tractor socket.



At this point, work carefully with the hydraulic distributor to make sure that the frame is completely lowered, and then adjust the height of the tines (H) above the ground. To change the distance between the tines and the ground, turn locking (4) and rotating the self locking nut (5), the tilt of the machine relative to the ground is adjusted.

It is advised to adjust the front tine so that it is 1 3/8" from the ground.

If adjustment is too high, the forage will not be completely picked up and if it is too low, the forage risks becoming dirty, the grass will be damaged and the double elastic tines will be worn down.

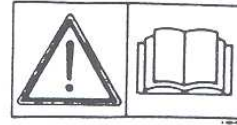


Before starting off for work, be sure that the machine is correctly assembled and in good operating condition.

# CONNECTING THE CARDAN SHAFT



**DANGER!!!**



More detailed information may be found in the Cardan shaft manual which, together with this manual, is an essential part of the accident-prevention documentation. It is your responsibility to read and comply with this documentation. If information given in this manual should conflict with that given in the Cardan shaft manual, you should follow the instructions given by the Cardan shaft manufacturer.



**DANGER!!!**



Fit the Cardan shaft and check that the shaft is connected correctly both at the tractor end and at the machine end. For more details, see the descriptions on the following pages.

If a safety system is provided, this should be fitted to the machine end, not to the tractor end.

During both transport and use, avoid conditions where the Cardan transmission shaft is extended to the maximum. In all working conditions, the telescopic tubes must overlap by at least  $\frac{1}{3}$  of their length (Fig.1).

Conversely, when the Cardan shaft is contracted to the maximum, there should still be a gap of approximately 50 mm (2") (Fig.2).

Take particular care when connecting the two Cardan shaft end forks and make sure that they are fully secured.

This is achieved by inserting the safety pins and bolts (1) (Fig.3.) in the special slots(2) on the power takeoff shafts on both the tractor and machine ends.

A loose shaft could come apart and cause considerable mechanical damage and serious injury to persons.

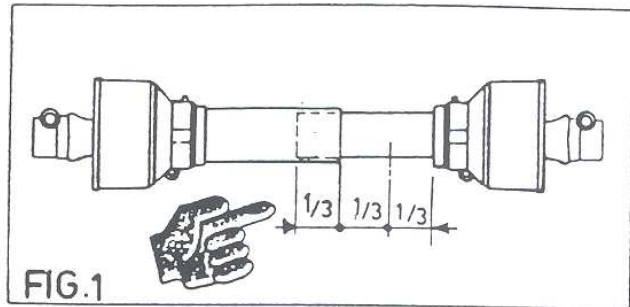


FIG.1

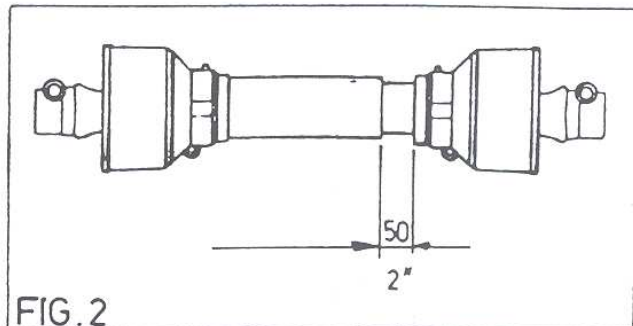


FIG.2

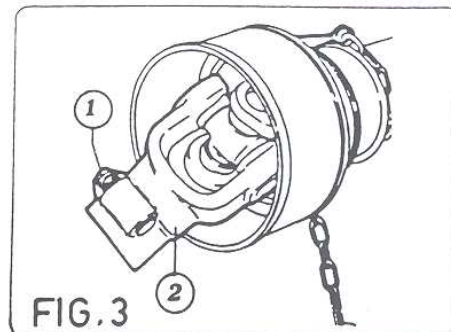
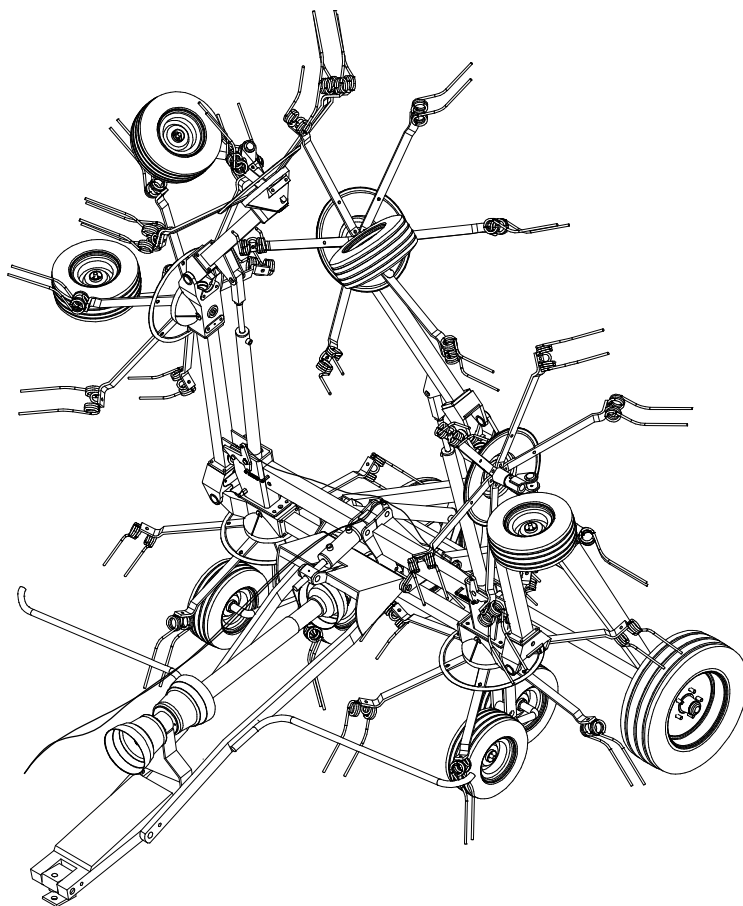
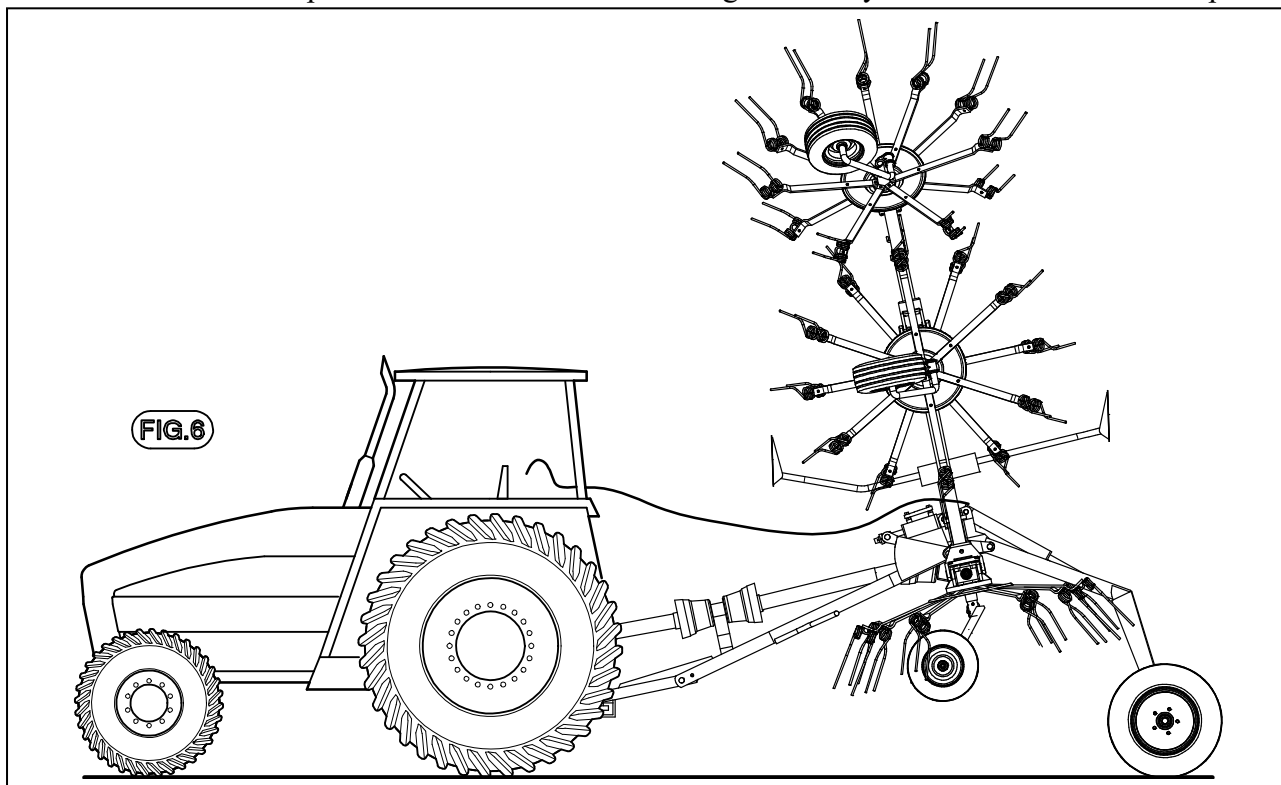


FIG.3

## Preparation for transport

To arrange machine for transport position, first it is necessary to operate movement of axle and drawbar. Valves mounted on cylinders make it possible, first partial movement of axle and then of drawbar. After this operation lift side rotors checking that safety hooks lock the relevant pins.



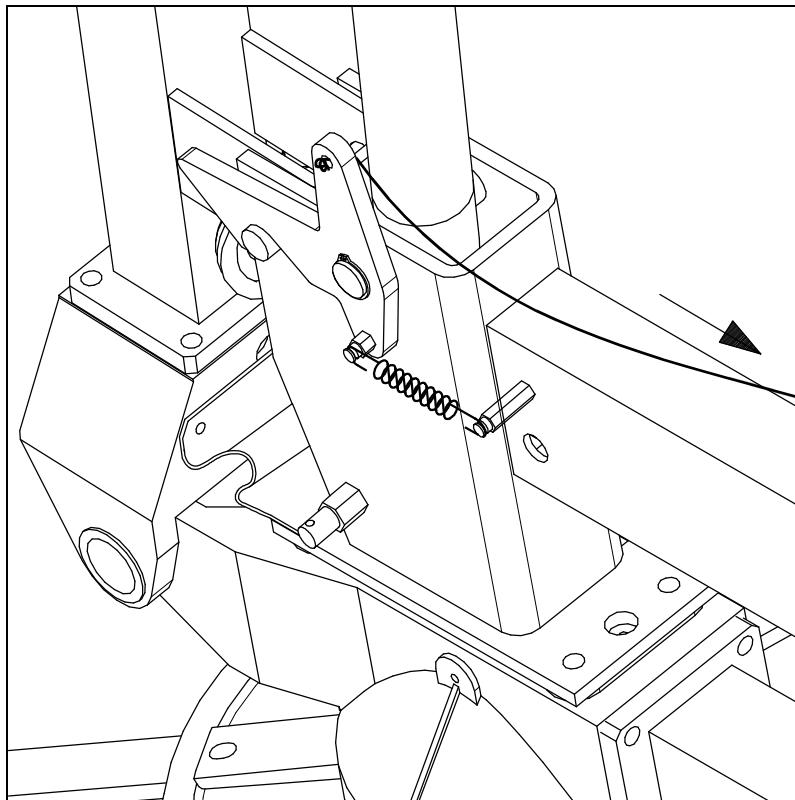
## DISASSEMBLY OF THE TRACTOR

In order to park the rake, make sure that the ground beneath it is flat and is able to bear the weight of the machine.

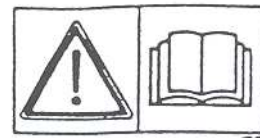
When the rake is raised and lowered, no one should be standing between the tractor and the machine or near the machine.

Before disconnecting the machine from the tractor, use the hydraulic system to lower the machine completely, then apply the brake and shut off the tractor. Dismount from the tractor and place the parking stand in the vertical position (Fig. 4). Turn the crank to raise the machine from the drawbar so that the hitch pin may be removed from the tractor. Disconnect the quick-releases coupling . Disconnect the cardan shaft and lay it against the crank. The tractor may now be moved away.

**Attention: the machine should be in the high position only when being transported.**



# TRANSPORT BY ROAD



After the machine has been attached to the tractor as previously described and before transporting it to or from fields or any other workplace, the following instructions should be heeded:



**ATTENTION!!!**



Before setting off with the machine attached to the tractor, check the local road transport regulations. During transport keep the machine fully raised with the power takeoff disengaged and the lifting unit immobilised.

Check that all guards, safety protection and locking split pins are in place, functioning and correctly fitted.

Ensure that nobody leans against, or climbs on to, the machine during transport. The **MACHINE** is an agricultural machine NOT designed for transporting persons or goods.

Consult the tractor maintenance-and-use manual where necessary.

Maintain constant control over the vehicle and ensure that you know how to stop the tractor quickly and switch off the engine.

When on a public road, observe all highway code regulations.

Drive near the edge of the road and try not to obstruct traffic.

Do not park the tractor and/or the machine where it might obstruct, or be a danger to, any public right of way.

Avoid going onto a public road if the tractor or machine is very dirty - you could leave a trail of soil, grass and other matter which could dirty the road and obstruct normal traffic.



## GENERAL INSTRUCTIONS FOR FIELD USE

Before starting work, familiarise yourself with the following general instructions:



Before using the machine ensure that all safety precautions are taken.

Check that all safety protection and guards are in place and working.

Inspect the work site in order to familiarise yourself with the terrain.

Do not start the tractor before being properly seated in the driving position.

Do not start the machine if it is damaged (or even if you only suspect it is damaged) and inform your nearest dealer of the problem and ask for assistance.

Do not allow yourself to become distracted when working - give your full attention to the job in hand.

Maintain constant control over the tractor and ensure that you know how to stop quickly and switch off the engine.

Caution when working on inclines. It is better to work from the bottom to the top of an incline (or from the top to the bottom), rather than across an incline where there is a risk of overturning. Check and heed the instructions supplied by the tractor manufacturer, especially those concerning the maximum incline on which it is possible to work.

It is advisable to reduce speed when working and manoeuvring on inclines and only to change speed and direction gradually. Do not make sudden stops or starts.

Do not work on wet or slippery grass or terrain, or anywhere where grip is poor. If this is unavoidable, work at a slow speed so as to ensure operator safety.

Always switch off the tractor engine, apply the parking brake and remove the ignition key whenever you have to attend to the machine to make adjustments or to remove grass and other objects which might be entangled in the machine.

Before leaving the tractor, disengage the power takeoff, lower the machine until its wheels are on the ground and put the hydraulic directional control lever into the locked position.

Never go near the rotors until they have completely stopped moving.

Never attempt to make adjustments to the machine while it is running. Always stop the machine before carrying out any such work. Do not oil the machine when it is running or is connected to the power takeoff.

Do not use the control levers as handholds since they can move and do not give a secure grip. Furthermore, any involuntary movement of a control lever can cause unintentional movement of the tractor or machine.

## USE IN THE FIELD

In order to arrange machine for work it is necessary to operate rotors' cylinders, so to release safety hooks and then lower rotors completely and at this point operate hydraulic system, so to lift axle and lower drawbar in order to have machine in working position. If work is not optimal adjust distance of tine from ground.

If quantity of forage is high, inclination of machine may be increased acting on wheel brackets moving them in second position.

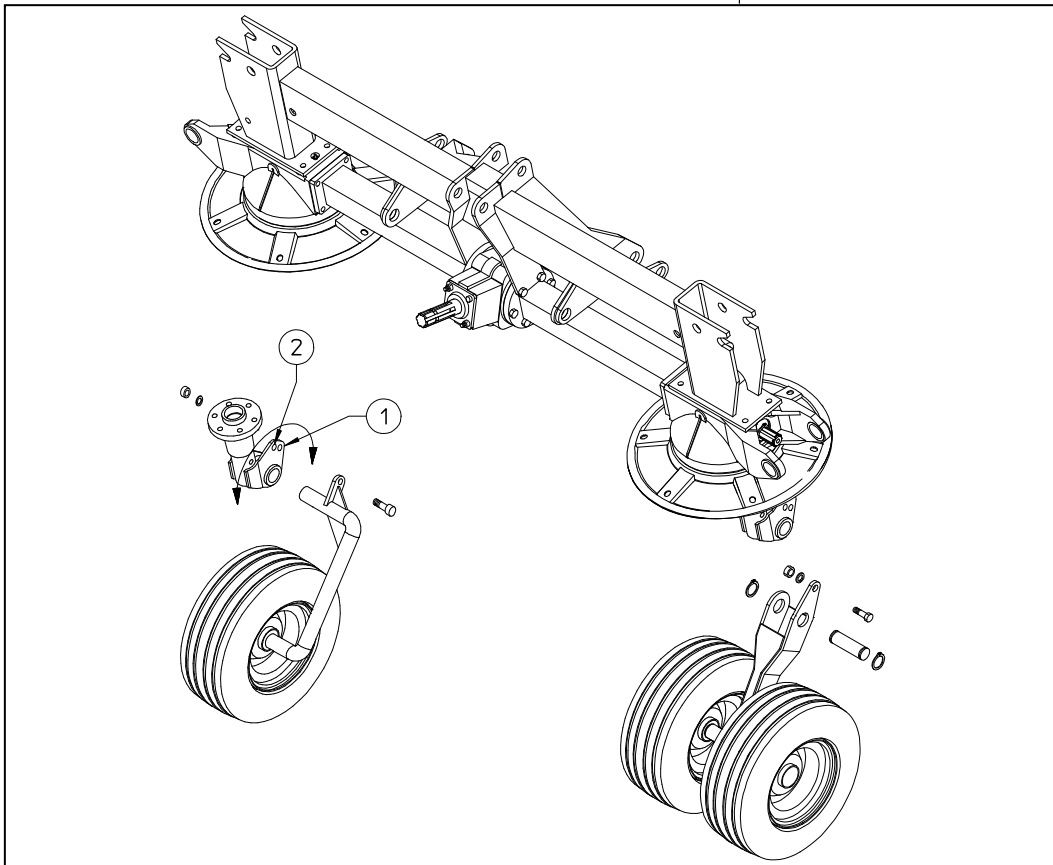
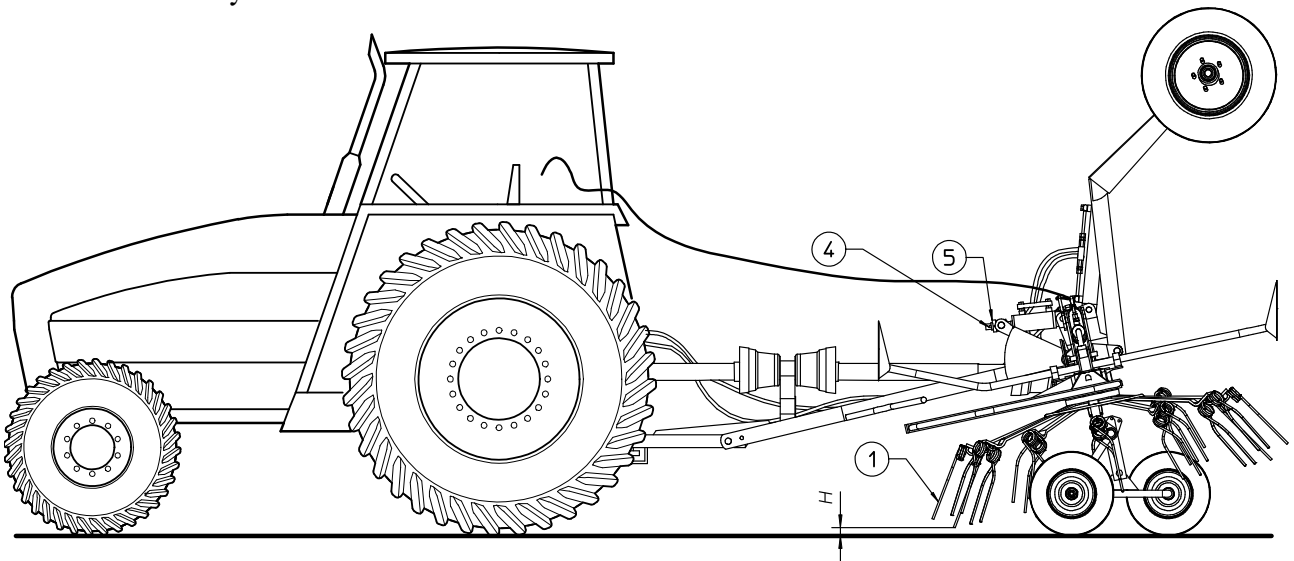
Adjustment of gear speed and revs to work the machine

The gear speed and machine revs depend on:

- the amount of forage
- the type of ground
- the degree of dryness

The forage rake was designed for a maximum number of revs for the power take-off of 540 g/min.

We advise working with a rev number of 350-450 g/min. Gear speed should be limited so that the rake works cleanly and the swath is well formed.





# MAINTENANCE DIRECTIONS



 DANGER III 

All cleaning, lubrication and maintenance operations must be carried out with the machine disconnected from the tractor. In an emergency with the machine still connected to the tractor, switch off the engine, apply the parking brake, disengage the power takeoff and remove the ignition key from the instrument panel.

Regular, correct maintenance and proper operation are the basic prerequisites for the long-term efficiency and safe operation of the machine.

Pay special attention to all instructions given on signs located on the machine.

All maintenance should be carried out in an area having the proper equipment readily available and in good condition. This area must always be kept clean and dry and must have enough surrounding space to facilitate operations. Any work must be carried out by trained personnel. Contact the dealer nearest to you.

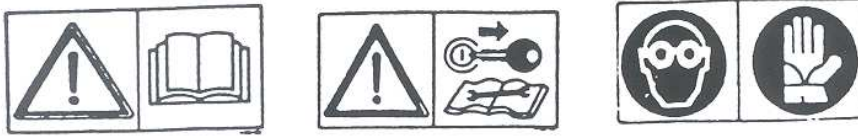
Respect the warnings and procedures for maintenance and technical assistance given in this manual.

Do not use petrol, solvents or other flammable liquids as detergents.

Use commercial non-flammable and non-toxic solvents, authorised by competent bodies.

Do not use compressed air or water at high pressure to clean the machine. If this is unavoidable, then wear goggles with side protection and limit the pressure as much as possible. When the work is finished, and with the machine disconnected from the tractor, inspect and check the machine completely.

## GENERAL INSTRUCTIONS FOR REPAIR WORK



 DANGER III 

Any repair work must be carried out with the machine at rest and disconnected from the tractor.

Do not carry out welding without authorisation and instructions from the manufacturers.

Disconnect the machine from the tractor before any welding work in order not to damage the battery. Always use a protective mask, goggles and gloves when welding, sanding or grinding or when using a hammer or drill.

Always work on the machine out of doors. If you have to operate the machine when connected to the tractor in an enclosed area (for example when testing after repair and/or maintenance), ensure that there is sufficient ventilation so as to prevent noxious exhaust gases accumulating.

In order to acquire the necessary control and to operate in safety, practise various manoeuvres by simulating those required in the workplace with the help of an experienced person.

If you activate the machine while it is raised from the ground, make sure there is nobody standing nearby or in a dangerous position.

### LAYING UP FOR EXTENDED PERIODS

At the end of the season, or when an extended period of inactivity is envisaged, it is advisable to:

Clean the machine following instructions and allow it to dry.

Check it carefully and replace any damaged or worn parts.

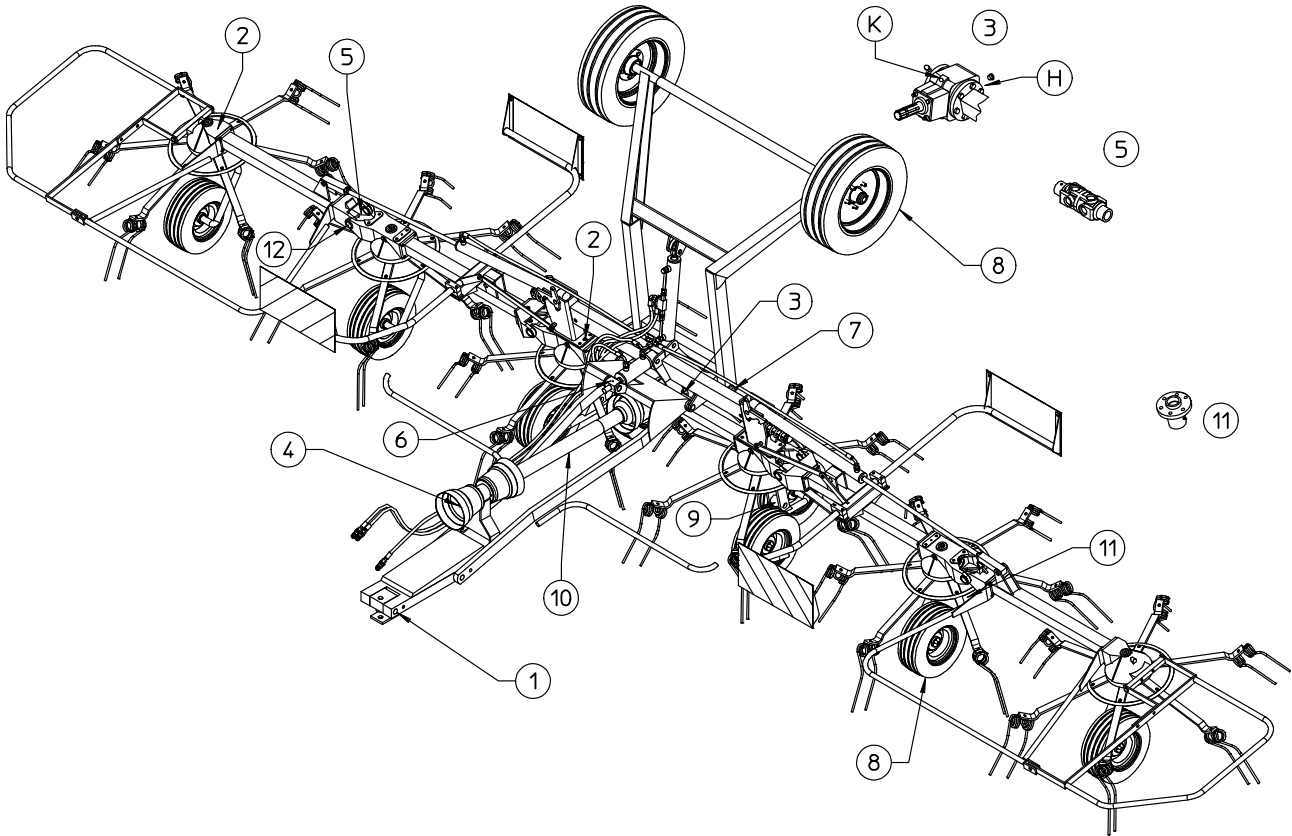
Thoroughly tighten all screws and bolts.

Grease the machine thoroughly and then cover it completely and lay it up in a dry place.

It is to the user's advantage to carry out these operations carefully. In this way, he will have a machine in perfect condition when work is restarted.

On recommencing work, repeat all the proper checks so as to be certain of working in conditions of maximum safety.

# MAINTENANCE POINTS



| Number | Q.ty | Description        | Operation      | Every hours | Product to be used | Notes       |
|--------|------|--------------------|----------------|-------------|--------------------|-------------|
| 1      | 1    | Bracket            | Greasing       | 20          | Grease             |             |
| 2      | 6    | Gearbox            | Greasing       | 40          | Grease             |             |
| 3      | 1    | Central housing    | Greasing       | 80          | Grease             | A           |
| 4      | 1    | Shaft              | Greasing       |             | Grease             | B           |
| 5      | 4    | Universal joint    | Greasing       | 8           | Grease             |             |
| 6      | 1    | Adjustment support | Greasing       | 20          | Grease             |             |
| 7      | 4    | Pin                | Greasing       | 50          | Grease             |             |
| 8      | 10   | Tyres              | Check pressure |             | Compressor         | C<br>45 psi |
| 9      | 2    | Axle tandem        | Greasing       | 20          | Grease             |             |
| 10     | 1    | Cardan shaft       | Greasing       | 8           | Grease             |             |
| 11     | 6    | Rotor hubs         | Greasing       | 24          | Grease             |             |
| 12     | 8    | Swivel hinge pin   | Greasing       | 40          | Grease             |             |
|        | 1    | Cardan shaft       | Greasing       | 8           | Grease             |             |

General checking of bolts, security pins and split pins to be carried out initially after the first 8 hours of use. Subsequently every 50 hours and whenever the machine is laid up for extended periods.

A = The complete lubrication of housing 1 is done the first time at the manufacturer's plant, after which it must be topped up periodically, as according to the lubrication points table. A complete change or fill is necessary only for the replacement and /or repairing of the entire housing or internal parts. In this case, it is necessary to: remove caps and inject the grease, using grease pump, into hole H until the grease comes out of hole K. Then screw caps back into place on housing.

B = Each time the Cardan shaft is disconnected and Whenever the machine is stopped, we recommended that you clean the power takeoff shaft and replace the protective cover.

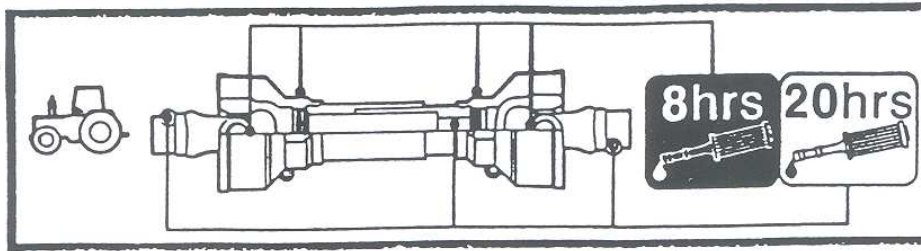
C = Each time the machine is connected to the tractor.

# Additives of a type permitted by anti-pollution regulations.

# CARDAN SHAFT MAINTENANCE



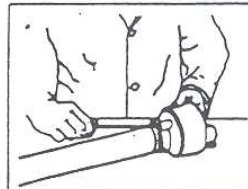
More detailed information may be found in the Cardan shaft manual which, together with this manual, forms an essential part of the accident-prevention documentation. It is your responsibility to read and comply with this documentation. If information given in this manual conflicts with that given in the Cardan shaft manual, you should follow the instructions given by the Cardan shaft manufacturer.



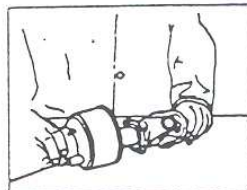
## MAINTENANCE OF SLIDING PARTS

### DISMANTLING

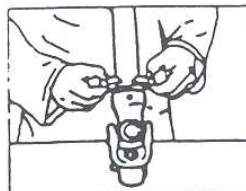
1) Turn the two eccentric pins on the ferrule until the protective cone comes free.



2) Withdraw the shaft protective guard.

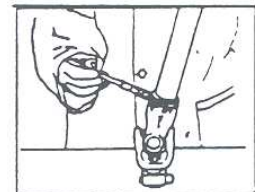


3) Check the condition of the ferrule and all protective parts.

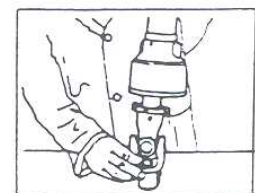


### ASSEMBLY

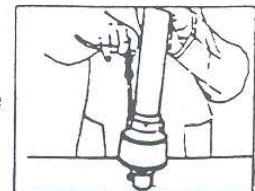
4) Lubricate supporting ferrule seating.



5) Refit the supporting ferrule.



6) Reattach the protective guard to the cardan shaft by turning the eccentric pins on the supporting ferrule.



## **NOISE AND VIBRATION**

Noise affecting the tractor driver (from the machine only) is less than 80dB.

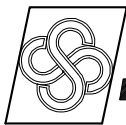
Vibration from the machine affecting the upper body and limbs of the driver is insignificant and is lower than the values given in Point 3.6.3 of Enclosure 1 of the Machine Directives (89/392/EEC, 91/386/EEC)

## **THE FOLLOWING SHOULD BE NOTED IF THE MACHINE IS SCRAPPED**

The machine consists mainly of ferrous material, which must be disposed of according to the regulations in force in the country concerned.

There is also a small amount of plastic, which must be disposed of according to the regulations in force in the country concerned.

There is very small amount of residual grease, which must be disposed of according to the regulations in force in the country concerned.



AGRICULTURAL MACHINERY  
**sitrex**® Spa

Zona Industriale-Viale Grecia, 8  
06018 TRESTINA-(Perugia)-ITALY  
Tel. +39.075.8540021-Telefax +39.075.8540523  
e-mail: [sitrex@sitrex.it](mailto:sitrex@sitrex.it) [www.sitrex.com](http://www.sitrex.com)

