

MH-540 USERS MANUAL



INTRODUCTION AND GENERAL SAFETY RULES

Dear customer,

We thank you for the trust you have placed in us by purchasing this machine.

When you received this machine, dealer should have given you instructions for operations, maintenance and adjustment of the machine.

However, this brief introduction to the machine cannot replace a detailed acquaintance with the different tasks and functions of the machine and the proper way of treating it.

These operating instructions are designed so that you are extensively informed of the activities required in each area, from commissioning and operation to the maintenance and care of the machine.

The structure of the individual chapters in the text and illustrations corresponds to the sequence of work procedures when you use the machine.

Read these operating instructions carefully before you use the machine, and pay special attention to the safety instructions.

Important: To avoid accidents and to ensure maximum results, no alterations may be made to the machine without the manufacturers permission.

Similarly, the machine must only be used under the conditions prescribed by Fort.

The rotary tedder is designed solely for normal agricultural use and operation in accordance with the specifications.

Any use of the machine for other purposes is deemed to be not in accordance with specifications.

The manufacturer bears no responsibility for any resulting damage; such use is entirely at the operators risk.

Use in accordance with specifications also includes adherence to the operating, maintenance and service instructions prescribed by the manufacturer.

The rotary tedder must only be used, maintained and repaired by personnel who are acquainted with the machine and have been informed of the dangers involved.

The applicable accident prevention regulations and all other generally recognized safety, health and road traffic regulations must be adhered to.

Any unauthorized alterations to the machine render any liability for damage undertaken by the manufacturer null and void.

Take note of both the regulations in these operating instructions and also the general safety and accident

prevention regulations!

The attached warning and information signs give important advices for safe operation, observing them will enhance your safety.

When you use public roads, make sure you observe the relevant traffic regulations?

Make sure you know all equipment and controls before you begin working with the machine when you are operating the machine, it is too late.

The operator's clothing should be tight fitting.

Avoid wearing loose fitting clothes.

Keep the machine clean to prevent the danger of fire!

Before starting the machine and moving off, check the danger area around the tractor.

Good visibility is absolutely essential!

Carrying passengers on the implement during work or transport is not permitted.

Make sure that the implement is correctly coupled, and that it is only fixed and secured with the prescribed fittings.

Make sure that the supporting devices, jacks etc. are in the correct position during assembly and removal!

Special care is required when equipment is being coupled to the tractor or detached from the tractor!

Ballast weights must always be attached in the prescribed way at the designed attachment points!

Adhere to the permitted axle loads, total weights and transport dimensions!

Check and fit transport equipment — e.g. lighting, warning signs and, if required, protective equipment!

Operating equipment for remote controls (ropes, chains, rods etc.) must be laid out in such a way that, whatever the working or transport position, it cannot inadvertently cause any movements.

Prepare equipment for road transport as prescribed by the manufacturer, and lock the equipment in accordance with the manufacturers regulations!

Never leave the driver's position when the tractor is in motion!

The speed of travel must always be suited to the environmental conditions! Avoid any sudden turns when travelling uphill, downhill or across a stop !

The handling, steering and braking of the tractor is affected by integrated or attached equipment and ballast weights. Make sure that you allow for more flexibility in steering and braking!

When turning, remember to take account of the wide load and/or the greater weight of the equipment!

Only switch on equipment when all protective devices are fitted and in protection position.

The Fort Rotary Tedder has been designed as a simple, easily maintenance machine.

Thus if there are problems with its working performance, the most likely cause is to be found in worn working parts. Change these as needed but use only genuine original parts which are available from your local Fort dealer.

Continuous improvement of our products is of prime importance to Fort technicians.

We therefore reserve the right to make all variations to our machines as are considered necessary at any moment, without advance warning and without being obliged to consequently modify already sold machines.

The machine is identified by characteristics data:

- Model:

- Incremental number:

- Year of manufacture:

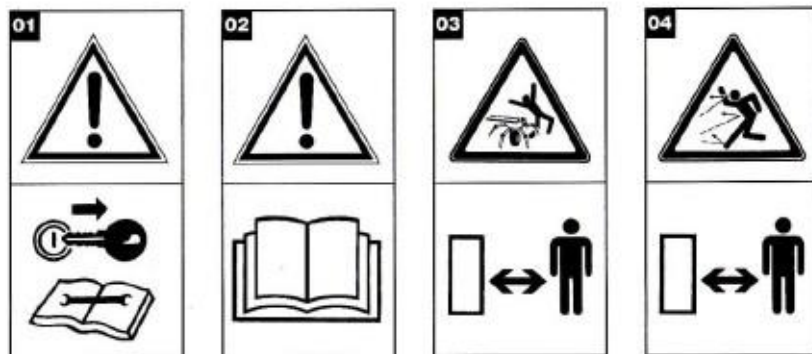
stamped on the plate attached to the machines' chassis. Always, specify this information when ordering parts or requesting information.

Use only original spare parts available at your local FORT or Farm-Maxx dealer.

Warning: this signal **01** indicates a hazard and will be used each time either persons and/or the machine could be harmed!



The operator should have become fully familiar with correct Use of the machine before working with it alone **02**

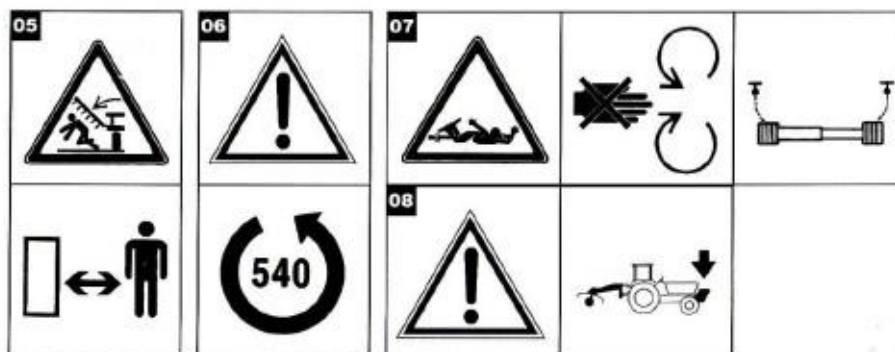


Check that the protections fixed on the machine are always in the perfect conditions. In case of deformation or breakage repair or replace them immediately because are very important for yours and other's people security

Before starting work, always check that all installed safety devices, including any guards, are efficient.

Before to start working with the machine do not allow people to remain within the tedder's working reach nor behind the rear throw area since they could be injured by stones or others foreign bodies throw out with the grass **03**

Be even more careful if are working close the roads paths or the stony ground **04**



Before lowering the machine from the transport position to that of work or viceversa,

always check that there are no persons, animals or other obstructions in the range of

action in the machine itself **(05)**.

Before carrying out any operation on the rotary tedder, always remember to disengage the Pto, turn of the tractor engine and check that the tractor is braked.

Remove the keys from the instrumental panel and wait until all moving components have stopped **(01)**.

Never exceed the prescribed Pto rpm rate: 540 rpm **(06)**.

Fix the cardan shaft shield with the relative latch in order to prevent the shaft itself from turning **(07)**.

Besides the above provisions, always comply with the general safety regulation in force in your country.

ROAD CIRCULATION

The rules to respect are those foreseen in the Highway Code of the country where the machine will be used.

To ensure that the tractor proceed in a straight line, it is of vital importance that the machine's weight does not affect the stability of the front wheels.

A ballast can be used if necessary **(08)**

Make sure that signals equipments are always in perfect conditions . The signals equipments can be assembled by the machine's owner.

It is recommended to use always reflecting materiel.

Respect the Rules regarding maximum speed permitted for tractor with equipment.

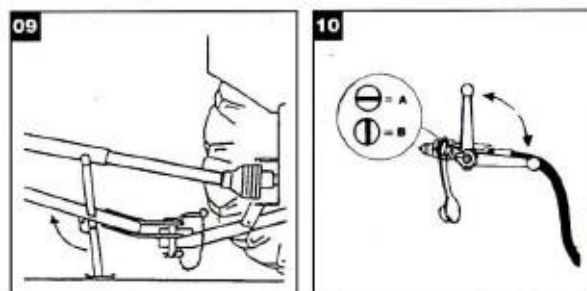
STICKERS

It is essential to pay the greatest attention to safety stickers on the machine.

The user shall be obliged to keep all safety stickers in a good condition. They must be perfectly readable.

Contact the Spares Service if the safety stickers need replacing.

ADAPT THE TEDDER TO TRACTOR



A. PULLED MACHINE

Switch off the engine of the tractor and take off the ignition key.

Couple the linkage to the tractor drawbar.

Fix the pin and connect the PTO shaft on the PTO of tractor and fix the protection by the chain **(07)**.

Push up the holder support turning it in up direction and be sure that lock pin is allocated in its own place. **(Fig. 09)**

B. THREE POINTS LINKAGE MACHINE

Switch off the engine of the tractor and take off the ignition key.

Hook the machine to the three points tractor connection .

To compensate possible differences of upper arm, there are two fixing holes on the linkage.

Push up the holder support. **(Fig. 19)**

For the connection to third point of lifting, there is a pin with two different diameter corresponding first or second class of lifting.

Fix the coupling pins (both upper and lower) use the proper split-pins.

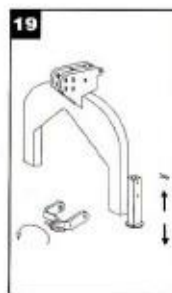
Adjust and lock the lower lifting arms to avoid lateral oscillations.

On the machines equipped with movable linkage make sure that hook linkage pin is fitted in .

These models are equipped by fork couplings with double pin to connect to

lower lifting arms.

It's enough to turn 180° the two couplings to have a connection first or second class. **(Fig. 19)**



Insert the cardan shaft to the tractor PTO shaft.

Make sure that protections are fixed by proper chains.

Push up the holder support and fix it in up position by proper split pin.

On the machines equipped by hydraulic installation must connect the coupling to the tractor.

Be careful that to open or close the hydraulic circuit it's necessary to use the cock **(Fig. 10)**.

A = Open / B = Closed

ADAPTING THE UNIVERSAL COUPLING

Due to the various positions which the shaft of the power take-off can assume on the different tractors, it may be necessary to correct the length of the cardan shaft.

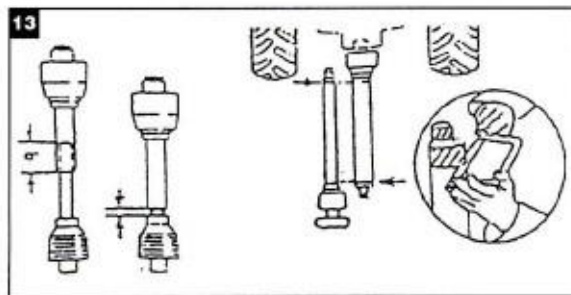
This length should be controlled when putting the machine into service for the first time.

Extract the two axle shaft is the cardan and insert them separately. (Eventual free wheel-machine side).

Check that, when the cardan shaft is in minimum extension position (Tedder raised or lower) the tube must not touch each other on the bottom, but it is necessary to have minimum clearance of 20 mm.

If necessary, shorten the shafts and the protections.

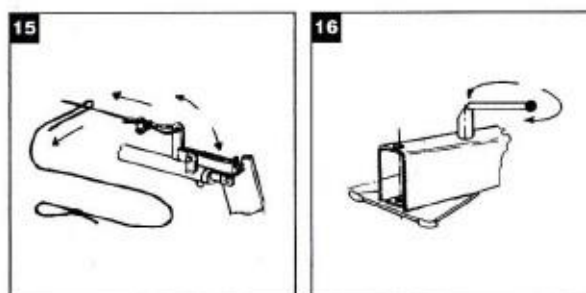
Before reinserting the two axle shafts, carefully clean and grease the sliding parts. **(Fig. 13)**



When the cardan shafts is in maximum extension (security disengaged) the tubes must be inserted minimum 150 mm.

Fix the external protection of cardan shaft by its proper chain. **(Fig. 07)**

HOW TO USE THE TEDDER



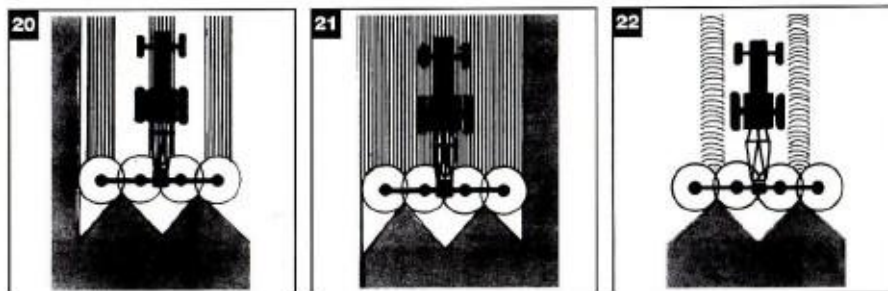
For the machines equipped with movable linkage, insert the lock-pins. (Fig. 16)

Before transport, close the lock-key of cock, that is placed on supple tube of hydraulic circuit. (Fig. 10)

The tedder is to:

- 1.To turn (Fig. 20)
- 2.To spread (Fig. 21)
- 3.To spread windrows (Fig. 22)

All other use shall be considered improper, not recommended and therefore at the user's risk.



Choose the most suitable advancement speed according to quantity and quality of product.

The cardan friction must not to work for more than 10 seconds.

In case of overloading, proceed to lower speed.

Disconnect always the PTO in case of sudden changes directions.

Never forget that the results of the work may also depend on the speed of power take off.

It's very important that the angle of inclination of tines is constantly.

The Tedder 3p model must be raised before every bend or before going into reverse motion.

The Tedder 3p model — with movable three points linkage, when raised, come itself automatically into central position.

Make sure nobody is near to the machine during this operation.

For the machines equipped with hydraulic plant, turn the cock-key and put the tractor device into floating position to permit the lateral units to adapt themselves to the ground.

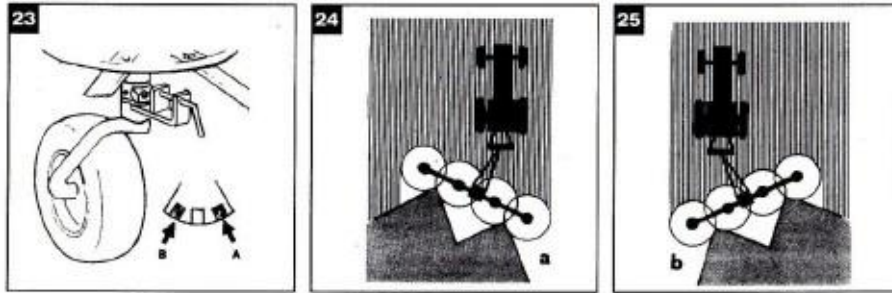
WORKING ON THE SIDE OF FIELDS

This operations must be done with engine switched off, ignition key taken off.

Make sure that rotors are completely stopped and PTO disengaged.

Valid only for MH540 and MH680 tedders.

Release the compensative spring taking out the back handle pivot, (leftside for position A, or rightside for position B) and fix it in the appropriate space on the



central main support.

Pull back the lever of axle positioning, movement, towards the left or the right, the axle according the work to do. Release the lever into chosen position (Fig. 23)

Displacement left side - pos. A (Fig. 23 - 24)

Displacement right site - pos. B (Fig. 23 - 25)

This operation is easier, on 3P tedders , raised a little the machine from the soil.

In these conditions the operating possibilities of the machine are greatly reduced.

GENERAL MAINTENANCE

Check that the protections fixed on the machine are always in perfect conditions.

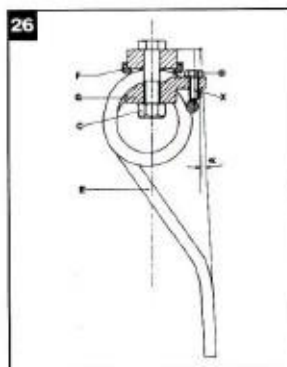
In case of deformations or breakage repair or replace them immediately because are very important for yours and other's people security.

The machine should be thoroughly controlled after first 5 hours of work.

Check that all the screws and bolts are thoroughly tightened; screwing up if necessary. Pay more attention to bolts fixing the tine-holder arms; the tines, the arms supporting revolving heads, the linkage.

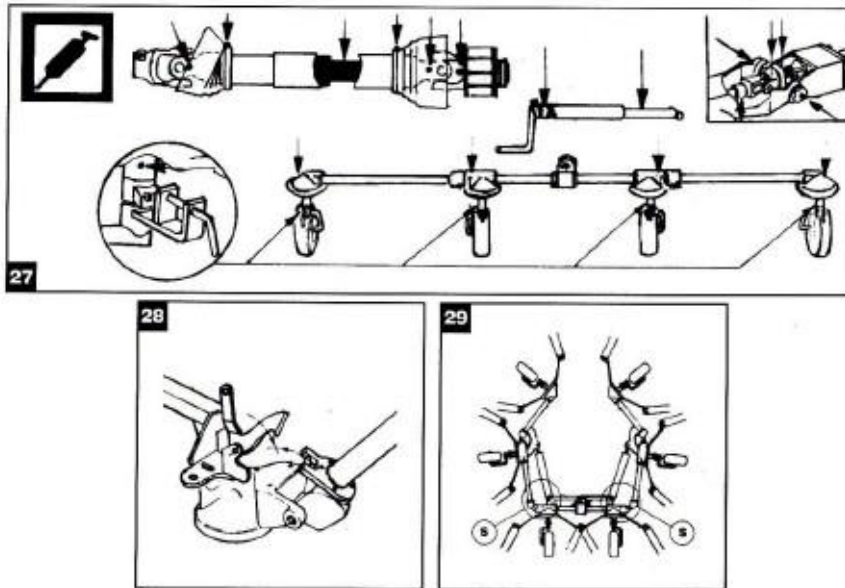
The operation should be subsequently repeated every 30 hours.

Check also the wheel pressure = 0,9 bar.



Tightening couples:

- Tine-holder - Tines 100 Nm.
- Tine-holder arms 120 Nm.
- Linkage 155 Nm.



Important:

It's necessary to grease all points indicated in fig. 27 after the first 3 hours of work.

In case of breakage or loosening of tines proceed to immediate replacement.

Deficiency of one or more lines on the revolving head, cause a bad balancing of the same with unusual vibrations which can damage the bearings, the pinions and the transmission.

To replace the times proceed as following:

Loosen nut C and jam-nut D (Fig. 26)

Disassemble and replace tine (E) position support (F). Replace the block (G) screw nut (C) by unhead screw (X) which must come into contact with the time slot in order to prevent movement.

Adjust the optimal inclination angle (θ) of tines

380 6 = 0°

420 3 = 7°

530 B = 3°

660 6 = 7°

LUBRICATION

The life of the machine depends very much on the correct respect of LUBRICATION RULES, regarding the points to Lubricate and periodicity.

All points interested are indicated by an arrow (Fig. 27)

For gears and articulations use semifluid grease.

For central gear box use OIL VARIAX EP 80 W 90, capacity Lit. 0,25

STORAGE OF THE MACHINE

Disengage the cardan shaft and proper protection chain from the tractor.

Unclamp the holder support and put it into hold position lowering the machine till to touch the ground.

Unclamp the drawbar (for pulled machines) or the lifting-arms and the third point.

Unclamp the block of lateral arms (Fig. 15).

Recall the cylinders and lower the external revolving units.

The machine must be stored always whit the external revolving units, lowered, before lower them, make sure that nobody is near the machine.

OFF SEASON STORAGE

For end season storage follow these instructions.

Clean carefully the machine and check the tightening of all screws and bolts.

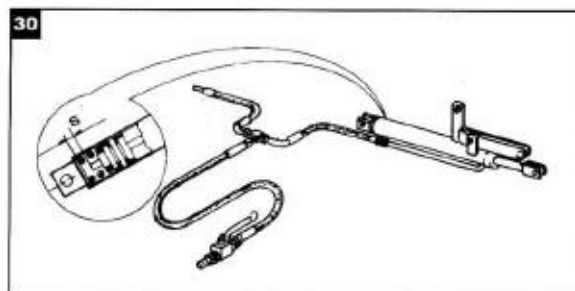
Repair or replace damaged pieces.

Grease all points indicated in Fig. 27 and check oil-level of the gearbox, the pressure of wheels.

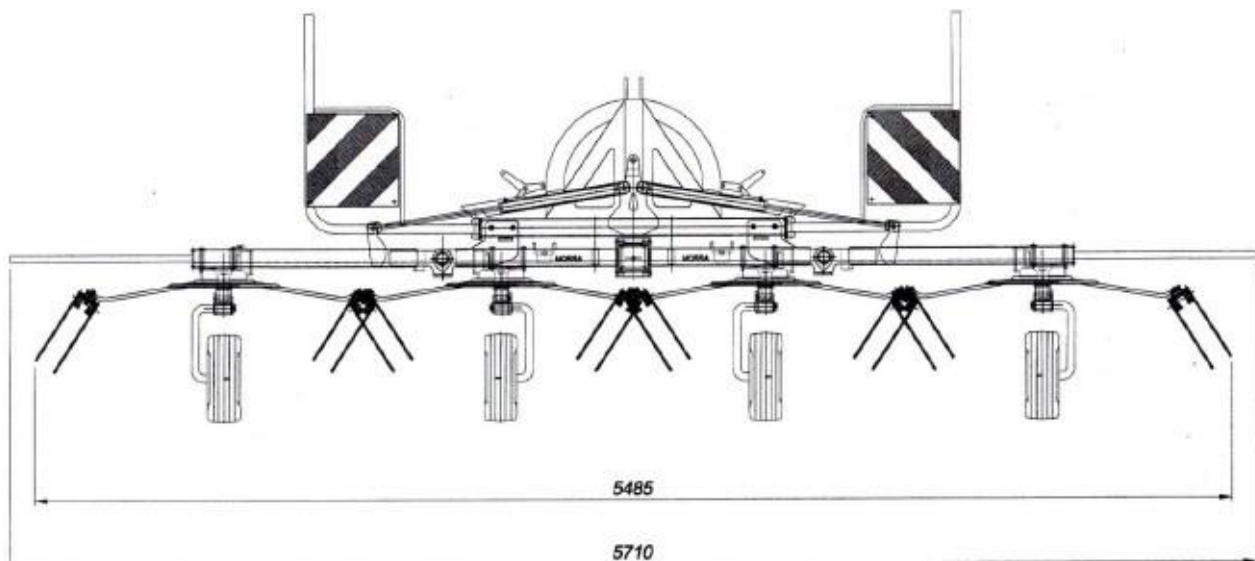
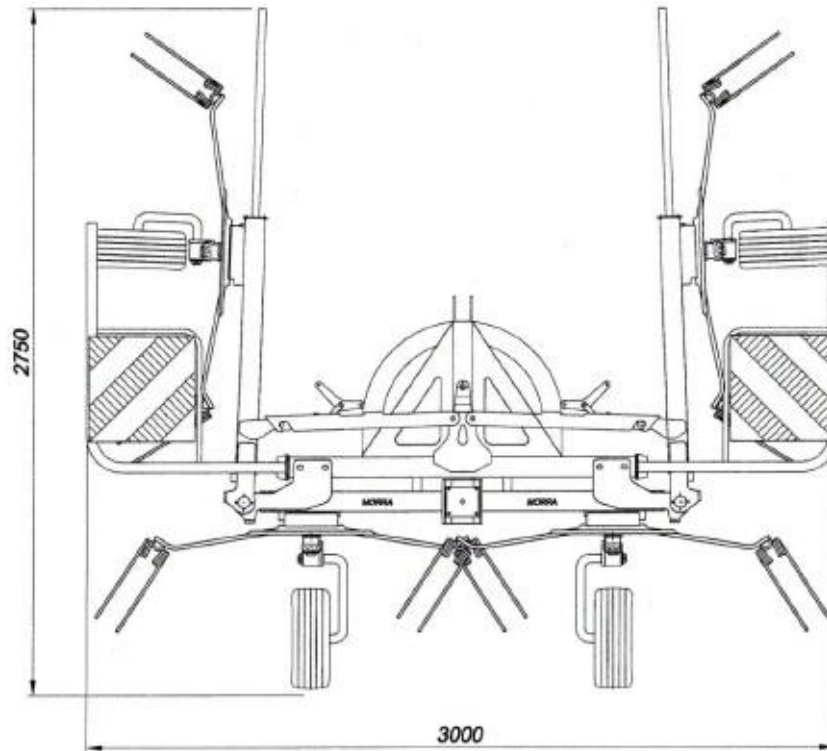
For the machines with hydraulic devices:

check the rubber tubes of circuit (Fig. 30) and if splits or abrasions, replace them.

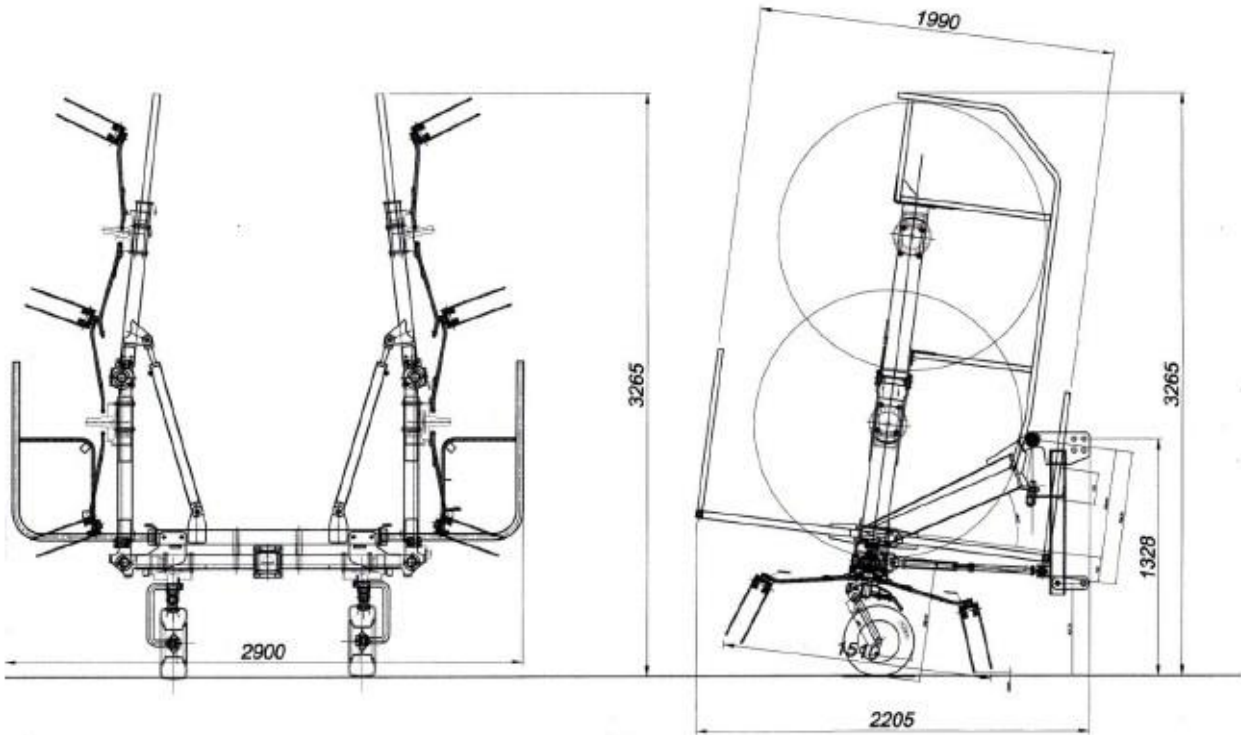
Check that spring (Fig. 30 part. S) is working by inserting the mechanic lock.



MH 540 (IN CM)



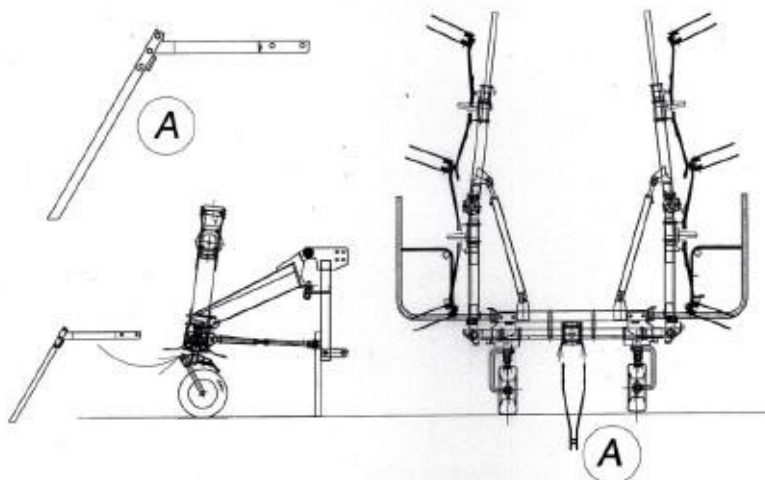
MH 680 H (IN CM)



DANGER OF OVERTURN



VERY IMPORTANT: FIX THE REAR SUPPORT (A) TO THE CENTRAL GEAR BOX BEFORE DOING ANY TEDDER DISPLACEMENT



1) FIRST: LAY DOWN THE SIDE ARMS (L)

DANGER OF OVERTURN



IMPORTANT: KEEP THE MH 680 IN A SAFE POSITION TO AVOID OVERTURNING

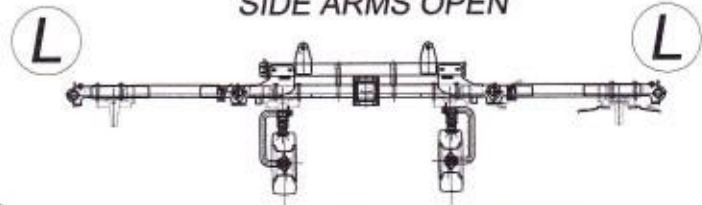
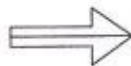
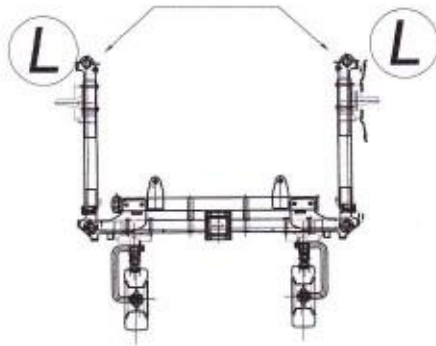
PUT WEIGHT WHERE INDICATED

PUT WEIGHT WHERE INDICATED



LAY DOWN THE SIDE ARMS

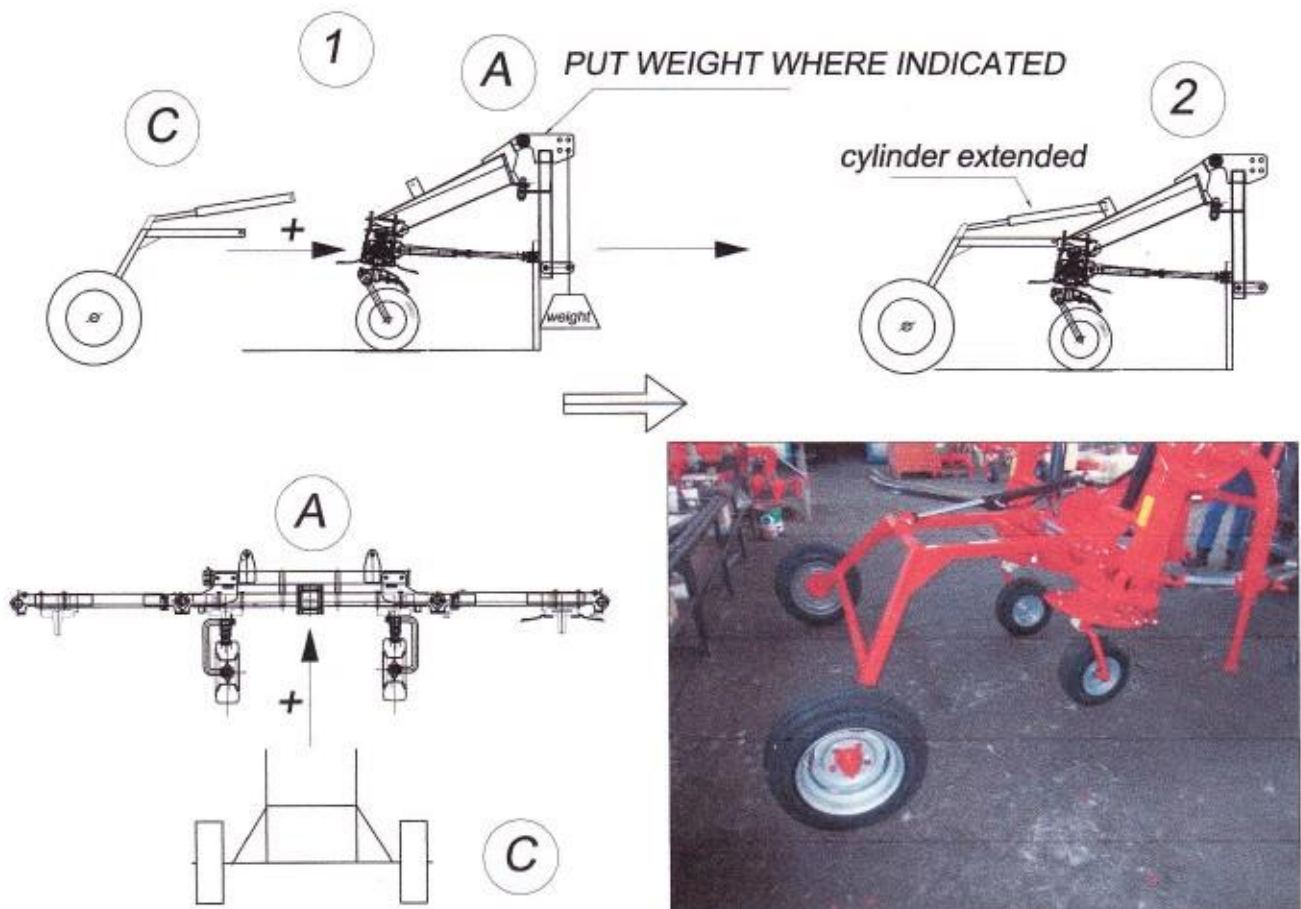
SIDE ARMS OPEN



2) SECOND: FIX IMMEDIATELY THE CADDIE AS IN THE PICTURE

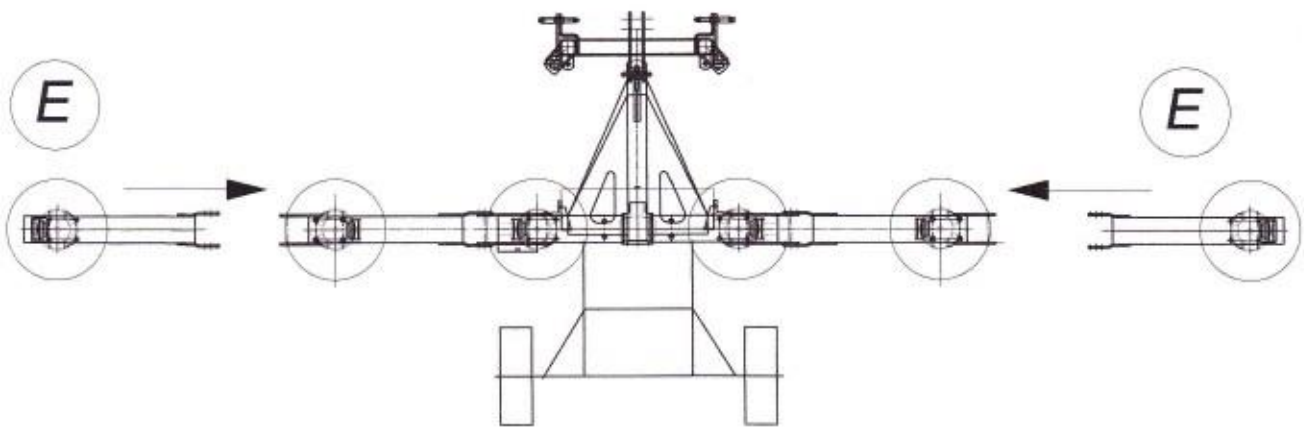
The hydraulic cylinder is extended as in the picture n° 2

(The caddie wheels stay firmly on the ground)



3) THIRD THING TO DO : SIDE ARMS NEED TO BE TO BE ASSEMBLED (E)

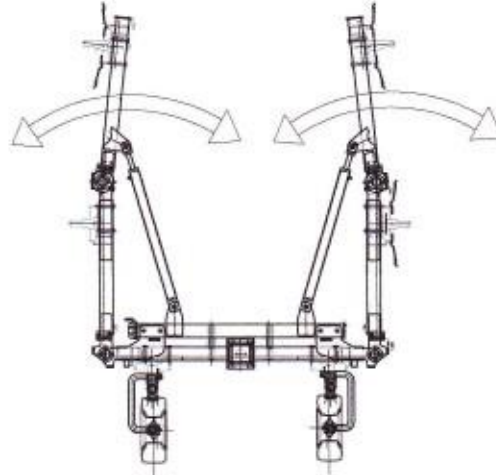
Then put together safety frames, and spring arms



HYDRAULIC VALVE

TO USE WITH THE TRACTORS WITH ONLY ONE DOUBLE EFFECT

"DOWN"
YOU MOVE THE ARMS



"UP"
YOU RAISE THE CADDIE

