

# **USER AND MAINTENANCE MANUAL**

Assembly instructions

rev 0 - 06/07

# (6

#### Harmonised standards

The "Y Rake" and "Easy Rake" were designed in accordance with the provisions of EC Machinery Directive 98/37 and comply with the following harmonised standards:

EN 292-1: Safety of machinery- Basic concepts, general principles for design - Part 1: Basic terminology, methodology (1991)

EN 292-2: Safety of machinery- Basic concepts, general principles for design - Part 2: Technical principles and specifications (1991)

EN 292-2/A1: Safety of machinery- Basic concepts, general principles for design - Part 2/A1: Technical principles and specifications (1995)

EN 982/92: Safety requirements - hydraulic power systems and their components - Hydraulics

Others are specified in the technical file.

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#### INTRODUCTION

#### A1 About hay rakes

The hay rake is an agricultural device used to collect cut forage. The **"Easy Rake**" models produced by our company, all trailer-type, comprise a flexible, sturdy frame enabling use on any type of land, even if extremely irregular or on a slope. The main component is the rake wheel, 14 of which make up the device. Each wheel is separate from the other and comprises a shock absorbing spring for the wheel to perfectly follow the surface of the land.

The hay rake has to be attached to an agricultural tractor for it to work. The arms and stars move hydraulically and the entire rake is trailed by the tractor to which it is attached. Operation and use of the rake is described in greater detail in the relative chapter.

#### A2 About the manual

The **ENOROSSI** firm (the "Manufacturer") designed and created the device in accordance with the relative safety standards to ensure the safety of personnel and the entire operating system.

Each rake is supplied with a copy of this manual, which the operator must read in full before using the equipment. The manual contains all information relating to transportation, use and maintenance of the equipment, as well as relative safety instructions.

Poor knowledge of the operating system can lead to accidents and therefore damage to the equipment. Although the Manufacturer provides the Customer with all information relating to the rake's operation, use and maintenance, the Customer is still expected to read this manual and take note of all the instructions herein.

The manual provides all basic instructions on how to ensure optimum working and safety conditions, but the most important factors to ensure the device's good working order are the operator's experience and common sense. The manual was drawn up on the basis of both the rake models' current technical and structural characteristics and does not take previous similar models into account. The Manufacturer therefore reserves the right to modify models in production in the interest of improving the product or in accordance with any new legislation (Machinery Directive) without obligation for adapting previous models.

This manual is integral to the rake and must therefore be kept intact, clean and in good condition, and stored in a container, either on the frame of the equipment or in the tractor cabin, where it can be readily accessed for consultation.

The manual must be kept in its container if the rake is placed out of service. Ask the Manufacturer for a duplicate copy if the original manual is lost.

Please contact the Manufacturer for any clarifications relating to the instructions in this manual. If the translated copy of this manual is unclear in any way, the valid text of reference is the original one in Italian.

Symbols used in this manual:

- **WARNING**, with associated pictogram, indicates potential danger and therefore the need for the operator to exercise caution and common sense;



- IMPORTANT indicates that the operator must be aware of the matter referred to;
- **Note** indicates that the information referred to can facilitate the operator's work.

#### A3 Warranty

The Manufacturer's warranty guarantees that all parts of the rake are free of defects as they are all tested before delivery to the Customer. The warranty is valid for a year (or for whatever duration is stipulated in the purchase contract) from the date specified in the fiscal delivery document, but is not valid during transportation as the Customer is responsible for its shipment. The warranty does not cover commercial components that are covered by the warranty of their original manufacturer.



The Customer, upon receipt of the shipment, must check the entire structure for any signs of damage and that the components are intact and none are missing. Any claims must be made to the Manufacturer in writing within 8 (eight) days of receiving the rake. Any components found to be defective within the period of the warranty will be replaced by the Manufacturer free of charge. Only the Manufacturer or technician employed by the Manufacturer is entitled to check the defect. Spare parts remain the property of the Manufacturer. The warranty does not however cover faults caused by improper use of the rake, the operator's negligence, accidents or normal wear and tear

#### The warranty is forfeited when:

- The manual's instructions are not followed;
- The necessary maintenance is not carried out;
- The Customer modifies the equipment without the Manufacturer's prior written consent;
- The spare parts used are not type approved.

#### A4 EC certification and identification

An identification plate is affixed to each machine. Details on the plate are:

- The rake's model (and/or version);
- Serial number;
- Tractor's power capacity (kw);
- Overall weight (kg);
- Year of manufacture.

You must have this information at hand when requesting assistance and spare parts.

#### **IMPORTANT**

It is strictly forbidden to alter and/or erase the data on the serial plate. The operator must check legibility of the data on a regular basis and inform the Manufacturer if it becomes in any way illegible. The Manufacturer will then replace the old plate with a new one bearing the same data.



The EC mark indicates that the Manufacturer has complied with the health and safety regulations, adopted by the EU countries, and known as the "**Machinery Directive**". This means that the Manufacturer designed and created the equipment in full compliance with all the requisites on use of the rake and avoidance of all possible risks and hazards associated with the same. The rake can therefore be freely distributed throughout Europe providing it features this mark and relative declaration of conformity.

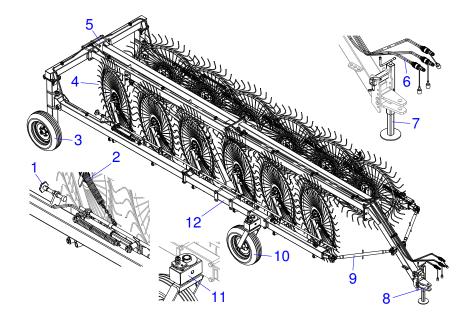


#### A5 Main components and technical specifications

- 1. Mechanical end stop (to adjust the rake wheel to the ground)
- 2. Shock absorbing spring
- 3. Rear wheel
- 4. Rake wheel
- 5. Frame

- Hydraulic quick couplings
  Hydraulic quick couplings
  Supporting foot
  Tractor coupling device
  Tie rod (for road circulation)
- 10. Front wheel
- 11. Device to limit pivoting of the front wheel
- 12. Side arm

Model		Stars		Wie	dth	Wheel	s	НР	Weight
	N°	Teeth	Ø cm	Work config cm	Trnspt config cm	Туре	N°		Kg
Easy RAKE	8	40	140	560	244	205/70.15	4	40/60	1190
Easy RAKE	10	40	140	650	244	205/70.15	4	40/60	1290
Easy RAKE	12	40	140	740	244	205/70.15	6	40/60	1390
Easy RAKE	14	40	140	830	244	205/70.15	6	40/60	1550





# SAFETY

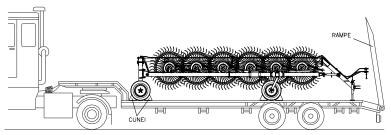
#### **B1** General regulations

This manual describes the safety regulations to be followed when using the rake. As most work-related accidents occur due to non-compliance with the most basic of safety regulations, **it is obligatory** to read this manual before carrying out any work with the rake and to follow all the instructions.

The equipment must be used by qualified adult personnel trained in its use. The Manufacturer therefore does not cover accidents caused by the operator's negligence and/or non-compliance with the safety instructions. This also forfeits the Manufacturer's responsibility and the rake's warranty.

#### B2 Handling and transportation

• **Transportation** (delivery): the device is fully dismounted and placed in a crate for transportation. The Customer can then re-assemble the parts quickly and easily on receipt, following the well detailed instructions. If the rake is sold or transferred to another user, the rake can be dismantled by following the instructions in reverse order, although it can also be delivered fully assembled. The rake can also be easily transported by road on a suitable means of transport, as illustrated below.



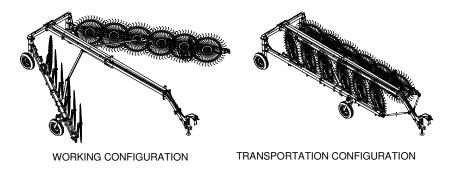
The rake is loaded or unloaded via a ramp attached to the vehicle. The equipment, when ready for transportation, is reversed onto the vehicle, then harnessed in place and fitted with all necessary safety devices for transportation.

#### WARNING

Loading and unloading must always be carried out with all due precautions as they can entail a certain element of risk.

#### Always take the following precautions:

- Loading/unloading must be carried out on a flat surface and at a safe distance from slopes or ditches;
- Always ensure the ramps are strong enough to withstand the rake's weight (given on the identification plate), are firmly attached to the vehicle and are parallel to each other and perpendicular with the edge of the vehicle;
- Ensure the ramps are clean, without any traces of oil, grease or ice;
- Never change direction when moving the rake onto or off the vehicle. If this does become necessary, bring the rake back down to change its trajectory.
- Transportation (by road): as this is a trailer-type device, it can only be transported if attached to an agricultural tractor. In this case, the device must always be in its transportation configuration for transportation either by road or in the fields, as illustrated below. This configuration is necessary as the device can be up to 10 metres in width in its working configuration.



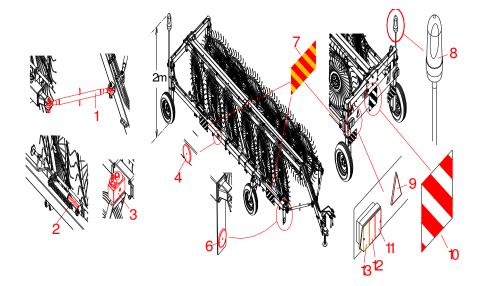


You must remember that the transportation configuration entails closing the side arms and fitting the equipment with the following safety devices:

- Tie rods (1) to be fitted in position on the arms and frame, and locked in place with their relative safety pins;
- End stop device (2) to be inserted on the rod of the jack (to prevent it from retracting) and blocked with its respective safety pin;
- Device (3) on the front wheels to limit their movement;

You must also comply with your national road regulations.

• **Installation:** the device must only be installed on agricultural tractors with universal three-point hitch system at the back and with hydraulic lift.



#### **IMPORTANT**

The tractor must also, by law, be fitted with a protective roll-bar or ROPS or FOPS cabin. It is strictly forbidden to install the rake device on a tractor without the required protection.

Prior to installation, however, the Customer must check the tractor's operating and maintenance manual to ensure the tractor is suited for use and operation of the rake, and whether ballasts are needed to prevent unbalancing that could cause it to tip over.

Instructions on installing the tiller and making the hydraulic connections are given below.



**Use:** the rake must only be put to the use for which it was intended: to rake up cut forage. **Any other use is therefore improper and forbidden**. The rake's technical characteristics must also not be altered in any way to modify performance **otherwise the warranty will be forfeited immediately and the Manufacturer will refuse all responsibility.** 

The rake must be used in conditions ensuring good light and visibility. We recommend you do not work when light and visibility is poor as this can compromise normal levels of safety. Recommence work only when light and visibility is good again.

The rake does not require special attention during use as it is not operated directly, being trailed by the tractor; the operator must, however, ensure that no persons or animals come too close in the interest of their safety.

In any case, the rake must only be operated by qualified and well trained adult personnel who have read the instructions in this manual. Safety is of paramount importance for personnel operating, repairing or maintaining the device. As the instructions given in this manual cannot cover all possible working situations and related risks, personnel must always act with caution and with common sense.

The operator must take the following precautions when using the rake device:

- The tractor must not be left running or unguarded, not even for short periods. The operator must always switch off the tractor's engine and take the key with him;
- The rake device is relatively quiet and does not require use of acoustic protection (ear plugs, ear muffs, etc), although this may not be the case with the tractor. We therefore recommend you check this in the tractor's operation and maintenance manual.

#### B3 Operator's responsibilities and safety

Safety is of primary importance to personnel operating the rake device and therefore each operator is directly responsible for controlling the rake's operation, maintenance, repairs and/or use of spare parts or consumable materials. This means the aforementioned personnel must never delegate their work to operators without the necessary requisites.

#### The Manufacturer assumes no liability for:

- Improper or incorrect use of the rake device that can cause harm to persons and animals or damage to objects and the actual rake;
- Employment of personnel who have not received proper training and/or has not read and understood the instructions in this manual;
- Lack of or insufficient maintenance;
- Use of spare parts that are not type approved or not compatible with the rake model;

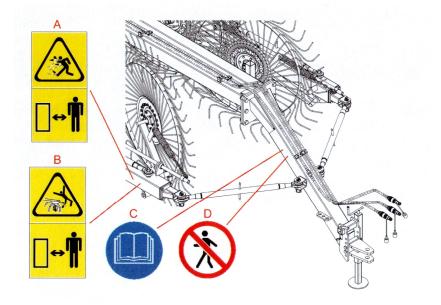
In addition to the instructions in this manual, personnel are given visual aids in the form of labels (shown in the illustration) attached to the front of the rake device indicating the necessary safety precautions. These labels are designed to attract the operator's attention and indicate the level of risk.

These labels, however, differ in shape and colour according to the instructions. Personnel must therefore know that a circular label indicates an **obligation** (blue and white) or a **prohibition** (red, white and black), and a triangular label indicates a **hazard** (yellow and black). Rectangular labels feature the hazard or prohibition symbol but also indicate the safety precautions to be taken.

Warnings given on the labels:

- **a. Risk of flying objects.** Objects in the field of operation may be caught and thrown by the teeth of the rotating rake wheels;
- **b. Risk of snagging.** As the rake wheel rotates, there is a risk that the teeth snag on the operator's clothes or other objects on the operator's body.





#### IMPORTANT

Warning labels and pictograms must be replaced if they become faded and risk becoming illegible. In this case, the operator must not use the rake until any faded labels are replaced with new ones. It is also strictly forbidden to remove the pictograms and labels from the equipment. Should this occur, the Manufacturer assumes no liability as the rake no longer meets the safety requirements for which it was designed and created.

- c. Obligation to read the user and maintenance manual;
- **d. Prohibition** for unauthorized persons to stand or move in the rake's field of operation when the rake is being used. Persons must keep at a safe distance and should they need to move in the rake's field of operation, they must do taking all due precautions;



#### INSTALLATION

#### C1 Rake assembly

As mentioned above, the equipment is fully dismantled for delivery to the Customer. The rake can be assembled quickly and easily following the user-friendly instructions (see Page 18). Assembly must be carried out on a flat surface prepared especially for the purpose. Assembly operators must be knowledgeable of installation safety regulations and work with all due care and attention.

The rake, once it has been assembled, can be installed or hitched to a tractor.

#### C2 Hitching to the tractor

The rake can be hitched to the attachment of any agricultural tractor. To do so, the operator must move the rake slowly to a position where the joints can be easily aligned (1).

#### **IMPORTANT**

The holes in the tractor's attachment must be aligned with those on the rake's attachment with maximum care and attention.

When the tractor is near the rake's attachment (type 1 or 2 – see picture), the operator turns the lever on the foot support (**2**) to lift or lower the rake's attachment and insert it in the tractor's attachment. The operator can then insert the locking pin (**3**) through the attachment holes, as illustrated below, and secure it in place with the relative safety pin (**4**).

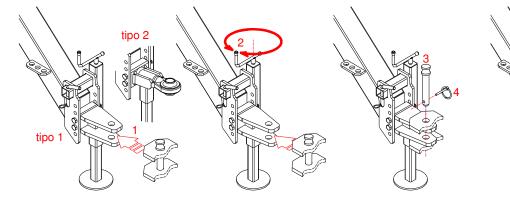
Next, the operator turns the lever (5) to lift the foot support off the ground, completing the tractor-rake attachment procedure. The foot support can then be removed from its housing and inserted in the housing on the frame.

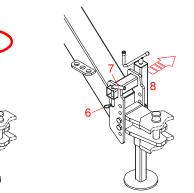
The operator therefore has to extract pin (6) to free pin (7), extract the latter from the holes of the foot support and remove the foot support from its housing (8). The foot support can then be placed in the housing on the frame (9) and fastened with pin (7) and its relative safety pin.

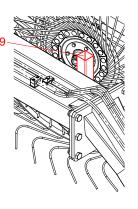
#### C3 Hydraulic connections

• The rake wheels are lowered and lifted by retracting and extending a jack, while the side arms are opened and closed hydraulically by another jack. Both jacks are powered by the tractor's auxiliary circuit and therefore commanded by their respective levers in the cabin. As a result, these functions can only be carried out if the jack connections are made (quick couplings, as











illustrated) to their corresponding attachments on the tractor's auxiliary circuits.

#### C4 Removal

To remove the rake from the tractor, follow the above instructions in reverse order. The hydraulic connections have to be removed before the actual rake.

#### C5 Storing the rake

The Customer must set aside a large and easily accessible area on his premises where the rake can be stored. How to store the rake:

- Park the rake in a safe area set apart for the purpose. The area must be flat and even;
- Install the foot support supplied with the rake and stored in its relative housing on the frame, near the attachment;
- Detach the rake from the tractor, following the instructions in paragraph C2 and C3 in reverse order;
- Chock the wheels;
- Place protective material over the rake.



#### **OPERATION** and USE

### Δ1 Preliminary information

Suitable and optimal use of the rake not only helps avoid accidents but is also the only way to ensure high yield and make use of the rake's full potential and performance.

The rake must be used by trained adult personnel knowledgeable of the instructions in this manual and on the labels. Safety is of paramount importance for the personnel that operate, repair and maintain the equipment. As the instructions given cannot possibly cover all possible working situations, personnel must always exercise caution and common sense.

Before the tractor can transport the rake to the work area, it is advisable to carry out the following preliminary checks:

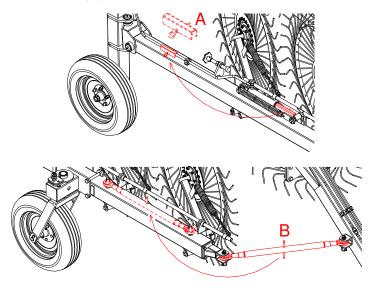
- Ensure all the parts of the rake are in their intended position and are securely fitted;
- Ensure the rake is fitted properly to the tractor;
- Check efficiency of all the protection devices;
- Carry out the daily maintenance checks described in the relative paragraph. **Note**: should the rake be returned to service after a long period of inactivity, ensure it has been properly maintained and that it has not been damaged in any way by poor weather or storage conditions.

#### Δ2 Operation and use

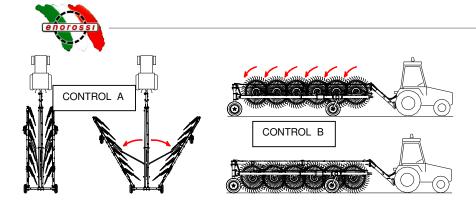
The rake must be taken to the work area in keeping with the instructions in paragraph B2 "Handling and Transportation".

The tractor driver is personally responsible for the general procedure of conveying the rake and must therefore prepare the rake for transportation as follows:

• Firstly, the operator must remove any safety devices that need to be removed for transportation, i.e. The jacks' end stop devices (**B**) and the arms' tie rods (**A**):



- End stop device: remove the safety pin to free the device, lift the latter from the jack rod and move it further back, as shown in the illustration. Re-fasten the device with the safety pin (do one side at a time);
- **Arms' tie rods:** remove the safety pin from the locating pin and remove the latter from its housing. Repeat the same procedure on the other side of the tie rod and then remove it from the rake's pinned supports. Move the tie rod to the points on the frame shown in the illustration. Screw the body of the tie rod into place at the new points.
- After removing the safety devices, the operator uses the respective controls in the cabin to fully open the rake's arms (**control A**) into the working configuration, and then lower the rake wheels (**control B**), which all move together, as shown in the illustration.



The rake is now ready for use. It is extremely easy to operate as it just has to be hitched to the tractor which trails it in the required direction. The rake wheels, which have been adjusted according to the type of ground, turn as they are pulled along and the teeth

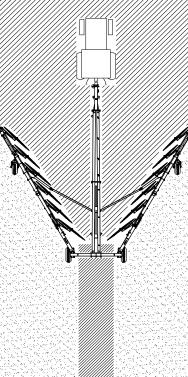
collect the cut forage.

The rake's working configuration, as illustrated, allows the cut forage to be collected and conveyed into a single central swath. This configuration, which can reach 10 metres for some models, considerably simplifies the process thereby reducing end costs.

#### **IMPORTANT**

You must remember that the tractor must drive in a more or less straight line. To **change direction** a few metres before the end of the field, the driver needs to apply the command to lift the rake wheels and close the side arms.

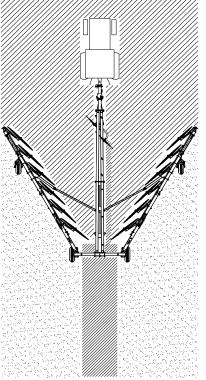
Only after the rake wheels have been lifted and the arms are closed can the operator change the tractor's direction, which requires several maneuvers.



#### Once the operator has turned the tractor, he can apply the command to reopen the side arms and then lower the rake wheels to continue the work.

To move the forage in the central swath, one or more additional rake wheels need to be installed at the centre of the frame. A set of additional rake wheels can be supplied with the Easy Rake series (the set, shown in the illustration, is called **Kicker wheel** and is available on request).

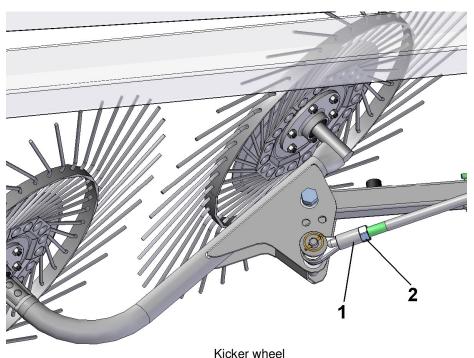
**Swath adjustment:** the swath can be narrowed by moving the two rear rake wheel arms, as indicated in the illustration by the arrow.

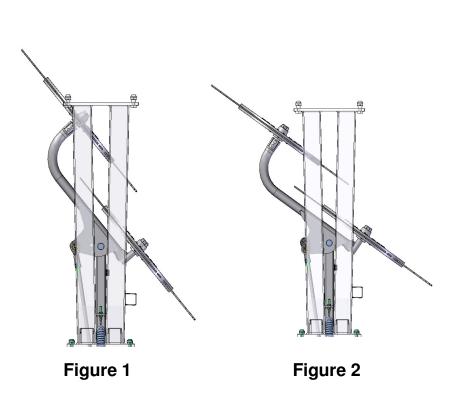


easy rake

Easy Rake with Kicker wheel







# Kicker wheel adjustment

After installing the kicker wheel (assembly instructions on page 40), the rake wheels can be better adapted to the ground by adjusting their inclination in relation to the direction in which they move:

Loosen the counter nut (pos 2) and screw or unscrew the bushing (pos 3) to increase or decrease inclination of the two rake wheels.

- 1) Decreased inclination FIG. 1: hay is discharged better from the rake wheels, but the ground isn't cleared as efficiently.
- 2) Increased inclination FIG. 2: hay isn't discharged as efficiently from the rake wheels, but the ground is cleared better.

Prior to work breaks (even short ones) the operator must always:

- Switch off the tractor's engine
- Apply the parking brake
- Place the gear stick in neutral
- Remove the keys from the ignition;

When the operator has finished work for the day, he must place the rake back in its transportation configuration before returning the tractor to its parking area.

Rake storage instructions are given in paragraph C5.



#### MAINTENANCE

#### E1 Maintenance instructions

The Manufacturer has drawn up a rake maintenance schedule based on functional tests. This schedule, if followed assiduously by the Customer, can maintain the rake's working efficiency and capacity without risk of damage. The operator, who must be a qualified technician of working age, must follow these rules:

- All maintenance and repairs must never be left unfinished or postponed;
- The operator must never rely on his memory alone, but always read and follow the instructions in this manual without fail;
- The operator must install a "**Maintenance in progress**" sign in a prominent position on the tractor's dashboard before starting work. This ensures the operator's safety and can prevent damage to the rake.
- All maintenance must be carried out on a flat and well lit surface, with the rake standing in a stable position and the tractor at standstill, with the parking brake applied, the engine off and the keys removed from the ignition;
- Tools for maintenance must be used in accordance with relative accident prevention regulations. Equipment must not, therefore, be put to improper use, e.g. do not use petrol instead of detergent, or pliers instead of a wrench;
- Only use spare parts that are type approved or recommended by the Manufacturer.

After maintenance or repairs, always clear the area of any water, oil, grease, dirty cloths, tools and any other material.

#### **IMPORTANT**

Take extra care when checking for leaks of pressurized fluid as the fluid can leak out of tiny, virtually invisible holes, burn through skin and cause serious infections. You must therefore use safety glasses with side protection and a piece of cardboard or wood to look for leaks.

#### E2 Scheduled maintenance

Scheduled maintenance is purely informative and depends on normal operating conditions. It may therefore differ in relation to the type of service, working environment (which may be dusty), the season, etc. Maintenance should be stepped up the tougher the machine's operating conditions.

#### E2.1 Checks on a daily basis

Checks to be carried out on a daily basis:

- Check condition of all the labels;
- Check condition of all the fittings (tightness of connections, condition of sleeves and leaks or overflowing of hydraulic oil);
- Use a grease pump to re-fill all the greasers on the equipment, or apply grease with a brush where necessary;
- Ensure all the nuts and bolts are properly fastened.

#### E2.2 Checks on a monthly basis or per 50 hours' operation

Checks to be carried out on a monthly basis or per 50 hours' operation:

- Check condition of all the labels;
- Check condition of all the fittings (tightness of connections, condition of sleeves and leaks or overflowing of hydraulic oil);
- Check presence and condition of fasteners and safety devices;
- Ensure all the nuts and bolts are properly fastened;
- Check condition of the entire structure.

#### E2.3 Checks on an annual basis or per 500 hours' operation

Checks to be carried out on an annual basis or per 500 hours' operation:

- Check condition of all the fittings (tightness of connections, condition of sleeves and leaks or overflowing of hydraulic oil);
- Check presence and condition of fasteners and safety devices;
- Ensure all the nuts and bolts are properly fastened;
- Check condition of the entire structure.

1



#### E3 Lubrication

To top up the greasers, remove their protection caps (if present), remove all traces of dust and then use the pump to inject the grease. Afterwards, use a cloth to remove any excess grease on the greasers. Use a brush to apply grease wherever there aren't any greasers.



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All grease top-up points on the rake are indicated by labels like the one shown in the illustration.

#### **IMPORTANT**

To avoid pollution, it is strictly forbidden to dispose of oil, lubricants, filter cartridges or other noxious materials in the environment. Comply with all regulations in force on disposal of liquid and solid substances.

#### E4 Troubleshooting

The jack activation command does not respond	Hydraulic oil level low Hydraulic system piping is damaged	Top up oil level Replace piping
	Hydraulic pump is damaged	Replace pump
	Filter is clogged	Replace filter
The jacks only move intermittently	Air in the hydraulic circuit	Operate the pump at no load for a few minutes, using the jacks, to expel any air in the hydraulic circuit.

The jacks move even when the command isn't given	Jack seals are worn out	Replace seals
Overheated oil	Filter is clogged Pipes are crushed	Replace filter Check and replace pipes
	Oil level low	Top up oil level
Oil loss	Slow connection Worn out seal	Squeeze the pipe Replace the seal

Т

**Note:** contact the Manufacturer about any faults or trouble not mentioned in the table.

#### E5 Machine demolition: disposal of materials

When the rake is placed out of service, you must make harmless all parts that could pose a safety risk to persons, animals and the environment when sent for disposal. Materials that make up the rake and should be set aside for segregated disposal are:

- Iron

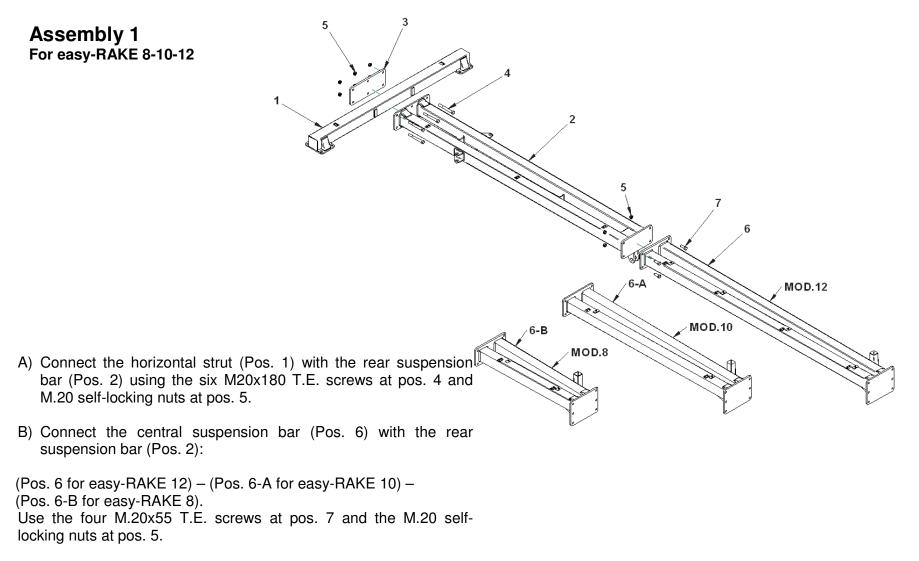
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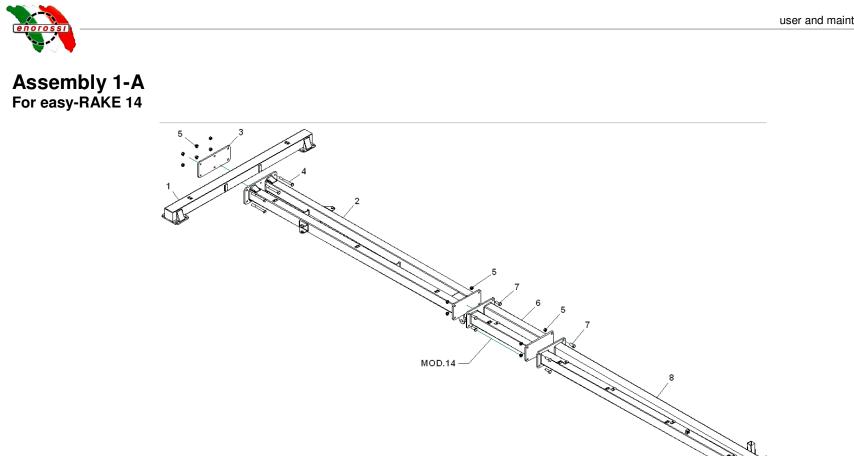
- Hydraulic oil
- Rubber
- Plastics

These materials must be disposed of in compliance with relative national legislation in force.

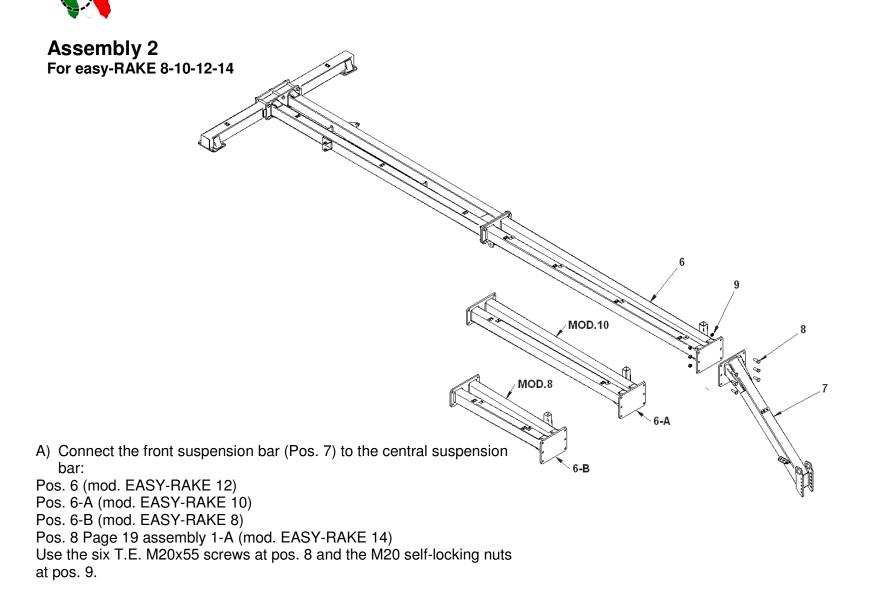


# Machine assembly instructions





- A) Connect the horizontal strut (Pos. 1) with the rear suspension bar (Pos. 2) using the six M20x180 T.E. screws at pos. 4 and M.20 self-locking nuts at pos. 5.
- B) Connect the additional central suspension bar (Pos. 6) with the rear suspension bar (Pos. 2) using the four M20x55 T.E. screws at pos. 7 and the M20 self-locking nuts at pos. 5.
- C) Connect the central suspension bar (Pos. 8) to the additional central suspension bar (Pos. 6) using the M20x55 T.E. screws at pos. 7 and the M20 self-locking nuts at pos. 5.

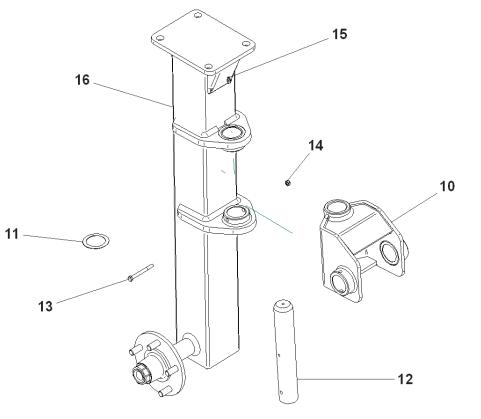


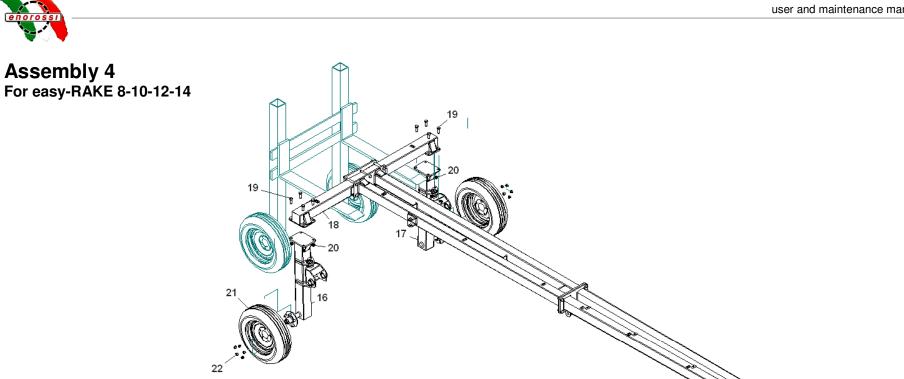
user and maintenance manual



Assembly 3 For easy-RAKE 8-10-12-14

- A) Install the pivot for the right-hand and left-hand frame (pos. 10) in the right-hand and left-hand legs (pos. 16 and 17), placing the AS 5070 anti-seizure coupling (Pos. 11) under the bushing of the pivot and above the leg's lower bracket. Insert the Ø 50x297 pin (pos. 12) and connect it with the M8x80 T.E. screw (pos. 13) and M8 self-locking nut (pos. 14).
- B) Insert the M8x1 greaser (pos. 15) in the pin (pos. 12).





A) Using a forklift truck, lift the horizontal strut already connected to the rear, central and front suspension bars; the front suspension bar should be left resting on the ground. Make sure the structure remains perfectly stable. Install the right-hand and left-hand legs (pos. 16 and 17), connecting them to the horizontal strut

(pos. 18) with the M20x55 T.E. screws at pos. 19 and the M20 self-locking nuts at pos. 20. Install the two rubber wheels (pos. 21), connecting them with the nuts (pos. 22).

Install the foot (pos. 23), connecting it with the Ø 15 pin (pos. 24). Connect the pin with the R safety pin (pos. 25).

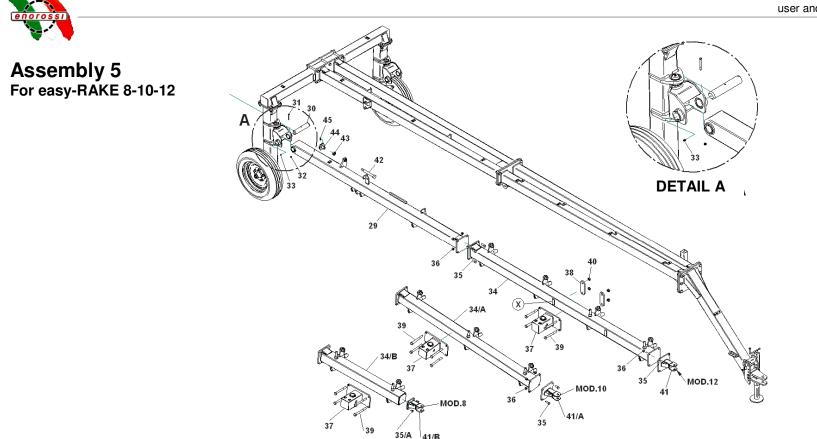
B) Install the pull connector (pos. 26) (for easy-RAKE 8-10-12) and fix it in place with two M16x160 T.E. screws (pos. 27) and M 16 self-locking nuts (pos. 28).

The pull connector (pos. 26/A) is only installed on EASY-RAKE Mod. 14.

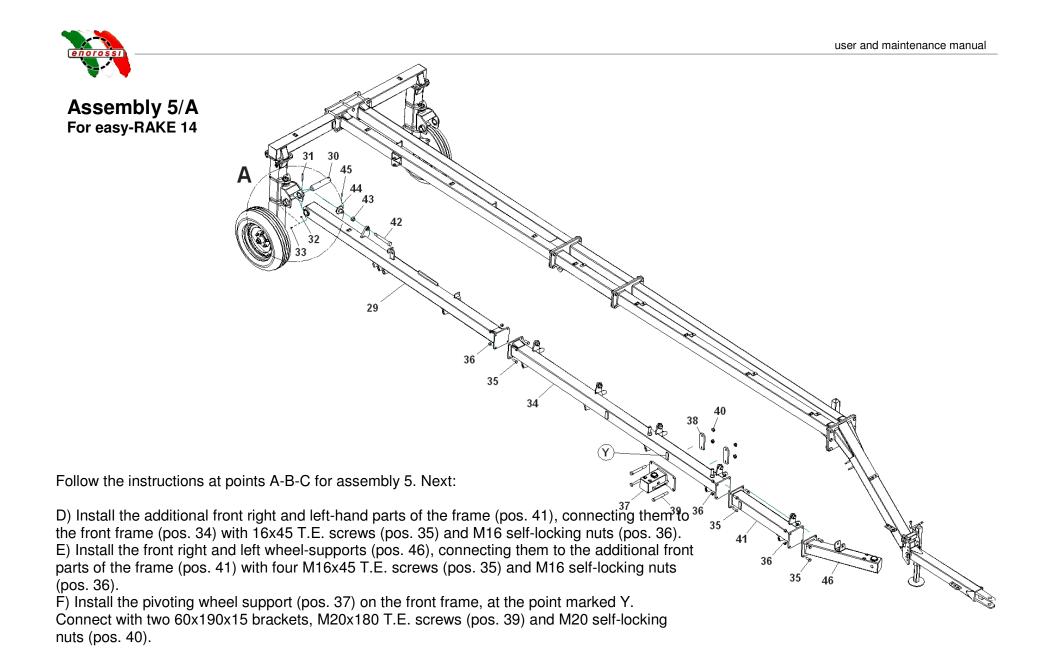
26/A

25

MOD.14



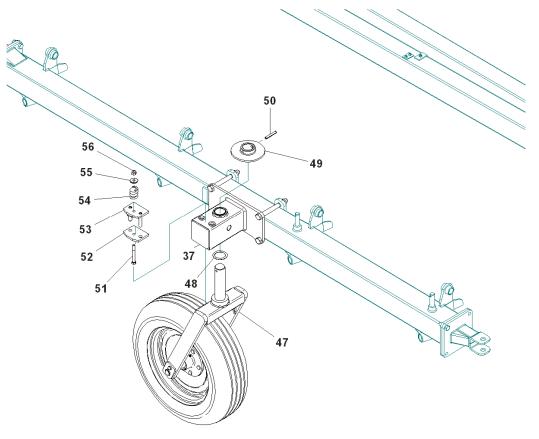
- A) Install the two rear left-hand and right-hand frames (pos. 29), connecting them to the two legs with the Ø50x225 pivot pins (pos. 30 see detail A). Connect the Ø50 pin (pos. 30) with the M8x80 T.E. screw (pos. 31) and M8 self-locking nut (pos. 32). Install the two M8x1 greasers (pos. 33) in the two Ø50x225 pins (see detail A).
- B) Install the M24x222 spacer screw (pos. 42); screw the hexagonal M24 counter-screw (pos. 43) into the spacer screw and install the hand wheel (pos 45). Connect with an Ø6x36 elastic pin (pos. 45).
- C) Install the two front right-hand and left-hand frames (pos. 34 for easy RAKE Mod. 12) (Pos. 34/A for easy RAKE Mod. 10) (Pos. 34/B for easy RAKE Mod. 8). Connect the front frames to the rear ones (pos. 29) with M16x45 T.E. screws at pos. 35 and M16 self-locking nuts at pos. 36.
- D) Install the pivoting wheel support (pos. 37) on the front frame (pos. 34), placing it at the place marked "X". Fix into place with the two brackets (pos. 8), M20x180 T.E. screws (pos. 39) and M10 nuts (pos. 40).
- E) For EASY-RAKE models 8-10-12: install the transport bar attachment in (pos. 41-41/A-41/B, depending on the model, connecting it with M12x25 T.E. screws (pos. 42/A).





# Assembly 6

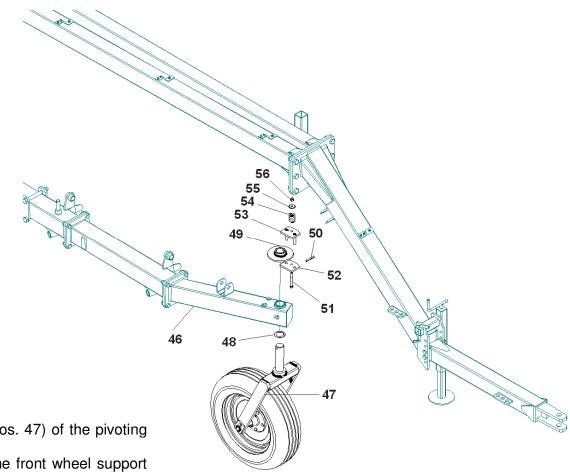
For easy-RAKE 8-10-12



- A) Insert the AS 50-70 coupling (pos. 48) on the Ø50 pin (pos. 47) of the pivoting wheel.
- B) Install the two wheels with pivoting fork (pos. 47) on the support (pos. 37).
- C) Install the disk brake (pos. 49) and connect with 10x70 elastic pin (pos. 50).
- D) Connect the M12x100 T.E. screw (pos. 51) to the connector boards (pos. 52 and 53); connect the Ø38x56 spring (pos. 54), Ø10x40 washer (pos. 55) and the M12 self-locking nut (pos. 56).



Assembly 6/A For easy-RAKE 14



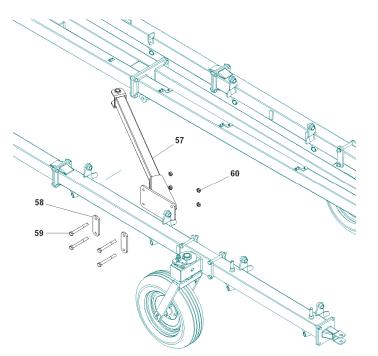
- A) Insert the AS 50-70 coupling (pos. 48) on the Ø50 pin (pos. 47) of the pivoting wheel.
- B) Connect the two wheels with pivoting fork (pos. 47) to the front wheel support (pos. 46).
- C) Install the brake disk (pos. 49) and connect with 10x70 elastic pin (pos. 50).
- D) Connect the M12x100 T.E. screw (pos. 51) to the connector boards (pos. 52 and 53); connect the Ø38x56 spring (pos. 54), Ø10x40 washer (pos. 55) and the M12 self-locking nut (pos. 56).



# Assembly 7-8 For easy-RAKE 8-10-12-14

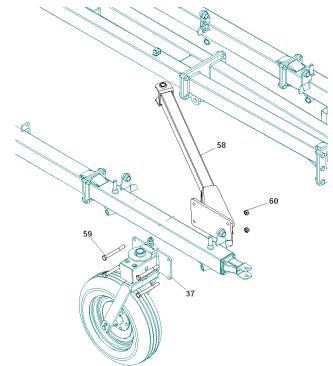
A) Fit the two unions – left and right (pos. 57) – on the two front frames, at the centre of the two vertical rabbets on the inner side of the front frames. Connect the unions with the fixing plates (pos. 58), M20x180 T.E. screws (pos. 59) and M20 self-locking nuts (pos. 60).

N.B: respect the positions of the pivoting wheels and unions, according to the model: FIGURE A: mod. EASY-RAKE 12 FIGURE B: mod. EASY-RAKE 10 and 8.



Position of pivoting wheel EASY-RAKE 12-14

**FIGURE A** 



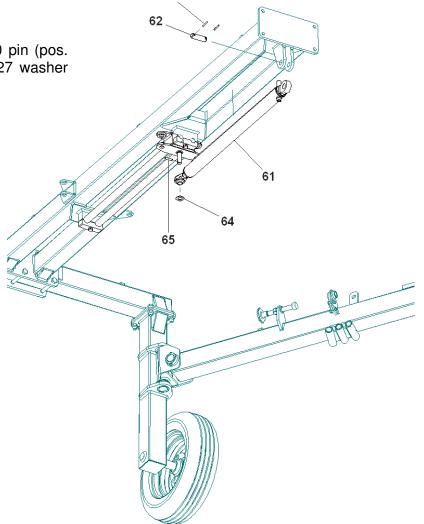
Position of pivoting wheel EASY-RAKE 8-10

FIGURE B



# Assembly 9 For easy-RAKE 8-10-12 -14

A) Install the hydraulic cylinder (pos. 61) and connect it to the Ø30x100 pin (pos. 62). Insert the hydraulic cylinder's rod in the pin slide; connect with Ø27 washer (pos. 64) and Ø8x50 elastic pin (pos. 65).

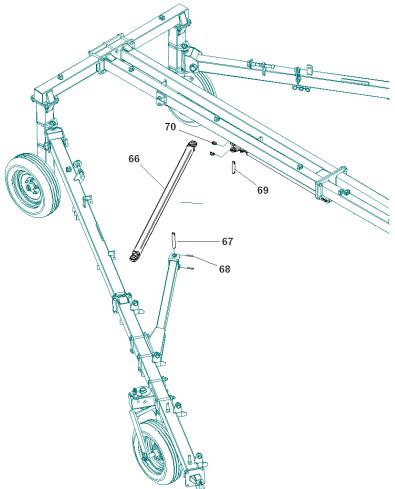


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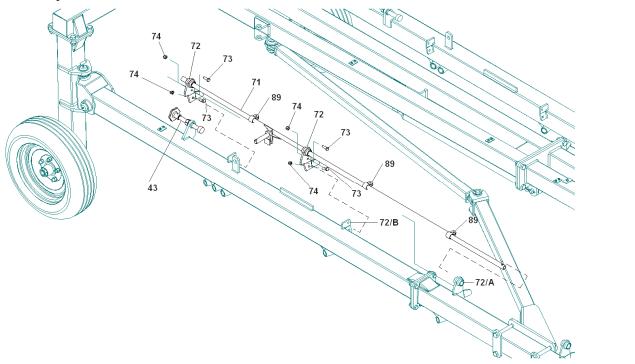
## Assembly 10 For easy-RAKE 8-10-12 -14

A) Install the connecting rod (pos. 66) and connect it to the union with the Ø30x175 pin (pos. 67) and 10x60 elastic pins (pos. 68). Fix the connecting rod to the slide with Ø30x135 pin (pos. 69) and Ø8 linch pins (pos. 70).





## Assembly 11 For easy-RAKE 8-10-12 -14



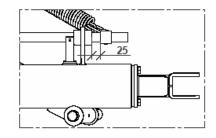


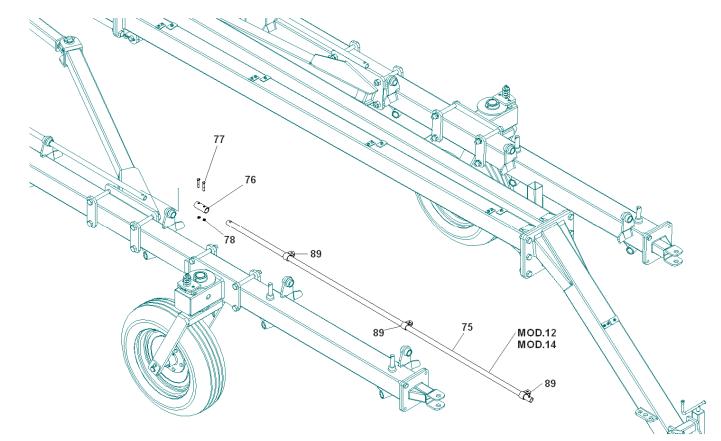
Figure C

A) Install the rake wheel bars (pos. 71) on the right and left-hand frame. Insert the two chain terminals (pos. 89) and the two mobile bar passages (pos. 72). The exact position of the chain terminals (pos. 89) is in front of the mobile bar passages (pos. 72) and the fixed bar passages (pos. 72/A) and at a distance of 25 mm, as illustrated in Fig. C (with rake wheel lifting jack in closed position (pos. 79), page 33)).

Insert the Ø27x2600 rear rake wheel bar (pos. 71) in the frame's fixed bar holders (pos. 72/A). Connect with M12x35 T.E. screws (pos. 73) and M12 nuts (pos. 74), with the bar passages (pos. 72) fixed to the supports (pos. 72/B).



# Assembly 12 For easy-RAKE 8-10-12

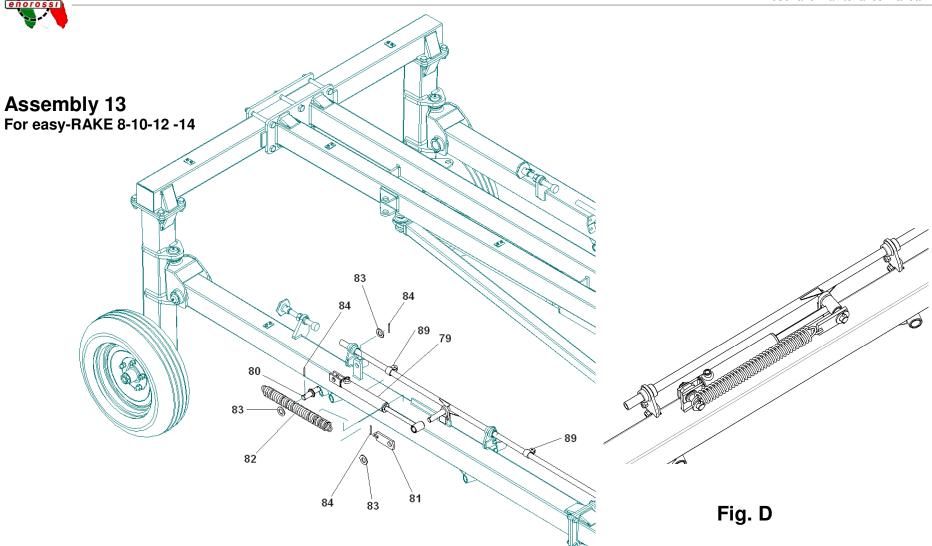


- A) Install the front bar (pos. 75) and use the Ø34x80 bushing (pos. 76) to connect it to the rear rake wheel bar (pos. 71). Connect with M8x50 T.E. screws (pos. 77) and M8 nuts (pos. 78).
- N.B: front bar (pos. 75/B of Ø27x500 EASY RAKE 8; front bar (pos. 75/A of Ø27x1.370 EASY RAKE 10; front bar (pos. 75 of Ø27x2.240 EASY RAKE 12-14.



# Assembly 12/A For easy-RAKE 14 77 76 B 89 75 78 / MOD.12-14 89 1A 89 77 76 89 78 MOD.14

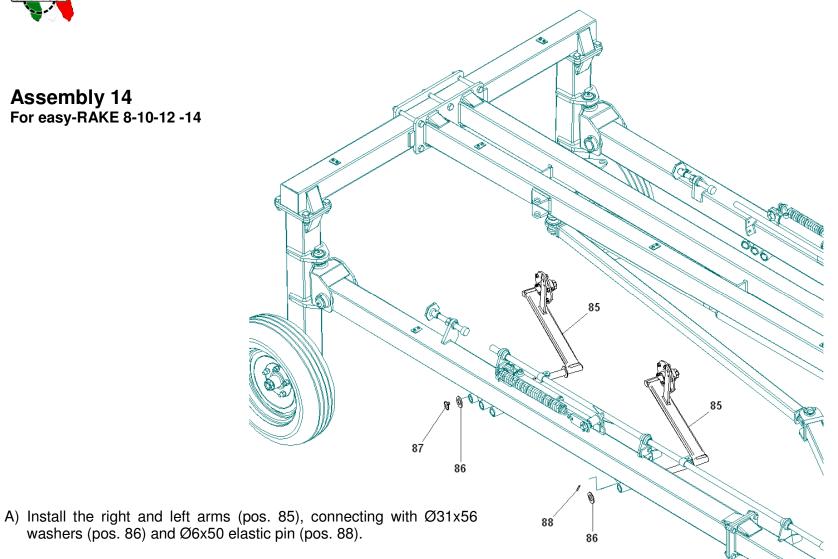
A) Install the central bar (pos. 75) and use the Ø34x80 bushing (pos. 76) to connect it to the front rake wheel bar (pos. 79). Connect with M8x50 T.E. screws (pos. 77) and M8 nuts (pos. 78).



- A) Install the two hydraulic cylinders (pos. 79) used to power the rake wheels.
- B) Install the two Ø25x100 pins (pos. 80) and two spring connector boards (pos. 81), blocking with washer (pos. 83) and elastic pin (pos. 84).
- C) Install the two Ø25x100 return springs (pos. 82) (more information in Fig. D), blocking with washer (pos. 83) and elastic pin (pos. 84).



Assembly 14 For easy-RAKE 8-10-12 -14



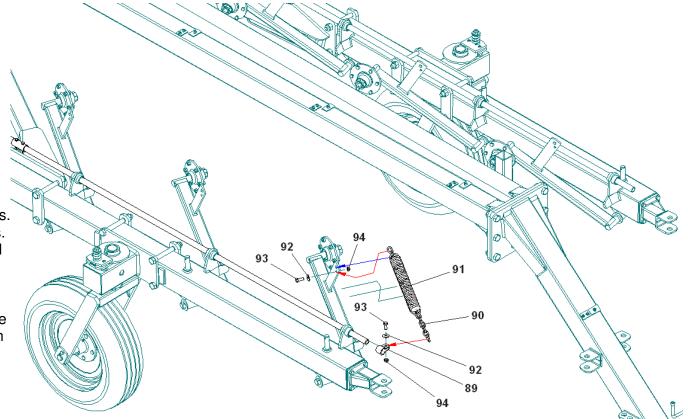
N.B: the last arm, right and left, is to be blocked with the Ø8 linch pin (pos. 87), to ensure easy removal of the two arms for adjusting swath width.



# Assembly 15 For easy-RAKE 8-10-12 -14

- A) Install the Ø50x200 springs (pos. 91), passing through the chain (twenty-three 38x23 rings) (pos. 90).
- B) The first ring on the chain is to be attached to the arm's bracket with the M10x30 T.E. screw (pos. 93), and the Ø10x30 washer (pos. 92). The last ring on the chain is to be attached to the end connector (pos. 89) with a M10x30 T.E screw (pos. 93), Ø10x30 washer (pos. 92) and M10 self-locking nut (pos. 94).
- C) Connect one side of the spring (pos. 91) to the arm's bracket and the other side to the fifth ring of the chain from the end connector, with the spring's hook facing upwards.

N.B: turn the screw (pos. 43, page 30) to adjust the rake wheel's weight on the ground.





# Assembly 16 For easy-RAKE 8-10-12 -14

Installation of the hydraulic fittings:

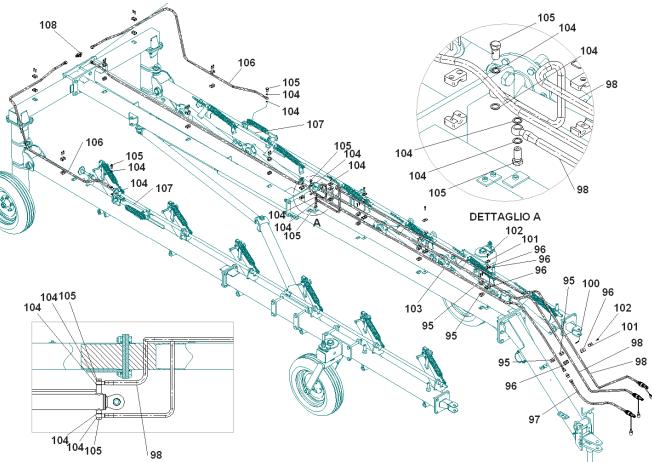
A) Connect the Ø5/16 Lg. 1600 rubber hydraulic pipe (pos. 97) (for mod. EASY-RAKE 8-10-12) or the Ø5/16 Lg. 2510 rubber hydraulic pipe (pos. 97 (for mod. EASY-RAKE 14), to the hydraulic pipe:

Pos. 103 Ø5/16 LG 7520 for easy-RAKE 14 Pos. 103 Ø5/16 LG 6650 for easy-RAKE 12 Pos. 103 Ø5/16 LG. 5780 for easy-RAKE 10 Pos. 103 Ø5/16 LG. 4910 for easy-RAKE 8

- B) Install the  $\frac{1}{2}$  Gas male T joint (pos. 108)
- C) Install the two Ø5/16 LG: 2500 hydraulic pipes (pos. 106) and connect them to the two hydraulic cylinders (pos. 107).
- D) Connect the pipes with single Ø14 necks (pos. 95) and M6x28 screws (pos. 100).
- E) Connect the two hydraulic pipes (pos. 98) to the double-acting hydraulic cylinder:

Pos. 98 Ø5/16 LG. 7280 mm. EÁSY-RAKE 14 Pos. 98 Ø5/16 LG. 5500 mm. EASY-RAKE 12 Pos. 98 Ø5/16 LG: 4630 mm. EASY-RAKE 10 Pos. 98 Ø5/16 LG: 3760 mm. EASY-RAKE 8 Connect the pipes with double Ø14 necks (pos. 96) and M8x35 T.E. screws.

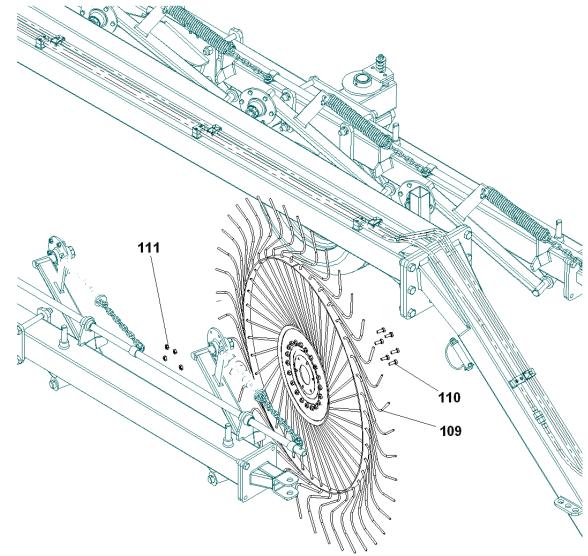
IMPORTANT: fully tighten all the hydraulic pipes to prevent oil leaks.





## Assembly 17 For easy-RAKE 8-10-12 -14

A) Install the right-hand rake wheels (pos. 109) and the left-hand ones. Connect them to the hub of the arm with M10x25 T.E. screws (pos. 110) and M10 self-locking nuts (pos. 111).

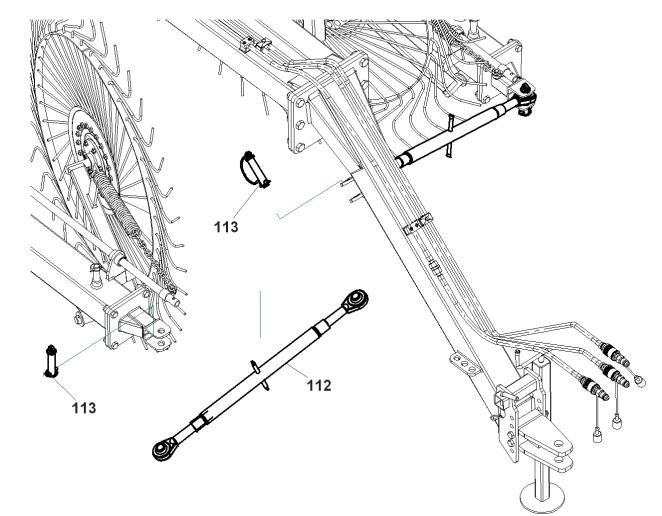




## Assembly 18 For easy-RAKE 8-10-12

#### Installation of the transport bars

A) Connect the two transport bars (pos. 112), to the two side frames and to the central suspension bar with the Ø25x100 pins (pos. 113).

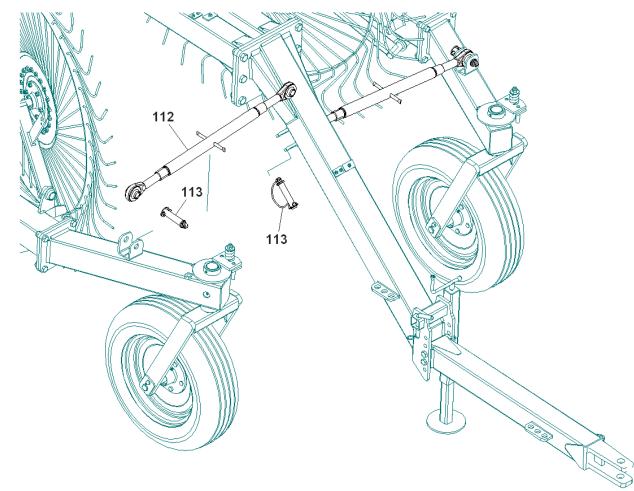




#### Assembly 18 For easy-RAKE 14

#### Installation of the transport bars

A) Connect the two transport bars (pos. 112) to the two front wheel supports and the central suspension bar, using the Ø25x100 pins (pos. 113).



**SPARE PARTS - 39** 

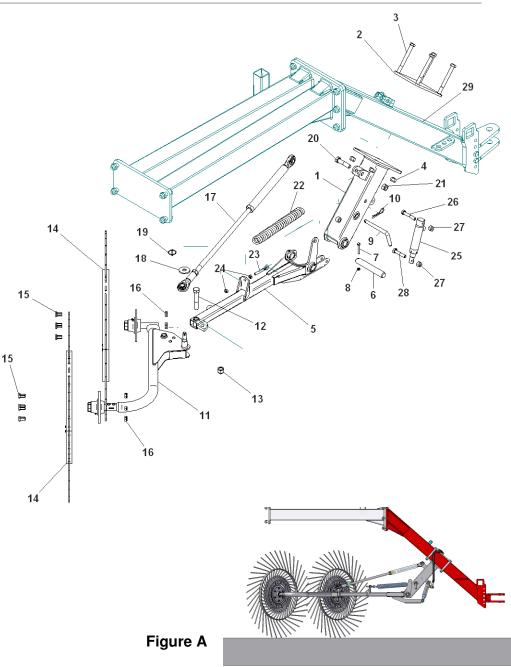




## Assembly of central rake wheels (optional)

# 1<sup>st</sup> central rake wheel assembly (optional)

- A) Connect the fixed frame (pos. 1) to the front suspension bar (pos. 29), attach the 174x240x10 plate (pos. 2), M16x160 T.E. screws (pos. 3) and M16 self-locking nuts (pos. 4). The best position of the fixed frame (pos. 1) in relation to the front suspension bar (pos. 29) is when the axis of the two rake wheels is perfectly parallel with the ground (FIG. A): the two rake wheels must apply exactly the same pressure on the ground.
- B) Connect the swivel frame (pos. 5) to the fixed frame (pos. 1); use the Ø30x190 pin (pos. 6), M8x55 T.E. screw (pos. 7) and M8 nut (pos. 8).
- C) Install the hydraulic cylinder (pos. 25) and connect it with the M14x70 T.E. screw (pos. 28) on the side of the rod, and the M14x80 T.E. screw. Tighten in place with the M14 nut (pos. 27).
- D) Connect the spring (pos. 22)
- E) Install the rake wheel arm (pos. 11) and connect it to the swivel frame (pos. 5) with the M20x110 T.E. screw (pos. 12) and M20 nut (pos. 13).
- F) Install the retractable rod (pos. 17) and connect it with the M18x80 T.E. screw (pos. 20). On the other side, connect it with Ø20 washer (pos. 18) and Ø5 linch pin (pos. 19).
- G) Install the two central rake wheels (pos. 14), taking the brake into account (Fig. A).



5



# 2<sup>nd</sup> central rake wheel assembly (optional)

- A) Install the ½ GAS 3-way male joint (pos. 1) in the 5/16 LG: 550 mm hydraulic pipe (pos. 2).
- B) Insert the pipe (pos. 2) between the Ø5/16 LG. 1600 pipe (pos. 5) and the Ø5/16 pipe (pos. 6) after removing the ½ GAS nipple.
- C) Connect the pipe (pos. 2) to the hydraulic cylinder (pos. 25 pag. 40) with the 3/8 throttle screw (pos. 3).
- D) Lift the two rake wheels, feeding oil from the tractor to the hydraulic pipe (pos. 5) (all the rake wheels of the two frames will lift together).
- E) Adjust the rake wheels' lifting speed with the 3/8 GAS throttle valve (pos. 3).
- F) To circulate on the road, lock the two rake wheels in their upright position with the Ø16 locking pin (pos. 9 page 40).

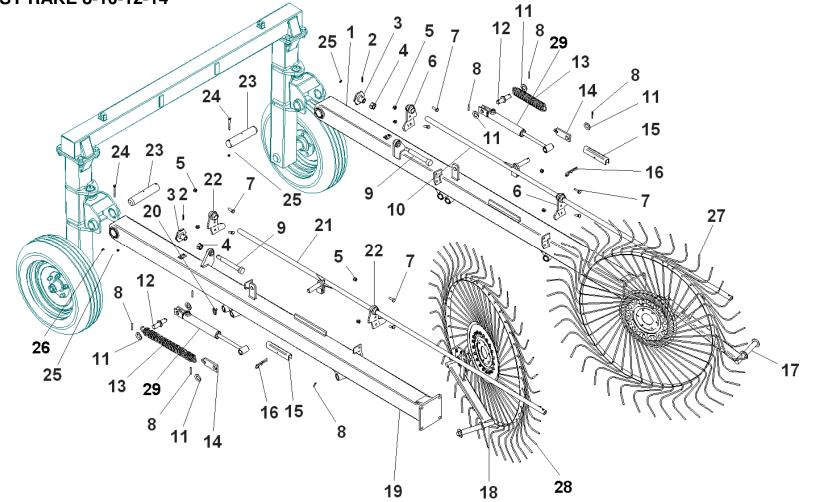


# Spare parts

	When ordering spare parts please make photostats of this order form, fill out and mail or fax it directly to us at this address:					
	ENOAGRICOLA ROSSI srl - Calzolaro di Umbertide - Perugia - Italy Tel. 075 / 930 22 22 Telefax 075 / 930 23 28 enorossi@enorossi.it - Info@enorossi.it http://www.enorossi.it - www.enoagricolarossi.it - www.enoagricolarossi.com To ensure prompt assistance and replacement of parts always supply below required information, thank you.					
Compan	y name					
Invoice a	address					
Country						
	ion of goods nt from above					
Pos.	Code number		Description	Quantity		



#### Parti di ricambio Tavola 1 Per EASY RAKE 8-10-12-14



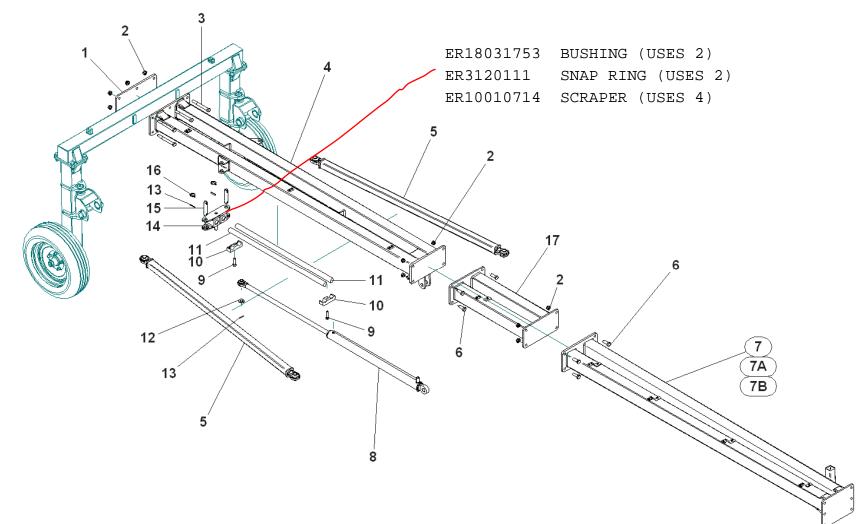


#### Tabella 1 - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1	18032058	TELAIO POSTERIORE SX E.R. 8-10-12-14	LEFT REAR FRAME E.R. 8-10-12-14
2	3080109	SPINA ELASTICA 6X32/6873	SPRING PIN 6X32
3	18031179	VOLANTINO DI REGOLAZIONE	REGOLATION KNOB
4	3020337	DADO ESAG.MEDIO 24MA/5588 ZINC.	NUT 24MA
5	3020202	DADO AUTOBL.BASSO 12MA/7473	SELF LOCKING NUT 12MA
6	18032113	PASSAGGIO BARRA MOV. STELLE SX	BRACKET LEFT
7	3011216	VITE TESTA ESAG.8.8 M12X35/5739 ZINC.	SCREW TW M12X35
8	3080113	SPINA ELASTICA 6X50/6873	SPRING PIN 6X50
9	18031066	VITONE DISTANZIERE	SPACER SCREW 24MA
10	18032060	BARRA MOV.STELLE POST. SX E.R. 8-10-12-14	RAKING WHEEL ADJUSTMENT BAR ER 8-10-12-14
11	3030164	RONDELLA PIANA M27/6592 ZINC.	WASHER M27
12	12310112	SPINOTTO ATTACCO CILINDRO D.25 LG.110	PIN D.25 LG.110
13	11010508	MOLLA D.56 LG.274	ARM SPRING
14	18030940	AGGANCIO MOLLA RICHIAMO MARTINETTO	CYLINDER SPRING HOOK
15	18030481	BATTUTA MARTINETTO	CYLINDER BLOCK CLAMP
16	3040202	COPIGLIA TIPO R 5X100	SPLIT PIN R 5X100
17	18032019	BRACCETTO SX E.R. 8-10-12-14	COMPLETE LEFT ARM E.R. 8-10-12-14
18	18032020	BRACCETTO DX E.R. 8-10-12-14	COMPLETE RIGHT ARM E.R. 8-10-12-14
19	18032059	TELAIO POSTERIORE DX E.R. 8-10-12-14	RIGHT REAR FRAME E.R. 8-10-12-14
20	12880614	SPINA A SCATTO D.8	PIN 8
21	18032061	BARRA MOV.STELLE POST.DX ER 8-10-12-14	RAKING WHEEL ADJUSTMENT BAR E.R. 8-10-12-14
22	18032112	PASSAGGIO BARRA MOV.STELLE DX ER	BRACKET RIGHT
23	12060863	PERNO SNODO VERTICALE D.50 LG.236	PIVOT PIN D.50 LG.236
24	3011695	VITE T. E. 8.8 M8X80/5737 ZINC.	SCREW TE M8X80
25	3020209	DADO AUTOBL. BASSO 8MA/7473	SELF LOCKING NUT 8MA
26	3090101	INGRASSATORE DIRITTO 8MB	GREASE ZERK 8MB
27	17010812	STELLA VICON 6,9 SX E.R. 8-10-12-14	LEFT VICON RAKE WHEEL 6,9 E.R. 8-10-12-14
28	17010803	STELLA VICON 6,9 DX E.R. 8-10-12-14	RIGHT VICON RAKE WHEEL 6,9 E.R. 8-10-12-14
29	12770101	MARTINETTO SEMPLICE EFFETTO 40X20/190	COMPLETE CYLINDER



#### Tavola 2 Per EASY RAKE 8-10-12-14



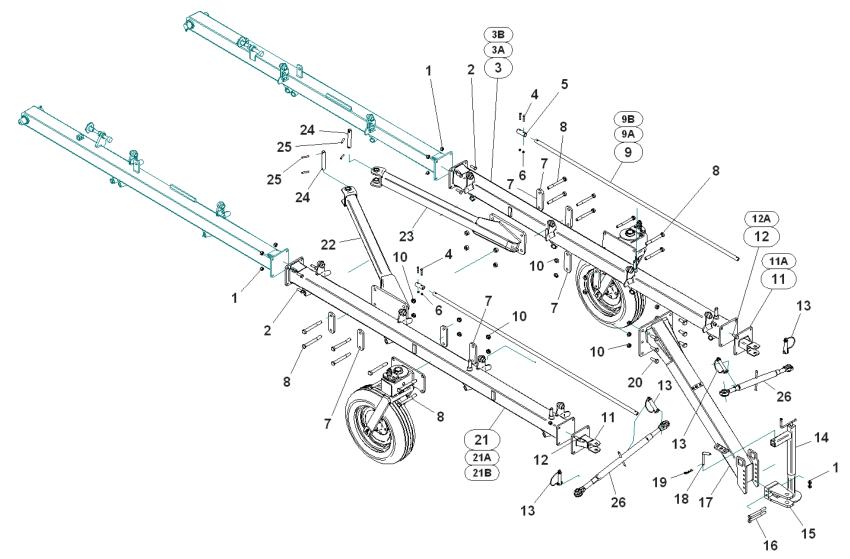


#### Tabella 2 - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1	18032022	PIASTRA DI GIUNZIONE	FASTENING PLATE
2	3020216	DADO AUTOBLOCCANTE BASSO 20MA	SELF LOCKING NUT 20MA
3	3011648	VITE TESTA ESAG. 8.8 M20X180/5737 ZINC.	SCREW TE 20X180
4	18032023	TIMONE POSTERIORE E.R. 8-10-12-14	PULL BAR E.R. 8-10-12-14
5	18032024	BIELLA	CONNECTING BAR
6	3011694	VITE T. E. 8.8 M20X55/5739 ZINC.	SCREW TE M20X55
7	18032025	TIMONE CENTRALE E.R. 8	CENTRAL DRAWBAR E.R. 8
7A	18032026	TIMONE CENTRALE E.R.10	CENTRAL DRAWBAR E.R. 10
7B	18032027	TIMONE CENTRALE E.R.12-14	CENTRAL DRAWBAR ER 12-14
8	12770131	MARTINETTO DOPPIO EFF.60X35/920	HYDRAULIC CYLINDER
9	3011271	VITE TESTA ESAG. 8.8 M16X60/5737 ZINC.	SCREW TE M16X60
10	18032028	SUPPORTO PORTASTELO	SUPPORT
11	12880417	ASSE GUIDA PER SLITTA	SKID SHAFT
12	3030164	RONDELLA PIANA M27/6592 ZINC.	WASHER 27
13	3080105	SPINA ELASTICA 8X50/6873	SPRING PIN 8X50
14	18032029	SLITTA	SKID
15	12060868	PERNO PER SLITTA D.30 LG.135	PIN 30X135
16	12880614	SPINA A SCATTO 8	PIN 8
17		PROLUNGA TIMONE E.R. 14	EXTENSION FRAME ER14



Tavola 3 Per EASY RAKE 8-10-12-14



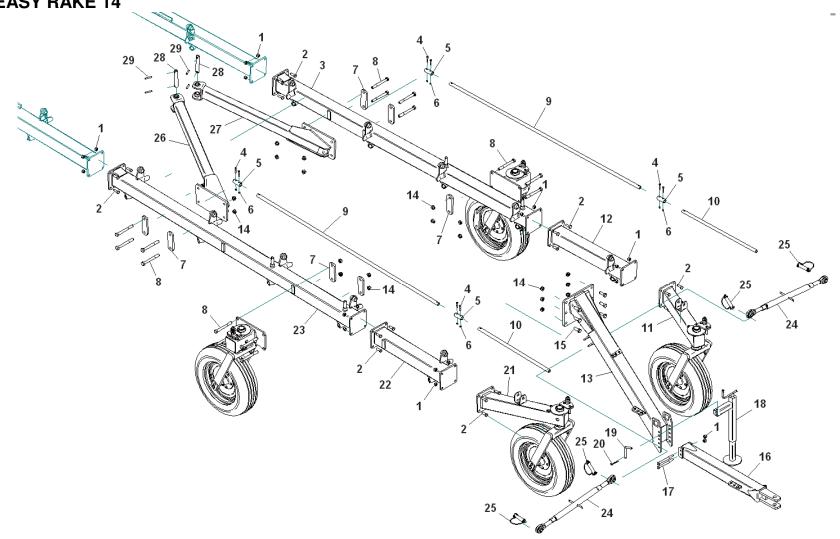


#### Tabella 3 - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1	3020204	DADO AUTOBL.BASSO 16MA/7473	SELF LOCKING NUT 16MA
2	3011645	VITE TESTA ESAG.8.8 M16X45/5739 ZINC.	SCREW TE M16X45
3	18032030	TELAIO ANTERIORE SX E.R. 8	LEFT FRONT FRAME ER 8
3A	18032031	TELAIO ANTERIORE SX E.R. 10	LEFT FRONT FRAME ER 10
3B	18032062	TELAIO ANTERIORE SX E.R. 12-14	LEFT FRONT FRAME ER 12-14
4	3011210	VITE T. E. 8.8 M8X50/5737 ZINC.	SCREW TE M8X50
5	18030435	BOCCOLA DI GIUNZIONE BARRE MOV.STELLE	BUSH D.33,7 LG.80
6	3020209	DADO AUTOBL.BASSO 8MA/7473	SELF LOCKING NUT 8MA
7	18032033	PIASTRA FISSAGGIO GOMITO	ELBOW ARM ATTACHMENT BRACKETS
8	3011648	VITE TESTA ESAG.8.8 M20X180/5737 ZINC.	SCREW TE M20X180
9	18032034	BARRA ANT.MOV.STELLE LG .500 E.R. 8	RAKING WHEEL ADJUSTMENT BAR ER 8 LG.500
9A	18032035	BARRA ANT.MOV.STELLE LG .1370 E.R. 10	RAKING WHEEL ADJUSTMENT BAR ER 10 LG.1370
9B	18032036	BARRA ANT.MOV.STELLE LG . 2240 E.R. 12-14	RAKING WHEEL ADJUSTMENT BAR ER 12-14 LG.2240
10	3020216	DADO AUTOBL.BASSO 20MA/7473	SELF LOCKING NUT 20MA
11	18032037	AGGANCIO BARRA DI TRASPORTO (118X118) (E.R. 8)	TRANSPORT BAR SUPPORT ER8
11A	18032038	AGGANCIO BARRA DI TRASPORTO (190X190) (E.R. 10-12)	TRANSPORT BAR SUPPORT ER10-12
12	3011255	VITE TESTA ESAG.8.8 M12X25/5739 ZINC. (ER 8)	SCREW TE M12X25 FOR ER 8
12A	3011645	VITE TESTA ESAG.8.8 M16X45/5739 ZINC. (ER 10-12)	SCREW TE M16X45 FOR ER 10-12
13	12310306	PERNO AGGANCIO BARRE DI TRASPORTO D.25 L.100	CLIP PIN
14	18032039	PIEDE DI SOSTEGNO	JACK
15	18032040	ATTACCO DI TRAINO	PULL LINKAGE ATTACHMENT
16	3010309	VITE TESTA ESAG.8.8 M16X160/5737 ZINC.	SCREW TE M16X160
17	18032064	TIMONE	FRONT DRAWBAR
18	12120104	SPINA D.15 LG.200	PIN 15X200
19	3040202	COPIGLIA TIPO R 5X100	SPLIT PIN R 5X100
20	3011694	VITE T. E. 8.8 M20X55/5739 ZINC.	SCREW TE M20X55
21	18032042	TELAIO ANTERIORE DX ER 8	RIGHT FRONT FRAME ER 8
21A	18032043	TELAIO ANTERIORE DX ER 10	RIGHT FRONT FRAME ER 10
21B	18032063	TELAIO ANTERIORE DX ER 12-14	RIGHT FRONT FRAME ER 12-14
22	18032045	GOMITO DX	RIGHT FRAME ELBOW ARM
23	18032046	GOMITO SX	LEFT FRAME ELBOW ARM
24	12060866	PERNO PER SLITTA D.30 LG.175	PIN 30X175
25	3080107	SPINA ELASTICA 10X60	SPRING PIN 10X60
26	12310702	BRACCIO 3° PUNTO	TRANSPORT BAR



Tavola 3/A Per EASY RAKE 14



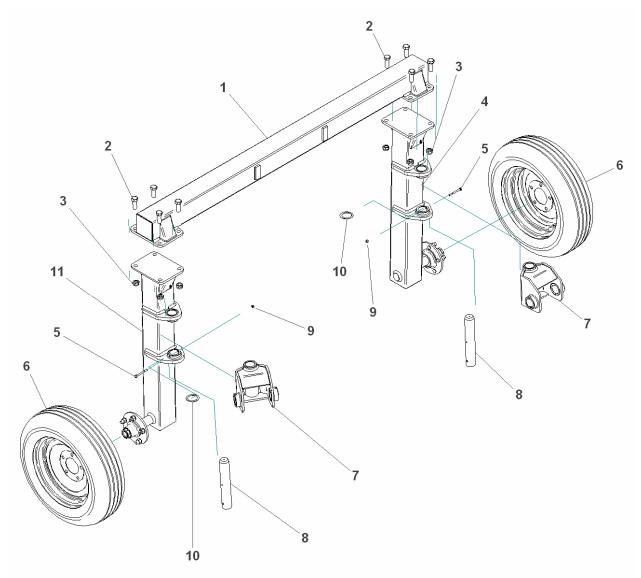


#### Tabella 3/A - Per EASY RAKE 14

CODICE	DESCRIZIONE	DESCRIPTION
3020204	DADO AUTOBL.BASSO 16MA/7473	SELF LOCKING NUT 16MA
3011645	VITE T. E., 8.8 M16X45/5739 ZINC.	SCREW TE M16X45
18032030	TELAIO ANTERIORE SX E.R. 12-14	LEFT FRONT FRAME ER 12-14
3011210	VITE TESTA ESAG. 8.8 M8X50/5737 ZINC.	SCREW TE M8X50
18030435	BOCCOLA DI GIUNZIONE BARRE MOV.STELLE	BUSH D.33,7 LG.80
3020209	DADO AUTOBL.BASSO 8MA/7473	SELF LOCKING NUT 8MA
18032033	PIASTRA FISSAGGIO GOMITO	ELBOW ARM ATTACHMENT BRACKETS
3011648	VITE TESTA ESAG.8.8 M20X180/5737 ZINC.	SCREW TE M20X180
18032034	BARRA ANT. MOV. STELLE LG .2.240 ER 12-14	RAKING WHEEL ADJUSTMENT BAR ER 8 LG.500
18032075	BARRA ANT. MOV. STELLE E.R. 14	RAKING WHEEL ADJUSTMENT BAR ER14
	SUPPORTO RUOTA FRONTALE SX E.R. 14	LEFT GROUND WHEEL SUPPORT
	PROLUNGA TELAIO SX E.R. 14	LEFT EXTENSION FRAME ER14
18032064	TIMONE	FRONT DRAWBAR
3020216	DADO AUTOBL.BASSO 20MA/7473	SELF LOCKING NUT 20MA
3011694	VITE T. E. 8.8 M20X55/5739 ZINC.	SCREW TE M20X55
	ATTACCO DI TRAINO E.R. 14	PULL BAR LINKAGE
3010309	VITE TESTA ESAG.8.8 M16X160/5737 ZINC.	SCREW TE M16X160
18032039	PIEDE DI SOSTEGNO	JACK
12120104	SPINA D.15 LG.200	PIN 15X200
3040202	COPIGLIA TIPO R 5X100	SPLIT PIN R 5X100
	SUPPORTO RUOTA FRONTALE DX E.R. 14	RIGHT GROUND WHEEL SUPPORT
	PROLUNGA TELAIO DX E.R. 14	EXTENSION FRAME ER14
18032063	TELAIO ANTERIORE DX ER 12-14	RIGHT FRONT FRAME ER 12-14
12310702	BRACCIO 3º PUNTO	TRANSPORT BAR
12310306	PERNO AGGANCIO BARRE DI TRASPORTO D.25 L.100	CLIP PIN
1		
	3020204 3011645 18032030 3011210 18030435 3020209 18032033 3011648 18032034 18032034 18032075 18032064 3010309 18032039 12120104 3040202 18032063 12310702	3020204      DADO AUTOBL.BASSO 16MA/7473        3011645      VITE T. E 8.8 M16X45/5739 ZINC.        18032030      TELAIO ANTERIORE SX E.R. 12-14        3011210      VITE TESTA ESAG. 8.8 M8X50/5737 ZINC.        18030435      BOCCOLA DI GIUNZIONE BARRE MOV.STELLE        3020209      DADO AUTOBL.BASSO 8MA/7473        18032033      PIASTRA FISSAGGIO GOMITO        3011648      VITE TESTA ESAG.8.8 M20X180/5737 ZINC.        18032034      BARRA ANT. MOV. STELLE LG .2.240 ER 12-14        18032075      BARRA ANT. MOV. STELLE E.R. 14        SUPPORTO RUOTA FRONTALE SX E.R. 14      PROLUNGA TELAIO SX E.R. 14        18032064      TIMONE        3020216      DADO AUTOBL.BASSO 20MA/7473        3011694      VITE T. E. 8.8 M20X55/5739 ZINC.        4TTACCO DI TRAINO E.R. 14      18032039        3010309      VITE TESTA ESAG.8.8 M16X160/5737 ZINC.        18032039      PIEDE DI SOSTEGNO        12120104      SPINA D.15 LG.200        3040202      COPIGLIA TIPO R 5X100        SUPPORTO RUOTA FRONTALE DX E.R. 14        18032063      TELAIO ANTERIORE DX ER 12-14        18032063      TELAIO ANTERIORE DX ER 12-14



Tabella 4 Per EASY RAKE 8-10-12-14



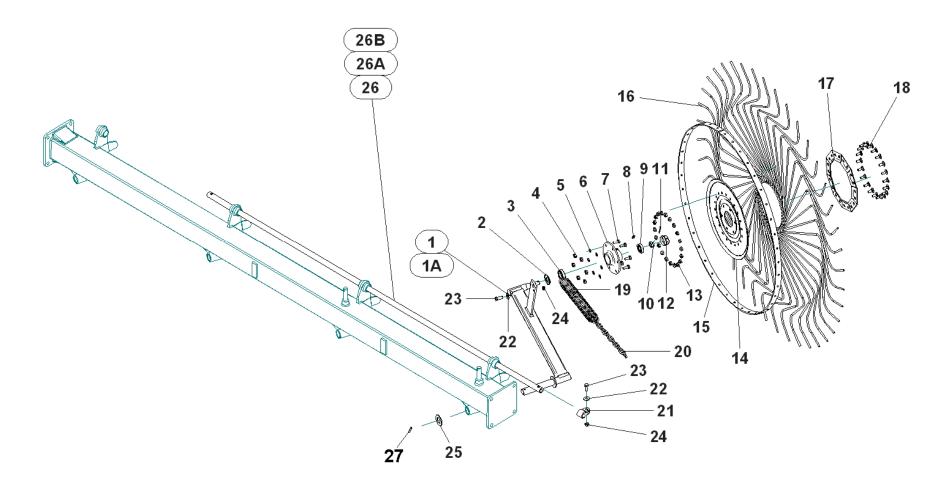


#### Tabella 4 - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1	18032065	TRAVERSA ORIZZONTALE	CROSS DRAWBAR
2	3011694	VITE T. E8.8 M20X55/5739 ZINC.	SCREW TE M20X55
3	3020216	DADO AUTOBL.BASSO 20MA/7473	SELF LOCKING NUT 20MA
4	18032048	GAMBA SX	LEFT WHEEL LEG SUPPORT
5	3011695	VITE TESTA ESAG.8.8 M8X80/5737 ZINC.	SCREW TE M8X80
6	12170108	RUOTA COMPLETA 205/70 R15	COMPLETE WHEEL 205/70 R15
7	18032049	SNODO PER TELAIO	PIVOTING SUPPORT
8	12060860	PERNO SNODO ORIZZONTALE D.50 LG.295	PIN D.50 LG.295
9	3020209	DADO AUTOBL.BASSO 8MA	SELF LOCKING NUT 8MA
10	12280007	RALLA AS 5070	SPACER AS 5070
11	18032049	GAMBA DX	RIGHT WHEEL LEG SUPPORT
I	<u> </u>		



#### Tavola 5 Per EASY RAKE 8-10-12-14



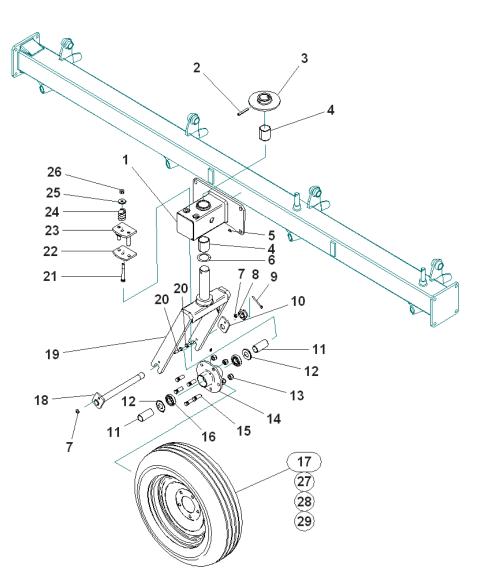


#### Tabella 5 - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1	18032020	BRACCETTO DX E.R. 8-10-12-14	COMPLETE RIGHT ARM
1A	18032019	BRACCETTO SX E.R. 8-10-12-14	COMPLETE LEFT ARM
2	12860001	CORTECO 25X52	DUST COVER 25X52
3	12240119	CUSCINETTO A RULLI CONICI 30205	BEARING 30205
4	3020328	DADO ESAG. MEDIO 10MA/5588	NUT 10MA
5	3030227	RONDELLA DENTELLATA M10 ZINC.	LOCK WASHER M10
6	12150103	MOZZO STELLA	HUB
7	3010261	VITE TESTA ESAG.8.8 M10X25/5739 ZINC.	SCREW TE 10X25
8	3090101	INGRASSATORE DIRITTO 8X1	GREASE ZERK 8MB
9	12240118	CUSCINETTO A RULLI CONICI 30204	BEARING 30204
10	3020210	DADO AD INTAGLIO 18MB	SELF LOCKING NUT 18MB
11	3040114	COPIGLIA 4X35	SPRING 4X35
12	12360001	PARAPOLVERE	DUST COVER CUP
13	3020224	DADO AUTOBL. BASSO 10MA CONELOX	SELF LOCKING NUT 10MA CONELOX
14	12160101	FLANGIA STELLA	RAKING WHEEL FLANGE
15	18031113	ANELLO STELLA	EXTERNAL RAKING WHEEL RING
16	18030415	DENTE STELLARE VICON 6,9	VICON TOOTH 6,9
17	18030416	PLACCHETTA SERRADENTI	TEETH FASTENER PLATE
18	3010105	VITE T.T.Q.S.T. M10X25 ZINC.	SCREW T.T.Q.S.T. M10X25
19	11010508	MOLLA	ARM SPRING
20	12070422	CATENA	CHAIN
21	18030906	MORSETTO PER CATENA	CHAIN CLAMP
22	3030169	RONDELLA M10X30 EXL ZINC.	FLAT WASHER 10X30
23	3011206	VITE TESTA ESAG. 8.8 M10X30/5739 ZINC.	SCREW TE M10X30
24	3020201	DADO AUTOBL. BASSO 10MA/7473	SELF LOCKING NUT 10MA
25	3030165	RONDELLA PIANA M30/6592 ZINC.	WASHER M30
26	18032034	BARRA ANT.MOV.STELLA LG.500 E.R. 8	RAKING WHEEL ADJUSTMENT ER 8 LG.500
26A	18032035	BARRA ANT.MOV.STELLA LG.1370 E.R. 10	RAKING WHEEL ADJUSTMENT ER 10 LG.1370
26B	18032036	BARRA ANT.MOV.STELLA LG.2240 E.R. 12-14	RAKING WHEEL ADJUSTMENT ER 12-14 LG.2240
27		SPINA ELASTICA	SPRING PIN



Tavola 6 Per EASY RAKE 8-10-12-14





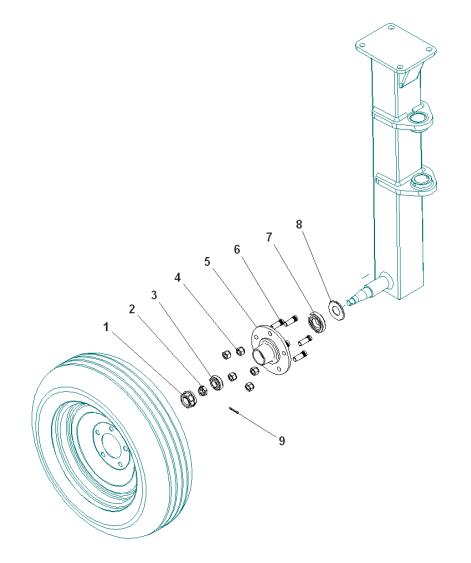
#### Tabella 6 - Per EASY RAKE 8-10-12-14

1 2	18031737		
2		SUPPORTO RUOTA PIVOTTANTE	WHEEL SUPPORT
	3080117	SPINA ELASTICA 10X70 SERIE PESANTE	SPRING PIN 10X70
3	18032051	DISCO FRENO RUOTA E.R. 8-10-12-14	BRAKING DISC
4	12070440	CUSCINETTO GLYCODUR 505560	NYLON BUSH 505560
5	3090101	INGRASSATORE DIRITTO M8X1	GREASE ZERK 8MB
6	12280007	RALLA AS 5070	SPACER AS 5070
7	3020201	DADO AUTOBL. BASSO 10MA/7474	SELF LOCKING NUT 10MA
8	3020219	DADO AD INTAGLIO 30MB	NUT 30MB
9	3040106	COPIGLIA 6X60	ROLL PIN 6X60
10	18031001	FERMO	LOCK WASHER
11	12070421	BOCCOLA DISTANZIERE D.38 LG.78	BUSH 38X78
12	10011308	CORTECO 30X62	DUST COVER 30X62
13	3020218	DADO PER PRIGIONIERO MOZZO RUTA 16MB	STUD BOLT NUT 16MB
14	12150110	MOZZO RUOTA	HUB
15	3011609	COLONNETTA M16 PER MOZZO RUOTA	STUD BOLT M16
16	12240144	CUSCINETTO RULLI CONICI 30206	BEARING 30206
17	12170108	RUOTA COMPLETA 205/70 R15	COMPLETE WHEEL 205/70 R15
18	18031002	PERNO FILETTATO	FORK PIN
19	18032050	FORCELLA RUOTA E.R. 8-10-12-14	WHEEL FORK
20	3011281	VITE T. E. 8.8 M10X45/5737 ZINC.	SCREW TE M10X45
21	3011214	VITE T. E. 8.8 M12X100/5737 ZINC.	SCREW TE M12X100
22	18031128	PASTICCA INFERIORE FRENO	LOWER BRAKE PAD
23	18031126	PASTICCA SUPERIORE FRENO	UPPER BRAKE PAD
24	11010602	MOLLA A COMPRESSIONE PER FRENO D.38	BRAKE SPRING
25	12880413	RONDELLA PER MOLLA FRENO	WASHER D.40
26	3020202	DADO AUTOBL.BASSO 12MA	SELF LOCKING NUT 12MA
27	12020103	CERCHIO RUOTA 6JX15"	WHEEL RIM 6JX15"
28	12390103	COPERTONE 205/70 R15	COVER 205/70 R15
29	12380103	CAMERA D'ARIA PER COPERTONE 205/70 R15	AIR TUBE FOR COVER 205/70 R15

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Tavola 7 Per EASY RAKE 8-10-12-14





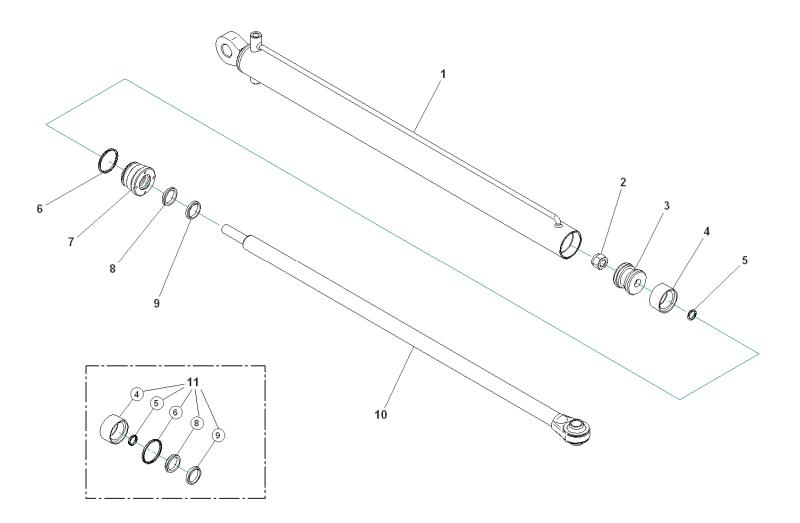
#### Tabella 7 - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1	12360003	PARAPOLVERE	DUST COVER CAP
2	3020217	DADO AUTOBL. BASSO 20MB	SELF LOCKING NUT 20MB
3	12240119	CUSCINETTO RULLI CONICI 30205	BEARING 30205
4	3020218	DADO PER PRIGIONIERO MOZZO 16MB	STUD BOLT 16MB
5	12150108	MOZZO RUOTA	HUB
6	3011609	COLONNETTA M16 PER MOZZO RUOTA	STUD BOLT M16
7	12240143	CUSCINETTO 30207	BEARING 30207
8	12360002	CORTECO 35X72	DUST COVER 35X72
9	3040114	COPIGLIA 4X35	SPRING PIN 4X35
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	1		
	1		

user and maintenance manual



#### Tavola 8 Per EASY RAKE 8-10-12-14





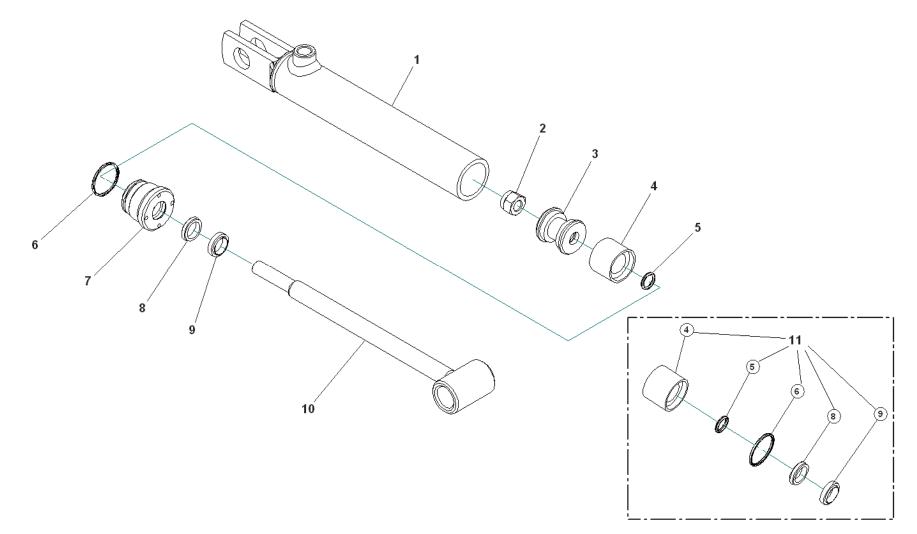
#### Tabella 8 - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1	12770135	CILINDRO MARTINETTO COD.12770131	CYLINDER
2	3020217	DADO AUTOBL.BASSO 20MB/7473	SELF LOCKING NUT 20MB
3	12770216	PISTONE 0706020	PISTON 0706020
4		GUARNIZIONE BALMASTER DBM 236173	SELA DBM 236173
5		ANELLO TOROIDALE 8-125	O-RING 8-125
6		ANELLO TOROIDALE 8-156	O-RING 8-156
7	12420104	TESTATA DI GUIDA 0306030	GUIDE
8		BALSELA B 157118	BALSELE
9		RASCHIATORE WRM 118149	SCRAPER RING WRM 118149
10	12440102	STELO D.35	SHAFT D.35
11	11010699	KIT GUARNIZIONI PER MARTINETTO 12770131	SEAL KIT FOR CYLINDER CODE 12770131

user and maintenance manual



#### Tavola 9 Per EASY RAKE 8-10-12-14

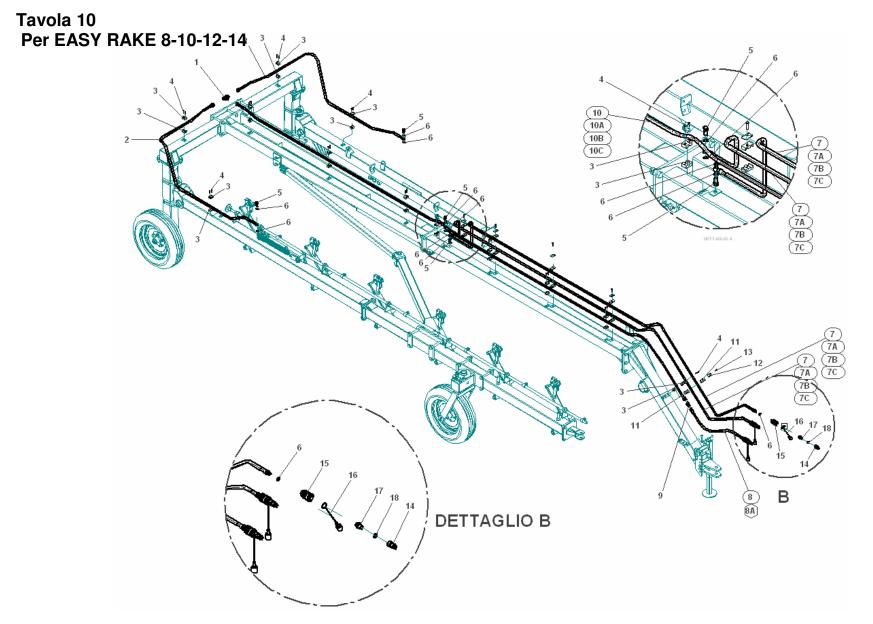




#### Tabella 9 - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1	12770103	CILINDRO ESTERNO MARTINETTO 12770101	CYLINDER
2	3020215	DADO AUTOBL. BASSO 14MB	SELF LOCKING NUT 14MB
3	12770104	PISTONE CILINDRO 0704015	PISTON 0704015
4		GUARNIZIONE BALMASTER DBM 157118	GASKET DBM 157118
5		ANELLO TOROIDALE 616	O-RING 616
6		ANELLO TOROIDALE 219	O-RING 219
7	12420101	TESTATA DI GUIDA 0304025	GUIDE
8		BALSELA B129098	BALSELE
9		RASCHIATORE WRM 118149	SCRAPER RING WRM 118149
10	12440101	STELO D. 20	SHAFT
11	10010636	KIT GUARNIZIONI CILINDRO 12770101	SEAL KIT FOR CYLINDER 12770101







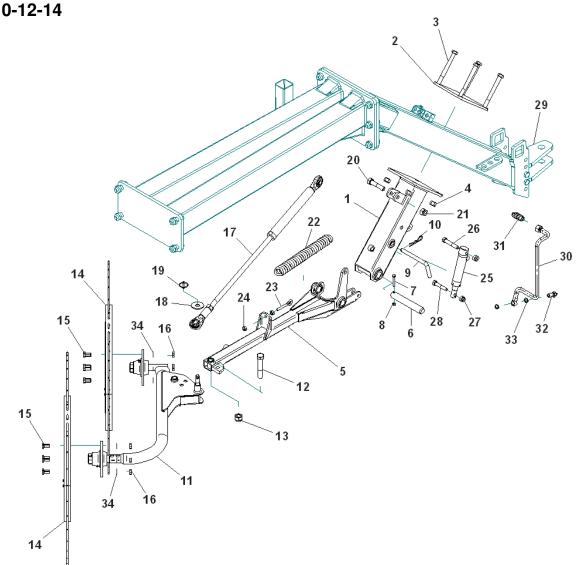
# Tabella 10 - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1	4010915	RACCORDO OLEODINAMICO A TEE 1/2" M.	"T" UNION 1/2"
2	12760212	TUBO IDR. LG. 2500 E.R. 8-10-12-14	HYDRAULIC HOSE LG.2500 ER 8-10-12-14
3	12980005	COLLARE TIPO C3 COMPLETO DI VITI DI FISSAGGIO	COLLAR C3
4		VITE TCEI M6X28 UNI 5931	SCREW M6X28 UNI 5931
5	3011605	VITE FORATA 3/8" GAS	DRILLED SCREW 3/8"
6	3030403	RONDELLA RAME 3/8	COPPER WASHER 17X23X1,5
7	12760205	TUBO IDR. LG.3760 PUSH-PULL E.R. 8	HYDRAULIC HOSE LG. 3760 ER 8
7A	12760207	TUBO IDR. LG.4630 PUSH-PULL E.R. 10	HYDRAULIC HOSE LG. 4630 ER 10
7B	12760209	TUBO IDR. LG.5500 PUSH-PULL E.R. 12	HYDRAULIC HOSE LG. 5500 ER 12
7C		TUBO IDR. LG. 7280 PUSH-PULL E.R. 14	HYDRAULIC HOSE LG. 7280 ER 14
8	12760211	TUBO IDR. LG.1600 PUSH-PULL E.R. 8-10-12	HYDRAULIC HOSE LG. 1600 ER 8-10-12
8A		TUBO IDR. LG.2510 PUSH-PULL E.R. 14	HYDRAULIC HOSE LG. 2510 ER 14
9	4010201	NIPPLO M/M 1/2"	NIPPLE 1/2"
10	12760206	TUBO IDR. LG.4910 PUSH-PULL E.R. 8	HYDRAULIC HOSE LG. 4910 ER 8
10A	12760208	TUBO IDR. LG.5780 PUSH-PULL E.R. 10	HYDRAULIC HOSE LG. 5780 ER 10
10B	12760210	TUBO IDR. LG.6650 PUSH-PULL E.R. 12	HYDRAULIC HOSE LG. 6650 ER 12
10C		TUBO IDR. LG.7520 PUSH-PULL E.R. 14	HYDRAULIC HOSE LG. 7520 ER 14
11	12980007	COLLARE DOPPIO COMPLETO DI VITI CF2 14/14	COLLAR CF2 14/14
12		COPERCHIO PER COLLARE	COLLAR CAP
13		VITE TCEI M8X35 UNI 5739	SCREW M8X35
14		INNESTO RAPIDO 1/2 GAS	PUSH PULL 1/2
15		VALVOLA REGOLAZIONE FLUSSO 3/8 GAS	VALVE 3/8
16		TAPPO DI PROTEZIONE	PROTECTION PLUG
17		NIPPLO DI RIDUZIONE ½ - 3/8 GAS	NIPPLE 3/8
18		RONDELLA RAME 1/2	COPPER WASHER

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Tavola 11 (OPTIONAL) Per EASY RAKE 8-10-12-14





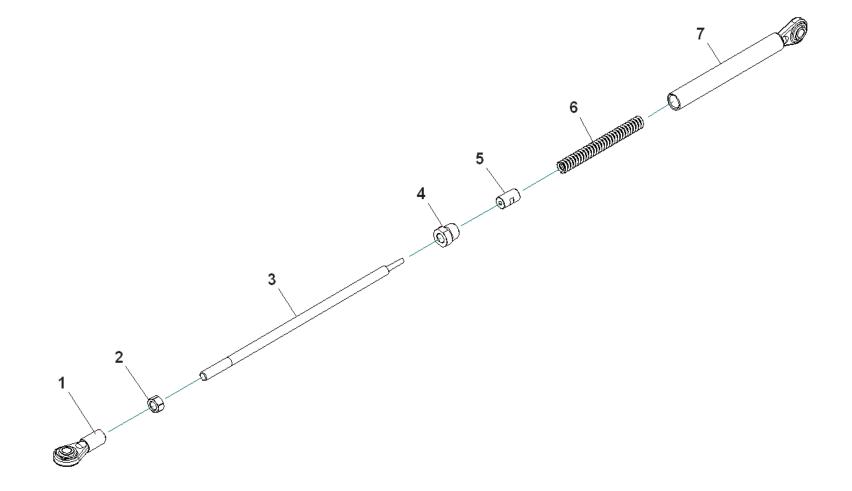
## Tabella 11

POS.	CODICE	DESCRIZIONE	DESCRIPTION	
1	18032047	TELAIO FISSO	MAIN FRAME	
2	1013197	PIASTRA DI ACCOPPIAMENTO	FASTENING PLATE	
3	3010309	VITE TESTA ESAG.8.8 M16X160/5737 ZINC.	SCREW TE M16X160	
4	3020204	DADO AUTOBL. BASSO 16MA/7473	SELF LOCKING NUT 16MA	
5	18032052	TELAIO BASCULANTE	SWIVELLING FRAME	
6	12060883	PERNO SNODO ORIZZONTALE D.30 LG.190	PIN D. 30 LG. 190	
7	3010781	VITE TESTA ESAG.8.8 M8X55/5737 ZINC.	SCREW TE M8X55	
8	3020329	DADO ESAG.MEDIO 8MA/5588	NUT 8MA	
9	12060884	PERNO DI BLOCCAGGIO D.16 LG.213	PIN 16X213	
10	3040202	COPIGLIA TIPO R 5X100	SPLIT PIN R 5X100	
11	18032053	TELAIO PORTASTELLE	RAKE WHEEL FRAME	
12	3010311	VITE TESTA ESAG.10.9 M20X110/5737 ZINC.	SCREW TE M20X110	
13	3020216	DADO AUTOBL.BASSO M20/7473	SELF LOCKING NUT 20MA	
14	17010816	STELLA COMPLETA PER KICKER MOD. KEP	COMPLETE RAKE WHEEL	
15	3011211	VITE TESTA ESAG.8.8 M10X25/5739 ZINC.	SCREW TE M10X25	
16	3020201	DADO AUTOBL.BASSO 10MA/7473	SELF LOCKING NUT 10MA	
17		BIELLA RETRATTILE	SHAFT	
18	3030193	RONDELLA TRANCIATA M18X56 EXL ZINC.	WASHER M18X56	
19	3080201	SPINA A SCATTO D.5	PIN 5	
20	3010310	VITE T. E. 8.8 M18X80/5737 ZINC.	SCREW TE M18X80	
21	3020214	DADO AUTOBL.BASSO 18MA/7473	SELF LOCKING NUT 18MA	
22	11010501	MOLLA LG.570	SPRING LG.270	
23	3220201	TENDITORE M10	HOOK SCREW	
24	3020328	DADO ESAG.MEDIO 10MA/5588 ZINC.	NUT 10MA	
25	12770132	MARTINETTO SEMPLICE EFFETTO	HYDRAULIC CYLINDER	
26	3011278	VITE T. E. 8.8 M14X80/5737 ZINC.	SCREW TE M14X80	
27	3020203	DADO AUTOBL.BASSO 14MA/7473	SELF LOCKING NUT 14MA	
28	3011631	VITE TESTA ESAG.8.8 M14X70/5737 ZINC.	SCREW TE M14X70	
29		TIMONE ANTERIORE	PULL LINKAGE FRAME	
30	12760160	TUBO IDRAULICO LG.550	HYDRAULIC HOSE LG.550	
31	4010915	RACCORDO OLEODINAMICO A TEE 1/2" M.	"T" UNION 1/2"	
32	4021503	VITE STROZZATRICE 3/8"	SCREW 3/8"	
33		RONDELLA DI RAME DA 3/8	COPPER WASHER 3/8	
34	3030227	RONDELLA DENTELLATA M10	LOCK WASHER M10	

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## Tavola 11/A (OPTIONAL) Per EASY RAKE 8-10-12-14



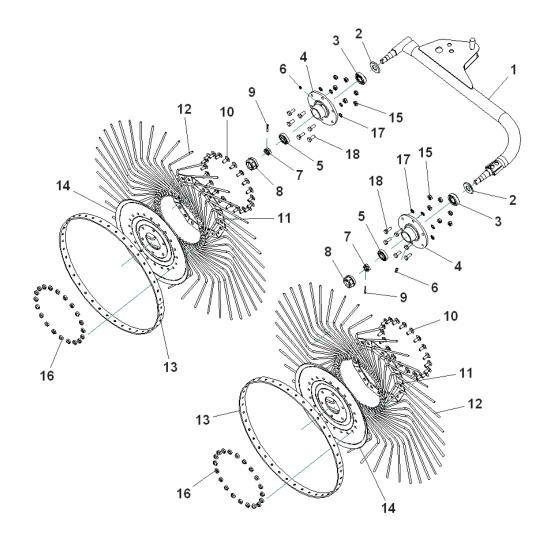


#### Tabella 11/A - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1		ATTACCO FIL. ASTA PER STELO	SHAFT ATTACHMENT
2		DADO M20	NUT M20
3		ASTA PER STELO	SHAFT
4		TESTATA	SHAFT HEAD
5		RONDELLA Ø26X48	WASHER
6	18033267	MOLLA	SPRING
7		CILINDRO	CYLINDER
			4



## Tavola 12 (OPTIONAL) Per EASY RAKE 8-10-12-14





#### Tabella 12 - Per EASY RAKE 8-10-12-14

POS.	CODICE	DESCRIZIONE	DESCRIPTION
1	18032053	TELAIO PORTASTELLE	
2	12860001	CORTECO 25X52	DUST COVER
3	12240119	CUSCINETTO A RULLI CONICI 30205	BEARING 30205
4	12150103	MOZZO STELLA	HUB
5	12240118	CUSCINETTO A RULLI CONICI 30204	BEARING 30204
6	3090101	INGRASATORE DIRITTO 8MB	GREASE ZERK 8MB
7	3020210	DADO AD INTAGLIO 18MB	SELF LOCKING NUT 18MB
8	12360001	PARAPOLVERE	DUST COVER CUP
9	3040114	COPIGLIA 4X35	SPRING 4X35
10	3010105	VITE T.T.Q.S.T. M10X25 ZINC.	SCREW T.T.Q.S.T. M10X25
11	18030416	PLACCHETTA SERRADENTI	TEETH FASTENER PLATE
12	18032054	DENTE STELLARE MOD. KEP	TOOTH MOD. KEB
13	18032055	ANELLO STELLA	EXTERNAL RAKING WHEEL RING
14	12160101	FLANGIA STELLA	RACKING WHEEL FLANGE
15	3020328	DADO ESAG. MEDIO 10MA	NUT 10MA
16	3020224	DADO AUTOBL.BASSO 10MA CONELOX	SELF LOCKING NUT 10MA CONELOX
17	3030227	RONDELLA DENTELLATA M10	LOCK WASHER 10
18	3011211	VITE T. E. 8.8 M10X25/5739 ZINC.	SCREW TE M10X25
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