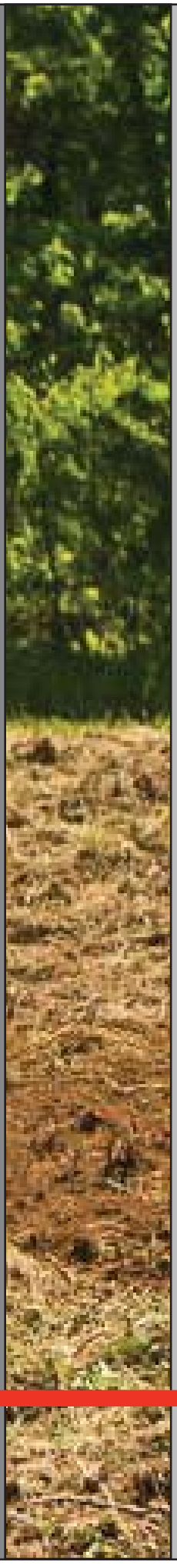

GEARMORE®

FLAIL SHREDDER
"TR" SERIES

Assembly, Service, Operation and Spare Parts Manual

MODEL: _____ ***S/N:*** _____

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® 903631002-00

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INTRODUCTION

Congratulations on your purchase of the TR Shredder. The TR Shredder is manufactured by SICMA S.p.A. which has been producing agricultural machines for over 40 years.

The TR shredder has all safety and quality requisites required for this tpe of equipment.

The manufacturer reserves the right to make any necessary changes without giving prior notice, in order to optimize the quality and safety features and does not commit itself to updating this manual every time a change is made.

This booklet provides a thorough and accurate description of the instruction and maintenance activities to be carried out on the shredder you purchased. We urge you to thoroughly familiarize yourself with and follow the instructions contained in this manual. This will assure you a long, safe and trouble free working life for your shredder.

The manufacturer shall not assume any responsibility should problems arise as a result of lack of compliance with the instructions and/or operator's negligence.

The manual is divided in chapters and paragraphs and the pages are numbered, thus offering accurate and precise information.

NAME: _____

PURCHASED FROM: _____

DATE OF PURCHASE: _____

MODEL NUMBER: TR255

SERIAL NUMBER: 4098891001

Carefully read this manual
before using the machine

1.1 Some Notes Regarding The User Manual

Remember that the USER MANUAL is not an accessory of the shredder, but is an INTEGRAL part and a SAFETY MEASURE.

For this reason:

- Keep the manual in a good condition
- Keep the manual near the equipment
- Pass it on to any operator user, maintenance technician, handler or successive owner.

In this way, the shredder can be used in the best way for all functions for which it has been designed and manufactured and in maximum safety.

The manual must not be damaged, it must remain integral (do not rip the sheets), must be kept away from humidity and heat. During consultation it must not be covered in grease or its legibility deteriorated.

If this manual is lost or damaged, request a copy from Gearmore, or the nearest dealer.

To ease consultation, the manual has been divided into parts so that every phase is described well.

With these arrangements, SICMA intends to unmistakably call the operator's attention to the dangerous situations that may occur.

1.2 List of Residual Risks

Even though SICMA has done everything possible to be in line with state-of-the-art safety and in compliance with all Directives. Laws and Standards available, some residual risks still exist.

- **Cut/crushing hazard** due to contact with tools (rotor)
- **Entanglement/dragging hazard** (rotor and driveshaft)
- **Overturning/crushing hazard** (shredder)
- **Burns hazard** (gear transmission box)
- **Cut/shearing hazard**

Therefore, anyone using the machine or performing maintenance on the same, must be trained and aware of the fact that dangers exist and in spite the use of protections to reduce them, it is not possible to eliminate them totally.

The staff assigned to these operations must always have the use and maintenance manual available for consultation.

The use and maintenance manual states all indications requested from point 1.7.4 (User instructions) of attachment 1 of the Machinery Directive and specific request is made to comply with the precautions, so as not to cause accidents that can injure persons.

1.3 General Delivery Notes

The shredder has been manufactured in compliance with the 2006/42/CE Directive and has been designed observing the guide lines of the Technical Standards relative to the shredder.

Therefore, the machine does not represent a danger for the operator if used according to the instructions in this manual and on condition that the safety devices are kept constantly efficient.

SICMA INFORMS THAT ANY MODIFICATION OR TAMPERING OF THE SHREDDER OR ANY OPERATION PERFORMED IN DISAGREEMENT WITH WHAT IS WRITTEN IN THIS MANUAL, ESPECIALLY FAILURE TO COMPLY WITH THE SAFETY PROVISIONS, AS WELL AS MAKING THE WARRANTY NULL AND VOID, RELIEVES SICMA FROM ANY LIABILITY FOR DAMAGE TO OBJECTS AND INJURY TO PERSONS.

Some of the devices described in this manual may not be present on your machine, depending on the chosen set-up and the market of destination.

It must be remembered that all technical values refer to the standard shredder (see "technical features") and the drawings and any other document delivered along with the shredder are the property of SICMA, which reserves all rights and reminds that they cannot be made available to third parties without its written approval.

Therefore, any reproduction, even partial, of the text and illustrations is prohibited.

The information, descriptions and illustrations contained in this manual reflect the state of the art of the machine at the moment it was put on the market.

The manufacturer reserves the right, at any time, to apply modifications to the machinery for technical or commercial reasons. Such modifications do not oblige the manufacturer to intervene on machines sold up until that moment, nor to consider this publication inadequate.

Any integration that the manufacturer will consider opportune to supply late on must be preserved together with the manual and be considered an integral part of the same.

The shredder and its parts and/or accessories are normally delivered by truck or container.

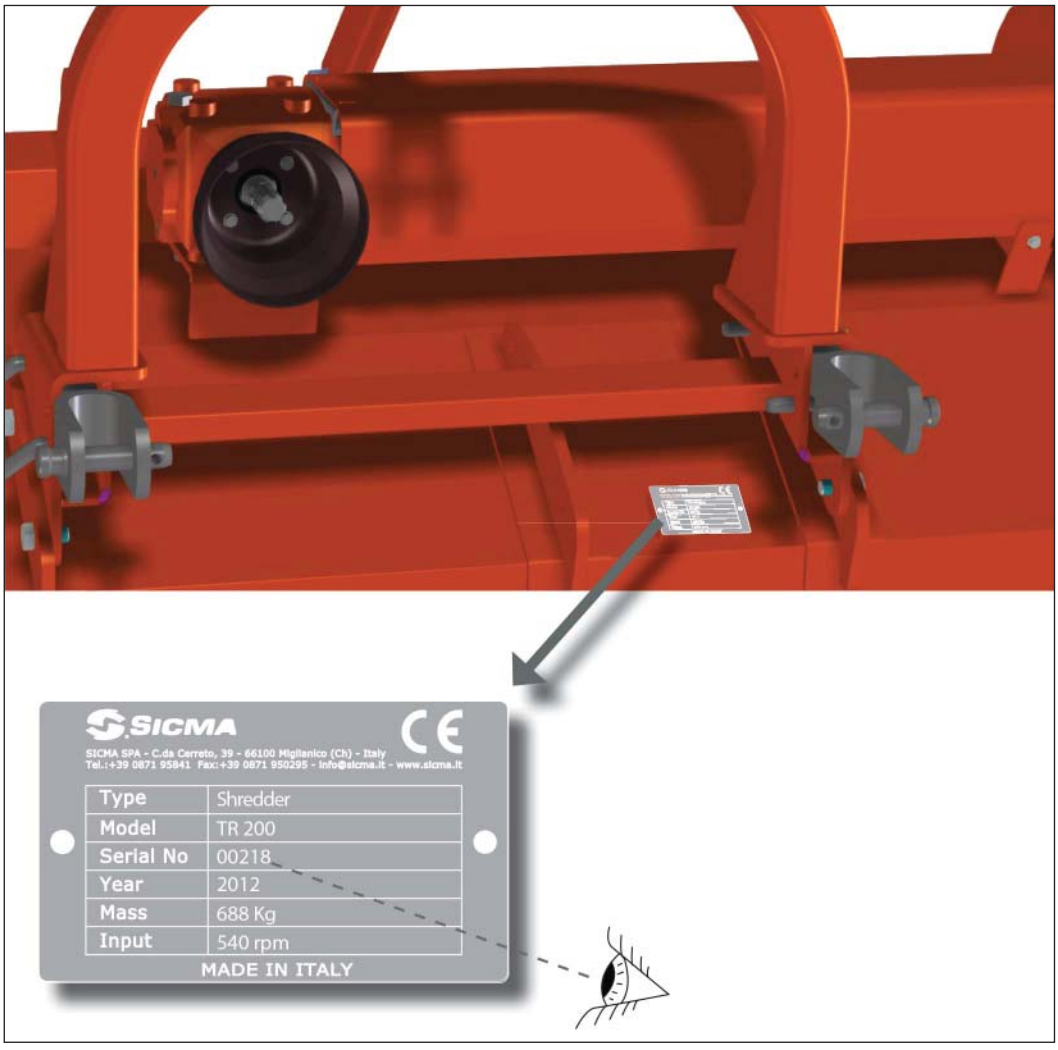
On receipt of the machine, check that:

- ✔ the supply corresponds with the order specifications (see packing list)
- ✔ there is no damage to the shredder or accessories
- ✔ in the event of damage or missing pieces, inform the dealer and carrier in detail and with photos
- ✔ the spare parts or equipment supplied are sometimes in separate containers

1.4 Shredder Identification and Manual Code

For any after sales requests or information regarding the shredder, contact Gearmore or your dealer always stating the model and the serial number given on the plate.

The identification code of this manual is written on the cover. Write the number in a safe place so that if this manual is lost or damaged, another copy can be requested from Gearmore or the nearest dealer by also stating the serial number visible in the marking.



1.5 Declared Use

The TR shredder has been designed to be used exclusively in the agricultural sector, for mowing grass, maize stalks, maize and branches up to a diameter of about 3" (8 cm.) according to the type of tool used.

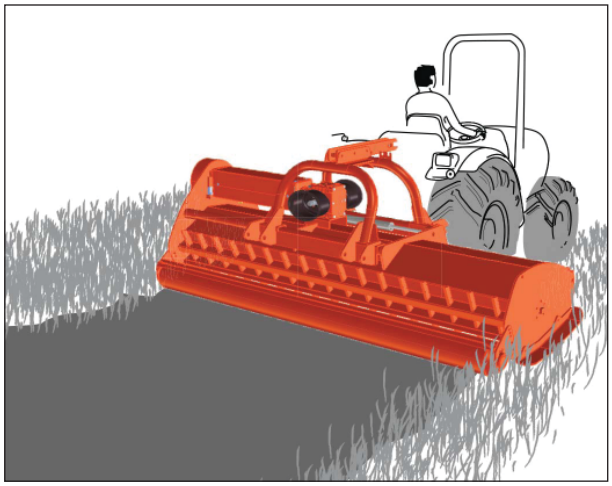
The machine is carried by the tractor via 3-point hitch and acts on the material via the rotation of the tool-holder shaft, which turns at high speed activated by the tractor PTO via driveshaft connection.

The machine is not suitable to be used in other sectors than in agriculture.

Use Environment

The shredder works:

- in open fields, on non friable land, not excessively stony with a maximum gradient of 3^0
- in environments with a temperature from $0^0 \div 50^0$ C.



Improper Use

Any use different to that declared is to be considered improper.

Sometimes the operator uses the shredder incorrectly, below find some examples that must **NOT BE PERFORMED**.

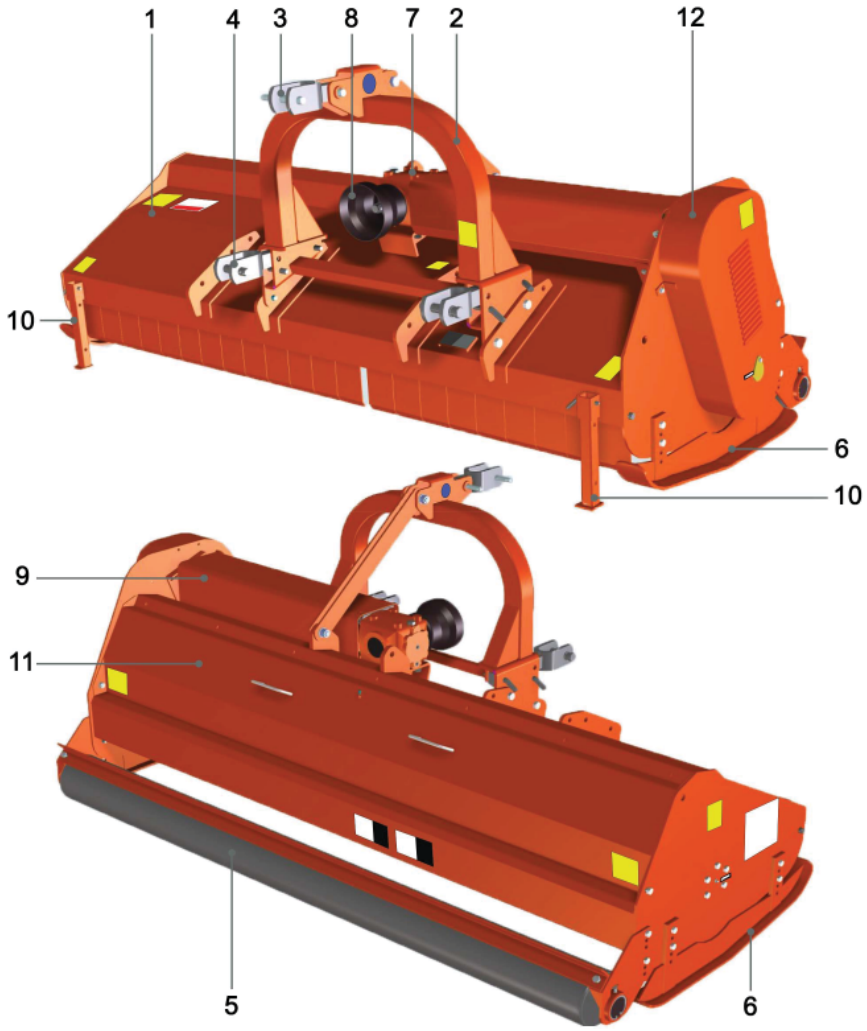
The operator must not:

- connect the shredder to a drive shaft with higher or lower power transmission capacity
- work in reverse gear
- couple the shredder to vehicles of unsuitable power or weight
- assemble the shredder without securing the rebound tie rods of the 3-point hitch of the tractor
- lift the equipment when the PTO is rotating
- make curves or reverse with the shredder lowered

Remember that the shredder is developed only for the purpose of the declared use.

Any other use is to be considered improper.

1.6 SHREDDER COMPOSITION



REF. NO.	DESCRIPTION
1	Chassis
2	Arc
3	Upper 3-point pin
4	Lower 3-point pin
5	Stabilizing wheel
6	Side skids
7	Gear transmission unit
8	Drive shaft joint protection
9	Drive shaft transmission guard
10	Parking foot
11	Rear bonnet
12	Belt drive guard

1.7 Options

Below find a list of the different options which can be requested according to personal requirements.

1 - Pivoting Wheels

They are used instead of the rear roller and allow to keep the outlet of the shredded material completely free, thus preventing annoying clogging, which would lead to obstruction of the expelling area.

2 - Beater Bar

Mounted inside the mowing chamber, it reduces the dimensions of the material shredded via teeth, which act as counter-blades for every pair of knives.

3 - Openable Rear Bonnet

If kept open via the two side arms, it allows to spread the shredded material from the rear.

4 - Baffles

Mounted on the openable bonnet, they guide the ejection of shredded material, widening and making the spreading area uniform.

IMPORTANT!

As the openable bonnet and its baffles do not respect the CE Standards, they cannot be marketed and used in countries that are part of the European Community.

The following image shows the shredder complete with all options.

Throughout the use and maintenance manual and on the equipment you will find several safety symbols whose meanings are translated below

2.1 Definitions

Danger - A potential source of physical injury or damage to health.

Dangerous Area - Any area within and/or in proximity of a machine in which the presence of a person constitutes a risk for the safety and health of the same. The dangerous area is the area around the machine (attached to the tractor) up to a distance of 1 meter.

Exposed Person - Any person who is totally or partially inside a dangerous area.

Critical Area - The critical area is that between the tractor and the equipment (Driveshaft area).

Zero Energy State - The state into which the shredder must be taken before any cleaning, lubrication and maintenance operation is performed.
The shredder is at the ***Zero Energy State*** when it is positioned on flat land, disconnected from the PTO and resting on its safety feet.

2.2 Safety Symbols

Attention General Hazard -
Informs the staff assigned that the operation described has the risk of physical injury if not performed with respect to the Safety Standards.

Note -
Informs the staff assigned of information whose content is of relevant consideration and importance.

Warning -
Informs the staff assigned of information whose content can cause slight injury to persons or damage to the machine if not respected.

Machine Operator or Driver -
Identifies qualified staff, i.e. with specific skills, as the operations are completely manual, therefore refer to the preparation and sensitivity of the machine driver to obtain the best quality results. It is therefore prohibited for the operator to perform operations that are the responsibility of the maintenance technician.

2.2 Safety Symbols (Continued)

Mechanical Maintenance Staff -

Qualified technician able to intervene on mechanical parts in order to make all regulations, maintenance interventions and repairs necessary.

Extraordinary Interventions -

Any maintenance interventions highlighted by the symbol at the side are to be requested from the manufacturer or authorized workshops.

Personal Protections (PPE) -

The presence of one of the symbols at the side imposes the use of the corresponding PPE by the operator, as the risk of accident is implicit.

Recommendation -

It refers to a work mode experimented on field, knowing well that every operator will develop his own way of operating.

2.3 Safety Training

Even though SICMA has applied all possible safety devices on the equipment, it must be remembered that it can be dangerous for health if not used correctly. It is therefore advised to read and comply with the safety precautions listed below.

Before using the equipment, all operators **MUST** have read and understood the safety precautions and the entire user manual.

- The machine is not suitable to be used only in the agriculture sector.
- Any use different to that specified is to be considered improper.
- The manual must always be on hand, in a way to consult it when necessary. If it should be lost or damaged, request a replacement copy from your dealer.
- Do not climb onto, sit on or rest on the equipment for any reason, whether it is on or in the zero energy state.

2.4 Operator Requirements

- The machine must only be used by one operator driving the tractor.
- The machine must be used exclusively by authorized, instructed and trained operators. The operator, besides having read and understood the instructions contained in this manual, must also be sufficiently instructed on the proper use of the machine and must have a driving license. The operator must contact the dealer or the manufacturer if in doubt regarding use of the machine or interpretation of this manual.
- The operator must make sure that no person or animal stops within the radius of action of the same during machine functioning. Never activate the machine near to persons standing or transiting within the radius of action of the machine.
- Do not use the machine if you are tired, ill or under the effects of alcohol, medicines, or drugs.
- The correct operator position is in the tractor driving seat. From this position he must also control that there are no persons exposed in the dangerous area in the work phase.

2.5 Clothing and PPE

- Staff ***must*** use the safety supplies and PPE during use and maintenance of the machine.

The correct clothing to be worn during maintenance operations and use of the shredder is:

- ✔ Gloves
- ✔ Accident prevention shoes or booths with steel toe cap
- ✔ Glasses
- ✔ Overall with elastic on the wrists, ankles and around the waist

Moreover:

- Given that the machine can generate emissions of dust during working, if the tractor does not have a closed cab, the operator must wear an anti-dust mack (especially on dry and dusty land).
- If the tractor does not have a sound-proof cab, the operator must wear hearing protections (especially on stony land).
- The operator assigned to the machine must wear not wear items of clothing that can cause entanglement (scarves, belts, wide sleeves, etc.)

2.6 Machine Use

- The machine is usually used during the day. If night time use is required or use in conditions of reduced visibility, a tractor lighting system or an auxiliary lighting system must be used.

- Any arbitrary modification made on this machine relieves the manufacturer from any responsibility for damage or injuries that could result to operators, third parties or to objects.

- Check the machine thoroughly before each start-up.

- Check the tightness of all bolts daily (consult torque table). Tighten them if necessary and also check the metal structures and repair if required.

- Check that the retainer chains snap hooks of the PTO shaft protection are hooked in the appropriate slot, in a way that the plastic protection remains at a standstill and does not turn with the driveshaft itself.

- Before getting out of the tractor and before any maintenance operation, activate the parking brake, turn the engine off, remove the ignition key from the dashboard and keep it.

- The tools rotate rapidly when the machine is functioning, stay at a safe distance to prevent accidental contact with moving tools or with thrown objects.

2.7 Safety Devices

- Before using the machine, make sure that all safety devices are properly in place and in good condition. If there are failures or damage to the guards, replace them immediately.

- Do not tamper with or bypass safety devices for any reason. After every cleaning and maintenance intervention, all of the safety devices must be restored and/or all protection guards closed. Check also that tools, cloths, or various materials do not remain in the drive compartments.

- The signs applied to the machine supply a series of important indications - compliance with the same is for your safety.

- Make sure the safety pictograms are in good condition. If the pictograms have deteriorated, they must be replaced with other original versions requested from the manufacturer and placed in the position indicated by the use and maintenance manual.

2.8 Incorrect Use

The operator must not:

- Connect the shredder to a PTO shaft with higher or lower power transmission capacity.
- Work in reverse gear.
- Make modifications to the equipment that could jeopardize safety.
- Perform makeshift repairs in order to work.

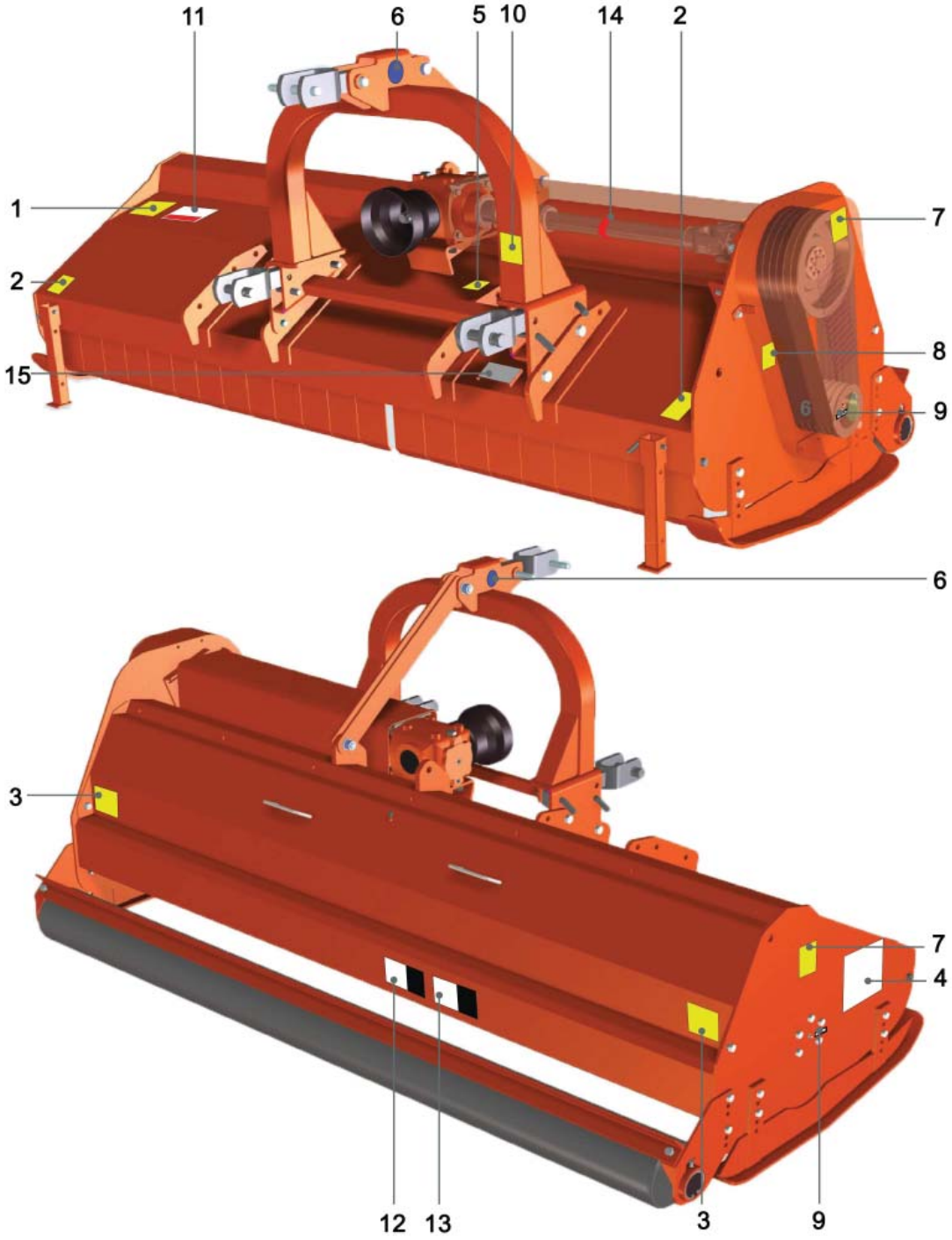
Moreover, it is prohibited to:

- Couple the shredder to vehicles of unsuitable power or weight.
- Assemble the machine without securing the rebound tie rods of the 3-point hitch of the tractor's elevator.
- Lift the equipment when the PTO is rotating
- Use the machine to transport and/or to lift persons, animals or objects.
- Work on ground with gradient over 3.

Sicma declines any liability for accidents deriving from the failure to comply with the precautions indicated.

Given the particular stress to which the equipment is subjected and for safety reasons, if pieces are replaced, only use original spare parts.

2.9 Position of Pictograms on the Machine



2.9 Position of Pictograms on the Machine (continued)

1 

5782902
ATTENTION
Read all instructions and safety rules carefully before using the machine. Stop engine and remove key before starting maintenance or repairs.

2 

4781011
FOOT INJURY HAZARD
Rotating tools: keep a safety distance from the machine.

3 

4781019
THROWN OBJECTS ON ENTIRE BODY
Keep at a safe distance from the machine. Hand injury hazard: do not open or remove safety guards while the machine is operating.

4 

4781016
SICMA LOGO

5 a 

4781010
INPUT 540 RPM
Use of a 540 rpm power takeoff.

5 b 

4781030
INPUT 1000 RPM
Use of a 1000 rpm power takeoff.

6 

4781031
HITCH POINT
For lifting the machine.

7 

4781012
FOOT INJURY HAZARD
Keep at a safe distance from the machine.

8 

5782708
ENTANGLEMENT HAZARD
Keep safety guards in position while operating.

9 

4781009
GREASE
Indication of lubricant grease injecting point

10 

4781013
HAND INJURY HAZARD
Rotating parts: keep a safety distance from the machine.

11 

4781802
ATTENTION
Machine damage hazard

12 

5786202
MACHINE INFO

13 

000-180; 000-200;
000-220; 000-250;
000-280;
LENGTH INFO

14 

1140003
RISK OF DEATH
Reposition the protections as they were positioned originally and keep at a safety distance from the rotating part

15 

4780001
CE MARKING PLATE

WARNING DANGER OF CRUSHING

ATTENTION -
Qualified staff that has read and understood the safety precautions must unload the shredder from the truck and handle the equipment in the work place.

A person in charge of operations must always be present during loading and unloading. In all cases, make sure that there are no persons, animals or objects in the unload area and behave as described in this manual.

The shredder is normally transported on a truck, sometimes without packaging, sometimes protected by heat shrinkable film and other times in wooden crates.

WARNING GENERIC DANGER

ATTENTION -
Read and fully understand "Safety Precautions" before starting to transport and unpack the shredder.

3.1 SHREDDER PROTECTED BY HEAT SHRINKABLE FILM

NOTE: Before starting to unload the equipment from the truck, read the entire sequence in a way to be prepared for every inconvenience in time.

Release the shredder from any fixing devices used to fasten it to the means of transport.

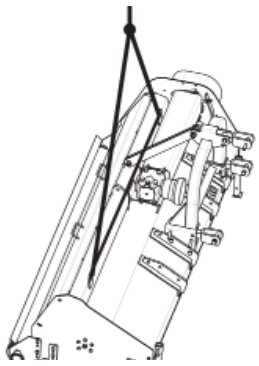
WARNING DANGER OF CRUSHING & ENTRAPMENT

ATTENTION -
Shredder unloading operations must be performed very slowly and the operator must make sure that there are no persons, animals and objects exposed in the unloading area.

WARNING DANGER OF SWINGING & CRUSHING

ATTENTION -
Before starting lifting:

- Check the good state of preservation of the ropes or chains used to lift the machine.
- Use ropes/chains with suitable capacity. Keep in mind that each individual rope/chain must be able to lift the weight of the shredder (see Technical Features).
- Make sure that the hook bolts are fastened well.
- In the event of chains with shorteners, make sure that these are also fastened correctly.



After having fastened the shredder with ropes and/or chains, lift the equipment by a few centimeters to check correct harnessing.

ATTENTION -

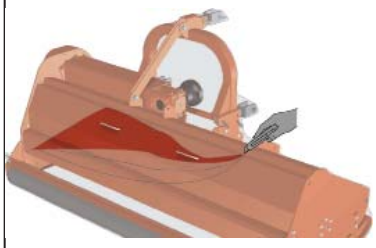
Lift the shredder from the deck of the means of transport to a height of about 30 cm. unless obstacles are present, so that it does not swing. Position the shredder on the ground in proximity of the tractor.

Remove the chains or ropes.

Once on the ground, unpack the equipment as described below:

ATTENTION CUTTING HAZARD-

If the shredder arrives wrapped in a protective film, cut it using a Stanley knife pay attention not to cause injury and not to damage the shredder itself.



To perform this operation in safety, the operator must:

- wear cut-proof gloves
- be equipped with a Stanley knife
- cut the protection, paying attention not to cause injury or damage the shredder

ATTENTION POLLUTION HAZARD -

Once unpacked, do not dispose of the packaging in the environment, but contact a specialized agency for its disposal. Check the transport document or packing list supplied and, if necessary, act as described in part 1 "General Delivery Notes".

3.2 SHREDDER IN WOODEN CRATE

NOTE: Before starting to unload the equipment from the truck, read the entire sequence in a way to be prepared for every inconvenience in time.

If the shredder is contained inside wooden packaging, use a forklift truck with suitable capacity to unload it (consult technical features table to see shredder weight) or use the truck's lifting arm.

WARNING DANGER OF CRUSHING AND ENTRAPMENT

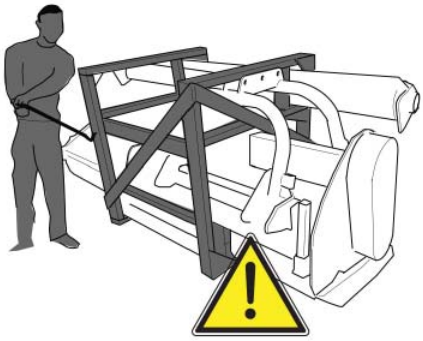
3.2 Shredder In Wooden Crate (continued)

Attention -

Shredder unloading operations must be performed very slowly and the operator must make sure that there are no persons, animals and objects exposed in the unloading area.

WARNING DANGER OF CRUSHING AND ENTRAPMENT

Insert the forklift forks as indicated in the figure.
Lift the crate from the deck of the means of transport to a height of about 30 cm. unless obstacles are present.
Position the crate on the ground in proximity of the tractor.



WARNING DANGER OF SWINGING & CRUSHING

Wear gloves and use a suitable tool to disassemble the wooden packaging. Use a forklift with suitable capacity (See "Technical Features"). After having fastened the shredder with ropes and/or chains, lift the equipment by a few centimeters to check correct harnessing.

Use ropes/chains with suitable capacity to lift the shredder.

Lift the shredder a maximum of 30 cm. from the crate and position it near the tractor.

Attention Pollution Hazard -

Once unpacked, do not dispose of the packaging in the environment, but contact a specialized agency for its disposal or keep it for other transport use. Check the transport document or packing list supplied and, if necessary, act as described in part 1 "General Delivery Notes".

WARNING DANGER OF TILTING

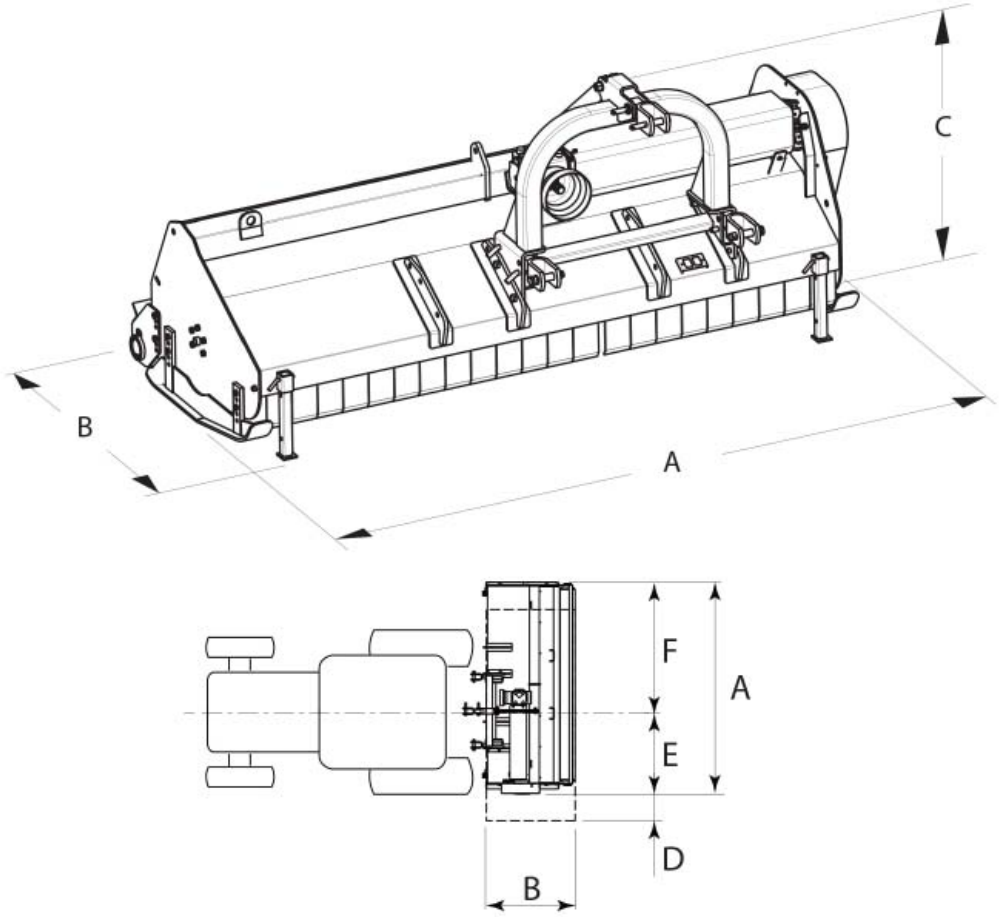
Attention

Remember that no matter how stable the equipment, during successive transport operations, it must **ALWAYS**:

be fastened securely to the truck
be positioned at the center of the truck, not at the edges in a way to prevent overturning hazards at curves or uneven roads.

TECHNICAL FEATURES

Below find the table stating the technical features of the TR shredder.



TECHNICAL FEATURES					
		TR			
Ref.	Description	200	225	255	280
	Working Width (mm)	2000	2250	2550	2800
A	Overall Width (mm)	2160	2430	2695	2965
B	Overall Length (mm)	1347	1347	1347	1347
C	Height (mm)	1300	1300	1300	1300
	Mass - Weight (lbs)	1515#	1675#	1830#	1990#
	Number of Revs. (rpm)	540-1000	540-1000	540-1000	540-1000
	Power Requested (hp)	60 - 90	60 - 90	60 - 90	60 - 90
	Power Requested (kw)	45 - 67	45 - 67	45 - 67	45 - 67
D	Movement (mm)	340	340	340	340
E		836	971	1106	1241
F		1176	1311	1446	1573
	Standard Y Knives	44	48	56	60
	Standard Hammer	22	24	28	30

WARNING GENERIC DANGER

ATTENTION -
Only qualified operators and which have read and understood the safety precautions can carry out the operations described below. Moreover, they must check that there are no persons, animals and objects exposed in the area where the connection is made to the tractor.

The operator can any aids must have PPE (Personal Protective Equipment) available and wear them as required.

The shredder can only be moved when connected to the tractor; scrupulously follow the instructions given below in order to perform hitching:

- 3-point hitch connection to the tractor
- Driveshaft connection

5.1 3-POINT HITCH CONNECTION

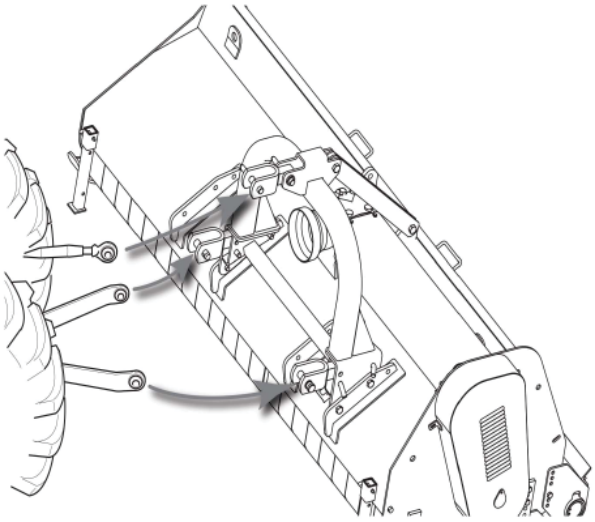
The machine must be hitched to tractors with suitable weight and power and with 2nd category standard hitch.

To connect the driveshaft, the operator must:

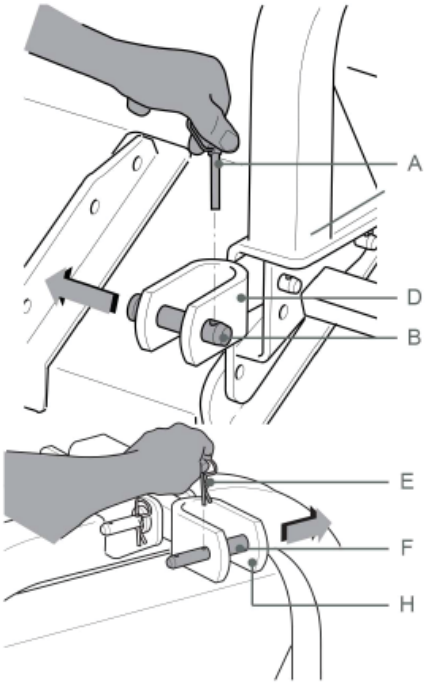
- Slowly approach the tractor to the shredder, position in a way that the lifting device arms of the tractor are aligned with the two lateral pins of the shredder.

- Once in position, engage the hand brake, switch the engine off, remove the key and keep it and climb down from the tractor.

- Check that the driveshaft protection is integral. If this is not the case, act accordingly consulting the relative user manual.

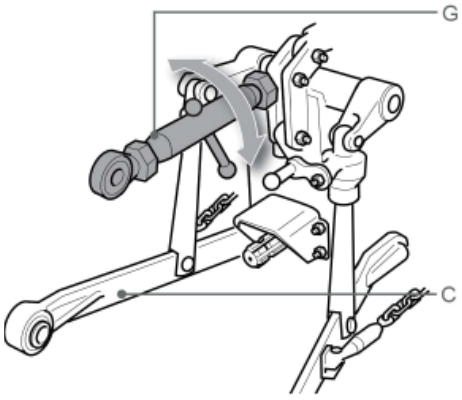


Proceed as follows to hitch the machine to the tractor:



- Remove the split pin **A** of pin **B** on both sides.
- Slide the pins **B** out.
- Climb onto the tractor and switch the engine on.
- Disengage the brake and reverse slowly until the tractor lifting device arm joint **C** combines with the lower third point of the shredder **D.**
- Switch the engine off, engage the hand brake, remove the key and keep it and climb down from the tractor.
- Insert the pin **B** into the hole of the lower third point **D** of the shredder and into the hole of the tractor arm joint **C**.
- Re-insert the split pin **A**.
- Proceed in the same way with the other lower hitch.
- Block the rebound tie rods of the tractor lifting arms to prevent the machine oscillating laterally, compromising the transversal stability of the complex.

To connect the upper third point, the operator must:

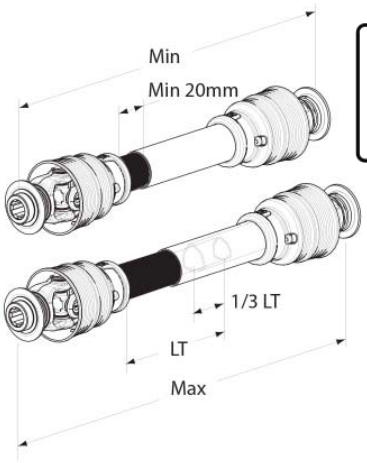


- Remove the split pin **E** of the pin **F** of the upper third point of the shredder.
- Slide the pin **F** out.
- Release the tie rod **G** of the tractor upper third point and insert it into the upper third point **H** of the shredder.
- Re-insert the pin **F** and the split pin **E** into the shredder upper third point and into the tractor tie rod joint.
- If the floating upper third point is used, make sure that it allows the machine to bend forward and backwards and that the PTO shaft is parallel to the ground.
- If the floating upper third point is not used, adjust the length of the tie rod in a way that the PTO shaft is parallel to the ground.

It is always good practice to make sure that the shredder PTO axis is parallel to the ground thus reducing the stress to a minimum on the power take-off and extending the working life of the shredder.

5.2 DRIVESHAFT CONNECTION

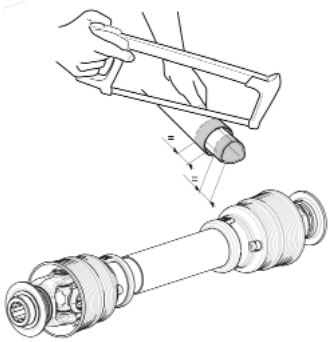
Before assembling the driveshaft, the operator must:

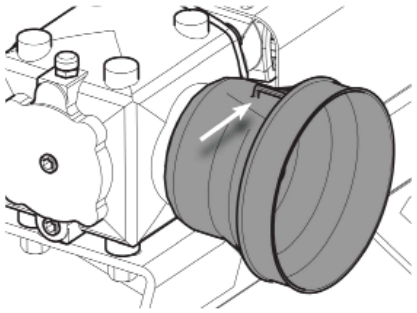


- Read the driveshaft and tractor manuals.
- Make sure that the number of revs. of the tractor PTO correspond to those of the shredder (the choice of the number of shredders revs. must be made in the purchase phase). If this is not the case, contact after sales.
- Check that the driveshaft minimum and maximum lengths are those required by shredder - tractor coupling. Remember that when at maximum extension, the pipes must overlap at least 1/3 of the length of the internal pipe. Moreover, in the maximum closure position of the pipes, the minimum play allowed of the plastic protections must be at least 2 cm. in order to prevent damage to the protections and the gear transmission. If this is not the case, it must be shortened suitably by cutting it accordingly. Consult the driveshaft use and maintenance manual or contact the authorized dealer.
- Use driveshafts with power/torque drive capacity and number of revs. suitable for that recommended.

Position the driveshaft in the right direction, making reference to the figure of the tractor embossed on the external protection pipe. Insert the first hub of the driveshaft onto the shredder PTO, holding the safety pin or safety collar pressed. Release the pin and retract with the driveshaft until the pin itself engages in the relevant seat with an audible "clack". Repeat the operation successively with the hub opposite the shaft, inserting it into the tractor PTO.

Connect the driveshaft protection retainer chain snap hook in the relevant seat on the shredder PTO protection hood, indicated in the figure. Carry out the same operation on the tractor PTO.

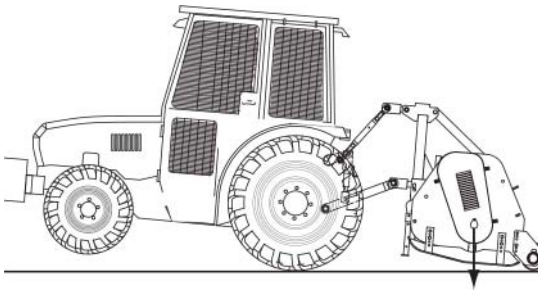




5.3 Check the Stability of the Tractor Shredder Complex

Shredder weight changes the stability of the tractor shredder complex, influencing steering and braking capability. Therefore proceed at a moderate speed. In particular, remember that the front axis must always be encumbered by a weight equal to at least 20% of the total weight of the tractor shredder complex.

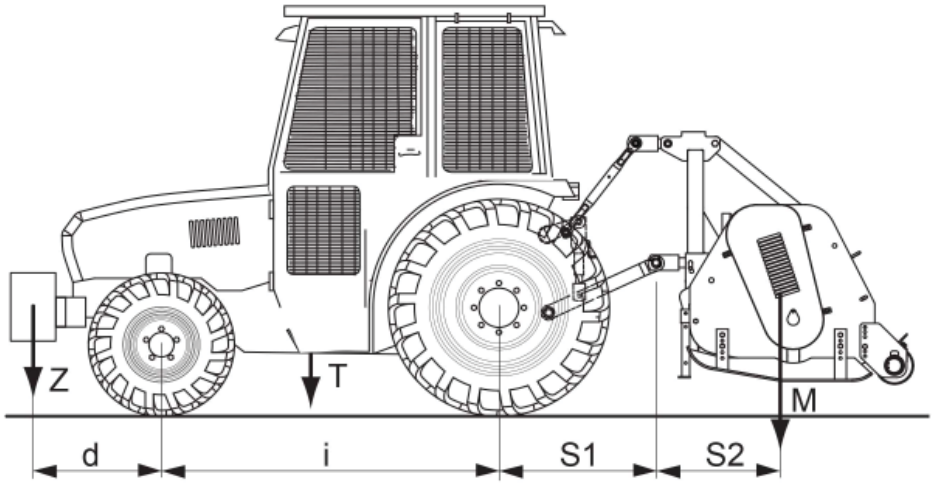
Check the lifting capability and tractor stability using the following formula and, if necessary, apply ballasts on the front.



WARNING DANGER OF TILTING

M x (S1+S2) ≤ 0.2 T x i+Z x (d+i)
M ≤ 0.3T

i	=	wheel base
d	=	distance from the front axis from the ballasts
S1	=	distance between center of the rear axle and center of the lower hitch points
S2	=	distance between the center of the lower hitch points and center of the shredder
T	=	weight of the tractor + 75 Kg (operator)
Z	=	weight of the ballast
M	=	weight of the machine



5.4 Road Transport

Before transporting on public roads, it is imperative to follow local traffic highway codes and regulations. Comply with state and local laws governing highway safety and movement of farm machinery on public roads. The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.

5.5 Machining & Preventive Maintenance

Once all controls and regulations have been performed, with the tractor connected to the shredder (via 3-point hitch, but with driveshaft disconnected), switch the tractor on and go to the work area, remembering to keep the shredder lifted so that the tools do not touch the ground (at least 20 cm.).

To activate the shredder, the operator must refer to the tractor manual, because the controls are located inside the tractor cab.

Warning:
Before starting work, make sure that no people or animals are within the radius of action of the machine. Make sure all equipment protections are present and efficient.

The machine must only be used by one operator positioned inside the tractor driving cab.

Make sure there are no restrictions that prevent movements. If there are restrictions, release the equipment from any fastening device.

Preventive Maintenance:
Before using the machine for the first time, or after a long period of inactivity, carry out the following:

- **check that the machine is not damaged**
- **check the mechanical parts are in good condition and not rusted**
- **check the state of wear of the tools**
- **grease all mobile parts precisely**
- **check that there is no oil leakage coming from the transmission unit**
- **check that all safety guards are properly positioned**
- **visually check the machine before each use. Tighten any loose bolts according to the coupling torque table**
- **check the oil level in the speed increasing gearbox and, if need be, top off the oil until the correct level is restored. (see Routine Maintenance).**
- **grease the rotor supports and the rear roller**

Use the following lubricants for greasing:

- **oil: 85/90 W Gear Oil**
- **grease: Multi-Grease**

NOTE:

Before working with the equipment, read the entire sequence in a way to be prepared for every inconvenience in time. It is good practice to start the equipment in reduced normal conditions especially in cold environments, to allow the system to run-in and to prevent equipment malfunctioning.

On arrival at the work place, the operator must:

- engage the hand brake
- switch the engine off
- remove the ignition key and keep it
- get off the tractor
- check that there are no persons, animals or objects in the exposed area
- connect the driveshaft tot he tractor PTO as previously described

Once connected to the driveshaft, the operator must:

- turn the tractor engine on
- release the hand brake
- work at a maximum speed of 6 km/h reducing it to about 2 km/h in the presence of woody material that is difficult to work (hard, large, etc.).

Keep the tractor engine running at a rev speed that assures the machine the needed power for the job it is performing.

Run a short way with the shredder working and check the quality of the work carried out. If it does not satisfy you, repeat and review the machine adjustment operations.

WARNING DANGER OF CUTTING AND SHEARING OF THE HANDS AND FEET

Do not approach the tool holder rotor with the hands or feet when it is rotating.

During functioning, the machine can project material from the rear part. Make sure that animals and persons are at least 50 meters from the machine.

In the operations involving change of direction, turning and going in reverse, disengage the power take-off and lift the shredder slightly from the ground, in order to avoid structure damage.

5.5 MACHINING (CONTINUED)

When the job has been finished, the operator must:

WARNING DANGER OF FLYING OBJECTS

- engage the hand brake
- switch the engine off
- remove the ignition key and keep it
- get off the tractor
- disconnect the driveshaft from the tractor PTO and place it in the relevant support hook
- climb onto the tractor and release the hand brake
- switch the tractor on
- paying attention during movement that there are no exposed persons, animals or objects, take the shredder into the storage area

Once having reached the storage area, the operator must:

- engage the hand brake
- switch the engine off
- remove the ignition key and keep it
- clean the shredder (see "Cleaning")
- check that there are no oil leaks, stop any leaks present (ground pollution hazard)
- check and if necessary, replace any worn parts (see "Routine Maintenance")

NOTE:
If the equipment stops during working, consult "Troubleshooting"

WARNING DANGER OF CUTTING AND SHEARING OF THE HANDS

Attention General Hazard:

Only qualified operators and persons who have read and understood the safety precautions can carry out the operations described below. Moreover, they must check that there are no persons, animals and objects exposed in the dangerous area.

The equipment must be stopped in the following ways:

- Temporary stop
- Stop at the end of the day
- Stop for long periods
- Emergency stop

Below find the description of how to behave in each case.

Temporary Stop - To stop the shredder temporarily, just deactivate the rotation of the tractor PTO by activating the relevant control in the tractor control panel.

If the operator must get off the tractor, he must:

- engage the hand brake
- switch the engine off
- remove the ignition key and keep it
- get off the tractor

Stop at the End of the Day

- engage the hand brake
- switch the engine off
- remove the ignition key and keep it
- get off the tractor
- disconnect the driveshaft from the PTO of the tractor
- clean the shredder (see "Cleaning")
- check that there are no oil leaks, stop any leaks present (ground pollution hazard)
- check and if necessary, replace any worn parts (see "Routine Maintenance")

STOP FOR LONG PERIODS - When the machine is parked for long periods of time:

- activate the tractor parking brake
- lower the machine resting feet
- place the shredder on the ground
- turn the tractor engine off
- remove the ignition key from the control panel and keep it
- descend from the driver position
- detach the driveshaft
- rest the driveshaft on the relevant support
- pull out the split pin and the gudgeon and detach the tie rod (upper third point)
- fix the tie rod to the appropriate support on the tractor
- pull out the slip pins and the connecting pins and then the tractor's rear hydraulic lift arms from the shredder hitch points
- get back onto the tractor
- start the tractor and move away carefully
- clean the shredder (see " Cleaning")
- lubricate all of the non-painted shredder parts with an anti-rust product

The shredder must be parked on flat land and within a protected area, so as to prevent unauthorized staff from approaching.

EMERGENCY STOPS - To stop the shredder in emergency conditions, just deactivate the rotation of the tractor PTO by activating the relevant control in the tractor control panel. At this point, engage the hand brake, switch the engine off, remove the key and keep it. Identify the cause of the emergency stop and, if necessary, consult "Troubleshooting".

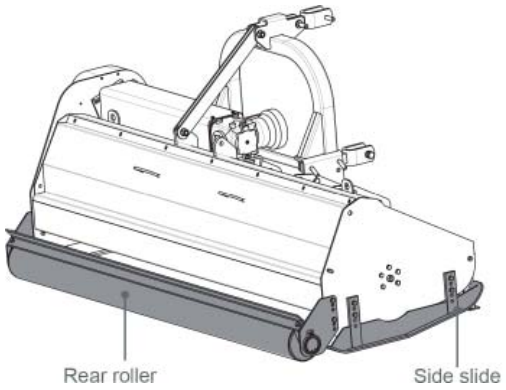
WARNING DANGER OF CUTTING AND SHEARING OF THE HANDS

Decide:

- if necessary, take the equipment to the zero energy state
- if after sales assistance must be requested
- if it is possible to repair the equipment

Once the cause of the emergency stop has been eliminated, the equipment must be re-started.

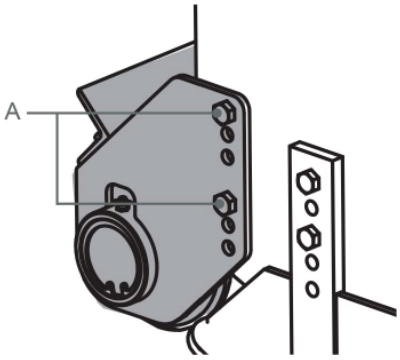
7.1 Working Height Adjustment



The machine working height is determined by the vertical position of the rear roller or the wheels.

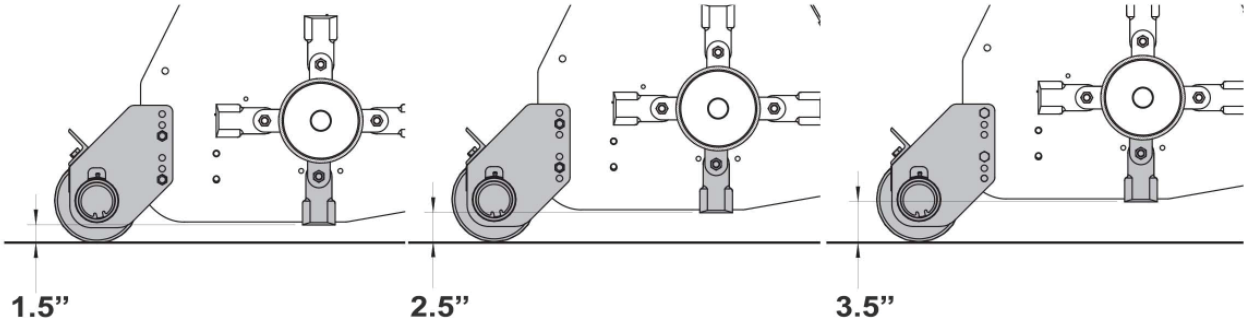
By lifting the roller/wheels, the tools move closer to the ground and, vice versa, lowering them the tools move away from the ground. Make sure that the tools do not touch the ground after a working height adjustment; direct contact would cause wear.

To adjust the height of the roller:



- loosen and extract the bolts **A** using the 24 mm wrench, which fix the roller on both sides, holding the lower bolt nut inside the body with a second 24 mm wrench (the upper screw is fastened to a nut welded to the plate)
- lift and lower the roller and reposition it according to the layout given below
- re-insert and tighten bolts **A**

The skids prevent direct contact between the large side plates and the ground, facilitating shredder running.



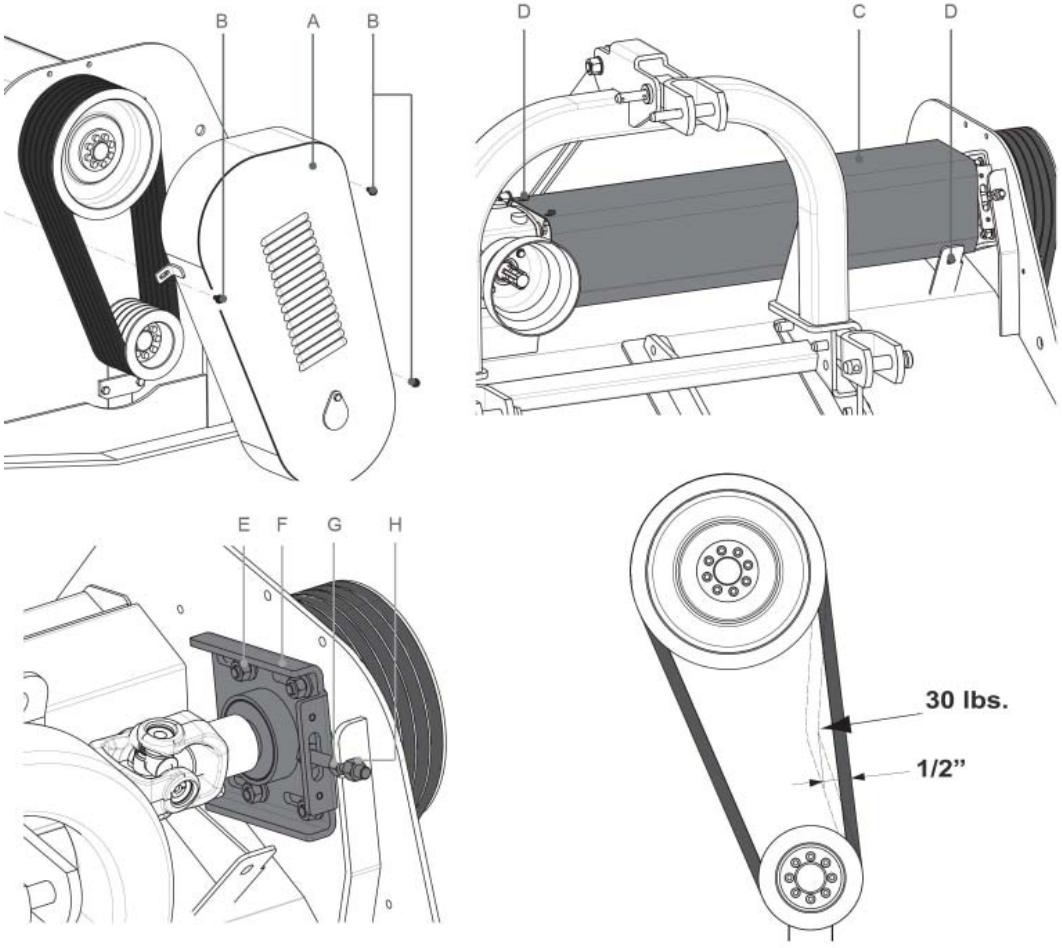
7.2 Adjusting Belt Tension

The tool holder rotor is dragged in rotation by a drive belt the manually adjustable fixed tensioner.

Proceed as follows to adjust belt tension:

- remove the belt protection guard **A** by loosening screws **B**, which fix it
- remove the driveshaft protection guard **C** by loosening screws **D** which fix it
- loosen the 4 nuts **E** which block the support plate **F** using a 24 mm wrench
- loosen the counter-nut **G** using the 24 mm wrench and appropriately tighten the drawing nut **H** if the belts are slack, loosen if they are too taut by holding the drawing nut with a second wrench of the same size
- tighten the counter-nut **G** while holding the nut **H** once sure of the correct tensioning
- tighten the 4 nuts **E**
- re-mount the protection guards **C** and **A**

The belts are correctly taut if, when applying a force of about 30 lbs. on the center of the belts set, these bend by about 1/2".



WARNING GENERIC DANGER

ATTENTION:
Only qualified operators and persons who have read and understood the safety precautions can carry out the operations described below. Moreover, they must check that there are no persons, animals and objects exposed in the dangerous area.

The operator must know and scrupulously follow the indications and must have put the machine out of service. The periodic controls and the maintenance operations described in this chapter must be performed in the times and way established and are the operator's responsibility. Failure to comply with Standards and maintenance times jeopardizes the good functioning of the machine and its duration and as a consequence the validity of the warranty.

For any other maintenance, consult "Troubleshooting" or contact the dealer. Considering the complexity of the equipment, repairs, modifications, extraordinary maintenance different to those mentioned below MUST NOT be performed without having consulted the Manufacturer or its after sales centers. Depending on the case, these will give authorization to proceed along with all instructions necessary or they will recommend the intervention of one of its own technicians. These precautions are due to the fact that, incorrect or unsuitable operations can lead to abnormal functioning conditions, causing damage to the equipment and risks to staff.

WARNING DANGER OF TILTING OR CRUSHING

WARNING GENERIC DANGER

WARNING DANGER OF POLLUTION OF THE LAND AND WATER TABLE

ATTENTION:
Before performing maintenance, read all of this part in a way to be prepared for every inconvenience in time.

ATTENTION:
Ensure the effective stability of the equipment (tractor and shredder) before performing any maintenance intervention (the maximum gradient limit of the ground must be 3°).
Before carrying out any maintenance operation, the operator must take the shredder to the zero energy state. (see article 2.1)
The maintenance technician and any aids must have PPE available and wear them where necessary.
Do not perform repairs of which you have no knowledge. Always follow the instructions. If they are missing, contact the supplier.
Do not use lifting points different from those prescribed. Make sure that the chosen lifting device is suitable to carry out operations in compliance with safety standards.
Do not leave the tractor engine running in closed places if they do not have a ventilation system suitable to remove toxic gas exhaust concentrated in the air.
Avoid prolonged and repeated skin contact with lubricants as they could harm skin and cause other problems.
Do not ingest fuels/lubricants/fluids. In the event of accidental contact with the eyes, wash them well with water.
Do not weld in closed places or in those which are not appropriately ventilated.
Do not weld on painted surfaces, to prevent the formation of toxic vapors.
Remove paint with suitable products and then wash the surfaces and let them dry.

SICMA INFORMS THAT ANY MODIFICATION OR TAMPERING OF THE SHREDDER OR ANY OPERATION PERFORMED IN DISAGREEMENT WITH WHAT IS WRITTEN IN THIS MANUAL, ESPECIALLY FAILURE TO COMPLY WITH THE SAFETY PROVISIONS, AS WELL AS MAKING THE WARRANTY NULL AND VOID, RELIEVES SICMA FROM ANY LIABILITY FOR DAMAGE TO OBJECTS AND INJURY TO PERSONS.

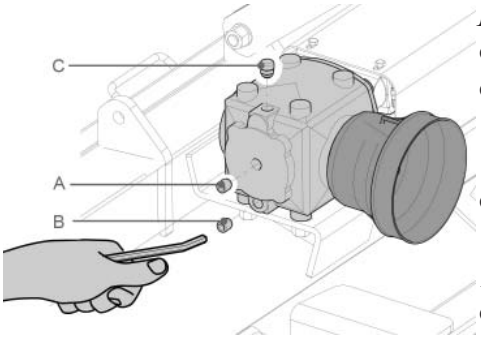
8.1 Control and Replacement of Oil in Speed Increasing Gear Unit

WARNING DANGER OF BURNS

Attention:
Wait for the gear transmission box to cool down before touching it.

Attention:
The operator must pay attention to oil leaks and perform relative maintenance immediately. Moreover, oil must not be poured onto the ground when topping off or replacing the oil.

The oil level of the gear transmission box must be checked visually by loosening cap **A** using 8 mm allen wrench.



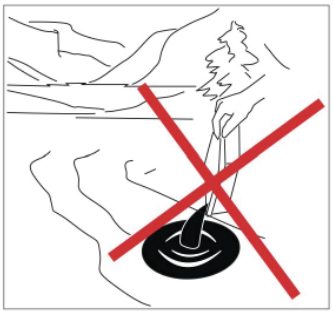
If top off is necessary, proceed as follows:

- use a 8 mm allen wrench to loosen the oil load cap **C**
- top off with oil type 85/90 W Gear oil, with the aid of a funnel until the oil level is clearly visible through the hole of cap **A**
- re-insert the load cap **C** and the level cap **A**, tightening them well.

The oil in the gearbox unit must be replaced as follows:

- the first time after the first 50 hours of work
- every 500 hours of work

To change the oil:



- position a container under the oil drain with cap **B**
- loosen the oil drain cap **B** (lower part of the sump) and allow the oil to flow out completely
- dispose of the drained oil in appropriate containers for waste oils
- screw the previously unscrewed oil drain cap **B**
- loosen the oil load cap **C** and the level cap **A**
- use a small funnel to top off with 85/90 W Gear oil until the level is reached
- top off and tighten the caps **A** and **C**

WARNING DANGER OF POLLUTION OF THE LAND AND WATER TABLE

Recover any waste oils and dispose of them in the relevant collection centers because, according to the laws in force, they must not be disposed of in the environment as they are classified as dangerous/hazardous waste.

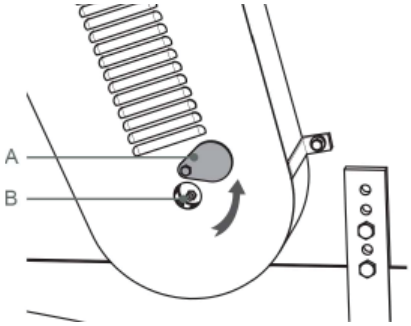
8.2 LUBRICATION

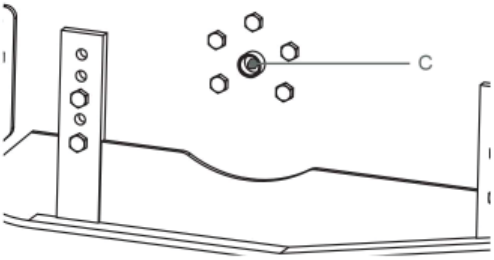
Greasing is performed using a manual greasing pump (as example in the figure) using Multi-Grease after having cleaned the greasing nipples thoroughly.

GREASING DRIVE SHAFT SUPPORTS (*EVERY 8 HOURS OF WORK*)

To grease the supports, proceed as follows:

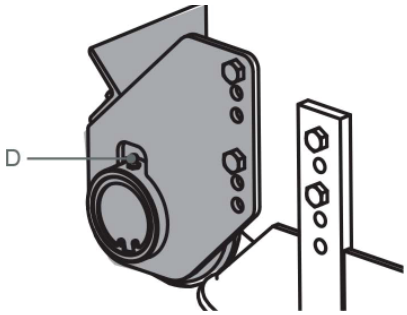
- turn the drip cap **A** and inject specific grease into the greasing nipple **B**
- inject grease into the greaser **C**, situated on the opposite side of the shredder

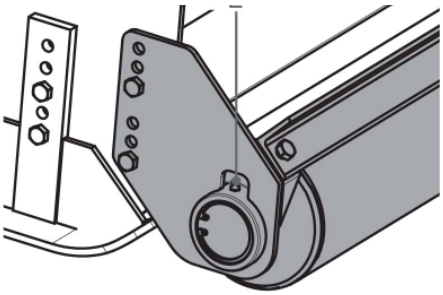




GREASING REAR ROLLER SUPPORTS (*EVERY 8 HOURS OF WORK*)

Inject the grease into the greasers **D** and **E** situated on the upper outer part of the rear roller supports.

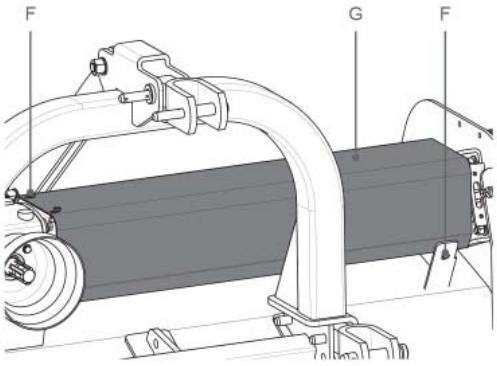


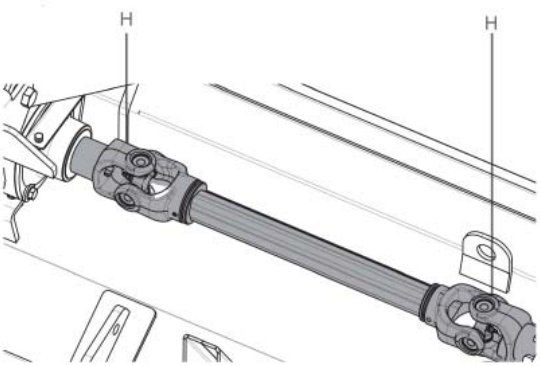


GREASING LATERAL TRANSMISSION JOINT (*EVERY 20 HOURS OF WORK*)

To grease the supports, proceed as follows:

- loosen the 8 screws **F** using the .51" (13 mm) wrench and remove the protection of the upper driveshaft **G**
- inject the grease into the greasers **H** positioned on the cross bodies of the driveshaft end forks
- re-mount the protection cover **F**



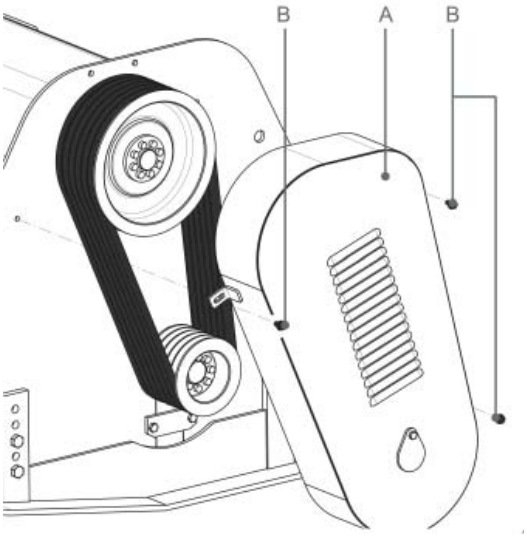


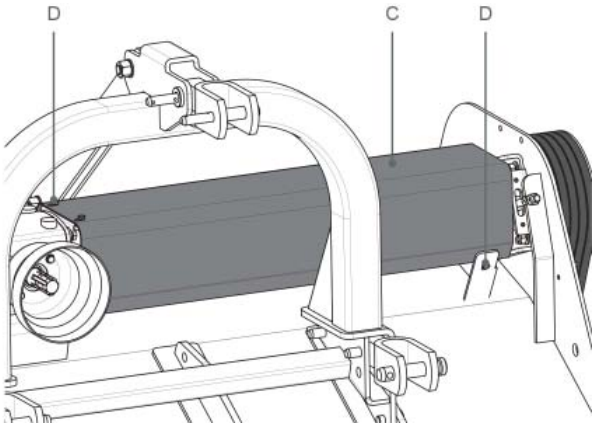
8.3 Replacing the Drive Belts

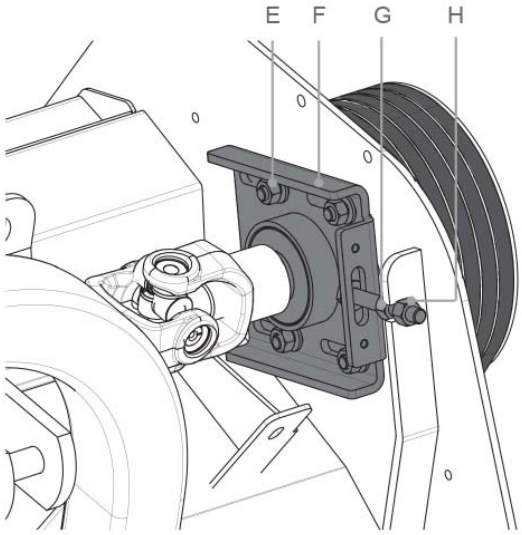
Frequently check the state of wear of the belts and replace the entire set if one or more have deteriorated.

Proceed as follows to replace the drive belts:

- remove the belt protection guard **A** by loosening the 4 screws **B**, which fix it
- remove the driveshaft protection guard **C** by loosening screws **D**, which fix it
- loosen the 4 nuts **E** which block the support plate **F** using a 24 mm wrench
- loosen the counter nut **G** using 24 mm wrench and loosen the drawing nut **H** until the belts set is loosened completely
- extract the belts by sliding the most external one out first followed by the others in succession
- replace all belts with a new set following the assembly in reverse order with respect to the prvious point
- perform tensioning as described in article 7.2







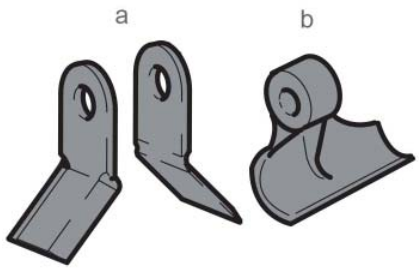
8.4 Replacing Knives/Hammers

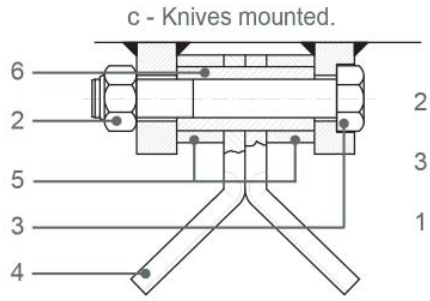
The TR Shredder can be equipped with knives and hammers depending on the job to be performed.

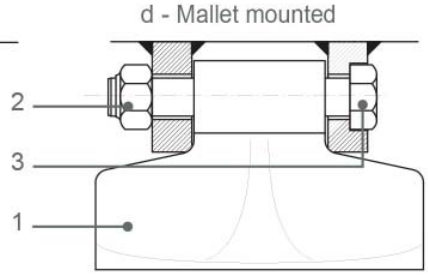
- (a) Universal knives for grass, straw, (assembly in fig. **c**)
- (b) Smooth hammers for grass, maize, grains (assembly in fig. **d**)

WARNING DANGER OF CUTTING

In order to obtain perfect machine operation, it must be frequently checked (at least every 50 working hours) that the shredding hammers or knives are in good working order and perfectly fixed to the bolts; replace them with new pieces whenever they are worn or broken.







TOOLS LIST

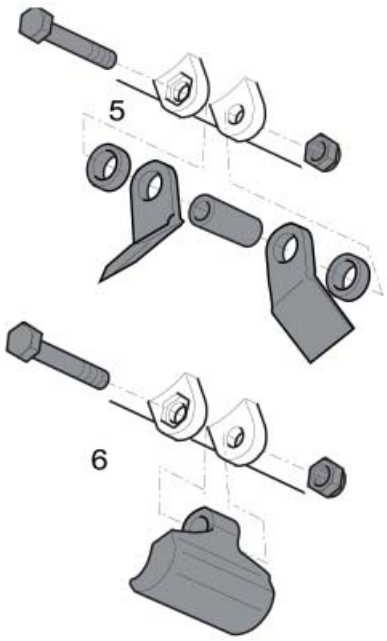
			Qty.			
Ref	**Description**	**Code**	**TR200**	**TR225**	**TR255**	**TR280**
1	Smooth hammer	5716648	22	24	28	30
2	Nut M16 UNI 7473	3464101016	22	24	28	30
3	Bolt M16x95 UNI 5737	5716502	22	24	28	30
4	Knife	5816618	44	48	56	60
5	Knife Spacer	5596542	44	48	56	60
6	Knife Holder Bushing	5536541	22	24	28	30

8.4 Replacing Knives/Hammers (continued)

When knives/hammers are worn, the entire set must be replaced. Replacing only some knives/hammers, causes the rotor shaft to be unbalanced.

To replace the knives or hammers, contact the nearest dealer or have this operation performed by skilled staff following the assembly layouts 5 and 6. Remember to assemble the tools with the sharp part facing in the direction of rotor rotation. Moreover, it is recommended to reassemble the knives with relative spacer in the same way for all knife units, in order to prevent any assembly errors.

Use of non-original knives/hammers can cause anomalous vibrations for the machine.



Always use original spare parts supplied by Sicma in order to guarantee small tolerance on the weight of the knives/hammers.

Sicma does not recommend modification of the type of knives/hammers originally mounted on the rotor shaft, e.g. replacing smooth hammers with notched hammers or knives and vice versa; whenever the user wants to perform this operation, the rotor shaft must be re-balanced by a Sicma authorized center (after having assembled the new knives/hammers) in order to prevent vibrations.

Sicma declines all liability for damage deriving from this action.

If the balancing must be performed again we recommend that you remove the added weights for the original balancing.

DRIVESHAFT

For lubrication and maintenance interventions, refer to the directions described in the use and maintenance manual from the manufacturer of the driveshaft installed on your shredder.

10.1 Cleaning

WARNING DANGER OF CUTTING

Attention General Hazard:
Only qualified operators and persons who have read and understood the safety precautions in the manual (Sec. 2) can carry out the operations described below. Moreover, these must check that there are no persons, animals and objects exposed in the dangerous area.

Attention:
During cleaning it is imperative that cut-proof gloves and accident prevention shoes be worn. The operator must clean the shredder on solid, flat ground and must take the shredder to the zero energy state. If compressed air is used to clean the machine, appropriate glasses are also required.

It is good practice to wash the equipment externally with a jet of water after every job. Clean the shredder with a high pressure water jet machine, especially the following parts:

- frame surface
- hammer/knives
- 3-point hitch
- rotor
- rotor compartment

When washing has been completed, protect the metal parts that are not painted with lubricant oil.

10.2 Storage & Wintering

If the machine is immobilized for long periods, it must be stored in a place sheltered from atmospheric conditions and be protected to avoid damage. Before setting it aside, clean the whole machine and lubricate all mechanical parts to protect them from rust.

Before storing the machine for long periods, operate as follows:

- free the rotor and the tools from shredder residues
- clean the machine thoroughly
- run an overall visual check on the machine to identify any structural damage, deep abrasions on the painted surfaces, the presence, integrity and readability of the safety labels, and that they are fitting in their original positions
- grease all mechanical parts including fastening pins
- if possible, store the machine in a covered place, on flat and consistent ground.

Quick Consultation Tables

The following paragraphs state the information necessary to speed up the interventions described up to this point in table form, both regarding maintenance and troubleshooting.

11.1 Coupling Torque Table

Check the tightness of nuts and bolts daily. If necessary, replace them by repositioning them (screws, washers, nuts) respecting the disassembly sequence.

COUPLING TORQUE				
	Bolt Class			
Threading	8.8		10.9	
	Nm	Lb - Ft	Nm	Lb - Ft
M6	11	8.5	17	12
M8	28	20	40	30
M10	55	40	80	60
M12	95	70	140	105
M14	150	110	225	165
M16	240	175	305	225
M18	330	250	475	350

11.2 TROUBLESHOOTING TABLE

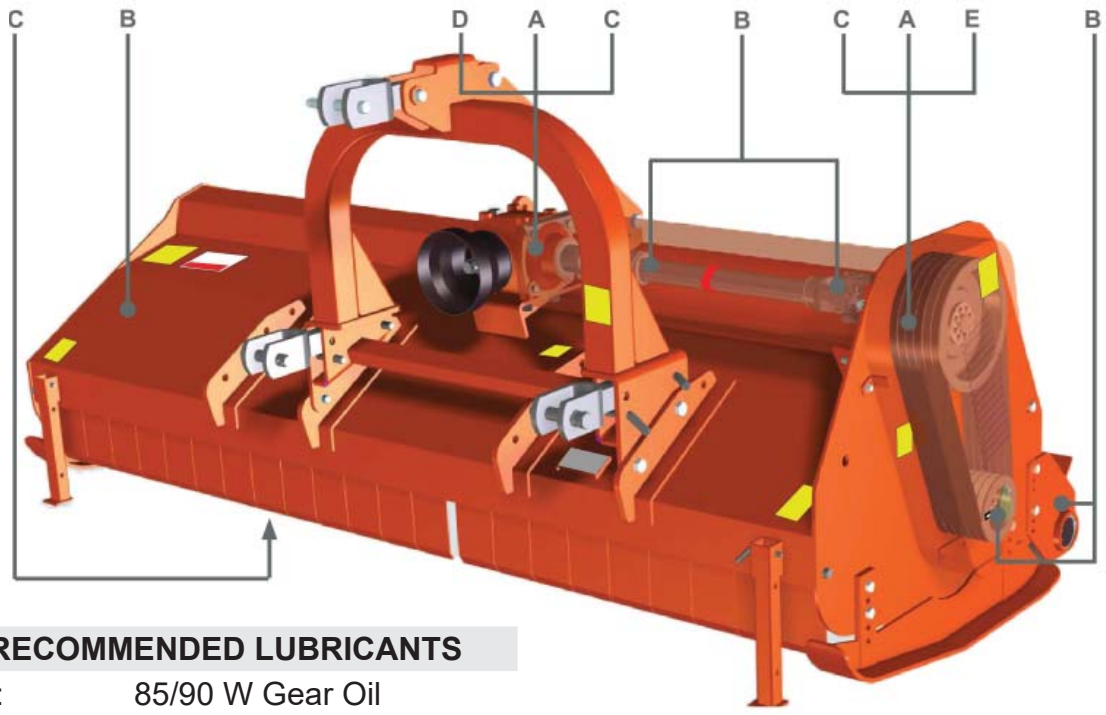
NOTE:
Before applying the solutions suggested, check that the anomaly persists via a further attempt. In this case, start from the most elementary solutions.

If the problem should persist in spite of the solutions applied, contact the dealer service department.

PROBLEM	CAUSE	REMEDY
Oil leak from the gear transmission box	• Too much oil in the box • Vent cap with faulty valve • Load/drain/level caps loose • Damaged gaskets	• Restore the correct oil level • Replace the vent cap • Tighten the load/drain/level caps • Replace the gaskets
Shredder not uniform	• Worn or damaged knives/hammers • Roller/wheels not adjusted correctly • Machine clogged	• Replace the knives/hammers • Carry out adjustments • Decrease tractor advancement speed • Clean shredding chamber
Bevel gear unit overheating	• Insufficient oil • No oil • material difficult to shred	• Top off the oil • Restore the oil level • Reduce advancement speed
Premature knife/ hammer wear	• Stony ground • Knives/hammers cutting height too low	• Clear the ground of stones • Adjust cutting height
Machine noise or vibrations	• Unbalanced rotor • Worn bearings • Damaged, worn or missing knives/ hammers	• Perform balancing in specialized workshop • Replace bearings • Replace the knives/hammers

11.3 Maintenance Table

REF.	INTERVAL IN HOURS	DESCRIPTION OF THE INTERVENTION
A	After the first 50 hours of work	• Check the correct tension of the drive belts • Check the correct tightness of the nuts and bolts • Replace the oil in the gear unit box
B	Every 20 hours of work	• Grease the rear roller supports • Grease the drive shaft supports • Grease the lateral transmission joint bearings
C	Every 50 hours of work	• Check the correct tension of the drive belts • Check the correct tightness of the nuts and bolts • Check the state of wear of the knives/hammers • Check the oil level in the gearbox unit and top off to the correct level if necessary
D	Every 500 hours of work	• Check the correct tightness of the nuts and bolts • Replace the oil in the gear unit box
E	Every 1000 hours of work	• Replace the drive belts



RECOMMENDED LUBRICANTS	
OIL:	85/90 W Gear Oil
GREASE:	Multi-Grease

Maintenance must be carried out only after having read and understood the entire shredder manual

Repairs and replacement parts must be performed using original spare parts, which must be requested from your authorized dealer. Remember that the request for spare parts must be correct and accompanied by the following information:

- machine type
- serial number
- code and description of the spare part requested (can be obtained from the Spare Parts Exploded Diagrams
- quantity requested

Given the particular stress to which the equipment is subjected and for safety reasons, if pieces are replaced, only use original spare parts. Failure to comply will void the warranty.

WARRANTY:

In order to make use of the contractual warranty supplied by the manufacturer, the operator must scrupulously comply with the precautions indicated in the Use and Maintenance Manual and in particular:

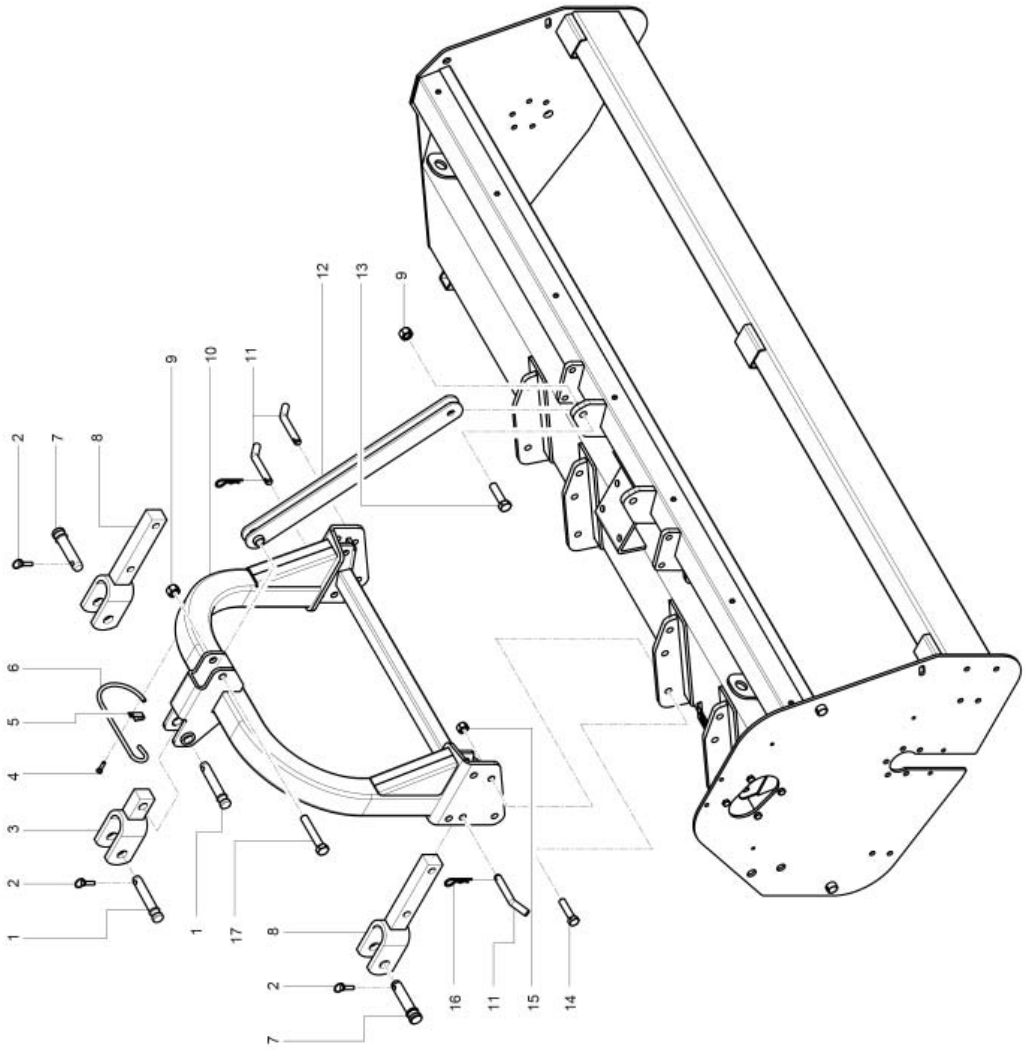
- respect the limits of use envisioned by the Manufacturer
- do not make modifications or variations to the machine without the written approval of the manufacturer
- always perform all maintenance interventions prescribed
- always use original spare parts
- make sure that the staff assigned to using the vehicle has the necessary skill requisites and training.

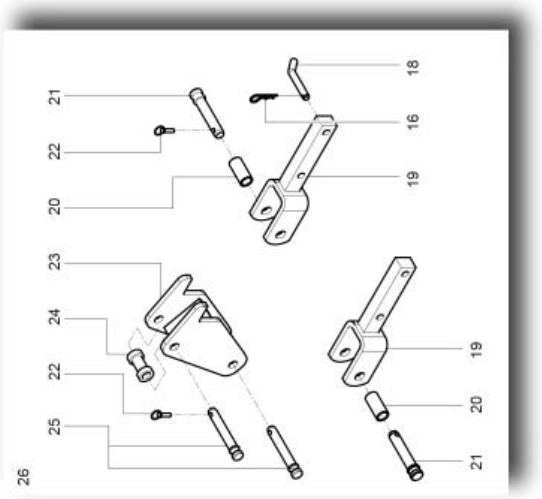
The contractual warranty is not applied if the conditions stated above are not respected, even partially.

The use of spare parts not approved by the manufacturer invalidates any warranty and relieves the manufacturer or dealer from any liability due to malfunctioning or accidents.

The removal or modification of guards and protections relieves the manufacturer from all liability due to damage/injury caused to objects and/or persons.

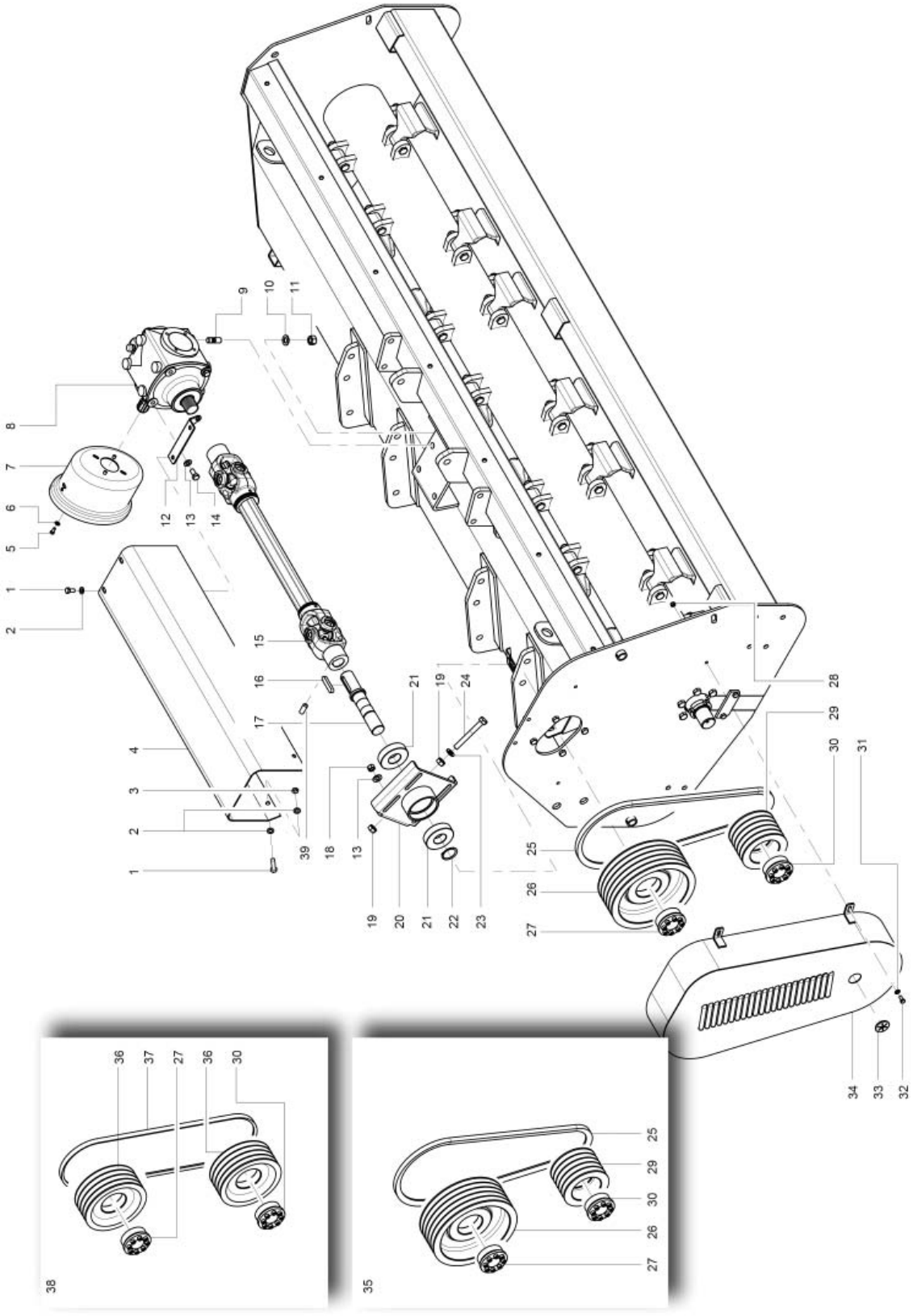
12.1 Shredder Parts





QUICK HITCH KIT

REF #	QTY.	PART NO.	DESCRIPTION
1	2	5304435	Upper 3rd Hitch Pin ∅25
2	4	6350010	Snap Pin ∅10 DIN 11023
3	1	5006313	Upper 3rd Hitch Pin Harm
4	1	3021108020	Screw M8 x 20 UNI 5739
5	1	5137068	Hook Clip
6	1	4337002	Cardan Hook 200
7	2	4304008	Down 3rd Hitch Pin ∅28
8	2	5006312	Down 3rd Hitch Pin Harm
9	2	3464101020	Self Loking Nut M20 UNI 7473
10	1	5006310	Arc
11	4	4301589	Pin
12	1	5006311	Tie Rod
13	1	3011120060	Screw M20 x 60 UNI 5737
14	4	3021118050	Screw M18 x 50 UNI 5739
15	4	3464101018	Self Loking Nut M18 UNI 7473
16	4	6351004	"R" Split Pin ∅4
17	1	3011120100	Screw M20 x 100 UNI 5737
18	4	4301589	Pin For Arms
19	2	5006333	QUICK HITCH Upper Arm
20	2	4534102	QUICK HITCH Bushing Adapter
21	2	5304434	Down 3rd Hitch Pin ∅28
22	4	6350010	Snap Pin ∅10 DIN 11023
23	1	5006332	QUICK HITCH Plate
24	1	5304438	3rd Hitch Bushing
25	2	5304437	Upper 3rd Hitch Pin ∅25
26	1	8630049	Quick Hitch Kit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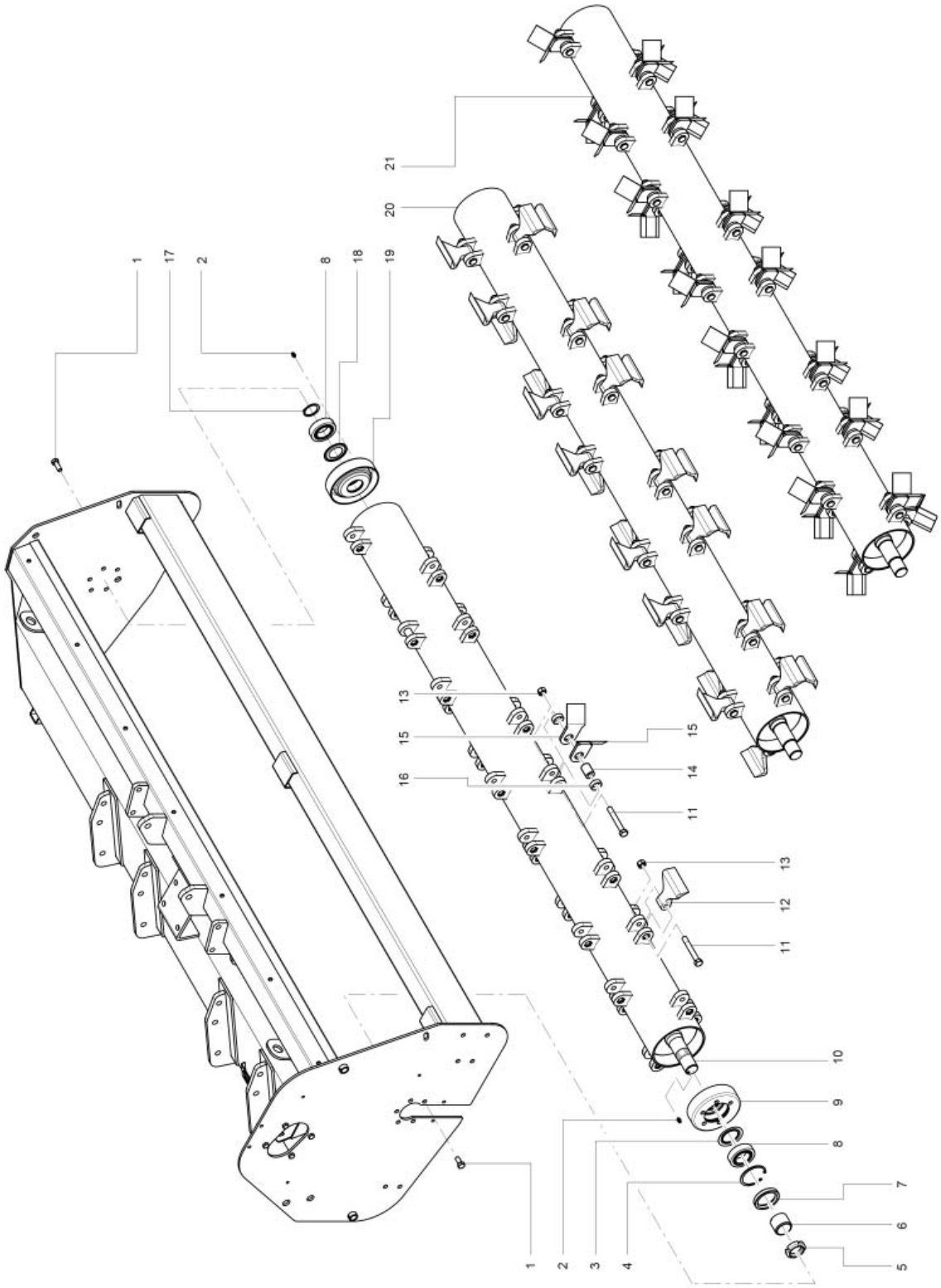
26REF 26#	QTY.	PART NO.	DESCRIPTION
1	4	3021110020	Screw TE UNI5739 M10 x 20
2	6	3614000010	Washer ∅10 UNI 6593
3	2	3464101010	Self Locking Nut M10 UNI 7473
4	1	5136460	Cardan Guard Centralizer TR/200
4	1	5136461	Cardan Guard Centralizer TR/225
4	1	5136462	Cardan Guard Centralizer TR/255
4	1	5136463	Cardan Guard Centralizer TR/280
4	1	5136486	Cardan Guard TR/200•225
4	1	5136487	Cardan Guard TR/255
4	1	5136488	Cardan Guard TR/280
5	4	3021108016	Screw M8 x 16 UNI 5739
6	4	3614000008	Washer ∅8 UNI 6593
8	1	1883512	Cardan Guard
9	1	8060001	EC/60 Gearbox
9	4	5306298	Stud Screw M16
10	4	3614000016	Washer ∅16 UNI 6593
11	4	3464101016	Self Locking Nut M16 UNI 7473
12	1	5136491	Guard Support
13	6	3604100012	Washer ∅12 UNI 6592
14	2	3021112030	Screw M142 x 30 UNI 5739
15	1	E7255006	Cardan Shaft Side Transmission TR/200•225 (dec.)
15	1	E7255001	Cardan Shaft Side Transmission TR/255 (dec.)
15	1	E7255002	Cardan Shaft Side Transmission TR/280 (dec.)
15	1	E7255008	Cardan Shaft Side Transmission TR/200 (cent.)
15	1	E7255009	Cardan Shaft Side Transmission TR/225 (cent.)
15	1	E7255010	Cardan Shaft Side Transmission TR/255 (cent.)
15	1	E7255011	Cardan Shaft Side Transmission TR/280 (cent.)
16	1	6361270	Parallel Key 70 x 12 x 8 UNI 6604
17	1	5214167	Pulley Shaft
18	4	3414101012	Nut M12 UNI 5587
19	2	3464101014	Self Locking Nut M14 UNI 7473
20	1	5004400	Pulley Support
21	2	2226308	Bearing 6308 2RS
22	1	6320040	Retaining Ring For Shafts ∅40
23	1	3614000014	Washer ∅14 UNI 6593
24	1	3021114110	Screw M14 x 110 UNI 5739
25	4	6721550	Toothed Belt XPB-1550 (540 rpm) TR/200•225
25	5	6721550	Toothed Belt XPB-1550 (540 rpm) TR/255•280

REF #	QTY.	PART NO.	DESCRIPTION
26	1	5644131	Pulley VIBIK SPB 265/4 Driving (540 rpm) TR/200•225
26	1	5644133	Pulley VIBIK SPB 265/5 Driving (540 rpm) TR/255•280
27	1	6364080	Self Locking Units VK 156 40/80
28	3	3464101008	Self Locking Nut M8 UNI 7473
29	1	5644132	Pulley VIBIK SPB 265/4 Driving (540 rpm) TR/200•225
29	1	5644134	Pulley VIBIK SPB 265/5 Driving (540 rpm) TR/255•280
30	1	6364580	Self Locking Units VK 156 45/80
31	3	3614100008	Large Washer ∅8 UNI 6593
32	3	3021108020	Screw M8 x 20 UNI 5739
33	1	6603516	Lubrification Plug
34	1	5006548	Belts Cover
35	1	8630022	Side Transmission Kit (540 rpm) TR/200•225
35	1	8630030	Side Transmission Kit (540 rpm) TR/255•280
36	2	5644144	Pulley VIBIK SPB 200/4 (1000 rpm)
37	4	6721550	Toothed Belt XPB-1550 (1000 rpm)
38	1	8630023	Side Transmission Kit (1000 rpm)
39	1	31112020	Dowel Pin N12 x 20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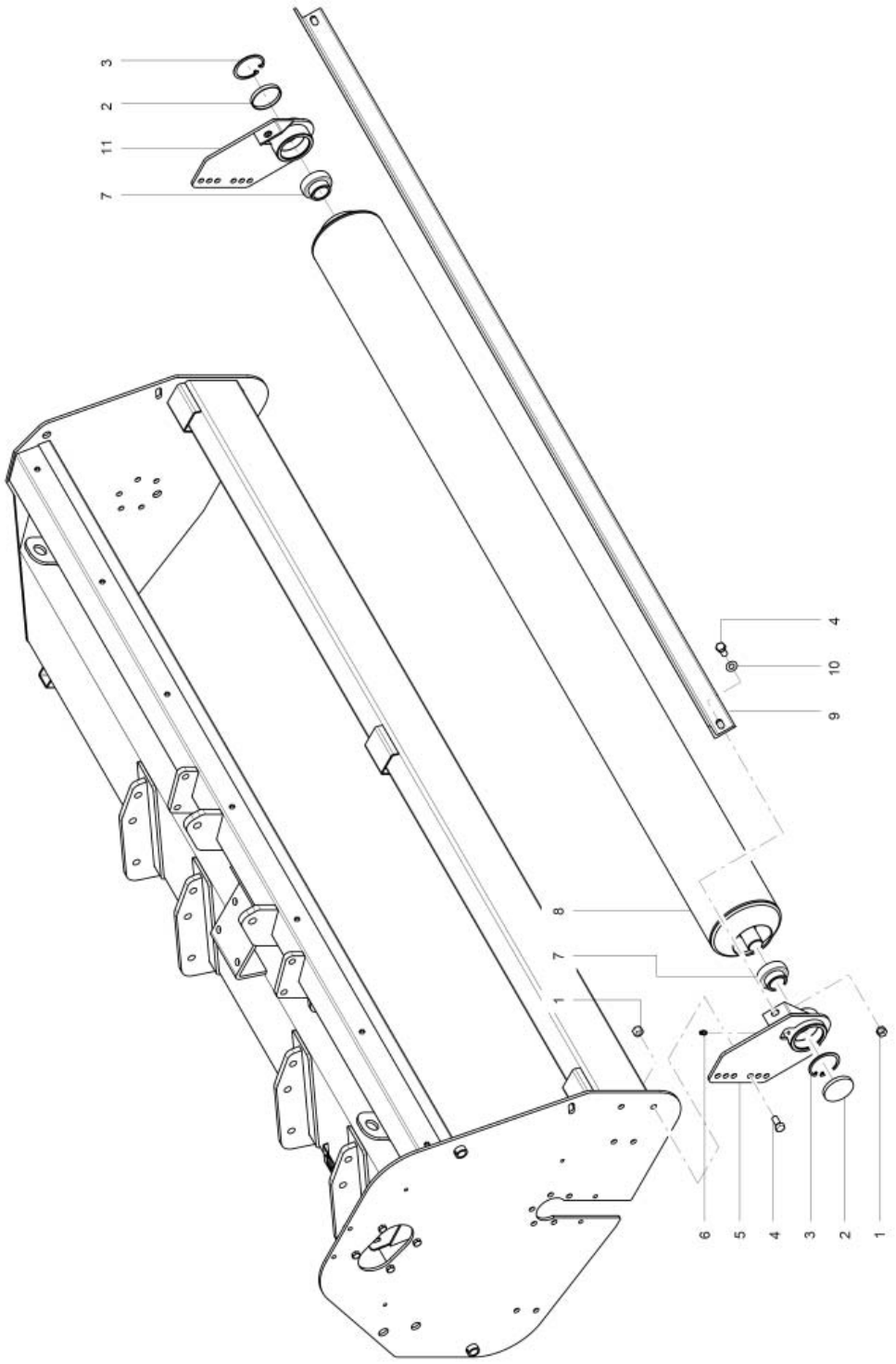
REF #	QTY.	PART NO.	DESCRIPTION
1	10	3021114035	Screw M14 x 35 UNI 5739
2	2	6560008	Grease Nipple M8 UNI 7663 A Type
3	1	2122210	Seal NILOS 22210/JV
4	1	6310090	Retaining Ring For Bores ∅90 UNI 7437-DIN 472
5	1	34127050	Self Locking Metal Ring M50 x 1.5
6	1	5536510	Pulley Spacer
7	1	6106090	Oil Seal 60 x 90 x 10 GM DIN 3760 A Type
8	2	2822210	Bearing 22210
9	1	5006416	Side Transmission Shaft Support
10	1	5006406	Shaft TR/200
10	1	5006407	Shaft TR/225
10	1	5006408	Shaft TR/255
10	1	5006327	Shaft TR/280
11	22	5716502	Screw TE M16 x 95 TR/200
11	24	5716502	Screw TE M16 x 95 TR/225
11	28	5716502	Screw TE M16 x 95 TR/255
11	30	5716502	Screw TE M16 x 95 TR/280
12	22	5716648	RM4 Hammer TR/200
12	24	5716648	RM4 Hammer TR/225
12	28	5716648	RM4 Hammer TR/255
12	30	5716648	RM4 Hammer TR/280
13	22	3464101016	Self Locking Nut M16 UNI 7473 TR/200
13	24	3464101016	Self Locking Nut M16 UNI 7473 TR/225
13	28	3464101016	Self Locking Nut M16 UNI 7473 TR/255
13	30	3464101016	Self Locking Nut M16 UNI 7473 TR/280
14	22	5536541	Bushing For Blades TR/200
14	24	5536541	Bushing For Blades TR/225
14	28	5536541	Bushing For Blades TR/255
14	30	5536541	Bushing For Blades TR/280
15	44	5816618	"Y" Blade TR/200
15	48	5816618	"Y" Blade TR/225
15	56	5816618	"Y" Blade TR/255
15	60	5816618	"Y" Blade TR/280
16	44	5596542	Blades Spacer TR/200
16	48	5596542	Blades Spacer TR/225
16	56	5596542	Blades Spacer TR/255
16	60	5596542	Blades Spacer TR/280
17	1	6320050	Retaining Ring For Shaft ∅50 UNI 7435-DIN 471
18	1	2022210	Seal NILOS 22210/AV

REF #	QTY.	PART NO.	DESCRIPTION
19	1	5006417	External Side Shaft Support
20	1	5006406ML	Balanced Shaft With Hammer TR/200
20	1	5006407ML	Balanced Shaft With Hammer TR/225
20	1	5006408ML	Balanced Shaft With Hammer TR/255
20	1	5006327ML	Balanced Shaft With Hammer TR/280
21	1	5006406C	Balanced Shaft With Blades TR/200
21	1	5006407C	Balanced Shaft With Blades TR/225
21	1	5006408C	Balanced Shaft With Blades TR/255
21	1	5006327C	Balanced Shaft With Blades TR/280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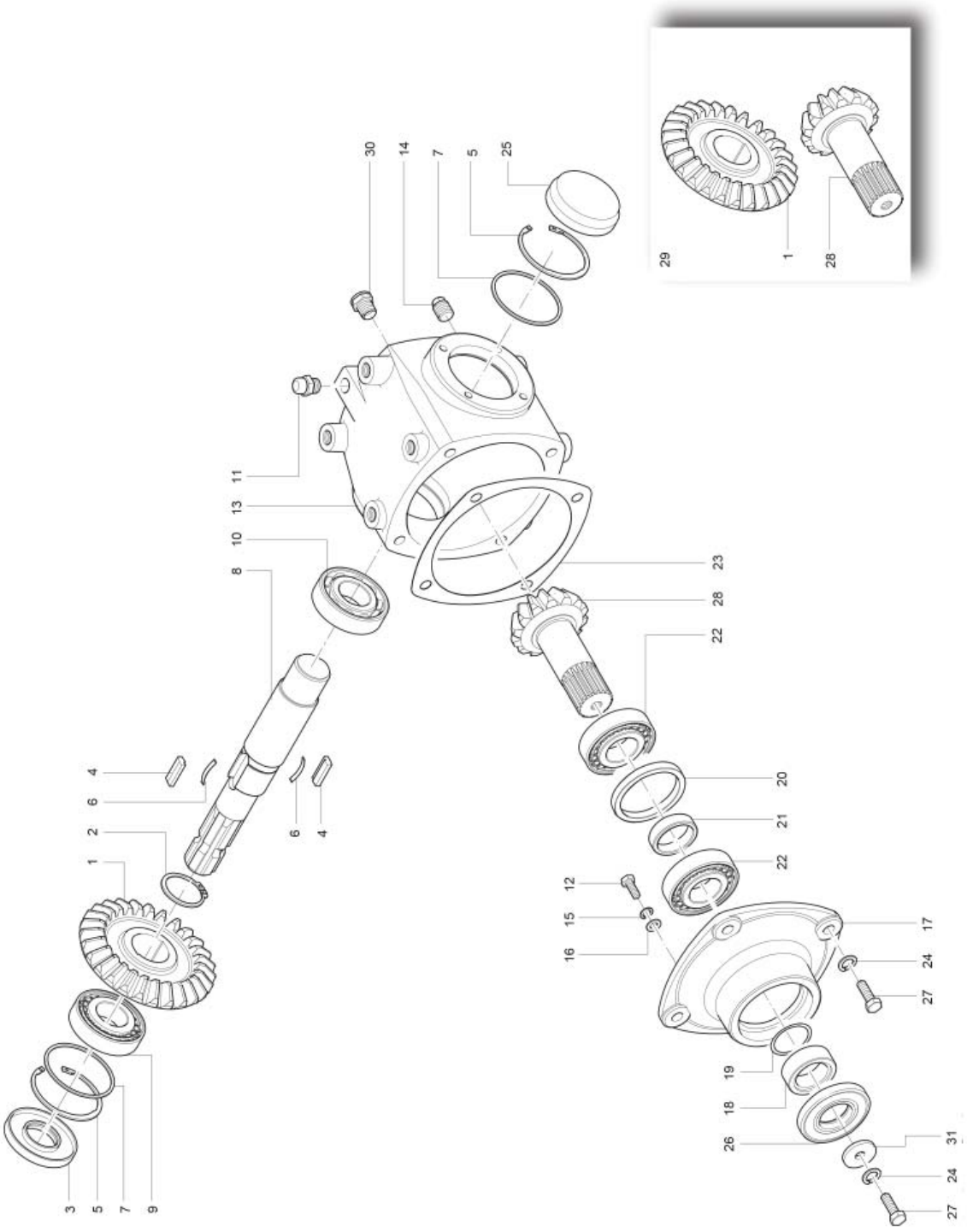
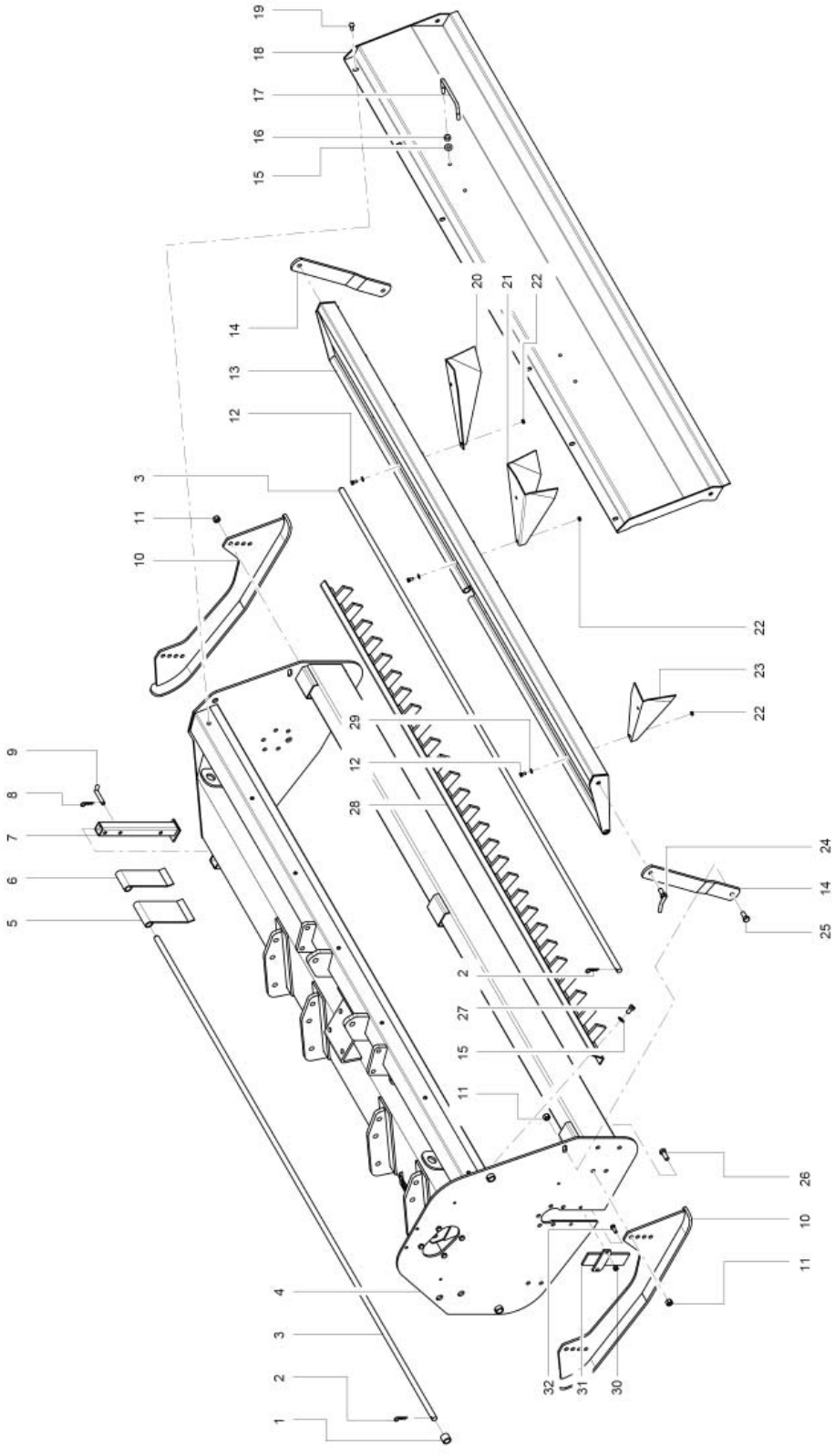
REF #	QTY.	PART NO.	DESCRIPTION
1	6	3464101014	Self Locking Nut M14 UNI 7473
2	2	6100080	Cover ∅80
3	2	6311080	Retaining Ring For Bores ∅80 UNI 7437-DIN 472
4	6	3021114030	Screw M14 x 30 UNI 5739
5	1	5006467	LH, Roller Support
6	1	6561008	Grease Nipple M8 UNI 7663 C Type 90º
7	2	2030040	Bearing UC208
8	1	5006422	Stabilizer Roller TR/200
8	1	5006423	Stabilizer Roller TR/225
8	1	5006424	Stabilizer Roller TR/255
8	1	5006425	Stabilizer Roller TR/280
9	1	5856505	Scraper TR/200
9	1	5856506	Scraper TR/225
9	1	5856507	Scraper TR/255
9	1	5856504	Scraper TR/280
10	4	3614100014	Washer ∅14 UNI 6593
11	1	5006466	LH, Roller Support

12.2 Gearbox Parts



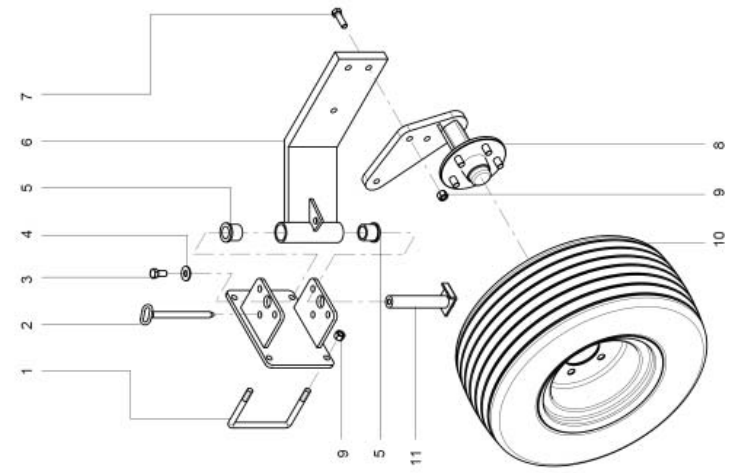
REF #	QTY.	PART NO.	DESCRIPTION
1	1	1721076	Ring Bevel Gear Z27
2	1	6320042	Retaining Ring For Shaft ∅42
3	1	6103580	Oil Seal 35 x 80 x 12 GM
4	2	1321001	Keyway
5	1	6310080	Retaining Ring For Bores ∅80
6	2	1811001	Spring
7	1	6016502	Shim
8	1	1221003	Shaft
9	1	2030307	Bearing 30307
10	1	2106208	Bearing 6208
11	1	3442018	Pressure Oil Plug M18 x 1.5
12	1	30208025	Screw M8 x 25 UNI 5739
13	1	1641001	Gearbox EC-90
14	1	3441018	Conical Plug M18 x 1.5
15	1	3625100008	GROWER Washer ∅8 UNI 1751
16	1	3604100008	Washer ∅8 UNI 6592
17	1	1701066	Pinion Support
18	1	1591073	Spacer
19	1	6836824	Gasket OR 824/D36.69 x 3.53
20	1	1591068	Spacer
21	1	4593020	Spacer
22	2	2730208	Bearing 30208
23	1	1781041	Gasket
24	4	3625100012	GROWER Washer ∅12 UNI 1751
25	1	6100080	Cover ∅80
26	1	6106085	Oil Seal 60 x 85 x 10 GM
27	4	3021112030	Screw M12 x 30 UNI 5739
28	1	1721074	Pinion Z14
29	1	8020012	Bevel Gear Kit
30	1	3444118	Level Oil Plug M18 x 1.5
31	1	1201065	Special Washer

12.3 Cover & Deflector Parts



REF #	QTY.	PART NO.	DESCRIPTION
1	2	5536513	Protection Spacer (TR skids)
2	2	6340550	"R" Split Pin ∅5 x 50 UNI 1336
3	2	5236505	Bonnet/Guard Pin TR/200
3	2	5236506	Bonnet/Guard Pin TR/225
3	2	5236507	Bonnet/Guard Pin TR/255
3	2	5236504	Bonnet/Guard Pin TR/280
4	1	5006435	Frame TR/200
4	1	5006436	Frame TR/225
4	1	5006437	Frame TR/255
4	1	5006438	Frame TR/280
5	17	5136101	Blade Protection 175 x 25 x 110 TR/200 (no skids)
5	16	5136101	Blade Protection 175 x 25 x 110 TR/200 (skids)
5	20	5136101	Blade Protection 175 x 25 x 110 TR/225 (no skids)
5	18	5136101	Blade Protection 175 x 25 x 110 TR/225 (skids)
5	22	5136101	Blade Protection 175 x 25 x 110 TR/255 (no skids)
5	21	5136101	Blade Protection 175 x 25 x 110 TR/255 (skids)
5	25	5136101	Blade Protection 175 x 25 x 110 TR/280 (no skids)
5	23	5136101	Blade Protection 175 x 25 x 110 TR/280 (skids)
6	1	5136102	Blade Protection 175 x 25 x 60 TR/200•255
6	2	5136102	Blade Protection 175 x 25 x 60 TR/225
6	2	5136102	Blade Protection 175 x 25 x 60 TR/280
7	2	5006114	Parking Stand Leg
8	2	6351004	"R" Split Pin ∅4
9	2	4236115	Parking Stand Leg Pin
10	2	5006541	RH-LH, Skid
11	10	3464101014	Self Locking Nut M14 UNI 7473
12	14	3021110020	Screw M10 x 20 UNI 5739 TR/200•225
12	18	3021110020	Screw M10 x 20 UNI 5739 TR/255•280
13	1	5006457	Opening Bonnet TR/200
13	1	5006458	Opening Bonnet TR/225
13	1	5006459	Opening Bonnet TR/255
13	1	5836544	Opening Bonnet TR/280
14	2	5006553	Arm For Bonnet
15	12	3614100012	Washer ∅12 UNI 6593
16	8	3414101012	Nut M12 UNI 5587
17	2	4331202	Bonnet Handle
18	1	5006476	Bonnet TR/200
18	1	5006477	Bonnet TR/225
18	1	5006478	Bonnet TR/255

REF #	QTY.	PART NO.	DESCRIPTION
18	1	5006479	Bonnet TR/280
19	5	3021110030	Screw M10 x 30 UNI 5739 TR/200
19	6	3021110030	Screw M10 x 30 UNI 5739 TR/225
19	7	3021110030	Screw M10 x 30 UNI 5739 TR/225•280
20	3	5136580	RH, Deflector TR/200•225
20	4	5136580	RH, Deflector TR/255•280
21	1	5136578	Central Deflector
22	14	3464101010	Self Locking Nut M10 UNI 7473 TR/200•225
22	18	3464101010	Self Locking Nut M10 UNI 7473 TR/255•280
23	3	5136581	LH, Deflector TR/200•225
23	4	5136581	LH, Deflector TR/255•280
24	2	5006917	Level Screw For Arm
25	2	3021114035	Screw M14 x 35 UNI 5739
26	8	3021114040	Screw M14 x 40 UNI 5739
27	4	3021112025	Screw M12 x 25 UNI 5739
28	1	5006460	Counter Blades Bar TR/200
28	1	5006461	Counter Blades Bar TR/225
28	1	5006462	Counter Blades Bar TR/255
28	1	5006579	Counter Blades Bar TR/280
29	14	3604100010	Washer ∅10 UNI 6592 TR/200•225
29	18	3604100010	Washer ∅10 UNI 6592 TR/255•280
30	2	3464101010	Self Locking Nut M10 UNI 7473
31	1	5006549	Cover
32	2	3021110030	Screw M10 x 30 UNI 5739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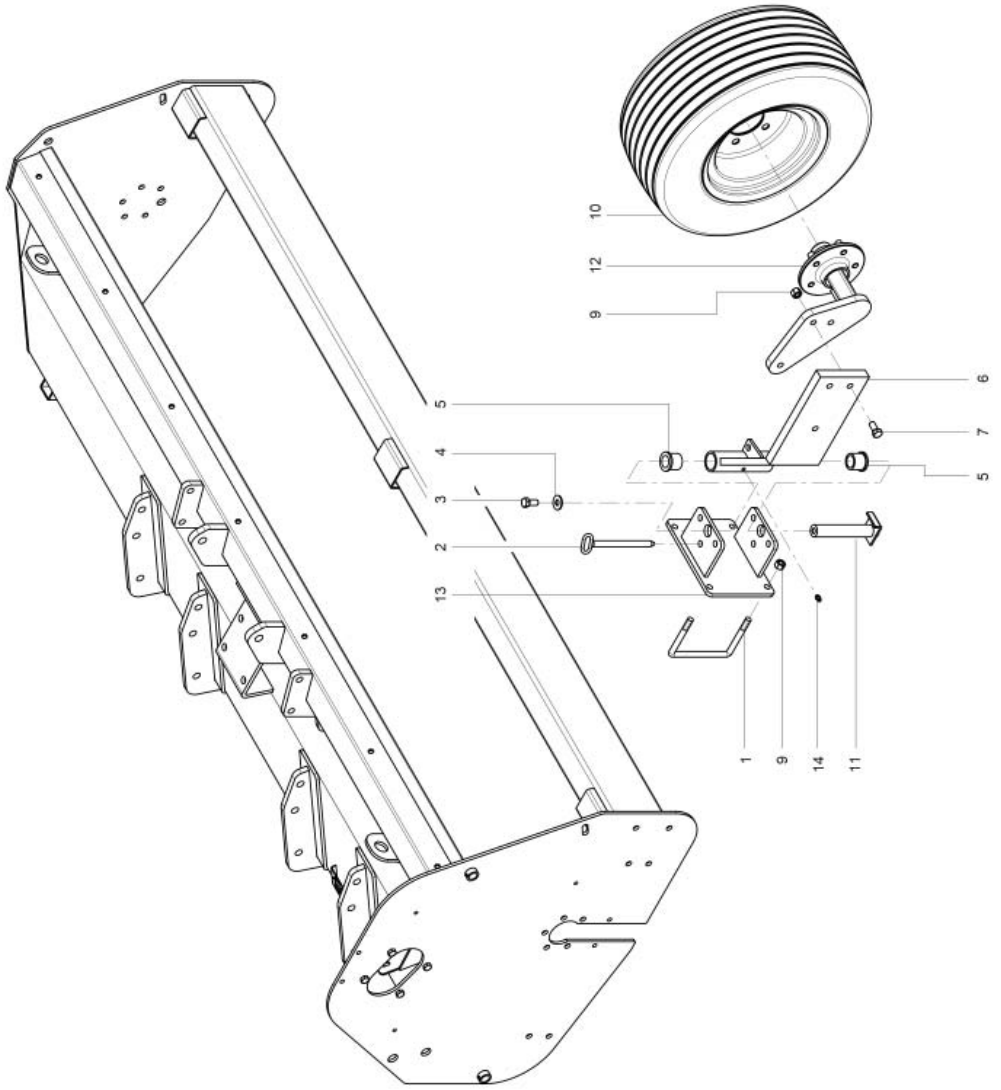
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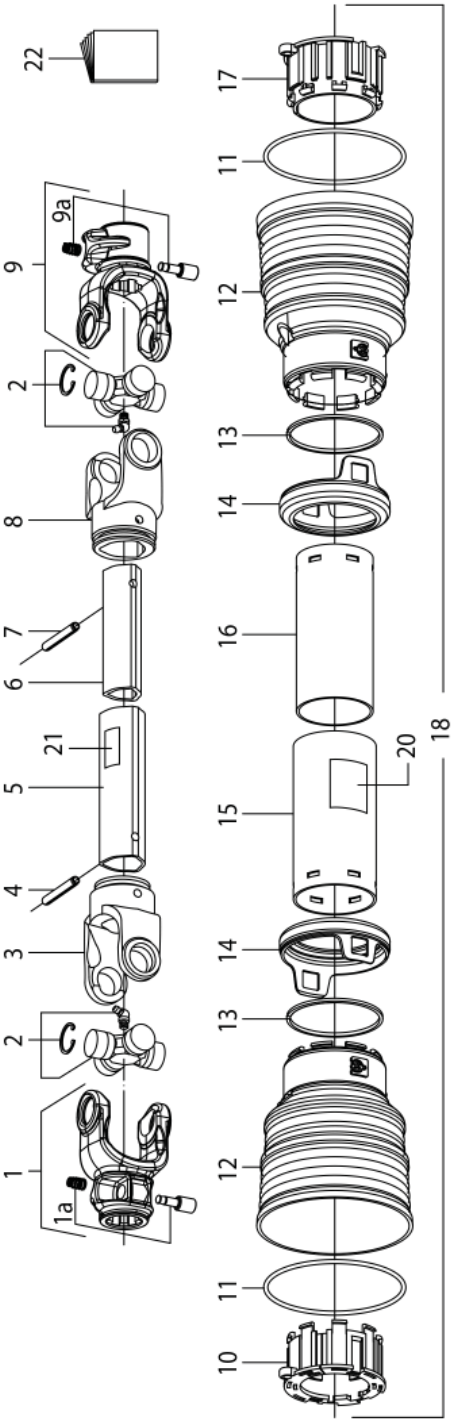
REF #	QTY.	PART NO.	DESCRIPTION
1	4	5336504	"U" Screw
2	2	5006596	Pin For Wheel Arm
3	2	3021114030	Screw M14 x 30 UNI 5739
4	2	3614100014	Washer ∅14 UNI 6593
5	4	5706890	Bearing Bushing
6	2	5006587	Wheel Support Arm
7	4	3021114055	Screw M14 x 55 UNI 5739
8	1	5006588	RH, Wheel Support
9	12	3464101014	Self Locking Nut M14 UNI 7473
10	2	6607012	Complete Wheel 7.00-12 PR6 TUBELESS 650x225
11	2	5006887	Pin For Arm
12	1	5006591	LH, Wheel Support
13	2	5006593	Junction For Wheel Arm
14	2	6560008	Grease Nipple M8 UNI 7663 A Type

12.4 DRIVELINE



DET.	QTY	DESCRIPTION	CODE
11	2	STIFFENING RING	1215733
10	1	TUBE BEARING (outer tube)	1786710
9a	1	PUSH PIN KIT	1581038
9	1	YOKE ASSEMBLY (IMPLEMENT END)	1026010
8	1	INNER TUBE YOKE	1706029
7	1	10x70 1485DIN ROLL PIN (inner tube)	6331070
6	1	INNER TUBE	1526064
5	1	OUTER TUBE	1528064
4	1	10x80 1485DIN ROLL PIN (outer tube)	6331080
3	1	OUTER TUBE YOKE	1706027
2	2	CROSS ASSEMBLY	1006020
1a	1	PUSH PIN KIT	1581038
1	1	YOKE ASSEMBLY (TRACTOR END)	1026010

DET.	QTY	DESCRIPTION	CODE
22	1	USER MANUAL	1140957B
21	1	INNER DECAL	1140011
20	1	OUTER DECAL	1140010
19	2	ANTIROTATION CHAIN	1006065
18	1	COMPLETE PROTECTION	90SS6054
17	1	TUBE BEARING (inner tube)	1786711
16	1	INNER PROTECTION	1877034
15	1	OUTER PROTECTION	1776034
14	2	SAFETY SLEEVE	1885709
13	2	STOP RING	1215735
12	2	STANDARD CONE	1785703

rev.	description	name	date
A	xxxxxxxxxxxxxxxxxxxxxxxxxx	A.C.	23/04/08

customer: ALTHAUS
note: xxxxxxxxxxxxxxxx
title: SPARE PARTS LAY-OUT
customer part no.: xxxxxxx
weight [kg/lb]: ---/---
AX6 810/1046 1026010-1026010 CE SS

eurocardan
c.da Saletti 66041 Atessa (CH) - Italy

drawn: D. BASTI
date: 10/10/2007
scale: no
A4
rev.: -
part no.: 8200618

LIMITED WARRANTY

GEARMORE INC.

GEARMORE, INC., warrants each new Gearmore product to be free from defects in material and workmanship for a period of twelve (12) months from date of purchase to the original purchaser. This warranty shall not apply to implements or parts that have been subject to misuse, negligence, accident, or that have been altered in any way.

Our obligation shall be limited to repairing or replacement of any part, provided that such part is returned within thirty (30) days from date of failure to Gearmore through the dealer from whom the purchase was made, transportation charges prepaid.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature, direct, consequential or contingent, to person or property. This warranty does not extend to loss of crops, loss because of delay in harvesting or any other expenses, for any other reasons.

Gearmore in no way warranties engines, tires, or other trade accessories, since these items are warranted separately by these respective manufacturers.

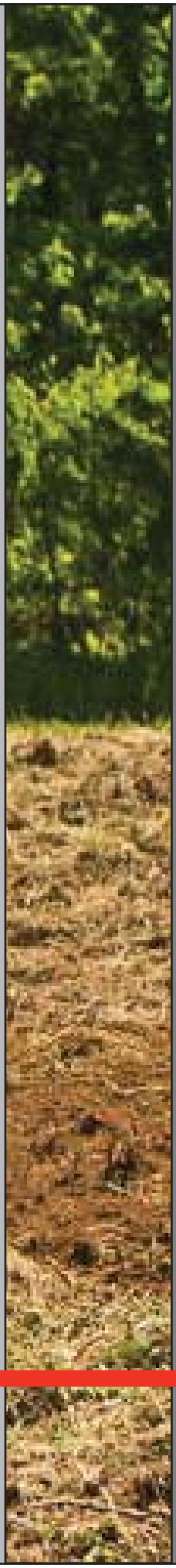
Gearmore reserves the right to make improvements in design or changes in specification at any time, without incurring any obligations to owners or units previously sold.

Please be advised that all warranty work done by your dealer must be approved by Gearmore before work begins.

GEARMORE, INC.
13477 Benson Ave.
Chino, CA 91710

Always refer to and heed machine operating warning decals on machine.

To validate the warranty on this product, please log-in to our website - www.gearmore.com. You will find "warranty registration" listed at the top of our homepage.



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Form: TRSeriesShredderRev05-17.indd