NORDLAND
EQUIPMENT
Nordland by Shaktiman

Flail Mowers (Shredders) Operator's Manual

➤ Operator Manual ➤ Service Manual

In this manual, Flail mowers are referred to as Shredders.

Congratulation for purchasing your new Shaktiman shredder!

This machine has been designed and manufactured following all safety and quality requirements needed for a safe and satisfactory use over time.
A careful reading of this manual will permit you to familiarize with your new equipment, and will provide you all the tools needed to use it safely.
A proper maintenance and knowledge of the safety rules of use will allow obtaining the best performance and a long service life of the machine.

The Safety Alert Symbol used throughout this manual and on safety decals of the machine indicates the presence of potential hazard to the operator. When you see this symbol, be alert and carefully read the message that follows it.

The Safety Alert Symbol is used in conjunction with following Signal Words, according to the degree of possible injuries that may result operating the implement:

DANGER
Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.

WARNING
Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION
Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

IMPORTANT
Indicates instructions or procedures that, if not observed, can cause damage to equipment or environment.

NOTE
Indicates helpful information.

READ, UNDERSTAND, and FOLLOW the safety messages following the Safety Alert Symbol and Signal Words. Failure to comply with safety messages could result in serious bodily injury or death.

TO THE PURCHASER

This manual contains valuable information about SFM-SERIES. It has been carefully prepared to give you helpful suggestions for operating, adjusting, servicing repair parts.

Keep this manual in a convenient place for quick and easy reference. Study it carefully. You have purchased a dependable and sturdy Shredder, but only by proper care and operation can you expect to get the service and long life designed and built into it.

RIGHT-HAND AND LEFT-HAND sides are determined by watching from the tractor side.

Sometime in the future your Shredder may need new parts to replace those are worn or broken. If so, go to nearest SHAKTIMAN dealer and provide him the model and part number.

Customer information

Name _____

Purchased from_____

Purchased date_____

Model No._____

Serial No._____

TABLE OF CONTENTS

1. ABOUT THIS MANUAL

The operator must read the manual for a correct understanding of the hazards that may present when operating the shredder, as well as for obtain optimum performance from the machine.
The manual is part of the machine, it must be kept in good condition and remain with the machine even in case of resale, until its demolition. In case of loss or damage, request a new copy to the Manufacturer or your Dealer.
The information, descriptions and illustrations in this manual describe the state of the product at the time of its publication, and may not reflectthe product in the future.
The Manufacturer reserve the right to make design improvements or changes in specificationswithout incurring in any obligation to install them on units previously sold.

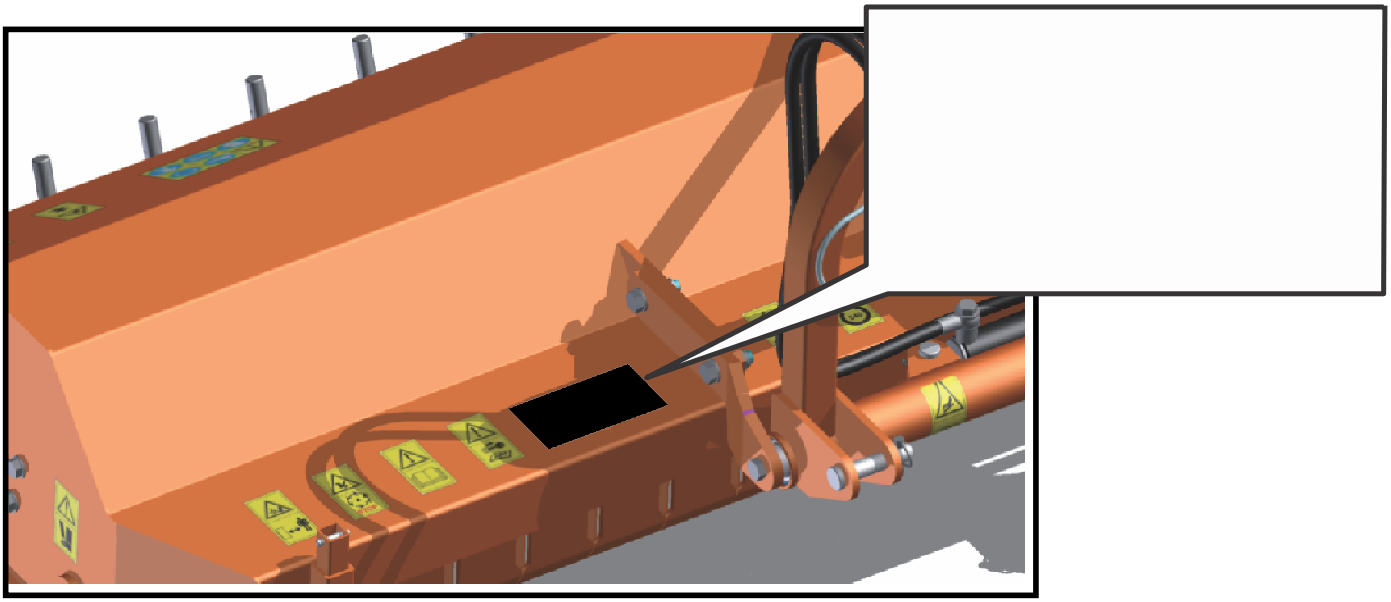
2. INTRODUCTION

2.1. MACHINE IDENTIFICATION

Each shredder is provided with a plate for unique identification(see position in picture below), showing the CEmarking together with following information:

- Manufacturer name and address
- Type of machine (“TYPE”)
- Model of machine (“MODEL”)
- Serial number (“SERIAL No.”)
- Construction year (“YEAR”)
- Machine weight (“MASS”)

It’s recommended to note down all data shown on the plate.
Any request for assistance or information regarding the machine must be directed to the Manufacturer or Dealer always referring to the model and serial number as shown on the plate affixedto the machine.



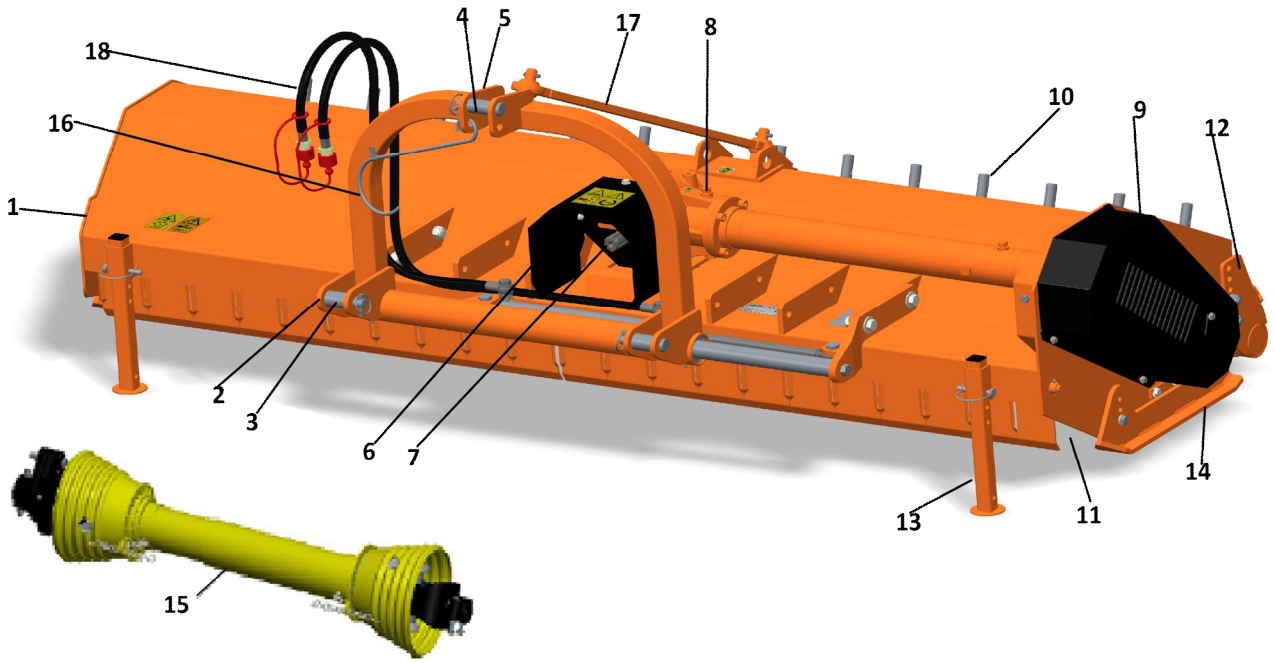
2.2. INTENDED USE

The SFM shredder is designed specificallyfor cutting grass and for shredding fibrous and wood stalks, corn and branches up to a diameter of 8 cm, depending on the type of tool used.
The shredders are designed to be mounted on tractors equipped with hydraulic lift and universal three point hitch that can support the implement weight, and driven by the power of the tractor through the PTO dri- veshaft.
The tractors used to operate the SFM shredder must have the following requirements:

Hitch Category:	3-point hitch, I / II Category standard
PTO:	540 RPM, 6-spline, 1 3/8 Z6
Horsepower:	30-60 HP

DANGER
Any use of the machine other than the intended use is non-intended use, and is to be considered as unauthorized and dangerous. The manufacturer assumes no liability for damage resulting from non-intended use.

2.3. MAIN PARTS DESCRIPTION

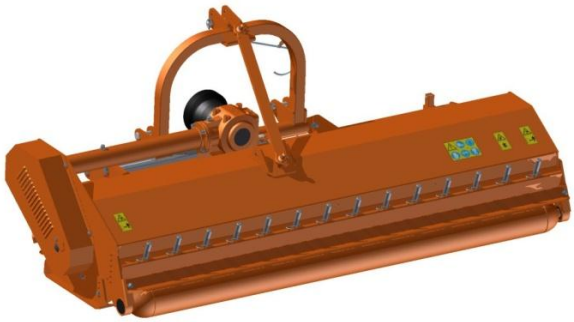
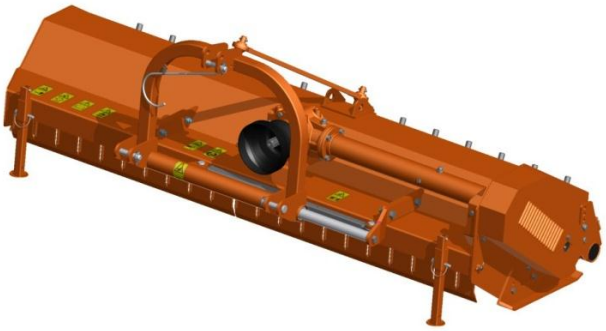
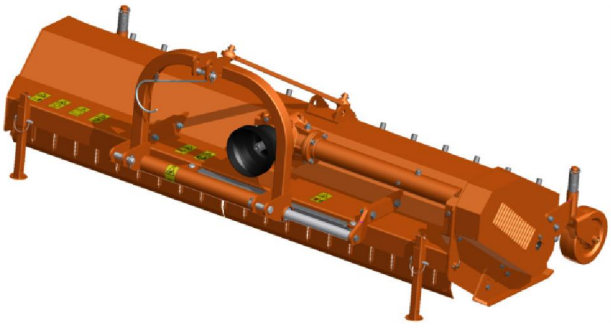


1. Shredder frame	10. Racks
2. Lower hitch	11. Shredding room
3. Lower hitch pin	12. Roller
4. Upper hitch pin	13. Parking stand
5. Upper hitch	14. Side skid
6. PTO shield	15. Cardan driveshaft
7. Implement Input Connection	16. Driveshaft support
8. Gearbox with free wheel inside	17. Tie-rod
9. Side transmission case	18. Hydraulic hoses

NOTE
To make the illustrations more clear, some images of this manual may refer to machines lacking of some components (e.g. safety devices and barriers).

2.4. CONFIGURATIONS

The SFM shredder can be set in different configurations.
The standard configurationcan be changed applying one or more optional parts, listed below:

<table>
<tr><th colspan="2">STANDARD CONFIGURATION</th></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>• Mobile arc with hydraulic cylinder
• Rear roller</td><td>• Standard rear cover
• “Y” blades or hammers</td></tr>
<tr><th colspan="2">OPTIONAL</th></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">• Mechanical shifting device (instead of hydraulic cylinder)</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">• Rear cover with racks (instead of standard rear cover)</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">• Rear floatingwheels (instead of rear roller)</td></tr>
</table>

2.5. TECHNICAL SPECIFICATIONS

		Model								
		85	**100**	**115**	**130**	**145**	**160**	**175**	**205**	**220**
Overall dimensions	mm	1000x850x1130	1150x850x1130	1300x850x1130	1450x850x1130	1620x850x1130	1770x850x1130	1920x850x1130	2220x850x1130	2370x850x1130
Working width	mm	850	1000	1150	1300	1450	1600	1750	2050	2200
	inches	33	39	45	51	57”	63”	69”	80”	87’’
Recommended tractor HP	HP / Kw	30-60 / 22-44	30-60 / 22-44	30-60 / 22-44	30-60 / 22-44	30-60 / 22-44	30-60 / 22-44	30-60 / 22-44	30-60 / 22-44	30-60 / 22-44
3-point hitch type	-	Cat. I/II	Cat. I/II	Cat. I/II	Cat. I/II	Cat. I/II	Cat. I/II	Cat. I/II	Cat. I/II	Cat. I/II
Number of blades	N.	20	24	28	32	36	40	44	52	56
Number of hammers	N.	10	12	14	16	18	20	22	26	28
PTO input speed	rpm	540	540	540	540	540	540	540	540	540
Rotor speed	rpm	2083	2083	2083	2083	2083	2083	2083	2083	2083
Side transmission	-	3 belts	3 belts	3 belts	3 belts	4 belts	4 belts	4 belts	4 belts	4 belts
		BX type	BX type	BX type	BX type	BX type	BX type	BX type	BX type	BX type
Side shift (max)	mm / Inch	FIX MOUNTING	FIX MOUNTING	FIX MOUNTING	300 / 11.81	300 / 11.81	300 / 11.81	300 / 11.81	300 / 11.81	300 / 11.81
Rotor diameter	inches	6.25’’	6.25’’	6.25’’	6.25’’	6.25’’	6.25’’	6.25’’	6.25’’	6.25’’
	mm	159	159	159	159	159	159	159	159	159
Rotor swing diameter	mm	378	378	378	378	378	378	378	378	378
Approx Weight (driveline not included)	kg	278 / 613	300 / 661	320 / 705	366 / 807	388 / 855	412 / 908	434 / 957	482 / 1063	506 / 1116
Cutting Height	mm	32,57,82 and 107								

3. SAFETY

Proper use of the equipment, a strict observance of the safety messages listed below and application of all reasonable practices to avoid any risks prevents accidents or injury, allows the machine working better and longer, and minimizes the failures.
The manufacturer assumes no liability for any damage resulting from not applyingthe behavioral rules indicated into the manual.

3.1. GENERAL SAFETY INSTRUCTION

 **DANGER**
The machine must be used only by authorized and well trained operators. The operator must have read and understood the instructions of this manual, it must make adequate preparation for the proper use of the machine and must hold a driving license. In case of doubt about the use of the machine and/or the interpretation of this manual, the operator must contact the Manufacturer or the Dealer.

 **WARNING**
The manual must always remain with the machine. In case of loss or damage, request a new copy to the Manufacturer or your Dealer.

 **WARNING**
Follow strictly the rules prescribed by the safety pictograms applied to the machine.

 **WARNING**
Be sure that all safety pictograms are legible. If pictograms are worn, they must be replaced with others obtained from the Manufacturer, and placed in the position indicated by this manual.

 **DANGER**
Before using the machine, make sure that all safety devices are installed and in good working conditions. In case of damages of shields, replace them immediately.

 **DANGER**
Is absolutely forbidden to remove or alter safety devices.

 **DANGER**
Before starting, and during operation of the shredder, make sure there are no people or animals in the opera- tion area: the machine can project material from the back, with risks of serious injury or death.

 **DANGER**
Pay maximum attention to avoid any accidental contact with rotating parts of the machine.

 **DANGER**
During operation, adjustment, maintenance, repairing or transportation of the machine, the operator must always use appropriate Personal Protective Equipment (PPE).

 **DANGER**
Do not operate the implement while wearing loose fittingclothing that can give rise to entanglement in parts of the machine.

 **DANGER**
Do not operate the implement when tired, not in good condition or under the influenceof alcohol or drugs.

 **CAUTION**
If the use of the machine is required at night or in conditions of reduced visibility, use the lighting system of the tractor and possibly an auxiliary lightingsystem.

3.2. EQUIPMENT SAFETY INSTRUCTION

 **WARNING**
Use the shredder for its intended purpose only. Improper use can damage the shredder and cause serious injury to persons, animals, or death.

 **DANGER**
The machine should be used by a single operator driving the tractor.

 **WARNING**
Any unauthorized modificationof the machine may cause problems in safety and relieves the Manufacturer from any liability for damages or injuries that may result to operators, third parties and objects.

 **WARNING**
Before using the machine, familiarize yourself with its controls and its working capacity.

 **WARNING**
Do not leave the shredder unattended with tractor engine running.

 **WARNING**
Do not operate shredder on too muddy, sandy or rocky soils.

 **WARNING**
Keep the machine clean from debris and foreign objects which may damage functioning or cause injury.

 **WARNING**
Do not use the machine if the category of the connecting pins of the shredder does not match that of the trac- tor hitch system.

 **WARNING**
Do not use the machine with missing bolts, screws, pins or safety pins, safety guards etc.

WARNING
Never use the machine to transport or lift people, animals or objects.

WARNING
Make certain, by adding front ballast, that at least 20% of the total weight (tractor, implement and ballast) is on the front axle of the tractor, to ensure stability.

WARNING
Before engaging the tractor PTO, make sure the tractor PTO speed is set as required for the shredder (540 rpm). Do not over speed PTO or machine breakage may result.

DANGER
Do not operate the shredder if the driveshaft is damaged. The driveshaft could be subject to breakage during operation, causing serious injury or death. Remove the driveshaft and replace it with an undamaged.

WARNING
With shredder disconnected from tractor, rest the driveline on the provided support of the shredder.

3.3. OPERATING SAFETY INSTRUCTION

WARNING
Before using the machine, be sure to have cleared the operating area from obstacles (stones, branches, debris, etc...). Mark all the obstacles that cannot be eliminated (e.g. by means flags).

DANGER
Never engage the tractor PTO in the presence of people close to the driveshaft. The body, hair or clothing of a person can get caught in rotating parts, causing serious injury or death.

DANGER
Before engaging the PTO and during all operations, make sure that no person or animal is in immediate area of action of the machine. Never use the shredder if people are in his working area.

DANGER
It's absolutely forbidden to stand near the shredder with moving parts.

WARNING
The operator must operate machine lifting/lowering only from the driving seat of the tractor. Do not perform lifting maneuvers on side or behind the tractor.

WARNING
Before making changes in direction, turns or going in reverse, slightly lift the shredderfrom the ground after disengagingthe power take-off, to avoid damage to the machine.

 **DANGER**
In presence of steep slopes (greater than 15 degrees) the tilling action may cause instability of the tractor with risk of serious injury or death hazard. Consult the manual for the tractor to determine the maximum slope that the tractor is able to deal with.

 **DANGER**
Always disengage the PTO before raising the shredder, and never engage the PTO with the shredder in the raised position. The machine might throw objects at high speed, causing serious injury or death.

 **WARNING**
Never leave the driver's seat when the tractor is turned on. Before leaving the tractor, lower the shredder to the ground, disengage the PTO, insert the parking brake, stop engine and remove the key from the control panel.

 **DANGER**
The PTO shields of tractor and implement side, the driveshaft shielding and the driveshaft retaining chains must be properly installed and in good condition, to avoid risk of entanglement with serious injury or death.

 **DANGER**
Before engaging the PTO of the tractor, always make sure that the driveshaft is mounted in the correct direction, and that its clamping elements are properly connected both to tractor side and to shredder side.

 **WARNING**
Stop operating immediately if blades strike a foreign object. Repair all damage and make certain rotor and blades are in good condition before resuming operation.

 **WARNING**
Always disengage the tractor PTO when the driveshaft exceed an angle of 10 degrees up or down while operating. An excessive angle with driveshaft rotating can break the driveshaft and cause flyingprojectiles.

 **CAUTION**
Prolonged use of the shredder can cause overheating of the gearbox. Do not touch the gearbox during use and immediately after, it could be extremely hot and cause severe burn.

 **WARNING**
All adjustment operations on the shredder must be performed by qualifiedand trained operators, with the trac- tor engine off, the PTO disengaged, the shredder lowered to the ground or on security stands, the ignition key off and the parking brake set.

3.4. TRANSPORTING SAFETY INSTRUCTION

 **WARNING**

Before transporting the machine, determine the stopping characteristics of the tractor and implement.

WARNING
Transport only at speeds where you can maintain control of the equipment.

WARNING
When driving on roads, the implement must be in transport position adequately raised from the road surface, with tractor lifting hydraulics locked so that the shredder cannot be lowered accidentally.

DANGER
The implement may be wider than the tractor. Pay attention during transporting to persons, animals or obstacles exposed.

WARNING
When turning, use extreme care and reduce tractor speed.

WARNING
Do not operate the tractor with weak or faulty brakes or worn tires.

CAUTION
Always use tractor lighting system and auxiliary lightingsystem for an adequate warning to operators of other vehicles, especially when transporting at night or in conditions of reduced visibility.

DANGER
In case is required the lifting of the machine, make sure that the lifting device chosen is suitable to perform the operation safely, and use only the lifting points prescribed on shredder.

3.5. MAINTENANCE SAFETY INSTRUCTION

WARNING
All maintenance and repairing operations must be performed by qualifiedand trained operators, with the tractor engine off, the PTO disengaged, the shredder lowered to the ground or on security stands, the ignition key off and the parking brake set.

WARNING
Perform repairs and replacements necessary to the machine using only original spare parts provided by the manufacturer or your Dealer.

DANGER
Perform maintenance operations always using appropriate Personal Protective Equipment (protective eye glasses, hard hat, hearing protection, safety shoes, overall and work gloves, filter-mask).

 **CAUTION**
Before any maintenance operation, make sure that the parts which may become hot during use (gear box) have cooled.

 **WARNING**
Do not perform repairs that you do not know. Always follow the manual instructions and in case of doubt contact the Manufacturer or your Dealer.

 **DANGER**
Do not swallow fuels or lubricants. In case of accidental contact with eyes, rinse well with water and consult a doctor.

3.6. INFORMATION ON STORAGE

 **WARNING**
Never leave the tractor unattended with the shredder in lifted position. Accidental operation of lifting lever or a hydraulic failure may cause sudden drop of unit with injury or death by crushing.

 **DANGER**
Following operation, or before unhookingthe machine, stop the tractor, set the brakes, disengage the PTO, lower the shredder to the ground, shut off the engine, remove the ignition key and wait for all moving parts to stop.

 **WARNING**
Make sure all parked machines are on a hard, level surface and engage all safety devices.

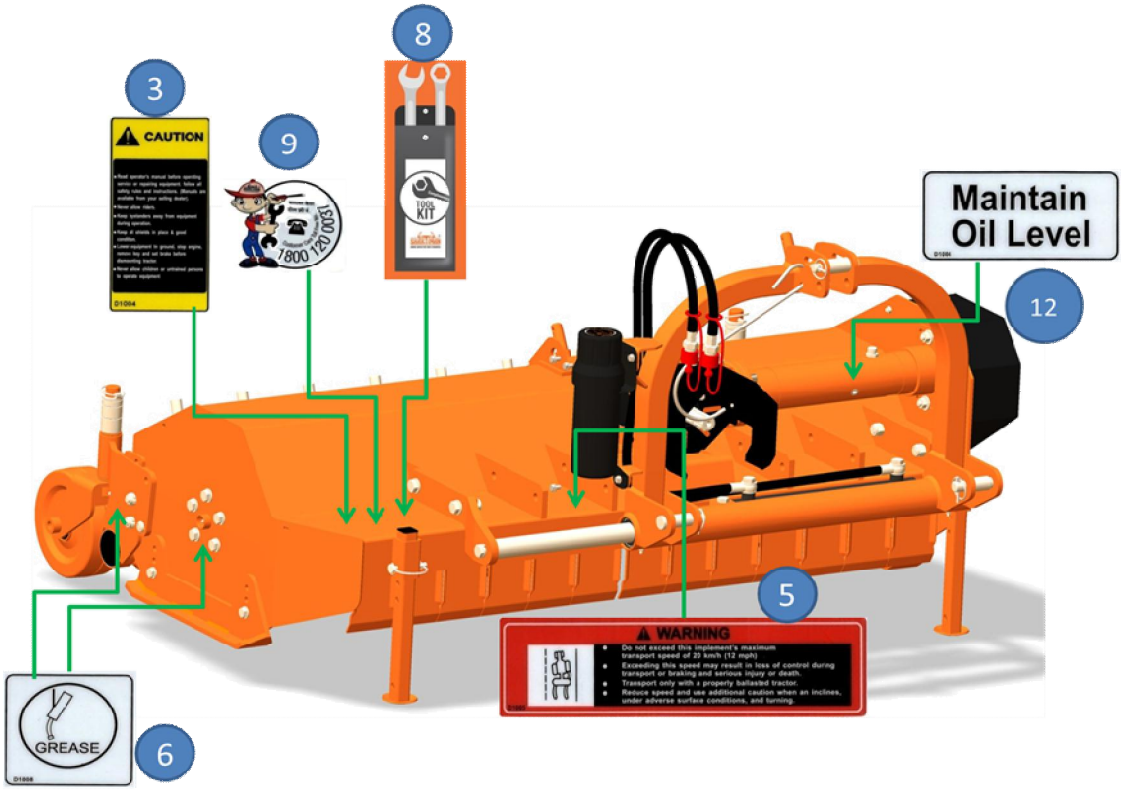
 **CAUTION**
Place support blocks under shredder as needed to prevent unit from tipping over onto a child and/or an adult. A shredder that tips over can result in injury or death.

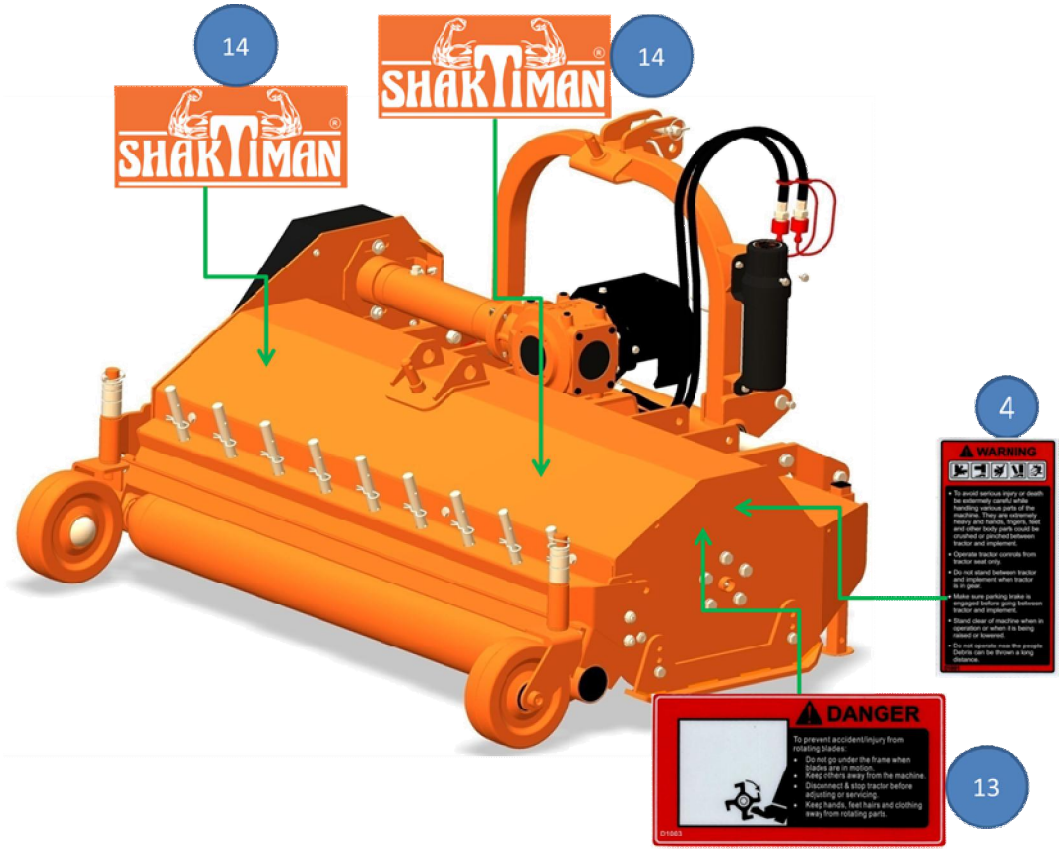
 **CAUTION**
Store the unit in an area away from human activity.

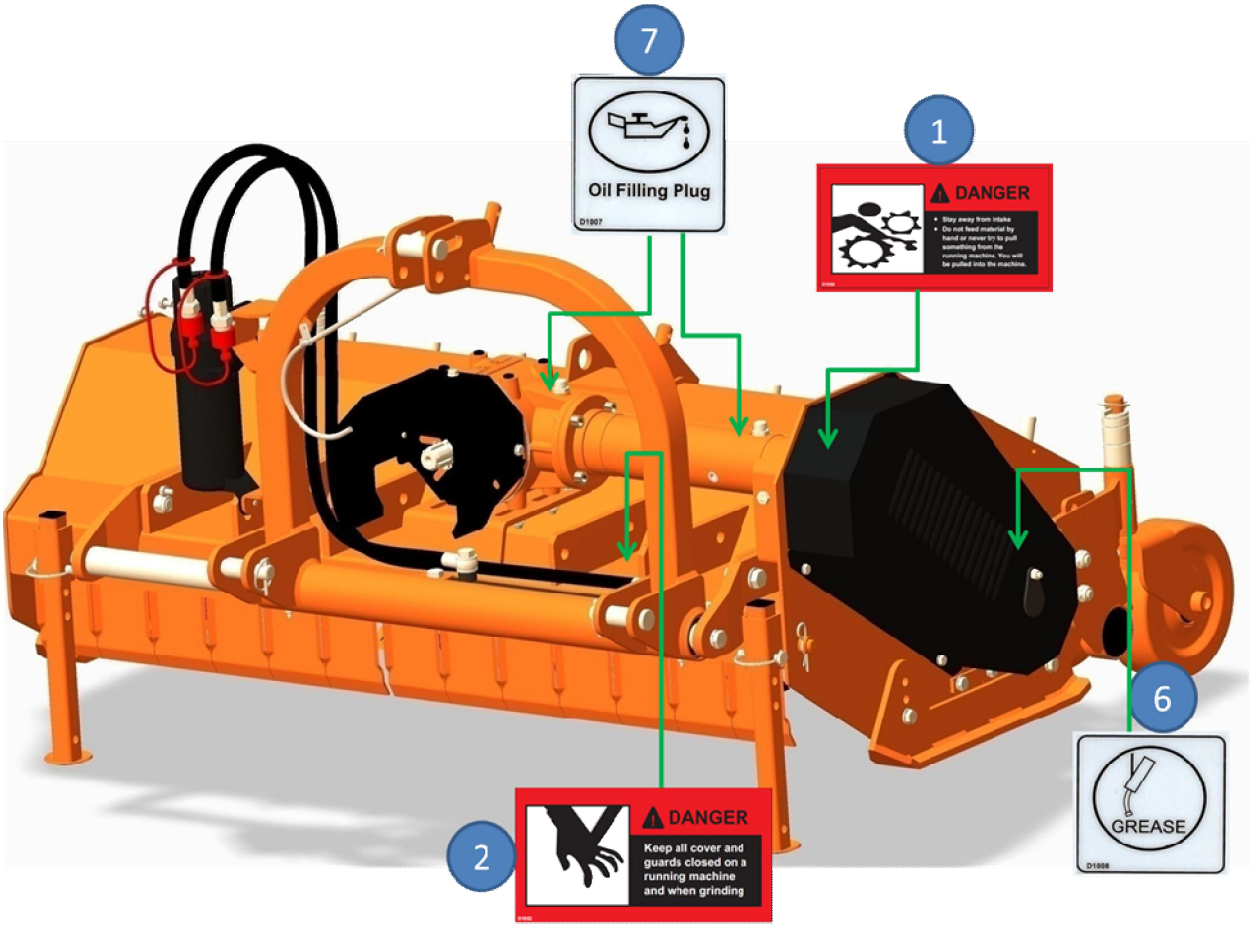
3.7. SAFETY LABELS

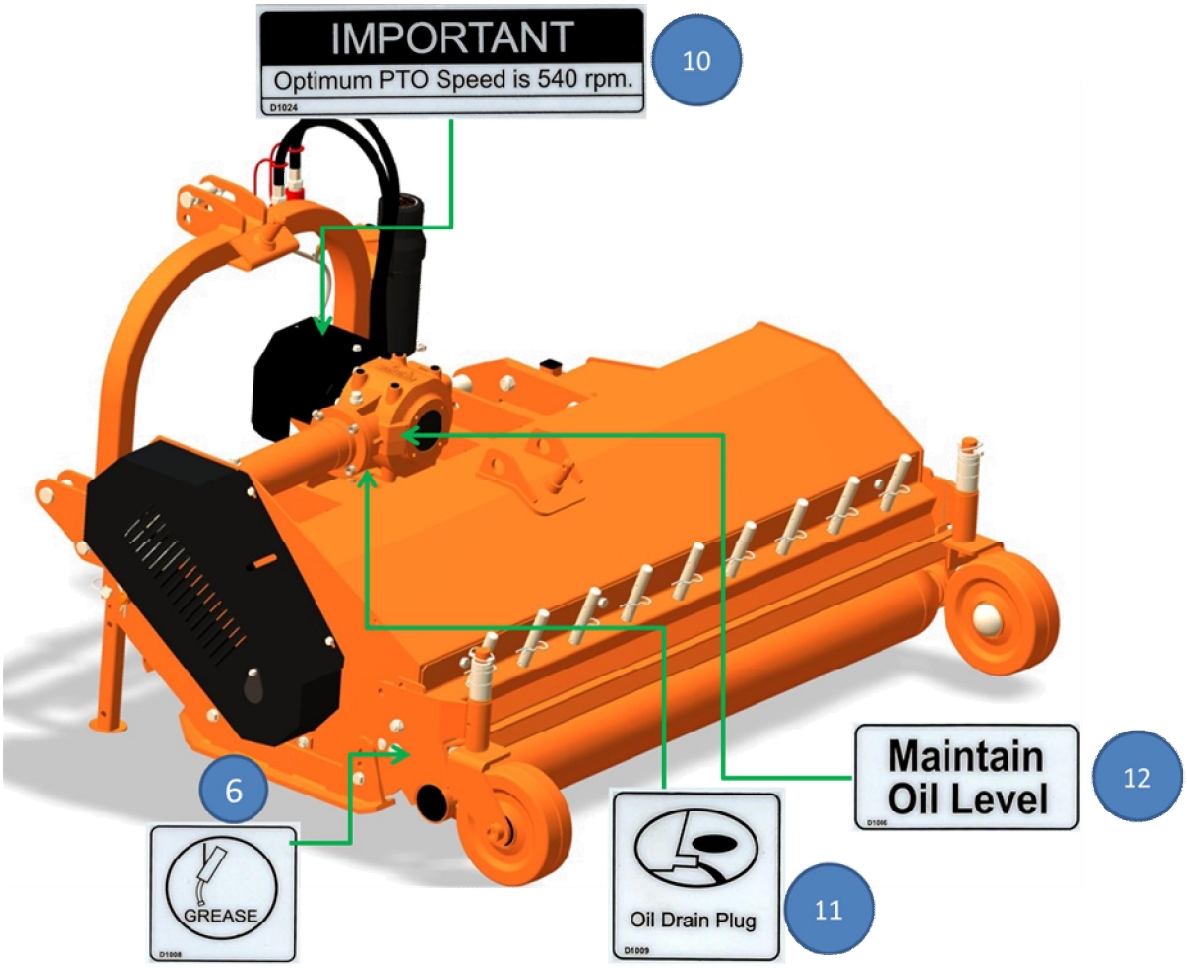
The safety labels on the machine provide key information for use in the safety of the machine.
Make sure all the labels are in good condition. If the labels are deteriorated, they must be replaced as with others provided by the manufacturer, and placed in the position shown in this manual. Make sure all the labels are readable. If necessary, clean them using a cloth with soap and water .

SAFETY LABELSPOSITION AND DESCRIPTION






7
Oil Filling Plug
D1007
1
DANGER
Stay away from intake
Do not feed material by hand or never try to pull something from the running machine. You will be pulled into the machine.
6
GREASE
D1006
2
DANGER
Keep all cover and guards closed on a running machine and when grinding


IMPORTANT
Optimum PTO Speed is 540 rpm.
D1024
10
6
GREASE
D1008
Maintain Oil Level
D1006
12
Oil Drain Plug
D1009
11

1		DANGER FEEDING
2		DANGER GRINDING WHEEL
3		CAUTION - NEW
4		WARNING STICKER - NEW
5		WARNING TRANSPORT - NEW

6		GREASE-NEW
7		OIL FILLING PLUG
8		FREE TOOL KIT - POUCH
9		TOLL FREE - NEW
10		OPTIMUM PTO SPEED -540 - NEW
11		OIL DRAIN PLUG

12		MAINTAIN OIL LEVEL
13		DANGER ROTOR BLADE - NEW
14		SHAKTIMAN DOME LOGO 170 X 75 MM

4. SET UP

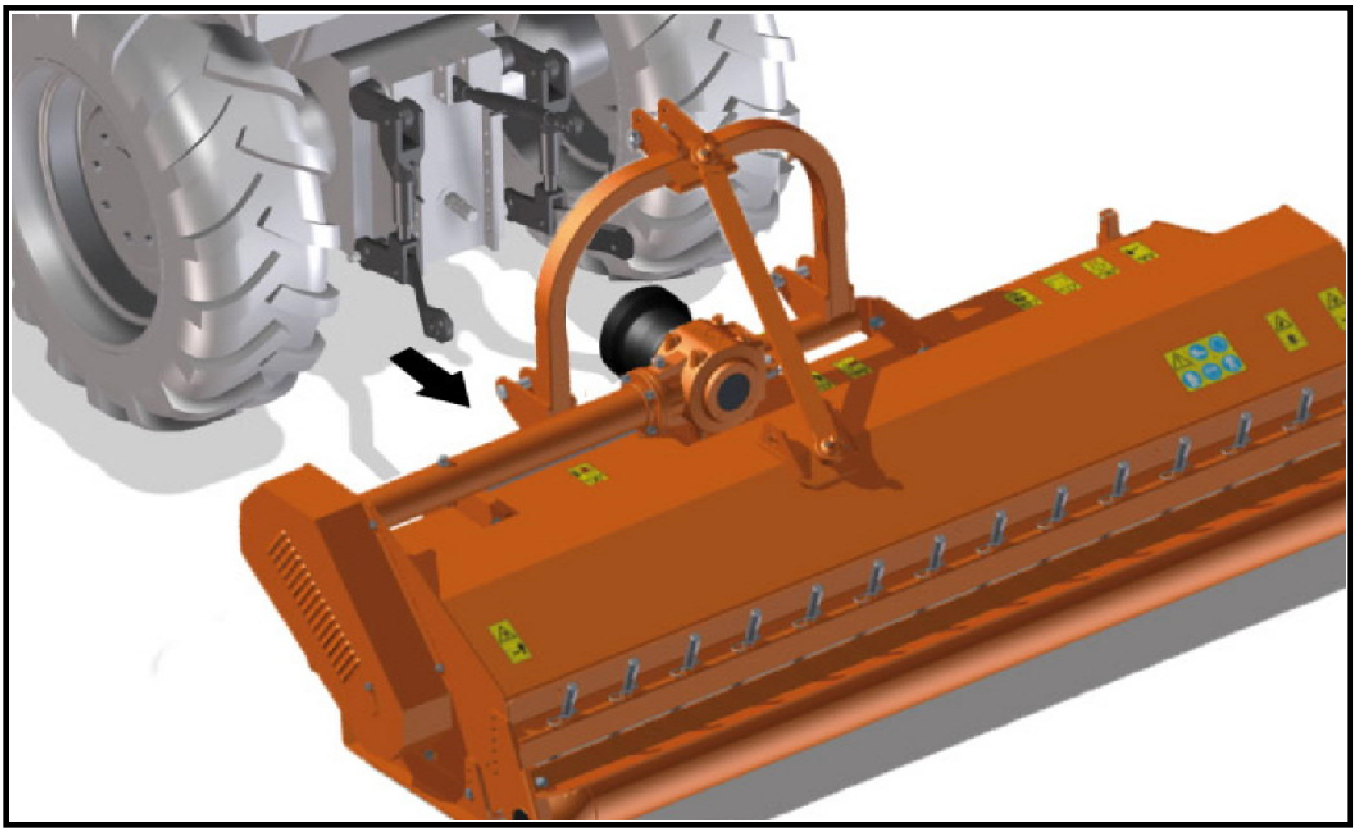
The shredder is delivered equipped with a driveshaft and related operating manual.
When the machine is delivered, check that there is no damage to the shredder or driveshaft. In case of damage or missing parts immediately notify the Manufacturer or your Dealer.
Because of his size, the machine could be delivered with some parts to be assembled.
In this case, the assembly of such parts is an owner's task, and must be performed carfefully, with reference to the tables of the Spare parts section.

WARNING
For proper tightening torques of bolts and screws, refer to the table in this manual.

4.1. CONNECTING TO THE TRACTOR

The shredder is designed to be mounted on tractors equipped with 3-point Hitch Category I (ISO 730 standard).

To connect the shredder to the tractor the operator must do the following:
• drive the tractor in reverse, up to align the rear lifting arms to lower hitches of the shredder in parking (see picture below);



• set the tractor's parking brake, stop engine, remove the ignition key and get off the tractor;
• connect the lifting arms of the tractor to the lower hitches of the shredder, and the 3-point top link to the upper hitch of the shredder, through the use of the pins and the relative safety split pins;
•raise the shredder until PTOs of tractor and machine are at the same height, then adjust the 3-point top link so that the front of the machine is leveled to the back (the axis of the shredder PTO must be parallel to the ground), in order to limit stress transmitted to the shredder through the cardan shaft;
• make sure that left side of the shredder is leveled with the right, by adjusting the tractor lifting arms, thenlock the arms to prevent swinging that could compromise the stability of tractor and machine;

• finallyadjust the parking stand, placing it at the highest point by means of the related elastic pin.

WARNING
Before connect the shredder to the tractor, make sure that tractor and shredder are on a flat, stable and dry surface

4.2. DRIVELINE INSTALLATION

The gearbox unit is equipped with a free wheel inside, able to absorbed the rotor inertia during stop- ping, and to prevent possible damage to the transmission system machine-tractor that would be caused by an instantaneous stop of the rotor.
Consequently, the use of a cardan shaft with free wheel is not required.

Before installing the driveshaft, the operator must read the manuals of driveshaft and tractor, checking in particular that rpm and direction of rotation of the tractor PTO match those of the shredder.
If the direction of rotation of the PTO tractor does not match that of the machine, contact the Manufacturer or your Dealer.
To connect the driveshaft to the tractor and implement, the operator must:

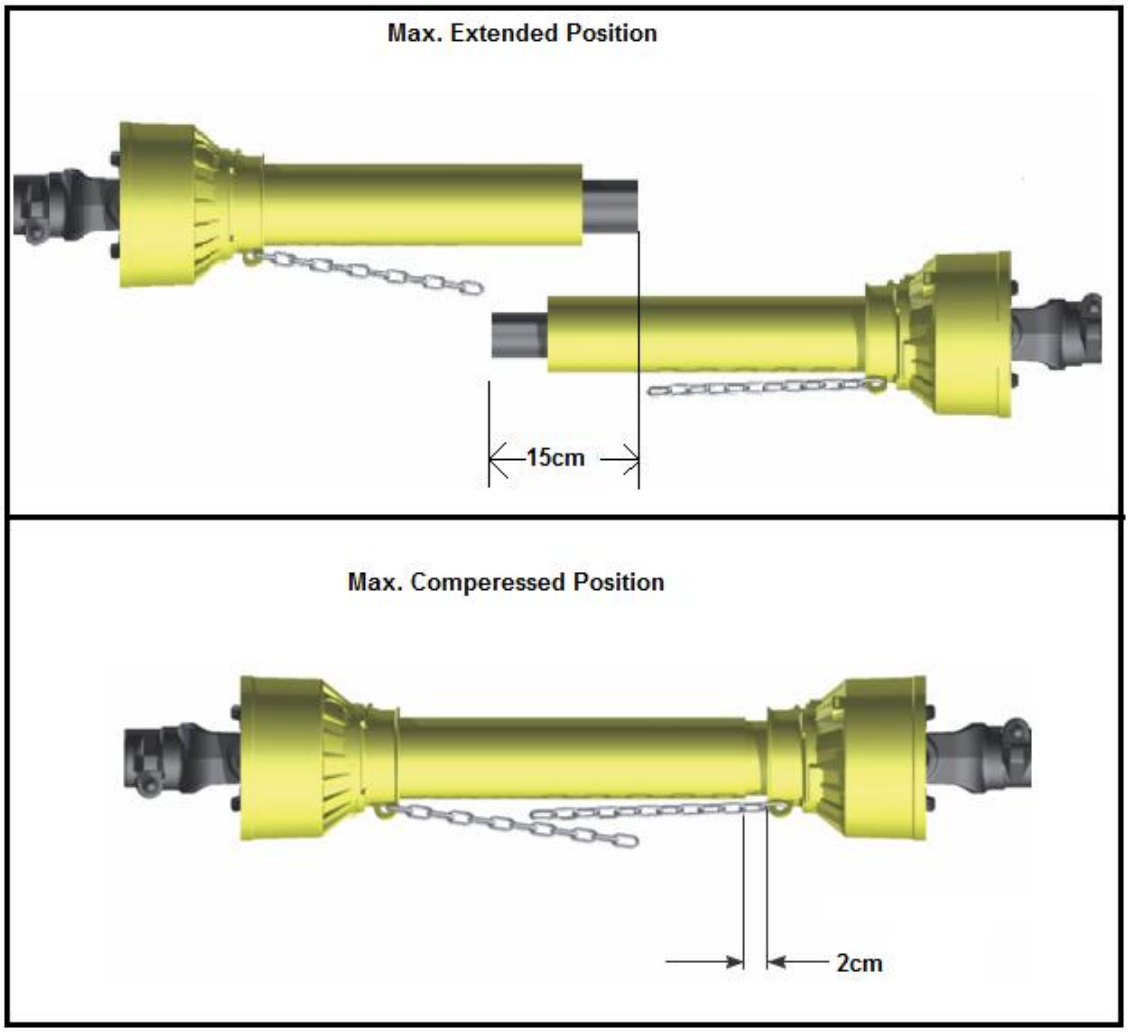
- park tractor and shredder on a flat surface, with parking brake set, engine off, and ignition key removed;
- check that driveshaft, shredder and tractor are in good condition, otherwise provide for their replacement;
- remove the PTO shield of the shredder through the fixing screws;
- insert the driveline yoke on the implement PTO by first lining up the splines, then ensure its tightening onto the shaft through its fastener/snap pin;
- replace the PTO shield of the shredder through the fixing screws;
- insert the driveshaft yoke on the tractor PTO, then ensure its tightening onto shaft through its fastener;
- Hook to the tractor and shredder the two retaining chains of the driveline shielding, to prevent shielding rotation during functioning of the machine.

DRIVELINE LENGTH CHECK

Before operating the shredder, ensure that the size of driveshaft is adequate. The driveshaft supplied with the machine has a standard length, therefore it may need an adaptation of the length, depending of the tractor which the shredder is combined.

The length of the driveshaft must be such to:
- avoid bottom out of the transmission tubes, when the driveshaft is in compressed position (when shredder is raised up off the ground);
- ensure an overlapping of the transmission tubes enough to transmit the torque required, when the Driveshaft is in max extension (when shredder is in its lowest position in the ground).

When the driveshaft is at its minimum length (max compressed position), there must be at least a 2 cm of distance between the ends of each transmission tube and the yokes side.
When the driveshaft is at its maximum operational extension, there must be an overlap between the tubes profiles of 15 cm at least.



A driveshaft too long may cause structural damages to the tractor and machine. If the driveshaft is too long, it may be adapted by removing it and shortening the tubes according to the instructions provided by the Manufacturer in its use and maintenance manual.

A driveshaft too short can cause disengage of the tubes during operation, with severe hazard for the operator and structural damage to the tractor and machine. If the driveshaft is too short, it must be replaced with a longer one. In this case contact the Manufacturer or your Dealer.

IMPORTANT

• Before operating the shredder the first time, make sure that the driveshaft is lubricated in accordance with how indicated in the instruction booklet;

• before operating the shredder the first time, and after long periods of inactivity, make sure that the driveline clutch has run a short "run in" in accordance with what indicated in the instruction manual of the Manufacturer, removing the possible oxidation of the components that may compromise the correct slipping during the usage (see also section "Maintenance");

• Always engage the tractor PTO at low rpm to minimize the effect of the peak torque on the driveline and the machine.

4.3. TRACTOR-SHREDDER STABILITY

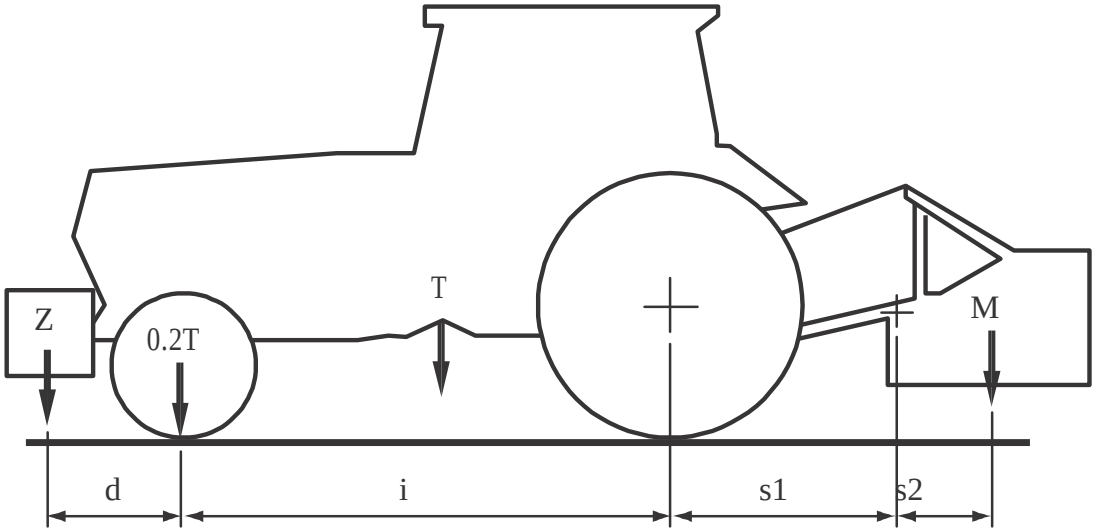
The weight of the machine modifies the stability of the system tractor-shredder, resulting in loss of steering Control and braking.

The front axle of the tractor should always load with at least 20% of the overall weight of the system tractor-shredder.

CAUTION
Check the lifting capacity and stability of the tractor making sure the following relations are complied with (see table below for definitions):

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

If this not occurs, apply the front ballast required. To determine the appropriate characteristics of the ballast, refer to the manual of the tractor.



i = Tractor wheelbase (cm)
d = Distance between front axle and ballast center of mass (cm)
T = Weight of tractor + operator (75 kg)
Z = Ballast weight (kg)
M = Implement weight (kg)
s1 = Distance between rear axle and lower hitch points (cm)
s2 = Distance between lower hitch points and implement center of mass = 61 cm

5. OPERATING

Before operate the shredder, make sure you have read and understood the operating manuals of the shredder, tractor and PTO shaft, and followed what is described in the section "Set Up".

DANGER
During operation, adjustment, maintenance, repairing or transportation of the machine, the operator must always use appropriate Personal Protective Equipment (PPE).
Before starting work, ensure that all machine guards are in good conditions and fully functional.
During operation, the machine can throw material from the back: prevent people and animals to approach the operational area.

5.1. START-UP

WARNING
Before conducting the above inspections and service, make sure the tractor engine is off, all rotation parts are completely stopped and the tractor is in park with the parking brake engaged. Make sure the machine

is resting on the ground or securely blocked up and the tractor lifting hydraulics locked.

Before the start up and before each use, perform the following pre-operation inspections and service of the implement:

• check that the machine has not damaged functional parts and has all mechanical parts in good condition Repair and / or replace the damaged parts;
• check that the machine has no missing parts (pins, safety pins, plugs oil ...). Restore the missing parts;
• check that all guards and safety devices have no damages and are properly positioned. Repair and / or Replace the damaged shielding, restore the correct position;
• verify that the PTO driveshaft is properly installed (see section: Connection of the drive shaft);
• check that the driveshaft clutch is in good condition and that its components are not subject to "sticking" (see sections: Maintenance / Driveline);
• check the presence of lubricant in all greasing points of the machines (driveshaft supports...) (see sections: Maintenance / Driveline and Maintenance / Support rotor);
• Checkfor oil leaks from the gearbox or the transmission side cover. Identify the reason of loss, then Repair and / or replace the damaged components;
• Check the correct oil level in the gearbox and in transmission side box (see section maintenance);
•check that the drive belts are in good condition.
• check that blades are not excessively worn and the relating hardware is correctly tightened (see section Maintenance);
• check that all the machine hardware is properly tightened. Refer to the tightening table in the manual for proper torque values;
• check that all safety decals are correctly positioned, in good condition and legible. Replace any damaged decals;
• check that there is no constraint that may prevent the movement of equipment. Remove any constraint.

Before the start up and before each use, make the following checks on the operating area identifiedfor shredding:

• check that area is clear of foreign objects (rocks, branches or debris). Remove any obstacle and visibly highlight obstacles that cannot be eliminated (e.g. by means flags);
• make sure in the working area exposed there are no people or animals;
• make sure the soil to be worked is not too grassy, muddy, sandy or rocky.

Once all the checks above have been done, start the tractor and the shredder as follows:

• start the tractor and engage the PTO at low rpm, making sure that the shredder is NOT in the raised Position but close to the ground, then increase the speed engine until to 540 rpm;
• lower the machine on the ground and simultaneously start driving the tractor at low speed. Subsequently increase the ground speed depending on ground conditions;
• If the environmental temperature is extremely cold, it's recommended to wait a few minutes with the PTO of the tractor at low rate before lowering the shredder completely on the ground;
• Drivefor a while operating the shredder, then stop the tractor to check the quality of the work performed. If you need to get off the tractor, lift the shredder just out of the ground, reduce engine speed and disengage PTO, set the parking brake, stop engine and remove the ignition key.

If the cutting height and/or the quality of the shredding are not as desired, correct them by adjusting the roller or the wheels (see sections "Adjustments").

5.2. OPERATING INSTRUCTIONS

During operations:
• alwayskeep the tractor engine at rpm rate ensuring to the shredder the right power required for the

use;
- always keep a tractor speed adequate to working conditions (from 2 to 10 km/h approx.). Reduce speed in the case of hard or stony soils;
- choose a driving pattern that provides the maximum pass length and minimizes turning;
- when working in the hills, if you can do "climbing" in the sense of the slope, in any case do not work along the hillsides, making the steps from top to bottom to reduce the terrace. Where possible always try to «work up» the slope. If this is not possible avoid hoeing along the contours of the hill and hoe up and down the slope to avoid a terracing effect;
- always perform changes and reverse of direction with PTO disengaged and the shredder slightly lifted from the ground to avoid damage to the machine;
- periodically check for foreign objects wrapped around the rotor shaft and remove them, after disengaging PTO, turning off tractor engine, and removing ignition key;
- if the rotor strikes a foreign object,stop operating immediately, idle the engine speed and disengage the PTO. Wait for stopping of all rotating parts, then raise the implement and proceed to check and remove the object, after stopped the tractor, set the parking brake, stopped engine and removed the ignition key. Repair any damages immediately, and make sure rotor is in good condition before restarting operation;
- avoid overheating of the gearbox due to materials extremely difficultto shred, in order to avoid damages of the gearbox.

Typical problems that may occur operating the shredder are described into Troubleshooting section, together with their solutions.

5.3. ADJUSTMENTS

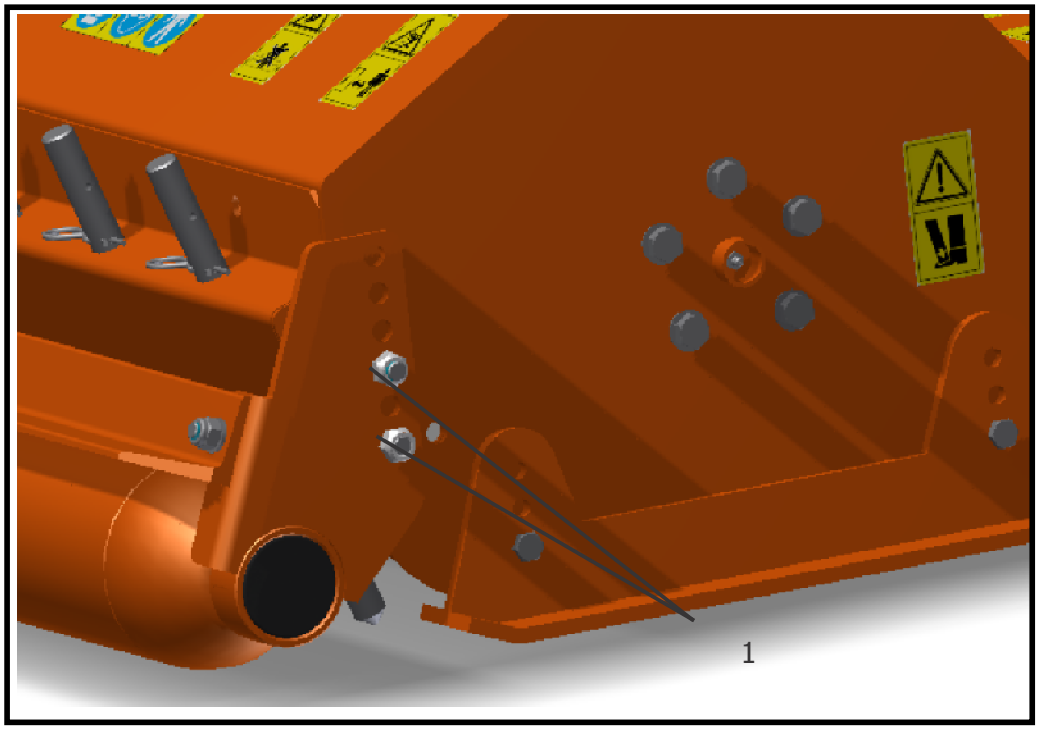
WARNING
All adjustment operations must be performed with the tractor engine off, the PTO disengaged, the shredder lowered to the ground or on security stands, the parking brake set and the ignition key off.

CUTTING HEIGHT ADJUSTMENT

The cutting height of the shredder is determined by the vertical position of the rear roller (or the pivoting wheels) on the machine.
Lifting up the roller (or the wheels) the tools of the rotor get closer to the ground, reducing the cutting height. On the contrary, lowering the roller (or the wheels) the tools increase their distance from the ground, increasing the cutting height.
After a change of the working height, make sure that the tools of the rotor are not interfering with the soil: a direct contact with the ground would facilitate the rapid wearing of the tools.

If the shredder is provided with a stabilizer roller, to adjust the cutting height:

- lift the shredder, put it on safety stands, then turn off the tractor engine, disengage the PTO, set the parking brake and remove the key from the panel;
- remove the bolts (1) that secure the roller supports to the frame on both sides;
- position the roller according to the height required;
- Replace and tighten the bolts (for the correct torque value refer to the torque table of the manual).

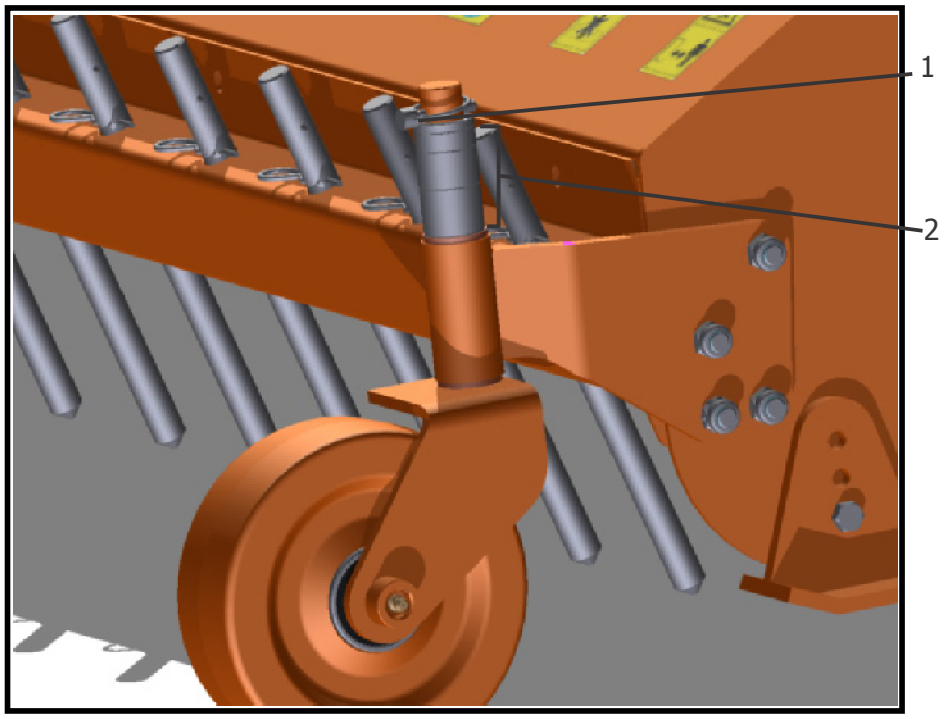


Depending on the different roller positions, it is possible to set four different cutting heights: 32-57-82 and 107 mm.

When finished,make sure that the roller supports are positioned at the same height, and check, with the shredder resting on the ground, that the front of the machine is leveled with the back. If necessary, adjust the level through the 3-point top link of the tractor.

If the shredder is provided with the pivoting wheels, to adjust the cutting height (see picture):

- lift the shredder, put it on safety stands, then turn off the tractor engine, disengage the PTO, set the parking brake and remove the key from the panel;
- while holding up vigorously the wheel with bracket, remove the snap pin (1);
- remove the wheel with bracket and spacers (2) that determine the cutting height;
- insert one or more spacers in the lower part of the shaft of the bracket. The number of the spacers shall be based on the increase of the cutting height desired;
- reposition the wheel with bracket into the original place, and put the remaining spacers on top of the shaft;
- reinsert the snap pin;
- repeat the same procedure to the opposite wheel, making sure the spacers are positioned exactly like on the firstwheel.



Depending on the different position of the spacers on the shaft, it is possible to set fivedifferent cutting heights: 70-76-89-114 and 145 mm.

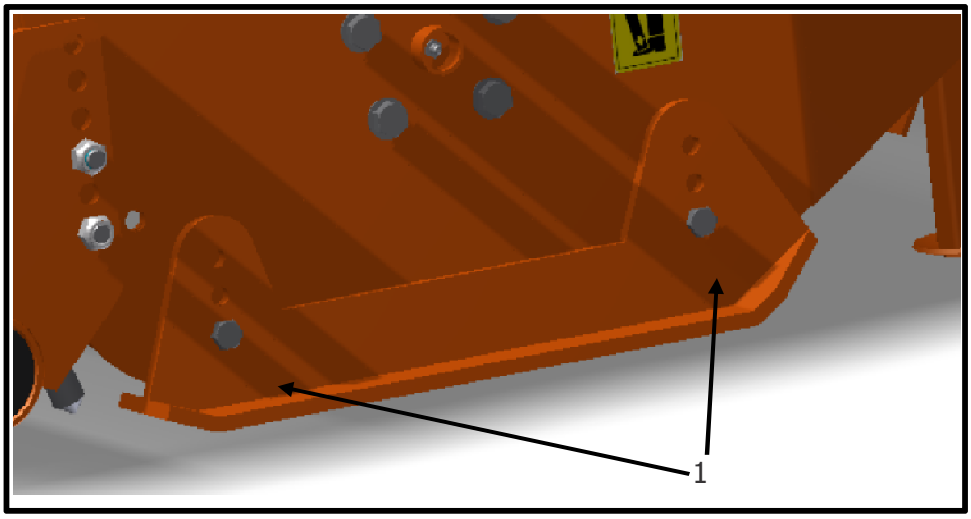
When finished, make sure that the pivoting wheels are positioned at the same height, and check, with the shredder resting on the ground, that the front of the machine is leveled with the back. If necessary, adjust the level through the 3-point top link of the tractor.

SKID ADJUSTMENT

The position of the skids can be adjusted by:

- loosening and removing the bolts (1) that clamp the skids to the side plates of the frame,
- reposition the skids according to the needs, and
- retightening the bolts (1).

The skids can be placed in 3 different positions but, in the presence of the stabilizer roller or the pivoting wheels, they have the unique function of protecting the side plates of the frame from any direct contact with the ground.
Therefore, make sure the skids are not positioned below the roller or wheels, because the latter two a the devices holding the shredder lifted ofthe ground (and not the skids).

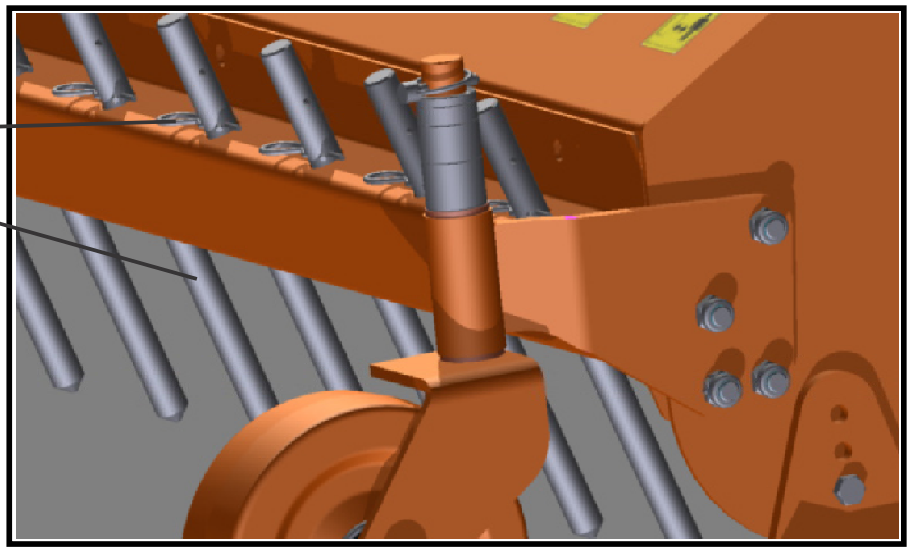


RAKES ADJUSTMENT

The function of the rear rakes is to obtain amore finecrushing by holding the material within the shredding room.
It is therefore recommend to perform the racks adjustment immediately after executing the cutting height adjustment.

To do this follow these steps:

- remove the cotter pin (1) from one of the rakes;
- push the rake downwards in order to retain more material inside the shredding chamber and obtain a more finecrushing. Vice-versa, pull the rake upwards to retain less material inside the shredding chamber and to obtain a more coarse crushing;
- insert the split pins (1) on the hole of the rake closest to rear bar, after setting the desired position;
- repeat the procedures adjusting all other rakes to the same height of the firstone.

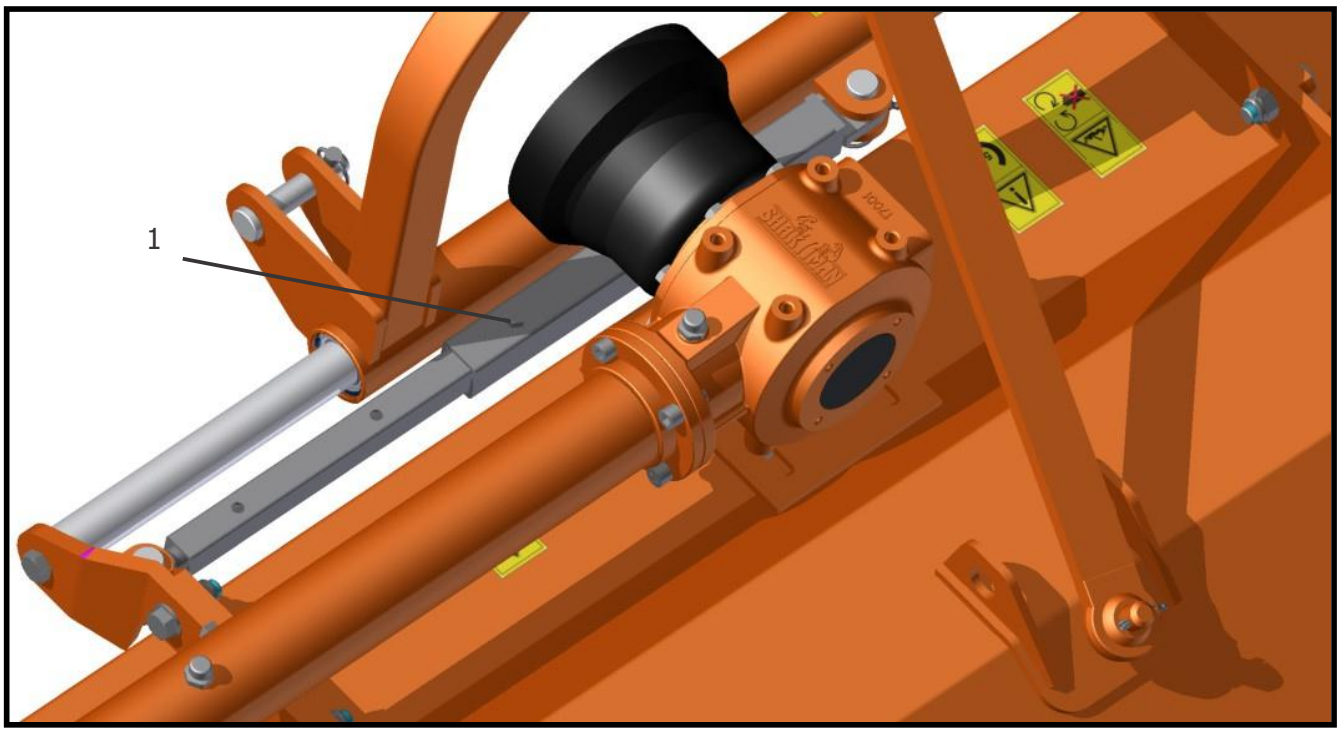


SIDE SHIFTING ADJUSTMENT

The SFM shredders can be configuredwith mechanical or hydraulically shifting device.

In case of mechanical shifting device, to shift the side position of the machine, act as described below:

- lift the shredder, then turn off the tractor engine, disengage the PTO, set the parking brake and remove the key from the panel;
- unscrew and remove the bolt (1);
- manually move the body of the shredder by pushing from one side, until is reached the position required overlaying the holes of the mechanical jack;
- reinsert the bolt removed earlier and tighten.

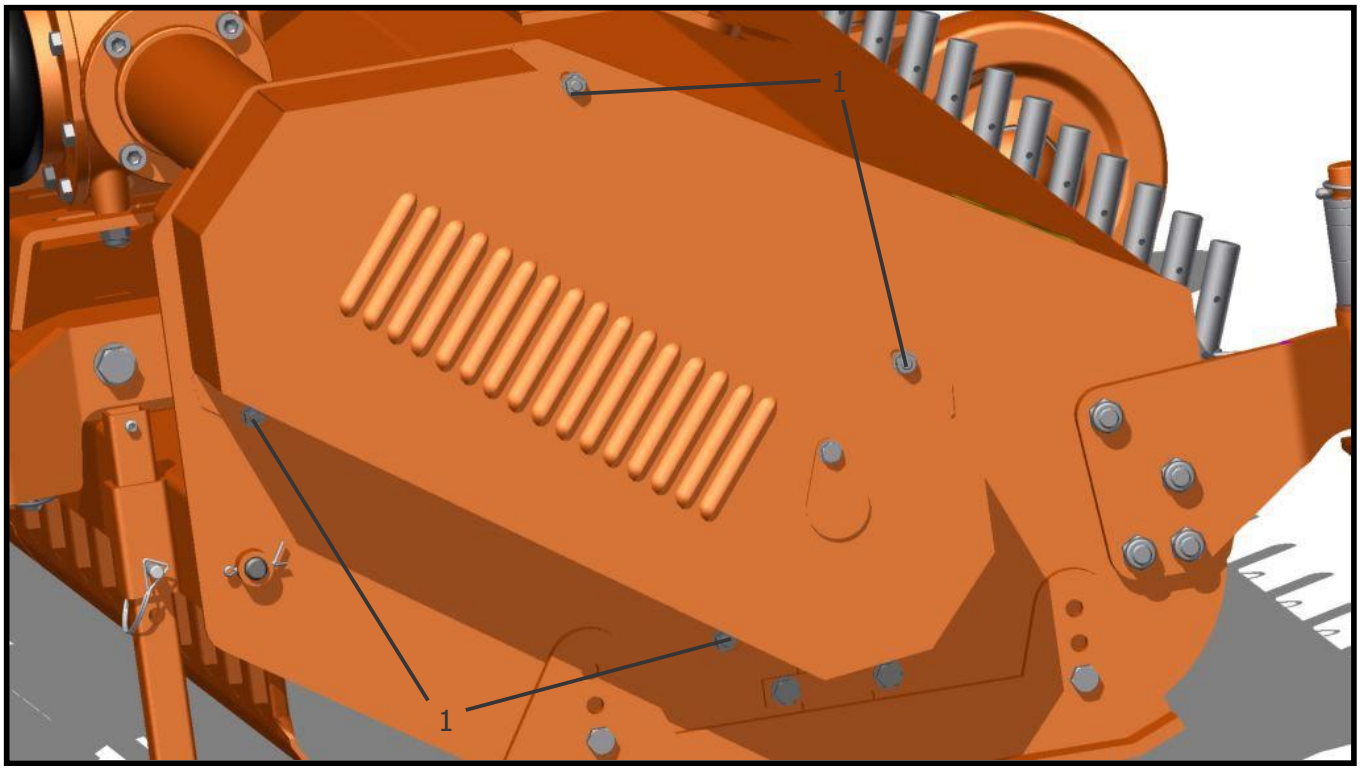


In case of configurationwith hydraulic cylinder, the side adjustment of the frame is effected by actuating the cylinder directly by the hydraulic control system of the tractor, after performed the connection of the machine hydraulics to the tractor.

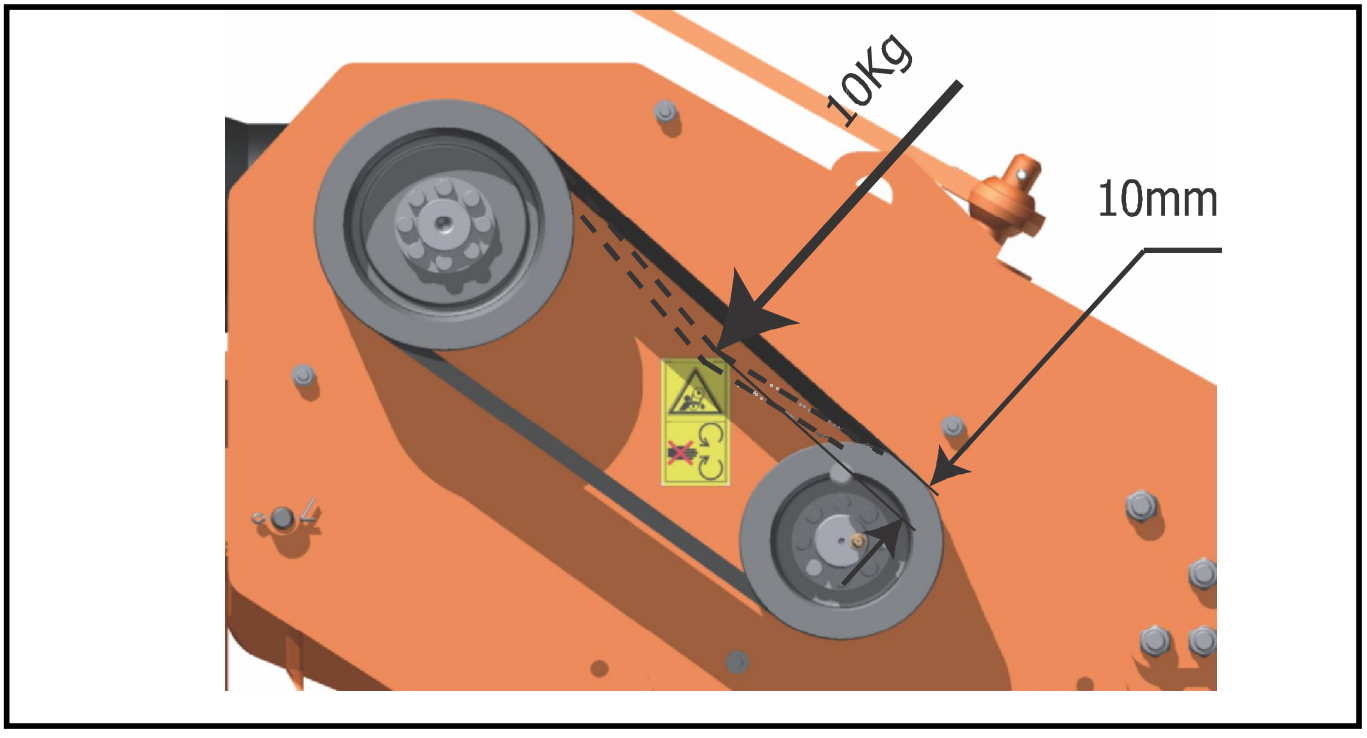
BELT TENSIONING ADJUSTMENT

To check the correct belt tensioning of the side transmission,

- remove the safety cover of the belts by loosening the four bolts (1) that secure it to the frame (see picture):
- Check the correct belt tension.

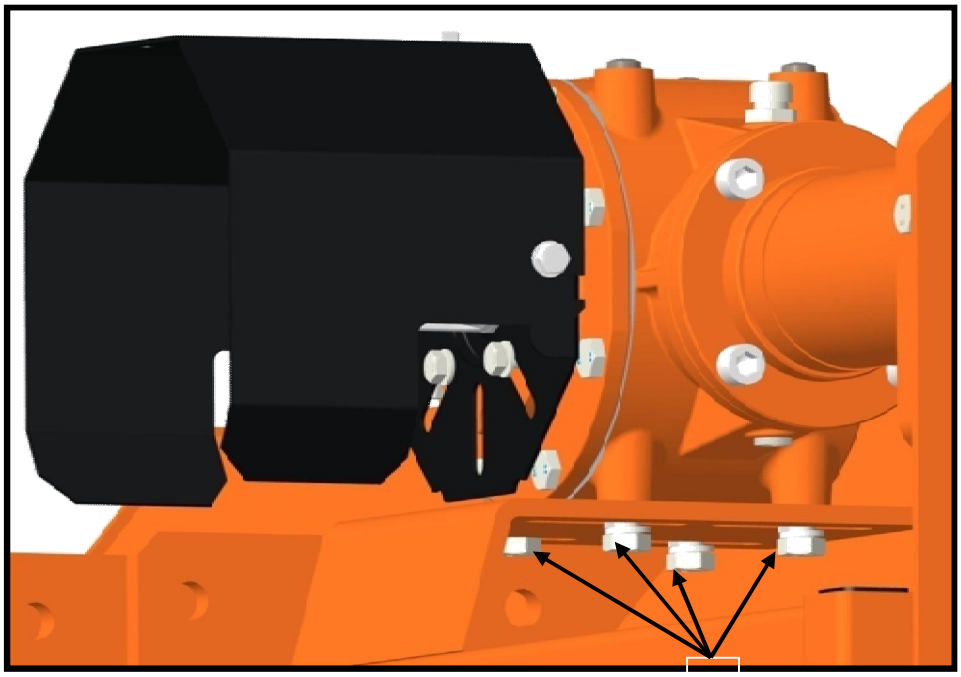


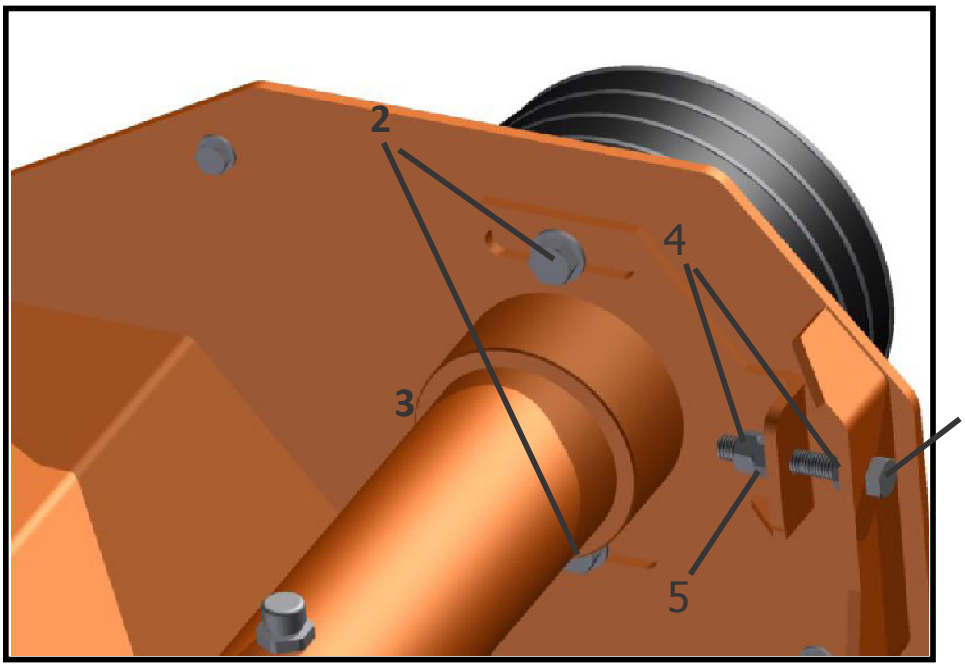
Apply a force of about 10-15 kg on the middle of the belts set, and measure the entity of the consequent deflectionof the belts (see picture):



If the deflectionis about 10 mm, the tension is correct.
If is not so, proceed with the adjustment in the following way (see picture below):

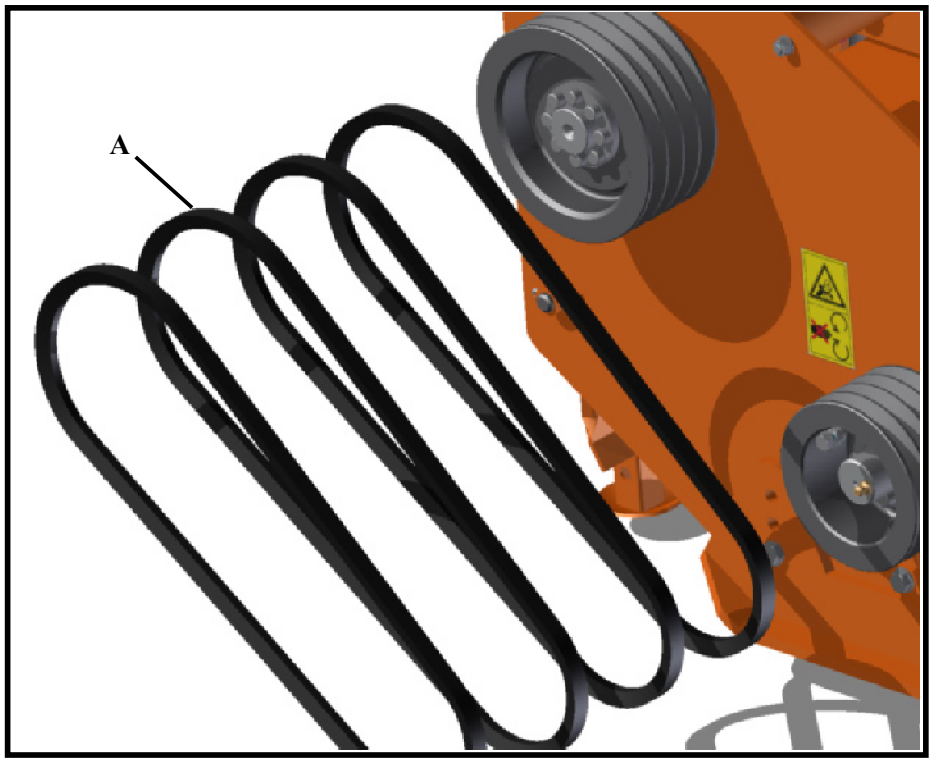
- loosen the four bolts and washers (1) under the gearbox which lock it to the frame;
- loosen the two bolts (2) fixingthe extension tube to the side plate of the frame;
- while holding the screw (3), loosen the lock nuts (4);
- tighten the tension nut (5) if the tensioning found is too low (deflectionof belts higher than 10 mm); unscrew the tension nut (5) if the tensioning found is too high (deflectionof belts lower than 10 mm).
- retighten the lock nuts (4) and the two bolts (2) fixingthe extension tube to the side plate of the frame;
- move the gearbox in order to restore the position of the extension tube perpendicular to the side plate of the shredder;
- retighten the four bolts and washers (1) under the gearbox;
- reposition the safety cover in his original place.





If the replacement of the set of belts is required:

- remove the safety cover of the belts by loosening the four bolts that secure it to the frame
- loosen the four bolts and washers (1) under the gearbox which lock it to the frame;
- loosen the two bolts (2) fixingthe extension tube to the side plate of the frame;
- loosen the lock nuts (4) and the tension nut (5) until the extraction of the belts from their seats on the pulleys is permitted, starting from the external position (a)
- reinsert the new belts in succession contrary to what done for the disassembly.
- adjust the belt tension according to the indications done above
- retighten the two bolts (2) fixingthe extension tube to the side plate of the frame;
- move the gearbox in order to restore the position of the extension tube perpendicular to the side plate of the shredder;
- retighten the four bolts and washers (1) under the gearbox;
- reposition the safety cover in his original place.



5.4. STOPPING AND DISCONNECTION

To stop the shredder at the end of a working session:

- bring the tractor to a complete stop;
- place the transmission in park or neutral;
- reduce the engine speed, then disengage the PTO;
- wait for stopping of all rotating parts;
- lower the implement to the ground;
- set the parking brake;
- shut down the engine and remove the key before exiting the tractor;
- do the cleaning and maintenance required to make the machine ready for later use (see section Maintenance).

 **WARNING**

Never leave the tractor unattended with the implement in the lifted position.

To disconnect the shredderfrom the tractor (e.g. to make a change of implement):

- adjust the parking stand to the lowest position, through the use of relative retaining pin;
- park the tractor on a dry and level surface;
- reduce the engine speed, then disengage PTO;
- wait for stopping of all rotating parts;
- lower the implement to the ground;
- set the parking brake;
- shut down the engine and remove the key before exiting the tractor;
- place safety blocks under shredder to prevent unit from tipping over onto a child and/or an adult. A Shredderthat tips over can result in injury or death;
- disconnect the driveline from the tractor PTO and rest it on the provided support of the shredder;
- disconnect the top link and rear lifting arms of the tractor from the shredder hitches;
- check the shredder stability. If needed, place additional safety blocks;
- get on the tractor, start the engine and move away from the shredder slowly;
- make sure the shredderremains stored in a protected area, to prevent that unauthorized personnel can approach it.

Before a long term storage (e.g. at seasonal end), do cleaning and maintenance operations as specifiedin sections MAINTENANCE and STORAGE.

5.5. TRANSPORTING

To set the shredderfor transportation, perform the following steps:

- idle tractor engine, disengage tractor PTO, and wait for stopping of all rotating parts;
- lift the shredder until the transport position, making sure the driveline transmission tubes does not contact tractor or shredder. A minimumgap of 2 cm should be leaved between the tubes and tractor and shredder (see also section Driveline installation);
- lock the tractor lifting hydraulics, turn off the engine, set the parking brake, remove ignition key and get off the tractor;
- adjust the parking stand to the highest position, through the use of relative retaining pin, to prevent its possible damage during transport.

When driving on public roads, follow strictly all local laws and trafficregulations.

WARNING
When driving on public roads, reduce your speed, be aware of trafficaround you and proceed in such a way that faster moving vehicles may pass you safely.

6. MAINTENANCE

Proper and regular maintenance ensures a long life of the equipment, avoids failures and saves time and repair costs.
Periodic inspections and maintenance operations described in this section must be performed by operator in the times and terms prescribed. Failure to comply with maintenance prescriptions can compromise the functioning and duration of the machine, and consequently invalidate the warranty.
The frequency of maintenance indicated refers to normal conditions of use: it must be intensifiedin severe operating conditions (frequent stops and starts, prolonged winter season etc ...).
Repairs, maintenance and modificationsother than those mentioned in this paragraph should NOT be performed without consulting the Manufacturer or your Dealer. Manufacturer, as the case, may give the authorization to proceed with the repair together with all necessary instructions.
Wrong or inappropriate repairs or maintenance may generate abnormal operating conditions, equipment damage and generate risks for the operator.

WARNING
For safety reasons, all maintenance operations must be performed with tractor PTO disengaged, shredder stopped and completely lowered to the ground or onto support blocks, parking brake set, tractor engine shut off, and ignition key removed.

IMPORTANT
Respect the environment. Store or dispose of unused chemicals as specifiedby the chemical Manufacturer.

6.1. ROTOR TOOLS REPLACEMENT

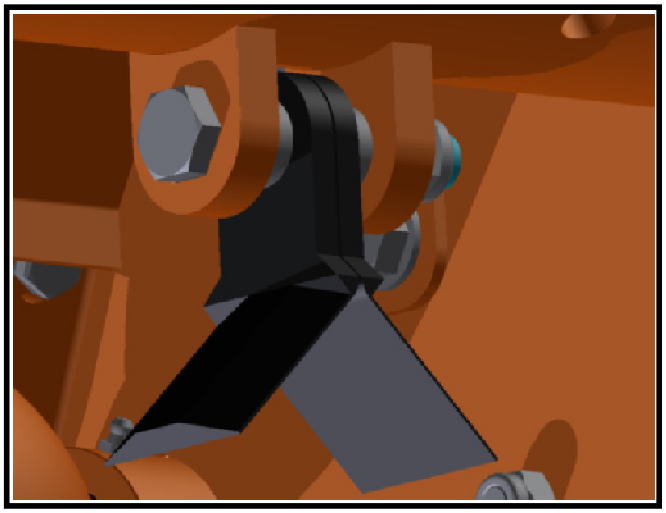
Frequently check the wear condition of the tools on the rotor (Y blades or hammers) through visual inspection. The wear of the tools is very variable depending on the type of soil.
Replacement of the tools is necessary when the operator notices increase of power absorption during operations, or when the blades or hammers dimension is significantlyreduced compared to the original.
The use of the machine with tools in bad condition compromises the quality of the work.

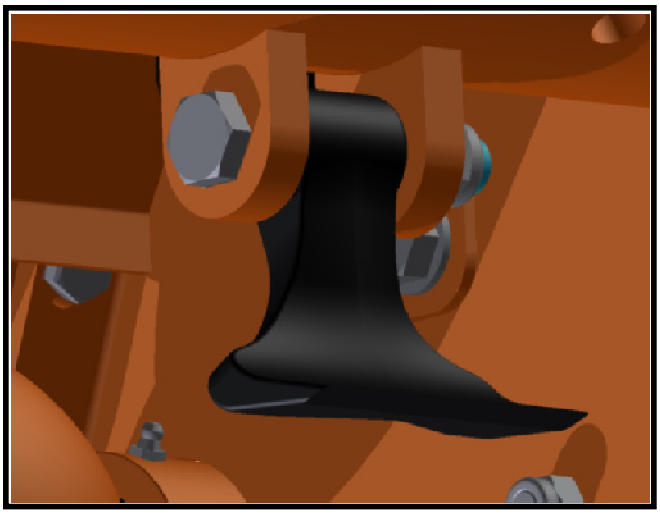
Before perform replacement of the blades:
• idle tractor engine, set the parking brake, disengage tractor PTO, and wait for all moving parts to come to a complete stop;
• place the machine slightly lifted from the ground on safety blocks or mechanical stands;
• lock the control lever of the hydraulic lift of the tractor;
• turn off the tractor and remove the key from the control panel.

To perform the replacement of blades:

- remove the bolt that locks the couple of Y blades (or the hammer) in the rotor. For the Y blades, two bushing are placed on the bolt to fill the gap between the blades and the holders of the rotor;
- place the new tool instead of the one worn out, and tighten the bolts with washers, referring to the torque values shown in “Table torques” in the manual. Be sure to install the cutting edge facing in the direction of rotation of the rotor. For the rotor with Y blades do not forget to place the related bushings between the blades and the holders.
- repeat the same procedure for all the Y blades (or hammers);

- repeat this process for all the tools.





IMPORTANT
Remove and install one blade/hammer at a time to ensure blades/hammers are correctly oriented when installed.
Replace worn blades only with original parts.

WARNING
When the blades/hammers are worn out it is necessary to replace the full set of tools.
Replacement of only some of the tools is certainly cause of the rotor unbalance, machine vibrations and can compromise the reliability of the shredder and generate risks to the operator.

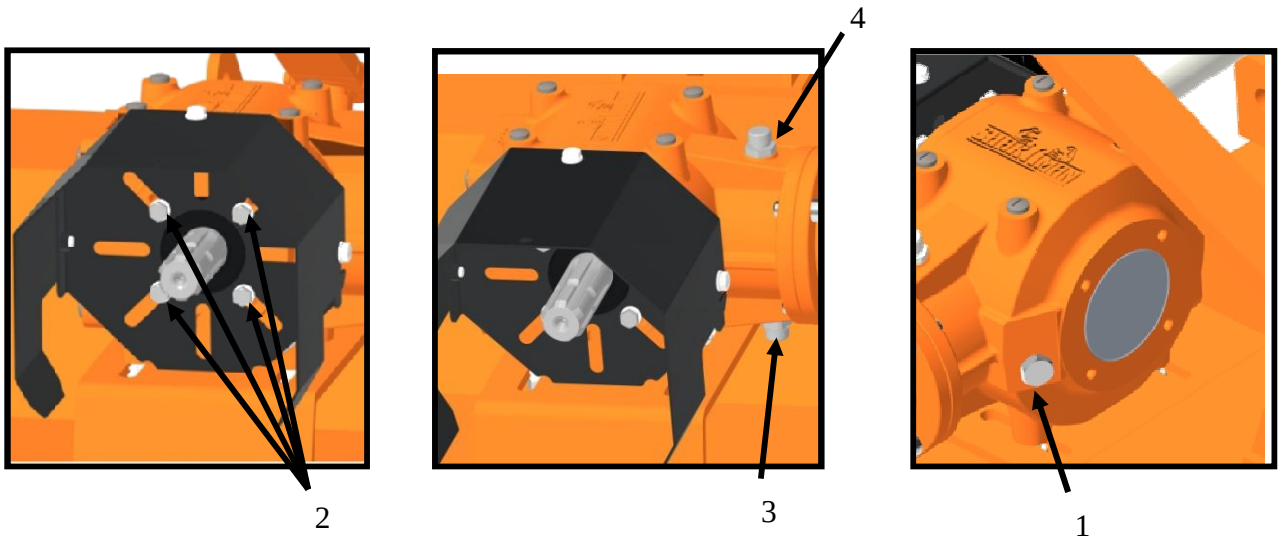
CAUTION
Worn blades and hammers may be very sharp!

6.2. GEARBOX LUBRICATION

Lubrificant:HP 85W140 (API GL4)oil gear or equivalent

CAUTION
Before touching the gearbox wait until it has cooled sufficiently.

Check the oil level every 50 hours, making sure the level is aligned with the level plug (1).
To perform the check, it is necessary to remove the screws (2) holding the safety cover on the gearbox, which prevents access to the plug.



If the oil level is below the line of the level plug, it's necessary fillup oil till restore the correct level.

The oil change must be performed:

- after the first50 working hours;
- each 500 working hours.

To make the oil change:

- unscrew the level plug (1);
- place a tank under the oil drain plug (3)
- unscrew the oil drain plug (3) and drain oil completely into the tank;
- retighten the drain plug (3);
- unscrew the oil fillingplug (4) on the top of gearbox;
- fillup oil till the level reach the hole of the level plug (1);
- retighten level plug (1) and the fillingplug (4);
- replace the safety cover retightening the screws (2);
- dispose the discharged oil into containers for used oil.

IMPORTANT
Frequently check possible oil leaks from the shredder through visual inspection, and in case of leakage provide immediately proper maintenance.
Avoid oil leaks on the ground when restoring oil level or making oil change.

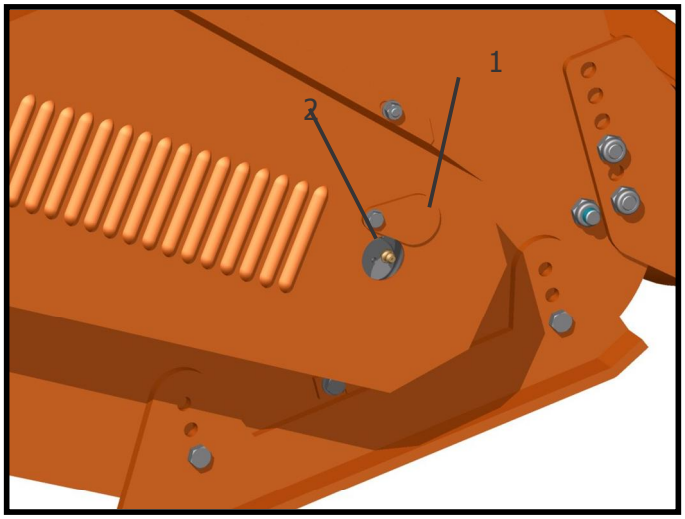
6.3. ROTOR BEARINGS LUBRICATION

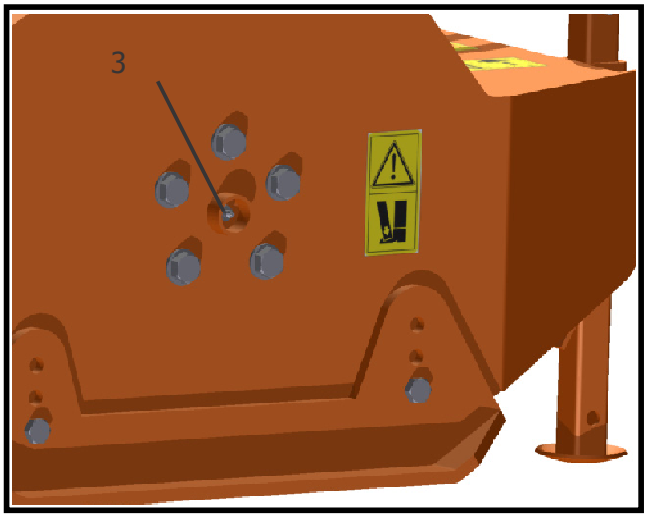
Lubricant: AGIP GREASE MU EP 2 lithium-type grease (or equivalent)
Frequency: each 20 working hours

Lubricate with multipurpose lithium-type grease through a manual grease pump, after meticulous cleaning of grease nipples.

To perform lubrication (see pictures):
- turn the cover (1) and inject grease through the nipple (2);
- inject grease through the nipple (3).

IMPORTANT
Make sure to clean the fittingzerk before using the grease gun.
Do not let excess grease collect on or around parts, particularly when operating in sandy areas.

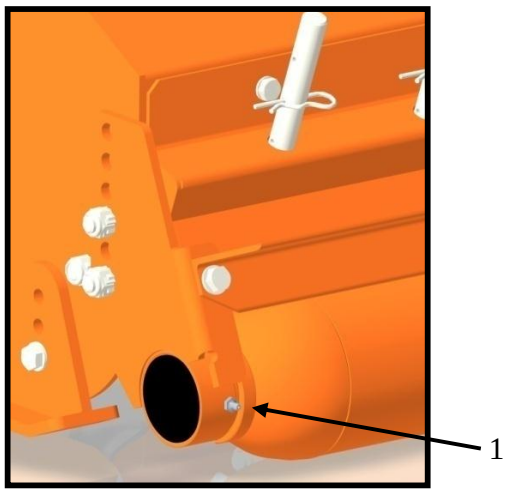


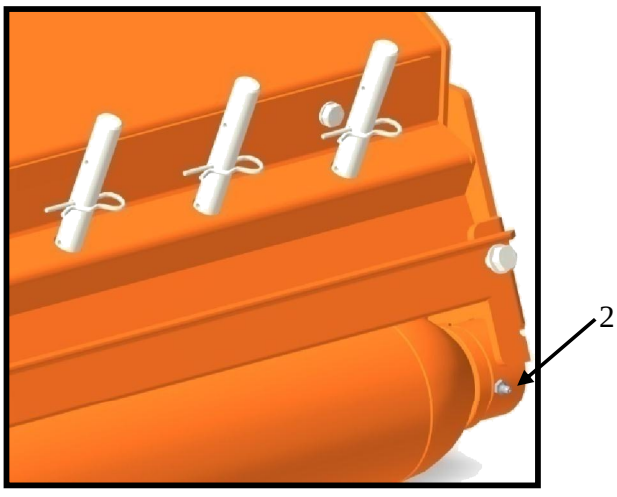


6.4. ROLLER BEARINGS LUBRICATION

Lubricant: AGIP GREASE MU EP 2 lithium-type grease (or equivalent)
Frequency: each 20 working hours

To perform lubrication, inject grease into the nipples (1) and (2), located on the upper part of the roller bearing supports (see pictures).

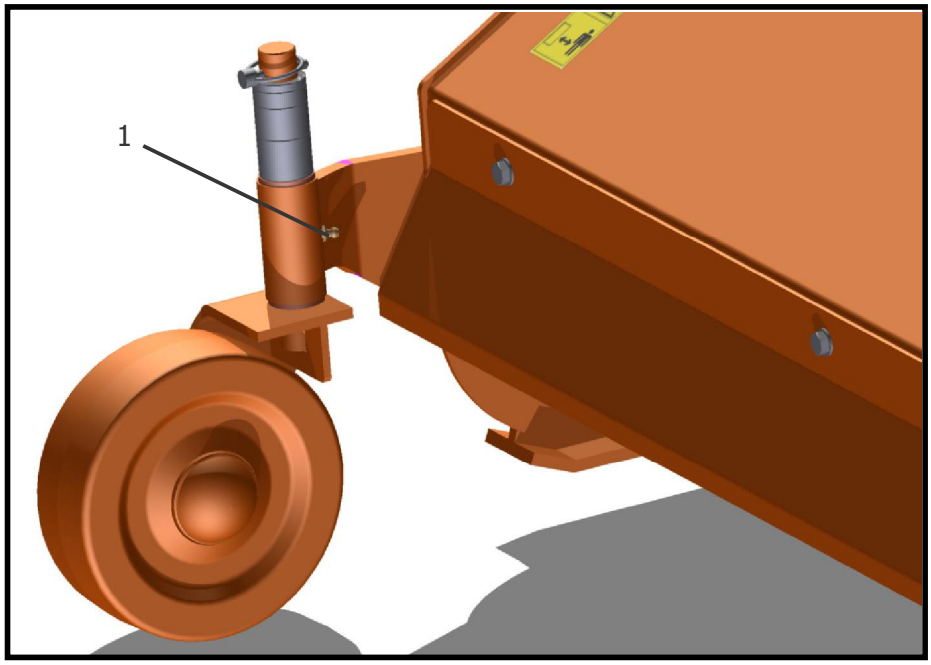




6.5. WHEELS BRACKETS LUBRICATION

Lubricant: AGIP GREASE MU EP 2 lithium-type grease (or equivalent)
Frequency: each 20 working hours

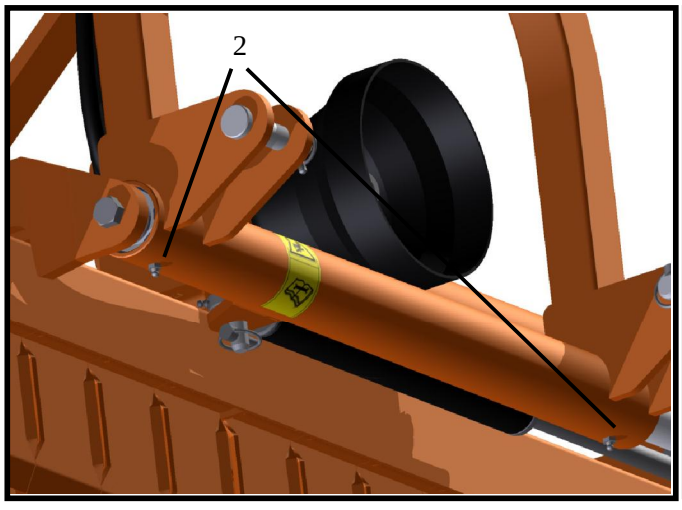
To perform lubrication, inject grease into the nipple (1), located on the inner part of the wheel bracket (see picture).

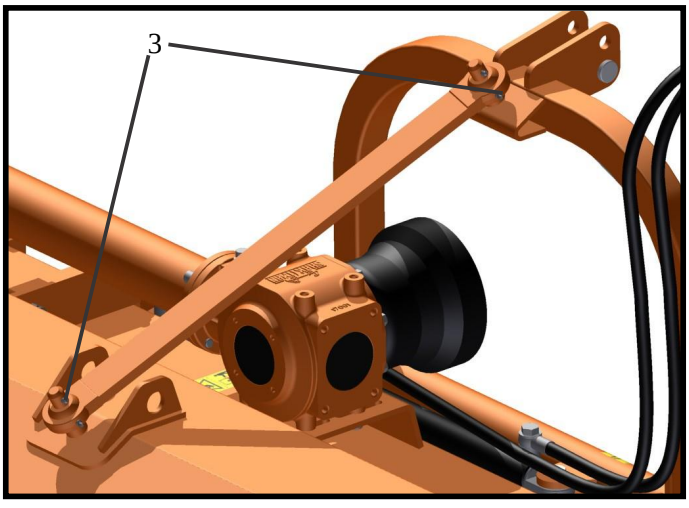


6.6. 3-POINT HITCH LUBRICATION

Lubricant: AGIP GREASE MU EP 2 lithium-type grease (or equivalent)
Frequency: each 20 working hours

To perform lubrication of the shifting parts of the 3-point hitch (see pictures):
- inject grease into the nipples (2), located on the lower part of the shifting tube of the hitch;
- inject grease into the nipples (3), located on the rod-tie of the hitch.





6.7. DRIVE BELTS REPLACEMENT

Frequently check the wear of the belts, and if one or more of these appears worn replace the full set.
To replace the drive belts, refer to the section "Belts tensioning adjustment".

6.8. DRIVESHAFT MAINTENANCE

Lubricant: AGIP GREASE MU EP 2 lithium-type grease (or equivalent)
Frequency: each 20 working hours

Grease crosses, sliding parts of protective shielding and driveshaft transmission tubes.

IMPORTANT
For details about maintenance and lubrication of the driveshaft, refer to the user manual of the driveshaft Manufacturer.

NOTE
For the driveshaft service parts, refer to the user manual of the driveshaft Manufacturer.

7. STORAGE

Before leaving the machine unused for a long time, it's necessary to perform following tasks to preserve the appearance and functionality of the machine, and to make easier the restart at later use:

- park the shredder on a flatsurface, in a place dry and protected from exposition to the elements, possibly with storage temperature between 0 and 50 °C (see section Stopping and disconnection);
- thoroughly clean the machine, removing from the rotor all residues due to tillage, in order to avoid damage from grass and stagnant water;
- inspect carefully the machine, checking for worn and/or damaged parts. Perform immediately all repairs and/or replacements needed, in order to make the machine ready for restarting;
- in case of abrasion of painted surfaces, provide restoring the surface protection through touchup paint to prevent rust;
- make sure the safety decals are in their original positions, intact and legible. When required, replace the decals immediately;
- lubricate properly all grease points, and restore the oil levels as indicated in the Maintenance section. Use protective oil to coat the exposed mechanical components and to protect them against rust.

8. SCRAPPING

In case of scrapping, the machine must be disposed in appropriate and authorized sites, according to local legislation.
Before scrapping, separate plastic parts from rubber parts, aluminum,steel, etc.
Recover and dispose any exhausted oils to authorized centers for oil collecting.

9.TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
Oil leaking from gearbox/ transmission case	• Gearbox overfilled • Loose filling/drain/levelplug • Damaged breather plug • Damaged seals	• Drain to proper level • Replace breather plug • Tighten filling/drain/levelplug • Replace seals
Shredding not uniform	• Worn blades/hammers • Roller/wheels set in wrong way • Debris wrapped on rotor • Dirty shredding room	• Replace blades/hammers • Set the roller/wheels correctly • Reduce the ground speed • Clean the shredding room
Gearbox overheating	• Low oil level • Material difficult to be shredded	• Add oil • Reduce the ground speed
Blades/hammers wear frequently	• Hard soil • Cutting height too low	• Check the soil in advance • Increase the cutting height
Shredder noise and vibration noticeable and constant	• Unbalanced roller • Worn bearings • Blades/hammers worn, damaged or missing	• Balance the roller in authorized shop • Replace bearings • Replace blades/hammers

10. TORQUE VALUES TABLE

Check frequently shredder hardware to make sure that screws and bolts are tightened according to torque values listed in following table:

	8.8 GRADE	10.9 GRADE
BOLT SIZE (METRIC)	Nm	Nm
M6	10-11	14-15
M8	25-27	34-36
M10	51-54	69-73
M12	91-97	122-129
M14	137-147	185-196
M16	224-240	302-320
M18	300-321	403-428
M20	440-472	593-630

11. WARRANTY

M/s. Tirth Agro Technology Pvt. Ltd. offer the following warranty to the purchaser of Shaktiman equipment mentioned herein above subject to the conditions set out herein after provided the Shaktiman equipment shall be in the possession of and used by such purchaser from the date of delivery.

M/s. Tirth Agro Technology Pvt. Ltd. Warrants its products for a period of twelve (12) months from date of delivery, for manufacturing or material defects only. Failed part will be replaced at its authorized dealers only and any part component there of that shall be examined by them, shall disclose if to be defective. This warranty shall not apply to equipment or parts that have been subject to negligence, or accident, or not maintained as per company instructions specified in operator manual or that have been altered or repaired or used with non-genuine parts or abused or due to contaminated oil or used in not recommended application.

Warranty Terms & Conditions:

1) The purchaser of Shaktiman equipment should strictly follow the instruction given in the instruction manual provided by the company along with the Shaktiman equipment at the time of delivery. Changes if any, resulting in improper usage will not be covered by the warranty. This warranty will automatically terminate on the expiry of warranty period of Six months even the Shaktiman equipment may not be in use for any time during the warranty period for any reason whatsoever including any technical reasons and time taken for such repairs/replacement of parts, and in transit, whether under this warranty or otherwise shall not be excluded from the warranty period.
2) All wear and tear items like bearings, chains, sprockets, oil seals, tines, blades, rubber parts and gaskets are not covered under warranty.
3) All items with normal wear or failure due to normal wear will not be covered under warranty.
4) While the company or authorized dealers will make every effort to carry out repairs/replacement of parts under this warranty as soon as possible. It is expressly made clear that the company shall not be liable to do within any specific period of time.
   In the event of repairs/replacement of any parts, this warranty will thereafter continue to remain in force only for the unexpired period of warranty.
5) It is entirely left to company discretion to repair/replacement of parts at the site of delivery or at the authorized service points of its dealers. The defective parts which has/have been agreed to be replaced, should be returned to the company without any further claim.

6) The warranty shall not cover any consequential or resulting liability, damage or loss arising directly or indirectly out of any defect in the Shaktiman equipment. This warranty shall be strictly limited to repairs and replacement of the defective parts specified in the warranty, and does not cover any reimbursement of labour charges for any repairs so earned out at dealer/client end.
7) This warranty shall not be extended in any case of replacement or return of the Shaktiman equipment as a whole. Only failed parts will be covered under warranty.
8) The purchasers of Shaktiman equipment will itself fully responsible for model/variant selection.
9) This warranty does not cover for statutory duties and taxes like excise, service tax or CST or VAT or State sales tax and octroi and any other local taxes payable on any of the parts which the company may supply or repairs free of cost during the warranty period.
10) This warranty also does not cover the cost of packaging, to and fro freight and transportation charges etc., on the defective Shaktiman equipment or other parts of the Shaktiman equipment sent to company's works in Rajkot or to the authorized service station.

11) Warranty becomes void if:

a) The Shaktiman equipment has not been delivered, assembled, started and put into operation by the company or its authorized representative.
b) The dully filled delivery certificate is not in our possession within 15 days from the date of delivery.
c) The Shaktiman equipment or any parts thereof is subjected to neglect, fire, floods or other acts of God or if in the company's opinion any damage has caused to the Shaktiman equipment during transportation.
d) The original serial number is removed, obliterated or altered from the unit.
e) Any attempt is made to have the repairs executed by a person or persons, other than the company or its authorized representative.
f) Any defect is not informed immediately to the company or its authorized representative, any alteration in warranty card is made.
g) Whenever the user or anyone else on his behalf applies equipment to the tractor or to prime mover that has not been expressly approved by the manufacturer or not suitable to the equipment.

12) a) Any changes in the location of the Shaktiman equipment or in the/its ownership thereof during the warranty period must be intimated in writing to the company or its authorized dealer within ten days before the change. Failure to do so will absolve the company from the obligation under this warranty.
b) Further, in the case of shifting for the continuation of the Warranty, the Shaktiman equipment has to be inspected by the company or its authorized representative before shifting from the original location and before using it at the new location. The inspection free levied by the company or its authorized representative as well as the cost of rectification of any damage in transit, detected in the above inspection, shall be borne by the purchaser/owner, if at the time of restarting, the Shaktiman equipment is found to be in working order, this warranty shall continue to be in force for the remaining period of the warranty.
c) Damage to the Shaktiman equipment or any part thereof caused during shifting or transportation is not covered by this warranty
13) None of the company representative or authorized dealer is authorized to alter/amend any terms and conditions of this warranty policy. Only the management of the company is authorized to do so. The decision of the company will be final and binding to the purchaser.
14) This warranty policy shall be governed by and construed in accordance with the laws of India and the courts in Rajkot shall have exclusive jurisdiction.
15) This warranty is given in lieu of all other guarantees and condition expressed or implied by law or by the any person purporting to act on behalf of the company and excludes every condition, warranty or guarantee not herein expressly set out.

Note: The parts/material that are not covered by this warranty are as follows:

1) Blades,
2) Universal joint cross,
3) Paint,
4) Bearings,
5) Rubber parts,
6) Gaskets,
7) Fasteners,
8) Fabrication,
9) Chains & sprockets,
10) Tines

12. SPARE PARTS

All repairs and replacements on the machine must be performed only by using original spare parts, which must be obtained from the Manufacturer or your Dealer.
This section contains the information needed to identify the parts of SFM shredder that may be ordered to Manufacturer.

When request spare parts to Manufacturer, always give following indications:

- type of machine;
- shredder serial number;
- description and p/number of the spare parts;
- quantities.

NOTE
For identificationof p/numbers and description of safety decals refer to the Section Safety labels.

For identificationof p/numbers and description of PTO driveline parts, refer to the manual of the driveshaft Manufacturer.

The Manufacturer reserves the right to substitute a required part with an equivalent part, if applicable.

13. “EC” DECLARATION OF CONFORMITY

In accordance with the EC Machinery Directive 2006/42/EC

Tirth Agro Technology Pvt. Ltd.
(An ISO 9001:2008Certified Company)
National Highway – 27, Nr. Bharudi Toll Plaza,
Gondal Road At.: Bhunava – 360311 Ta. Gondal,
Dist.: Rajkot. State: Gujarat- INDIA.
Phone: + 91 (2827) 270457
e-mail: info@shaktimanagro.com

hereby declares that the machine:

Type: **Shaktiman Flail mower**
Model: **SFM - Series**

satisfiesthe basic safety and health requirements established by European Directive 2006/42/EC.

Harmonized standards used:

EN ISO 12100
Safety of machinery - General principles for design - Risk assessment and risk reduction
EN ISO 4254-1
Agricultural machinery - Safety - Part 1: General requirements
EN ISO 4254-12
Agricultural machinery -- Safety -- Part 12: Rotary disc and drum mowers and flailmowers
EN ISO 17101-2
Agricultural machinery -- Safety -- Part 2: Thrown objects testing of flail mowers.

Other technical standard used:

ISO 11684
Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Safety signs and hazard pictorials - General principles

Rajkot,
Ashwin Gohil / Hasmukh Gohil
Chairman / Managing Director

NOTES:

NORDLAND

EQUIPMENT

Nordland by Fieldking

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