



## FLAIL MOWERS



### INSTRUCTION BOOK

Manufactured by  
**CONCEPT PERUGINI S.R.L.**  
Via Dell'Artigianato, 11-15  
47014 Meldola (FC)  
Italia

**TEL.:** +39 0543494602

**FAX:** +39 0543 494727

[www.conceptagri.com](http://www.conceptagri.com)

[info@conceptagri.com](mailto:info@conceptagri.com)



**CONCEPT PERUGINI**

CONCEPT PERUGINI S.R.L. RESERVES THE RIGHT TO MODIFY THEIR  
PRODUCTS WITHOUT PRIOR NOTICE AND THE COMMITMENT TO UPDATE  
THIS MANUAL

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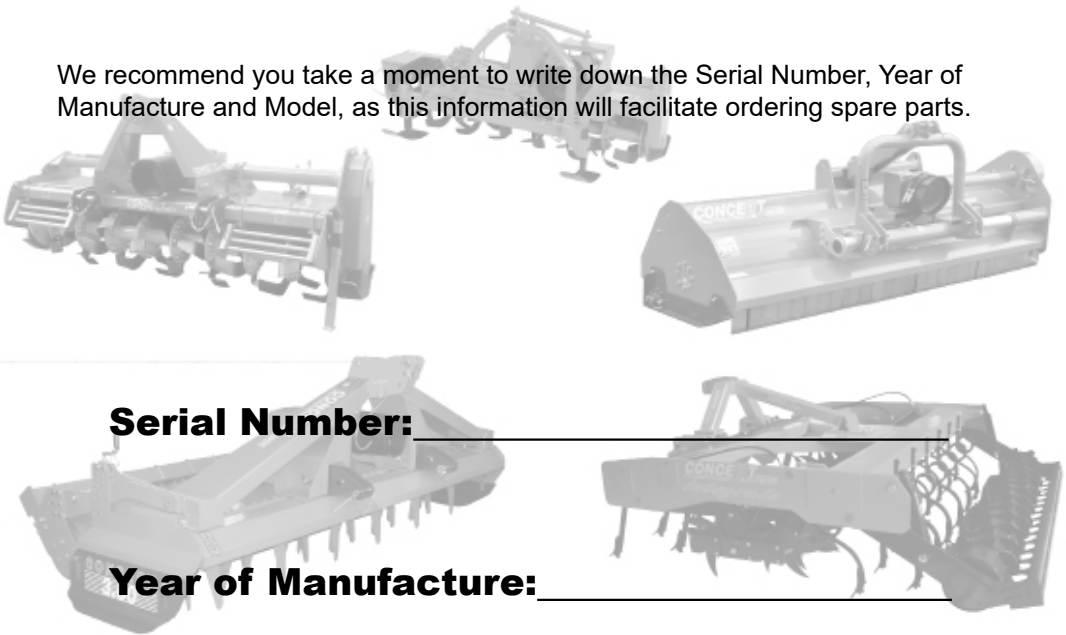
## Introduction

Concept Perugini S.R.L would like to thank you for purchasing this Flail mower and offer their support and assistance throughout its productive life.

We strongly recommend that this booklet is read and understood before using your new machine, and that regular maintenance is carried out as described further in the booklet. If any doubts arise then don't hesitate to contact your local dealer or the company via the options provided on the front page or via Facebook @ Concept Perugini.



We recommend you take a moment to write down the Serial Number, Year of Manufacture and Model, as this information will facilitate ordering spare parts.



**Serial Number:** \_\_\_\_\_

**Year of Manufacture:** \_\_\_\_\_

**Model:** \_\_\_\_\_

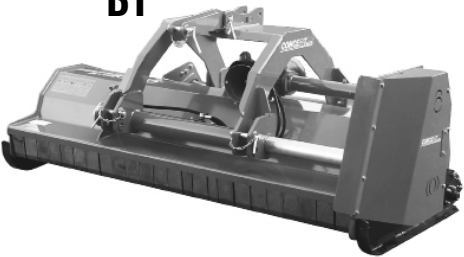
# Instruction Manual

The aim of this manual is to help you (the user) understand how to use and how to maintain the machinery. This booklet covers the following models : **MT MX KT ST DT DTS**

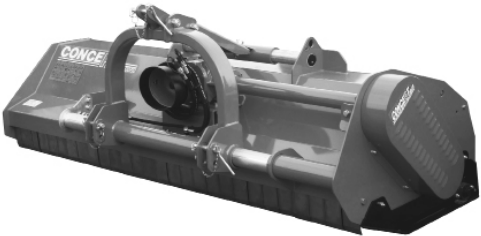
**DTS**



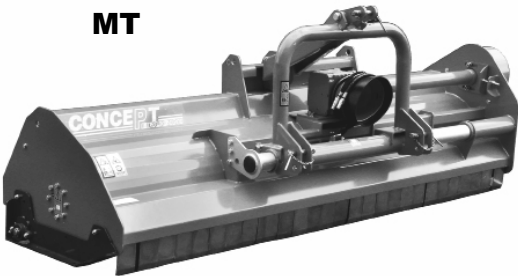
**DT**



**MX**



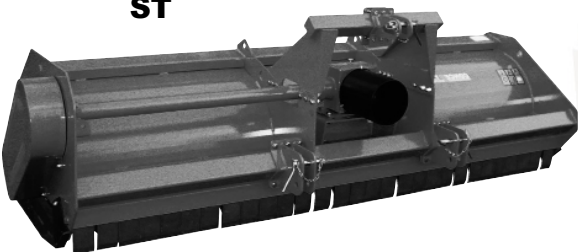
**MT**



**KT**





**ST**



## Identification

The identification plate, attached to the machine shows the following information:

<b>CONCEPT</b> EQUIPEMENT 47014 MELDOLA - (FO) - ITALIA		<b>CE</b>	
1 ANNO DI FABBRICAZIONE	2 MANUFACTURE YEAR		
3 ANNÉE DE FABRICATION	4 DELIVERY		
5 N° DI IMMATRICOLAZIONE	6 SERIAL NUMBER		
7 NUMÉRO DE MATRICULE	8 FABRIKNUMMER		
9 MODELLO	10 TYPE	11 TYPE	12 MODELLE/SERIE
KW	HP	 min <sup>-1</sup>	
		<input type="checkbox"/> 440 <input type="checkbox"/> 5000	<input type="checkbox"/> <input type="checkbox"/>

- Manufacturer's Name
- CE mark
- Year of production
- Serial number
- Recommended tractor horsepower
- Overall weight
- P.T.O. speed and direction of rotation

These data are very important in order to check the compatibility between the machine and the tractor and when ordering spare parts

## Before operation

At the factory each machine is carefully inspected to guarantee proper functioning. In addition, the dealer, before delivering the machine should have carried out a pre delivery inspection. However as a precaution measure check:

- Oil level in the gearbox
- Grease all those components provided with grease nipples
- Air pressure in the tractor's tyres, length of lift arms
- Tractor PTO speed to match the machine transmission speed

## Safety

### Symbols

In this booklet three different symbols are used to highlight danger levels or important information



#### DANGER

To draw the operator's attention to situations which could endanger his or other people safety.



#### CAUTION

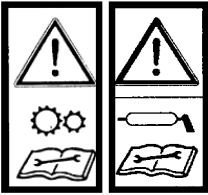




To draw the operator's attention to situations which could affect the machine performances but not his or other people safety.



#### IMPORTANT

To draw the operator's attention to situations which do not affect the machine performances and his or other people safety.

It is important to comply with the instructions given by the safety stickers, which must always be on the machine. If new ones are required, contact your dealer.

	SYMBOL	DESCRIPTION
1		<p>Before operation, adjusting or servicing the machine, it is important that each operator carefully reads the following instructions. Servicing lubrication etc. should be carried out with the engine stopped, the brakes applied and locked and the starter key removed.</p>
2		<p>Anybody who is near the machine when working, must keep at a safe distance. During operation keep away from rotating parts and PTO shaft. Do not remove safety guards whilst the machine is working or with engine running.</p>
3		<p>Danger of injury to lower body parts. Anybody who is near the machine when working must keep a safe distance at all times.</p>
4		<p>Danger of injury to limbs. Anybody who is near moving parts must be aware of where his body is in relation to the machine and keep at a safe distance. Do not remove safety guards.</p>
5		<p>Any servicing should be carried out with the tractor off and the correct parking procedures should be followed out as advised by the manufacturer. Should the machine need to be raised it should be supported securely.</p>



When lifting the machine always use the appropriate lifting gear and always use the lifting points indicated by the yellow and black stickers as shown in picture.

## **General Safety Instruction**

- During operation keep away from rotating parts and PTO shaft, do not remove safety guards during operation or with the engine running.
- Servicing should be carried out with the engine stopped, the brakes applied and locked and the started key removed. Once the machine is raised do not work underneath unless supported securely.
- When travelling on the public road disconnect the PTO shaft and carefully follow the traffic regulations of your country.
- Always lift the machine from the lifting points.
- The operator should be experienced and in good health in order to avoid injury to his person and others.
- The operator must wear the correct safety garments.
- Do not work when dark unless suitable lighting is available

## **Operator's Prerequisites**

To avoid danger to himself and others, the operator must be:

- **Physically sound**
- **Mentally sound**
- **Trained**

We advise that the operator read and understand this booklet before using the machinery. If there are any doubts then contact your dealer or **CONCEPT PERUGINI S.R.L**

## **Work Clothing**

The operator must wear the following:

- Working gloves
- Overalls of appropriate size
- Working boots
- Protective glasses
- Protective helmet

**ALWAYS MAKE SURE THE TRACTOR IS TURNED OFF, P.T.O  
IS DISENGAGED AND MACHINE IS MADE SAFE**

## Attaching the machine to the Tractor

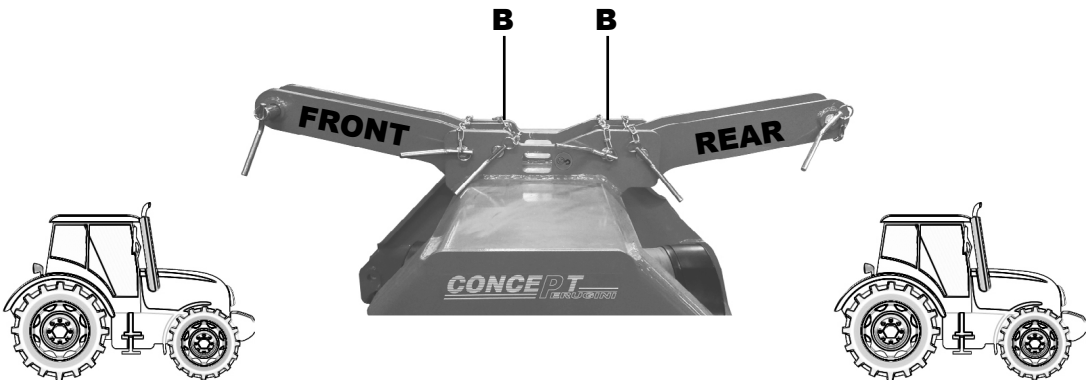
Concept Perugini Flail toppers can be linked up to any tractor with a category 2 three point linkage.

Read the tractor's instruction manual before attempting to attach the machine to the tractor.

- Adjust the width of the tractor arms to match the lower brackets on the machine
- On a flat surface reverse the tractor up to the machine
- Firstly attach the lower links and do the necessary adjustments to limit sideways movement
- Lengthen and attach the top link in order to have the machine parallel to the ground once attached
- **Remember** to fit all the locking pins and that the machine is safely secured to the tractor

## Front and Rear mowers

The **KT DT DTS** models can be either front or rear mounted. To switch from the front to rear is straight forward.



To switch from rear to front mounted the machine's top link must be removed and replaced in the correct brackets. To do this remove and re-insert the hitch pins in the desired position.

When in use pin **B** must be removed, this allows the machine to follow the natural flow of the land.

During transportation **B** must be re-inserted. Failure to do so will result in causing damage to both the machine and people near by.



## DT DTS

The **DTS** is the link between a regular flail mower and a forestry mower. It's much stronger than a normal flail mower, it's double skin chassis is 14mm thick, comes standard with 2 counter knives which make mulching logs and thick, wet, heavy material very easy. The first counter knife is a series of Y blades bolted onto the chassis which can therefore be replaced when needed,

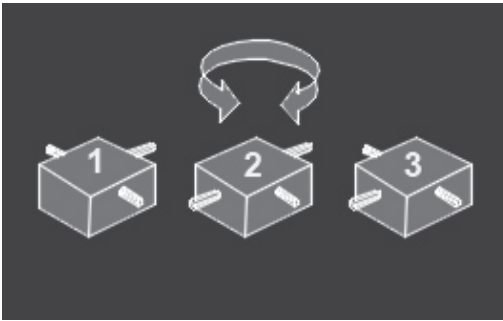
The second counter knife is a standard "zig zag" edge knife which cuts the mulch very finely.

The **DTS** differs to the **DT** in that it has a double transmission, so double the belts driving the rotor (5+5). This is particularly

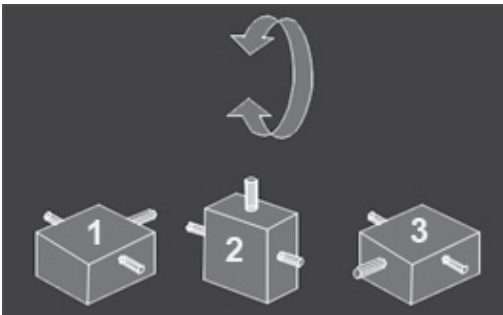
indicated if the intended use is for clearing areas with lots of heavy waste such as wood clippings, logs, small trees etc.

The DTS is fitted with a central gearbox driving the two side transmissions however the gearbox is fitted with only one input shaft because with a rear input shaft the rotor rotation would not be correct. Therefore when the machine is used on the front of the tractor the gearbox has to be physically turned in order to have the input shaft facing the tractor.

Depending on the type of tractor the gearbox has to be turned in one of the two following ways:



1 - Tractor with a standard front linkage and PTO (Turning anti clockwise when looking at the front of the tractor)



2 - Reversible tractor using the same rear PTO (Turning clockwise when looking at the rear of the tractor)

## PTO Shaft

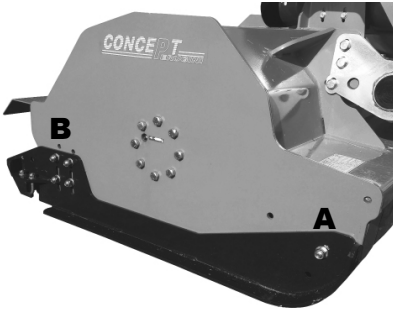
If necessary, cut the PTO shaft to the right length following the shaft manufacturer instructions.

When attaching the PTO shaft to the machine and tractor make certain that if the PTO shaft is fitted with an overrun clutch this must be installed on the implement. When connecting to the tractor verify that the locking pin is correctly located and secure in place. Before use make sure all the chains and guards are correctly fitted.

## Working Depth

The height of the machine from the ground is controlled by the rear roller, skids and top link. Before using the flail mower make sure that the flails do not hit the ground, this will result in extreme wear will damage the rotor.

Always adjust the top link to keep the machine parallel to the ground when adjusting the height of the rear roller.



The **MT MX KT ST DT DTS** all have similar skids and rear roller supports. To adjust the height of the rear roller and skids:

- Slacken bolt **A**
- Remove bolts **B** and reposition skid in the desired position
- Replace **B** and tighten **A**

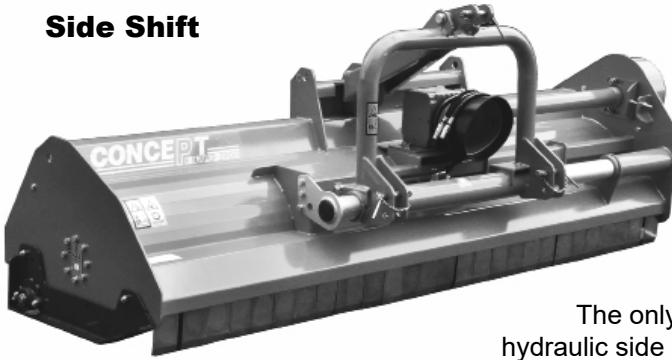
## Rear Roller



The rear roller is attached via a hub to the skid. If the hub should brake then follow the following procedure to replace it:

- Remove the U bolt attaching the hub to the skid
- Remove the 4 nuts attaching the hub to the rear roller and replace the damaged hub with a new one
- Tighten the 4 nuts and replace the U bolt

## Side Shift



The only machine which does not have hydraulic side shift is the **ST**.

The hydraulic side shift is very simple and requires very little maintenance, simply connect the hoses to the tractors double acting spool valve. Make sure there are no oil leaks and that the side shift tube is well lubricated. Grease the grease nipple provided every 10 working hours to reduce wear.

## In the Field

Once the machine has been attached to the tractor, adjusted and inspected then it can be operated in the field.

- Lower the machine to approximately 10 cm from the ground.
- Engage the tractor PTO and slowly increase the speed to 540 rpm.
- Lower the machine to the ground, engage a forward moving gear and commence forward motion.

Always drive in a straight line, when turning lift the machine off the ground to avoid straining the parts in contact with the ground.

**IF THE MACHINE IS PROVIDED WITH AN OPENING TAILGATE, THIS CAN BE OPENED ONLY WITH THE MACHINE STOPPED. FOR NO REASON CAN THE MACHINE BE USED IN THE FIELD WITH THE TAILGATE OPEN.**

## Road Transport

When transporting on the road make sure to disconnect the PTO, if the machine is fitted with wheels then fold them in by relocating the pin. Carefully follow the traffic regulations of your country.

## Maintenance

The maintenance for the Concept Perugini flail mowers is very straight forward.

### Lubrication

#### Every 10 working hours:

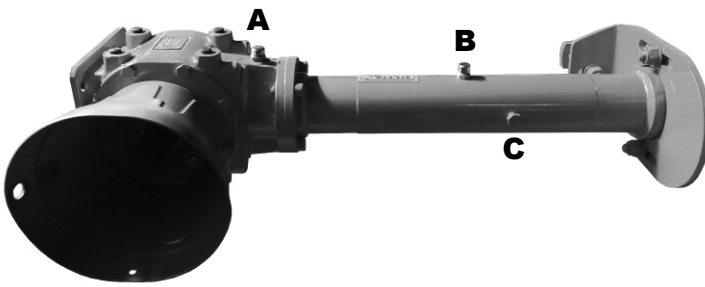
Grease the rotor's supports and the side shift sliding parts with **Agip 33/FD** or equivalent

#### Every 50 working hours:

Check the gear box and side shaft oil level. If necessary top up with gear oil **EP90**

#### Every 250 working hours or once a year:

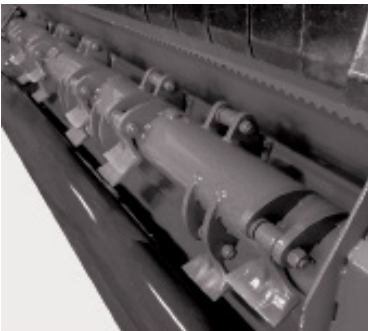
Change the oil in the gear box and the side shaft



To control the gear box oil use cap **A**.

For the side shaft, check oil level via cap **B** and use plug **C** to empty the oil for the oil change.

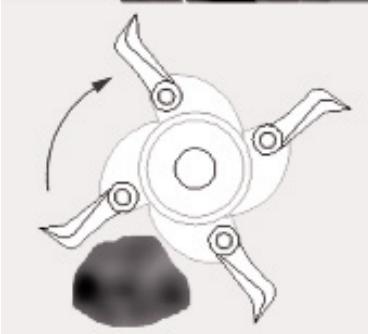
### Rotor



Maintenance on the rotor is very important. Lubricate the supports every 10 working hours.

Before and After each use check to see if the rotor and flails are damaged. If the rotor is damaged it will cause it to become unbalanced creating unwanted vibrations which will lead to the supports breaking. If the rotor is damaged then contact your local dealer for either a replacement or arrange for it to be repaired.

Check the bolts for tightness and the flails for wear and breakages. Replace all broken, bent or worn blades.



**THE REAR TAILGATE MUST BE CLOSED DURING USE, IT CAN BE OPENED ONLY WHEN THE MACHINE IS STOPPED AND P.T.O IS DISENGAGED**

Belt tension observation slot



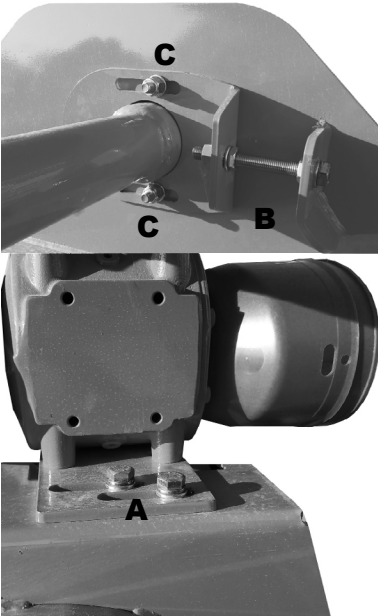
## Transmission

The transmission on all Concept Perugini flail mowers is belt driven. After the first 2/3 hours of use check the tension in the belts via the slot on the belt guard, there should be 5 mm play when 10kgf are applied.

Should the belts need tensioning or replacing, the procedure is very simple.

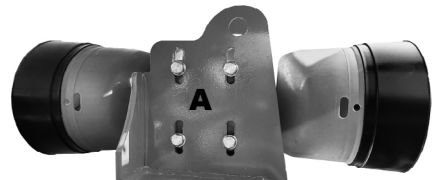
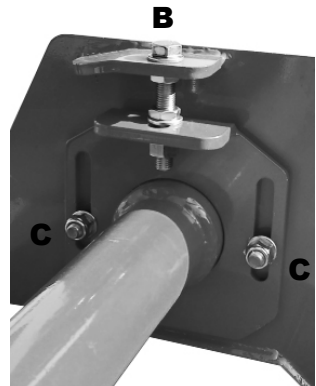
### MT MX KT ST

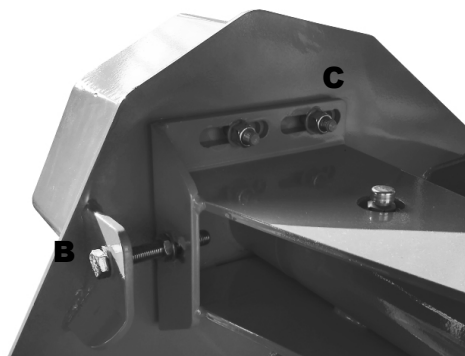
- Slacken the 2 nuts **C**
- Slacken the 4 bolts indicated **A** (2 on each side of gearbox)
- Adjust the tension by either tightening or slackening bolt **B**, **NB**. Loosen the counter nuts on **B** before tightening or slackening
- When the belts are taught tighten the counter nuts on **B** and tighten nuts **C**
- Move the gearbox either forwards or backwards slightly to make the side shaft square with the side of the flail mower and tighten bolts **A**, this is very important as it will reduce the wear of the belts and lengthen their life



### DT

- Slacken the 2 bolts indicated **C**
- Slacken the 4 bolts indicated **A**
- Tighten or loosen bolt **B** to reach the optimum tension. **NB** loosen counter nut on **B** before either tightening or slackening
- Once the tension has been made tighten all bolts **B** and **C**
- Move the gearbox either upwards or downwards to make the side shaft square with the side of the flail mower and the tighten **A**. This is very important in order to lengthen the life of belts and to reduce uneven wear





### **DTS**

- Slacken the 4 bolts indicated **C** (2 above and 2 under side shaft)
- Tighten or loosen bolt **B** to reach the optimum tension. **NB** loosen counter nut on **B** before either tightening or slackening
- Once the tension has been made tighten all bolts **B** and **C**

### **Stone Guards**

The front stone guards are very important for the protection of the tractor driver. Under no circumstances should the machine be used without the front stone guards. If the guards are bent, worn or broken they should be immediately replaced, failure to do so can result in severe injury and in certain cases can cause death.

The picture shows the comparison between a used worn and bent stone guard (top) and a new guard (bottom).

If the machine is properly set up, set at the correct height and the top tractor link is adjusted accordingly then the stone guards should be able to hang freely and not dig into the ground.



**ALL MAINTENANCE MUST BE CARRIED OUT WITH THE TRACTOR OFF, P.T.O. DISENGAGED AND THE MACHINE PROPERLY SUPPORTED. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY**

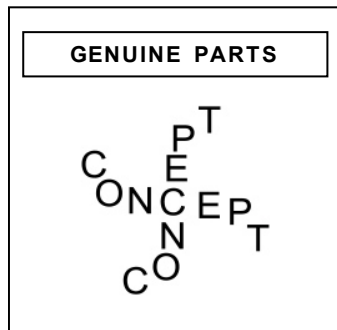
## Storage

Before storing the flail mower after it's seasonal use it is recommended that a thorough check and clean is carried out. Remove all dirt and address any severely worn parts or broken parts. Treat any areas of the machine where the paint has worn off with a rust inhibitor and store in a dry place out of the elements to insure a longer life span. Grease the P.T.O shaft following the manufacturers recommendations.

## Spare Parts

For the correct spare parts contact your local dealer and ensure that you have the all of the identification data and correct codes of the parts required.

Always use **genuine Concept spare parts**



**THE USE OF NON GENUINE SPARE PARTS WILL NULLIFY THE WARRANTY**

## Warranty

During the warranty period the appropriate maintenance should be carried failure to do so will breach any cover necessary,

Concept Perugini S.R.L covers warranty with the exemption of wearing parts, providing that the fault is due to defects in workmanship or material and is in any way or to any extent not attributable to misuse, lack of reasonable care and general wear or to the fitting of spares, replacements or extra components which are not supplied or approved by Concept Perugini S.R.L. failure to comply will void warranty and should any problems arise Concept Perugini S.R.L is not held responsible and is not required to answer to any warranty claims.

