ROTARY MOWER
TIGER 510 & 725

HANDBOOK

EN

GREENTEC

Cutting Edge Technology

Tiger 510 & 725

User manual

2. edition – January 2025
(Original version)

! IMPORTANT !

It is important that the operator is given both the user manual, spare parts book, and all other relevant technical documentation before the machine is put into use for the first time.

It is important that the operator fully understands the contents of the instruction material before using the machine.

This user manual must accompany the machine and must always be available to the operator.

In case of later resale of the machine, all relevant technical documentation must be handed over to the new owner.

The content of the user manual is based on information, standards, and regulations, valid at the time of publication.

As our products are under continuous development and improvement, changes to the specifications may occur.

If there is information that differs from the current machine, updated instructions can be found on our webpage or by contacting GreenTec After-sales service department at: service@greentec.eu

Manufacturer, name, and address (a)

Merkurvej 25

DK-6000 Kolding

Danmark

Tel: +45 75553644
Fax: +45 75554243
E-mail: info@greentec.eu
Web: www.greentec.eu

Preface

Dear Customer!

Your new GreenTec machine is designed based on almost 30 years of experience with vehicle-mounted machines for maintaining green areas.

The machine is manufactured based on the latest technology and approved safety regulations, standards, and regulations.

We want to make a product available in a way that does not cause damage or misunderstandings either during use, during transport or during maintenance of the machine.

The user manual contains information and instructions that are important and useful for maintaining the operational safety, reliability, and value of the GreenTec machine.

Therefore, read this user manual carefully, as it will make you familiar with assembly, use, care, and maintenance. **Pay particular attention to instructions regarding safety!**

You are welcome to visit our website www.greentec.eu - where you can find technical documentation and access the latest updates to instruction- and spare parts books on our entire product range.

We hope that you will be satisfied with your new GreenTec machine!

Kind regards:

John Christensen

Co-owner, Product Development

GreenTec A/S

GreenTec's vision is to develop and sell quality machines for the maintenance of green areas, i.e., in agriculture, industry, airports and the municipal sector. Through innovative product development, we strive to become a leader in our field.

All machines are developed in a simple, functional, and production-friendly design in close cooperation with dealers and end users. It is our goal to cover all needs in the market segment with a minimum of 2 different proposed solutions.

Through in-depth analysis and counselling, the customer must be offered the best possible solution, where individual needs can also be met through the modular structure of the product range.

The aim is also to offer the best possible after-sales service and a fast and efficient supply of spare parts.

Contents

List of tables and figures

Tables in this instruction manual

Figures in this instruction manual

Declaration of conformity (c)

Acc. to Machinery Regulation (EU) 2023/1230 Annex V.A

MANUFACTURER: GreenTec A/S

ADDRESS: Merkurvej 25

LOCATION: DK-6000 Kolding

We, **GreenTec A/S**, hereby declare that the machine:

TYPE:	PRODUCT:	APPROVED WITH:
Rotary Mower	**9993510-3 / 9993725-5** **Tiger 510 / Tiger 725**	GreenFlex Blade System

Table 1 - Machines covered by declaration of conformity

- is manufactured in conformity with both the European Parliament and Council Regulation (EU) 2023/1230, and UK Statutory Instrument 2008 No. 1597: The Supply of Machinery (Safety) Regulations 2008, with references to the following standards associated with its design, construction, and production:

NAME:	DESCRIPTION:
BS/EN ISO 12100:2011	Safety of machinery - General principles for design - Risk assessment and risk reduction.
BS/EN ISO 14120:2015	Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards.
BS/EN ISO 4413:2010	Hydraulic fluid power - General rules and safety requirements for systems and their components.

Table 2 - Declared international standards

The declaration only applies if the machines stated above are used in accordance with the operating instructions. When connecting the above-mentioned machines to a vehicle and/or with a tool carrier other than those mentioned above, it is the responsibility of the owner and operator to ensure that the vehicle and the assembled machines meet the applicable requirements in the relevant directives for this.

Date: 01.01.2026

John Christensen

Co-owner, Product Development

GreenTec A/S

1) Machine data and useful info (b)

Before the machine is put into use for the first time, the dealer is responsible for ensuring that the buyer receives this document and that the machine is correctly registered via the Extranet on GreenTec's website: https://extranet.greentec.eu/login

If in doubt regarding login information, please contact GreenTec After-sales service: service@greentec.eu

The dealer/importer must also ensure that the buyer and operator fully understand the contents before the machine is put into use.

If the machine is re-sold, all the supplied technical documentation must be handed over to the new owner and must also always accompany the machine.

The fields below are filled in, for future use when ordering spare parts or other enquiries:

1.1) Registration of Greentec machine data

DATA TO BE ENTERED BY THE DEALER VIA THE GREENTEC EXTRANET!
Machine description:
Serial number:
Sales date:
Dealer:
E-mail:
Phone:

Table 3 - Machine data form

GREENTEC
Merkurvej 25
DK-6000 Kolding
Danmark
Tel: +45 75553644
E-mail: info@greentec.eu
Web: www.greentec.eu
Opening hours: mon-fri (08:00-16:00)

DEALER STAMP

1.2) Name plate

All GreenTec's machines are equipped with a name plate. The nameplate contains important information relating to the machine, including a unique serial number used for identification.

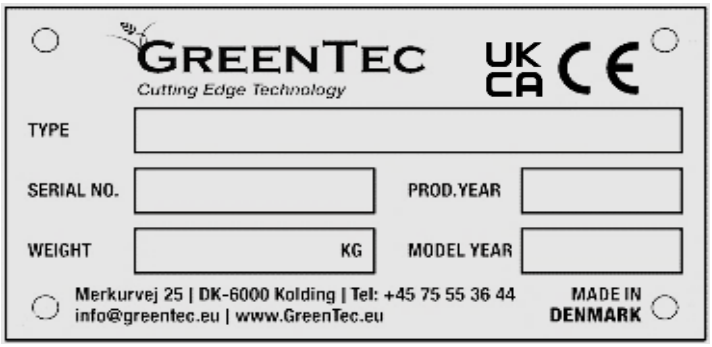


Figure 1 - Name plate for GreenTec machine

CONTENT OF THE NAME PLATE:	
TYPE:	Machine model and type number.
SERIAL NO.:	Unique serial number of the machine.
PROD. YEAR:	Production year.
WEIGHT:	Weight of the machine *without* optional
MODEL YEAR:	The year of development of the machine

The nameplate also provides address information for the manufacturer.

Table 4 - Content of GreenTec name plate

1.3) Warranty terms

- GreenTec must be notified in writing of errors or defects in the sold machine **no later than 8 days** after the error was or should have been registered by the end-user. If not notified within this period, the customer is not entitled to submit claims regarding errors or defects.
- GreenTec is entitled and obliged to remedy all errors and defects within the specified coverage of the product warranty, being able to decide freely whether such remediation must take place in the form of repair or replacement of the defective part(s).
- Warranted parts, can be re-called upon by GreenTec for inspection, if needed. Unless otherwise agreed, warranted parts must be available for return, free of charge, to GreenTec's After-sales service department - **no later than 14 days** after replacement.
- When warranty work is carried out, **always** make sure to have the original invoices for any spare parts used, and timesheets for the labour and working hours available as documentation.

THE WARRANTY COVERS:	THE WARRANTY DOES NOT COVER:
✓ Defective or faulty design and/or materials.	✗ Normal wear and tear.
✓ Improper or faulty workmanship.	✗ Insufficient service and maintenance.
✓ Original GreenTec parts and materials.	✗ Improper use and/or handling of the machine.
GreenTec's warranty obligation is conditioned to the customer documenting that an identified deficiency or fault is not due to any of the above circumstances. GreenTec assumes no liability for any of the mentioned points, including loss of profits, lost earnings, and other consequential financial loss. Please read through GreenTec's overall terms and conditions of sale and delivery here: https://greentec.eu/about-us/terms-and-conditions-of-sale-and-delivery/	✗ Overloading of the machine and equipment. ✗ Incorrect installation and/or mounting. ✗ Use of non-original spare parts and materials. ✗ Any 3rd party modifications made to the machine. ✗ Hydraulic- and/or gear oil, lubricants, or any other propellants. ✗ Compensation for transport or any consequential costs. ✗ Any damage and defects due to violation of road and/or traffic regulations.

(Labour costs associated with a warranty are always settled at a fixed standard rate, agreed between GreenTec and our dealers)

Table 5 – Warranty coverage

1.4) Complaints

Risk for the goods is transferred to the customer immediately upon delivery. Complaints about goods must be made in writing and submitted to GreenTec without undue delay and **no later than 8 days after delivery**.
If GreenTec has not received a complaint within the mentioned time limit, the customers lose all rights to complain about the quantity and quality of the goods delivered.

GreenTec has the right and obligation to remedy all errors resulting from defective design, materials, and workmanship. GreenTec decides whether the remedy must be in the form of repair or replacement of the defective part(s).

If GreenTec chooses to repair the goods, the customer is obliged to deliver and collect the goods from a workshop indicated by GreenTec, without GreenTec incurring costs in this context.

If GreenTec chooses to replace the defective part(s), customers must send the defective part(s) to GreenTec without GreenTec incurring costs in this regard. Instead, GreenTec is entitled to supply replacement goods.

GreenTec's liability only applies to defects, in connection with the sold goods, which are indicated within 2 years from the delivery date.

GreenTec assumes no responsibility for defects that exceed what is stipulated in this provision. This applies to losses resulting from such a deficiency, including loss of profit, lost earnings, and other financial loss.

2) General information

2.1) Use of the user manual

Read this user manual thoroughly before assembling and putting the machine into use. If you have any questions, contact your local dealer or GreenTec's After-sales service department.

The illustrations in this user manual have the sole purpose of instructing, informing, and substantiating the general procedures and instructions.
Illustrations may appear different from the actual machine, e.g., by being fitted with additional equipment and/or in a different size variant.

2.2) Definitions of information signs

The following definitions apply throughout this user manual:

DANGER!

Warns of a potential situation that could result in death or permanent disabling injury if instructions are not followed carefully!

WARNING!

Warns of a potential situation that could result in partially disabling injuries or serious bodily injury if the instructions are not followed carefully!

CAUTION!

Warns of a potential situation that could result in serious damage to the machine or equipment if the instructions are not followed carefully!

NOTICE!

Specific or general information deemed important or useful.

2.3) Definitions, terms, and descriptions

Operator:	Daily user and/or operator of the machine.
Owner:	Owner, buyer and/or those who are responsible for the operator and maintenance.
Rotary Mower:	The GreenTec Tiger rotary mower.
Vehicle:	Machine that tows the rotary mower during operation.
RH / LH:	RH: Right-sided unit / LH: Left-sided unit.
PTO Shaft:	Power take off shaft.
Input PTO:	Input power take off shaft.

Table 6 - Definitions, terms and descriptions

3) Safety

3.1) Local legislation in the country where the machine is used

The use of the machine may be restricted by the legislation of the countries where it is used. It is important that the responsible owner and operator familiarize themselves with the country's laws and regulations regarding cutting, pruning and maintenance of fences and hedges.

3.2) Warnings, prohibitions, and instructions

Instructions come from the applicable national accident prevention regulations, which the operator and operator must comply with:

⚠ WARNING	For all types of work on the machine, it must be disconnected from all hydraulics!
⚠ WARNING	Only authorized personnel may carry out service and maintenance on the machine!
⚠ CAUTION	Read the user manual carefully before using the machine!

3.3) Safety labelling

The machine is marked with safety and warning labels; these are placed at the identified dangers to which you are exposed when working with and staying near the machine.

3.3.1) Personal safety equipment

It is recommended that the following safety equipment is worn when working with or performing maintenance on the machine:

Figure 2 - Safety labelling: Personal safety equipment

The recommended safety equipment together with the points of attention mentioned in this and the following section cover the precautions GreenTec has deemed necessary for use. The varying circumstances that may arise when working with this machine cannot always be predicted.

No good advice can replace "common sense", "due care" and "attention", but the above recommendations are a good start to safe use of the GreenTec machine.

3.3.2) Warning labels

Warning labels that identify the dangers to which you are exposed when working with and when staying near the machine:

WARNING LABELS:

Warning!

Read relevant instruction manuals carefully before using this machine.

Follow all instructions and safety regulations when using the machine.

Warning!

Keep clear of the operating range of foldable machine components.

Warning!

Check every 8 hours of use that all bolts/nuts are tight.

Warning!

Beware of oil in case of skin contact or inhalation of oil vapors, as well as high pressure in case of leakage or handling.

Switch off the engine, remove the key and apply the handbrake before maintenance or repair work.

Warning!

Flying objects/material.

Make sure to keep a distance from the machine during use.

Warning!

Keep clear of rotating parts. Do not wear loose clothing, jewellery or hair that could become entangled.

Do not operate without all driveline shields in place.

Disconnect PTO clutch, tractor engine and remove key before approaching the implement.

Read the PTO manual for additional safety points.

Check wheel nut torques and tyre pressures daily for the first week, then at least weekly.

Figure 3 - Safety labeling: Warning labels

3.4) Recommendations for optimal security and operation (I)

⚠ DANGER

Always be aware of the following risks when using the machine:

This machine can be potentially fatal in the wrong hands. It is therefore of the utmost importance that both the owner of the machine and the machine operator fully understand the following, to ensure that they are aware of the dangers that exist or may arise when using the machine, as well as which responsibility that comes with the use of the machine.

The operator of this machine has, in addition to the responsibility for himself, also responsibility for others who may enter the proximity of the machine; as the owner is responsible for both the operator and others who may come near the machine.

To achieve optimal safety and operation, it is important that the operator understands how dangerous the machine is, and foresees the danger before it occurs:

- ⚠ You can be caught by the rotating shaft from the PTO.
- ⚠ You can be hit or caught by the moving parts, e.g., blades, knives, drive shaft and wings, or hit by flying materials or machine parts in case of machine damage.
- ⚠ The lift and fold operations are powered by hydraulic oil from the hydraulic system in the machine or from the vehicle.
- ⚠ The operator of the vehicle should know how the hydraulic oil should be handled! (Read in the safety data sheet for the oil)
- ⚠ Oil splashes under high pressure from damaged fittings or hydraulic hoses can penetrate the skin and cause serious injury.
- ⚠ Accidents due to collisions with other vehicles or dropped objects on the road.

3.4.1) Safety distances

When using the machinery, there is a risk that the mower may throw flying objects-/material. Depending on the driving conditions and surface, there will be the possibility that serious fragments can come flying and damage people or equipment.

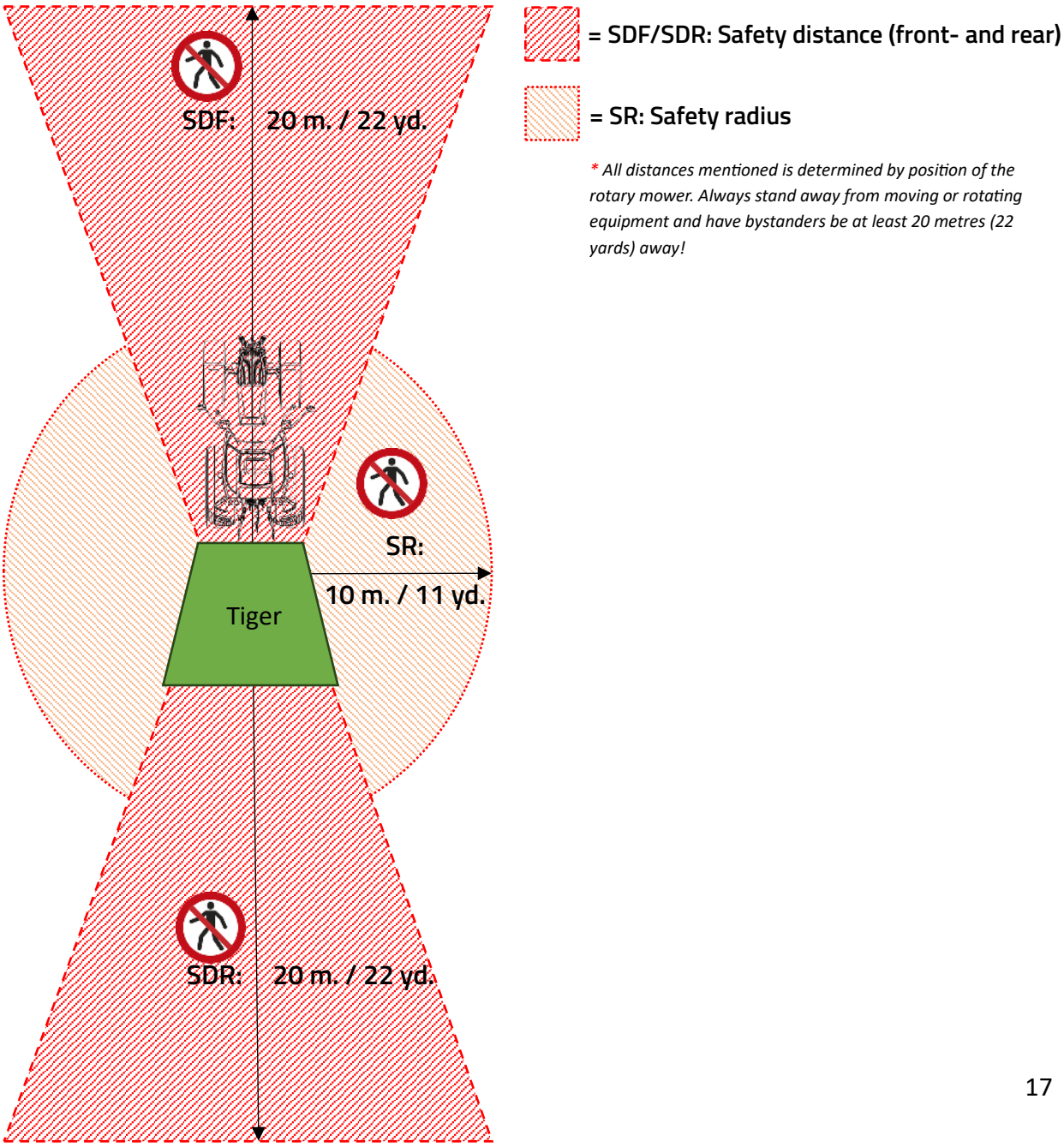
- **Always comply with the specified safety distances (SDF/SDR) to the machinery.**

When using the machinery there is a risk of being hit or caught by the moving parts, e.g. blades, knives, drive shaft and wings, as well as being hit by flying materials or machine parts in the event of machine damage.

- **Always comply with the specified safety radius (SR) for the machinery.**

⚠ WARNING

During commissioning, persons must **under no circumstances** enter the safety zones marked on the drawings!



** All distances mentioned is determined by position of the rotary mower. Always stand away from moving or rotating equipment and have bystanders be at least 20 metres (22 yards) away!*

3.5) Necessary safety measures (m)

NOTICE

The machine must be used in the following ways:

- ✓ Make sure that the operator of the machine has read this user manual, as well as the user manuals for both the attachment tool and the vehicle used.
- ✓ In addition to the instructions contained in this manual, legislation relating to safety instructions and accident prevention should be complied with.
- ✓ Ensure that the operator of the machine has been trained in the use of the machine.
- ✓ Use hearing protection if the machine is operated from a cabin that is not soundproof or if the cabin windows are open.
- ✓ Ensure that all warning labels are always visible and that none of them are missing, damaged or illegible.
- ✓ Check that all safety screens are correctly fitted and that there are no damaged or loose parts.
- ✓ Ensure that all hydraulic pipes and hoses are positioned correctly to avoid rubbing, stretching, pinching, or kinking damage to them.
- ✓ Check the work area and remove any rope, poles, large stones, and other dangerous objects before starting work.
- ✓ Drive at a safe speed that is tailored to the terrain and any other vehicles and obstacles.
- ✓ Make sure the vehicle is stable and meets the machine manufacturer's minimum weight recommendations - if necessary, use additional counterweight.
- ✓ Pay attention to power lines, if in doubt about the distance, contact the local power plant.
- ✓ It is recommended to use impact resistant screens on the vehicle.
- ✓ Check that the machine's fittings, screws, and couplings are in good condition.
- ✓ Follow the manufacturer's instructions for removing and installing the machine from the vehicle.
- ✓ Disconnect the hydraulics to the machine, stop the engine, pull the handbrake, and remove the key before leaving the cab.
- ✓ If necessary, remove nuisance material residues left behind from the area.
- ✓ Great care must be taken when inspecting, repairing, or doing other work on the stationary machine.
- ✓ Always use protective gloves, safety shoes, safety glasses and appropriate tools to perform the work.
- ✓ When travelling on public roads, abide by the provisions of the highway legislation.

- Before starting up the machine and beginning work, check the immediate surroundings, particularly for children. Make sure the visibility is adequate. Clear any persons or animals from the danger zone.
- The machine should only be coupled up to the tractor at the provided linkage point and in accordance with applicable safety standards.
- Extreme care must be taken when coupling or uncoupling the machine from the tractor.
- Before hitching up the machine, ensure that the front axle of the tractor is sufficiently weighted. Ballast weights should be fitted to the special supports in accordance with the instructions of the tractor manufacturer.
- Before entering a public road, ensure that the protective and signalling devices (lights, reflectors, etc.) required by law are fitted and working properly.
- Before entering a public road, place the machine in the transport position, in accordance with the manufacturer’s instructions.
- The speed method of operation must always be adapted to the land, roads and tracks.
- Avoid sudden changes of direction under all circumstances.
- Precision of the steering, tractor adhesion, road holding and effectiveness of the braking mechanism are influenced by the nature of the hitched machine, the front axle ballast and the state of the land or path. It is essential, therefore, that the appropriate care is taken for each situation.
- Take extra care when turning, taking account of the overhang, length, height and weight of the machine.
- Before any operation on the machine, ensure that it cannot be started up accidentally.
- Ensure tractor guards are fitted correctly and free of damage to the tractor from damage caused by debris.
- Ensure machine guards are in position, free from damage and maintained in accordance with the manufacturer's recommendations.

3.6) Warnings on how the machine must not be used (h)

DANGER

The machine must never be used in the following ways:

- Do not operate the machine until relevant user manuals have been read and understood. Likewise, the operator must be familiar with the operating levers according to the user manual for the connected attachment tool!
- Do not operate the machine if there are others within the safety distances of the machine!
- Never let an inexperienced person operate the machine without supervision!
- Do not go inside the machine's working area / safety zone!
- Never try to locate a hydraulic leak by hand, use a piece of cardboard instead!
- Never allow children to play on or near the machine!
- Do not perform any maintenance or adjustment without first removing the hydraulic pressure from the machinery, lowering the machine to the ground, stopping the vehicle engine, and applying the parking brake and removing the key!
- Do not use and/or mount the machine on a vehicle that does not comply with the manufacturer's specifications!
- Never use the machine if the hydraulic system shows signs of damage / defects!
- Do not stop the engine while the hydraulic pressure is activated!
- Never attempt to use the machine for any purpose other than that for which it is intended!
- Do not leave the vehicle cabin without removing the ignition key!
- Do not transport the machine while the hydraulic pressure to the attachment tool is activated!
- Do not use a machine that has not been maintained or if any of its screens are missing or damaged!
- Never operate the vehicle from a position other than the driver's seat!
- Do not exceed the maximum axle weight or the gross vehicle weight rating!
- Do not exceed the maximum authorised dimensions for using public roads!
- It is strictly forbidden to transport any persons or animals on board the machine, whether it is in operation or not!
- Do not stand between the machine and the tractor until the handbrake has been applied and/or the wheels have been wedged!

3.7) Safety instructions for maintenance, adjustment, and inspection (s)

NOTICE

The machine must be maintained in the following ways:

- The operator must ensure that all maintenance, inspection, and assembly work is carried out by authorized and qualified specialist personnel who, after thorough reading of relevant instruction materials, possess sufficient knowledge.
- Maintenance, inspection, and assembly work may only be carried out with the hydraulics disconnected.
- When carrying out maintenance work under the machinery etc., securing with suitable support elements must be carried out.
- When replacing attachment tools, the hydraulic system is checked for residual pressure.
  A possible residual pressure is reduced to zero (0 bar / 0 psi).
- Use only suitable tools and wear heavy-duty gloves, safety shoes and safety glasses.
- Handle the hydraulic oil and grease according to regulations. Always be familiar with the safety data sheets.
- Immediately after finishing work, all safety and protective devices must be installed and activated again.

3.8) Safety instructions for the operator / user

- It is important to familiarize yourself with all operating elements and equipment and their function before starting the work. Once the work has started, it may be too late.
- Check the immediate area before starting and during operation of the work the machine is to perform (people, children, animals, or obstacles, e.g., stones, fence posts, steel wire).
- Ensure sufficient visibility and a well-lit work area.
- The operator must be fresh and rested before using the machine, and take breaks when tired, to ensure his own safety and that of others.
- The operator should ensure varying working positions and take frequent breaks to avoid disorders in the musculoskeletal system.
- The operator must not leave the driver's seat while driving.
- When working near high-voltage lines, additional distance and caution are required.

4) Machine description (d)

4.1) Overview and features

Tiger 510 & Tiger 725

GreenTec Tiger 510

5.1 m (510)
7.25m (725)
Working width

30-400 mm
Cutting Height

6 km/h
Max. driving speed

2-year warranty
High quality materials
= long life

The Tiger Rotary Mower is used by farmers, municipalities and aviation and military customers all over the world to manage large area grassland, stubble and vegetation.

Delivering reliability, efficiency and a superior mulching result, the Tiger features the innovative GreenTec GreenFlex blade system, featuring 6 blades as standard.

It is engineered with operator-friendly features including a semi-mounted headstock for sharp turning circles, on-the-go height adjustment and the ultimate in input PTO protection.

Semi Mounted Headstock	GreenFlex Blade System	On-the-go Height Control
For sharp turning circles and ultimate PTO protection	2, 4 or 6 blades for increased mulch quality	Adjust via the tractor link arms

EQUIPMENT OVERVIEW:

GreenFlex blade system	Standard
6 blades per rotor	Standard
Double skin, easy clean deck construction	Standard
Semi-mounted headstock	Standard
8-wheel axle	Standard
LED road lights	Standard
Replaceable side skids	Standard
High specification driveline	Standard
Chain guards	Standard
Foam filled wheels	Option

Table 7 - Overview of equipment

4.2) Use of the machine

4.2.1) Intended use of the machine (g)

NOTICE

For any use of the machine other than that described in this section, GreenTec is not liable for damages as a result. The risk then rests solely with the operator and/or the user.

The Tiger Rotary Mower is available in several different sizes, but they all have the same basic construction and operation and are therefore the same. The machine is used to carry out the work of cutting grass or field vegetation.

4.2.2) Application and restrictions of the machine (h)

The Tiger has been designed to be mounted to the rear of a tractor via the tractors link arms. The minimum power output required by each model is 100 HP for the Tiger 510 and 140 HP for the Tiger 725.

The capacity of the machine depends on the working width, the type and amount of material to be processed and the speed at which it is driven.

The machine should be operated at 1000 rpm.

DANGER

The owner of the machine / operations manager is responsible for observing the following rules:

- The vehicle on which the machine is mounted must meet the requirements for machines approved for agriculture.
- All safety values must under no circumstances be exceeded. (Safety distances, pressure, flow, rpm, etc.)
- The machine must never be used to transport people, animals or other equipment than described in this instruction manual.

DANGER

Safety shields on the machine can never work 100%!
Depending on the driving conditions, there will be a possibility that serious fragments/materials can come flying and damage people or equipment.
Always keep your distance!

4.3) Components of the machine

4.3.1) Hydraulic Circuit

Caution the hydraulic circuit is pressurized.

When connecting the hydraulic cylinders, ensure that the circuits are connected correctly in accordance with the manufacturer's guidelines.

Check hydraulic hoses regularly, but no less than once a year for:

- Damage to the outer surface
- Porosity of the outer surface
- Deformation with and without pressure
- State of the fittings and seals

When a leak is found, all necessary precautions should be taken to avoid accidents. Never attempt to stop a leak with your hands or fingers.

Pressurized liquid, particularly hydraulic circuit oil, may cause serious injury if it comes in contact with skin. In case of injury, consult a doctor immediately. There is a risk of infection.

Before commencing any work on the hydraulic circuit, lower the machine, release the pressure from the circuit, turn off the engine and remove the key from the ignition.

The maximum working life for hoses is 6 years. When replacing them, ensure that only hoses with the specifications and grade recommended by the machine manufacturer are used.

4.3.2) Electrical System

Always use the correct size fuses. Never use higher than prescribed fuses as it will not protect the system as intended. It will also lead to irreversible damage to the electrical system.

Always disconnect the battery when working on the implement electrics.

Ensure any retrofit electronics complies with the EMC Directive and carries a CE mark

The implement may be equipped with components that may be influenced by electromagnetic interference.

4.3.3) PTO Driveline System

Never operate the machine without the appropriate guards fitted to the driveline.

The rotary mower driveline system should be run at 1000 rpm.

To protect the driveline system, the operator should never fold the machine before the blades have stopped moving. To do so would risk irreparable damage to the PTO shafts and system.

Failure to observe the correct free movement of the input PTO shaft will cause irreparable damage to the PTO. Do not allow the input shaft telescopic cover to extend beyond the red indicator.

The driveline system, should be lubricated as per the manufacturer's instructions to ensure the long working life of the components.

4.3.4) Rotor and Blade Configuration

DANGER

Never exit the tractor without disengaging the PTO and turning the engine off. Wait until the blades have come to a complete stop before exiting the vehicle.

The Tiger rotary mower features both clockwise and counterclockwise rotors to ensure residue is evenly cut, mulched and distributed.

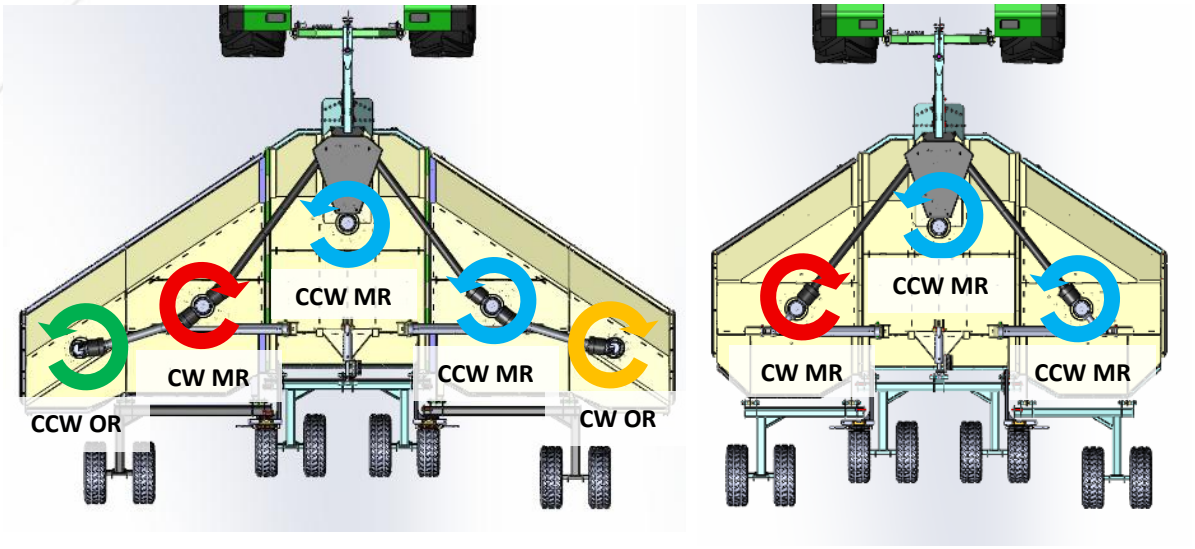


Figure 5 - Rotor Direction Diagram

The direction of the rotor is described as the direction of rotation looking at the rotor from directly above the machine. It is important to identify the correct rotor when ordering and fitting new blades.

Rotor Directions and Compatible Blades:

Rotor Icon	Descriptor	Compatible Blades
CCW MR	Counter Clockwise Rotor Direction (CCW) - Main Rotors	High Lift Blade Long Right – 6703621R Mulcher Blade Long Right – 6703622R Recycler Blade Long Right – 6703623R
CW MR	Clockwise Rotor Direction (CW) – Main Rotors	High Lift Blade Long Left – 6703621L Mulcher Blade Long Left – 6703622L Recycler Blade Long Left – 6703623L
CCW OR	Counter Clockwise Rotor Direction (CCW) – Outer Rotors (725)	High Lift Blade Short Right – 6703676R Mulcher Blade Short Right – 6703677R Recycler Blade Short Right – 6703678R
CW OR	Clockwise Rotor Direction (CW) – Outer Rotors (725)	High Lift Blade Short Left – 6703676L Mulcher Blade Short Left – 6703677L Recycler Blade Short Left – 6703678L

For further details on blade configuration, please refer to the parts book.

Table 8 - Rotor directions and compatible blades

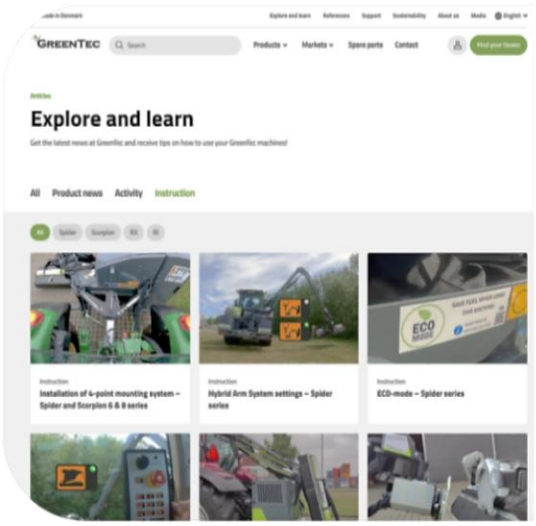
5) Instructions for using the machine (k)

5.1) GreenTec.eu – Explore and learn!

On GreenTec's website there is the section: "Explore and learn": https://greentec.eu/explore-learn/

The page contains useful videos and other guidance material on how to use your GreenTec machines as best as possible.

The "Explore and Learn" page can be used as an interactive supplement to the instruction manual for the machine, with e.g., video guides and articles regarding practical use and maintenance of your GreenTec machine.



Explore and learn page on GreenTec's website

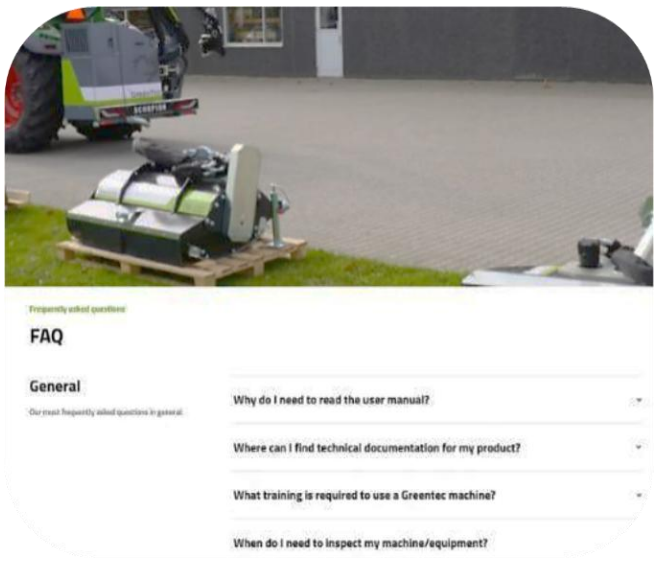
Whether you are just starting out or a seasoned professional with GreenTec's machines, the "Explore and Learn" page can be useful for anyone who wants to learn more about their GreenTec equipment.

5.2) GreenTec.eu – FAQ

On GreenTec's website there is the section "FAQ": https://greentec.eu/support/faq/

The page contains a collection of the most frequently asked questions regarding technology, use, service, and maintenance of GreenTec machines and equipment.

The "FAQ" page can also be used as a supplement and reference work together with the instruction manual for the GreenTec machine.



The FAQ page on GreenTec's website

5.3) Instructions regarding delivery of the machine

Upon delivery of the GreenTec machine, the following is immediately checked:

1. Check the machine and all included parts for transport damage.
   In case of transport damage, please see section 5.3.1) – Transport damage.

NOTICE

In the event of deficiencies and/or defects upon delivery, contact the dealer immediately!

2. Check that the following components are included with the Tiger rotary mower:

CHECKLIST UPON DELIVERY (PER MACHINE):	
1x Tiger 510	Incl. optional equipment.
1x Rear Transport Strap	
1x Input PTO Strap	
1x User manual	Digital QR code on the machine. (Physical copy optional upon purchase)
1x Spare parts book	Digital QR code on the machine. (Physical copy optional upon purchase)

Table 9 - Checklist for delivery of machine

5.3.1) Transport damage

Upon delivery of the machine, both the machine and accompanying equipment are immediately checked for visible signs of transport damage. If a machine and/or equipment with transport damage is received, it is important that an objection is immediately made to the condition of the shipment, **and that the receipt is signed off with reservations!**

NOTICE

If it is not noted that the item is damaged or is received with reservations, it is received as undamaged upon delivery, and all compensation claims are waived.

GreenTec is not liable for damages incurred during transport. The carrier, on the other hand, is liable for damages.

Contact your dealer immediately if damaged goods have been received, or if the shipment is rejected because it is damaged.

5.4) Instructions for mounting, connection and disconnection (j)

Initial mounting and connection of the machine should always be carried out by the dealer with the necessary knowledge and experience!

When the Tiger rotary mower is mounted to the tractor for the first time, in some cases it may be necessary to make further adjustments, especially the position of the front hitch and PTO in relation to the tractor - this should also be carried out at the dealer of the machine.

See section: Preparing the machine for use – page 35-40.

DANGER

- **The instructions for the machine must be completely understood before any attempts are made to mount, connect, or use the machine. If in doubt, contact the dealer of the machine!**
- **The tractor must meet the power requirement of the implement.**
- **Turn off the tractor and remove the keys whilst you are not in the cab.**
- **Lowering the machine can cause severe crush injuries.**
- **To prevent accidents, instruct persons to leave the danger zone.**
- **Do not stand between the tractor and the machine when hitching up.**

WARNING

When mounting the Tiger rotary mower it is every operator's own responsibility to ensure that the vehicle and the machine meet the applicable requirements and relevant directives for this!

5.4.1) Mounting (i)

Couple the mower's semi-mounted drawbar to the tractor's rear link arms. Once securely attached, raise the machine to take the weight off the stand legs. Then raise the stands up out of the way and secure each with its respective pin.

⚠ WARNING

Ensure jack stands are raised and secured out of the way before moving.

5.4.2) First Connection of the Input PTO Shaft

It is essential that the input PTO shaft has sufficient free movement of travel to ensure that it doesn't 'bottom out' when on full turn.

Failure to observe the correct free movement of the PTO shaft will cause irreparable damage to the PTO.

To ensure the PTO length is correct, first position the tractor and mower aligned in a straight line. Fit the shaft correctly to the tractor power take-off and then ensure you have a minimum of 260mm free movement, as demonstrated in figure 6.

On many tractors, this may be closer to 280mm or even 300mm. This can be determined by ensuring there is sufficient free travel to allow the rotary mower and tractor to be turned as required without the telescopic input cover exceeding and going over the red marker.

Figure 6 - Input PTO Minimum Free Travel – 260mm

Next, attach the PTO guard safety chain to a fixed point on the tractor, allowing slack in the chain for the driveline to flex.

⚠ WARNING

Failure to observe the correct free movement of the PTO shaft will cause irreparable damage.

Never allow the telescopic shaft cover to move over the red line.

To achieve sufficient free movement of travel of the input PTO shaft, the relationship between the semi-mounted hitch assembly (black) and the mower headstock (grey) can be adjusted.

This relationship is set by sliding the hitch assembly (black) forward or backwards, selecting the correct holes in the mower headstock (grey), as demonstrated in figure 7.

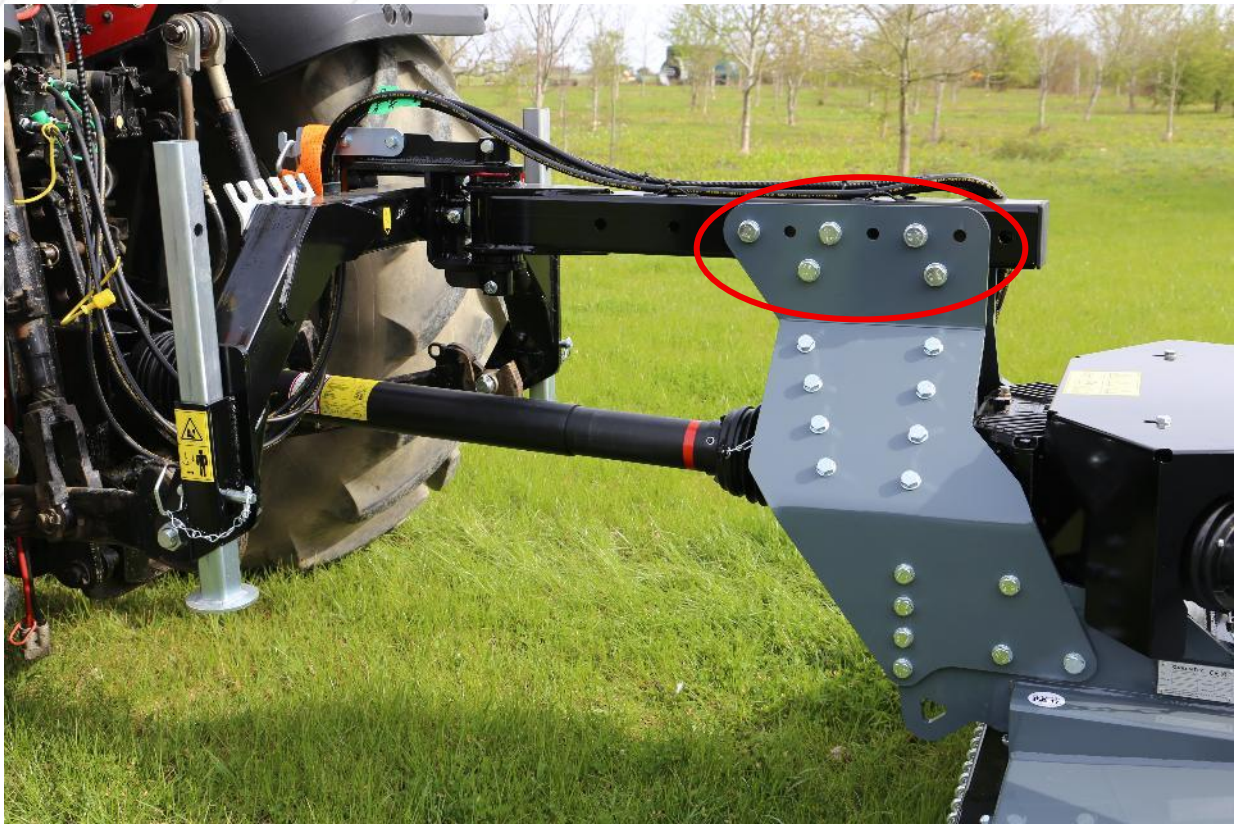


Figure 7 - Position of the hitch assembly (black) and bolts used to adjust the position in relation to the headstock (grey).

To adjust this relationship, first lower the machine completely to the floor. Using gentle adjustment of the tractor's link arms, you can then release weight off the top headstock bolts. Next, remove the top three bolts located on the top of the grey headstock, and loosen the two lower bolts indicated in figure 7.

Once in this position, gently move the tractor forward or backwards until the desired free movement of the PTO is achieved. Then replace all bolts and tighten.

⚠ DANGER

It is essential that you never leave the tractor with the engine running.

It is essential that you seek assistance whilst observing safe distances.

This is an adjustment that is typically only needed for the initial setup on a specific tractor; however, be mindful that when changing tractors, the amount of free movement may have changed, and further adjustment may be necessary.

5.4.3) Hydraulic Connection

Connect the hydraulic hoses, ensuring that the matching colour cable-tied hoses are on the same spool valve, as shown in figure 10, to prevent damage to the system. Both pairs of hoses must be attached to double-acting services.

The green cable-tied hoses mark the folding rams, and the yellow cable-tied hoses mark the axle height ram.

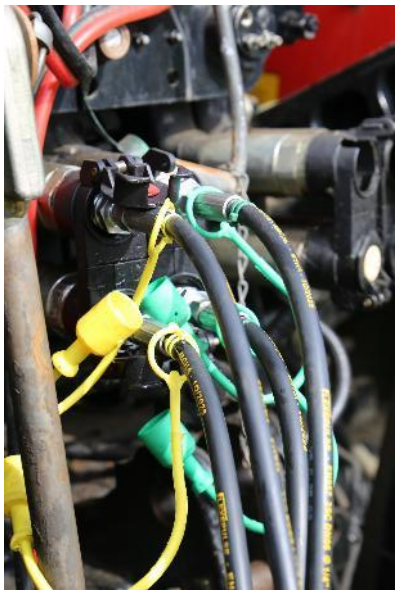


Figure 8 - Hydraulic Hose Spools

5.4.4) Disconnection (i)

Before removing the hydraulics, ensure all pressure has been dumped from the system and all hydraulic rams are sat on the stops. Once removed, put the dust caps on each hose to prolong their service life then place them in the hydraulic hose holder.

Once the tractor engine has been turned off, to unhitch the machine simply lower the stands, ensuring the red stop is engaged on the central height ram and then lower the lower link arms to allow the weight to be carried by the linkage stands.

Then remove the link arms and the PTO shaft.

⚠ DANGER

Never remove the PTO shaft while the tractor is running.

Ensure that the mower is secure and cannot roll before disconnecting.

Ensure jack stands are engaged before lowering and unhitching the mower from the tractor.

5.4) Preparing the machine for use (e)

After complete mounting and connection of the attachment tool to the tool carrier/vehicle, the following procedures in this section are carried out before putting the machine into use:

5.4.1) Procedures before start-up and use

The operator of the machine must always have read and understood the instruction material, for both vehicle, tool carrier and the attachment tool in use!

Before start-up and use, be sure to have reviewed all points, instructions and procedures in the following sections of this instruction manual:

- Safety – page 14-22.
- Instructions for using the machine – page 29-30.
- Instructions for mouning – page 31-34.
- Daily and routine inspections - page 43-46.

5.4.2) Training of machine operators before use

The operator of a vehicle with a Tiger rotary mower mounted must review and understand both the instruction material for the Tiger rotary mower as well as the instruction material for the tractor used, before putting the machine into use.

The operator must be competent and fully capable of working with this machine in a safe and efficient manner before using it.

⚠ DANGER

The instructions must be completely understood before attempting to mount, connect or use the machine.

If there is any doubt, contact the dealer or GreenTec's After-sales service!

GreenTec offers paid commissioning at the customer's place when purchasing a machine!

5.4.3) Operator's workplace (f)

The operator must take breaks if this is deemed necessary and be aware of the strain from the working position.

It is important that the operator can follow and control the work of the equipment, while at the same time being aware of the course of the road, traffic conditions etc.

It is many things at once, and often with a twist on the back and/or neck. In the long term, this can put a strain on the body's musculoskeletal system, and it is therefore recommended to take appropriate breaks as needed during use.

Know and understand the operation of both the vehicle and the rotary mower, in order to control the machine safely. The assembled machinery must be operated so that it is controlled in the most appropriate way, according to their instruction material.
The operator's workplace is always the vehicle's cab, where the rotary mower can be controlled.

5.4.4) Operation Warnings

Read and fully understand this manual and how to operate the machine before using.

Before starting up the machine and beginning work, check the immediate surroundings, particularly for children. Make sure the visibility is adequate. Clear any persons or animals from the danger zone.

Thrown debris can be a risk, therefore, the rear window of the tractor should be closed at all times during operation.

Inspect the working area for foreign objects, i.e. rocks, wire.

Ensure blades don't come into contact with the ground through the working height being set too low.

When backing up, the transport wheels should be engaged to raise the machine out of work.

Regulate forward speed in relation to the thickness of the residue to prevent overloading the clutches.

If on undulating or uneven terrain, slow down to prevent damage to the machine or tractor.

Never operate the machine above the recommended PTO speed of 1000rpm. Otherwise, damage will be caused to the gearbox and motors with potentially taking the blades out of balance, reducing machine life.

Always slowly engage the PTO to prevent damage to the motors at low revs.

If serious vibration occurs, stop immediately and check for damage on the blades. **Ensure blades have stopped moving and the tractor has been switched off before approaching the machine.**

Only start the machine when out of work, i.e. with the axle lift rams fully extended.

5.4.5) Machine Level

Before using the machine, it must be adjusted to the correct level. This should be carried out on flat level ground.

The first step is to look at how the machine is currently sat. The ideal setup for the machine would be for the front of the side skid to be 20mm higher than the rear of the skid.

Lower the wings and select float on the tractor's hydraulics to allow the wings to be in the float position.

Figure 9 – Tiger axle ram

On the height cylinder, located centrally to the axle frame, disengage the height stops between the cylinder and the yellow stop as shown in figure 9. This yellow stop indicates the recommended cutting height.

The optimal working position can be achieved by lowering the tractors link arms which will alter the pitch of the mower from front to back. The optimal working position is for the front of the side skid to be 20mm higher than the rear of the skid.

Once the pitch of the machine has been set, the final adjustment is made on the wing axle turnbuckles, shown in figure 10.

By lengthening or shortening the turnbuckles, the evenness of the cut across the machine from left to right can be adjusted. For instance, if the left rotor is cutting closer than the centre rotor, the left axle turnbuckle should be lengthened. Equally, if the cut is too high, the turnbuckle should be shortened. This procedure is the same for the right-hand side.

Figure 10 – Axle turnbuckle

5.4.6) Field Settings

In the field, set the machine into the work position with both wings down and the wing cylinders hydraulics set to float.

Fully extend the axle cylinder and remove the cylinder stops from the cylinder end to the yellow stop, leaving the yellow stop engaged as shown in figure 11. Ensure that stops are removed in a sequential order from the cylinder end to avoid damage to the ram.

Figure 11 – Recommended cutting height

⚠ WARNING

Spacers must be taken from the cylinder end to prevent damage.

Cutting near minimum height could cause scalping on the ground and damage to the blades especially on uneven ground.

This axle cylinder is the first stage of adjustment for controlling the cutting height of the machine.

Further adjustment is achieved by gently raising and lowering the tractors link arms, which is particularly useful during operation when adapting the cut dependent on changes in residue. When coming into a dense rough area, the link arms can be raised to avoid damaging the machine and scalping the ground, and likewise the link arms can be lowered to return to the optimal working height.

Please remember the front of the machine should be set slightly higher than the rear of the machine for optimal operation – see page 37.

The higher the cut required, the more cylinder stops will be engaged. Likewise, the lower the cut required, the fewer cylinder stops will be engaged. It is recommended that once the operator is happy with the preliminary setup, to proceed forward 50 yards, stop the tractor, disengage the driveline and check the cutting height across the width of the machine.

5.4.7) Operating the machine

When mowing, always ensure the wing rams can float to allow the machine to follow the ground contours.

For on-the-go height adjustment, raise or lower the tractor's link arms to alter the cut or adapt to residue on the move.

Care must always be taken when turning, ensuring the turn isn't so sharp that the tractor wheels collide with the machine.

Be aware when turning on a tight radius that the input PTO shaft does not 'bottom out' – see pages 32-33 for the correct PTO setting.

5.4.8) Moving to transport position

First ensure the PTO drive is turned off and that the blades have stopped spinning.

Fully extend the height ram and then fold the wings up fully. Ensure both wing rams are fully closed.

Then place the retaining strap and tighten securely. At the same time, locate the red transport stop on the axle height cylinder – see figure 13.

Once returned to the cab, lower the weight onto the axle height cylinder to the orange transport stop. This ensures that the wing wheels are within the width of the machine for safe transport.

When travelling on public highways, the electrics plug must be plugged into the tractor, and all lights on the machine should be checked to ensure they work and are undamaged.

Figure 12 - Transport position with retaining strap (Tiger 725 shown)

Figure 13 - Axle cylinder, transport position

⚠ DANGER

Always use the retaining strap before transporting anywhere.

5.4.9) Moving to work position

Firstly, extend the axle height cylinder, remove the wing retaining strap and select the recommended yellow cutting height stop.

Then lower the wings to the ground, ensuring wing cylinders are set to float.

5.4.10) Engaging drive

Ensure the machine is set to 1000 rpm PTO and the tractor RPM is low.

Slowly increase the RPM of the tractor up to the required RPM for 1000 rpm at the PTO.

Never engage the PTO while there are persons in the vicinity of the machine.

Once the drive is engaged, it is only then that you lower the machine onto the cylinder stop and lower the link arms to achieve the desired pitch of the machine. It is essential that the link arms are set on position control.

5.4.11) Disengaging drive

Decrease engine RPM to a high idle.

Disengage the PTO drive.

It will take a while for the blades to stop spinning so do not leave the cab until the PTO and blades have stopped spinning and the engine is stopped.

5.4.12) Machine protection

To prevent any damage to the gearbox, slip clutches are fitted on all three/five of the driveshafts. The clutch settings should not be changed without fully understanding the setting of them. If overtightened this could prevent the clutch slipping and subsequently cause damage to the gearbox and all drivelines. Modifying the slip clutch setting beyond that of the recommended setting will invalidate the warranty.

If the machine has been stored for a length of time then it is possible for the plates to seize together. **Serious damage could be caused due to the plates seizing together.**

To prevent damage, slacken off all of the pressure spring bolts, then run the machine up and try to cause the plates to slip for a short period. Then retighten the bolts to the correct setting.

If unsure, then contact your dealer Service Department for advice.

6) Inspection and Maintenance (e, r)

To ensure a long working life of the machine, good and careful inspection and maintenance is required.

Remember that the machine is designed to withstand the harshest conditions, and that with a little care and attention it will be able to give you many years of trouble-free operation.

To avoid problems and ensure that the warranty covers, always use original GreenTec spare parts and make sure that the machine is not used for anything other than described in this user manual.

The owner or operator must ensure that the machine is only used, maintained, inspected, and repaired by persons who are familiar with the procedures associated with it and are instructed in the associated dangers.

If doubts arise in connection with some of the procedures mentioned, contact an authorized specialist workshop or importer/retailer (See: www.greentec.eu)

Repair work that is not described in the user manual may only be carried out by authorized specialist workshops.

IGNORING ONE OR MORE OF THE SAFETY INSTRUCTIONS MAY MEAN:

⚠ DANGER — **Great danger to people due to mechanical and chemical influences!**

⚠ WARNING — Danger to the environment due to leakage of hydraulic oil! Damage and defects to the machine or the towing vehicle!

NOTICE — The warranty on the machine is void if one or more of the safety instructions are disregarded.

GreenTec is not liable for compensation claims for damages caused by incorrect use of the machine and incorrect connection or connected equipment, or by incorrect maintenance of the machine!

6.1) Instructions for safe maintenance and adjustment (s)

To avoid accidents during maintenance and adjustment, the following points must always be observed:

DANGER

All work on the machine must only be done when the machine is stopped, the vehicle is switched off, the handbrake is applied, and the key is removed from the ignition lock on the vehicle!

Do not approach the machine until the blades have stopped turning!

Before working on the machine, ensure the machine is held on the stops and the locking strap is in place if folded. Never work on a machine held by hydraulics only.

When working under the machine, always ensure there are additional props or stands underneath the machine for safety.

Only use suitable tools and use the prescribed personal protective equipment prescribed in this user manual!

Great care should be taken when working with the machines, as there is a danger of fingers and hands being trapped by e.g. drive belts, pulleys, blade blades, rotors, guards etc.!

WARNING

Immediately after finishing maintenance work, all safety and protective devices etc. mounted and activated again! During maintenance, you can often come into contact with hydraulic oil, gearbox oil and grease. Always avoid skin contact, inhalation, etc.!

Always use the correct protective equipment and use the safety data sheets for these!

ALWAYS dispose of oil and grease in a regulatory and environmentally sound manner!

6.2) Daily and routine inspections (e)

To avoid accidents during maintenance and adjustment, the following points must always be observed:

⚠CAUTION

Before starting up the machine, a daily inspection should be carried out before starting up, after one hour and then after **3-5 operating hours.** After this, a daily inspection after using the machine is sufficient, combined with a six-monthly inspection of the machine! (**Every 6 months**)

At the beginning of the machine's service life, extra attention should be paid to the tightening of bolts, shielding and any belt tension on attachment tools.

NOTICE

Always remember to check the entire machinery, vehicle and machine. It is important that the operator knows the machines and carries out the daily and routine inspections necessary for the vehicle, the tool carrier and the attachment tools used.

For correct inspection and maintenance, the instruction manuals for the respective machines must be used at all times. (Vehicle and machine) Always be safe in the daily routines and inspection of machines!

6.2.1) Initial Checks

The following checks are imperative to safe operation of the machine, and to prevent invalidating the warranty.

These must be done before the first operation, after one hour, and then after 3-5 hours of use.

1. Check wheel nuts are tight.
2. Check the tyre pressure is 45 psi.
3. Check drive shaft retaining bolts are tight.
4. Complete machine greasing.
5. After the first 50 hours, and after every 500 hours thereafter, drain and replace the gearbox oils. Use EP90 gear oil.
6. Check all other nuts and bolts and ensure they are tight.
7. Check there is no debris wrapped around the blade holders, i.e. string or wire. Failure to observe this would quickly lead to damaged oil seals and catastrophic gearbox failure.

6.2.2) Daily Checks

Daily inspection is always carried out after the first 3-5 operating hours. All points MUST be reviewed! Thereafter, a daily inspection is carried out each time the machine is used:

DAILY INSPECTION OF THE MACHINE:	
1. General overall impression of the machine:	Possible damage and/or errors must be corrected immediately.
2. Check the condition of the blades and their retaining bush:	Ensure there is no slack and blade carrier bolts are tight.
3. Check there is no debris, i.e. string or wire around the blade holders.	Failure to observe this would quickly lead to damaged oil seals and catastrophic gearbox failure.
4. Check wheel nuts are tight.	
5. Check tyre pressures:	45 psi
6. Check the condition of all pins and bushes:	Excessive wear must be repaired
7. Intact guards/shielding, incl. rubber flaps on attachment tools + belt housing:	All forms of guards/shielding must be intact.
8. Cracks in the frame's sides, corners and around the mounting points:	Also look for dents and/or bent parts.
9. Loose parts or missing bolts:	Retighten all bolts! (See section: Tightening of bolts – page 46-47)
10. Check gearbox oil level:	Refill with EP90 gear oil to the correct level where necessary
11. Ensure all product logos and instruction signs are undamaged:	Replace any damaged items immediately
12. Inspect the hydraulic system for leaks:	Check all hydraulic hoses incl. fittings + motor, flow divider etc. (See section: Tightening of hydraulic hoses- and fittings – page 47-48)
13. Check all road lighting and marker boards are correct and working.	
14. Check hydraulic hoses and hose protection for correct guidance:	Check for wear marks and/or displaced hose protection. (See section: Hydraulic hoses – page 48-49)
15. Lubrication of the entire machine:	If any, best done after finished work, as the components on the machine are hot here and possible water/moisture is thereby pressed out of e.g. bearings, bushings etc. (See section: Daily & 8 Hourly Lubrication – page 45)

Table 10 - Checklist for daily inspections: Before and after commissioning

6.2.3) Daily Lubrication

The following grease points should be greased daily for the safe operation of the machine, and to prevent invalidating the warranty.

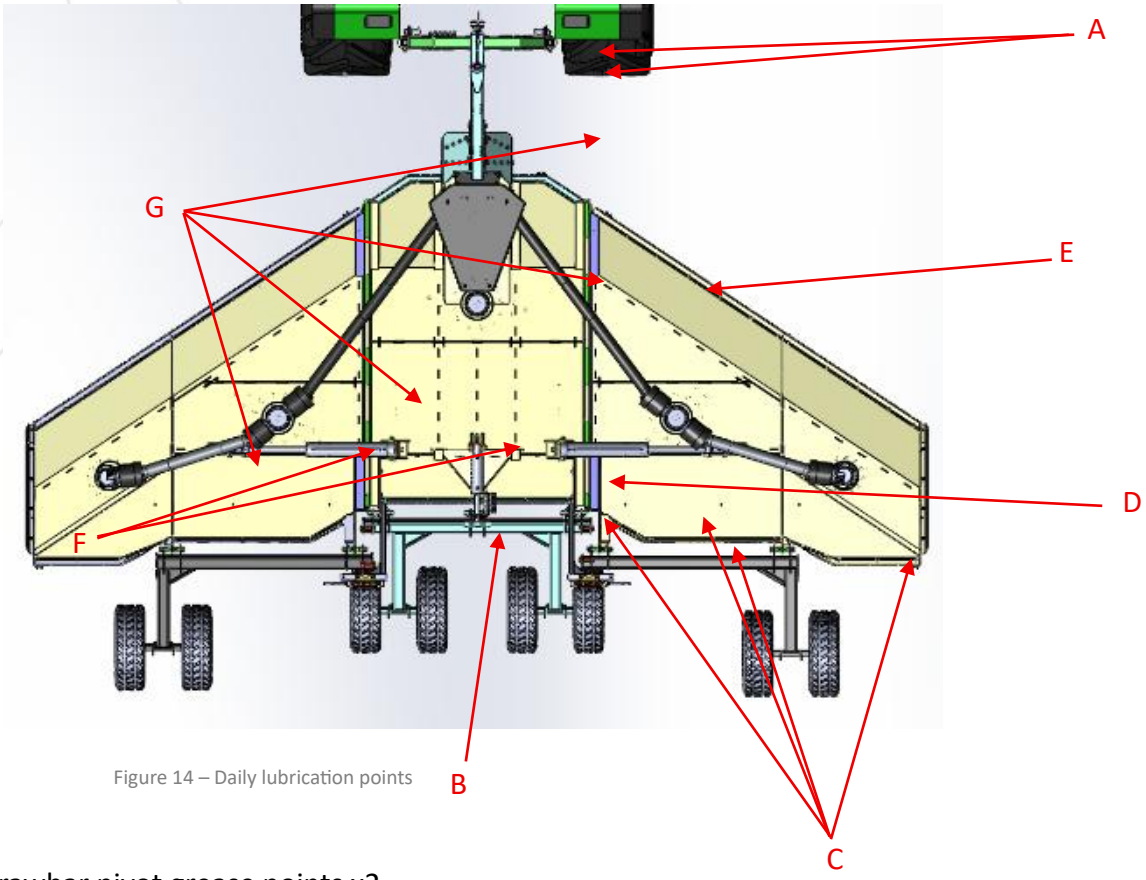


Figure 14 – Daily lubrication points

A – Drawbar pivot grease points x2

B – Axle Swivel Link grease points x2

C – Axle Pivot points x 7

D – Axle Ram grease points x2

E – Telescopic Shaft grease points x3

F – Wing Fold Ram grease points x4

G – Drive Shafts w/ slip clutch x4 (510) x6 (725)

6.2.4) Every 50 Hours Lubrication

Take apart and clean the input PTO shaft before re-greasing the sliding surfaces and reassembling. See PTO manufacturers information stickers for more information.

Grease all universal joints on all PTO shafts.

Grease the wing drive shaft tubes using the access points

Grease the input PTO inner tube and collar.

Grease the driveshaft covers where appropriate.

6.2.5) Semi-annual inspections

Semi-annual inspection is always carried out every 6 months. All points MUST be reviewed!

Thereafter, a daily inspection is carried out each time the machine is used:

SEMI-ANNUAL INSPECTION OF THE MACHINE:	
1. General review of machinery:	Do a careful daily inspection. Cleaning and maintenance/lubrication so that general maintenance is minimized. (See Table 9 - page 44)
2. Clean the entire machine of loose branches and dirt:	Wash and then lubricate the machine with anti-corrosion oil/grease where this is relevant. Especially on worn areas/parts of the machine! (See section: Cleaning the machine – page 50)
3. Carefully check the condition of all hydraulic hoses:	Be aware that hoses do not rub against edges, flanges, bolts and the like. Hose protections are correctly fitted so that the hoses are always protected as best as possible. (See section: Hydraulic hoses – page 48)
4. Examine all bearings, and possibly shafts, rivets and bushings on the machine:	(See section: Bearing, shafts, rivets and bushings – page 50)
5. Store the machine well protected and dry:	Protect especially the hydraulic couplings on the attachment tool and tool carrier, and possibly bearings on work equipment against continuous rain, moisture, and temperature fluctuations. (See section: Storage of the machine – page 52)

Table 11 - Checklist for semi-annual inspection: preventive maintenance

6.3) Tightening of bolts and hydraulic connections

6.3.1) Tightening of bolts

All bolts and nuts on the machine are provided with quality class marking. Ordinary machine steel bolts have quality class 8.8: bolts marked with 8.8, and nuts marked with 8.

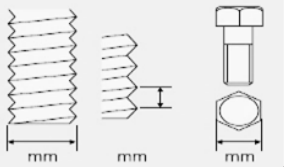
Hardened steel bolts may be marked 10.9 or 12.9: bolts marked 10.9 or 12.9, and nuts marked 10 or 12.

Individual bolts and nuts have no markings: these are always ordinary steel bolts and/or nuts in quality class 8.8 / 8.

Bolts / steel set screws

Below are the nominal tightening torques for steel bolts/set screws (ISO 4014/ISO 4017 standard).

TIGHTENING OF BOLTS:

			Regular steel bolts/set screws (Strength class 8.8) *	Hardened steel bolts/set screws (Strength class 10.9) *	Hardened steel bolts/set screws (Strength class 12.9) *
mm	mm	mm			
M6	1,00	10	9,8 Nm (7.23 lbf·ft)	14,0 Nm (10.33 lbf·ft)	17,0 Nm (12.54 lbf·ft)
M8	1,25	13	24,0 Nm (17.70 lbf·ft)	33,0 Nm (24.34 lbf·ft)	40,0 Nm (29.50 lbf·ft)
M10	1,50	16	47,0 Nm (34.67 lbf·ft)	65,0 Nm (47.94 lbf·ft)	79,0 Nm (58.27 lbf·ft)
M12	1,75	18	81,0 Nm (59.74 lbf·ft)	114,0 Nm (84.08 lbf·ft)	136,0 Nm (100.30 lbf·ft)
M14	2,00	21	128,0 Nm (94.40 lbf·ft)	181,0 Nm (133.50 lbf·ft)	217,0 Nm (160.05 lbf·ft)
M16	2,00	24	197,0 Nm (145.30 lbf·ft)	277,0 Nm (204.30 lbf·ft)	333,0 Nm (245.60 lbf·ft)
M18	2,50	27	275,0 Nm (202.83 lbf·ft)	386,0 Nm (284.70 lbf·ft)	463,0 Nm (341.50 lbf·ft)
M20	2,50	30	385,0 Nm (283.96 lbf·ft)	541,0 Nm (399.00 lbf·ft)	649,0 Nm (478.70 lbf·ft)
M22	2,50	34	518,0 Nm (382.06 lbf·ft)	728,0 Nm (536.90 lbf·ft)	874,0 Nm (644.60 lbf·ft)
M24	3,00	36	635,0 Nm (468.35 lbf·ft)	935,0 Nm (689.60 lbf·ft)	1120,0 Nm (826.00 lbf·ft)

* *Indicative values: Bolts and steel set screws (± 5%)*

Table 12 - Tightening torques for bolts

6.3.2) Tightening of hydraulic hoses- and fittings

The hydraulic hoses and fittings used on the Tiger are all produced with BSP threads.

Hydraulic hoses and fittings

TENSIONING OF HYDRAULIC HOSES AND FITTINGS (BSP):

Size:	Dash Size:	Tightening torque (Nm): *
1/4"	-04	25,0 – 28,0 Nm (18.44 – 20.65 lbf·ft)
3/8"	-06	41,0 – 48,0 Nm (30.24 – 35.40 lbf·ft)
1/2"	-08	72,0 – 82,0 Nm (53.10 – 60.48 lbf·ft)
5/8"	-10	96,0 – 110,0 Nm (70.81 - 81.13 lbf·ft)
3/4"	-12	124,0 – 137,0 Nm (91.46 – 101.05 lbf·ft)
1"	-16	151,0 – 165,0 Nm (111.37 – 121.70 lbf·ft)
1 1/4"	-20	192,0 – 206,0 Nm (141.61 – 151.94 lbf·ft)

* *Indicative values: Hydraulic connections (± 5%)*

Table 13 - Tightening torques for hydraulic hoses and fittings

6.4) Hydraulic hoses

⚠ WARNING

When inspecting hydraulic hoses, any damage/defect must be rectified immediately. When searching for leaks, due to the danger, suitable aids must be used: protective glasses, work gloves + a piece of cardboard that quickly reveals a leak!

Thin jets of hydraulic oil under high pressure can penetrate the skin and cause serious injuries! In the event of injuries of this nature, seek immediate medical attention: **DANGER OF INFECTION!**

Check the condition of all hoses at regular inspections. Pay particular attention that they do not rub against edges, flanges, bolts etc., and that the stocking is correctly fitted, so that the hoses are always protected as best as possible.

Check all hydraulic hoses and fittings daily. Any damage or leakage must be repaired immediately. Hoses with damage/defects must be replaced.

GreenTec's hydraulic systems work at a very high pressure: from approx. 200 bar up to 320 bar (2900 – 4621 psi) Use only original hoses. A burst hose can be very dangerous!

When replacing hydraulic hoses, avoid twisting hoses and fittings.

- Use 2 spanners to loosen and tighten the hoses!
- Avoid over-tightening! (Correct tightening torques are given in the Table 12 – page 47-48)
- If fittings or screw connections continue to leak, these must be replaced!

⚠ WARNING

A flexible hose must not be twisted during installation, as this will significantly reduce the life of the hose and may cause the connections to loosen.
To determine if a hose is twisted or not, the specification line running the length of the hose must be straight. **If the specification line spirals around the hose, the hose is twisted:**

⚠WARNING

A flexible hose must never be stretched tightly between two fittings.
Approx. 5 to 8 percent of the total length should be allowed as slack to allow free movement under pressure. Under pressure, a flexible hose is compressed in length and expands in diameter.

NOTICE

The warranty of the hydraulic hoses is limited to the replacement of hoses due to defective material or manufacturing. The warranty for hydraulic hoses is void if:

- Hoses are damaged due to wear and tear.
- If the hoses have been cut or pinched during work.
- If threads etc. are damaged due to over-tightening.

6.5) Bearings, shafts, rivets, and bushings

6.5.1) Ball bearing

It is always recommended to carry out a regular monitoring of the operating conditions of the bearings on the main hitch pivot.

Elements that should be checked from the bearings regularly during operation of the machine include **noise, vibration, temperature** and **lubrication.**

In general, if bearings are used under correct specified conditions, they will survive for the full manufacturer's estimated service life (hours).

Bearings etc. most often fail as a result of errors that could have been avoided: incorrect assembly after replacement, handling or lubrication, ingress of foreign bodies or abnormal heat generation.

The bearings on the Tiger headstock located within the main pivot point must be greased.

⚠CAUTION

If sudden higher noise, vibration, or temperature level than normally perceived is experienced on the attachment tool, contact the dealer of the machine immediately!

6.6) Cleaning the machine

⚠CAUTION

Be careful when using high-pressure cleaner close to the paint!

Steam cleaners are used with great care around the machine's labels/stickers!

Avoid harsh cleaning agents to avoid discoloration or damage to the paint!

It is important to store the machine covered so that it is protected from rain and sunlight. It must be placed on a flat surface or pallet!

Make sure that when storing the machine, there is no risk of it tipping over or falling down. Make sure for a suitable storage location or support of the machine!

Lubricate the machine with anti-corrosion oil afterwards, especially on the worn parts, also on the blades, rotors and internal shields of the attachment tool. This minimizes the formation of rust and prolongs the shelf life significantly!

See section: 6.2.3) Daily lubrication and 6.2.4) Every 8 Hours Lubrication - page 45.

6.5) PTO Slip Clutch Maintenance

Slip clutches have an adjustable torque setting. The torque setting of the Bondioli & Pavesi friction clutches varies with different compression “h” of the Belleville spring.

The compression of the Belleville springs used on the friction clutches must be adjusted to compensate for wear of the friction linings and to maintain the desired setting.

It is imperative to check the condition of the slip clutches before use, especially after periods of storage.

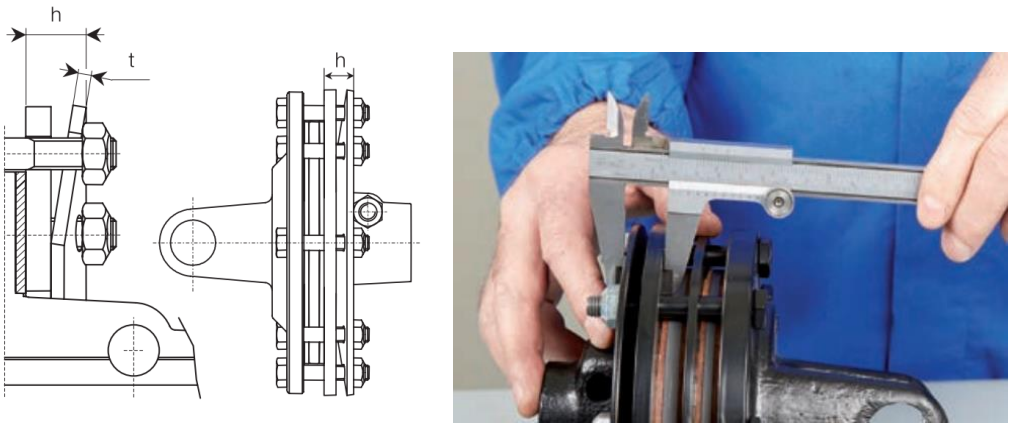


Figure 15 – Slip clutch setting diagram

Table 13 sets out the thicknesses and compression “h” measured as shown in figure 15 for standard settings.
The height of the spring is measured next to each bolt and may be ± 0.2mm of the listed value.

Slip Clutch Settings:

Driveshaft	No. of Plates	Diameter mm	t mm	Setting Nm	h mm
Centre Deck	2	202	4.25	1200	18.5
Wing Deck Inner	4	180	3.75	1450	17.75
Wing Deck Outer (725)	2	180	3.75	900	17.5

Table 14 - Slip clutch settings

6.6) Storage of the machine

Always store the machine so that it is protected from moisture, wind, and weather. Before putting the machine away for storage, it must be washed and dried carefully. Also remove all traces of leaves / branches and dirt.

⚠CAUTION

GreenTec's machines MUST be stored dry, due to the risk of water in bearings, bushings and possibly electrical parts.

NOTICE

Do not leave hydraulic hoses lying on the floor. They pose a tripping risk and there is a chance of contamination of hydraulic interconnections! Always lay all hoses over the machine/tool!

NOTICE

Always store work tools in a cleaned and dried condition! Dirt attracts moisture and will thus result in increased rust formation. Damage to the paint must be repaired immediately!

6.11) Disposal of machine/machine parts

NOTICE

To ensure the most environmentally sound disposal method, the machine/machine parts must be disassembled, and the disassembled parts sorted into the following categories below:

DISPOSAL OF MACHINE PARTS:	
Rubber and plastic parts	Belts, rubber curtains, support wheels, plastic components, etc.
Technical components	Motors, valve blocks, hydraulic hoses, etc.
Iron and Metal	Plates, profile pipes, tubes, bearing housings, knives, blades, pulleys, etc.
Chemistry	Hydraulic oil, grease etc.

Table 15 - Overview of the disposal/scrapping of machine parts

7) Troubleshooting the machine

7.1) Troubleshooting procedures

If the Tiger rotary mower does not work correctly, the source of the error must be located on the machine. Faulty conditions on the machinery can be isolated by examining the following:

1. Where on the machinery is there an error / faulty condition?

(Errors can occur on the **attachment tool**, on the **tool carrier** and/or on the **vehicle** used)

NOTICE

When troubleshooting the tool carrier and/or vehicle, refer to the instruction materials for these.

2. What type of error /faulty condition?

- Is the error / failure **mechanical**? (Error on the mechanical parts)
- Is the error / failure **hydraulic**? (Error on the hydraulic parts)
- Is the error / failure **electrical**? (Error on the tool carrier and/or the vehicle's electrical system)

TROUBLESHOOTING INDEX:

PROBLEM:	CAUSE:	SOLUTION:
Poor cutting quality	Worn blades.	Replace or sharpen blades.
	Driving too fast.	Reduce forward speed.
	Revolutions on blades too low.	Check and adjust Tractor RPM for 1000 rpm.
	Clutches slipping.	Replace slip clutches.
Abnormal vibration level	Damage to PTO shafts.	Check PTO's are undamaged and running true. Lubricate telescopic PTOs. Ensure blades have stopped turning before folding.
Excessive heat	Worn slip clutches.	Adjust or replace clutches.

Table 16 - Identifying error / faulty conditions

8) Appendix

8.1) Hydraulic diagrams

NOTICE

Contact GreenTec's Aftersales service department.

NOTES:

Made in Great Britain
Designed and manufactured

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