

# GreenTec LRS 2002



## HANDBOOK Instruction

UK

 **GREENTEC**

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*Cutting Edge Technology*

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# Important Information

## GreenTec LRS 2002

### HANDBOOK 6th Edition – May 2016

Please ensure that this manual is handed to the operator before using the machine for the first time. If the machine is resold the Handbook must be given to the new owner!

The information contained in this Handbook is correct at the time of publication. However, in the course of constant development, changes in specification are inevitable. Should you find the information given in this book different to the machine it relates to please contact the “After Sales Department” for advice



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GreenTec Machinery Limited 2016

GreenTec LRS 2002 Quadsaw

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# Introduction

Dear customer!

Your new Greentec machine is constructed with background in more than 20 years experience with tractor mounted machines to maintenance of green areas. This machine is produced by the latest technology and recognized safety regulations, standards and regulations.

We want to make a product available in such a way, that neither the use of the machine during transportation or maintenance of the machine causes any damage or misunderstandings.

This parts list contains information that are important and useful for maintaining your Greentec machine's reliability, dependability and value.

You are welcome to visit our website [www.greentec.eu](http://www.greentec.eu) - where the login via the dealer's access gives you the latest updates on instructional and part books on our entire product range. The password for dealer log-in: PUBLISHER

We hope, you will be pleased with your new Greentec machine.

Best regards,

A handwritten signature in blue ink, appearing to read "John Christensen".

John Christensen  
Sales Director Greentec A/S



**Greentec's** vision is to develop and sell quality machines for the maintenance of green areas, including in agriculture, in industry, at airports and in the local sector. Through innovative product development, we will strive to become a leader in our field.

All machines are developed in a simple and functional design in close cooperation with dealers and end users. It is our goal to cover every need in the market segment with preferably 2 different solutions. In-depth analysis of requirements and serious advice to the customer is offered the best solution, where individual needs can be met through the modularity of the product program.

Our goal is also to offer the best possible after sales service, and a quick and efficient spare parts supply.

# Important

Please ensure that this manual is handed to the operator before using the machine for the first time. The operator must fully understand the contents of this manual before using this machine.  
(If the machine is resold the Manual must be given to the new owner.)

Please, fill out the following information. It is practical information that is useable when ordering spare parts.

Serienumber: .....

Delivery date: .....

Dealer name: .....

Address: .....

.....

Tel. / e-mail .....

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Http: [www.greentec.eu](http://www.greentec.eu)

# General Information

Read this manual before fitting or operating the machine or accessory. Whenever any doubt exists contact your local dealer or the GreenTec Service Department for assistance.

**Only use 'Genuine GreenTec Parts' on GreenTec machinery and equipment.**

DEFINITIONS: *The following definitions apply throughout this manual;*

## **⚠ DANGER**

**DANGER:** *Alerts to a hazardous situation which will result in death or serious injury if not observed carefully.*

## **⚠ WARNING**

**WARNING:** *Alerts to a hazardous situation which could result in death or serious injury if not observed carefully.*

## **⚠ CAUTION**

**CAUTION:** *Alerts to a hazardous situation which could result in damage to the machine and/or equipment if not observed carefully.*

## **NOTICE**

**NOTICE:** *Specific or general information considered important or useful to emphasise.*

**LEFT HAND (LH) & RIGHT HAND (RH):** These terms are applicable to the machine when fitted to the tractor and viewed from the rear; these terms also apply to tractor references.

### **SERIAL PLATE**

All machines are equipped with a serial number plate containing important information relating to the machine including a unique serial number used for identification purposes.

**Note:** Images in this manual are provided for instruction and informational purposes only and may not show components in their entirety. In certain instances images may appear different to the actual machine; where this occurs the general procedure will be basically the same.



Merkurvej 25, DK-6000 Kolding, Denmark

## CE Declaration of Conformity

Adapted EEC directive  
EG Guideline 2006/42/EF, 89/392/EEC & 98/37/EC

We, **GreenTec A/S**, Merkurvej 25, 6000 Kolding, hereby declare that in terms of its design, method of construction and our execution thereof, the item of machinery described below complies with the basic health and safety regulations of the respective EU Directives. The Machinery Directive is supported by the following harmonized standards:

- DS/EN ISO 12100 3<sup>rd</sup> edition 2011. Safety of Machinery – General principles for design – Risk assessment and risk reduction.
- DS/EN 953+A1 4<sup>th</sup> edition 2010. Safety of Machinery – Guards-General requirements for the design and construction of fixed and movable guards.
- DS/EN ISO 4413 1<sup>th</sup> edition 2010. Hydraulic fluid power – General rules and safety requirements for systems and their components.

**Product:** Quadsaw LRS 2002  
**Product code:** 9992002L  
**Serial no:** 214824671  
**Type:** Quadsaw



The EC Declaration only applies if the machine stated above is used in accordance with the operating instructions.

on behalf of

Date: 26.09.2014

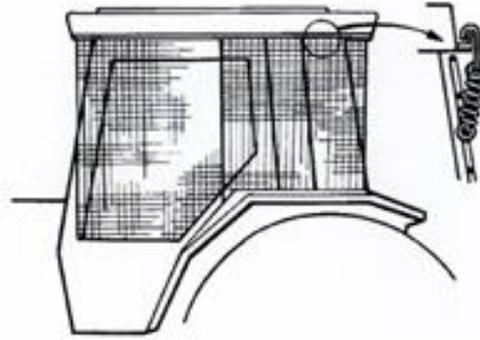
Signature: \_\_\_\_\_  


John Christensen Sales Director

**GreenTec LRS 2002 Quadsaw**

# VEHICLE / TRACTOR PREPARATION

We recommend vehicles are fitted with cabs using ‘safety glass’ windows and protective guarding when used with our machines. Fit Operator Guard (See drawing) using the hooks provided. Shape the mesh to cover all vulnerable areas. The driver must be looking through mesh and/or polycarbonate glazing when viewing the working tool in any working position - unless the vehicle/ cab



manufacturer can demonstrate that the penetration resistance is equivalent to, or higher than, that provided by mesh/polycarbonate glazing. If the tractor has a roll bar only, a frame must be made to carry both mesh and polycarbonate glazing. The operator should also use personal protective equipment to reduce the risk of serious injury such as; eye protection (mesh visor to EN1731 or safety glasses to EN166), hearing protection to EN352, safety helmet to EN297, gloves and high visibility clothing.

## Vehicle Ballast

It is imperative when attaching ‘third-party’ equipment to a vehicle that the maximum possible stability of the machine and vehicle combination is achieved – this can be accomplished by the utilisation of ‘ballast’ in order to counter-balance the additional equipment added.

## Front weights

May be required for rear mounted machines to place 15% of total outfit weight on the front axle for stable transport on the road and to reduce ‘crabbing’ due to the drag of the cutting unit when working on the ground.

## Rear weights

May be required to maintain a reasonable amount of rear axle load on the opposite wheel from the arms when in work; for normal off-ground work i.e. hedge cutting this should be 20% of rear axle weight or more for adequate control, and for ground work i.e. verge mowing with experienced operators, this can be reduced to 10%.

All factors must be addressed in order to match the type and nature of the equipment added to the circumstances under which it will be used – in the instance of Power Arm hedgecutters it must be remembered that the machines centre of gravity during work will be constantly moving and will differ from that during transport mode, therefore balance becomes critical.

## **Factors that affect stability**

- Centre of gravity of the tractor/machine combination.
- Geometric conditions, e.g. position of the cutting head and ballast.
- Weight, track width and wheelbase of the tractor.
- Acceleration, braking, turning and the relative position of the cutting head during these operations.
- Ground conditions, e.g. slope, grip, load capability of the soil/surface.
- Rigidity of implement mounting.

## **Suggestions to increase stability**

- Increasing rear wheel track; a vehicle with a wider wheel track is more stable.
- Ballasting the wheel; it is preferable to use external weights but liquid can be added to around 75% of the tyre volume – water with anti-freeze or the heavier Calcium Chloride alternative can be used.
- Addition of weights – care should be taken in selecting the location of the weights to ensure they are added to a position that offers the greatest advantage.
- Front axle locking (check with tractor manufacturer).

**NOTE: The advice above is offered as a guide for stability only and is not a guide to vehicle strength. It is recommended that you consult your vehicle manufacturer or local dealer to obtain specific advice on this subject, additionally advice should be sought from a tyre specialist with regard to tyre pressures and ratings suitable for the type and nature of the machine you intend to fit.**

# Mounting the Quadsaw

- The blades **MUST** be mounted in a downward cut rotation. Mount the blades so they are cutting down (Must run same way as the tractor) (Fig. 1).
- Mount the Quadsaw so the blades are running in the driving direction (Fig. 2).

Mount the hydraulic hoses so the blades are running in correct direction. Separate drainage hose (max 1,5 bar) must be led directly to the oil reservoir.

Also separate, the Return hose must be led directly to the oil reservoir (max 15 bar)

- Check for oil leak.
- First time the machine is used, measure the blade rpm. LRS 2002 (3000 – 3200 rpm). Maintaining this speed is important for the best optimum performance.

**⚠ WARNING** Never use the machine with broken or missing sawblades.

**⚠ WARNING** Blades must be mounted in a downward cutting rotation only.

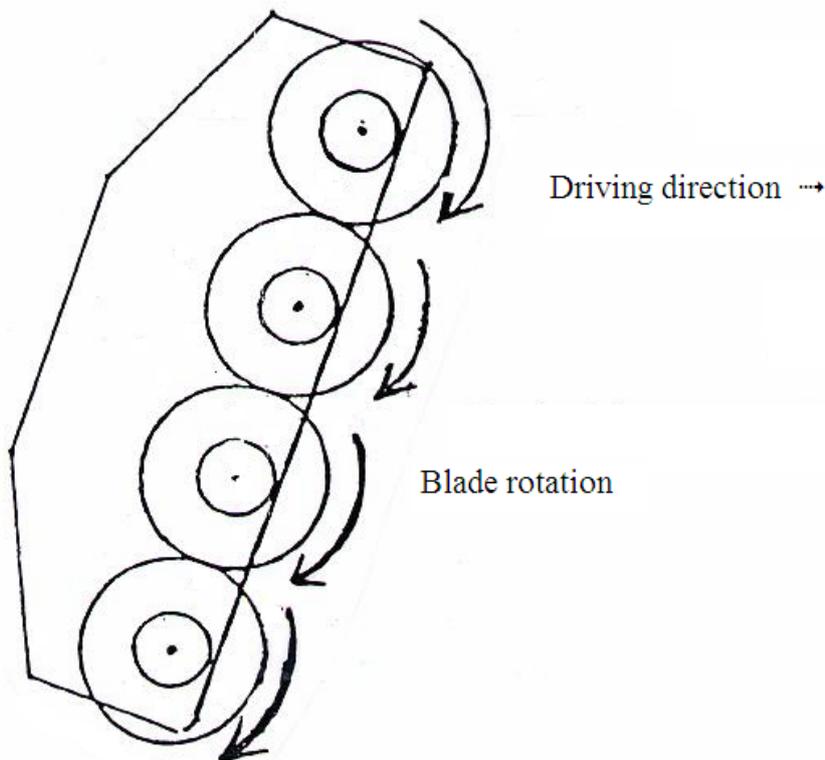


Fig. 1 Blade rotation

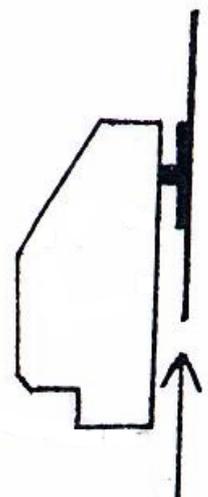


Fig. 2 Driving direction

**⚠ WARNING**

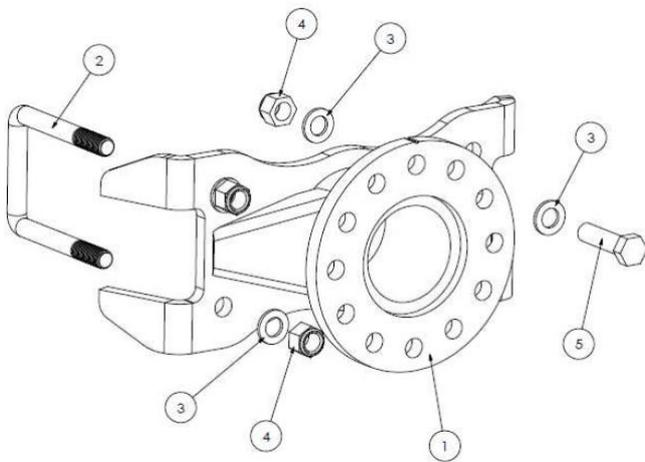
Attachment of the machine must be performed in a safe location on a firm level site. Care should be adopted at all times when handling or manoeuvring the machine during the attachment procedure; ensure all persons remain clear of the cutting blades which possess the potential to cause injury even when stationary. For reasons of safety the blade guard should be fitted to machine at all times and only removed for machine operation.

**⚠ DANGER**

**Never use the machine on a vehicle that is unstable or unsuitable.**

### Attachment to Armsystem or Mounting Carrige

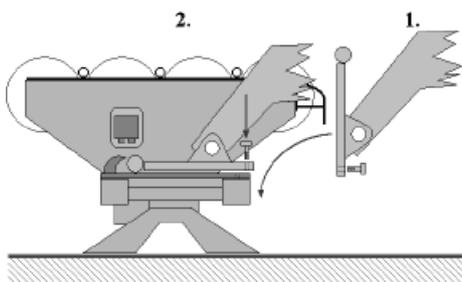
Can be attached to Arm-system with a clamp bracket. Nuts should be torqued 200 Nm. Spearhead Twiga & GreenTec HXF 2802, 3300 & 3302 are all specially designed to carry the Quadsaw. The HXF is a mounting carriage designed for attaching Quadsaws to Tractor loaders and Telehandlers.



features a reach of approximately 2,0-2.5 metres, 180° manual folding system, and hydraulic collision safety. The overall weight of the unit, without tools, is 180-225kg. If necessary, suitable ballasting should be fitted to the vehicle to ensure the unit remains stable and balanced in all working positions under all conditions.

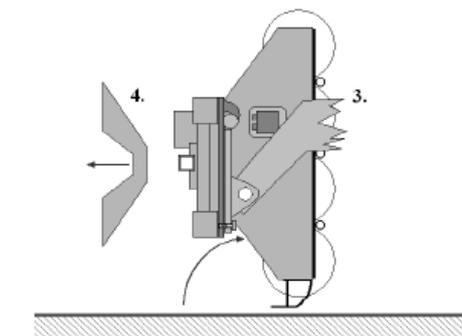
The Spearhead Twiga system features a reach of approximately 4,5-9,0 metres, hydraulic folding system, and hydraulic collision safety. The overall weight of the unit, without tools, is 1100-1750 kg. If necessary, suitable ballasting should be fitted to the vehicle to ensure the unit remains stable and

balanced in all working positions under all conditions.



1. Drive up to the machine, tilt attachment bracket into the horizontal position.

2. Locate attachment bar into hooks and secure latches.



3. Tilt bracket backwards 90°.

4. Detach supporting legs (only some models)

## Operation / Introduction

The Quadsaw is used for cutting branches and trees up to a max. diameter of 160 mm.

Branches thicker than 80 mm must be cut one of the time.

Vertical cutting is allowed up to a 45 degree angle. Horizontal cutting is possible on hedges with a width up to 1.2 m and a branch diameter up to 50 mm. thicker branches might stop the blades and get stuck in the machine.

It is recommended that forward speed is kept to a minimum when starting work in order to retain the correct working speed of the blades. Set the angle of the Quadsaw so it is positioned at right angles to the work and adjust the machine position so the branches meet the saw blades 'straight on'.

Wherever possible try to keep the blades running vertical in relation to the direction of travel, this will help prevent them from 'distorting' during operations.

Should small branches, debris or unwanted material get stuck in the blades the **machine and tractor must be switched off** and the starting key removed before attempting to clear the blockage. If necessary, remove the belt cover to gain better access to the blockage; replace cover immediately before starting or using the machine.

### WARNING

Never run the machine without beltcover mounted.

### WARNING

Great care must taken when attempting to clear debris from the blade and/or belt area of the machine; sharp components and numerous pinch risk points exist in these locations. Safety gloves and safety eyewear should be worn and wherever possible the use a suitable tool should be used to remove any debris to ensure hands and fingers are kept clear of any risk areas.

### DANGER

Never use the machine as a stationary saw for making firewood.

### DANGER

Never use the machine as a crane.

- When in charge of the machine always obey the following rules;
- Always inspect the work area prior to operation and remove any dangerous materials.
- Never operate the machine with persons or animals in close proximity.
- Ensure all cab guarding is in place and the tractor windows are kept shut.
- Only operate the machine at the correct blade speed.
- Never transport the machine without the blade protection guards fitted.
- Never approach the machine when it is running, always switch it off and stop the tractor.
- Always remove the vehicle ignition key before leaving the cab.
- Never use the machine to perform tasks it was not designed for.
- Always lower the machine to rest on the ground with blade protection guards fitted when the unit is parked up or not in use.

## Driving recommendations

It is recommended to travel at a slow forward speed when starting work in order to obtain and keep the recommended rpm of the blades. Adjust the angle of the saw to approx 90 degrees in relation to the branches. If a thick branch is approaching the branch reflectors, the working height must be adjusted for the branch to hit the saw blades straight on.

If small branches or other unwanted material get stuck in the blades, the machine must be stopped and cleaned.

Always ensure that the blades are running vertical related to the direction of the travel. This will prevent the blades from bending too much.

### NOTICE

It might be an advantage to mount a skid at the bottom of the Quadsaw to prevent the saw blades from hitting the ground. (Optional equipment)

The cutting angle is as std. a “top-link”, and can only be adjusted when the machine is stopped.

### NOTICE

A hydraulically ram (option), can be mounted. Operate the ram in the required direction to set the desired cutting angle before starting work. The ram may be operated during work to make minor angling adjustments, but it is recommended to stop work before making major adjustments to the cutting angle.

### ⚠ DANGER

To prevent sawblades in blocking there is mounted a Branchcarrier part no. 200112.0, a Plastic-strip part no. 200110.0 in the full length of the machine and wearplates part no. 200153.0 under each sawblade to prevent sawblades bending. If the sawblades anyway blocks, then stop the saw, stop the carrier, take out the ignition key, pull the handbrake, take your safety goggles and gloves on and remove the jammed piece of wood.

# Maintenance

## ⚠ WARNING

Beware of blades and belt areas when maintaining and servicing.

- After 2 hours work all Taper-lock must be retightened to 81 Nm.
- After 10 hours work all bolts, screws and Taper-lock bushes must be retightened. If the bushes loosen at a later time they may be secured with Locktite.
- All bolts must be retightened on a regular basis.
- Dismount the belt guard to clean the housing.
- Inspect and if necessary adjust the belts. (See belt diagram here or under belt guard).
- GreenTec A/S recommend changing all sawblade-axles after 1500 hours of work, because of the possibility of metal fatigue.
- After inspection or service ALL protection plates and guards must be replaced.

## NOTICE

GreenTec A/S recommends changing all sawblade-axles after 1500 hours of work, because of the possibility of metal fatigue.

## Lubrication

Grease the lubrication points on machine on the following basis;

- Daily prior to use.
- Always prior to storage.
- Always after it has been washed.

## NOTICE

**Never use grease that contains Molybdenum Disulfide on nylon bushes.**

## Hydraulic Hoses

Inspect hydraulic hoses and fittings on a daily basis prior to using the machine; ensure they are free from damage or leaks and that the hoses are not rubbing on machine components.

Any damaged hoses or fittings should be repaired or replaced immediately.

Run new hoses alongside the old ones prior to removal to ensure the correct routing is retained. When replacing a hose avoid twisting it, use 2 spanners to tighten it.

Ensure hoses bend with machine movements and that they do not twist or strain.

All hose connections are of a 'soft seal' type and should only be turned a further 1/2 turn more than hand tight in order to be leak-proof (*see table below*).

BSP (size)	Nm
1/4"	25 Nm
3/8"	33 Nm
1/2"	44 Nm
3/4"	84 Nm
1"	115 Nm

## Oil Supply

Check oil level in the tank each day prior to starting work - it is good practice to constantly keep an eye on the sight glass level as a ruptured pipeline can empty a system within minutes; a pump or motor that runs out of oil will be damaged beyond repair very quickly. The oil must be changed if there are signs that it is contaminated (discolored).

Ensure cleanliness when replacing or topping up the oil by;

- Carefully cleaning around the filler neck prior to opening.
- Always using clean containers for refilling the system.
- Regular inspection of the filtration system.
- Never letting the oil level fall below the level in the sight glass.

Check daily for all hydraulic connections and fittings are in good condition. Any defect or leak must be immediately repaired, it is part of the daily maintenance that will reduce costs and prolong machine life.

If fittings require retightening always use 2 spanners and avoid over tightening. If the fitting continues to leak, replace it.

## Regular Maintenance Tasks

After every 4 hours of use the following maintenance task should be observed;

- Check bolts for tightness and – *retighten if required.*
- Check valve block, hoses and fittings for signs of leaks – *retighten or replace seals if required.*
- Bolts and bushes should be greased and retightened.

## Regrinding

If sawblades are sent to regrinding, GreenTec offers a wooden box made for that purpose. Can contain four saw blades.



## Tensioning the Belts

### **⚠ WARNING**

Great care must be adopted when servicing the machine as there is risk of trapping hands or fingers in the belts, pulleys or sawblades.

It is utmost importance that the belts are correctly mounted and tightened. When new belts are mounted they must be tensioned to 950 Nm.

After 3-5 working hours the belts may have slackened and must be checked.

### **⚠ CAUTION**

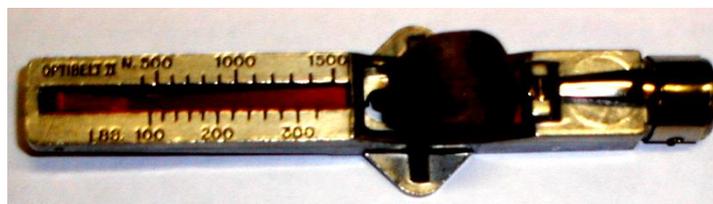
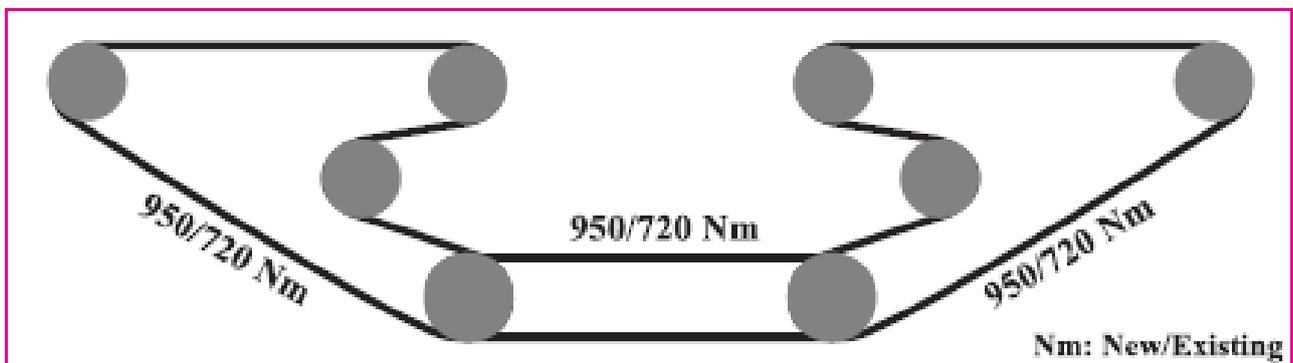
The tension has may now have changed to 720 Nm.

- Take the lid off.
- Check the Nm setting with tool 200155.0
- Adjust powerbelts if required.
- Re-check again with tool 200155.0
- Remount the lid.

Contact GreenTec A/S After Sales Department if you have any questions. We might help you with a piece of good advice.

## Belt diagram

### LRS 2002



Tool for belt tension control  
Part no. 200155.0

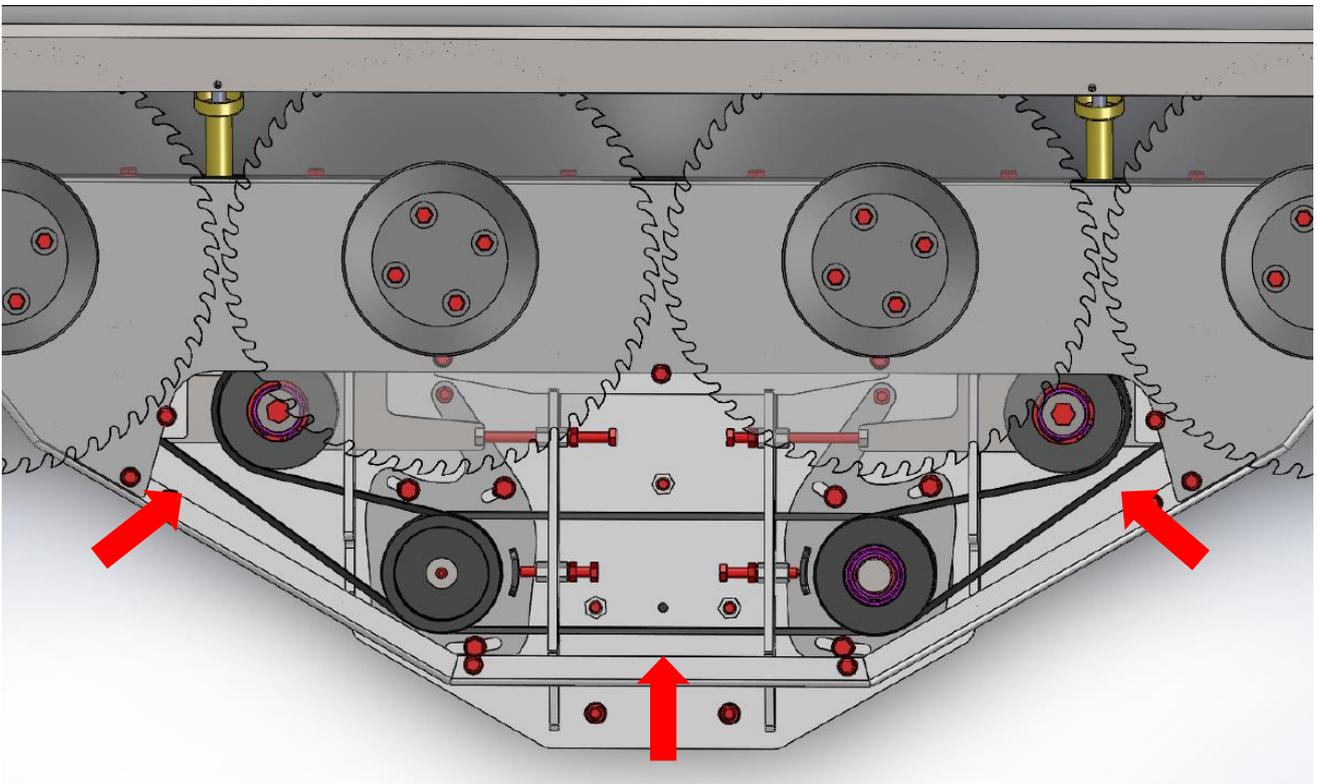
## Correct Belt tension

See also "Tensioning the belt" for further information.

NOTE!! After adjustment the blades must be turned a few times and checked again.

Recommended tools

- Belt measurer "Optikrik II"
- 19 mm Socket
- Socket extension bar
- Ratchet
- 17 & 19 mm Spanner
- Gloves



1. Take the lid off; mounted behind the saw blades.
2. Check/adjust the short belt by the engine.
3. Check/Adjust the 2 long belts connected to the saw blades.
4. Measure the belt tension on the middle of the belts. See 
5. Remount the lid.

## Technical data and description of working tool

Quadsaw for mounting on hydraulic hedge cutters.

Frame with 4 shafts.

490 mm saw blades.

Each shaft is driven by vee belts, and the whole unit is powered by a hydraulic motor.

Branch deflectors are placed between the blades.

The Quadsaw is supplied with a special bracket enabling mounting on various vehicles / carriers.

<b>Model</b>	<b>Lrs 2002</b>	<b>Lrs 2402</b>
<b>Working width</b>	2000 mm	2380 mm
<b>Blade speed</b>	3000 – 3200 rpm.	3000 – 3200 rpm.
<b>Blade diameter</b>	490 mm	590 mm
<b>Teeth per blade</b>	72 teeth.	78 teeth.
<b>Material</b>	Hardened steel with special teeth HM precision blade	Hardened steel with special teeth HM precision blade
<b>Performance</b>	5 – 160 mm branch diameter	5 - 160 mm branch diameter
<b>Application</b>	Vertical	Vertical
<b>Oil flow 15,0 CC</b>	50 Litres. Relief valve 180 bar	50 litres. Relief valve 180 bar
<b>Oil flow 28,0 CC</b>	85 Litres. Relief valve 150 bar	85 litres. Relief valve 150 bar
<b>e. g. Twiga 4-7000</b>	PTO speed 540	PTO speed 540
<b>e. g. Twiga MID</b>	PTO speed 540	PTO speed 540
<b>e. g. Twiga PRO HP</b>	PTO speed 440	PTO speed 440

# Safety

**This machine has the potential to be extremely dangerous - in the wrong hands it can kill or maim; it is therefore imperative that both owner and operator of the machine reads and understands the following section to ensure they are fully aware of the dangers that do, or may exist, and their responsibilities surrounding the use and operation of the machine. The operator of this machine is responsible not only for their own safety but equally for the safety of others who may come into the close proximity of the machine, as the owner you are responsible for both.**

**All operators must be fully competent in the use of this machine and also the machine to which it is attached and must read and understand the operation manuals for both machines before attempting to attach or operate this equipment.**

**When the machine is not in use it should be lowered to rest on the ground. In the event of any fault being detected with the machine's operation it must be stopped immediately and not used again until the fault has been corrected by a qualified technician.**

## **Potential Dangers associated with the use of this machine**

- ▲ Being hit by debris thrown by rotating components.
- ▲ Being hit by machine parts ejected through damage during use.
- ▲ Being caught on a rotating power take-off (PTO) shaft.
- ▲ Being caught in other moving parts i.e.: belts, pulleys and cutting heads.
- ▲ Electrocution from Overhead Power Lines (by contact with or 'flashover' from).
- ▲ Being hit by cutting heads or machine arms as they move.
- ▲ Becoming trapped between tractor and machine when hitching or unhitching.
- ▲ Tractor overbalancing when machine arm is extended.
- ▲ Injection of high-pressure oil from hydraulic hoses or couplings.
- ▲ Machine overbalancing when freestanding (out of use).
- ▲ Road traffic accidents due to collision or debris on the road.

## Before using this machine

### Always:

- ⊗ Ensure the operator has read this handbook and has been trained to use the machine.
- ⊗ Ensure that the tractor meets the minimum weight recommendations of the machine manufacturer and that ballast is used if necessary.
- ⊗ Ensure all cab safety guards are in place and all tractor windows are closed. Never allow an inexperienced person to operate the machine without supervision. If tractor is without cabin then mount metal mesh or polycarbonate guards of suitable size and strength to protect the operator against thrown debris or parts
- ⊗ Wear ear defenders if operating without a quiet cab or with the cab windows open.
- ⊗ Inspect work area for wire, steel posts, large stones and other dangerous materials. If such items are found, remove them.
- ⊗ Work at a safe speed, taking into account terrain, passing vehicles and obstacles.
- ⊗ Never start or continue to work a machine if people are nearby or approaching - Stop and wait until they are at a safe distance before continuing. **WARNING:** Some cutting heads may continue to 'freewheel' for up to 20 seconds or more after being stopped.
- ⊗ Remove the ignition key, before leaving the cab.
- ⊗ Ensure that the saw or flail head is firmly on the ground, no weight is on the tractors hydraulics and blades / knives have stopped spinning, before leaving the tractor cab
- ⊗ Check that all safetyguards are properly fitted, check there are no damaged or loose parts.
- ⊗ Beware of the danger of overhead power cables. The operator must be aware of the maximum height and reach of the machine when working under power cables. The minimum legal height for 11,000 and 22,000-volt cables is 5.2 metres from the ground. When fully extended, the machine may well exceed this height so extreme caution should be practised. For more information contact the Health and Safety Executive or your local power company.
- ⊗ Operate the blades at a speed between 3000-3200 rpm (depending on model).
- ⊗ Ensure that all warning labels are always visible and that they are not damaged, defaced or missing.
- ⊗ Follow the manufacturer's instructions for attachment and removal of machine from the tractor.

**Never:**

- ⊗ Operate the machine until you have read and understood the relevant Handbook and are familiar with the controls.
- ⊗ Operate the machine with other people present, as it is possible for debris to be thrown from the saw blades in all directions.
- ⊗ Use a machine that is poorly maintained or has guards that are damaged or missing.
- ⊗ Allow an inexperienced person to operate the machine without supervision.
- ⊗ Use or fit a machine onto a tractor if it doesn't meet the manufacturer's specification.
- ⊗ Allow children to play on or around the machine at any time.
- ⊗ Attempt any maintenance or adjustment without first disengaging the pto/hydraulic pump, lowering the head to the ground, stopping the tractor engine and applying the tractor parking brake.
- ⊗ Stop the engine with the power take-off (PTO) engaged.
- ⊗ Transport with the power take-off (PTO) engaged.
- ⊗ Exceed maximum oil pressure of 250 bar in the hydraulic hoses.
- ⊗ Use a machine if the hydraulic system shows signs of damage.
- ⊗ Attempt to detect a hydraulic leak with your hand, use a piece of card.
- ⊗ Operate the tractor or any controls from any position other than from the driving seat.
- ⊗ Transport without the blade protection guards mounted.
- ⊗ Operate with sawblades/flails missing.
- ⊗ Operate with wire around the rotor/sawblade. Stop immediately.
- ⊗ Use the head at an angle, which may throw debris towards the cab.
- ⊗ Leave the cab without removing the ignition key.
- ⊗ Attempt to use the machine for any purpose other than that it was designed for.
- ⊗ Attempt any maintenance or adjustment without first disengaging the PTO, lowering the head to the ground, stopping the tractor engine and applying the tractor parking brake.
- ⊗ Enter the working area of the machine (risk of injury!).

## Additional Safety Advice

### Training

Operators need to be competent and fully capable of operating this machine in a safe and efficient way prior to attempting to use it in any public place. We advise therefore that the prospective operator make use of relevant training courses available such as those run by the Agricultural Training Board, Agricultural Colleges, Dealers and GreenTec.

### Working in Public Places

When working in public places such as roadsides, consideration should be paid to others in the vicinity. Stop the machine immediately when pedestrians, cyclists and horse riders etc. pass. Restart only when they are at a distance that causes no risk to their safety.

### Warning Signs

It is advisable that any working area be covered by suitable warning signs and statutory in public places. Signs should be highly visible and well placed in order to give clear advanced warning of the hazard. Contact the Department of Transport or your Local Highways Authority to obtain detailed information on this subject. The latter should be contacted prior to working on the public highway advising them of the time and location of the intended work asking what is required by way of signs and procedure. – *‘Non-authorized placement of road signs may create offences under the Highways Act’.*

### Suggested Warning Signs Required

**‘Road works ahead’** warning sign with a supplementary **‘Hedge cutting’** plate. **‘For 1 km’** or appropriate shorter distance may be added to the plate. **‘Road narrows’** warning signs with supplementary **‘Single file traffic’** plate. White on blue **‘Keep left’** (\*) arrow sign on rear of machine.

*\* Note – this applies to EU Market machines where traffic passes to the left of a machine working in the same direction as the traffic flow. The direction, use and colour of the arrow sign will depend on the country of use and the Local Highway Authorities regulations in the locality.*

### Use of Warning Signs

- ▲ On two-way roads one set of signs is needed facing traffic in each direction.
- ▲ Work should be within 1 km of the signs.
- ▲ Work only when visibility is good and at times of low risk e.g.: NOT during ‘rush-hour’.
- ▲ Vehicles should have an amber-flashing beacon.
- ▲ Ideally, vehicles should be conspicuously coloured.
- ▲ Debris should be removed from the road and path as soon as practicable, and at regular intervals, wearing high visibility clothing and before removing the hazard warning signs.
- ▲ Collect all road signs promptly when the job is completed.

**Safety Gear:** It is recommended that the following personal protective equipment is worn when operating and/or maintaining this machine; Coveralls, safety boots, safety glasses, hearing protection, safety helmet, protective gloves.



Although the information stated here covers a wide range of safety subjects it is impossible to predict every eventuality that can occur under differing circumstances whilst operating this machine. No advice given here can replace ‘good common sense’ and ‘total awareness’ at all times, but will go a long way towards the safe use of your GreenTec machine.

## Safety Stickers



**Warning**  
Avoid fluid escaping under pressure. Consult technical manual for service procedures.



**Warning**  
Stop engine and remove key before performing maintenance or repair work.



**Warning**  
Danger – flying objects. Keep safe distance from the machine as long as the engine is running.



**Warning**  
Beware of overhead electrical power lines.



**Warning**  
Stay clear of rotating sawblades / knives.



**Warning**  
Carefully read operator's manual before handling this machine. Observe instructions and safety rules when operating.



**Warning**  
Do not remove / open guard when parts are rotating.



**Warning**  
Check all nuts and bolts are tight every 8 hours – retighten if required.

## Storage

Before storing away, thoroughly wash the machine, removing all traces of grass and dirt.

**CAUTION** Great care must be taken when washing with high-pressure hoses, do not hold the water jet close to the paintwork. Use steam cleaners with caution, be sure to remove all detergents to avoid any discolouring or damage to paint. Grease all grease points until fresh grease shows. Slacken rotor drive belts (where fitted).  
It is important where possible to store undercover to protect against rain and sunlight. Always ensure a firm level surface.

**NOTICE** Smear grease on all areas vulnerable to corrosion, in particular the chrome on the ramrods.

**Remember: regular maintenance will greatly increase the life of the machine.**

## Noise measuring

Noise measuring has been made on the machine during normal working conditions at GreenTec A/S, Denmark, with a Elma 1350 noise measurer, type ICE 651 type II.

- The energy A-weighted Sound pressure is lower than: **85 dB (A)**.

The test has been done in a distance of 1 meter from the machines critical noise maker and in a height of 1,5 m above ground.

## Supplier information and CE-declarations

Company name	: GreenTec A/S
Address	: Merkurvej 25
Mail code /City	: DK-6000 Kolding
Country	: Denmark
Tlf	: +45 75 55 36 44
Telefax	: +45 75 55 42 43

<b>CE-declaration</b>	
Producent	: GreenTec A/S
Tlf	: +45 75 55 36 44
Telefax	: +45 75 55 42 43
Machine No.	: Lrs 2002 Lrs 2402
Delivery date	: _____
Delivery year	: 2015

## Warnings, ban and directions

### WARNING

Never attempt any maintenance or adjustment without first disengaging the pto/hydraulic pump.

### WARNING

Only authorised personal must do maintenance work on the equipment.

### CAUTION

Read this manual carefully before using the machine.

## Disassemble

Machine disengaged from all connections.

To ensure the most environmentally friendly removal, the machine must be disassembled and the parts separated as following:

### NOTICE

Category	Example of parts
Rubber and plastic	Hoses, plastic strip
Technical components	Pumps, motors, hydraulic hoses
Pure metal	Plates, pipes, guard

Removal of the parts must be done according to national and EU legislation.

# GreenTec Warranty

Greentec warrants that the Greentec machine referred to in the Warranty Registration Form will be free from defects in materials and workmanship for a period of 12 months from the date of sale. This warranty does not affect your statutory rights, but merely adds to them. Should you have a problem within 12 months from the date of sale please contact your original Greentec dealer, or Greentec's Service Department. Any part found to be defective during this period will be replaced or repaired, at Greentec's discretion, by the dealer or a Greentec Service Engineer.

## Greentec Warranty Conditions

1. The Warranty Registration Form (green page) must be completed and returned to Greentec within 7 days of the date of sale
2. This warranty does not cover defects arising from fair wear and tear, willful damage, negligence, misuse, abnormal working conditions, use in competition, failure to follow Greentec's instructions (oral or written, including all instructions and recommendation made in the Operator's Manual) or alteration or repair of the machinery without Greentec's approval.
3. The machinery must have been serviced in accordance with the Operator's Manual and the Service Log must have been kept up to date and made available to the dealer should service, repair or warranty work be undertaken.
4. This warranty does not cover claims in respect of wearing parts such as blades, flails, paintwork, tires, belts, hydraulic hoses, bearings, bushes, linkage pins, top links, ball ends unless there is a manufacturing or material defect or the cost of normal servicing items such as oils and lubricants.
5. This warranty does not cover any expenses or losses incurred whilst the machinery is out of use for warranty repairs or parts replacement.
6. This warranty does not extend to parts, materials or equipment not manufactured by Greentec, for which the Buyer shall only be entitled to the benefit of any such warranty or guarantee given by the manufacturer to Greentec. Only genuine Greentec replacement parts will be allowable for warranty claims.
7. All parts replaced by Greentec under warranty become the property of Greentec and must be returned to Greentec if Greentec so request. Such parts may only be disposed of after a warranty claim has been accepted and processed by Greentec.
8. Greentec is not liable under this warranty for any repairs carried out without Greentec's written consent or without Greentec being afforded a reasonable opportunity to inspect the machinery the subject of the warranty claim. Greentec's written consent must, therefore, be obtained before any repairs are carried out or parts replaced. Use of non- Greentec parts automatically invalidates the Greentec Warranty. Failed components must not be dismantled except as specifically authorized by Greentec and dismantling of any components without authorization from Greentec will invalidate this warranty.
9. All warranty claims must be submitted to Greentec on Greentec Warranty Claim Forms within 30 days of completion of warranty work.

**Using the machine implies the knowledge and acceptance of these instructions and the limitations contained in this Manual.**