

QUADSAW

LRS 1601



**HANDBOOK
PARTS**

UK

6th edition 2017

 **GREENTEC**

Cutting Edge Technology

Contents

Contents

| | |
|---|----|
| <i>Introduction</i> | 4 |
| <i>Important</i> | 5 |
| <i>Mounting the Quadsaw</i> | 6 |
| <i>Operation / Introduction</i> | 8 |
| <i>Maintenance</i> | 8 |
| <i>Driving recommendations</i> | 8 |
| <i>Belt diagram</i> | 9 |
| <i>Correct belt adjustment</i> | 10 |
| <i>Technical data and description of working tool</i> | 11 |
| <i>Safety</i> | 12 |
| <i>Main Frame PRE Jan. 2012</i> | 13 |
| <i>Main frame PRE Jan. 2012</i> | 14 |
| <i>Main frame POST Jan. 2012</i> | 15 |
| <i>Main frame POST Jan. 2012</i> | 16 |
| <i>Belt tensioner box 1</i> | 17 |
| <i>Belt tensioner box 2</i> | 18 |
| <i>Blade shaft 1</i> | 19 |
| <i>Blade shaft 2</i> | 20 |
| <i>Stickers</i> | 21 |
| <i>Noise measuring</i> | 22 |
| <i>Supplier information and CE-declarations</i> | 22 |
| <i>CE-declaration</i> | 22 |
| <i>Warnings, ban and directions.</i> | 22 |
| <i>Disassemble</i> | 22 |

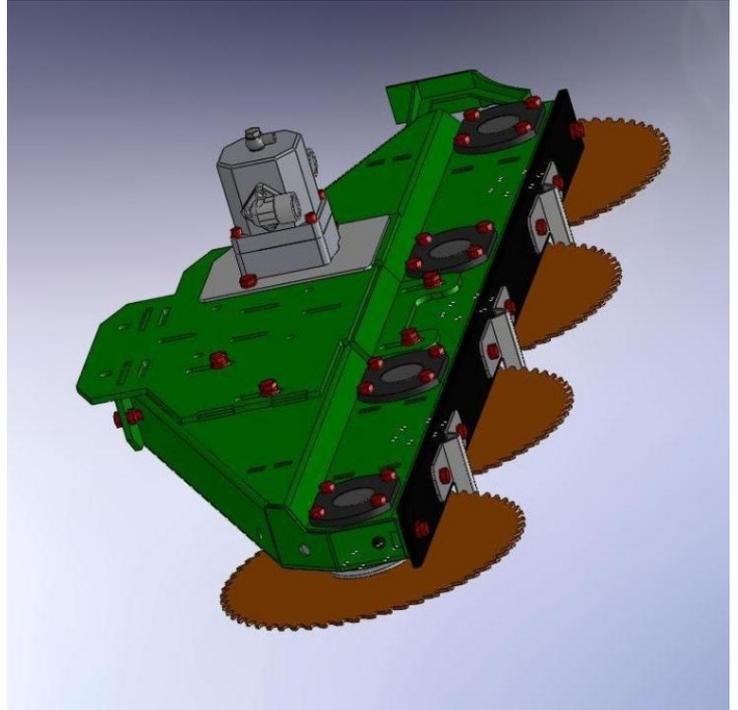
Introduction

Dear customer!

GreenTec LRS 1601 Quadsaw is designed with a background of 20 years of experience with cutting-tool technology, and building of special machines. They are made from the latest technology and recognized safety technical regulations, standards and regulations.

It is our goal to make a product available in such a way that, neither during transit by further processing and compilation process or the subsequent use is damage.

This manual contains information and instructions there are important and useful for the preservation of LRS 1601 Quadsaw reliability, dependability and value. Read this manual carefully and pay particular attention to the instructions for the avoiding of damage.



The content also makes you familiar with connectivity, use, care and maintenance. And then it helps to prevent injuries.

We hope, you are happy with your new LRS 1601 Quadsaw.

Best regards:

A handwritten signature in blue ink, appearing to read 'John Christensen', positioned above the printed name.

John Christensen
Sales Director, GreenTec A/S

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.

Serial number:

Delivery date:

Dealer name :

Address:

.....

Tel. / Fax No.:

GreenTec A/S
Merkurvej 25
Dk-6000 Kolding
Tel: +45 7555 3644
Fax: +45 7555 4243
E-mail: info@greentec.eu
Web: www.greentec.eu

Mounting the Quadsaw

- The blades are mounted, so the sawblade teeth are rotating in a downward direction (Fig. 1).
- Saw is mounted in such a way, that the blade runs straight in the driving direction (Fig. 2).
- Mount the hydraulic hoses so the blades are running in correct direction. The drain hose shall go in free to the hydraulic oil tank.
- Check the hydraulic system for leaks.
- First time the machine is used. Measure the blades rpm 2600 – 2700 by 40 L/min. Holding this speed is important for the best optimum performance.
- This saw can NOT be changed from right to left mounting or vice versa .

Fig. 1.

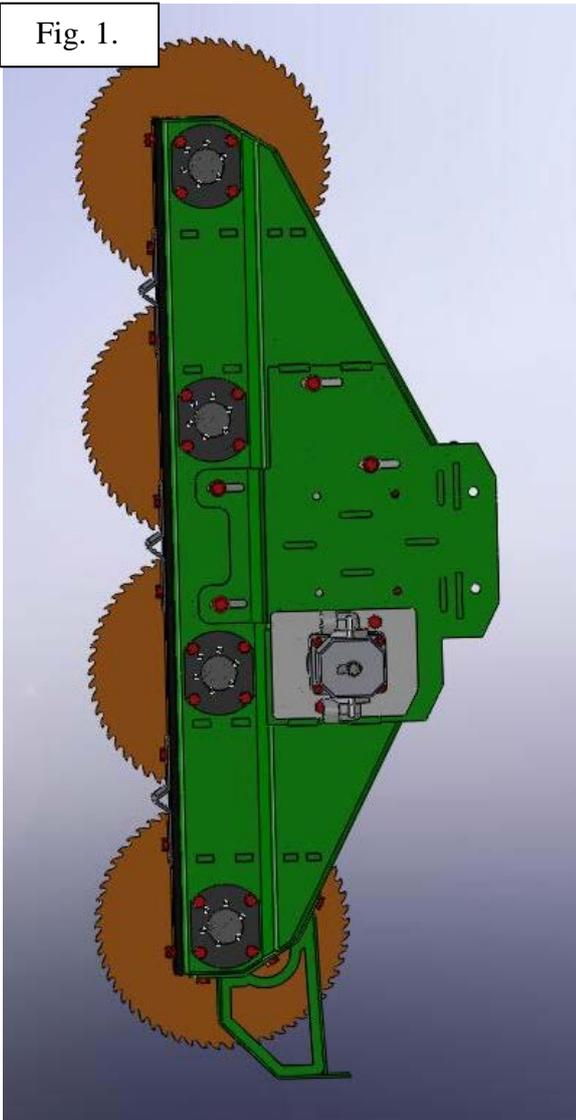
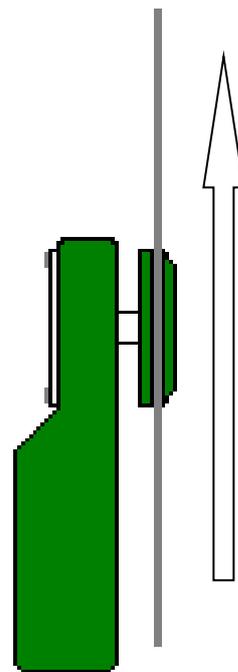


Fig. 2.



Hose connection:

- The smallest hose is the DRAIN. It is connected to a depressurized (0bar) tank connection.

Marked in BLUE.

This must never be connected to RETURN.
(variates depending of attachment tool)



- The middle hose is PRESSURE. It is connected to Pressure (P) with a maximum of 200 bar.

Marked in RED.



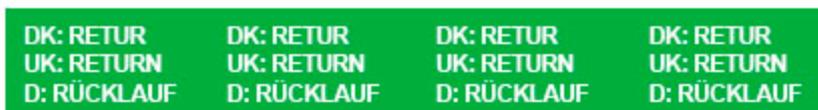
- The largest hose is RETURN. It is connected to Tank (T) Maximum back pressure 15 bar.

Marked in GREEN.



OBS: Case drain pressure may never exceed return pressure

All machines supplied by GreenTec have hose connections marked with the following stickers:



Operation / Introduction

The Quadsaw is used for cutting branches and trees up to a max. diameter of 100 mm without the branches being torn.

Branches with a diameter over 70 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. 1,0 m. and a branch diameter up to 40 mm. Thicker branches might stop the blades and get stuck in the machine.

Maintenance

- After 2 hours driving tighten everything. "Easy-Lock" connector with 14 Nm. Allen-screws for the saw blades with 40 Nm.
- After 10 hours work all bolts, screws and "Easy-Lock" retightened
- All bolts shall be retightened / checked every 8 hour.
- Plastic rail is adjusted down to the blades, with a distance of 1 mm. Is there more than 5 mm intervals, replace the list. Branch deflectors adjusted as closely as possible into the saw blades, without touching the blades.
- Dismount protection plate to the belts, and clean the house for dirt.
- Inspect, and if necessary adjust the belts. (See belt diagram)
- After inspection or service ALL protection plates and guards must be replaced.

Driving recommendations

Starting and stopping the saw shall always be at lowest pto. rpm.

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.

Belt diagram

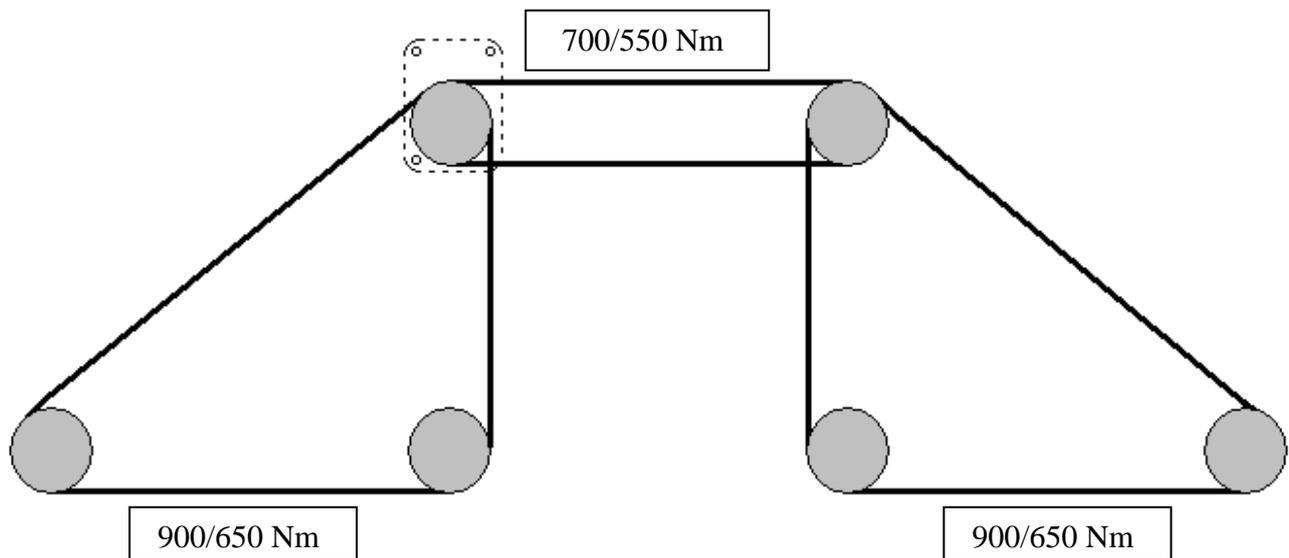
It is utmost importance that the belts are correctly mounted and tightened. When new belts are mounted they must be tensioned to 700 Nm, for the short and 900 Nm for the long belts.

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

BEWARE!! The tension has now changed. The short belts is tightened to 550 Nm, the long belts are tightened to 650 Nm.

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

LRS 1601



Tool for belt tension control
"Optikrik II" Part no. 200155.0

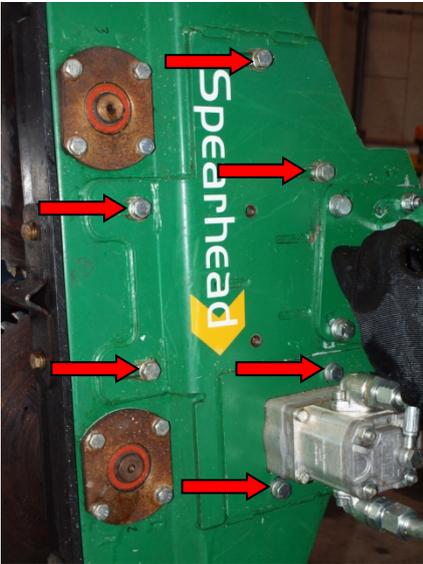
Correct belt adjustment

See also "Belt Diagram" for more information.

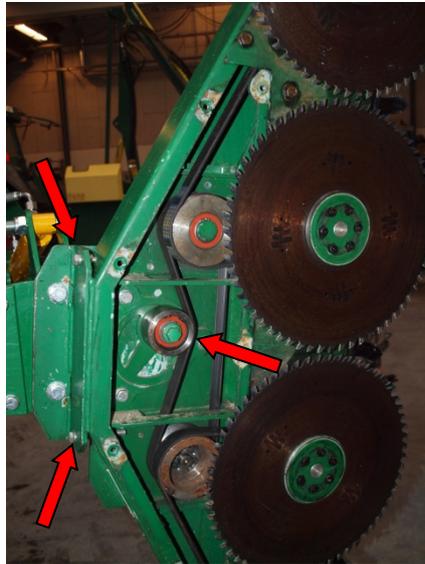
NOTE!! After adjusting, turn the blades some rounds and then control again.

Recommended tools:
Belt measure "Optikrik II"
17 & 19 mm
17 & 19 mm Ring/fork wrench
Ratchet with short extension
Gloves

Loosen bolts. See arrows



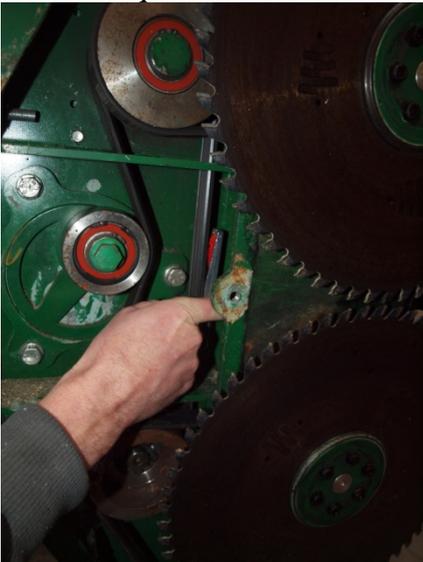
Remove cap. See adjustment bolt



Loosen 3 bolts. Twist tensioner



Check torque on the center belt



Check torque on the lowest belt



Check torque on the top belt



Technical data and description of working tool

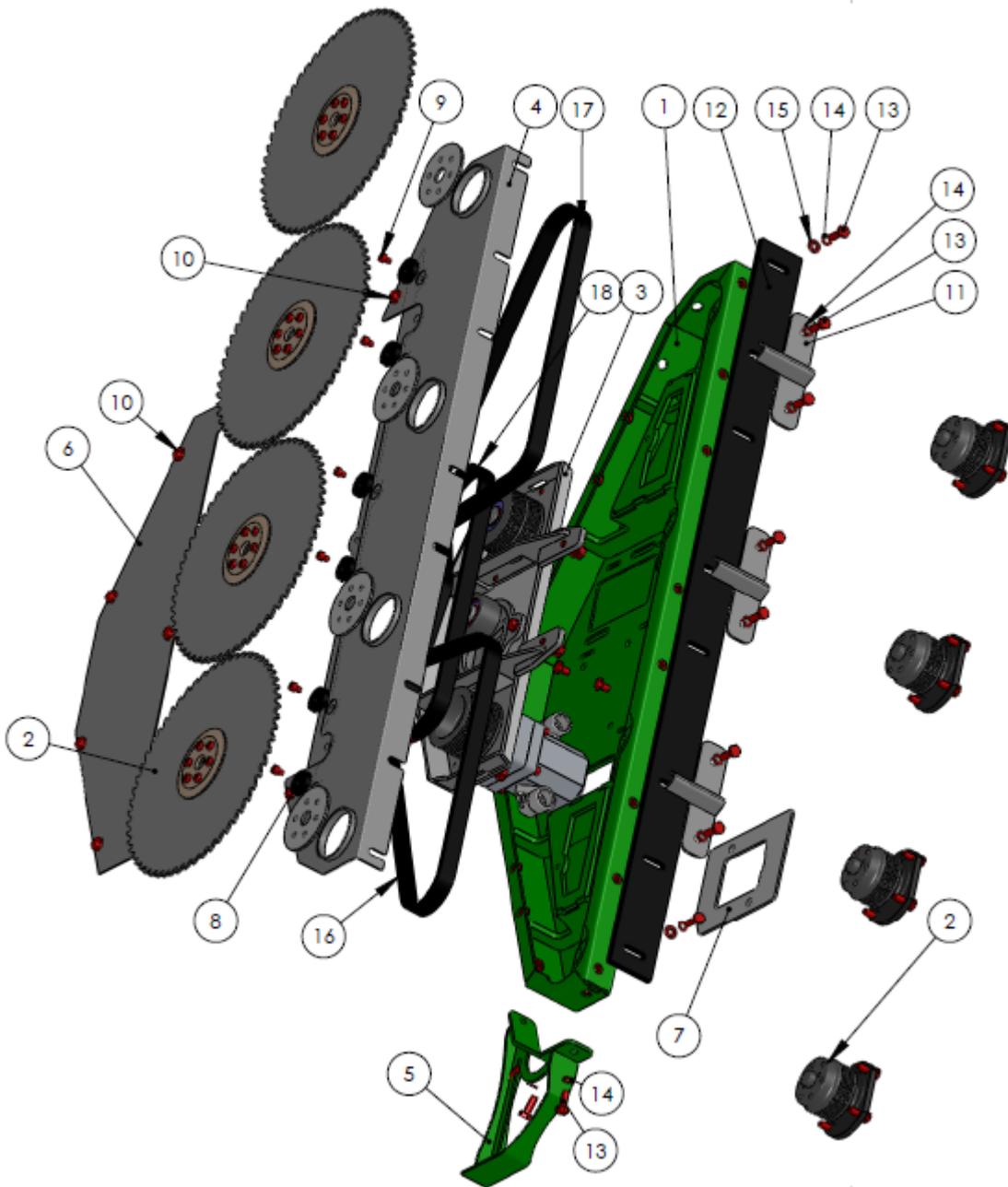
- Quadsaw for mounting, on hydraulic hedge cutters.
- Frame with 4 shafts, for mounting the saw blade Ø 390 mm.
- Drift of each shaft by rib ribbon belts, the entire operation is done by the hydraulic powered motor. Branch deflectors are placed between the blades.
- The Quadsaw is supplied with a special bracket enabling mounting on various vehicles / machines.
- The drive belt is like the supporting part on the carrying frame entirely covered.

| | LRS 1601 |
|------------------|---|
| Working width | 1600 mm |
| Blade speed | 2600 – 2700 |
| Blade diameter | 390 mm |
| Teeth per blade | 60 stk. |
| Material | Hardened metal with special teeth HM precision blade. |
| Performance | 5 – 100 mm branch diameter. |
| Application | Vertical |
| Oil flow 17,7 cc | 40 L/min. relief valve 200 bar |
| e. g. Twiga 3000 | 540 Pto. rpm. |

Safety

- ⊗ Never operate the machine with other people present, as it is possible for debris to be thrown from the saw blades in all directions.
- ⊗ Always 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.
- ⊗ Never allow children to play or around the machine at any time.
- ⊗ Never 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.
- ⊗ Before leaving the tractor cab always ensure that the saw head is firmly on the ground, no weight is on the tractors hydraulics and blades have stopped spinning.
- ⊗ Never stop the engine, when the power transmission is engaged.
- ⊗ Always check that all guards are properly fitted, check there are no damaged or loose parts.
- ⊗ Always drive with the correct rotations of the blades (see specifications).
- ⊗ Maximum oil pressure of 250 bar in the hydraulic hoses.
- ⊗ Never transport without the blade protection guards mounted.
- ⊗ Always inspect work area for wire, steel posts, large stones and other dangerous materials. If such items are found remove them.
- ⊗ Never drive with wire or the like. wrapped around the blades / knife axles. Stop immediately and remove the unwanted material.
- ⊗ Never attempt to use the machine for any purpose other than that it was designed for.
- ⊗ Ensure that all warning labels are always visible and that they are not damaged, defaced or missing.
- ⊗ PTO must never be connected during transport.

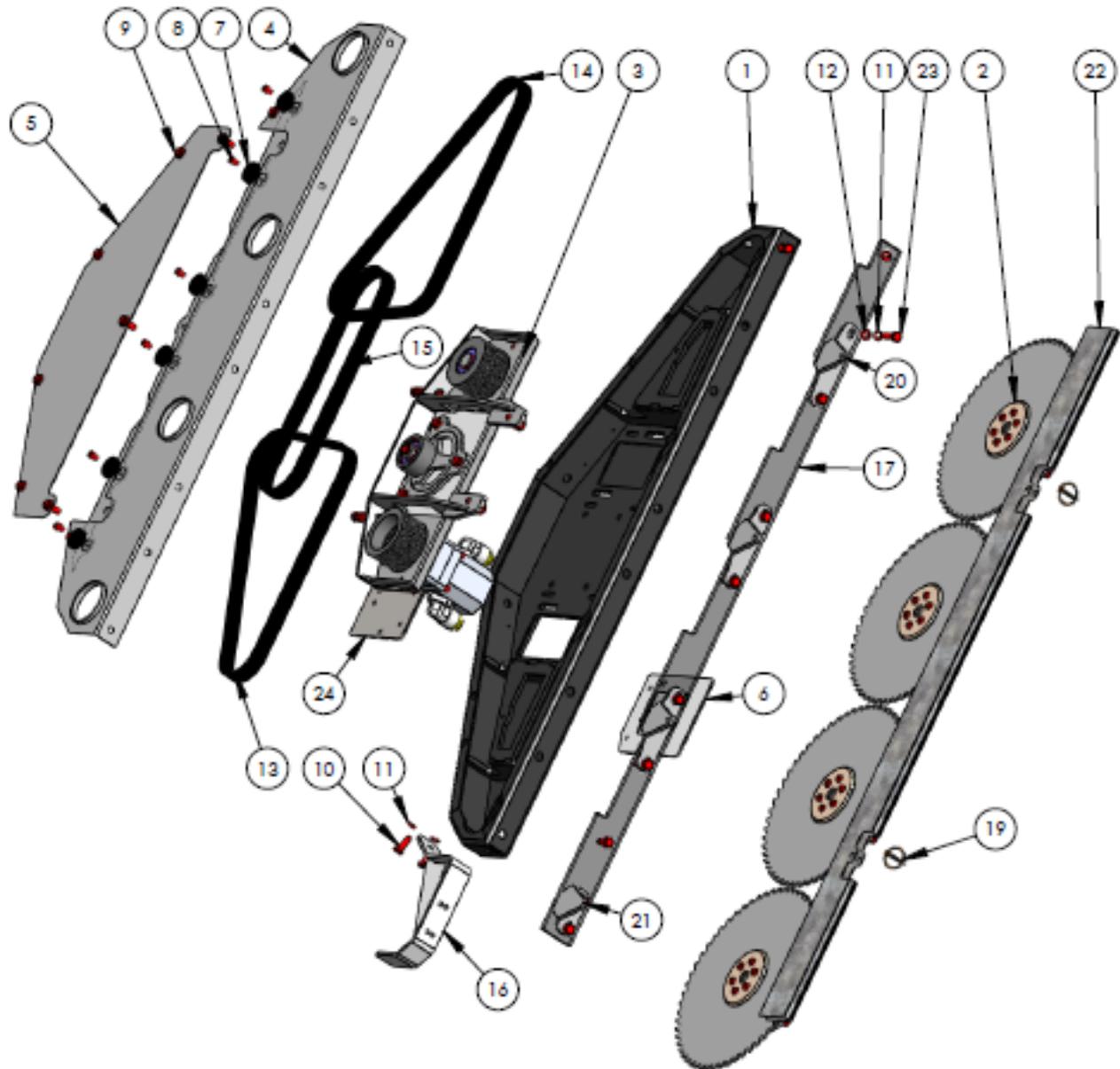
Main Frame PRE Jan. 2012



Main frame PRE Jan. 2012

| Item | Qty. | Part no. | Description | |
|-----------|------|-----------|------------------------------------|---|
| 1 | 1 | 160100.0 | Body | |
| 2 | | | See section "Spinde" | |
| 3 | | | See section "Belt-box" | |
| 4 | 1 | 160101.0 | Lid | |
| 5 | 1 | 160102.0 | Skid | |
| 6 | 1 | 160129.0 | Lid | |
| 7 | 1 | 160173.0 | Construction | |
| 8 | 6 | 160168.0 | Backstop for blade | |
| 9 | 6 | 200163.0 | Allen screws 8x10 mm 12.9 | |
| 10 | 9 | 200104.0 | Bolt 10x20 mm | |
| 11 | 3 | 160999.02 | Branch deflector | |
| 12 | 1 | 160110.0 | Plastic rail | |
| 13 | 11 | 200109.0 | Bolt | |
| 14 | 11 | 8222003 | Spring washer 10 mm | |
| 15 | 2 | 8142003 | Washer HD 10 mm | |
| 16 | 1 | 160140.0 | Belt, long | |
| 17 | 1 | 160140.0 | Belt, long | |
| 18 | 1 | 160141.0 | Belt, short | |
| 19 | 1 | 160162.0 | Protective guard for blades | |
| Not shown | 1 | 160999.0 | Up-grade kit "brance lead" LRS1601 | Improved Plastic rail, branch deflector, skid and guard (see pos. 11,12,16,17,19,20,21,22 and 23 next page) |

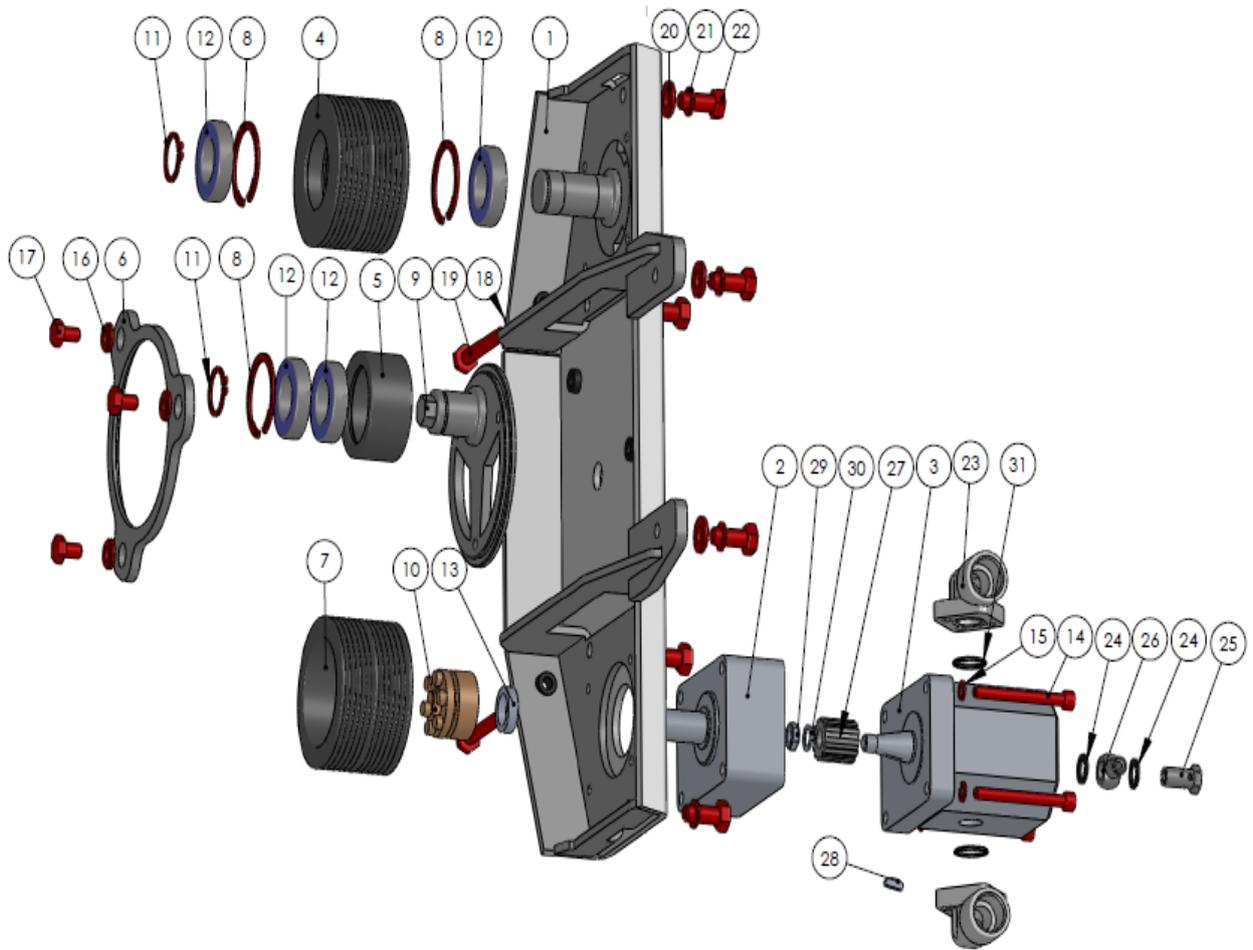
Main frame POST Jan. 2012



Main frame POST Jan. 2012

| Item | Qty. | Part no. | Description | |
|-------------|-------------|-----------------|-------------------------------|--|
| 1 | 1 | 160100.0 | Body | |
| 2 | | | See section "Spindle" | |
| 3 | | | See section "Belt-box" | |
| 4 | 1 | 160101.0 | Lid | |
| 5 | 1 | 160129.0 | Lid | |
| 6 | 1 | 160173.0 | Construction | |
| 7 | 6 | 160168.0 | Backstop for blade | |
| 8 | 6 | 200163.0 | Allen screws 8x10 mm 12.9 | |
| 9 | 9 | 200104.0 | Bolt 10x20 mm | |
| 10 | 4 | 200109.0 | Bolt | |
| 11 | 12 | 8222003 | Spring washer 10 mm | |
| 12 | 10 | 8142003 | Washer HD 10 mm | |
| 13 | 1 | 160140.0 | Belt, long | |
| 14 | 1 | 160140.0 | Belt, long | |
| 15 | 1 | 160141.0 | Belt, short | |
| 16 | 1 | 160999.05 | Skid | |
| 17 | 1 | 160110.1 | Plastic rail | |
| 19 | 2 | 8146002 | Lynch Pin | |
| 20 | 3 | 160999.02 | Branch deflector. Long | |
| 21 | 1 | 160999.01 | Branch deflector. Short | |
| 22 | 1 | 160999.07 | Protective guard for blades | |
| 23 | 8 | 8142001 | Bolt 10x40 mm | |
| 24 | 1 | 160103.0 | Option plate for Splittevalve | |

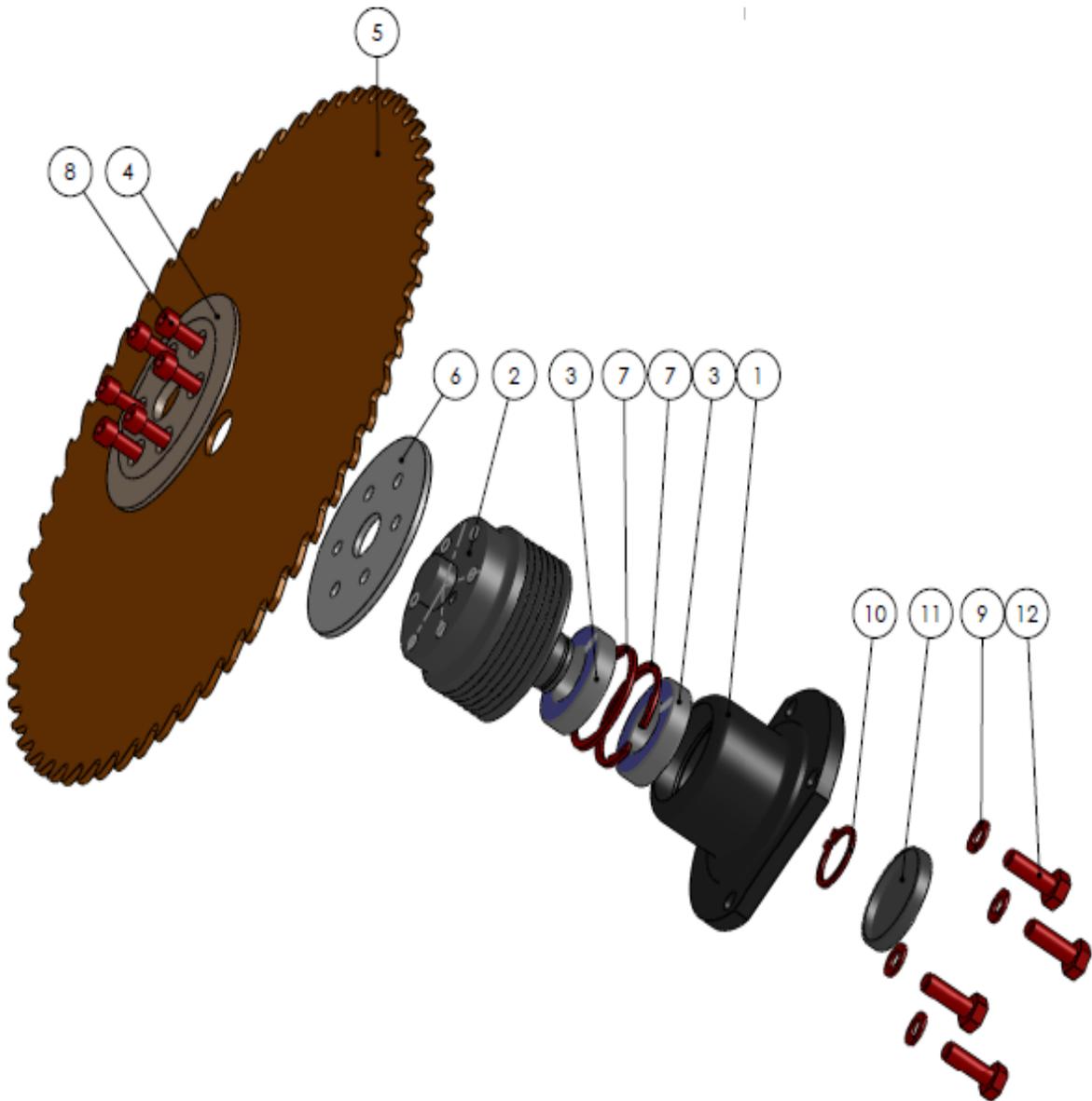
Belt tensioner box 1



Belt tensioner box 2

| Item | Qty. | Part no. | Description | |
|-----------|------|---------------------|-------------------------------|---|
| 1 | 1 | 160128.0 | Adjustment Box | |
| 2 | 1 | 200131.0 | Bearing cpl. | |
| 3 | 1 | 200130.0 | Motor 17 cc with "Item 28-30" | |
| 3A | 1 | 200160.0 | Sealkit for Bondioli motor |  |
| 3B | 1 | No longer available | Sealkit for Danfoss motor |  |
| 4 | 1 | 160126.0 | Belt pulley 105 mm | |
| 5 | 1 | 160124.0 | Roll | |
| 6 | 1 | 160171.0 | Adjustment holder | |
| 7 | 1 | 160137.0 | Belt pulley for motor 105 mm | |
| 8 | 3 | 160121.0 | Lock ring | |
| 9 | 1 | 160172.0 | Adjusting Wheel | |
| 10 | 1 | 160123.0 | Clamping Element (Easy-Lock) | |
| 11 | 2 | 200121.0 | Lock ring | |
| 12 | 4 | 160120.0 | Bearing | |
| 13 | 1 | 160165.0 | Distance ring | |
| 14 | 4 | 12912080901 | 8x90 mm Allen screw | |
| 15 | 4 | 200156.0 | Spring Washer 8 mm | |
| 16 | 3 | 8142003 | Washer HD 10 mm | |
| 17 | 3 | 8142002 | Bolt 10x16 mm | |
| 18 | 2 | 2770412 | Locking nut | |
| 19 | 2 | 933100802 | Bolt 10x80 mm fully threaded | |
| 20 | 4 | 8222011 | Washer HD 12 mm | |
| 21 | 6 | 8222005 | Spring washer 12 mm | |
| 22 | 6 | 8222006 | Bolt 12x30 mm | |
| 23 | 2 | 200132.0 | Elbow ¾ "with o-ring | |
| 24 | 2 | 8143005 | Sealing ring ¼ " | |
| 25 | 1 | 8143003 | Banjo bolt ¼ " | |
| 26 | 1 | 8143004 | Banjo body ¼ " | |
| 27 | 1 | 200133.0 | Spline bush | |
| 28 | 1 | N/A | Key | |
| 29 | 1 | | Nut. Included in "Item 3" | |
| 30 | 1 | N/A | Security lock | |
| 31 | 2 | | O-ring. Included in "Item 23" | |
| Not shown | | 200155.0 | "Optikrik II" | Tool for belt tension control |

Blade shaft 1

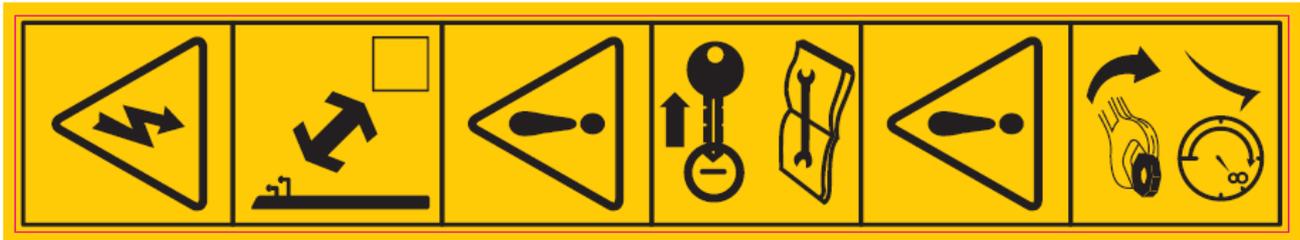


Blade shaft 2

| Item | *Qty. | Part no. | Description | |
|-------------|--------------|-----------------|----------------------|--|
| 1 | 1 | 160164.0 | Bearing | |
| 2 | 1 | 160122.0 | Pulley 90 mm | |
| 3 | 2 | 160120.0 | Bearing | |
| 4 | 1 | 160114.0 | Mounting plate outer | |
| 5 | 1 | 160111.0 | Saw blade | |
| 6 | 1 | 160115.0 | Mounting plate inner | |
| 7 | 2 | 160121.0 | Locking ring | |
| 8 | 6 | 8362010 | Allen screw | |
| 9 | 4 | 8222003 | Spring washer 10 mm | |
| 10 | 1 | 200121.0 | Locking ring | |
| 11 | 1 | 160130.0 | Seal | |
| 12 | 4 | 200109.0 | Bolt 10x30 mm | |

*Qty. is the number of spending per. axle.

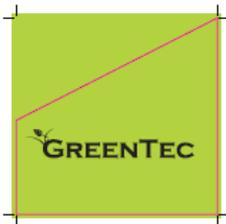
Stickers



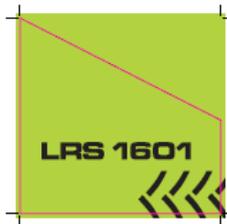
325 x 56 mm



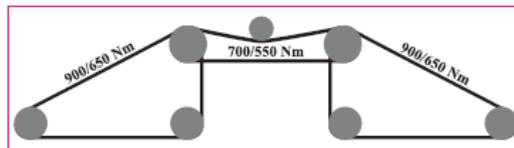
325 x 56 mm



185 x 182 mm



185 x 182 mm



170 x 48 mm

LRS1601 KITS

| Item | Qty. | Part no. | Beskrivelse |
|------|------|-------------|-------------|
| 1 | 1 | LRS1601KITS | Sticker Kit |

Noise measuring

Noise measuring has been made on the machine during normal working conditions at GreenTec A/S in Denmark, with a Elma 1350B Noise measurer, 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 meters over the ground.

Supplier information and CE-declarations

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

CE-declaration

| | |
|---------------|-------------------|
| Producent | : GreenTec A/S |
| Tel | : +45 75 55 36 44 |
| Telefax | : +45 75 55 42 43 |
| Machine No. | : LRS 1601 |
| Delivery date | : _____ |
| Delivery year | : 2014 |

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.

Direction!

Read this manual carefully before using the machine.

Disassemble

Machine disengaged from all connections. Removal of the parts must be done according to national and EU legislation. To ensure the most environmentally friendly removal, the machine must be disassembled and the parts separated as following:

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



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Cutting Edge Technology