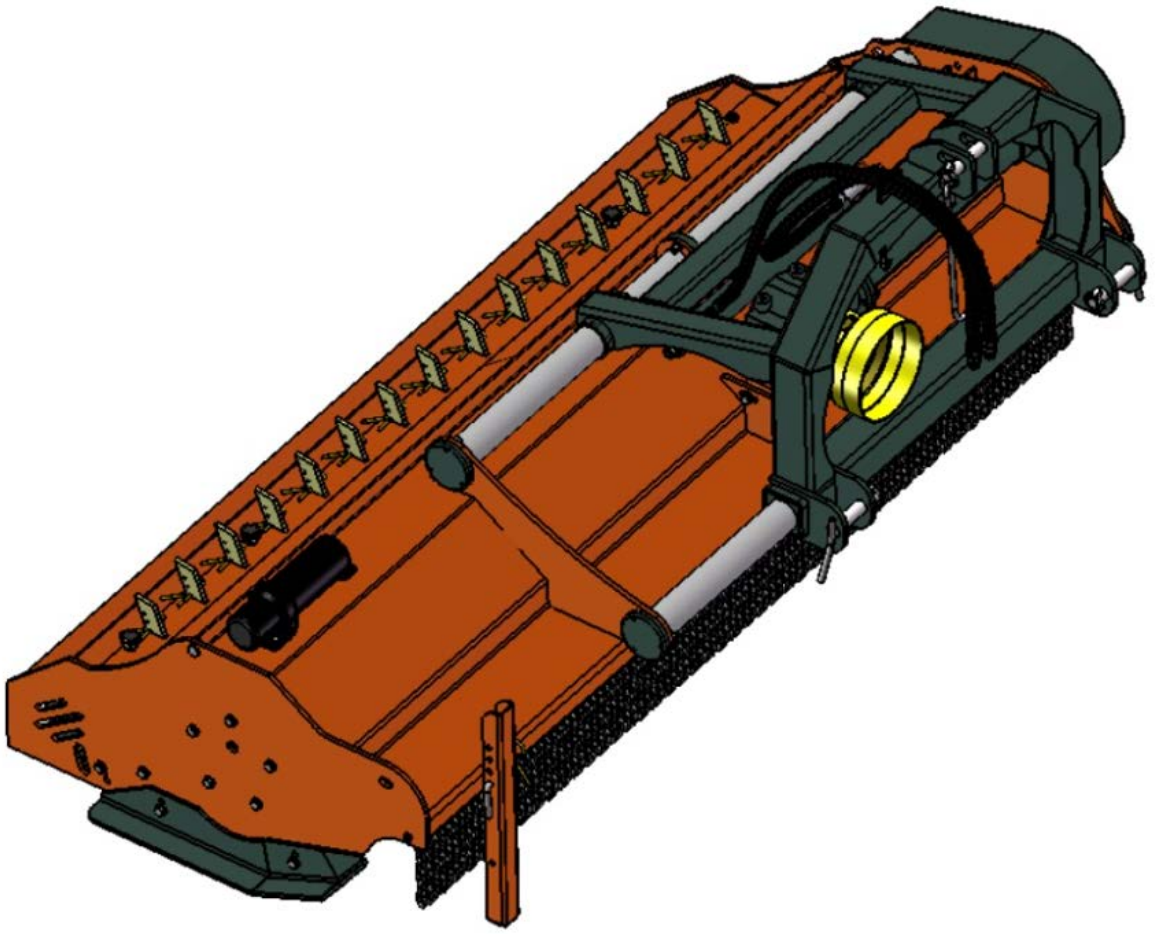
Operator's Manual

Flail Mowers

L.TRE 200-220-240-260-280



MATENG®

Read the Operator’s Manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception your life and the lives of others depend on it!

Table of Contents

These are common practices that may or may not be applicable to the products described in this manual.

Safety at All Times

Thoroughly read and understand the instructions given in this manual before operation. Refer to the "Safety Label" section, read all instructions noted on them.

Do not allow anyone to operate this equipment who has not fully read and comprehended this manual and who has not been properly trained in the safe operation of the equipment.

- ▲ Operator should be familiar with all functions of the unit.
- ▲ Operate implement from the driver's seat only.
- ▲ Make sure all guards and shields are in place and secured before operating implement.
- ▲ Do not leave tractor or implement unattended with engine running.
- ▲ Dismounting from a moving tractor could cause serious injury or death.
- ▲ Do not allow anyone to stand between tractor and implement while backing up to implement.
- ▲ Keep hands, feet, and clothing away from power-driven parts.
- ▲ Wear snug fitting clothing to avoid entanglement with moving parts.
- ▲ Watch out for wires, trees, etc., when raising implement. Make sure all persons are clear of working area.
- ▲ Turning tractor too tight may cause implement to ride up on wheels. This could result in injury or equipment damage.
- ▲ Do not carry passengers on implement at any time.

Look For The Safety Alert Symbol

The SAFETY ALERT SYMBOL indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control, and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.

Be Aware of Signal Words

A Signal word designates a degree or level of hazard seriousness. The signal words are:

⚠ DANGER
Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

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

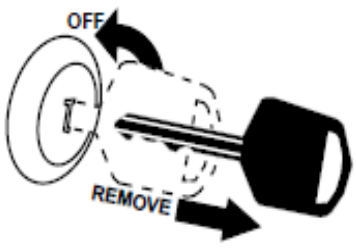
⚠ CAUTION
Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

For Your Protection

- ▲ Thoroughly read and understand the "Safety Label" section, read all instructions noted on them.

Shutdown and Storage

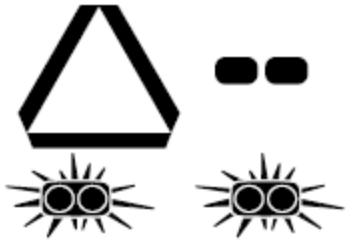
- ▲ Lower machine to ground, put tractor in park, turn off engine, and remove the key.
- ▲ Detach and store implements in a area where children normally do not play. Secure implement by using blocks and supports.



These are common practices that may or may not be applicable to the products described in this manual.

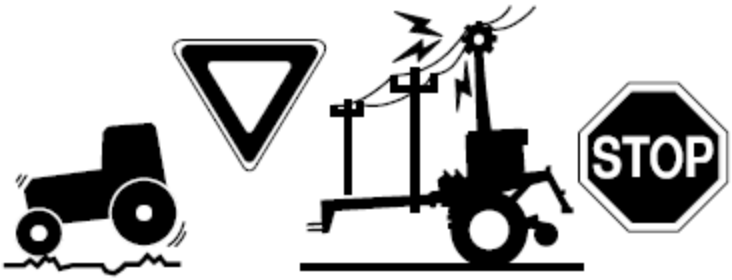
Use Safety Lights and Devices

- ▲ Slow moving tractors, self-propelled equipment, and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.
- ▲ Flashing warning lights and turn signals are recommended whenever driving on public roads.



Transport Machinery Safely

- ▲ Comply with state and local laws.
- ▲ Maximum transport speed for implement is 20 mph. DO NOT EXCEED. Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrain require a slower speed.
- ▲ Sudden braking can cause a towed load to swerve and upset. Reduce speed if towed load is not equipped with brakes.
- ▲ Use the following maximum speed - tow load weight ratios as a guideline:
  - **20 mph** when weight is less than or equal to the weight of tractor.
  - **10 mph** when weight is double the weight of tractor.
- ▲ **IMPORTANT**: Do not tow a load that is more than double the weight of tractor.



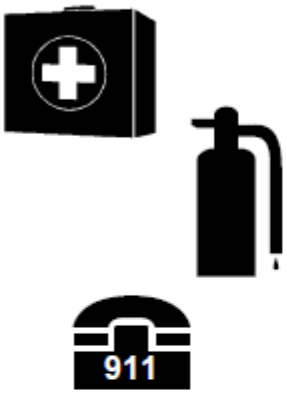
Practice Safe Maintenance

- ▲ Understand procedure before doing work. Use proper tools and equipment, refer to Operator's Manual for additional information.
- ▲ Work in a clean dry area.
- ▲ Lower the implement to the ground, put tractor in park, turn off engine, and remove key before preforming maintenance.
- ▲ Allow implement to cool completely.
- ▲ Do not grease or oil implement while it is in operation.
- ▲ Inspect all parts. Make sure parts are in good condition & installed properly.
- ▲ Remove buildup of grease, oil, or debris.
- ▲ Remove all tools and unused parts from implement before operation.

These are common practices that may or may not be applicable to the products described in this manual.

Prepare for Emergencies

- ▲ Be prepared if a fire starts.
- ▲ Keep a first aid kit and fire extinguisher handy.
- ▲ Keep emergency numbers for doctor, ambulance, hospital, and fire department near phone.

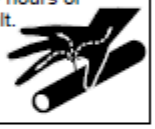


Wear Protective Equipment

- ▲ Wear protective clothing and equipment appropriate for the job. Avoid loose fitting clothing.
- ▲ Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Operating equipment safely requires the full attention of the operator. Avoid wearing radio headphones while operating machinery.

Avoid High Pressure Fluids Hazard

- ▲ Escaping fluid under pressure can penetrate the skin causing serious injury.
- ▲ Avoid the hazard by relieving pressure before disconnecting hydraulic lines or performing work on the system.
- ▲ Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- ▲ Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- ▲ Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- ▲ If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be treated within a few hours or gangrene may result.



Keep Riders Off Machinery

- ▲ Riders obstruct the operator's view, they could be struck by foreign objects or thrown from the machine.
- ▲ Never allow children to operate equipment.

Tire Safety

- ▲ Tire changing can be dangerous and should be preformed by trained personnel using the correct tools and equipment.
- ▲ When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.
- ▲ When removing and installing wheels, use wheel handling equipment adequate for the weight involved.

Safety labels

Your Flail Mower comes equipped with all safety labels in place. They were designed to help you safety operate your implement. Read and follow the directions.

1. Refer to this section for proper label placement.
Replace all damaged or missing labels. Order new labels from your nearest dealer.

2. Some new equipment installed during repair requires safety labels to be affixed to the replaced component as specified by Mateng .When ordering new components make sure the correct safety labels are included in the request.

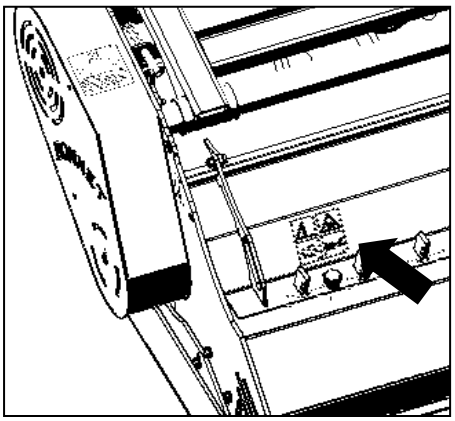
3. Refer to this section for proper label placement.
To install new labels:

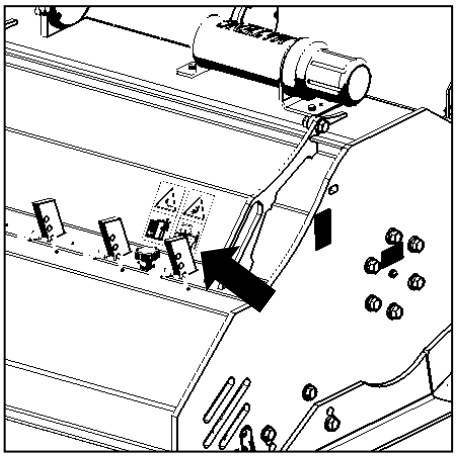
a. *Clean the area the label is to be placed.*

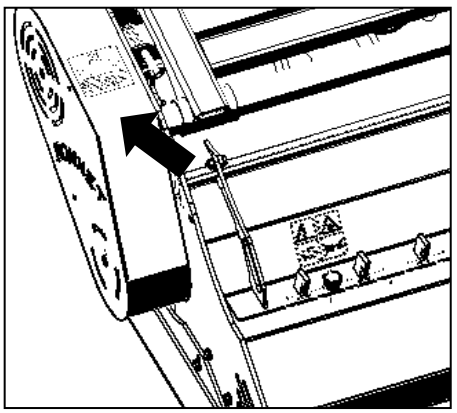
b. *Spray soapy water on the surface where the label is to be placed.*

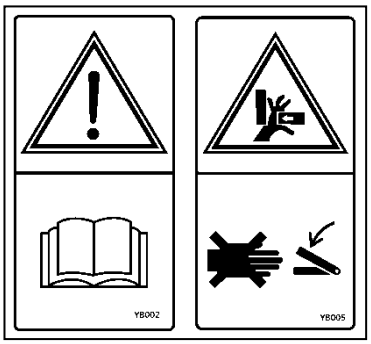
c. *Peel backing from label. Press firmly onto the surface.*

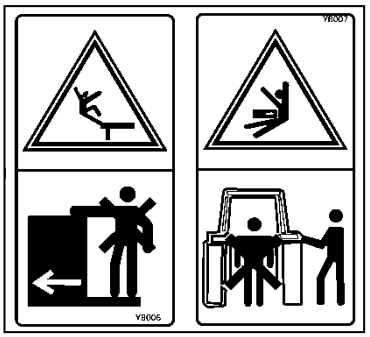
d. *Squeeze out air bubbles with the edge of a credit card or with a similar type straight edge.*

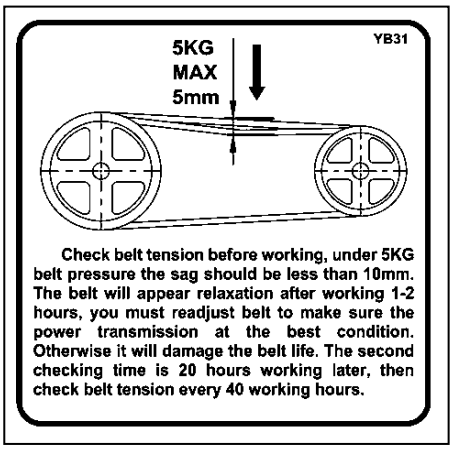


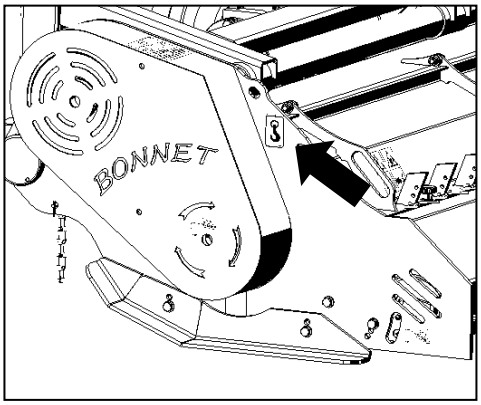


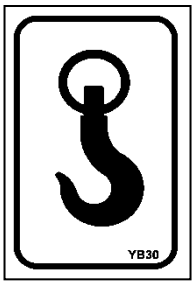




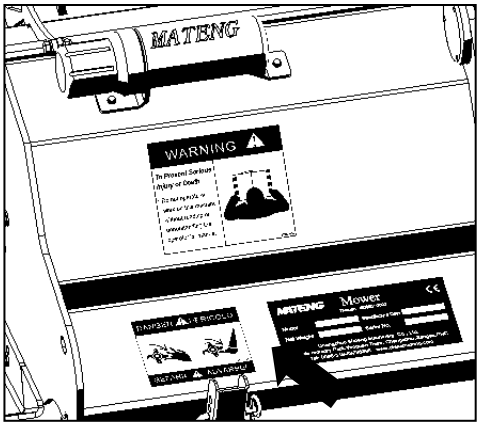


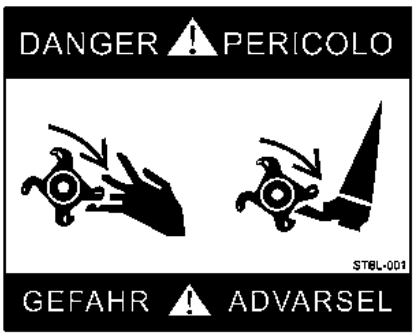




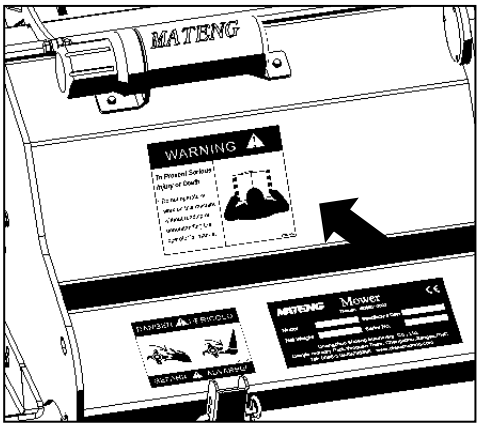


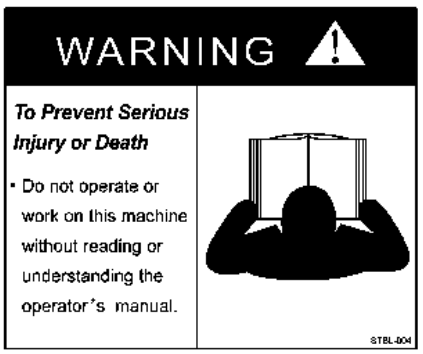
The lifting hook



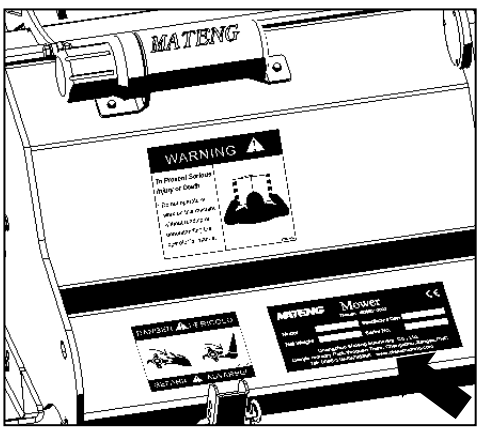


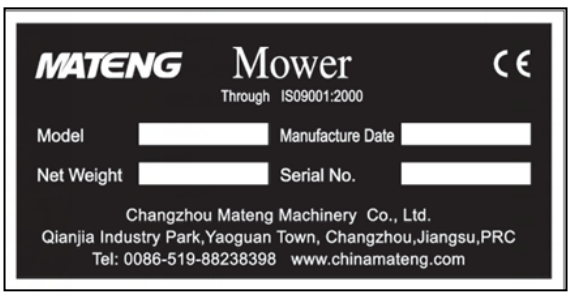
Danger: Rotating blades Both sides



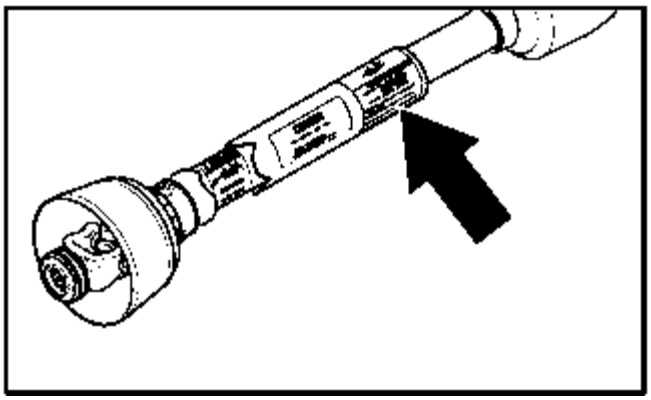


reading

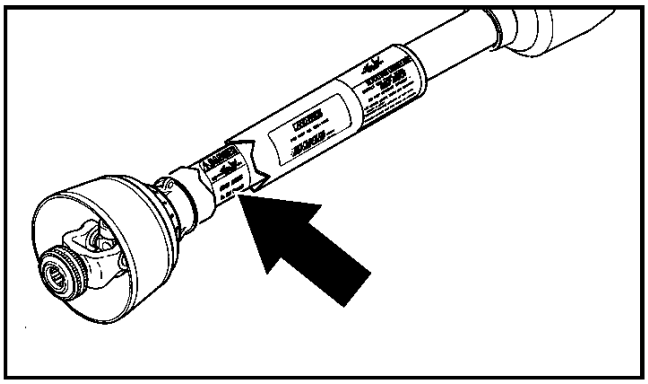




Nameplate



Danger: Rotating Driveline



Danger: Guard Missing

Introduction

MATENG welcomes you to the growing family of new product owners.

This Flail Mower has been designed with care and built by skilled workers using quality materials. Proper assembly, maintenance, and safe operating practices will help you get years of satisfactory use from this machine.

Application

The Heavy duty L.TRE Series Flail Mowers are designed and built to provide excellent cutting performance on gently sloping or slightly contoured right-of ways, roadsides, ditches, pastures, nurseries, and smaller fields of r ow crop debris, stalks, and residual agricultural growth.

L.TRE heavy duty series has 5 models available: 1950mm, 2150mm, 2350mm, 2550mm,2750mm cutting width, cutting angle, displacement, three point suspension, equipped with a 60HP to 100HP tractor. Specially designed for cutting orchard, on both sides of highway slope, ditch.

All models equipped with fine cutting knives will perform extremely well cutting material up to 1" in diameter or provide a very respectable quality o cut for grooming yards, municipal parks, medians, and right of ways.

All models also can be equipped with forged hammer knives and heavy duty brush rake teeth to make them well suited for nursery and agricultural applications where heavy grass, brush, pruning, saplings, small stumps, corn stocks, and other row crop debris are present. The rake teeth will gather and aggressively force material into the rotor hammer knives for a more complete pulverization.

Using This Manual

• This Operator's Manual is designed to help familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.

• The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance.

• To order a new Operator's or Parts Manual contact your authorized dealer. Manuals can also be downloaded, free-of-charge from our website at www.Mateng.com.

Terminology

"Right" or "Left" as used in this manual is determined by facing the direction the machine will operate when used unless otherwise stated.

Definitions

IMPORTANT: A special point of information related to the following topic. MATENG's intention is this information must be read & noted before continuing.

NOTE: A special point of information that the operator should be aware of before continuing.

Owner Assistance

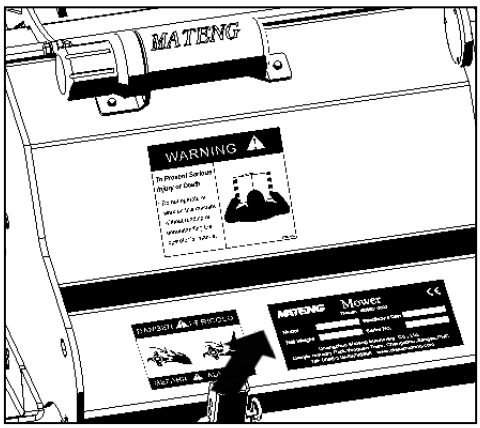
The Online Warranty Registration or Warranty Registration card should be completed by the dealer at the time of purchase. This information is to necessary provide you with quality customer service.

The parts on your Flail Mower have been specially designed by MATENG and should only be replaced with genuine MATENG parts. Contact a MATENG dealer if customer service or repair parts are required. Your MATENG dealer has trained personnel, repair parts, and equipment needed to service the implement.

Serial Number

Model No. _____ Serial No. _____

For quick reference and prompt service, record model and serial number in the spaces provided above and again on warranty page 31. Always provide model and serial number when ordering parts and in all correspondences with your MATENG dealer. Refer to Figure 1 for location of your serial number plate.



Serial Number Plate Location
Figure 1

Further Assistance

Your dealer wants you to be satisfied with your new Mowers.
If for any reason you do not understand any part of this manual or are not satisfied with the service received, the following actions are suggested:

1. Discuss the matter with your dealership service manager making sure that person is aware of any problems you may have and has had the opportunity to assist you.
2. If you are still not satisfied, seek out the owner or general manager of the dealership, explain the problem, and request assistance.
3. For further assistance write to:

Changzhou Mateng Machinery Co., Ltd.
10# Chuangsheng Road, LuoYang Industrial Park,
Wujin District, Changzhou City ,Jiangsu Province ,P.R.of China 213104
Tel: 0086-519-8823 8398·
Fax: 0086-519-8823 8397
E-mail address
mateng@mateng.com

Torque Requirements

Refer to **“Torque Values Chart for Common Bolt Sizes”** on page 30 to determine correct torque values when tightening hardware.

Hitch Assembly

Refer to “Page No.1” on page 23

The hitch has already assembled with machine body.

Hitch Assembly
Figure 1-1

Tractor Requirements

Tractor horsepower and hitch category should be within the range noted below. Tractors outside the horsepower range must not be used. The lower 3-Point arms must be stabilized to prevent side-to-side movement. Most tractors have sway blocks or adjustable chains for this purpose.

Horsepower Rating 60-100HP
Hitch Type . . . . . 3-Point Cat. II
Rear PTO Speed . . . . . .540 RPM
Tractor Weight . . . . . See Important Note Below

Tractor Hook-up

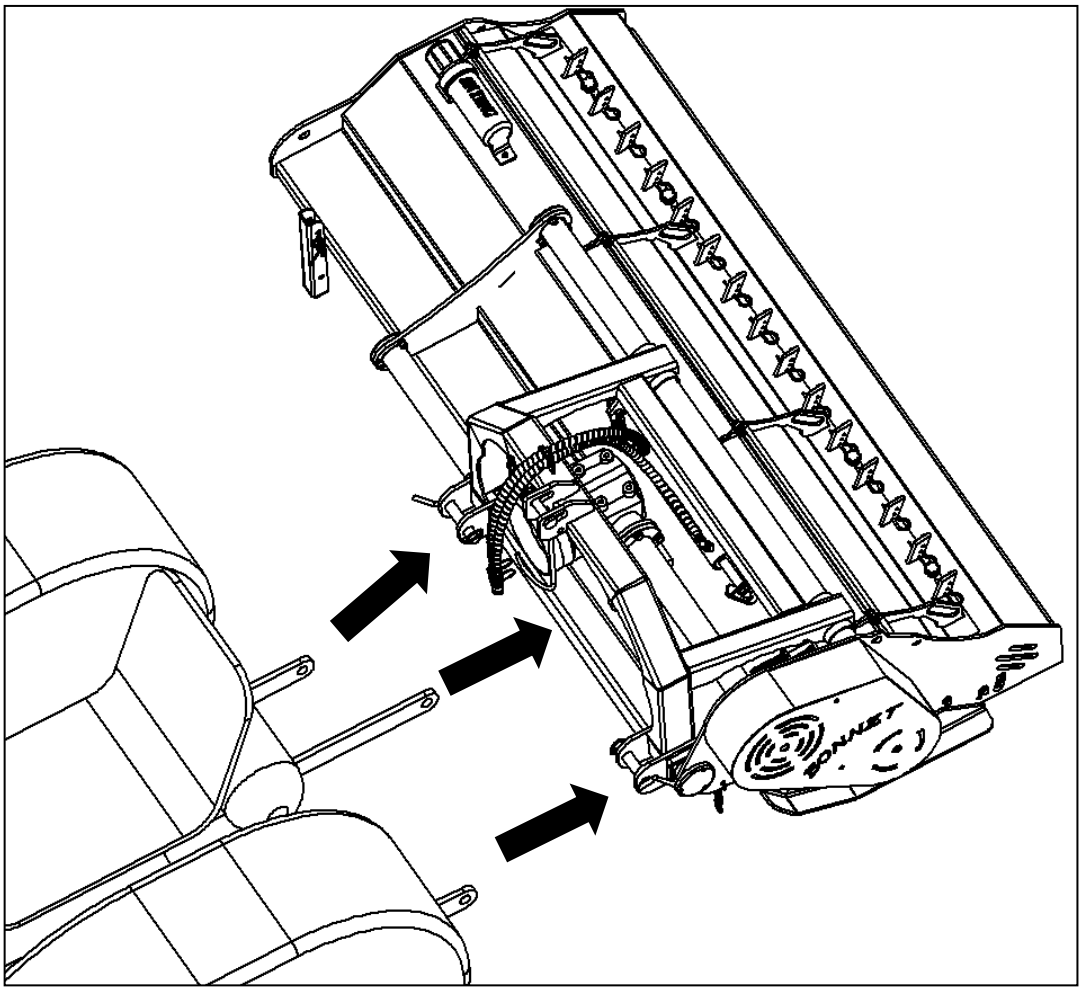
Refer to Figure 1-2:

1. Be certain tractor draw bar does not interfere. Move draw bar ahead or remove if required. Draw bar should also be checked for clearance when unit is raised for the first time.
2. Remove all three clevis hitch pins.
3. Align ball swivels in the tractor's lower 3-Point arms with pin holes in the lower hitch clevises of the Mowers . Insert hitch pins and secure with hair pin cotters.
4. Align the top center link with the center hitch Clevis of the Mowers.
Insert hitch pin and secure with hair pin cotter.
5. With tractor's 3-Point controls, lift Mowers up 1 to 2 inches and then raise jack stands fully up. Secure stands with jack pins and hair pin cotters.
6. Level Mowers by adjusting lower 3-Point arms and upper center link. Refer to **"Leveling the Mowers "** on page 16.

Driveline Installation

! DANGER

Do not *engage tractor PTO while hooking-up and unhooking driveline or stand near a rotating driveline. A person's body and/or clothing can become entangled*



Tractor Hook-Up
Figure 1-2

Driveline installation

Refer to Figure 1-3:

1. Park tractor on a level surface. Slowly engage tractor 3-Point lift lever to raise Mowers until gearbox shaft is in line (level) with tractor PTO shaft.
2. Support Mowers deck at this height with support jacks or blocks to keep Mowers from drifting down.
3. Place gear selector in park, set park brake, shut tractor off, and remove switch key.
4. Slide inner yoke (implement end) of driveline onto the gearbox. Secure driveline with yoke locking device.
5. Slide outer yoke of driveline over the tractor PTO shaft. Secure driveline with yoke locking device.
6. If driveline does not fit between tractor and gearbox, skip to instructions to **"Shorten Driveline Length"** on this page.
7. The driveline should now be moved back and forth to ensure both ends are secured to the tractor and poultry litter crusher PTO shafts. Reattach any end that is loose.
8. Hook driveline safety chain on the tractor end of driveline to the tractor. Re-latch safety chain to the driveline shield.
9. Hook driveline safety chain on the Mowers end of driveline to the Mowers frame. Re-latch safety chain to the driveline shield.

Check Driveline Collapsible Length

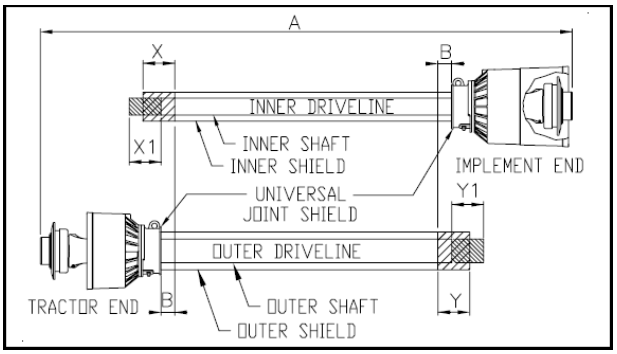
IMPORTANT: Two small chains are supplied with the driveline. To keep driveline shields from rotating, these chains must be attached to the outer and inner driveline shields and to the Mowers and tractor.

IMPORTANT: A driveline that is too long will bottom out causing structural damage to the tractor and Mowers . Always check driveline collapsible Length during initial setup and when connecting to a different tractor. More than one driveline may be required to fit all applications.

1. Make sure driveline is properly installed and level before checking driveline collapsible length. (Refer to **"Driveline Installation"** on page 10 if needed.)

Refer to Figure 1-3:

2. With driveline level, measure 1" (**"B"** dimension) back from universal joint shield to end of outer driveline shield. If measurement is 1" or more, skip **"Check Driveline Extended Length"** on page 12. If measurement is less than 1", then continue with **"Shorten Driveline Length"** on this page.



Driveline ShorteningFigure 1-3

Shorten Driveline Length

Refer to Figure 1-3:

1. Un-hook driveline from tractor PTO shaft and pull outer and inner drivelines apart.
2. Reattach outer driveline to tractor PTO shaft. Pull on inner and outer drivelines to be sure universal joints are properly secured.
3. Hold inner and outer drivelines parallel to each other:
   a. Measure 1" (**"B"** dimension) back from outer driveline universal joint shield and make a mark at this location on the inner driveline shield.
   b. Measure 1" (**"B"** dimension) back from the inner driveline universal joint shield and make a mark at this location on the outer driveline shield.
4. Remove driveline from tractor and gearbox shafts.
5. Measure from end of inner shield to scribed mark (**"X"** dimension). Cut off inner shield at the mark. Cut same amount off the inner shaft (**"X1"** dimension).
6. Measure from end of outer shield to scribed mark (**"Y"** dimension). Cut off outer shield at the mark. Cut same amount off the outer shaft (**"Y1"** dimension).
7. Remove all burrs and Crushings.
8. Check drive line extend length next.

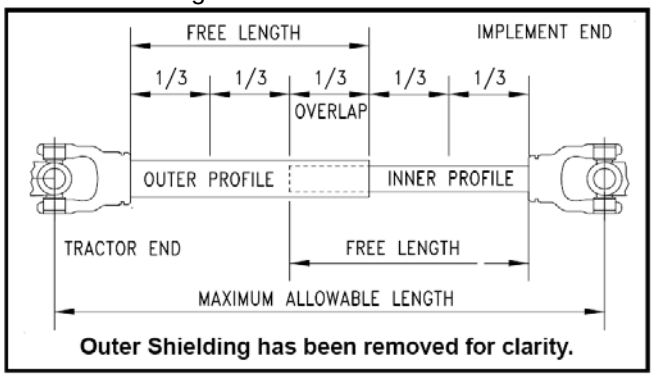
Check Driveline Extended Length

Refer to Figure 1-4:

Make sure driveline collapsible length is acceptable. If needed, refer to **"Check Driveline Collapsible Length"** on page 11 instructions on this page.

The driveline maximum allowable length must, when fully extended, have a mini mum overlap of the profile tubes by not less than 1/3 the free length with both inner and outer profile tubes being of equal length.

1. Apply multi-purpose grease to the inside of the outer shaft and reassemble the driveline.
2. Assemble driveline profiles together with 1/3 overlapping of inner and outer profile tubes. Once assembled, measure and record the maximum allowable length shown below for future reference.



Driveline Maximum Extended Length
Figure 1-4

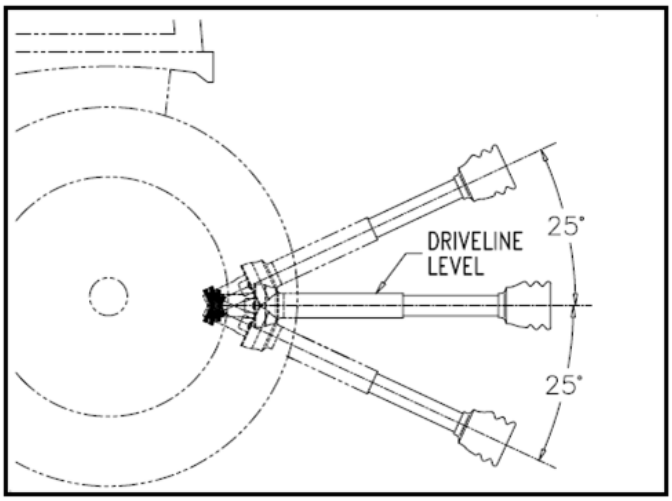
3. Attach inner driveline yoke to the Mowers gearbox shaft. Attach outer driveline yoke to the tractor's PTO shaft.
4. Move yoke ends of driveline back and forth to ensure they are secured to the tractor and Mowers shafts.
   Reattach any end that is loose.

IMPORTANT: Small chains are supplied with the driveline. They must be attached to the inner and outer driveline shields and to the Mowers and tractor to restrict shield rotation.

5. Hook driveline safety chain on the tractor end of driveline to the tractor. Re-latch safety chain to the driveline shield.
6. Hook driveline safety chain on the Mowers end of driveline to the Mowers frame. Re-latch safety chain to the driveline shield.
7. Start tractor and raise Mowers just enough to remove blocks.
8. Slowly engage tractor hydraulic 3-Point control lever to lower Mowers . Check for sufficient drawbar clearance. Move drawbar ahead, aside or remove if required.
9. Raise and lower implement to find maximum extended driveline length. Check to make certain that the driveline overall length does not exceed the maximum recorded length in step 2.
10. If needed, set tractor 3-Point lift height to keep driveline from exceeding maximum allowable length.

Check Driveline Interference

Refer to Figure 1-5:



Maximum PTO Driveline Movement During Operation
Figure 1-5

1. Slowly engage tractor hydraulic 3-Point control lever to lower Mowers while checking for sufficient drawbar clearance. Move drawbar ahead, aside, or remove if required.
2. Raise and lower implement to find maximum extended driveline length. Check to make certain the driveline does not exceed the maximum allowable length and 25° up or down.
3. If needed, set tractor 3-Point lift height to keep driveline from exceeding the maximum allowable length and 25° up.

Pre-Start Checklist

Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training involved in the operation, transport, storage, and maintenance of the Mowers . Therefore, it is absolutely essential that no one operates the poultry litter Crusher without first having read, fully understood, and Become totally familiar with the Operator's Manual. Make sure the operator has read and paid particular attention to:

- **Important Safety Information**, page 1
- **Section 1: Assembly & Set-up,** page 9
- **Section 2: Operating Instructions**, page 13
- **Section 3: Adjustments**, page 16
- **Section 4: Maintenance & Lubrication**, page 18

Make sure the operator has completed the Operating Checklist below.

✔	Check	Page No.
	Read and follow all Safety Information carefully. Refer to "Important Safety Information".	Page 1
	Make sure all guards and shields are in place. Refer to "Important Safety Information".	Page 1
	Read and follow 3-Point hook-up & preparation instructions. Refer to "Assembly & Set-up".	Page 9
	Read and made all required adjustments. Refer to "Section 3: Adjustments".	Page 16
	Read and follow all operating procedures. Refer to "Section 2: Operating Instructions".	Page 13
	Read and follow all Maintenance Instructions. Refer to "Section 4: Maintenance & Lubrication".	Page 18
	Read and follow all Lubrication Instructions. Refer to "Lubrication Points".	Page 19
	Make sure all gearboxes are properly lubricated. Refer to Gearbox Lubrication lubrication.	Page 19
	Check Mowers initially and periodically for loose bolts and pins. Be sure all lock nut s and bolts are tight. Especially make sure blade bolts are tight. Refer to "Torque Values Chart for Common Bolt Sizes".	Page 30

Tractor Shut Down Procedure

It is essential that the tractor be shut down as noted below before making any inspections, maintenance and/or repairs to the tractor and/or Mowers .

1. Park tractor on a level surface.
   Don't work under or around an implement parked on a steep incline.
2. Place tractor in park and set park brake.
3. Disengage PTO if operating.
4. Shut engine off and remove switch key.
5. Wait for PTO to come to a complete stop before dismounting tractor.
6. Wear safety glasses.

Transporting

! CAUTION

When traveling on public roads whether at night or during the day, use accessory light and devices for adequate warning to operators of other vehicles. Comply with all federal, state, and local laws.

1. When raising Mowers to transport position, be sure driveline does not contact tractor or Mowers . Adjust and set tractor's 3-Point lift height so that the driveline does not contact Mowers deck in the fully raised position.
2. Be sure to reduce tractor ground speed when turning, leaving enough clearance so that the Mowers does not contact obstacles such as buildings, trees, or fences.
3. Select a safe ground travel speed when transporting from one area to another. When traveling on roadways, transport in such a way that faster moving vehicles may pass safely.
4. When traveling over rough or hilly terrain, shift tractor to a lower gear.

Safety Information

! DANGER

Do not engage tractor PTO while hooking-up and unhooking the driveline or while someone is standing near the driveline. A person's body and/or clothing can become entangled in the driveline resulting in serious injury or death.

! DANGER

Mowers s have the ability to discharge objects at high speeds if guards and safety shields are not in place and closed.

! DANGER

Gearbox and driveline shields must be secured in place when operating the Mowers to avoid injury or death from entanglement in rotating drivelines.

! DANGER

Do not operate a broken or bent driveline. Such a driveline can brake apart while rotating at high speeds causing serious injury or death. Always remove Mowers from service until damaged driveline is repaired or replaced.

! DANGER

Never carry a person on the Mowers . A rider can fall or become entangled in the machine causing serious injury or death.

! DANGER

Do not operate and/or travel across steep inclines where a tractor can roll-over resulting in serious injury or death. Consult your tractor's manual for acceptable inclines the tractor is capable of traveling across.

! DANGER

Do not use Mowers to lift or carry objects. Lifting and/or carrying objects can result in damage to the Mowers , serious bodily injury, or death.

! DANGER

Do not use Mowers as a working platform. The Mowers is not properly designed or guarded for this. Using the Mowers as a working platform can cause serious injury or death.

! WARNING

Always disengage PTO, engage parking brake, shut tractor engine off, remove switch key, and wait for blades to come a complete stop before dismounting from tractor.

! WARNING

The G.OS is designed to cut grass and brush up to 1" diameter and yet cut up to 2" diameter brush.
Using this Mowers for another type of work can damage the Crushing components, drive components, Mowers frame, and tractor.

! CAUTION

Do not over speed PTO or machine damage may result. This Mowers is designed to be used only with a tractor having a 540 RPM rear PTO.

Working Instructions

1. Clear area to be worked of objects and debris that might be picked up and thrown by the Mowers blades. Do not use Mowers on stony ground.
2. Make the following machine checks before operating the Mowers .

• All hook-up pins should be secured.
• All shields should be in place and secured.
• All bolts and lock nut s should be present and tight.
• Make sure the blades are not be broken or loose.

Operating Instructions

Proper servicing and adjustments are the key to the long life of any machine. With careful and systematic inspection of the Mowers , costly maintenance, time, and repair can be avoided.

!

Before beginning to work, the following inspection and checks should be performed:

1. Check oil level in gearbox. Refer to "Gearbox Lubrication" on page 19.
2. Check that all plugs in gearbox have been replaced and tightened properly.
3. Be sure all Mowers blades, bolts, and lock nut s are tight.
4. Be certain all guards and shields are in place and secure.
5. Grease driveline shaft and all other grease fittings.
6. Clear area to be worked of rocks, branches, and other foreign objects. Do not use Mowers on stony ground.
7. Lower Mowers to ground. Set tractor throttle at approximately 1/4 open. Engage PTO to start blades rotating.
8. Operate with 540 rpm PTO tractor. At first begin working at a slow forward speed and shift up until the desired speed is achieved maintaining 540 rpm PTO. The rotor blades will cut better at full blade speed than at reduced throttle.
9. After working the first 50 feet, stop and check to see that the Mowers is adjusted properly.
10. Do not make sharp turns or attempt to back up while Mowers is on the ground.
11. Never work close to or on steep slopes.
12. Do not engage PTO with Mowers in the fully raised position. Do not engage PTO at full throttle. Do not lift Mowers with PTO engage.
13. Do not allow anyone including yourself near the Mowers when it is operating.
14. Periodically check for foreign objects wrapped around the rotor shaft and remove them after disengaging PTO, turning off tractor, and removing ignition key.

General Operating Instructions

Now that you have familiarized yourself with the Operator's Manual, completed the Operators Checklist, properly attached your Mowers to your tractor, made the right offset or center adjustments, and preset your Crushing height, you're almost ready to begin using your MATENG L.TRE Series Flail Mowers

It's now time to do a running operational safety check. If at any time during this safety check you detect a malfunction in either the Mowers or tractor shut the tractor off immediately, remove the key, and make necessary repairs or adjustments before continuing on.

Make sure the tractor's park brake is engaged, the tractor's PTO is disengaged, and the Mowers is resting on the ground. Start the tractor and then back the tractor throttle off till the engine is at low idle. With the tractor's rear hydraulic lift control lever, raise the Mowers to transport position making sure that the PTO shaft is not in a bind and does not come in contact with the Mowers frame. Lower the unit to Crushing position and, with the tractor still at low idle, engage the PTO. If everything is running smoothly at this point increase the engine rpm until the tractor's engine reaches full PTO operating speed which will be 540 rpm. Slowly raise the cutter to transport height to make sure the driveline does not bind or chatter. Then return the engine to low idle, disengage PTO, and position the adjustable stops on the tractor's hydraulic lift lever control console so the cutter can be consistently returned to the same Crushing and transport height.

You should now be ready to move to the Crushing site to begin working. You should have inspected and should only be Crushing in an area you are familiar with which is relatively free of debris and unseen objects. Never assume an area is clear. In the event you do strike an object, stop the tractor and Mowers immediately to inspect the rotor and make any necessary repairs before resuming operation. It pays to inspect a new area and to develop a plan before you cut.

Normal working speed will be between 2-5 mph and you will need to maintain tractor PTO speed to produce a clean cut so make a tractor gear and range selection that will maintain this combination. Generally the quality of cut of will be better at lower ground speeds and Crushing denser ground cover or heavier brush may create the need to slow down. Always cut downward on slopes and avoid crossing the face of steep slopes. Avoid sharp drops and cross diagonally through dips to prevent hanging up the tractor and Mowers . Slow down in turns and avoid sharp turns if at all possible. Remember to look back often.

Now you're prepared and well briefed so let's begin Cutting. Reduce the tractor's engine rpm, make sure the Mowers is on the ground and in Crushing position, engage the PTO, raise the engine rpm to the appropriate PTO speed, and begin working. Operators must plan ahead and choose a Crushing route that allows safe turns. Try increasing or decreasing ground speed to determine the effect on quality of cut. With a little practice you will be pleased with what you and your MATENG Mowers can do.

! CAUTION

Engage parking brake, shut off tractor, remove key, and disengage PTO before making any adjustments!

! CAUTION

Ensure Mowers with special supports if it is necessary to lift Mowers off the ground to make adjustments! If not supported, the Mowers could fall causing serious injury to those present.

Leveling the Mowers

Level adjustments are made at the tractor's 3-Point lower arms and top center link.

1. Park tractor and Mowers on a flat level surface.
2. Slowly raise Mowers with the tractor's Hydraulic 3-Point lift until the unit is about 1 to 2" above the ground.
3. Ensure that the lower arms are stabilized to prevent excessive side movement.
4. Place a spirt level on the top cover running from left to right and adjust one of the lower 3-Point arms up or down until the Mowers is level from left to right.
5. Adjust tractor's top center link to place the upper hitch pin vertically above or slightly behind the lower hitch pins.
6. Slowly operate the tractor's 3-Point hydraulic control up and down to check for clearance between the tires, frame, drawbar, etc.

Belt Tension Adjustment

! WARNING

Excessive tension on the belt may lead to premature failure of belt and drive components. Excessive tension on the belt may also lead to a safety hazard to the operator or bystanders.

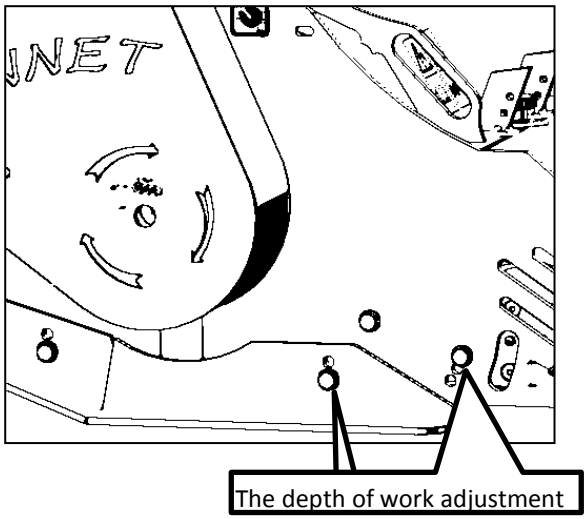
The Belt tension should be checked after the first 20 hours of use and every 40 hours thereafter.

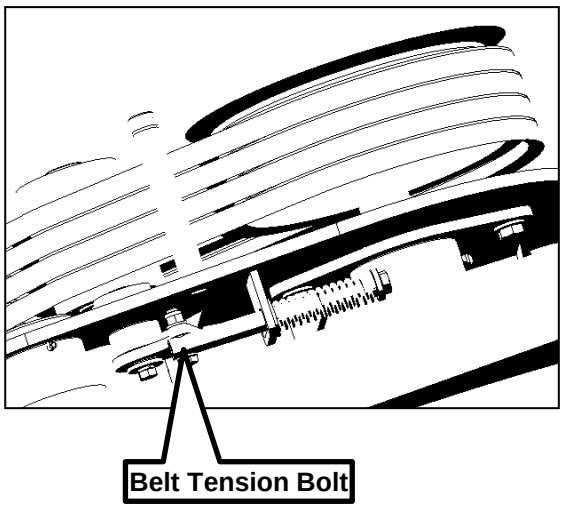
1. Check belt tension by applying approximately 22 pounds of pressure half way between the pulleys. The belt should deflect approximately 3/8".
2. Belt tension can be adjusted at the belt tension bolt. Turn belt tension bolt until desired belt tension is achieved.
3. Loosen gearbox mounting bolts and move gearbox until Mowers driveline is running straight (parallel) with the Flail Mo

Crushing Height Adjustment

The machines cutting height depends upon the position of Adjustment plate.

1. Remove bolts that fix the roller height on both sides.
2. Lift or lower both sides of roller in equal measurements.
3. Replace bolts and re-tighten to the proper torque.
4. Inspect blades to make sure they do not touch the ground. blades that come in contact with the ground will wear quickly. If necessary, readjust Crushing height to keep blades from touching the ground.





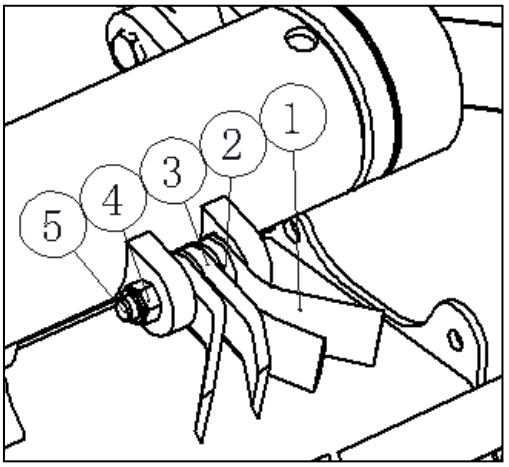
Rotor blade Replacement

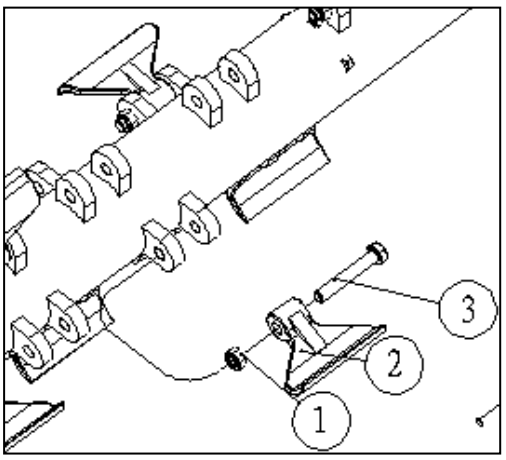
Frequently check rotor blades to make sure they are in good working condition and properly secured to the rotor. Replace worn or damaged parts with new blades.

IMPORTANT:
Make sure that the replacement of blade with other same weight. This will be a balance of rotor spinning.

IMPORTANT:
The replaced blade must be the original factory accessories

The blade have a Crushing edge on both the leading and trailing edges. When the leading edge wears out, turn existing pair of blade around 180 degrees and reinstall. Replaced blade should be the same length as existing part to maintain rotor balance.





L.TRE Series Blade Replacement

1. Remove nut(#4), bolt (#5) for Y type blade system or locknut (#1), bolt(#3) for forged harmer system.
2. Remove existing blades and spacer (#2) or turn existing pair of blade around 180 degrees and reinstall.
3. Install blade with existing bolt, spacer and locknut..
4. Tighten locknut with correct torque.

Storage

It is good practice to clean off any dirt and grease that may have accumulated on the Mowers and to inspect and make necessary repairs before parking the unit at the end of the working season and for long periods. This will help ensure that the Mowers will be ready for use the next time you hook-up to it.

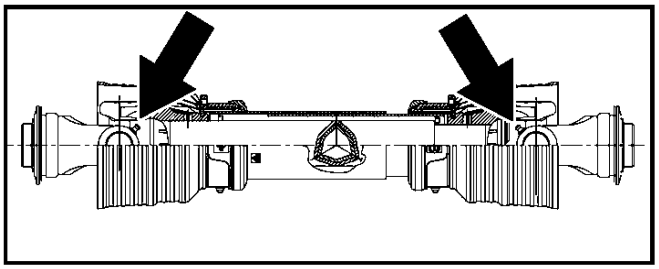
! DANGER

Always disconnect main driveline from tractor PTO and secure Mowers in the up position with solid supports before servicing underside of the Mowers .

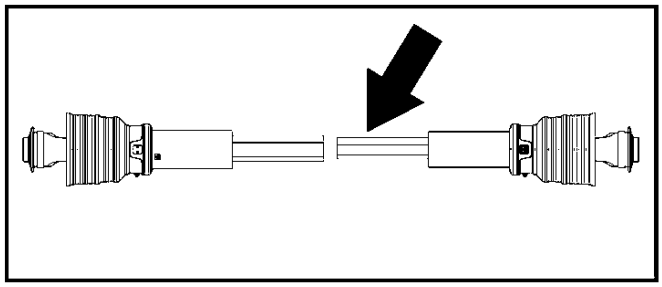
1. Remove any dirt and grease that may have accumulated on the Mowers and moving parts Scrape off compacted dirt from under the hood and then wash the surface thoroughly with a garden hose.
2. Check rotor blade and blade bolts for wear and replace if necessary. See **"Rotor blade Replacement"** on page 17.
3. Inspect Mowers for loose, damaged, or worn parts and adjust or replace as needed.
4. Repaint parts where paint is worn or scratched to prevent rust. Ask your dealer for MATENG aerosol touch-up paint It are also available in touch-up bottles with brush, quarts, and gallon sizes by adding TU, QT, or GL to the end of the aerosol part number.
5. Replace all damaged or missing labels.
6. A light coat of oil or grease may also be applied to areas where paint has worn off to minimize oxidation.
7. Lubricate as noted under **"Lubrication Points"** on page 19.
8. Store equipment on a level surface in a clean, dry place. Inside storage will reduce maintenance and make for a longer mower life. Position the unit on a flat surface with jack stands lowered to a suitable 3-Point height. Ensure that the main frame is stable.
9. Store driveline end off the ground.

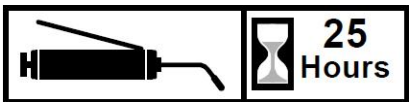
Lubrication Points

Lubrication Legend	Multi-purpose spray lube	Multi-purpose grease lube	Multi-purpose oil lube	50 hrs	Intervals in hours at which lubrication is required

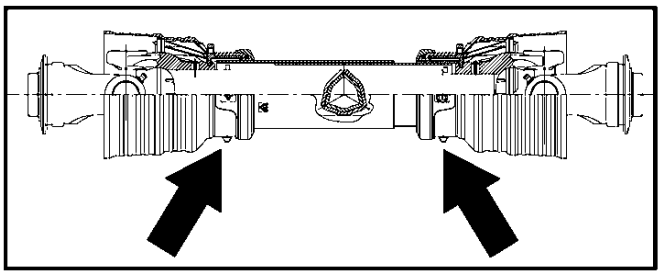


Driveline Shaft U-Joints
Type of Lubrication: Multi-purpose Grease
Quantity - 4 to 8 Pumps

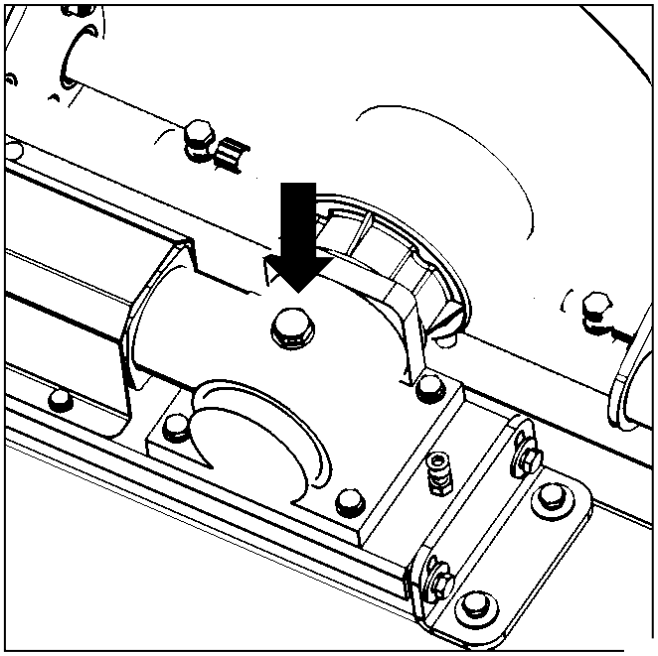


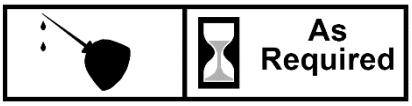


Driveline Profiles
Type of Lubrication: Multi-purpose Grease
Quantity - Clean & coat inner profile tube of driveline with a light film of grease and then reassemble.



Inner Tube Bearings
Type of Lubrication: Multi-purpose Grease
Quantity - As Required

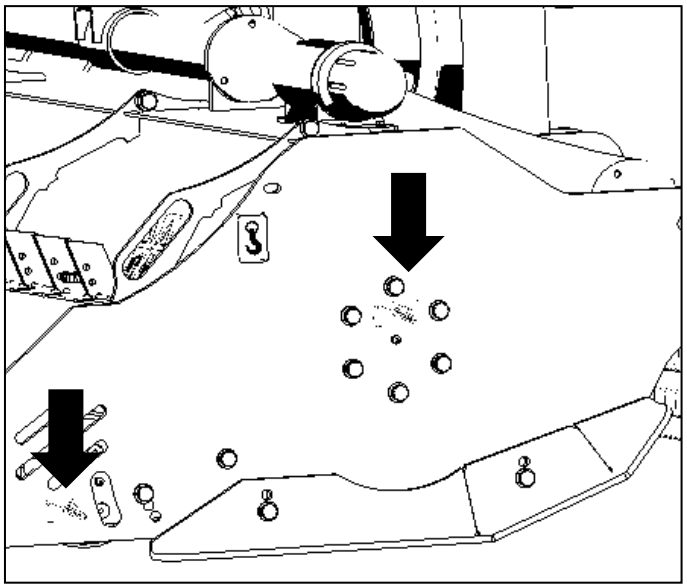


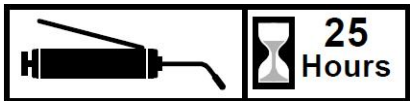


Gearbox Lubrication
Type of Lubrication: SAE EP 90W Gear Lube

Add visual to the center of the gear oil
Reinstall plugs and tighten.

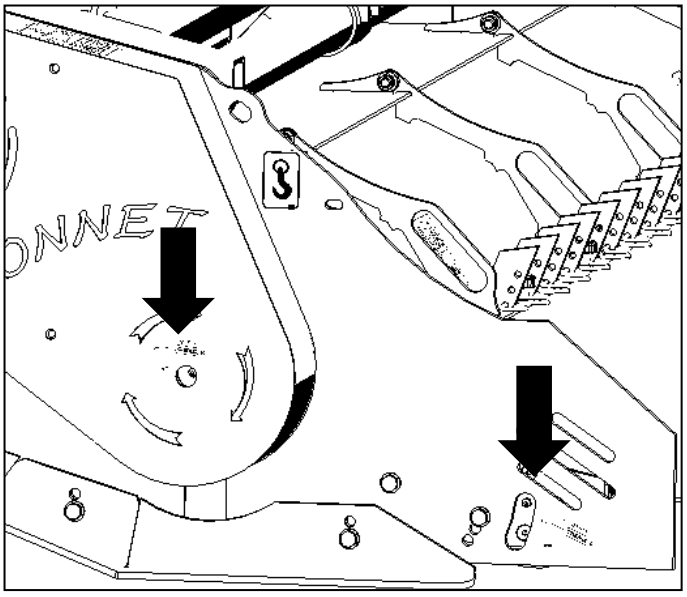
Do not overfill!
Should your gearbox require service, take it to your MATENG dealer.

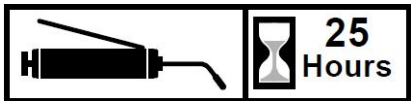




The shaft end bearing

Type of Lubrication: Multi-purpose Grease

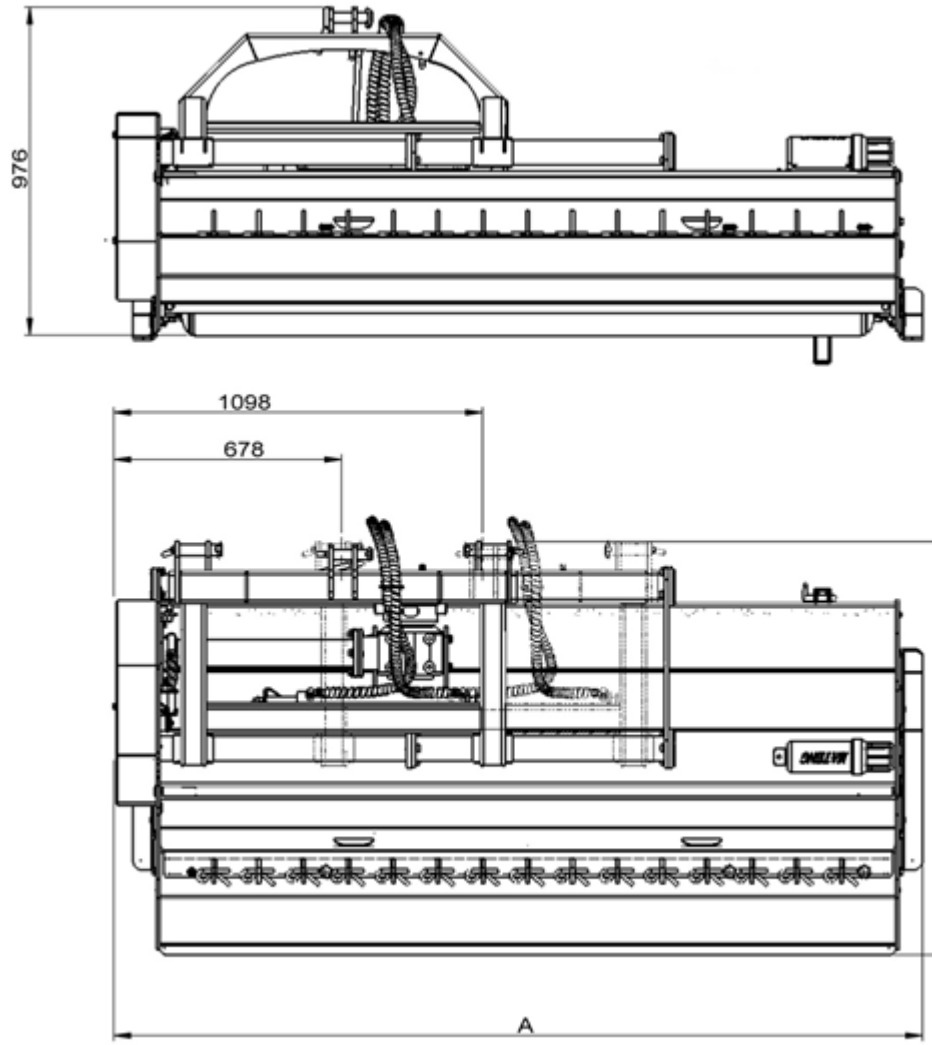




The shaft end bearing

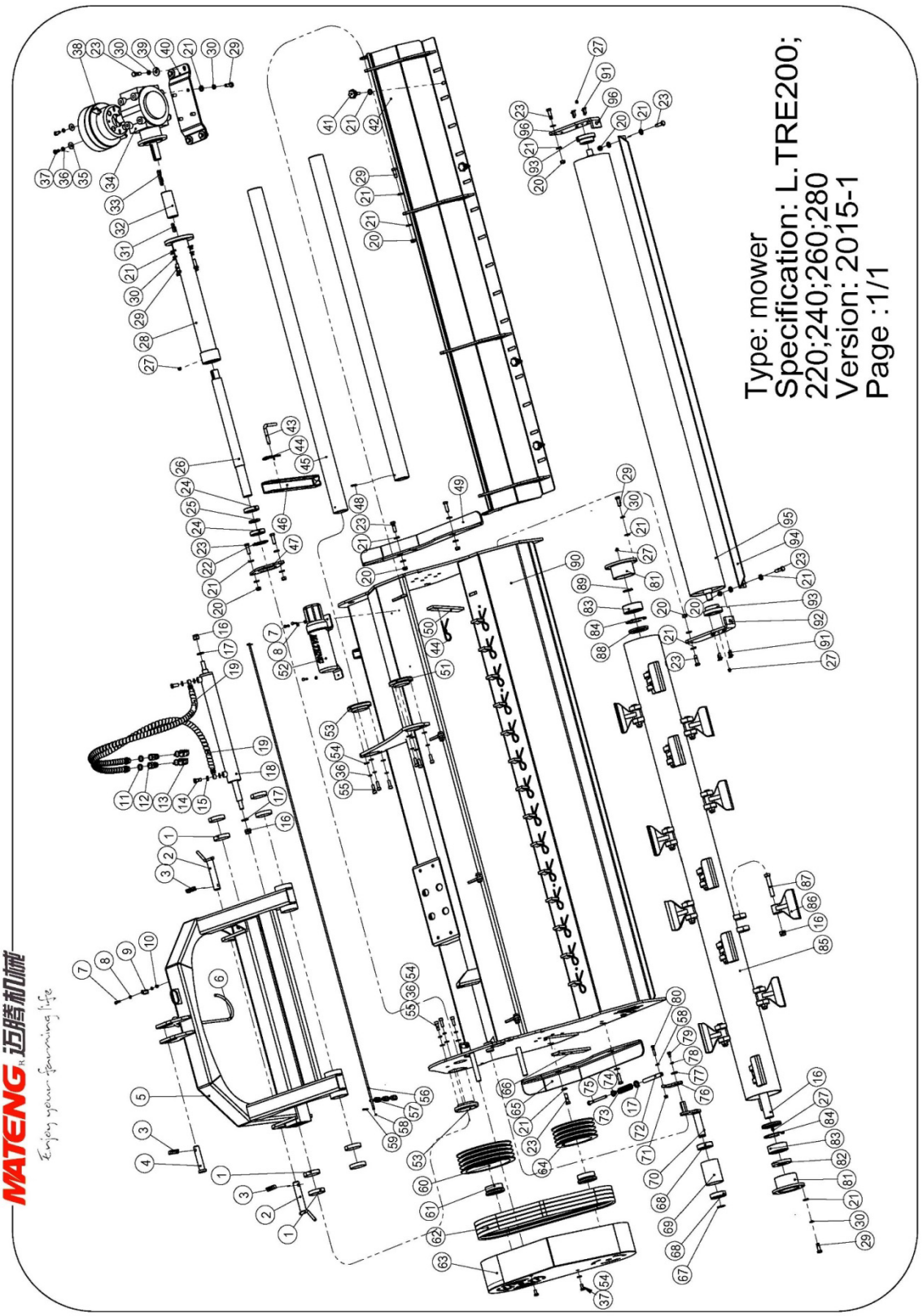
Type of Lubrication: Multi-purpose Grease

Features	Benefits
Cutting width	1950mm-2150mm-2350mm-2550mm-2750mm, a good cutting width for many applications.
60-100 HP Gearbox Rating	Fits a large array of consumer, municipality, and landscape of tractors.
3-Point screw type hitch can be	Easily offset the hitch for a closer cut alongside buildings, fences, roadsides, and for getting
The turning angle of the lawn mowers	The vertical 90 degrees to minus 50 degrees
Hydraulic cylinder displacement	Through the hydraulic cylinder convenient swing mower to cut the scope, and effectively avoid obstacles
Two year gearbox warranty	The gearbox is designed tough to withstand the rigors of flail mowing.
540 RPM cast iron gearbox with Reverse running clutch	Enables the rotor to free swing to a stop when the tractor PTO has been turned off.
60mm Cutting height	Variable cutting heights for many uses.Lowest cutting height allows for scalping in grasses such as Bermuda prior to overseeding.
Fine cutting knives	Heavy enough to cut 20mm material, yet fine enough to groom a yard.
Forged hammer knives	Forged hammers are just right for chopping up pruning up to 40mm thick, but will also groom grass in a very acceptable manner.
Reverse rotor rotation	Brings the cut material up and over which allows it to be dispersed more evenly.
High knife tip speed	Knife tip speed of 30 m/s for cleaner cut.
3 - "SPB" Section belts	"SPB" Section belts have more surface to pulley contact and fits deeper in the groove.
4mm Deck thickness	Allows the mower to handle rough conditions.
Height adjusting roller	Rear height adjusting roller with greaseable bearings and tapered ends to prevent gouging during turns.
Standard scrapers on rear height adjusting roller	Keeps roller clean for consistent cutting height.



Model	A						KG			
	mm	HP	N	PTO	CAT	N	KG	HP	CM	CM
L.TRE200	2210	50	16	540	II	4	660	60-80	420	1930
L.TRE220	2410	50	18	540	II	4	710	60-80	420	2130
L.TRE240	2610	65	18	540	II	4	770	90-100	420	2330
L.TRE260	2810	65	20	540	II	5	825	90-100	420	2530
L.TRE280	3010	65	22	540	II	5	885	90-100	420	2730

Page No.1


Type: mower
Specification: L.TRE200;
220;240;260;280
Version: 2015-1
Page :1/1
MATENG 远腾机械
Enjoy your gardening life

Page No.1

Item	Material code	Part No.	Description	Qty	U.WKg	GWT	Remark
1	11019900032	L.TRE220-105	Wearable ring	8	0.003	0.024	
2	11000200173	BCRI200.055	Hitch pin weldment(Lower)	2	0.73	1.46	
3	11011700014	Φ11*45	PTO pin	3	0.05	0.15	
4	11011700008	LG180.104	Hitch pin (Upper)	1	0.476	0.476	
5	11000201172	L.TRE220-011	Hitch weldment	1	60.938	60.94	
6	11000000047	BCRI200.126	PTO hook	1	0.39	0.39	
7	14010100004	GB/T 5783-2000	Bolt M6*25	4	0.008	0.032	
8	14040000001	GB/T 95-2002	Plain washer 6*1.6	5	0.001	0.005	
9	11010300004	BCRI200.125	Spring strip	1	0.016	0.016	
10	14050100001	GB/T 889.1-2000	Locknut M6	1	0.003	0.003	
11	11011200003	G1/2	Combined sealing gaskets （Automatic core）	2	0.001	0.002	
12	11010900020	G1\2	Adaptor (male)	2	0.125	0.25	
13	11011800005	A-G1/2	A type sheath （For male adaptor）	2	0.007	0.014	
14	11010600090	G1/4	Hollow bot 1/4	2	0.029	0.058	
15	11011200000	BS/A13.70(G1/4)	Combined sealing gaskets （Automatic core)	4	0	0	
16	14050100008	GB/T 889.1-2000	Locknut M16	18	0.039	0.702	200 Model
	14050100008	GB/T 889.1-2000	Locknut M16	20	0.039	0.78	220 Model
	14050100008	GB/T 889.1-2000	Locknut M16	20	0.039	0.78	240 Model
	14050100008	GB/T 889.1-2000	Locknut M16	22	0.039	0.858	260 Model
	14050100008	GB/T 889.1-2000	Locknut M16	24	0.039	0.936	280 Model
17	14040000006	GB/T 95-2002	Plain washer 16*3	3	0.011	0.033	
18	11011000048	L.TRE220-113	Cylinder assembly	1	7.25	7.25	
19	11010700196	BCS170-016	Hose 1900 with sheath	2		0	
20	14050100006	GB/T 889.1-2000	Locknut M12	16	0.013	0.208	
21	14040000004	GB/T 95-2002	Plain washer 12*2.5	56	0.006	0.336	
22	14000400044	GB 893.1-86	Circlip 68	1	0.018	0.018	
23	14010100059	GB/T 5783-2000	Bolt M12*40	16	0.052	0.832	
24	11011500012	GB/T 276-94	Deep groove ball bearing 6008-RZ	2	0.182	0.364	
25	11000000468	L.TRE220-122	Spacer	1	0.032	0.032	
26	11000100507	L.TRE220-120	Connecting shaft	1	1.548	1.548	200 Model
	11000100507	L.TRE220-120	Connecting shaft	1	1.548	1.548	220 Model
	11000100592	L.TRE240-120	Connecting shaft	1	9.4	9.4	240 Model
	11000100592	L.TRE240-120	Connecting shaft	1	9.4	9.4	260 Model
	11000100597	L.TRE280-120	Connecting shaft	1	11.9	11.9	280 Model
27	14000200002	GB1152.89	Pressure lubricator M10*1.0	5	0.007	0.035	
28	11000201177	L.TRE220-016	The propeller shaft tube weldment	1	7.05	7.05	200 Model
	11000201178	L.TRE220-016	The propeller shaft tube weldment	1	7.05	7.05	220 Model
	11000201362	L.TRE240-016	The propeller shaft tube weldment	1	9.08	9.08	240 Model
	11000201362	L.TRE240-016	The propeller shaft tube weldment	1	9.08	9.08	260 Model
	11000201381	L.TRE280-016	The propeller shaft tube weldment	1	10.9	10.9	280 Model
29	14010100069	GB/T 5783-2000	Bolt M12*35	24	0.047	1.128	
30	14020000008	GB/T 93-1987	Spring washer 12	24	0.004	0.096	
31	14030000000	GB/T 1096-1979	Flat key 10*40	1	0.024	0.024	
32	11000100073	EF175-105	Spacer	1	961.17	961.2	
33	14030000001	GB/T 1096-1979	A Flat key 10*70	1	0.042	0.042	
34	11010000007	XH50.003Z.02W	Gearbox assembly	1	40.56	40.56	200 Model
	11010000007	XH50.003Z.02W	Gearbox assembly	1	40.56	40.56	220 Model
	11010000043	XH65.003Z.02W	Gearbox assembly	1	46.12	46.12	240 Model
	11010000043	XH65.003Z.02W	Gearbox assembly	1	46.12	46.12	260 Model
	11010000043	XH65.003Z.02W	Gearbox assembly	1	46.12	46.12	280 Model

Page No.1

Item	Material code	Part No.	Description	Qty	U.WKg	GWT	Remark
35	14040100003	GB/T 96.2-2002	Large plain washer 10×2.5	2	0.012	0.024	
36	14020000007	GB/T 93-1987	Spring washer 10	11	0.002	0.022	
37	14010100035	GB/T 5783-2000	Bolt M10*20	4	0.023	0.092	
38	11011800013	EF175.123	PTO dust cover	1	0.55	0.55	
39	14040100004	GB/T 96.2-2002	Large plain washer 12×3	4	0.022	0.088	
40	11000000467	L.TRE220-125	Gearbox mounting bracket	1	2.958	2.958	200 Model
	11000000468	L.TRE220-125	Gearbox mounting bracket	1	2.958	2.958	220 Model
	11000000594	L.TRE240-125	Gearbox mounting bracket	1	2.958	2.958	240 Model
	11000000594	L.TRE240-125	Gearbox mounting bracket	1	2.958	2.958	260 Model
	11000000594	L.TRE240-125	Gearbox mounting bracket	1	2.958	2.958	280 Model
41	11011800032	MT-029	Special screw M10	4	0.021	0.084	
42	11000201187	L.TRE200-017	Covering weldment	1	26.5	26.5	200 Model
	11000201178	L.TRE220-017	Covering weldment	1	29.54	29.54	220 Model
	11000201361	L.TRE240-017	Covering weldment	1	31.5	31.5	240 Model
	11000201365	L.TRE260-017	Covering weldment	1	34.2	34.2	260 Model
	11000201380	L.TRE280-017	Covering weldment	1	36.6	36.6	280 Model
43	11000100011	EF175.116	Kickstand pin	1	0.14	0.14	
44	11011700015	Φ4	Hair pin cotter	15	0.03	0.45	200 Model
	11011700015	Φ4	Hair pin cotter	16	0.03	0.48	220 Model
	11011700015	Φ4	Hair pin cotter	18	0.03	0.54	240 Model
	11011700015	Φ4	Hair pin cotter	20	0.03	0.6	260 Model
	11011700015	Φ4	Hair pin cotter	22	0.03	0.66	280 Model
45	11012600006	L.TRE220-119	Guide rail tube	2	17.603	35.21	
46	11000000465	L.TRE220-121	Kickstand tube	1	1.361	1.361	
47	11000000463	L.TRE220-116	Fixing plate	1	0.699	0.699	
48	14000000001	GB/T 879.1-2000	Coiled-type spring pin 5*30	1	0.003	0.003	200 Model
	14000000001	GB/T 879.1-2000	Coiled-type spring pin 5*30	1	0.003	0.003	220 Model
	14000000001	GB/T 879.1-2000	Coiled-type spring pin 5*30	0	0	0	240 Model
	14000000001	GB/T 879.1-2000	Coiled-type spring pin 5*30	0	0	0	260 Model
	14000000001	GB/T 879.1-2000	Coiled-type spring pin 5*30	0	0	0	280 Model
49	11000000457	L.TRE220-103	Skate-L	1	5.615	5.615	
50	11000000458	L.TRE220-104	Rake tooth	14	1.148	16.07	200 Model
	11000000458	L.TRE220-104	Rake tooth	15	1.148	17.22	220 Model
	11000000458	L.TRE220-104	Rake tooth	17	1.148	19.52	240 Model
	11000000458	L.TRE220-104	Rake tooth	19	1.148	21.81	260 Model
	11000000458	L.TRE220-104	Rake tooth	21	1.148	24.11	280 Model
51	11000100506	L.TRE220-118	Fixing sleeve 1	1	0.911	0.911	200 Model
	11000100506	L.TRE220-118	Fixing sleeve 1	1	0.911	0.911	220 Model
	11000100506	L.TRE220-118	Fixing sleeve 1	2	0.911	1.822	240 Model
	11000100506	L.TRE220-118	Fixing sleeve 1	2	0.911	1.822	260 Model
	11000100506	L.TRE220-118	Fixing sleeve 1	2	0.911	1.822	280 Model
52	11011800038		Manual canister	1		0	
53	11000100505	L.TRE220-115	Fixing sleeve	2	0.928	1.856	
54	14040000003	GB/T 95-2002	Plain washer 10*2	11	0.003	0.033	
55	14060200037	GB/T 70.1-2000	HSHCS M10*30	9		0	
56	11000100512	L.TRE200-108	Chain mounted axle	1	0.611	0.611	200 Model
	11000100502	L.TRE220-108	Chain mounted axle	1	0.671	0.671	220 Model
	11000100591	L.TRE240-108	Chain mounted axle	1	0.731	0.731	240 Model
	11000100593	L.TRE260-108	Chain mounted axle	1	0.791	0.791	260 Model
	11000100596	L.TRE280-108	Chain mounted axle	1	0.851	0.851	280 Model

Page No.1

Item	Material code	Part No.	Description	Qty	U.WKg	GWT	Remark
57	11010500055	L.TRE	Chain 6x20x28(7 loops）	90	0.13	11.7	200 Model
	11010500055	L.TRE	Chain 6x20x28(7 loops）	99	0.13	12.87	220 Model
	11010500055	L.TRE	Chain 6x20x28(7 loops）	108	0.13	14.04	240 Model
	11010500055	L.TRE	Chain 6x20x28(7 loops）	118	0.13	15.34	260 Model
	11010500055	L.TRE	Chain 6x20x28(7 loops）	127	0.13	16.51	280 Model
58	14040000002	GB/T 95-2002	Plain washer 8*1.6	4	0.002	0.008	
59	14000000037	GB/T 91-2000	Cotter pin	2	0.002	0.004	
60	11011400028	L.TRE220-100	Pulley	1	12.15	12.15	
	11011400028	L.TRE220-100	Pulley	1	12.15	12.15	
	11011400028	L.TRE220-100	Pulley	1	12.15	12.15	
	11011400059	L.TRE260-100	Pulley	1	13.4	13.4	
	11011400059	L.TRE260-100	Pulley	1	13.4	13.4	
61	11011900004	Z6-40*80	Swellable sleeve	2	0.812	1.624	
62	11011300010	B-1495	Belt-L.TRE	4			200 Model
	11011300010	B-1495	Belt-L.TRE	4			220 Model
	11011300010	B-1495	Belt-L.TRE	4			240 Model
	11011300010	B-1495	Belt-L.TRE	5			260 Model
	11011300010	B-1495	Belt-L.TRE	5			280 Model
63	11000201173	L.TRE220-012	Pulley cover weldment	1	8.52	8.52	
64	11011400029	L.TRE220-101	Pulley	1	7.771	7.771	200 Model
	11011400029	L.TRE220-101	Pulley	1	7.771	7.771	220 Model
	11011400029	L.TRE220-101	Pulley	1	7.771	7.771	240 Model
	11011400060	L.TRE260-101	Pulley	1	8.99	8.99	260 Model
	11011400060	L.TRE260-101	Pulley	1	8.99	8.99	280 Model
65	11000000456	L.TRE220-102	Skate-R	1	5.615	5.615	
66	11000000466	L.TRE220-123	Fender	1	0.781	0.781	
67	14000300020	GB 894.1-86	Circlip 30	1	0.003	0.003	
68	11011500032	GB/T 276-94	Deep groove ball bearing 6306-2RZ	2	0.312	0.624	
69	11000100503	L.TRE220-111	Belt idler pulley	1	1.056	1.056	
70	11000201179	L.TRE220-018	Belt tensioning shaft weldment	1	1.04	1.04	
71	14050100002	GB/T 889.1-2000	Locknut M8	1	0.006	0.006	
72	11000100501	L.TRE220-107	Belt tensioning rod	1	0.108	0.108	
73	11010300019	100x25x4	Tension spring	1	0.108	0.108	
74	11000100508	L.TRE220-124	Spring installation bracket	1	0.026	0.026	
75	14010100034	GB/T 5783-2000	Bolt M10*110	1	0.079	0.079	
76	11000000459	L.TRE220-106	Belt tension plate	1	0.204	0.204	
77	14040200002	GB/T 5287-2002	Extra larger plain washer 8*3	1	0.014	0.014	
78	14020000006	GB/T 93-1987	Spring washer 8	1	0.001	0.001	
79	14010100016	GB/T 5783-2000	Bolt M8*16	1	0.012	0.012	
80	14010100022	GB/T 5783-2000	Bolt M8*40	1	0.022	0.022	

Page No.1

Item	Material code	Part No.	Description	Qty	U.WKg	GWT	Remark
81	11000201176	L.TRE220-015	Bearing seat weldment	2	1.67	3.34	
82	11011200032	TC40*90*12	Oil seal	1	0.019	0.019	
83	11011500046	GB/T 281-94	Self-aligning ball bearing 2308	2	0.944	1.888	
84	14000400053	GB 893.1-86	Circlip 90	2	0.03	0.06	
85	11000201186	L.TRE200-014	Blade axle welment	1	72.4	72.4	200 Model
	11000201175	L.TRE220-014	Blade axle welment	1	80.25	80.25	220 Model
	11000201360	L.TRE240-014	Blade axle welment	1	85.3	85.3	240 Model
	11000201364	L.TRE260-014	Blade axle welment	1	92.7	92.7	260 Model
	11000201379	L.TRE280-014	Blade axle welment	1	98.8	98.8	280 Model
86	11010200002	BCR140.111	Hammer blade	16	1.195	19.12	200 Model
	11010200002	BCR140.111	Hammer blade	18	1.195	21.51	220 Model
	11010200002	BCR140.111	Hammer blade	18	1.195	21.51	240 Model
	11010200002	BCR140.111	Hammer blade	20	1.195	23.9	260 Model
	11010200002	BCR140.111	Hammer blade	22	1.195	26.29	280 Model
87	14010000024	GB/T 5782-2000	Bolt M16	16	0.182	2.912	200 Model
	14010000024	GB/T 5782-2000	Bolt M16	18	0.182	3.276	220 Model
	14010000024	GB/T 5782-2000	Bolt M16	18	0.182	3.276	240 Model
	14010000024	GB/T 5782-2000	Bolt M16	20	0.182	3.64	260 Model
	14010000024	GB/T 5782-2000	Bolt M16	22	0.182	4.004	280 Model
88	11011200044	TC50*90*10	Oil seal	2	0.036	0.072	
89	14000300028	GB/T 894.1-1986	Circlip 40	1		0	
90	11000201188	L.TRE200-010	Hood panel weldment	1	231.9	231.9	200 Model
	11000201171	L.TRE220-010	Hood panel weldment	1	248.8	248.8	220 Model
	11000201357	L.TRE240-010	Hood panel weldment	1	270.7	270.7	240 Model
	11000201358	L.TRE260-010	Hood panel weldment	1	286	286	260 Model
	11000201377	L.TRE280-010	Hood panel weldment	1	301.4	301.4	280 Model
91	14060100017	GB/T 70.3-2000	HSCHS M8*25	8	0.013	0.104	
92	11000000461	L.TRE220-110	Bearing baffle-R	1	2.101	2.101	
93	11011500070	UC205-A	Bearing seat	2	0.92	1.84	
94	11000000471	L.TRE200-114	Mud scraper plate	1	7.09	7.09	200 Model
	11000000462	L.TRE220-114	Mud scraper plate	1	7.825	7.825	220 Model
	11000000593	L.TRE240-114	Mud scraper plate	1	8.445	8.445	240 Model
	11000000595	L.TRE260-114	Mud scraper plate	1	9.16	9.16	260 Model
	11000000602	L.TRE280-114	Mud scraper plate	1	9.88	9.88	280 Model
95	11000201185	L.TRE200-013	Roller weldment	1	48.9	48.9	200 Model
	11000201174	L.TRE220-013	Roller weldment	1	53.68	53.68	220 Model
	11000201359	L.TRE240-013	Roller weldment	1	58.4	58.4	240 Model
	11000201363	L.TRE260-013	Roller weldment	1	63.2	63.2	260 Model
	11000201378	L.TRE280-013	Roller weldment	1	67.9	67.9	280 Model
96	11000000460	L.TRE220-109	Bearing baffle-L	1	2.092	2.092	

Item	Material code	Part No.	Description	Qty	mark
1	14050100008	GB/T 889.1-2000	Locknut M16	16	
2	14010000024	GB/T 5782-2000	Hexagon bolt M16*95	16	
3	11010200070	L.TRE220-126	Inner Y blade	32	Used in 200 Model
4	11010200068	L.TRE220-127	Outer Y blade	32	
5	11011300010	B-1495	Belt-LRE	4	
6	11010200069	L.TRE220-128	Blade spacer	32	
1	14050100008	GB/T 889.1-2000	Locknut M16	18	
2	14010000024	GB/T 5782-2000	Hexagon bolt M16*95	18	
3	11010200070	L.TRE220-126	Inner Y blade	36	Used in 220 Model
4	11010200068	L.TRE220-127	Outer Y blade	36	
5	11011300010	B-1495	Belt-LRE	4	
6	11010200069	L.TRE220-128	Blade spacer	36	
1	14050100008	GB/T 889.1-2000	Locknut M16	18	
2	14010000024	GB/T 5782-2000	Hexagon bolt M16*95	18	
3	11010200070	L.TRE220-126	Inner Y blade	36	Used in 240 Model
4	11010200068	L.TRE220-127	Outer Y blade	36	
5	11011300010	B-1495	Belt-LRE	4	
6	11010200069	L.TRE220-128	Blade spacer	36	
1	14050100008	GB/T 889.1-2000	Locknut M16	20	
2	14010000024	GB/T 5782-2000	Hexagon bolt M16*95	20	
3	11010200070	L.TRE220-126	Inner Y blade	40	Used in 260 Model
4	11010200068	L.TRE220-127	Outer Y blade	40	
5	11011300010	B-1495	Belt-LRE	5	
6	11010200069	L.TRE220-128	Blade spacer	40	
1	14050100008	GB/T 889.1-2000	Locknut M16	24	
2	14010000024	GB/T 5782-2000	Hexagon bolt M16*95	24	
3	11010200070	L.TRE220-126	Inner Y blade	48	Used in 280 Model
4	11010200068	L.TRE220-127	Outer Y blade	48	
5	11011300010	B-1495	Belt-LRE	5	
6	11010200069	L.TRE220-128	Blade spacer	48	
Item	**Material code**	**Part No.**	**Description**	**Qty**	**mark**
1	14050100008	GB/T 889.1-2000	Locknut M16	16	
2	11010200002	BCR140.111	Hammer blade	16	Used in 200 Model
3	14010000024	GB/T 5782-2000	Hexagon bolt M16*95	16	
4	11011300010	B-1495	Belt-LRE	4	
1	14050100008	GB/T 889.1-2000	Locknut M16	18	
2	11010200002	BCR140.111	Hammer blade	18	Used in 220 Model
3	14010000024	GB/T 5782-2000	Hexagon bolt M16*95	18	
4	11011300010	B-1495	Belt-LRE	4	
1	14050100008	GB/T 889.1-2000	Locknut M16	18	
2	11010200002	BCR140.111	Hammer blade	18	Used in 240 Model
3	14010000024	GB/T 5782-2000	Hexagon bolt M16*95	18	
4	11011300010	B-1495	Belt-LRE	4	
1	14050100008	GB/T 889.1-2000	Locknut M16	20	
2	11010200002	BCR140.111	Hammer blade	20	Used in 260 Model
3	14010000024	GB/T 5782-2000	Hexagon bolt M16*95	20	
4	11011300010	B-1495	Belt-LRE	5	
1	14050100008	GB/T 889.1-2000	Locknut M16	22	
2	11010200002	BCR140.111	Hammer blade	22	Used in 280 Model
3	14010000024	GB/T 5782-2000	Hexagon bolt M16*95	22	
4	11011300010	B-1495	Belt-LRE	5	

Problem	Solution
! CAUTION *Do not try to clean rear discharge area when Mowers is running. Bodily harm may occur!*	
Belt slipping	Unplug and clean Mowers deck.
	Remove belt guard shields and clean sheaves.
	Replace belt
Patches of uncut to land	Mow at full throttle (540 PTO rpm), check PTO speed, and tractor engine.
	Shift transmission to a lower gear.
	Tighten belts.
	Replace missing blades.
Excessive vibration	Replace blades.
	Replace drive belt.
	Replace pulleys or align.
	Remove belt guard shields & clean debris from belt area & sheaves.
Gearbox noisy	Check lubricant level.
blades scalping grass	Raise Crushing height by adjusting .
	Change broken pattern.
	Reduce speed turns.
Uneven cut	Shift to a lower gear.
	Level Mowers .
	Replace missing blades or hammers
Tractor loaded down by Mowers	Mow at full throttle (540 PTO rpm).
	Shift to a lower gear.
	Clean Mowers .

Torque Values Chart for Common Bolt Sizes

Bolt Size (Inches)	Bolt Head Identification: Grade 2		Grade 5		Grade 8	
in-tpi [1]	N·m [2]	ft-lb [3]	N·m	ft-lb	N·m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12
1/4" - 28	8.5	6	13	10	18	14
5/16" - 18	15	11	24	17	33	25
5/16" - 24	17	13	26	19	37	27
3/8" - 16	27	20	42	31	59	44
3/8" - 24	31	22	47	35	67	49
7/16" - 14	43	32	67	49	95	70
7/16" - 20	49	36	75	55	105	78
1/2" - 13	66	49	105	76	145	105
1/2" - 20	75	55	115	85	165	120
9/16" - 12	95	70	150	110	210	155
9/16" - 18	105	79	165	120	235	170
5/8" - 11	130	97	205	150	285	210
5/8" - 18	150	110	230	170	325	240
3/4" - 10	235	170	360	265	510	375
3/4" - 16	260	190	405	295	570	420
7/8" - 9	225	165	585	430	820	605
7/8" - 14	250	185	640	475	905	670
1" - 8	340	250	875	645	1230	910
1" - 12	370	275	955	705	1350	995
1-1/8" - 7	480	355	1080	795	1750	1290
1 1/8" - 12	540	395	1210	890	1960	1440
1 1/4" - 7	680	500	1520	1120	2460	1820
1 1/4" - 12	750	555	1680	1240	2730	2010
1 3/8" - 6	890	655	1990	1470	3230	2380
1 3/8" - 12	1010	745	2270	1670	3680	2710
1 1/2" - 6	1180	870	2640	1950	4290	3160
1 1/2" - 12	1330	980	2970	2190	4820	3560

Bolt Size (Metric)	Bolt Head Identification: 5.8 Class 5.8		8.8 Class 8.8		10.9 Class 10.9	
mm x pitch [4]	N·m	ft-lb	N·m	ft-lb	N·m	ft-lb
M 5 X 0.8	4	3	6	5	9	7
M 6 X 1	7	5	11	8	15	11
M 8 X 1.25	17	12	26	19	36	27
M 8 X 1	18	13	28	21	39	29
M10 X 1.5	33	24	52	39	72	53
M10 X 0.75	39	29	61	45	85	62
M12 X 1.75	58	42	91	67	125	93
M12 X 1.5	60	44	95	70	130	97
M12 X 1	90	66	105	77	145	105
M14 X 2	92	68	145	105	200	150
M14 X 1.5	99	73	155	115	l215	160
M16 X 2	145	105	225	165	315	230
M16 X 1.5	155	115	240	180	335	245
M18 X 2.5	195	145	310	230	405	300
M18 X 1.5	220	165	350	260	485	355
M20 X 2.5	280	205	440	325	610	450
M20 X 1.5	310	230	650	480	900	665
M24 X 3	480	355	760	560	1050	780
M24 X 2	525	390	830	610	1150	845
M30 X 3.5	960	705	1510	1120	2100	1550
M30 X 2	1060	785	1680	1240	2320	1710
M36 X 3.5	1730	1270	2650	1950	3660	2700
M36 X 2	1880	1380	2960	2190	4100	3220

[1] in-tpi = nominal thread diameter in inches-threads per inch

[2] N· m = newton-meters

[3] ft-lb= foot pounds

[4] mm x pitch = nominal thread diameter in millimeters x thread pitch

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

Warranty

MATENG warrants to the original purchaser that this MATENG product will be free from defects in material and workmanship beginning on the date of purchase by the end user according to the following schedule when used as intended and under normal service and conditions for personal use.

Overall Unit and Driveline: Eighteen months Parts and Labor
Gearbox: Three years on all components.
Blades and Belts: Considered wear items.

This Warranty is limited to the replacement of any defective part by Land Pride and the installation by the dealer of any such replacement part, and does not cover common wear items. MATENG reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This Warranty does not apply to any part or product which in Land Pride's judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. Misuse also specifically includes failure to properly maintain oil levels, grease points, and driveline shafts.

Claims under this Warranty should be made to the dealer which originally sold the product and all warranty adjustments must be made through an authorized MATENG dealer. MATENG reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty shall not be interpreted to render MATENG liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, Land Pride shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery or for any other reason.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

This Warranty is not valid unless registered with MATENG within 30 days from the date of purchase by the end user.

Model Number _____ **Serial Number** _____

Changzhou Mateng machinery Co., Ltd
10# Chuangsheng Road, LuoYang Industrial Park,
Wujin District, Changzhou City ,Jiangsu Province ,P.R.of China
213104
Tel: 0086-519-8823 8398·
Fax: 0086-519-8823 8397
E-mail address
mateng@mateng.com