

# LT3200 & TR3200 TRACTOR SAWS



# DELIVERY RECORD: PLEASE KEEP & FORWARD COPY

The following checklist is a reminder of very important information which should be conveyed to the customer at the time the Turbo Saw™ unit is delivered. Check off each item as it is fully explained to the customer.



- Safe and correct operation and service.
- Daily and periodic inspections.
- Servicing machine regularly and correctly.
- Explain proper cutting procedures.
- Give the Operator's Manual to the customer and encourage customer to read entire manual.
- Advise customer of safety precautions that must be observed while using the tractor saw.
- Review information on how to maintain the tractor saw (See Maintenance section.)
- Review recommended procedures for attaching to or detaching from tractor (See Attaching and Detaching section.)
- Recommended transporting information. (See Transporting section.)
- Review equipment safety features (i.e. grapple arm, skid plate).
- Review tractor saw operation. (See Operating the Cutter section.)
- Review service intervals and lubrication points. (See Lubrication and Maintenance section.)
- Review all adjustments. (See Service section.)
- Recommended machine storage.
- Have customer record machine serial number in the Introduction section.
- Dougherty Forestry parts and service.
- Remove and file this page.



# \*DATE OF PURCHASE/WARRANTY CERTIFICATE

MODEL NUMBER	_UNIT SERIAL NUMBER
PURCHASE DATE	
DEALER (if purchased through dealer)	
ORIGINAL PURCHASER (PRINT)	
ADDRESS	
CITY	
STATE	ZIP
PHONE	
FAX	
EMAIL	
SIGNATURE	

PLEASE COPY, AND MAIL OR FAX TO: Dougherty Forestry Manufacturing LTD Co. 211 W. Canyon Run, Hinton, OK 73047

FAX: (405) 542-6928

TABLE OF CONTENTS	
INTRODUCTION	9
UNIT SPECIFICATIONS	11
SAFETY	12
GENERAL SAFETY	12
SAFE MAINTENANCE	13
SAFE OPERATION	14
PRE-START CHECKLIST	15
ATTACHING THE TRACTOR SAW	16
CUTTING GUIDELINES	18
MAINTENANCE SCHEDULE	20
ROTATING / CHANGING TEETH	21

# INTRODUCTION

PLEASE READ THE TURBO SAW™ OPERATOR'S MANUAL BEFORE OPERATING THE TRACTOR SAW. THIS MANUAL MUST ACCOMPANY YOUR TURBO SAW UNIT AT ALL TIMES.



SAFETY IS THE FOREMOST PRIORITY OF DOUGHERTY FORESTRY MANUFACTURING. The TR3200 & LT3200 (referenced as "tractor saw" in this manual) has been designed with operator safety in mind and we have specific guidelines to ensure that safety. Please read the Turbo Saw<sup>TM</sup> operator's manual before operating the tractor saw. Safety depends upon the operator thoroughly reading, understanding, and using the techniques and maintenance requirements specified in the Turbo Saw<sup>TM</sup> operator's manual. This manual shows proper techniques and precautions for the tractor saw. The tractor saw must always be operated by the instructions outlined in this manual. The operator must always act responsibly. Dougherty Forestry Manufacturing can not be held liable for an operator's carelessness, recklessness, or misuse of its products. Do not use this product if it has been modified in any manner. If a tractor saw owner has additional questions about operating or maintaining their tractor saw, please contact our service center at (405) 542 3520.

#### 1 YEAR FRAME & COMPONENT WARRANTY POLICY

A. GENERAL PROVISIONS – The warranties described below are provided by Dougherty Forestry Manufacturing ("DFM") to the original purchasers of new Tree Clearing Equipment from DFM or authorized DFM dealers. Warranty begins on the date of product delivery to the original purchaser. Rental coverage is 90 days and begins upon date of initial rental. Under these warranties, DFM will repair or replace, at its option, any covered part which is found to be defective in material

or workmanship during the applicable warranty term. Warranty service must be performed by a dealer or service center authorized by DFM to sell and/or service the type of product involved, which will use only new or remanufactured parts or components furnished by DFM. Warranty service will be performed without charge to the purchaser for parts or labor. The purchaser will be responsible, however, for any service call and/or transportation of product to and from the dealer's or service center's place of business, for any premium charged for overtime labor requested by the purchaser, and for any service and/or maintenance not directly related to any defect covered under the warranties below.

All claims for this warranty policy must be accompanied by a copy of the original sales receipt and must be made to dougherty forestry manufacturing in writing within eight (8) days after the occurrence. Any claim after the eight (8) days will automatically invalidate the warranty claim.

**FRAME & COMPONENTS COVERAGE:** Dougherty Forestry Manufacturing offers a twelve (12) month warranty from date of purchase by the original purchaser. Components may also be warranted by their original manufacturers which may vary from this warranty.

Coverage has the following exclusions: The original purchaser is responsible for and must bear the cost of: Normal maintenance of the machine such as greasing, minor adjustments, etc. Transportation of defective part(s) to and from Dougherty Forestry Manufacturing or such place where warranty work is being performed. This warranty does not cover any damage to the machine the DFM product is attached to nor subjected to falling trees or limbs, flying debris, hydraulic component damage.

B. WARRANTY CÖVERAGE: All metal housing, fabrication, and components of any new DFM product against manufactured defects and workmanship.

C. NON-WARRANTY COVERAGE: DFM is not responsible for the following: (1) Used Products: (2) Any product that

has been altered or modified in ways not approved by DFM (3) Depreciation or damage caused by normal wear and tear, lack of reasonable and proper maintenance, failure to follow operating instructions, damage due to improper use, abuse or neglect or conditions caused by abuse or neglect, misuse, lack of proper protection during storage, or accident (4) Normal maintenance parts and service. This warranty does not cover normal wear items. Such items would include, but not be limited to: blades, carbide inserts, backing blocks, bolts in wear areas, bearings or seals.

- D. SECURING WARRANTY SERVICE: To secure warranty service, the purchaser must (1) Report the product defect to an authorized dealer and request repair within the applicable warranty term, (2) Present evidence of the warranty start date, and (3) Make the product available to the dealer or service center within a reasonable period of time.
- G. LIMITATION OF IMPLIED WARRANTIES AND OTHER REMEDIES: DFM's Tree Clearing Equipment, to the extent permitted by law, neither DFM nor any company affiliated with it makes any warranties, representations or promises as to the quality, performance or freedom from defect of DFM's Tree Clearing Equipment covered by this warranty. Implied warranties or merchantability and fitness for a particular purpose, to the extent applicable, shall be limited in duration to the applicable period of warranty set forth on this page. The purchaser's only remedies in connection with the breach or performance of any warranty on the DFM Tree Clearing Equipment are those set forth on this page. In no event will the dealer, DFM, or any company affiliated with DFM be liable for incidental or consequential damages. (Note: some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages so the above limitations and exclusions may not apply to you.) This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

H. NO DEALER WARRANTY: The selling dealer makes no warranty of its own and the dealer has no authority to make any representation or promise on behalf of DFM, or to modify the terms or limitations of this warranty in any way.

This warranty does not cover damage caused by the operator due to improper use of the Turbo Saw or by using the attachment in a manner other than recommended in the operator's manual.

TR3200 GRAPPLE TRACTOR SAW



### LT3200 TRACTOR SAW



	TR3200	LT3200
Machine:	Tractor	Tractor
Engine Requirement:	28 - 120hp	28 - 70hp
Weight:	810lbs (367kg)	625lbs (283kg)
Cutting disc Diameter:	32" (81cm)	32" (81cm)
Cutting Rate:	3-6" (10 - 20cm) per second	3-6" (10 - 20cm) per second
Cutting Capability:	12" (30cm) stumps	12" (30cm) stumps
Length:	68" (173cm)	68" (173cm)
Height:	45" (114cm)	45" (114cm)
Cutting disc Speed:	1,000 rpm	1,000 rpm
Hydraulics Required:	Yes	No

<sup>\*</sup> Specifications rated on an average ratio: performance/capability may vary with make and model of machine.

#### **FOLLOW SAFETY INSTRUCTIONS**

Carefully read all safety instructions in this manual and on your attachment prior to operation. Learn how to operate the machine and how to use your machines controls properly. Do not let anyone operate without instruction. Keep your machine in proper working condition. Do not operate a modified Turbo Saw attachment. If you do not understand any part of this manual and need assistance, contact your Turbo Saw dealer.

#### RECOGNIZE SAFETY INFORMATION

A signal word-DANGER, WARNING, or CAUTION are used along with the Safety Alert Symbol to alert you to important details.



Immediate danger which, if not avoided will result in injury or death.



# **WARNING**

Potential hazard which, if not avoided, could result in injury or death.



# **CAUTION**

If not avoided could result in minor injuries or property damage.

### **GENERAL SAFETY**

#### **PROTECT BYSTANDERS**

Never operate the Turbo Saw<sup>TM</sup> near people or animals. Debris can be thrown hundreds of feet. Flying debris can cause serious injury or death. Never operate a modified Turbo Saw<sup>TM</sup>. The Turbo Saw<sup>TM</sup> must have its protective features operational. DO NOT allow children to operate the Turbo Saw<sup>TM</sup> attachment.



#### **ENVIRONMENT & LOCATION**

Be aware of your environment and location. Do not cut trees in unsafe

weather conditions. Rain, snow, wind, and other weather variables can cause vehicles, attachments, and cut material to behave uncontrollably. Do not cut trees near electrical lines. A cut tree could fall, break an electrical line, and cause serious injury or death. Do not cut near cliffs, canyons, or other dangerous terrain. A collapsed embankment could result in a fatal tractor rollover. Avoid uneven terrain and steep slopes as these could result in a fatal tractor rollover.

#### WEAR APPROPRIATE CLOTHING

- 1. Wear a mask to prevent inhalation of dust during operation. Wear a mask during maintenance to prevent inhalation of potentially hazardous fumes.
- 2. Wear safety goggles during operation and maintenance to prevent injury from dust and flying debris.
- 3. Wear welding goggles if welding. \*Only a licensed welder should perform welds on any Turbo Saw™ units.
- 4. Wear earmuffs during operation and maintenance since sudden or prolonged exposure to loud noise can cause impairment or loss of hearing.
- 5. Wear gloves, boots, hard hat, and safety vest if operation or maintenance job requires it.



# SAFETY REQUIRES AN ATTENTIVE AND KNOWLEDGEABLE OPERATOR.

Operators should be aware of their surroundings, equipment gauges, and controls. Radios and music headphones should not be turned on during maintenance and operation. Read the Turbo Saw<sup>TM</sup> manual before operating or maintaining your tractor saw.

#### **BE PREPARED**

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy. Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.

#### **HYDRAULIC PRESSURE**

Hydraulic motors, lines, and machines can build up and carry high volumes of pressure. Hydraulic pressure can cause serious injury. Turn off tractor before hydraulic maintenance. Relieve pressure before unhooking hydraulic lines. Tighten all connections before applying pressure.



Any fluid injected into the skin must be surgically removed immediately by a medical profession familiar with this type of injury.

Keep all guards in place and do no not operate a saw that has bee altered in any way.

#### WHEN NOT IN USE

Lower and place attachment upon the ground, disconnect it from the tractor. Always store the tractor saw away from trafficked areas.

#### PERFORMING MAINTENANCE

Lower and detach the tractor saw from your tractor when performing any type of maintenance work. Slippage on attachments may occur. Always place unit on sturdy blocks or servicing stands when replacing the cutting disc. Do not use wheel supports which rotate and may cause heavy material to fall upon the maintenance worker.



#### PRACTICE SAFE MAINTENANCE

Always work in a clean and dry environment. Never work on a running machine or with a machine with moving parts. Disengage unit from tractor; make sure machine is off, brake is engaged, and remove key. Lower tractor saw to the ground, or place it upon service stands or blocks. Allow the tractor saw to cool off before maintaining. Caution, parts may be hot, sharp, or hazardous. Follow guidelines on protective equipment and clothing.
\*If you are not a licensed welder or hydraulic specialist call your Turbo Saw<sup>TM</sup> dealer for maintenance assistance.

Beware of toxic fumes when maintaining your tractor saw. Weld, smolder, or torch in a well ventilated area. Metal, paint, and other materials can be toxic when heated. Please be mindful of your chemical environment and wear the proper equipment when maintaining your tractor saw such as a breathing mask and/or welders mask.

### **SAFE OPERATION**

# OPERATE TRACTOR AND TRACTOR SAW ATTACHMENT SAFELY

Turbo Saw™ units are designed with operator safety in mind. Please familiarize yourself with Turbo Saw™ operator instructions and safety precautions. Become familiar with all controls. Keep the tractor saw free of debris. Only operate with a tractor that has a glass or Plexiglas cab. Travel cautiously near large objects or ditches in your machine's path.

#### TRANSPORTING THE TRACTOR SAW SAFELY

The tractor saw must be disengaged and lowered in the upright horizontal position. It should be sufficiently elevated above the terrain to prevent equipment damage. Reflectors should be clean and visible. Proceed with caution. Be aware of oncoming vehicles, and move slowly through uneven surfaces. Follow your typical safety precautions when driving a tractor. Do not over exceeded tractor's balance ratio which could result in flipping your machine. When transporting the tractor saw be aware of the total length the attachment adds to your machine.

#### **EXITING**

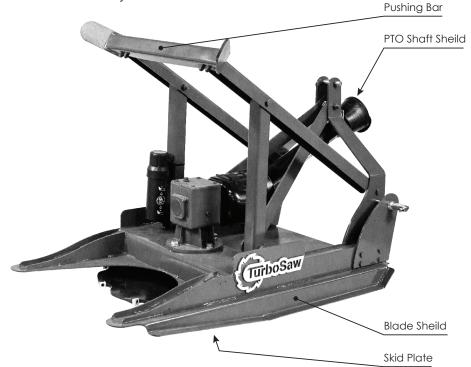
Lower the tractor saw attachment to the ground. Engage tractor parking brake or place transmission in "Park".

Shut off tractor engine and remove key.

Make certain cutting disc has completely stopped before exiting the cab of your machine.

#### **ATTENTION OPERATORS**

NO PASSENGERS. Passengers may impair or distract the operator, resulting in unsafe operation. Passengers may also fall off the tractor and be put in extreme danger. DO NOT OPERATE NEAR BYSTANDERS. Flying debris, falling limb, trees, and heavy machinery can cause serious injury or death. NEVER OPERATE ANY HEAVY EQUIPMENT WHEN JUDGEMENT IS IMPAIRED



- Fully Shielded Drive Shaft: Protection from drive components.
- Pushing Bar (Grapple on TR3200): Helps direct the tree away from the operator.
- Skid Plate: Protects cutting disc fasteners.
- Cutting disc Shield: Helps deflect thrown objects.

\*The operator is the primary safety feature of any machine. Do not operate without safety features.

- 1. METAL SHIELD: Check for non-uniform holes or perforated metal
- 2. **GRAPPLE ARM (TR3200 MODELS):** Check for wear or damage.
- 3. **cutting disc shield:** Check for wear or damage
- 4. **CYLINDER:** Check grease end pins
- 5. **GEAR BOX:** Check for leaking. Check for tightness.
- 6. HYDRAULIC FITTINGS: Check for tightness.
- 7. HYDRAULIC HOSE: Check for wear, rips, or punctures
- 8. **HOSE COVERS:** Check for wear, rips, or punctures.
- 9. SKID PLATE: Check for tightness and for wear.
- 10. **CUTTING DISC:** Inspect for wear, cracks damage, bending, or warping. If 1/8" " play on edge of cutting disc or if cutting disc repositions to a 1/8" downward, this is a sign of worn bearings and you must replace bearings immediately.
- 11. **cutting disc: Backing Blocks:** Inspect for wear or damage.
- 12. **CUTTING DISC: CARBIDE TEETH:** Inspect to see if in place and securely fastened. Inspect for wear or damage.
- 13. **CUTTING DISC: CAP SCREWS:** Inspect for wear or damage.
- 14. **DECALS:** Check readability.

### ATTACHING THE TRACTOR SAW

#### FORWARD FOR OPERATING THE TRACTOR SAW

Cutting brush and trees has inherent risks and hazards. To reduce those risks and hazards read the operator's manual, follow the safety precautions, and appropriately operate your Turbo Saw attachment. The methods and techniques in the operator's manual are designed to maximize your protection while cutting brush and trees.

Before starting your attachment, be familiar with you tractor and the tractor saw's basic operating controls. Each tractor model has unique operating controls that activate and utilize your tractor saw's capabilities. If you have any question regarding this, or any other Turbo Saw related question, please contact a Turbo Saw specialist.

Attaching the tractor saw varies with each tractor. Please refer to your machines owner's manual for the proper way to attach your machine to the base plate of the tractor saw.

# ATTACHING THE TRACTOR SAW TO TRACTOR WITH THREE-POINT HITCH



CAUTION: To avoid bodily injury or machine damage whenever an implement is attached, put transmission in PARK position and check the full range of hitch for interference, binding, or PTO separation.



#### Do not stand between tractor and implement

- 1. Back up tractor to cutter with hitch points approximately in alignment.
- 2. Engage tractor parking brake and/or place transmission in "Park".
- 3. Shut off tractor engine and remove key.
- 4. Remove center link mounting hardware and hitch pin assemblies at both hitch masts.
- 5. Install tractor draft links on hitch pins. Secure with quick-lock pins (stored on tractor draft links.)

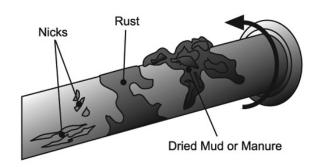
- 6. Align center link with upper holes in cutter mast straps and install center link mounting hardware.
- 7. Attach PTO drive-line. Start tractor engine.
- Slowly pull hitch control lever to raise cutter. Check for interference. Lower hitch to ground and adjust center link and/or lift links if necessary.

#### ATTACHING PTO DRIVE-LINE



CAUTION: Shut off tractor engine before attaching PTO drive-line. Entanglement in rotating drive-line can cause serious injury or death.

IMPORTANT: Keep drive-line and power shaft splines clean of paint, dirt and chaff. Apply John Deere SD POLYUREA Grease or equivalent on tractor PTO shaft before attaching PTO drive-line



- 1. Shut off tractor engine.
- 2. Raise tractor PTO shield, if equipped.
- IMPORTANT: Do not use bell on drive-line to lift driveline into position. Damage to shielding can occur.
   Support drive-line, cradling it in your hand.
- 4. Pull collar back toward cutter. Align splines by rotating cutter drive-line. Push drive-line onto tractor PTO shaft until collar snaps into place.
- 5. Pull back on shield to make sure drive-line is locked. Do not pull back on collar, this will release latch.
- 6. Lower tractor PTO shield, if equipped.
- 7. If cutter was not used for a while, free slip clutch, if equipped.

IMPORTANT: Slip clutch components must be free to rotate when necessary. After long idle periods, linings of slip clutch may draw moisture. Linings may bond to metal parts causing slip clutch to be ineffective, resulting in machine damage.

#### **HYDRAULIC REQUIREMENTS (TR3200)**

- Make sure your tractor has the horse power requirements for your Tractor Saw unit
- Do not exceed the rated gpm for you Tractor Saw unit.
   This could void your warranty, damage the unit, or cause an injury.
- Do not attach your Tractor Saw to a different tractor without consulting a Turbo Saw specialist first.
- Do not operate a Tractor Saw that has been altered in anyway. An altered unit may minimize or negate the Tractor Saw's safety features.

#### **ATTACHING THE HYDRAULICS (TR3200)**

Always clean quick-release hydraulic couplers before connecting to prevent dust and debris from entering your hydraulic system. Then attach the hydraulic lines. Beware of hydraulic pressure. Wear proper attire like gloves, goggles, and appropriate clothing.

Make a visual inspection of the hydraulic lines and check for cuts, abrasions, and signs of wear.

If the hydraulic lines are leaking during operation, follow your safe maintenance precautions and tighten or replace hoses and fittings.

\*Remember! Follow all of your safety precautions.

#### CHECKING DRIVE-LINE/CUTTER CLEARANCE

IMPORTANT: Prevent drive-line damage from contact with frame or machine damage from contact with tractor tires. Raise cutter slowly and check for interference. If necessary, shorten center link or lengthen lift links to provide clearance to full lift height.

- 1. Raise cutter slowly and check for clearance between drive-line shield and cutter deck.
- 2. Check clearance between tractor tires and blade shield
- 3. Adjust hitch height, center link, or lift links to provide clearance desired.
- 4. Raise and lower cutter slowly to check for binding or interference.
- 5. Check cutter-to-tractor drive-line telescoping length to ensure it does not bottom out.

IMPORTANT: PTO drive-line may be too long for some tractor models, causing tractor trans-axle damage.

#### **TRANSPORTING**

Do not leave the cutting disc engaged while transporting over long distances. Anything the spinning cutting disc contacts will be severely damaged. Proceed with caution. Be aware of oncoming vehicles, and move slowly through uneven surfaces.

#### **DETACHING CUTTER FROM TRACTOR**



WARNING: To prevent personal injury caused by unexpected movement:

- 1. Park cutter on a level surface, so machine cannot move after detaching from the tractor
- 2. Tractor with Three-Point Hitch; Slowly push hitch control lever to lower cutter to the ground.
- 3. Engage tractor parking brake and/or place transmission in "Park".



WARNING: Shut off tractor engine before detaching PTO drive-line. Entanglement in rotating drive-line can cause serious injury or death.

- 4. Shut off tractor engine and remove key.
- 5. Raise tractor PTO shield, if equipped.
- 6. Push in locking pin and slide drive-line off tractor shaft.
- 7. Support and collapse drive-line completely and lower onto front sill.
- 8. Lower tractor PTO shield, if equipped.
  - a. Remove quick-lock pins from hitch pins and install in storage position on tractor draft links.
  - b. Remove and lower tractor draft links from hitch pins.
  - c. Disconnect center link from mast straps. Reinstall center link pin/hardware.
  - d. Carefully drive tractor away.

### **CUTTING GUIDELINES**

#### WHAT MATERIAL TO CUT

It is the responsibility of the operator to determine whether a tree can be cut safely.

If the cutting disc makes contact with a material other than wood (t-post or rocks), the teeth must be evaluated for damage. Once all of the operators safety precautions have been met, examine the unit for damages.

NOTE: If one tooth has been found to be damaged, then the cutting disc could have sustained enough impact to damage or loosen all of the teeth.

ACTION RECOMMENDED: Remove all loose teeth or damaged teeth. Replace broken teeth and reset loose teeth. The tractor saw is designed to cut brush and small trees up to medium size stumps. The tractor saw is not designed to cut large diameter trees. The maximum trunk diameter of a standing tree the tractor saw can safely cut depends on the size of tractor it is attached to, the experience of the operator and the weight of the tree.

It is generally recommended that the operator not try to cut a tree with a diameter larger than 12" at the base.

- Determine whether or not the tree is to large to be safely cut.
- Evaluate the surrounding terrain. Don't cut on a steep slope or on a slope where the weight of the tree can cause the tractor to tip.
- Establish an exit path in case the tree falls in the wrong direction.
- DO NOT feed the saw into the tree to quickly lest the cutting disc stall out.
- DO NOT cut a tree so large that one cannot control the direction the tree falls.
- DO NOT operate the Turbo Saw<sup>™</sup> around bystanders.
- DO NOT place the Turbo Saw™ in danger from falling trees.
- DO NOT operate the Turbo Saw™ in an unsafe manner.

It is the responsibility of the operator to determine whether a tree can be cut safely.

#### **FEED RATE**

The tractor saw is a low torque, high RPM cutting disc. Cut at a rate that maintains the cutting disc's rpm. If the saw is pushed too quickly, the cutting disc will stall out. If this happens, retreat the saw slightly and allow the cutting disc to build momentum. Stalling the cutting disc excessively will cause the slip clutch to wear prematurely.

NOTE: Friction discs protect PTO shaft in case the cutting disc binds out. If operator binds in tree the discs are designed to absorb tension. Smoke or unusual PTO activity indicates worn discs; replace both discs to ensure this PTO safeguard.

#### DIRECTING THE FALL OF THE TREE

- The tractor engine must be run at full throttle to get maximum volume to the tractor saw.
- Always direct the tree away from the operator.
- If the tree is leaning in any direction cut it so it will continue in that direction.
- Take extra precautions when cutting dead trees.
- The grapple arm will not work as effectively on a dead tree as a live tree.

WARNING: Never cut off a tree completely without the grapple arm raised as the tree may fall in any direction. If the grapple arm is disabled or impaired in anyway, stop cutting immediately.

#### **CUTTING BELOW GROUND**

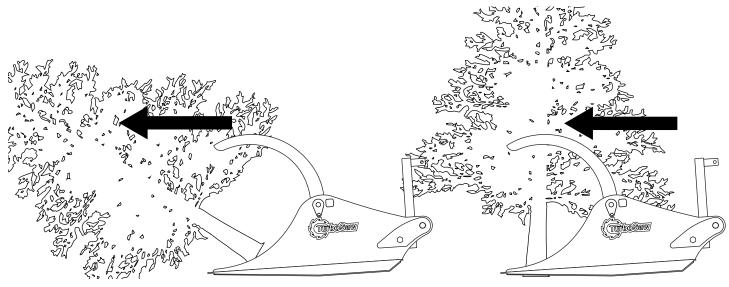
Below ground cutting is best achieved by first cutting the tree level with the surrounding ground and then cutting below grade. If the disc is angled too low on the fixed boom models the disc will bind in the slot cut into the material.

You can get closer to the ground by slightly angling the cutting unit.

CAUTION: Do not exceed a 4 degree cutting angle for below ground cutting.

WARNING: The Turbo Saw™ is design for ground level cutting. Do not use the Turbo Saw™ to trim limbs.

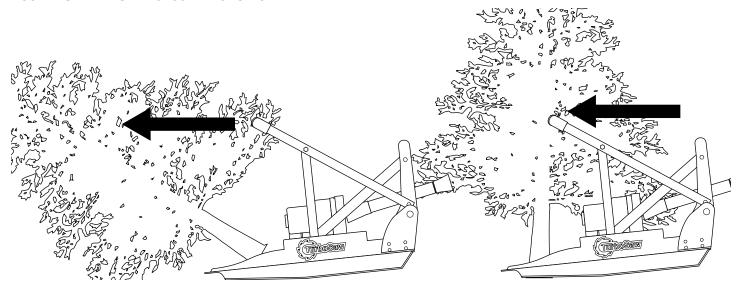
#### **GRAPPLE ARM FOR TR3200 TRACTOR SAW WITH GRAPPLE**





WARNING: The Grapple Arm can only encourage the direction of fall. The operator must always have an escape route in case the tree falls in the wrong direction.

#### **PUSHING BAR FOR LT3200 TRACTOR SAW**





WARNING: The Pushing Bar can only encourage the direction of fall. The operator must always have an escape route in case the tree falls in the wrong direction.

### **MAINTENANCE SCHEDULE**

#### **MAINTENANCE TOOLS & SKILL REQUIREMENTS**

\*Daily maintenance of your equipment requires basic tools, skill, and expertise.

Welding & hydraulic repair work should be done by a licensed professional. For a Turbo Saw™ maintenance specialist in your area please contact our service department at (405) 542-3520 or email contact@doughertymfg.com

#### **ROUTINE MAINTENANCE**

#### **Every 8 Hours**

- Grease hinge shaft on boom joint.
- Check cutting disc condition.
- Check carbide inserts and make certain the set bolts are tight.

#### **Every 100 Hours**

Rotate carbide inserts on cutting disc.

#### **Every 200 Hours**

• Check bolts/ connections on drive train.

#### **Every 400 Hours**

• Check/Replace teeth.

#### **Every 1500 Hours**

• Check/Replace skid plate.

Annually Check Oil Level in Gearbox:

Gearbox has fill port. Fill till gear port leaks oil. Do not overfill. This will reduce life of with 85 W-140 Oil

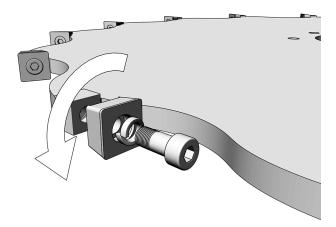
bearings. Fill

\*Life of cutting teeth will vary depending on cutting conditions and operator technique.

## **ROTATING / CHANGING TEETH**

#### **ROTATING AND CHANGING THE TEETH**

The carbide teeth should be rotated every 125 hours or when cutting rate has noticeably decreased. Depending on cutting conditions, the teeth may need to be rotated sooner or later. Most wear occurs on the outside edge of the tooth. A tooth needs to be rotated when the cutting edge becomes rounded. Rotate them 90° so that the top edge faces out.

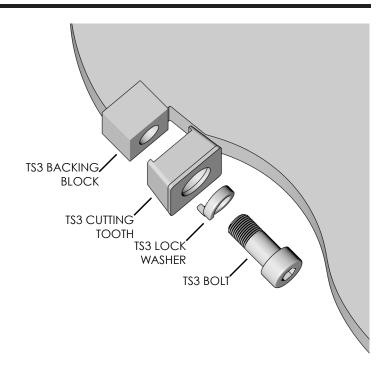


NOTE: When the tooth comes in contact with the ground, the bottom edge will wear as well. If both the bottom and outside edges of the tooth are worn, rotate the tooth 180°.



A 1/4" hex bit socket and a ratchet are needed to remove and fasten the teeth.

Do not run a cutting disc with teeth missing or broken. The backing block behind the tooth will wear very quickly without a tooth in front of it. If the backing block becomes worn do to a missing tooth, it will have to be cut off and a new backing black welded on.





DOUGHERTY FORESTRY MANUFACTURING LTD Co.

211 W. Canyon Run, Hinton, OK. 73047

Call toll free: 1.888.444.2218 or 1.405.542.3520

Email: contact@doughertymfg.com



If you have any additional questions about Turbo Saw'<sup>TM</sup> maintenance and operation please contact your local dealer, or contact a Turbo Saw service specialist at (405) 542-3520, e-mail contact@doughertymfg.com. We, at Dougherty Forestry Manufacturing, are dedicated to providing quality forestry products that we are proud to have the Dougherty name on. You are not just buying a tree saw, but a family owned business committed to your success.



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