

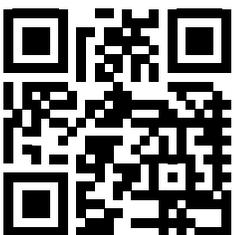


GROWLER MULCHING HEAD

Current as of 3/25/2020



PARTS LISTING WITH MOUNTING AND OPERATING INSTRUCTIONS



Tiger Corporation
3301 N. Louise Ave.
Sioux Falls, SD 57107
1-800-843-6849
1-605-336-7900
www.tiger-mowers.com

06090018

TO THE OWNER / OPERATOR / DEALER

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

BEFORE YOU START!! Read the safety messages on the implement and shown in this manual. Observe the rules of safety and use common sense!

READ AND UNDERSTAND THIS MANUAL! Non-English speaking operators will need to GET THE MANUAL TRANSLATED as needed!



DANGER

FAILING TO FOLLOW SAFETY MESSAGES AND OPERATING INSTRUCTIONS CAN CAUSE SERIOUS BODILY INJURY OR EVEN DEATH TO OPERATOR AND OTHERS IN THE AREA.

<p>1.</p> 	<p>2. NO RIDERS. NO CHILDREN OPERATORS.</p> 	<p>3. USE SAFETY SHOES, HARD HAT, SAFETY GLASSES, SEAT BELTS, ROPS & OPS</p> 	<p>4. BLOCK UP SECURELY BEFORE WORKING UNDER.</p> 
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1. Study and understand Operator's Manuals, Safety Decals, and Instructional Decals for tractor and implement to prevent misuse, abuse, and accidents. Practice before operating in a confined area or near passersby.
 ● Learn how to stop engine suddenly in an emergency. Be alert for passersby and especially children

2. Allow no children on or near folding mower or tractor. Allow no riders on tractor or implement. Falling off may cause serious injury or death from being run over by tractor or mower or contact with rotating blades.

3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seat belt securely fastened to prevent injury and possible death from falling off or tractor overturn.
 ● Personal Protective Equipment such as Hard Hat, Safety Glasses, Safety Shoes, & Ear Plugs are recommended.

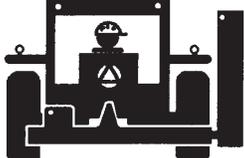
4. Block up or support raised machine and all lifted components securely before putting hands or feet under or working underneath any lifted component to prevent crushing injury or death from sudden dropping or inadvertent operation of controls. Make certain area is clear before lowering or folding

5. Before transporting, put Lift Lever in detent or full-lift position. Install Transport Safety Devices securely on folding mowers. Put Booms securely in Transport Rest.
 ● Folding and Boom Mowers have raised center of gravity. Slow down when turning and on hillsides.

6. Make certain that SMV sign, warning lights, and reflectors are clearly visible. Follow local traffic codes.

7. Never operate with Cutting Head or Folding Section raised if passersby, bystanders, or traffic are in the area to reduce possibility of injury or death from objects thrown by Blades under Guards or mower structure.

8. Before dismounting, secure implement in transport position or lower to ground.
 ● Put tractor in park or set brake, disengage PTO, stop engine, remove key, and wait until noise of rotation has ceased to prevent crushing by entanglement in rotating parts which could cause injury or death.
 ● Never mount or dismount a moving vehicle. Crushing from runover may cause serious injury or death.

<p>5. TRANSPORT SAFELY, LOCK UP.</p> 	<p>6. USE SMV, LIGHTS, & REFLECTORS.</p> 	<p>7. DO NOT OPERATE WITH CUTTER OR WING RAISED.</p> 	<p>8. DO NOT MOUNT OR DISMOUNT WHILE MOVING.</p> 
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Warranty Information: Read and understand the complete Warranty Statement found in this manual. Fill out the Warranty Registration form in full and return it within 90 days. Make certain the Serial Number of the machine is recorded on the Warranty Card, and form that you retain.

FORWARD

This manual contains information about many features of the Tiger mowing and roadside maintenance equipment. Some of these include: Safety precautions, Assembly instructions, Operations, Maintenance and Parts. This manual will also assist you in the proper break-in, daily care, and troubleshooting of your new mower.

We recommend that you read carefully the entire manual before operating the unit. Also, time spent in becoming fully acquainted with its performance features, adjustments, and maintenance schedules will be repaid in a long and satisfactory life of the equipment.

Troubleshooting - Please, before you call, help us to help you!

Please look at the equipment to observe what is happening, then:

- Classify the problem
 - Hydraulic, electrical or mechanical - Read the trouble shooting section
 - Tractor or Truck chassis - Contact vehicle dealer

- If unable to correct the problem yourself, contact your local Tiger Dealer after gathering:
 - Machine model _____
 - Serial number _____
 - Dealer name _____
 - Detailed information about the problem including results of troubleshooting

Attention Owner / Operator / Dealer: It is your obligation to read, and understand, the warranty information section located at the back of this manual denoting that the purchaser understands the safety issues relating to this machine and has received and will read a copy of this manual.

If at any time, you have a service problem with your Tiger mower, Contact your local dealer for service and parts needed.

MANUFACTURED BY:

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1012

This symbol means:

CAUTION – YOUR SAFETY IS AT RISK!

When you see this symbol, read and follow the associated instructions carefully or personal injury or damage may result.

Tiger is a registered trademark.



SAFETY SECTION

Mulcher Safety Section

SAFETY

GENERAL SAFETY INSTRUCTIONS AND PRACTICES

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this Implement. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.



The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

Practice all usual and customary safe working precautions and above all--- remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.



Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.



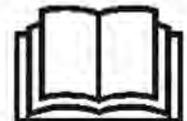
Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.



Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

NOTE: *Identifies points of particular interest for more efficient and convenient operation or repair.*

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in this Manual and in the Safety Messages on the implement. Always follow the instruction in this manual and use good common sense to avoid hazards.



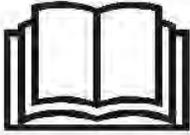
Pictographs are used throughout this manual to help bring your visual attention to safety issues.

SAFETY HAZARD	SAFETY AVOIDANCE	SAFETY PREVENTION
<p>Pictograph surrounded by a triangle indicates a Safety Hazard that must be avoided. <i>Example:</i></p>  <p>Equipment contacting overhead electrical lines</p>	<p>Pictograph by itself or inside a box indicates an avoidance procedure that should be followed to prevent injuries. <i>Example:</i></p>  <p>Always shut off engine and remove key before working on equipment.</p>	<p>A circle with a slash through it indicates an action that is prohibited. <i>Example:</i></p>  <p>No Smoking</p>

NOTE: *If you want a translation of this safety section in one of the following Languages, please contact: Translations at 1502 E. Walnut Street Seguin, TX 78155; Fax: (830) 372-9529; Safety Section Translations are available in Spanish, Portuguese, French, German, Russian. PN GS01*

SAFETY

Operator Safety

				
Read and understand Operator's Manual	Always wear Safety Glasses	Wear Hard Hat Safety Shoes	Never use Drugs or Alcohol when operating equipment	Wear Safety Vest when operating on or near roads

SAFETY



TO AVOID SERIOUS INJURY OR DEATH DO THE FOLLOWING:

- **READ, UNDERSTAND** and **FOLLOW** Operator's Manual instructions, Warnings and Safety Messages.
- **WEAR SAFETY GLASSES**, safety shoes, hard hat, hearing protection and gloves when operating or repairing equipment
- **WEAR** appropriate breathing respirator when operating in dusty conditions to avoid respiratory diseases.
- **DO NOT WEAR** loose clothing or jewelry to avoid rotating parts entanglement injury.
- **DO NOT USE DRUGS** or **ALCOHOL** before or while operating equipment.
- **DO NOT ALLOW** anyone to operate equipment under the influence of drug or alcohol.
- **CONSULT** medical professional for medication impairment side effects.
- **STAY CLEAR** of hot surfaces such as Mufflers, hydraulic pumps, valves and tanks.
- **STAY ALERT**, prolonged operation can cause fatigue, **STOP** and **REST**.

GENERAL OPERATING SAFETY

VISIBILITY CONDITIONS WHEN MOWING:

- **OPERATE IN DAYLIGHT** or with lights that gives at least 100 yards clear visibility.
- **BE ABLE TO SEE** and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects.
- Avoid backing up while mowing, vision may be limited, severe damage or injury can occur.
- **DO NOT** run tractor in enclosed building without adequate exhaust ventilation.

GROUND SPEED WHEN MOWING:

- **NORMAL SPEED** range is between 1 to 2 mph(1-3 kph).
- **ADJUST MOWING SPEED** for terrain conditions and grass type, density and cut height.
- **REDUCE MOWING SPEED** when near steep slopes, ditches, drop-offs, overhead obstructions, power lines and to avoid debris and foreign objects.

TRACTOR and MOWER

- **DO NOT** operate the tractor or mower unless the equipment is maintained and operating properly.
- **DISCONTINUE OPERATION** if tractor or mower electrical and hydraulic controls do no function properly.
- **DISCONTINUE OPERATION** of the tractor if the braking or steering systems do not function properly.
- **DO NOT** operate the tractor or mower if there are any hydraulic leaks.

INSECT INFESTATION

- **DO NOT** operate in areas where bees or insects may attack unless you **WEAR PROTECTIVE CLOTHING** or use enclosed tractor cab.

PTO SPEED:

- **DO NOT EXCEED IMPLEMENT RATED PTO SPEED**
- **AVOID** exceeding rated PTO speeds that may result in broken drivelines or blade failures.

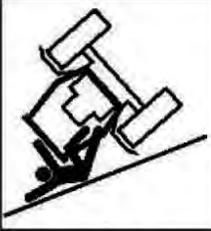
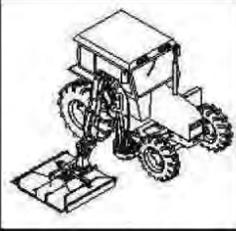
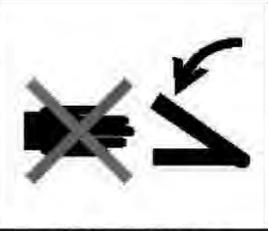
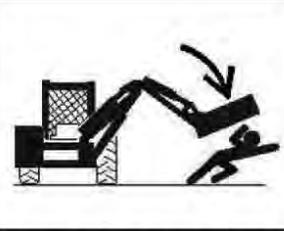
SAFETY SIGNS:

- **REPLACE** missing, damaged or unreadable safety signs immediately. *PN OSBM-01*

SAFETY

SAFETY

CRUSHING HAZARDS

				
Crushing injury from roll over	Use Cab Tractor With Boom Mowers	Always wear seatbelt	Pinch Point Hazard Keep Hands and body parts clear of pinch points	Crushing injury from boom or mower head falling



TO AVOID SERIOUS INJURY OR DEATH FROM FALLING OFF TRACTOR, EQUIPMENT RUN OVER, ROLLOVER AND CRUSHING BY FALLING WING OR IMPLEMENT:

- **USE ROPS** and **SEAT BELT** equipped tractors for mowing operations.
- **KEEP ROPS** lock in up position.
- **ALWAYS BUCKLE UP** seat belt when operating tractor and equipment.
- **ONLY OPERATE** tractor and equipment while seated in tractor seat.

WHEN RAISING BOOM MOWER:

- Raise or lower **ONLY WHILE SEATED** in tractor seat with seat belt buckled.
- **KEEP BYSTANDERS CLEAR** of area **TO AVOID** crushing.
- **KEEP** sufficient clearance around implement and wings **TO AVOID** contacting buildings or overhead power lines.

LIFTED Equipment can fall from mechanical or hydraulic failure or inadvertent Control Lever movement.



TO AVOID EQUIPMENT FALLING while working near or under lifted boom, components and Mower Head:

- **SECURELY SUPPORT** or **block up** raised equipment, wings and components.
- **BLOCK UP** and **securely support** equipment before putting hands, feet or body under raised equipment or lifted components.
- **KEEP BYSTANDERS CLEAR** of raised boom or mower head until securely blocked up.

WHEN PARKING Implement and Tractor:

- **LOWER** Mower Head to the ground or **BLOCK** lifted parts before leaving equipment.
- **NEVER** leave implement unattended in a raised position.



TO AVOID CHILDREN FALLING OFF OR BEING CRUSHED BY EQUIPMENT:

- **NEVER ALLOW** children to play on or around Tractor or Implement.
- **DO NOT** operate without operator CAB or OVERHEAD protection. Falling limbs and debris can cause injuries. *PN CHBM-01*

SAFETY

CONNECTING OR DISCONNECTING IMPLEMENT SAFETY

			
<p>Stop Tractor Remove Key Read Manual</p>	<p>Crushing Hazard Do Not get under boom when connecting mower head to boom</p>	<p>Stability Hazard Ensure 20% of tractor weight is on front wheels</p>	<p>Stability Hazard Ensure 1500lbs down force on left tire with boom extended</p>



TO AVOID SERIOUS INJURY OR DEATH FROM BEING CRUSHED BY TRACTOR OR IMPLEMENT:

WHEN connecting mower head to the boom:

- **KEEP BYSTANDERS AWAY** from tractor and mower.
- Ensure there is enough room to lift and swing the boom with out hitting objects

BEFORE connecting and disconnecting the mower head or boom:

- **STOP TRACTOR ENGINE**, place transmission into park, engage parking brake and remove key.

WHEN connecting and disconnecting the mower head or boom:

- **DO NOT** crawl or walk under raised mower head or boom. *(Refer to Instructions in Operation Section)*

WHEN CONNECTING IMPLEMENT DRIVELINE:(If equipped)

TO AVOID implement driveline coming loose during operation:

- **LUBRICATE** yoke spring locking collar to ensure it freely slides on PTO shaft.
- **SECURELY** seat yoke locking balls in PTO shaft groove.
- **PUSH** and **PULL DRIVELINE** on both the tractor and implement **PTO SHAFTS** to ensure it is **SECURELY ATTACHED**.

TO AVOID broken driveline during operations:

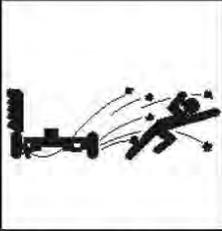
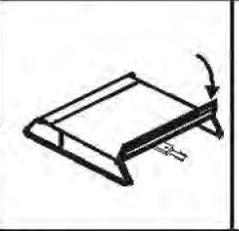
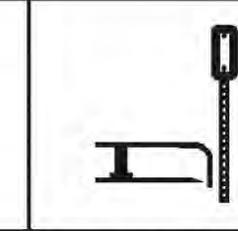
- **CHECK** driveline for proper length between PTO shaft and implement gearbox shaft. *(Refer to Instructions in Operation Section)*
- Drivelines too short can pull apart or disengage.
- Drivelines too long can bottom out.
- Bottoming driveline telescoping assembly will stop sliding and become solid.
- Driveline bottoming can push through support bearings and break off PTO shaft.

CONTACT DEALER if implement driveline does not match Tractor PTO shaft:

- **DO NOT USE PTO ADAPTER.**
Using a PTO adapter can cause:
- Excessive vibration, thrown objects, blade and implement failures by doubling operating speed.
- Increased working length exposing unshielded driveline areas and entanglement hazards. *PN CDBM-01*

SAFETY

THROWN OBJECTS HAZARDS

				
Mower Thrown Objects Hazard	Raised Mower Thrown Objects	Keep mower door closed when traffic comes within 300 feet	Inspect Area remove foreign objects	Do not let blades contact solid objects



ROTARY MOWERS CAN THROW OBJECTS 300 FEET OR MORE UNDER ADVERSE CONDITIONS.

TO AVOID SERIOUS INJURY OR DEATH TO OPERATOR OR BYSTANDERS FROM THROWN OBJECTS:

- KEEP bystanders 300 feet away

STOP MOWING IF PASSERSBY ARE WITHIN 300 FEET UNLESS:

- **All THROWN OBJECT SHIELDING** including, Front and Rear Deflectors, Chains Guards, Steel Guards, Bands, Side Skirts and Skid Shoes in place and in good condition when mowing.
- Mower is close and parallel to ground without exposing blades.
- **MOWING AREA** has been inspected and foreign materials and debris have been removed.
- **DO NOT** shred or mow loose or previously cut material if **BYSTANDERS** are within 300 feet.
- **PASSERSBY** are inside enclosed vehicle.

INSPECT AREA FOR POTENTIAL THROWN OBJECTS BEFORE MOWING:

- **REMOVE** debris, rocks, wire, cable, metal objects and other foreign material from area.
Wire, cable, rope, chains and metal objects can be thrown or swing outside deck with great velocity:
 1. **MARK** objects that cannot be removed.
 2. **AVOID** these objects when mowing.

HIGH GRASS and WEED AREA INSPECTION:

- **INSPECT** for and **REMOVE** any hidden large debris.
- **MOW** at Intermediate height
- **INSPECT** and remove remaining debris
- **MOW** at final height.

MOWER THROWN OBJECT SHIELDING:

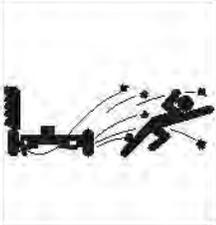
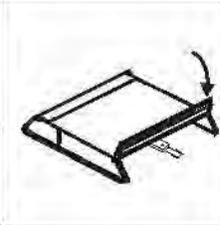
- **KEEP** all thrown object shielding including, Front and Rear Deflectors, Chains Guards, Steel Guards, Bands, Side Skirts and Skid Shoes in place and in good condition when mowing.
- **DO NOT OPERATE** with any thrown object shielding missing, damaged or removed.

RIGHT OF WAY (Highway) MOWING

- Stop mowing if any bystander comes within 300 feet of the mower.
- No shielding is 100% effective in preventing thrown objects. To Reduce Possibility of Injury:
 1. **MAINTAIN MOWER SHIELDING**, side skirts, skid shoes, and blades in good operational condition,
 2. **RAISE CUTTING HEIGHT** to **6 INCHES** minimum,
 3. **INSPECT AREA** thoroughly before mowing to **REMOVE** potential **THROWN OBJECT HAZARDS**,
 4. **NEVER ALLOW BLADES** to **CONTACT SOLID OBJECTS** like wire, rocks, post, curbs, guardrails, or ground while mowing. *PN TOBM-01*

SAFETY

THROWN OBJECTS HAZARDS (Continued)

				
Mower Thrown Objects Hazard	Raised Mower Thrown Objects	Keep mower door closed when traffic comes within 300 feet	Inspect Area remove foreign objects	Do not let blades contact solid objects

MOWER OPERATION:

- **DO NOT** exceed mower's rated Cutting Capacity or cut non-vegetative material.
- **USE ENCLOSED TRACTOR CABS** when two or more mowers are operating in mowing area.
- Do Not mow in areas where bees or insects may attack unless you **WEAR PROTECTIVE CLOTHING** or use enclosed tractor cab.
- **ADJUST** mower head close and parallel to ground without exposing blades.
- **ADJUST** cutting **HEIGHT** to **AVOID BLADE CONTACT** with solid objects like wire, rocks, posts, curbs, guard rails and fixed obstructions.
- **CLOSE** Mower door and stop operating if bystanders come within 300 feet of the mower.
- Keep mower door closed when cutting close to the ground.
- Open door only to cut large brush or tree limbs. Close door immediately after cutting limb.
- **DO NOT** push mower head down onto material to cut it, use the front tips of the mower blades to cut into the material.
- **DO NOT** operate mower when mower is in transport position.
- **STOP MOWING** immediately if blades strike heavy objects, fixed structures, metal guard rails and concrete structures:
 1. **BLADES CAN FAIL** from impact and objects can be thrown with great velocity.
 2. **INSPECT** and **REPLACE** any damaged blades.
 3. **CHECK** blade carrier and **REPLACE** if damaged.
- **DO NOT** mow in standing water **TO AVOID** possible **BLADE FAILURE**.
- **AVOID MOWING** in reverse:
 1. **STOP PTO** and back up mower.
 2. **LOWER** mower, engage **PTO** and mow forward.
- **DISENGAGE** mower head and wait until **BLADES** stop rotating before raising mower to transport position.
- **DO NOT ENGAGE PTO** with mower in transport position.
- **STOP** mowing when **EXCESSIVE VIBRATION** occurs:
 1. **STOP PTO** and tractor **ENGINE**.
 2. **INSPECT** mower for vibration source.
 3. **REPLACE** any damage parts and bent or damaged **BLADES**. PN TOBM-02

SAFETY

RUN OVER HAZARDS

		
Operator run over hazard	Rider fall off run over hazard	Bystander run over hazard



TO AVOID SERIOUS INJURY OR DEATH FROM FALLING OFF TRACTOR OR EQUIPMENT RUN OVER:

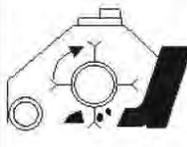
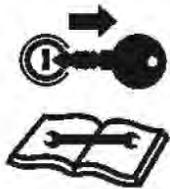
- **USE ROPS** and **SEAT BELT** equipped tractors for mowing operations.
- **KEEP ROPS** locked in **UP** position.
- **ONLY** start tractor while seated in tractor seat.
- **ALWAYS BUCKLE UP** seat belt when operating tractor and equipment.
- **ONLY OPERATE** tractor and equipment while seated in tractor seat.
- **NEVER ALLOW RIDERS** on tractor or implement.
- When not mowing stow Boom and Mower head in transport location before moving.

WHEN MOUNTING AND DISMOUNTING TRACTOR:

- **ONLY** mount or dismount when tractor and moving parts are stopped.
- **STOP ENGINE AND PTO**, engage parking brake, lower implement, allow all moving parts to stop and remove key before dismounting from tractor. *PN ROBM-01*

SAFETY

MOWER BLADE CONTACT HAZARDS

					
Do not put fingers underneath mower	Do not put hands underneath Flail Mower	Do not put foot underneath mower	Do not put foot underneath Flail Mower	Shearing Hazard from Sickle blades	Stop Tractor Remove Key Read Manual



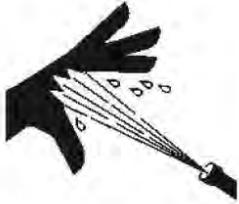
KEEP AWAY FROM ROTATING BLADES TO AVOID SERIOUS INJURY OR DEATH FROM BLADE CONTACT:

- **STAY AWAY** and **KEEP HANDS, FEET** and **BODY AWAY** from rotating blades, drivelines and parts until all moving elements have stopped.
- **DO NOT** put hands or feet under mower decks
- **STOP** rotating **BLADES** disengage mower switch and PTO and wait for blade to stop rotating before raising mower head.
- **DO NOT** approach Sickle Bar head until Tractor Engine has been shut off.
- **STOP LOOK** and **LISTEN** before approaching the mower to make sure all rotating motion has stopped. *PN MBBM-01*

SAFETY

SAFETY

HIGH PRESSURE OIL LEAK HAZARD

			
High pressure oil penetrating skin	High pressure oil eroding skin	Using cardboard to check for oil leaks	Tank contents under pressure. Allow oil to cool before slowly removing cap



TO AVOID SERIOUS INJURY OR DEATH FROM HIGH PRESSURE HYDRAULIC OIL LEAKS PENERATING SKIN:

- **DO NOT OPERATE** equipment with oil or fuel leaks.
- **KEEP** all hydraulic hoses, lines and connections in **GOOD CONDITION** and **TIGHT** before applying system pressure.
- **RELIEVE HYDRAULIC PRESSURE** before disconnecting lines or working on the system.
- **REMOVE** and replace hose if you suspect it leaks. Have dealer test it for leaks.

HIGH PRESSURE FLUID LEAKS CAN BE INVISIBLE.

WHEN CHECKING FOR HYDRAULIC LEAKS AND WORKING AROUND HYDRAULIC SYSTEMS:

- **ALWAYS WEAR** safety glasses and impenetrable gloves.
- **USE** paper or cardboard to search for leaks.
- **DO NOT USE** hands or body parts to search for leak.
- **KEEP** hands and body **AWAY** from pin holes and nozzles ejecting hydraulic fluid.
- Hydraulic fluid may cause gangrene if not surgically removed immediately by a doctor familiar with this form of injury.

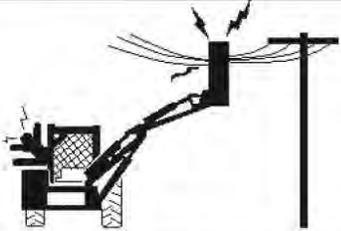
Use caution when removing Hydraulic Tank cap.

- Tank contents maybe under pressure
- Allow oil to cool before removing cap.
- Relieve oil pressure before removing cap slowly.
- Stay away from hot oil that may spray from tank.

PN HPBM-01

SAFETY

ELECTRICAL & FIRE HAZARDS

		
Mower head or Boom contacting overhead electrical lines	Strike and explosion Hazard Blades Contacting Utility or Gas Lines	Fire Hazard Do Not operate near fires. Keep debris away from hydraulic pumps and valves



TO AVOID SERIOUS INJURY OR DEATH FROM ELECTRICAL CONTACT WHEN WORKING AROUND ELECTRICAL POWER LINES, GAS LINES AND UTILITY LINES:

- **INSPECT** mowing area for overhead or underground electrical power lines, obstructions, gas lines, cables and Utility, Municipal, or other type structure.
- **KEEP** all raised wings at a 10 feet or greater distance from all power lines and overhead obstructions.
- **DO NOT** allow mower to contact with any Utility, Municipal, or type of structures and obstructions.
- **CALL 811** and 1-800-258-0808 for identify buried utility lines.

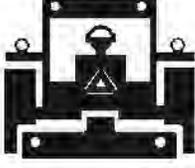
FIRE PREVENTION GUIDELINES while Operating, Servicing, and Repairing Mower and Tractor to reduce equipment and grass fire Risk:

- **EQUIP** Tractor with a **FIRE EXTINGUISHER**
- **DO NOT OPERATE** mower on a tractor equipped with under frame exhaust
- **DO NOT SMOKE** or have open flame near Mower or Tractor
- **DO NOT DRIVE** into burning debris or freshly burnt area
- **AVOID FIRE IGNITION** by not allowing mower blade to contact solid objects like metal or rock.
- **DO NOT** operate if oil is leaking. Repair oil leak and remove all accumulated oil before operating.
- **CLEAR** any grass clippings or debris buildup around mower hydraulic pumps, valves or tanks.
- **SHUT OFF ENGINE** while refueling. *PN EFBM-01*

SAFETY

SAFETY

TRANSPORTING HAZARDS

		
<p>Use SMV signs and Flashing Lights</p>	<p>Loss of Control Stopping Hazard</p>	<p>Loss of Control Speeding Hazard</p>

WARNING

TO AVOID SERIOUS INJURY AND DEATH WHEN TOWING OR TRANSPORTING EQUIPMENT:

- **KEEP** transport speed **BELOW** 20 mph to maintain control of equipment.
- **REDUCE SPEED** on inclines, on turns and in poor towing conditions.
- **DO NOT TOW** with trucks or other vehicles.
- **USE** only properly sized and equipped tractor for towing equipment.
- **FOLLOW** all local traffic regulations.

TRACTOR REQUIREMENTS FOR TOWING OR TRANSPORTING IMPLEMENTS:

- **ONLY TRANSPORT** with tractor with **ROPS** in the raised position.
- **USE** properly sized and equipped tractor that exceeds implement weight by at least 20%.
- **KEEP** 20% of tractor weight on front wheels to maintain safe steering.

BEFORE TRANSPORTING OR TOWING IMPLEMENT:

TRACTOR INSPECTION:

- **CHECK** steering and braking for proper operation and in good condition.
- **CHECK SMV** sign, reflectors and warning lights for proper operation and visibility behind unit.
- **CHECK** that your driving vision is not impaired by tractor, cab, or implement while seated in tractor seat.
- **ADJUST** your operating position, mirrors, and implement transport for clear vision for traveling and traffic conditions.

PREPARE IMPLEMENT FOR TRANSPORTING OR TOWING:

- Store Boom and Mower in transport positions and engage transport locks if equipped.

DETERMINE STOPPING CHARACTERISTICS OF TRACTOR AND IMPLEMENT FOR TRANSPORTING OR TOWING:

BRAKING TESTS:

- Stopping distance with implement attached may increase
- Observe **STOPPING** distances increases with increased speeds.
- **DETERMINE** the maximum safe transport speed that does not exceed 20 mph.
- Reduce travel speed in wet or icy roads, stopping distances increase.

DETERMINE MAXIMUM TURNING SPEED BEFORE OPERATING ON ROADS OR UNEVEN GROUND:

- **TEST** equipment in slowly increasing speed in turns to determine it can be operated at higher speeds.
- **USE REDUCED** turning speeds in sharp turns to avoid equipment turning over.

WHEN TOWING OR TRANSPORTING EQUIPMENT:

- Always **WEAR SEAT BELT** when operating or transporting mower.
- **USE** low speeds to avoid overturn with raised wings.
- **USE** low speeds and gradual steering on curves, hills, rough or uneven surfaces and on wet roads.
- **TURN ON** tractor **FLASHING WARNING LIGHTS**.
- **ALLOW** clearance for implement swing while turning.

KEEP raised boom mower 10 feet or greater distance from all power lines and overhead obstructions. *PN THBM-01*

SAFETY

HAZARDS WITH MAINTENANCE OF IMPLEMENT

				
Periodically inspect all moving parts, lubricate drivelines, and tighten all fasteners	Lower mower head to ground or block up before servicing	Stop engine remove key before conducting maintenance	Set mower head securely on the ground before servicing blades	Thrown Objects Hazard Ensure blades rotate clockwise viewed from above mower head



AVOID SERIOUS INJURY OR DEATH FROM COMPONENT FAILURE BY KEEPING IMPLEMENT IN GOOD OPERATING CONDITION IN PERFORMING PROPER SERVICE, REPAIRS AND MAINTENANCE.

BEFORE PERFORMING SERVICE, REPAIRS AND MAINTENANCE ON THE IMPLEMENT:

- **STOP ENGINE AND PTO**, engage parking brake, lower implement, allow all moving parts to stop and remove key before dismounting from tractor.
- **PLACE** implement on ground or securely block up raised equipment. Use large blocks on soft or wet soil.
- **PUSH** and **PULL** Remote Hydraulic Cylinder lever to relieve hydraulic pressure.
- **DISCONNECT Pump solenoid valve or PTO driveline connection before servicing mower head.**
- **WEAR SAFETY GLASSES, PROTECTIVE GLOVES** and follow **SAFETY PROCEDURES** when performing service, repairs and maintenance on the implement:
- Always **WEAR** protective **GLOVES** when handling blades, knives, cutting edges or worn component with sharp edges.
- Always **WEAR GLOVES** and **SAFETY GLASSES** when servicing hot components
- **AVOID CONTACT** with hot hydraulic oil tanks, pumps, motors, valves and hose connection surfaces.
- **SECURELY** support or **BLOCK UP** raised implement, framework and lifted components before working underneath equipment.
- **FOLLOW INSTRUCTIONS** in maintenance section when replacing hydraulic cylinders to prevent component falling.
- **STOP** any implement movements and **SHUT-OFF TRACTOR** engine before doing any work procedures.
- **USE** ladder or raised stands to reach high equipment areas inaccessible from ground.
- **ENSURE** good footing by standing on solid flat surfaces when getting on implement to perform work.
- **FOLLOW** manufacturer's instructions in handling oils, solvents, cleansers, and other chemical agents.
- **DO NOT** change any factory-set hydraulic calibrations to avoid component or equipment failures.
- **DO NOT** modify or alter implement, functions or components.
- **DO NOT WELD** or repair rotating mower components. These may cause vibrations and component failures being thrown from mower.

PERFORM SERVICE, REPAIRS, LUBRICATION AND MAINTENANCE OUTLINED IN IMPLEMENT MAINTENANCE SECTION:

- **INSPECT** for loose fasteners, worn or broken parts, leaky or loose fittings, missing or broken cotter keys and washers on pins, and all moving parts for wear.
- **REPLACE** any worn or broken parts with authorized service parts.
- Inspect mower blade spindle to ensure bearing preload. If loose repair before operating.
- **LUBRICATE** unit as specified by lubrication schedule
- **NEVER** lubricate, adjust or remove material while it is running or in motion.
- **TORQUE** all bolts and nuts as specified.

BLADE INSPECTION:

- Inspect blade carrier and blades daily.
- Check blade and blade carrier **BOLT TORQUE** daily. Loose bolts can cause blade or blade bolt failures.
- **REPLACE**, bent, damage, cracked and broken blades immediately with new blades.
- **AVOID** blade failures and thrown broken blades. **DO NOT** straighten, weld, or weld hard-facing blades.

SAFETY SHIELDS, GUARDS AND SAFETY DEVICES INSPECTION:

- **KEEP** all Deflectors, Chain Guards, Steel Guards, Gearbox Shields, and PTO integral shields, Bands, Side Skirts and Skid Shoes in place and in good condition.
- **REPLACE** any missing, broken or worn safety shields, guards and safety devices.
- **PROPOSITION 65** - Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.
- Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. **PN HMBM-01**

SAFETY

PARTS INFORMATION

Parts Information

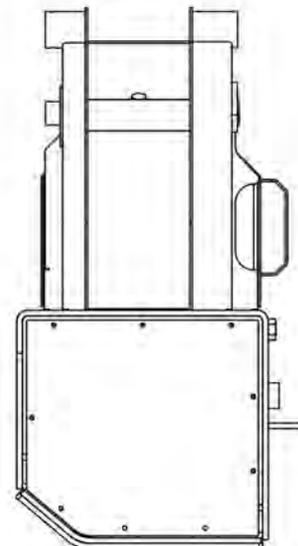
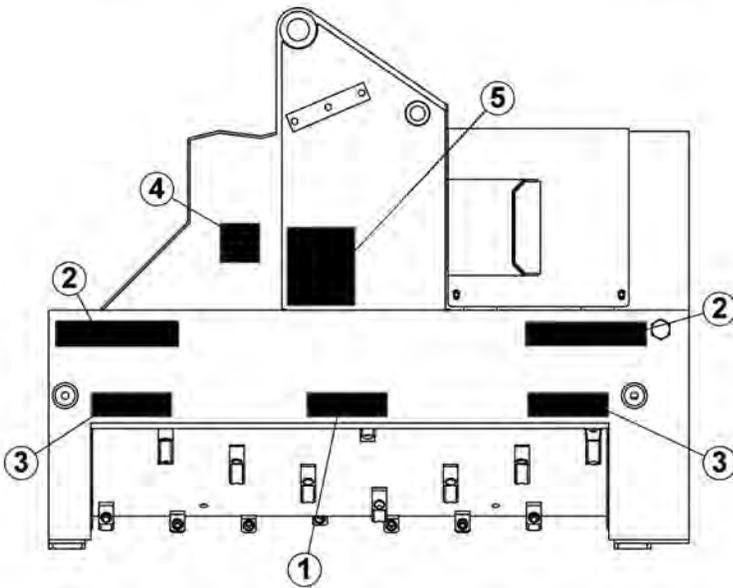
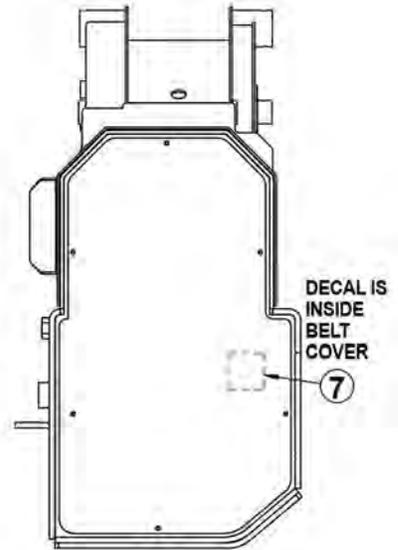
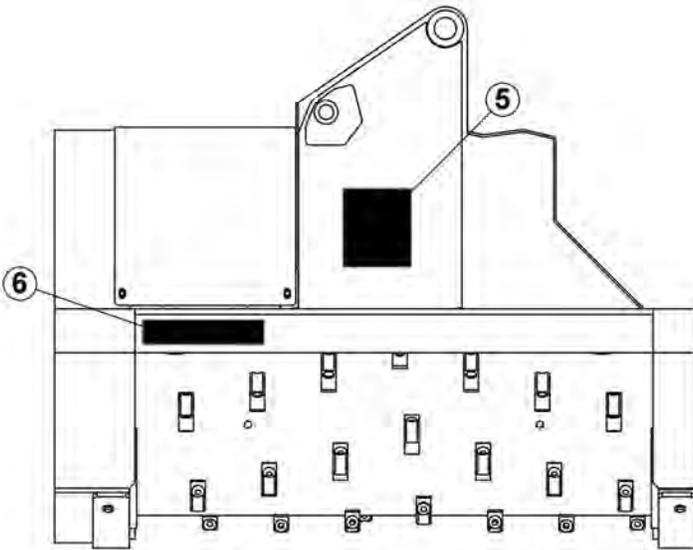
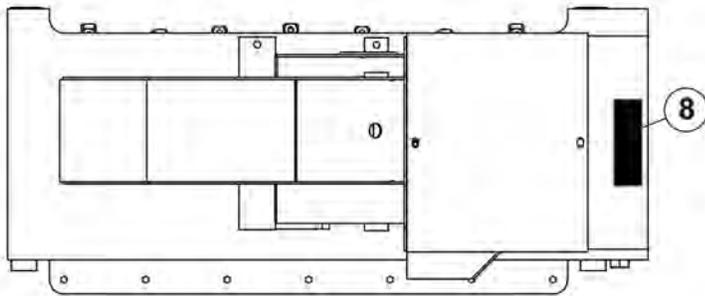
The Tiger Growler Mulcher uses balanced and matched system components for blade carriers, teeth, cuttershafts, rollers, drivetrain components, and bearings. These parts are made and tested to Tiger specifications. Non-genuine “will fit” parts do not consistently meet these specifications. The use of “will fit” parts may reduce mower performance, void mower warranties, and present a safety hazard. Use genuine Tiger mower parts for economy and safety.

Decal Location

NOTE: Tiger supplies safety decals on this product to promote safe operation. Damage to the decals may occur while in shipping, use, or reconditioning. Tiger cares about the safety of its customers, operators, and bystanders, and will replace the safety decals on this product in the field, free of charge (Some shipping and handling charges may apply). Contact your Tiger dealer to order replacement decals.

SAFETY

1	6T3249A	1	DECAL_CAUT_TF1018 LUBE INSTR4
2	42399	2	DECAL_RED REFLECTOR
3	22839	2	DECAL_CAUT_HAND GREASE ONLY
4	D637	1	DECAL_SOLENOID_DISCONNECT
5	D983	2	DECAL_DANGER_CTTRSHFTROT_3FT
6	4240006	1	DECAL_YELLOW REFLECTOR
7	D646	1	DECAL_DANGER_GUARD_MISSING
8	00758194	1	DECAL_WARNING BELT SHIELD



Mulcher Safety Section 3-15

SAFETY

GREASING INSTRUCTIONS

CUTTER SHAFT BEARING

GREASE EVERY 8 HRS. OR DAILY

NOTE: If unusual environmental conditions exist-extreme temperatures, moisture, or contaminants-more frequent lubrication is required.

6T3249A

6T3249A

Decal, Caut. Lube Instructions

SAFETY



42399

Decal, Red Reflector

**DO NOT LUBRICATE WITH AUTOMATIC
GREASE GUN. GREASE WITH HAND
GREASE GUN ONLY.**

P/N22839

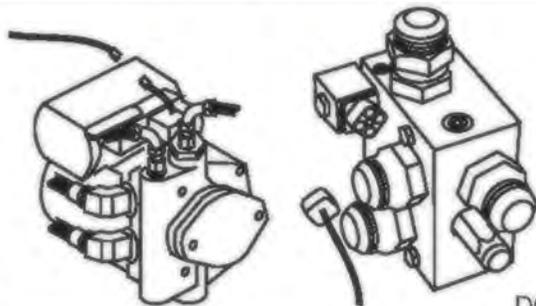
22839

Decal, Caut, Hand Grease Only

⚠ WARNING

**TO AVOID SERIOUS INJURY OR DEATH FROM
INADVERTENT MOWER HEAD START UP:**

- Disconnect the hydraulic solenoid BEFORE servicing the tractor or mower.



D637

D637

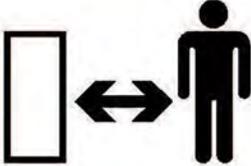
Decal, Solenoid Disconnect

SAFETY

D983

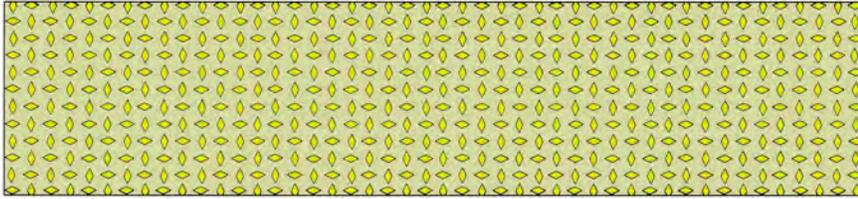
Decal, Danger, Ctttrshft, 3 ft

SAFETY

! DANGER	
	
Rotating Cutter Shaft Hazard Do not approach cutter if tractor engine is running.	Stay 3 feet away until all rotating motion has stopped.
! DANGER	
	
Thrown Object Hazards Mower can throw objects 300 feet.	Stay 300 feet away. Shut off mower if bystanders are within 300 feet.
D983	

SAFETY

SAFETY



4240006
Decal, Yellow Reflector



D646
Decal, Danger, Guard Missing



00758194
Decal Warning, Belt Shield

SAFETY

Federal Laws and Regulations

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

Employer-Employee Operator Regulations

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

This Act Seeks:

"...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources..."

DUTIES

Sec. 5 (a) Each employer-

- (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.
- (b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA Training Requirements

Title 29, Code of Federal Regulations Part 1928.57(a)(6). www.osha.gov

Operator instructions. At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee who operates an agricultural tractor and implements in the safe operating practices and servicing of equipment with which they are or will be involved, and of any other practices dictated by the work environment.

Keep all guards in place when the machine is in operation;

Permit no riders on equipment

Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.

Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.

Employer Responsibilities:

To ensure employee safety during Tractor and Implement operation, it is the employer's responsibility to:

1. Train the employee in the proper and safe operation of the Tractor and Implement.
2. Require that the employee read and fully understand the Tractor and Implement Operator's manual.
3. Permit only qualified and properly trained employees to operate the Tractor and Implement.
4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.
5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.
8. Require that the employee operator stop operation if bystanders or passersby come within 300 feet.

Child Labor Under 16 Years of Age

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

SAFETY

SAFETY

Mulcher Safety Section 3-20

ASSEMBLY SECTION

Mulcher Assembly Section

ASSEMBLY

Before attempting to mount your Tiger Growler Mulcher head, it is important to read and understand all of the Safety Messages in the Safety Section of this manual.

Check complete shipment list against the packing list to make sure there are no shortages.

Read and understand the entire Assembly Section instructions before attempting to mount your Tiger equipment. Refer to the Parts Section of this manual for detailed illustrations to locate all parts.

▲WARNING Always use a floor jack, hoist or fork lift to lift and raise heavy parts.

The Tiger Growler Mulching Head is designed to be used with units already equipped with a Tiger Bengal or Saber Boom Mower. The Growler Mulcher can be placed on and removed from the boom quickly and easily, allowing multipurpose use of the boom.

Note: Refer to the specific Tiger Boom Mower manual for your Tiger product for safety, maintenance and operation details for your Tiger Boom.

Before attaching the Tiger Growler Mulcher head, remove the Tiger Boom Mower head from the boom arm as detailed in the specific Tiger Boom Mower manual for your Tiger product. Retain all hardware for ease in replacing the mower head later.

ASSEMBLY

GROWLER MULCHER ATTACHMENT

If your Tiger Boom currently has a mower attached, remove the mower as instructed in the manual for the boom. Then prep the Growler Mulcher for attachment to the existing boom.

1. Use a hoist to lower the boom down to the Mulcher. Insert the 1-1/2" diameter pin through the end of the boom and the Mulcher. Secure pin with hardware.
2. The Mulcher head requires a rotary-type dogleg. If the boom is equipped with a dogleg for a flail head, then a rotary-type dogleg must be installed on the boom.
3. The link on the dogleg is to be connected to the Mulcher. Align the hole in the link



with the lower hole in the Mulcher and secure with pin and hardware.

4. Finally, make sure all bolts/nuts are tightened to recommended torque.

QUICK COUPLERS

The Growler Mulcher case drain hose is attached with quick couplers to facilitate easier swapping of the Mulcher head with other Tiger boom heads.



ASSEMBLY

BELT TENSION ADJUSTMENT

The Growler drive belt will relax after initial use of the mulcher. After approximately 10 hours of moderate use the belt will have stretched to the maximum and will not stretch any further.

Belt tension must be checked after the first 10 hours of operation and re-tensioned (cold/at room temperature) to a minimum of 68 hz, or 11 lbs. of push force to 1/4" deflection, minimum. If retensioning is required, loosen motor mount bolts slightly, and just loosen the jam nut on the tensioning bolt. Then repeat the steps in the section above. If tension has stabilized, check tension again after 40 hours of use, and then every 6 months thereafter.

See the Maintenance Section for more information on performing a belt tension adjustment.

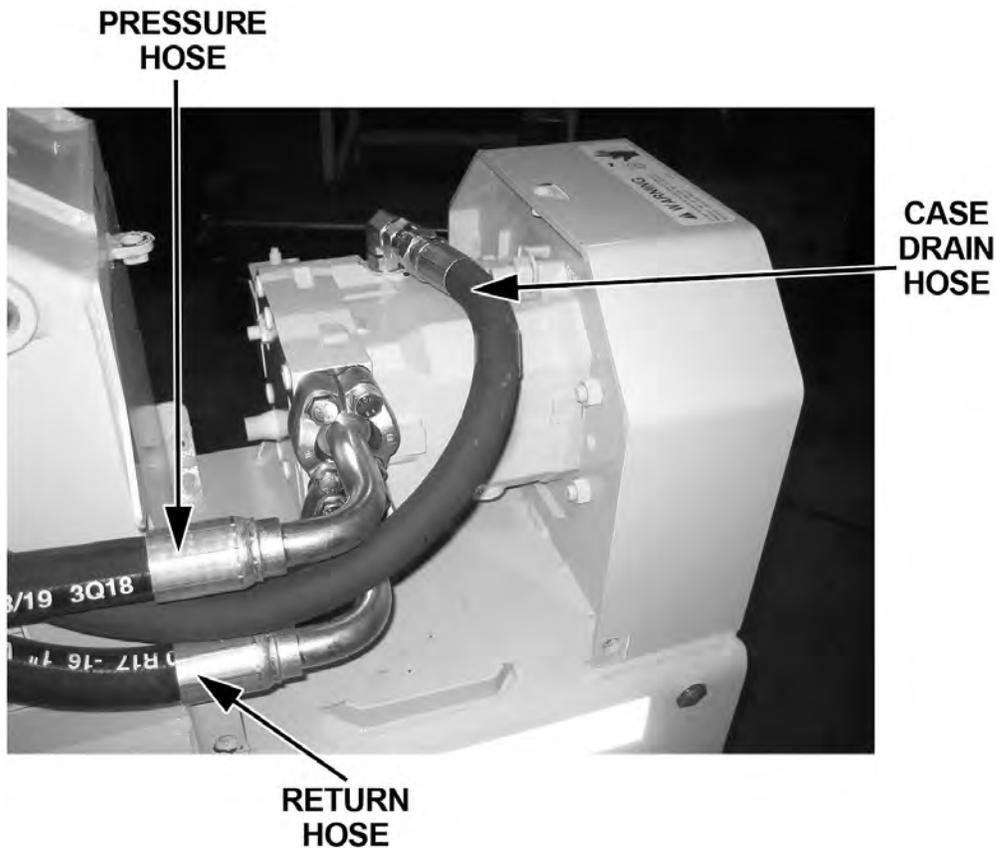
ASSEMBLY

PISTON MOTOR INSTALLATION

Install the motor into Mulcher head with work ports oriented horizontal and aft. Install motor pressure and return hoses. The pressure port on the motor is “B-port”, or the upper port (see photo below).

Fill the motor with oil through upper, case-drain port after installation into Mulcher bonnet (see photo below). Fill motor with new, filtered AW46 oil (approximately 30 oz., must meet ISO 18/16/13).

Install elbow fitting into upper case-drain port and connect $\frac{3}{4}$ ” case-drain hose to elbow, then fill hose with oil and install male, quick coupler onto hose. For installation of pre-assembled head onto an existing boom, insure that oil in reservoir meets cleanliness standard.

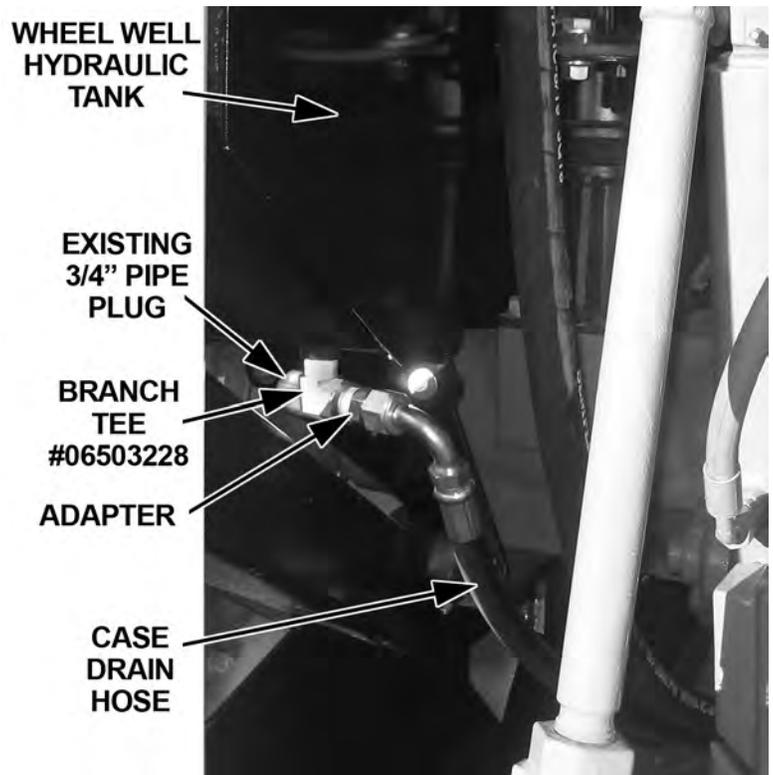
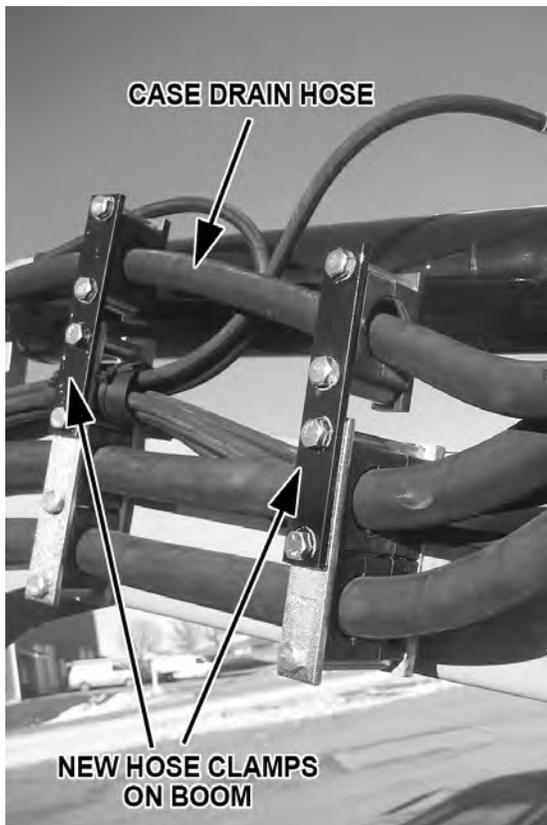
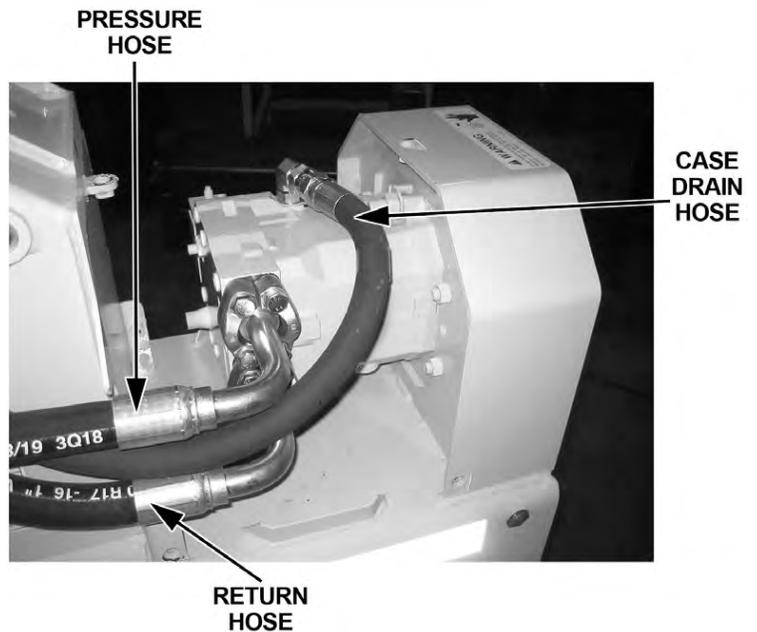


ASSEMBLY

CASE DRAIN HOSE SYSTEM

ASSEMBLY

The Growler Mulcher head utilizes a hydraulic motor case drain. The case drain hose runs from the top case drain port on the Mulcher motor to the hydraulic tank on the tractor or other boom unit. Clamps need to be added along the length of the Tiger boom to accommodate the case drain hose, and the plug on bottom of the hydraulic tank will need to be removed to install the tee fitting and hose. For this reason, it is necessary to either drain the hydraulic tank before installing the case drain hose system, or to use the vacuum option detailed on the facing page.



ASSEMBLY

CASE DRAIN HOSE VACUUM OPTION

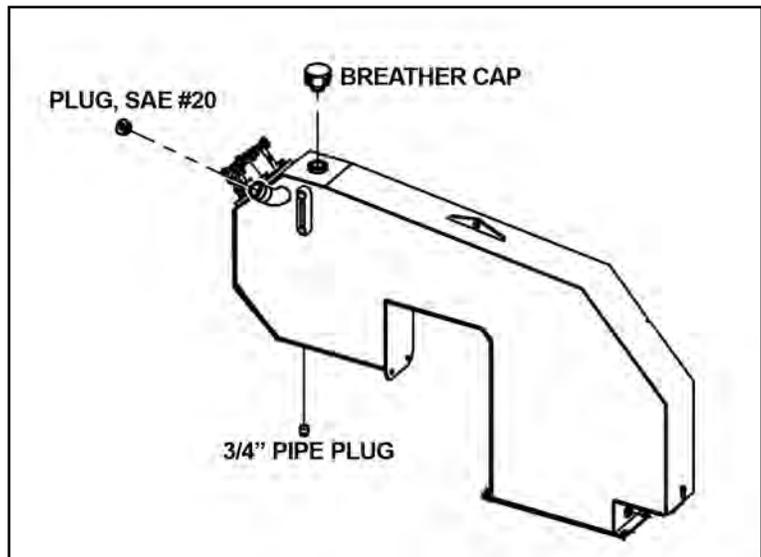
The plug at the bottom of the wheel well tank can be removed without loss of hydraulic oil using a small Shop Vac vacuum.

Using a wrench, remove the plug from the filler neck and set aside. Remove the breather cap from the top of the tank. Replace the breather cap with the plug that was removed from the filler neck and tighten with wrench.

Set up and secure a small Shop Vac on an even surface on the back of the tractor. Place the Shop Vac hose in the tank's filler neck and stuff a rag around the shop vac hose where it enters the tank to create a tight seal around the hose. Turn the vacuum on.

Remove the plug from the bottom of the wheel well tank with a wrench and set aside. The hydraulic oil should not leak because of the vacuum created. Replace the plug with the tee fitting provided and tighten with a wrench. Install adapter and the Case Drain Hose in the side of the Tee. Clean the plug that was removed from the bottom of the wheel well tank and place it in the other end of the tee.

With all items tightened, it is now possible to turn off the Shop Vac. A small amount of hydraulic oil may be found in the Shop Vac vacuum hose and compartment. Re-install the breather cap into the top of the tank and replace the plug in the filler tube.



ASSEMBLY

FINAL PREPARATION FOR OPERATION

Place operator's safety and operation decals on the steering column and side console where they are clearly visible to the operator. These decals should be understood by each operator of the machine in conjunction with the Safety and Operation Sections of this book. The decals are to be maintained in good condition as a reminder to the operator, and should be replaced if damaged.

All bosses, pins and pivot points will need to be greased as instructed in the Maintenance Section of this manual. The hydraulic reservoir can also be filled with the recommended fluid (see Maintenance Section) and the filter installed in the top of the tank. Double check all fittings and fasteners BEFORE starting tractor. Also secure any loose hoses together with zip ties and wrap with split hoses where friction may occur on the hoses.

BEFORE starting or operating the tractor you must read and understand the Safety and Operation Sections of this manual completely.

BE SURE THE BALL VALVES ARE OPEN! Start tractor and allow instruments to stabilize. Using a piece of paper or cardboard as noted in the Safety and Maintenance Sections, check all fittings and connections for hydraulic leaks.

If a leak is found, you must shut down the tractor and set the cutter on the ground. Before attempting to fix the leak, you must actuate the lift valve handles several times to relieve any pressure in the lines.

Before operating the mulcher, the cutter head and boom should be slowly moved throughout the full range of motion. Watch for any condition that would cause pinching or excess stress on the hoses. The steering and front axle travel should also be carefully moved through their full range of motion. If any condition occurs in which the hoses contact the tires, the steering and / or front axle travel may need to be limited as described in the tractor operator's manual. This should also be done if the tires rub, or are extremely close to any other part of the mower, such as the hydraulic tank or draft beam. This may include adding shims or adjusting stop bolts in the tractor front to solve the problem. While checking motion, you should also check that the control circuits are connected according to the operator's decal for the valve handles.

MULCHER TESTING

Take the tractor to a place free of loose objects on the ground. Operate the cylinders through their full range of motion again, to clear the lines of air. Follow the instructions in the Operation Section to operate the mulcher. Vibration of the mulcher should be minimal at all times.

If any parts of this Assembly Section, or any other section of this manual are not clearly understood you must contact your dealer or the address on the front of this manual for assistance!

OPERATION SECTION

Boom Operation Section

OPERATION

TIGER BOOM MULCHER OPERATING INSTRUCTIONS

Tiger Booms are manufactured with quality material by skilled workers. The Boom is designed to attach to a tractor and operate various heads for a wide range of vegetative maintenance applications. The boom and heads are equipped with safety warning decals, protective deflectors, shields, and other safety features to provide operator and passerby protection, however, no shielding is 100% accurate. ALL safety equipment and safety warning decals must be maintained on the unit in good operational condition at all times.

It is the operator's responsibility to be knowledgeable of all potential operating hazards and to take every reasonable precaution to ensure oneself, others, animals, and property are not injured or damaged by the boom unit, tractor or a thrown object. Do not operate the boom and attached head if bystanders, passersby, pets or livestock are within 300 feet of the unit.

This section of the Operator's Manual is designed to familiarize, instruct, and educate operators to the safe and proper use of the boom and attached head. Pictures contained in this section are intended to be used as a visual aid to assist in explaining the operation of a Boom and are not specific to a Boom. Some pictures may show shields removed to enhance visual clarity. NEVER operate the boom unit without all safety equipment in place and in good operational condition. The operator must be familiar with the boom unit and tractor operation and all safety practices before beginning operation. Proper operation, as detailed in this manual, will help ensure years of safe and satisfactory use of the Boom.

READ AND UNDERSTAND THE ENTIRE OPERATING INSTRUCTIONS AND SAFETY SECTION OF THIS MANUAL AND THE TRACTOR MANUAL BEFORE ATTEMPTING TO USE THE TRACTOR AND IMPLEMENT. If you do not understand any of the instructions, contact your nearest authorized dealer for a full explanation. Pay close attention to all safety signs and safety messages contained in this manual and those affixed to the implement and tractor.

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards.

**SAFETY
INSTRUCTIONS**



Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.

**¡ LEA EL
INSTRUCTIVO!**



OPERATION

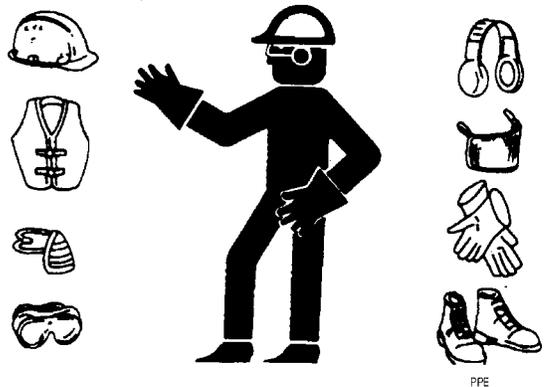
OPERATOR REQUIREMENTS

Safe operation of the unit is the responsibility of a qualified operator. A qualified operator has read and understands the implement and tractor Operator's Manuals and is experienced in implement and tractor operation and all associated safety practices. In addition to the safety messages contained in this manual, safety signs are affixed to the implement and tractor. If any part of the operation and safe use of this equipment is not completely understood, consult an authorized dealer for a complete explanation. If the operator cannot read the manuals for themselves or does not completely understand the operation of the equipment, it is the responsibility of the supervisor to read and explain the manuals, safety practices, and operating instructions to the operator.

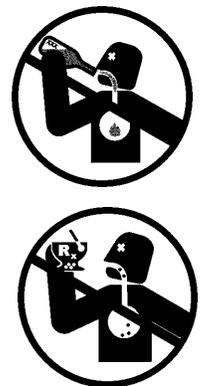
Safe operation of equipment requires that the operator wear approved Personal Protective Equipment (PPE) for the job conditions when attaching, operating, servicing, and repairing the equipment. PPE is designed to provide operator protection and includes the following safety wear:

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Always Wear Safety Glasses
- Hard Hat
- Steel Toe Safety Footwear
- Gloves
- Hearing Protection
- Close Fitting Clothing
- Respirator or Filter Mask (depends on operating conditions)



NEVER use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27)



OPERATION

TRACTOR REQUIREMENTS

In addition to tractor horsepower and size required to operate the boom unit, the tractor must also be properly equipped to provide operator protection, to alert approaching vehicle drivers of the tractor's presence, and to ensure tractor stability when mowing with the boom fully extended.

Tractor Requirements and Capabilities

- ASAE approved Roll-Over Protective Structure (ROPS) or ROPS cab and seat belt.
- Operator Protection -- Tractor must be equipped with protective structure such as operator cage or lexan window to protect operator from thrown object and falling objects
- Tractor Safety Devices -- Slow Moving Vehicle (SMV) emblem, lighting, etc.
- Tractor Ballast -- As required to maintain at least 1500 lbs. on left rear tire

ROPS and Seat Belt

The tractor must be equipped with a Roll-Over-Protective-Structure (ROPS) (tractor cab or roll-bar) and seat belt to protect the operator from falling off the tractor, especially during a roll over where the driver could be crushed and killed. Only operate the tractor with the ROPS in the raised position and seat belt fastened. Tractor models not equipped with a ROPS and seat belt should have these life saving features installed by an authorized dealer.



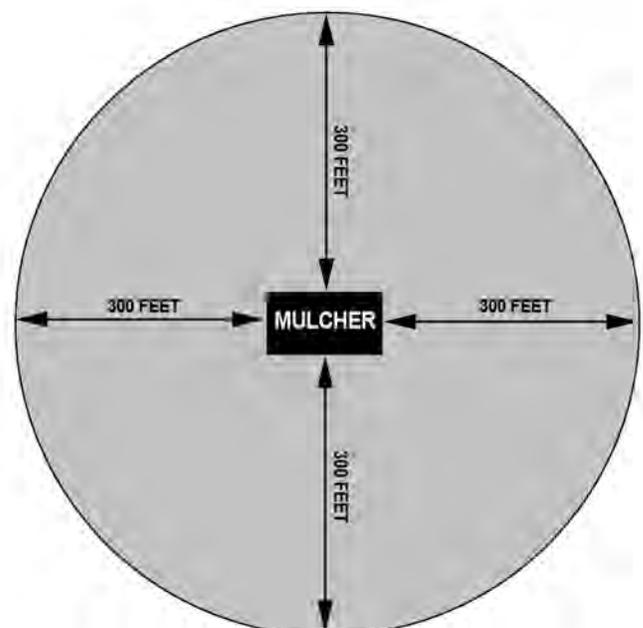
Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the tractor--particularly during a turnover when the operator could be pinned under the ROPS.



FLYING DEBRIS AND FALLING OBJECTS

Pieces of wood and rock can be thrown from the Mulcher. This condition is dangerous, and the Mulcher should not be operated when anyone is within a safety zone of 300 feet from the Mulcher.

Conditions are especially dangerous when the Mulcher is being raised up and out of the material that it is working on, or when the Mulcher is being lowered onto new material.



Mulcher Operation

OPERATION

Operator Thrown Object Protection

The tractor must be equipped with protective equipment to shield the operator from falling and thrown objects. For cab tractors, the tractor must be equipped with an operator safety screen on its right side or the right side windows must be fitted with a shatter resistant safety window. For non-cab tractors, the tractor must be equipped with a ROPS and operator protective safety cage that provides protection to the right and above the operator seat. DO NOT remove the ROPS from non-cab tractors to equip a safety cage.

Boom Unit Pre-Operation Inspection and Service

Inspect and service the boom arm and head prior to operation. Damaged and/or broken parts should be repaired and/or replaced immediately. To ensure the unit is ready for operation, conduct the following:



Never Leave the mower unattended while the head is in the raised position. The mower could fall causing serious injury to anyone who might inadvertently be under the mower.



BOOM ARM ASSEMBLY

- Inspect condition of each arm section weldment
- Ensure all pins are in place.
- Ensure all bolts, nuts and rollpins are properly installed.
- Check condition of bushings at boom pivot points and hydraulic cylinder tangs.
- Ensure each hydraulic cylinder is installed and retained correctly. Ensure the proper size pins are used to retain the cylinders in place and are secured properly.

HYDRAULIC LINE INSPECTION

- Check for hydraulic leaks along hoses, cylinders and fittings. **IMPORTANT: DO NOT** use your hands to check for oil leaks. Use a piece of heavy paper or cardboard to check for hydraulic oil leaks.
- Inspect the condition of the valve mounting.
- Ensure fittings are properly connected.

OPERATION

MULCHER HEAD INSPECTION

- Be certain the Mulcher and tractor are OFF before conducting any inspection.
- Inspect teeth and bolts for looseness and excessive wear. When teeth become significantly worn (after 40-50 hrs), rotate all teeth 180°. When that side becomes worn, rotate teeth 90°, and then rotate 180° to have the final side in front. Each side will maintain a useful face for a shorter time than the side before. After all four sides have been used, replace teeth with a new set. Replace damaged and worn teeth as needed.
- Ensure chain deflectors are in position and not damaged. Replace worn, broken, and missing sections immediately.
- Inspect that all bolts and screws are in position and are properly torqued.
- Ensure hydraulic lines are properly connected to the hydraulic motor. Check for hydraulic leaks along hoses and fittings. DO NOT use your hands to check for oil leaks. Use a piece of heavy paper or cardboard to check for hydraulic oil leaks.
- Inspect the condition of the drive belt and adjust belt tension regularly. (See Maintenance Section).
- Ensure the all shields are in place and in good repair.
- Remove any debris which may be wrapped around the cuttershaft.
- Inspect the condition of skid shoes and hardware.



NEW TEETH



WORN TEETH



All Safety Shields, Guards and other safety devices including (but not limited to) - Deflectors, Steel Guards and Gearbox Shields must be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from thrown objects, entanglement, or blade contact.

OPERATION

MOTOR OPERATION

For operation in temperatures at 0°F to 32°F, start tractor, run at idle, then start Mulcher and run it for two (2) minutes minimum. Gradually increase tractor speed to 2,200 rpm, and let it run an additional one (1) minute prior to shutdown or conducting any work with Mulcher.

During working operation of Mulcher, the tractor shall be run at 2,200 rpm minimum to insure adequate oil supply to the piston motor.

OPERATION

WARNING

Avoid contact with hot surfaces including hydraulic oil tanks, pumps, motors, valves and hose connections. Relieve hydraulic pressure before performing maintenance or repairs. Use gloves and eye protection when servicing hot components. Contact with a hot surface or fluid can cause serious injury from burns or scalding. (SG-34)

Mulcher Operation Section 3-7

OPERATION

OPERATING GUIDELINES

The purpose of the Growler Mulcher head is road-side cutting of standing trees and mulching of downed foliage. Do not manually feed debris into the Mulcher head. The head is to be moved into or over foliage by application of the boom only.

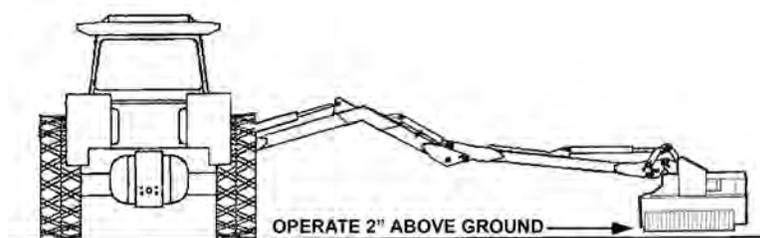
To cut down small standing brush or trees (4" diameter), the head can be lowered down on top of the foliage. For larger diameter trees, index the front of head into the tree trunk and cut off the tree. This may require moving the head up and down while holding cutter against the tree, to allow the cutter to work through the tree. Use caution when performing this procedure to prevent the tree from falling on the tractor. The Mulcher can be lowered down on top of the trunk or stump after the upper portion is downed. This procedure requires proper positioning of the mulcher head to index the cutter on the stump.



Use caution when cutting through the trunk of the tree to prevent the tree or branches from falling on the tractor.

The cutter may stall when cutting heavy material, and may require moving the cutter out of foliage. Allow cutter speed to recover and increase to normal, maximum speed before introducing cutter back into foliage.

Prior to mulching foliage on ground or operating close to ground, lower the mulcher to just above the ground and drive ahead without running Mulcher, to determine that area is clear of obstacles or debris that may damage the cutter. For cutting close to ground, lower head to just above ground and travel forward at minimum speed. For mulching downed foliage on the ground, lower the head to just above ground (approximately 2"), and pass the head over foliage, fore and aft, to mulch material. If tractor has a "creeper" gear, it is best to drive forward passing the head over the top of foliage.



Mulcher Operation Section 3-8

OPERATION

Tractor PRE-OPERATION Inspection



Mower ID# _____

Make _____

Date: _____

Shift _____



Before conducting the inspection, make sure the tractor engine is off, all rotation has stopped and the tractor is in park with the parking brake engaged. Make sure the mower is resting on the ground or securely blocked up and all hydraulic pressure has been relieved.

Item	Condition at Start of Shift	Specific Comments if not O.K.
The flashing lights function properly		
The SMV Sign is clean and visible		
The tires are in good condition with proper pressure		
The wheel lug bolts are tight		
The tractor brakes are in good condition		
The steering linkage is in good condition		
There are no visible oil leaks		
The hydraulic controls function properly		
The ROPS or ROBS Cab is in good condition		
The seatbelt is in place and in good condition		
The 3-point hitch is in good condition		
The drawbar pins are securely in place		
The PTO master shield is in place		
The engine oil level is full		
The brake fluid level is full		
The power steering fluid level is full		
The fuel level is adequate		
The engine coolant fluid level is full		
The radiator is free of debris		
The air filter is in good condition		

Operator's Signature: _____

DO NOT OPERATE an UNSAFE TRACTOR or MOWER

This Inspection Form may be freely duplicated for extra copies.

OPERATION

OPERATION

Boom PRE-OPERATION Inspection



Mower ID# _____

Make _____

Date: _____

Shift _____



Before conducting the inspection, make sure the tractor engine is off, all rotation has stopped and the tractor is in park with the parking brake engaged. Make sure the mower is resting on the ground or securely blocked up and all hydraulic pressure has been relieved.

OPERATION

Item	Condition at Start of Shift	Specific Comments if not O.K.
The Operator's Manual is in the tractor		
All safety decals are in place and legible		
The mounting frame bolts are in place and tight		
The boom connection bolts & pins are tight		
There are no cracks in boom		
The hydraulic cylinders pins are tight		
The hydraulic pump hose connections are tight		
The hydraulic valve controls function properly		
There are no leaking or damaged hoses		
The hydraulic oil level is full		
There is no evidence of hydraulic leaks		
The blades are not chipped, cracked or bent		
The blade bolts are tight		
The deflectors are in place and in good condition		
The boom shields are in place and in good condition		
The skid shoes are in good condition and tight		
There are no cracks or holes in boom deck		
The hydraulic motor mounting bolts are tight		
The boom head spindle housing is tight and lubricated		

Operator's Signature: _____

DO NOT OPERATE an UNSAFE TRACTOR or MOWER

This Inspection Form may be freely duplicated for extra copies.

MAINTENANCE SECTION

Mulcher Maintenance Section 4-1

MAINTENANCE

GENERAL INSTRUCTIONS

Tiger Mulchers are designed for high performance and rugged durability, yet with simplified maintenance. The purpose of this section of the manual is to help the operator in the regular servicing of the Mulcher. Regular maintenance at the intervals mentioned will result in the maximum efficiency and long life of the Tiger Mulcher.

When you purchase a Tiger Mulcher you also acquire another valuable asset, Tiger's parts organization. Our rapid and efficient service has guaranteed the customer satisfaction for many years. Tiger parts keep up with the demands for efficiency, safety and endurance expected of the Tiger Mulcher.

MAINTENANCE

TOOTH MAINTENANCE & REPLACEMENT

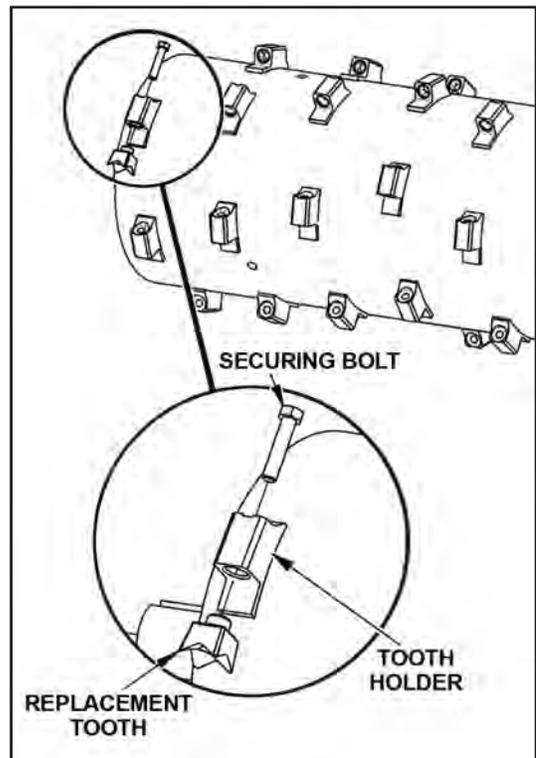
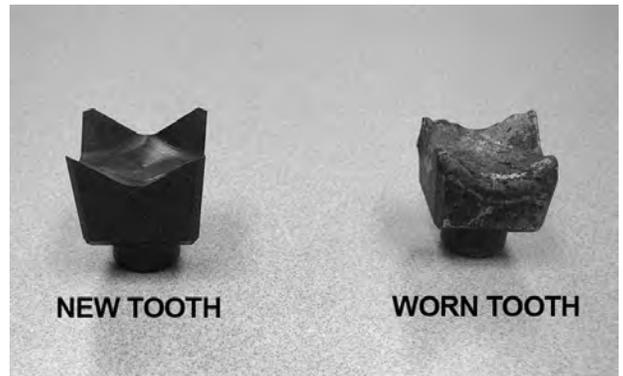
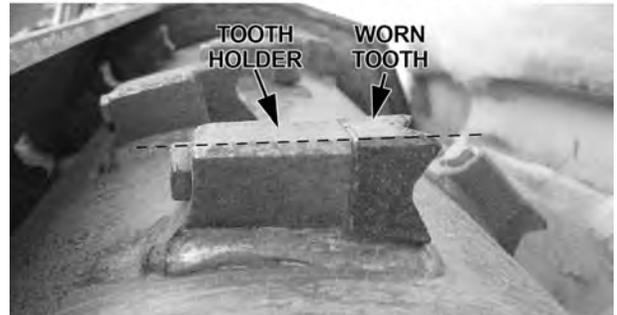
The mulcher teeth have four (4) cutting edges. The majority of the cutting is done by the outboard edge of tooth (away from drum). Monitor the wear on the teeth. Do not allow teeth to wear to the extent that the tooth holder begins to wear. When teeth contact the ground, wear increases significantly.

Each edge of tooth will last approximately 40 hours. After the first edge becomes worn, remove bolt, and rotate tooth 180°. Insure tooth is seated completely into holder. Apply Anti-Seize to threads of bolt, reinstall bolt, and torque bolts to 33 ft-lbs. After the second edge has become worn, rotate tooth 90°. Reinstall as per the above instructions. After the third edge has become worn, rotate tooth 180°. Reinstall as per the above instructions.

If an individual tooth is chipped or broken, remove, and replace with new tooth. Monitor condition of securing bolts. If they become damaged or worn, replace them. When replacing teeth, also replace securing bolts.

NOTE: When replacing a worn tooth, the securing bolt should ALWAYS be replaced at the same time.

DO NOT ALLOW TOOTH TO WEAR TO THE EXTENT THAT THE TOOTH HOLDER BEGINS TO WEAR



CUTTERSHAFT BEARING REPLACEMENT

Support cuttershaft with overhead hoist. Remove sprockets, grease hoses, fittings, and bearings. Inspect and clean stub shafts, then apply anti-seize to both stub shafts.

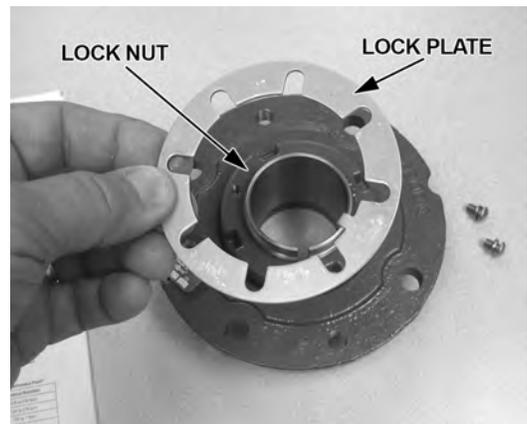
Install the Non-Expansion Bearing on Drive-End first.

Insure that snap ring that secures bearing insert in bearing housing of non-expansion bearing for drive-end bearing is installed in inboard groove, to make assembly “non-expansion.” Remove lock plate from face of lock nut. Turn locknut counter-clockwise until bearing will freely slide onto stub shaft. Index holes in bearing housing over studs in bonnet.

Locate cuttershaft in bonnet to bias it slightly (1/16”) to drive side. Note: as lock nut is tightened (clockwise), adapter sleeve moves inboard into bearing, gripping stub shaft and pushing it inboard, or bearing housing outboard. Tighten lock collar using both hands as tight as possible. Then scribe a reference line on face of lock collar and adapter sleeve.

Using spanner wrench or drift and hammer, tighten locknut clockwise by 7/8 to 1 turn from reference mark. Secure bearing housing to bonnet housing by snugging nuts and check that cuttershaft is centered in bonnet. If cuttershaft is not centered, then loosen lock collar, adjust position of cuttershaft, and retighten lock collar.

Slide lock plate over shaft and align tang of lock plate with slot in adapter sleeve. TIGHTEN locknut until slots in lock plate overlap the two threaded holes in face of locknut. Insert and tighten button head screws into locknut face. Remove nuts and install hardened washers onto studs. Apply Loctite 271 to studs, install 7/16-14 grade 9 nuts and torque to 61 ft-lbs.



Remove lock plate from face of lock nut.



Install hardened washers, apply Loctite 271 to studs, and torque nuts to 61 ft-lbs.

CUTTERSHAFT BEARING REPLACEMENT cont.

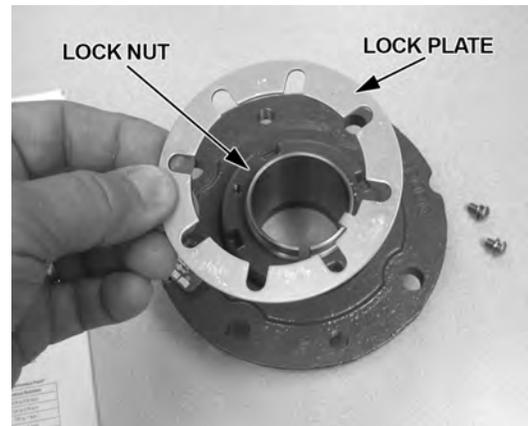
Installation of Expansion Bearing, Non-Drive End

Insure that snap ring that secures bearing insert in bearing housing of expansion bearing for non-drive end is installed in outboard groove, to make bearing assembly "expansion" capable. Remove lock plate from face of lock nut. Turn locknut counter-clockwise until bearing will freely slide onto stub shaft. Index holes in bearing housing over studs in bonnet.

Snug bearing housing to bonnet housing. Push bearing insert inboard until it stops. Tighten lock collar using both hands as tight as possible. Then scribe a reference line on face of lock collar and adapter sleeve.

Using spanner wrench or drift and hammer, tighten locknut clockwise by $\frac{7}{8}$ to 1 turn from reference mark. Slide lock plate over shaft and align tang of lock plate with slot in adapter sleeve. TIGHTEN locknut until slots in lock plate overlap the two threaded holes in face of locknut. Insert and tighten button head screws into locknut face.

Remove nuts, install hardened washers onto studs, Apply Loctite 271 to studs, install 7/16-14 grade 9 nuts and torque to 61 ft.-lbs Then re-install grease hose and fittings from original bearings. Re-install sprockets, taper-locks, and belt (see "Belt Installation and Tensioning").



Remove lock plate from face of lock nut.



Install hardened washers, apply Loctite 271 to studs, and torque nuts to 61 ft.-lbs.

MAINTENANCE

BELT INSTALLATION AND TENSIONING

- 1) Snug motor mount bolts to just pull motor mount plate to upper belt housing.
- 2) Install sprocket and taper-lock onto cuttershaft.
- 3) Position sprocket on cuttershaft and secure taper-lock to position sprocket within 1/8" of grease hose fitting to cuttershaft bearing. Torque set screws in taper-lock to 36 ft-lbs.
- 4) Then place belt over cuttershaft sprocket and loop belt over motor sprocket (with taper-lock) and slide motor sprocket/taper-lock onto motor shaft. Position motor sprocket on motor shaft to align with lower sprocket. Place straight edge across faces of sprockets to align sprockets so that straight edge contacts the inside and outside edges of both sprockets (see photo). The sprockets must align within 1/16", as shown for both illustrations in Figure 1, i.e. place straight edge flat across upper sprocket and swing it across lower sprocket, also place straight edge flat across lower sprocket and swing it across upper sprocket. The allowable gap/misalignment for both cases is 1/16" between straight edge and inner or outer edge of other sprocket, whichever is more. Secure taper-lock into sprocket with set screws; torque set screws to 36 ft-lbs., and confirm that alignment is within 1/16".

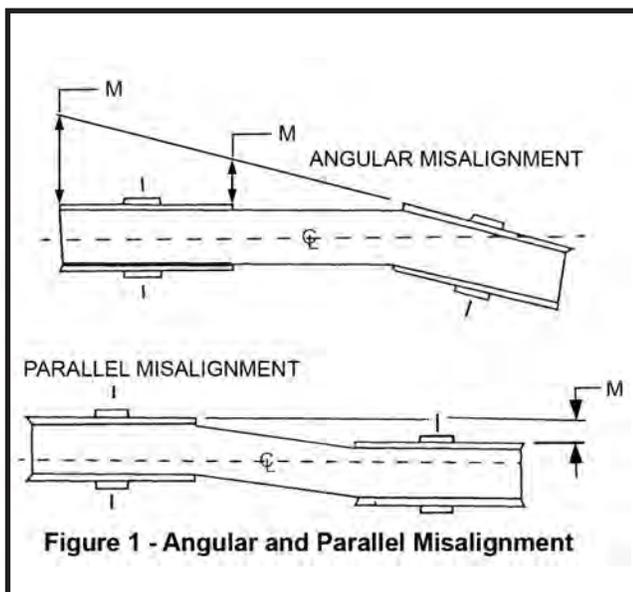
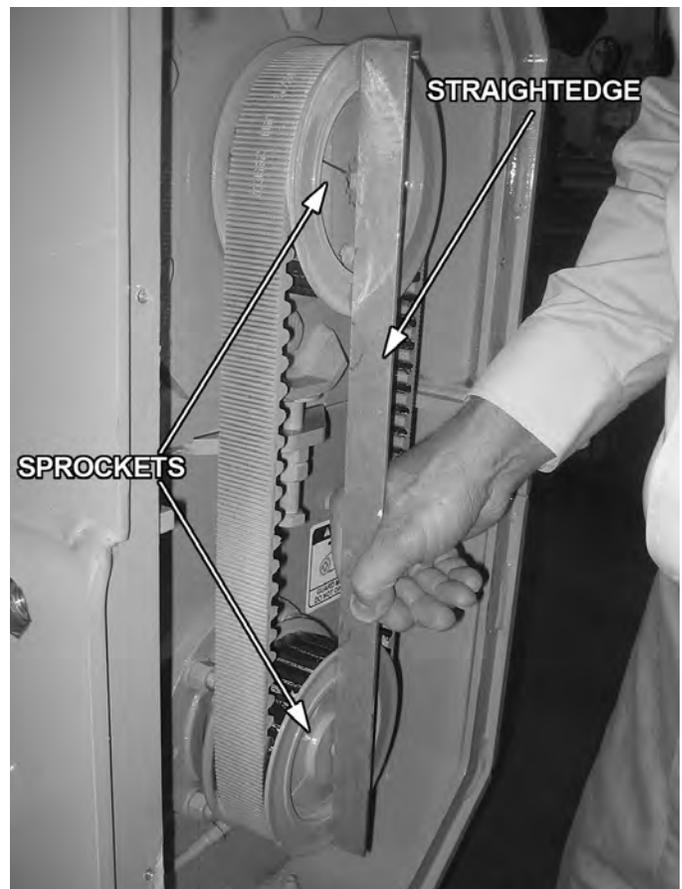
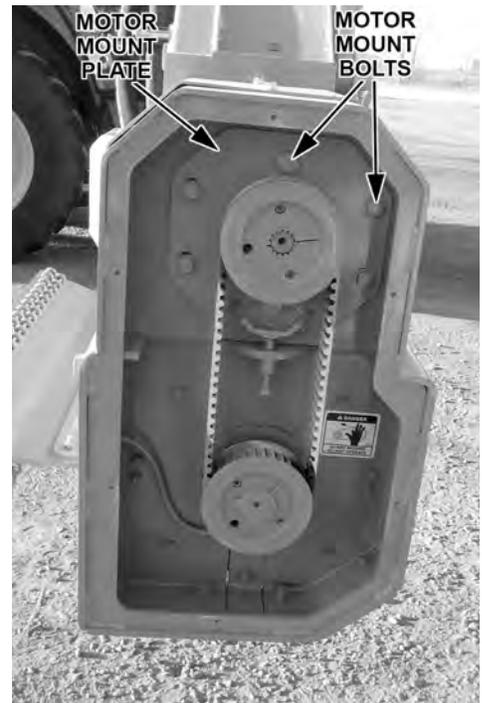
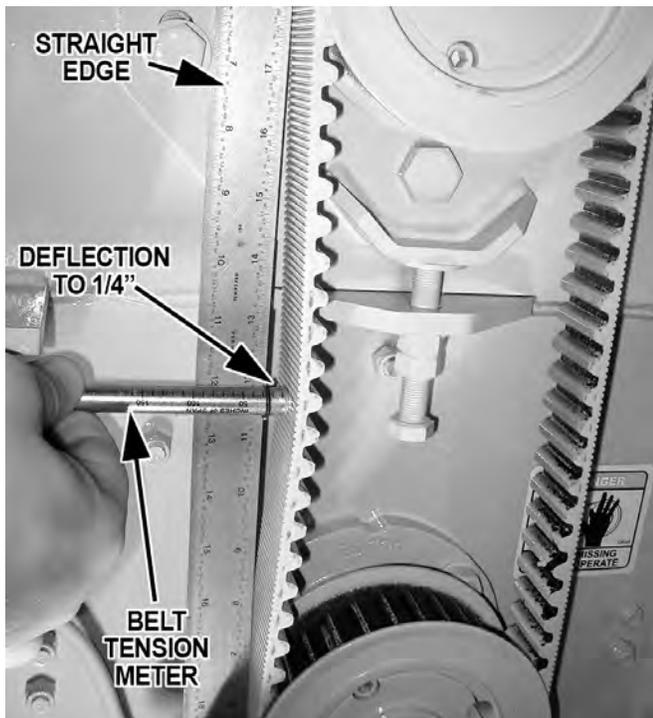


Figure 1 - Angular and Parallel Misalignment

BELT INSTALLATION AND ADJUSTMENT



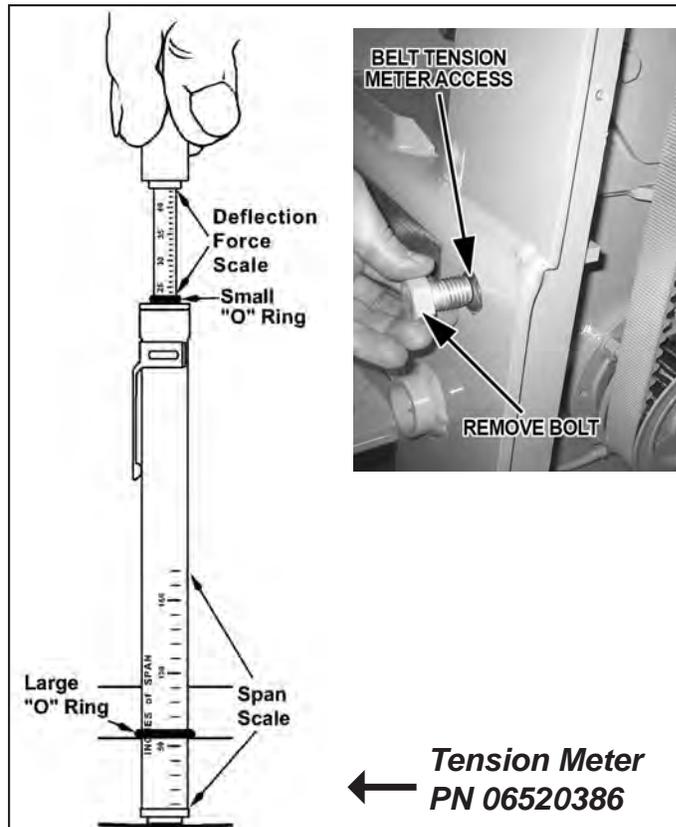
5) Tension belt at room temperature (65°F-80°F).

6) Tension belt slowly by gradually turning the ½” tensioning bolt to push motor up.

7) Measure tension with tension meter using meter inputs of: Span Length = .350 meters, and Belt Mass Constant = .008 Kg./meter, or use push gauge. Target a tension of 68 Hz, or 11 lbs. push force to ¼” deflection, minimum (show photo).

8) Measure the tension at three (3) clocking positions 12, 4, and 8 o'clock (120° apart) of cutter and average the values.

9) Then torque motor mount bolts to 90 ft-lbs. and tighten the jam nut on the tensioning bolt. Re-check tension. Tension shall be within 68-74 hz or 11-13 lbs. push force to ¼” deflection.



BELT TENSION ADJUSTMENT

The Growler drive belt will relax after initial use of the mulcher. After approximately 10 hours of moderate use the belt will have stretched to the maximum and will not stretch any further.

Belt tension must be checked after the first 10 hours of operation and re-tensioned (**cold/ at room temperature**) to a minimum of 68 hz, or 11 lbs. of push force to 1/4” deflection, minimum. If retensioning is required, loosen motor mount bolts slightly, and and just loosen the jam nut on the tensioning bolt. Then repeat the steps in the adjacent section. If tension has stabilized, check tension again after 40 hours of use, and then every 6 months thereafter.

MAINTENANCE

PISTON MOTOR REPLACEMENT

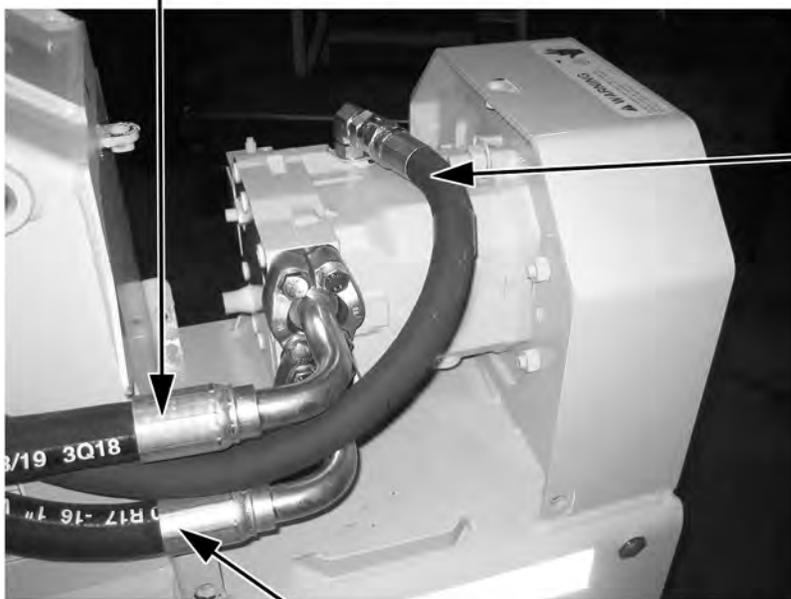
Install the motor into Mulcher head with work ports oriented horizontal and aft. Install motor pressure and return hoses. The pressure port on the motor is “B-port”, or the upper port (see photo below).

Fill the motor with oil through upper, case-drain port after installation into Mulcher bonnet (see photo below). Fill motor with new, filtered AW46 oil (approximately 30 oz., must meet ISO 18/16/13).

Install elbow fitting into upper case-drain port and connect $\frac{3}{4}$ ” case-drain hose to elbow, then fill hose with oil and install male, quick coupler onto hose. For installation of pre-assembled head onto an existing boom, insure that oil in reservoir meets cleanliness standard.

See Parts Section for hardware used.

PRESSURE HOSE TO PRESSURE PORT



CASE DRAIN HOSE
TO TOP
CASE DRAIN PORT

RETURN HOSE TO LOWER PORT

MAINTENANCE

CUTTERSHAFT LUBRICATION

Description	Application	General Specification	Recommended Lubricant
Cutter Shaft	Grease Gun	Lithium-Complex NLGI 2-ISO 320	Mobil Delvac® Xtreme Grease Mobilgrease CM-S



GREASE ZERKS

GREASING CUTTER SHAFT BEARINGS

Locate grease zerks on back side of mulcher bonnet. Normal conditions require one or two pumps in each bearing, using Lithium-Complex Extreme Pressure grease conforming to NLG12-ISO 320 specifications. This is to be done with a standard grease gun daily or at 8 hour intervals. **CAUTION: Over greasing may cause premature seal failure.**

MAINTENANCE

MAINTENANCE

Replacing Shaft Seal on Mulcher Motor

Tools and Equipment Required:

- Snap ring pliers (to squeeze/compress the snap ring)
- Green Loctite No. 270
- Petroleum jelly
- Cleaning solvent
- New shaft seal
- Assembly tools (available on request)

Figure 1 illustrates the area of the unit where the work is to be done and some key items which will be referenced with these instructions.

As shown in Figure 2, remove the Snap Ring with a set of snap ring pliers. You may have to lightly tap the snap ring pliers once the Snap Ring is compressed to free it from the housing.

Remove the existing Shaft Seal from the housing. You may have to use needle-nose pliers or an o-ring pick to pry the Shaft Seal out. (Figure 3)

Care must be taken NOT to:

- a. Damage the Shaft Seal Race
- b. Drop shaft seal fragments into the unit (*if shaft seal fragments drop into the unit and they cannot be recovered, then the unit must be disassembled to free it of the contamination*).

Use cleaning solvent and a lint-free rag to thoroughly clean the surface indicated in Figure 4. The old shaft seal had Loctite on its outside diametric surface and remnants of the Loctite may still be on the indicated surface of the housing.

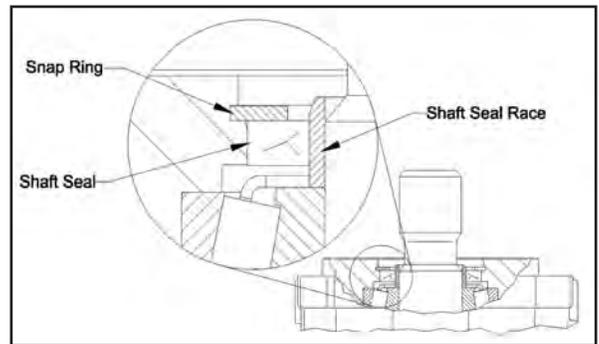


Figure 1

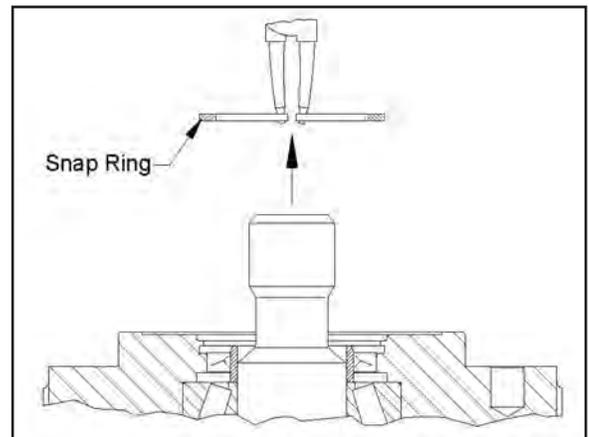


Figure 2

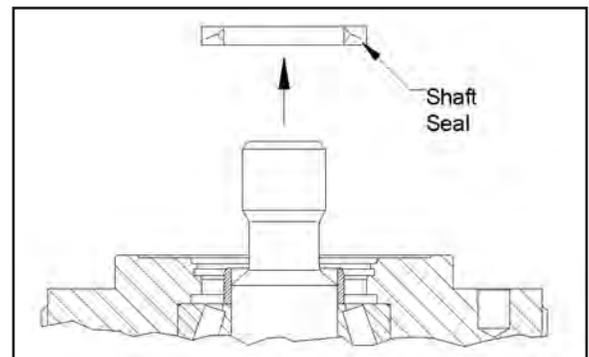


Figure 3

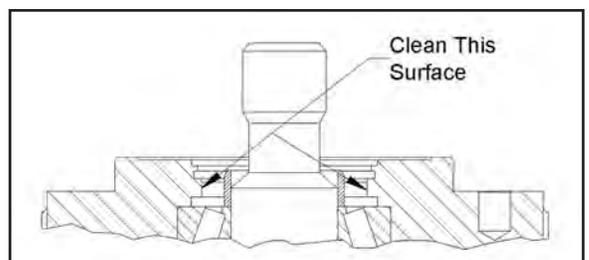


Figure 4

MAINTENANCE

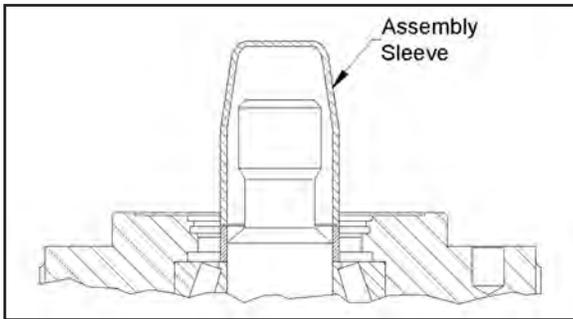


Figure 5

If available, place an Assembly Sleeve Tool over the drive shaft as illustrated. Apply petroleum jelly to the outside surface of the Assembly Sleeve Tool. (Figure 5)

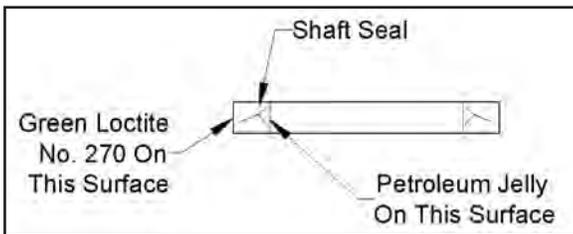


Figure 6

Apply petroleum jelly to the inside diametric surface of the Shaft Seal. Apply Green Loctite No. 270 to the outside diametric surface of the Shaft Seal, then spread it to a uniform thickness with your finger. (Figure 6)

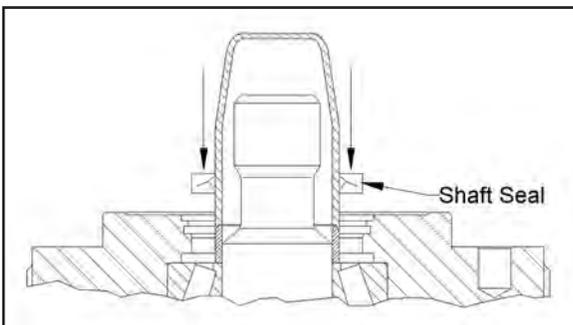


Figure 7

Lightly press the Shaft Seal onto the Assembly Sleeve Tool as illustrated in Figure 7.

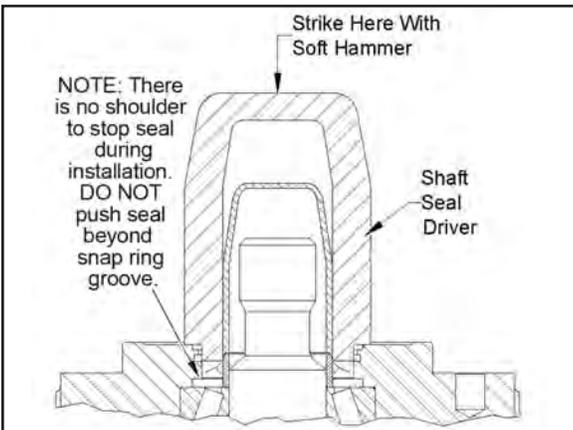


Figure 8

Use a suitable Shaft Seal Driver Tool and a soft hammer to drive the Shaft Seal into the housing. *Note: There is no shoulder to stop seal during installation. Do not push seal beyond snap ring groove.* (Figure 8)

Once the Shaft Seal is in its final position wipe away any excess Loctite. (Figure 8)

Reinstall the Snap Ring making sure that it is fully engaged into the snap ring groove. (Figure 9)

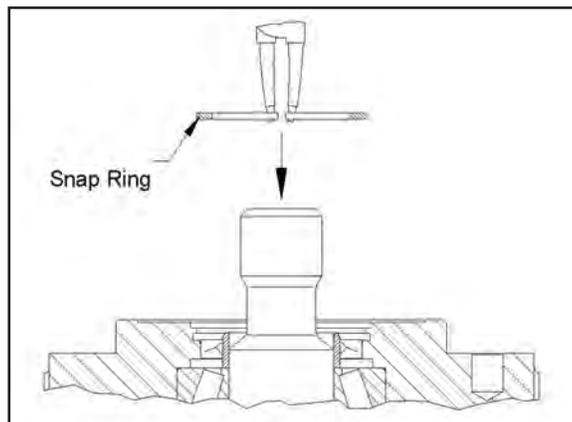


Figure 9

MAINTENANCE

TORQUE SPECIFICATIONS

Torque for Standard Fasteners

Nominal Dia. (in.)	threads per inch	 Grade 2			 Grade 5			 Grade 8			 Grade 9		
		Tightening Torque			Tightening Torque			Tightening Torque			Tightening Torque		
		Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain
		K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20
Unified Coarse Thread Series													
1/4	20	49 in-lbs	59 in-lbs	66 in-lbs	76 in-lbs	86 in-lbs	101 in-lbs	107 in-lbs	122 in-lbs	143 in-lbs	126 in-lbs	143 in-lbs	168 in-lbs
5/16	18	101	122	135	157	178	209	221	251	295	259	294	346
3/8	16	15 ft-lbs	18 ft-lbs	20 ft-lbs	23 ft-lbs	26 ft-lbs	31 ft-lbs	33 ft-lbs	37 ft-lbs	44 ft-lbs	38 ft-lbs	43 ft-lbs	51 ft-lbs
7/16	14	24	29	32	37	42	49	52	59	70	61	70	82
1/2	13	37	44	49	57	64	75	80	90	106	94	106	125
9/16	12	53	63	70	82	92	109	115	130	154	135	153	180
5/8	11	73	87	97	113	128	150	159	180	212	186	211	248
3/4	10	129	155	172	200	227	267	282	320	376	331	375	441
7/8	9	125	150	167	322	365	429	455	515	606	533	604	710
1	8	187	225	250	483	547	644	681	772	909	799	905	1065
1 1/8	7	266	319	354	596	675	794	966	1095	1288	1132	1283	1510
1 1/4	7	375	450	500	840	952	1121	1363	1545	1817	1597	1810	2130
1 1/2	6	652	783	869	1462	1657	1950	2371	2688	3162	2779	3150	3706

Fine Thread Series

1/4	28	56 in-lbs	68 in-lbs	75 in-lbs	87 in-lbs	99 in-lbs	116 in-lbs	123 in-lbs	139 in-lbs	164 in-lbs	144 in-lbs	163 in-lbs	192 in-lbs
5/16	24	112	135	150	174	197	231	245	278	327	287	325	383
3/8	24	17 ft-lbs	20 ft-lbs	23 ft-lbs	26 ft-lbs	30 ft-lbs	35 ft-lbs	37 ft-lbs	42 ft-lbs	49 ft-lbs	43 ft-lbs	49 ft-lbs	58 ft-lbs
7/16	20	27	32	36	41	47	55	58	66	78	68	78	91
1/2	20	41	49	55	64	72	85	90	102	120	105	120	141
9/16	18	59	71	78	91	103	121	128	146	171	151	171	201
5/8	18	82	99	110	127	144	170	180	204	240	211	239	281
3/4	16	144	173	192	223	253	297	315	357	420	369	418	492
7/8	14	138	165	184	355	403	474	502	568	669	588	666	784
1	14	210	252	280	542	614	722	765	867	1020	896	1016	1195
1 1/8	12	298	357	397	668	757	890	1083	1227	1444	1269	1439	1693
1 1/4	12	415	498	553	930	1055	1241	1509	1710	2012	1768	2004	2358
1 1/2	12	734	880	978	1645	1865	2194	2668	3024	3557	3127	3544	4169

Torque values for 1/4 and 5/16-in series are in inch-pounds. All other torque values are in foot-pounds. K = 0.15 for "lubricated" conditions D = Nominal Diameter
 Torque values calculated from formula T=KDF, where K = 0.17 for zinc plated and dry conditions F = Clamp Load
 K = 0.20 for plain and dry conditions

Torque-Tension Relationship for Metric Fasteners

Nominal Dia. (mm)	Pitch	 Class 4.6			 Class 8.8			 Class 10.9			 Class 12.9	
		Tightening Torque			Tightening Torque			Tightening Torque			Tightening Torque	
		Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry plain
		K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.20
		(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)
3	0.5	0.28	0.32	0.38	0.73	0.82	0.97	1.0	1.2	1.4	1.2	1.6
3.5	0.6	0.44	0.50	0.59	1.1	1.3	1.5	1.6	1.9	2.2	1.9	2.5
4	0.7	0.66	0.74	0.87	1.7	1.9	2.3	2.4	2.7	3.2	2.8	3.8
5	0.8	1.3	1.5	1.8	3.4	3.9	4.5	4.9	5.5	6.5	5.7	7.6
6	1	2.3	2.6	3.0	5.8	6.6	7.7	8.3	9.4	11	9.7	13
6	1.25	2.1	2.3	2.7	5.3	6.0	7.0	7.6	8.6	10	8.8	12
7	1	3.8	4.3	5.0	9.7	11	13	14	16	19	16	22
8	1	5.9	6.6	7.8	15	17	20	22	24	29	25	34
8	1.25	5.5	6.2	7.3	14	16	19	20	23	27	24	31
10	1.25	11	13	15	29	33	39	42	48	56	49	66
10	1.5	11	12	14	28	32	37	40	45	53	47	62
12	1.25	21	23	28	53	60	71	76	86	101	89	119
12	1.5	20	22	26	51	58	68	73	82	97	85	113
12	1.75	19	21	25	49	55	65	70	79	93	81	108
14	1.25	26	29	34	66	75	89	95	108	127	111	148
14	1.5	28	32	37	72	82	96	103	117	138	121	161
14	2	30	34	40	78	88	104	111	126	148	130	173
16	1.5	50	57	67	129	146	171	184	208	245	215	287
16	2	47	53	62	121	137	161	173	196	230	202	269
18	1.5	73	82	97	187	212	249	268	303	357	313	417
18	2.5	65	73	86	167	189	222	239	270	318	279	372
20	2.5	91	104	122	236	267	314	337	382	449	394	525

Clamp load calculated as 75% of the proof load for specified bolts. K = 0.15 for "lubricated" conditions D = Nominal Diameter
 All torque values are listed in foot-pounds K = 0.17 for zinc plated, dry conditions F = Clamp Load
 Torque values calculated from formula T=KDF, where K = 0.20 for plain and dry conditions

* These are intended to be general specifications. See tractor operators or service manual for exact specifications for your unit.

GROWLER MULCHER

PARTS SECTION

PART NAME INDEX

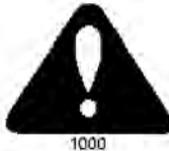
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PARTS ORDERING GUIDE

The following instructions are offered to help eliminate needless delay and error in processing purchase orders for the equipment in this manual.

1. The Parts Section is prepared in logical sequence and grouping of parts that belong to the basic machine featured in this manual. Part Numbers and Descriptions are given to help locate the parts and quantities required.
2. The Purchase Order must indicate the **Name and Address** of the person or organization ordering the parts, **who should be charged**, and if possible, the **serial number of the machine** for which the parts are being ordered.
3. The purchase order must clearly list the **quantity of each part**, the complete and correct **part number**, and the basic **name of the part**.
4. The manufacturer reserves the right to substitute parts where applicable.
5. Some parts may be unlisted items which are special production items not normally stocked and are subject to special handling. Request a quotation for such parts before sending a purchase order.
6. The manufacturer reserves the right to change prices without prior notice.

NOTE: When ordering replacement decals, refer to the part numbers and descriptions listed in the safety section in the front of this manual.

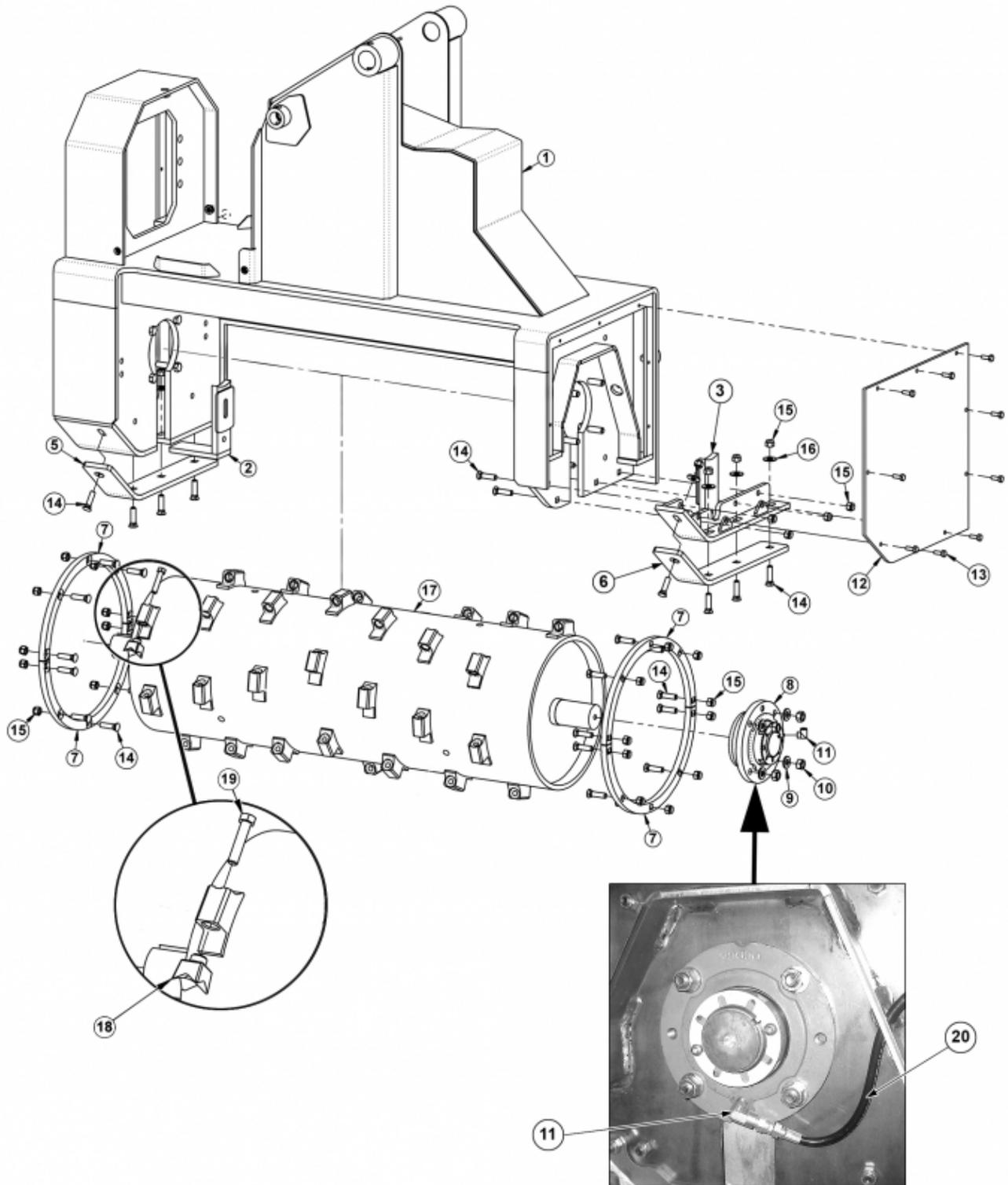


For maximum safety and to guarantee optimum product reliability, always use genuine **Tiger** replacement parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death.

Direct any questions regarding parts to:

Tiger Corporation
3301 N. Louise Ave.
Sioux Falls, SD 57107
1-800-843-6849
1-605-336-7900

MULCHER HEAD

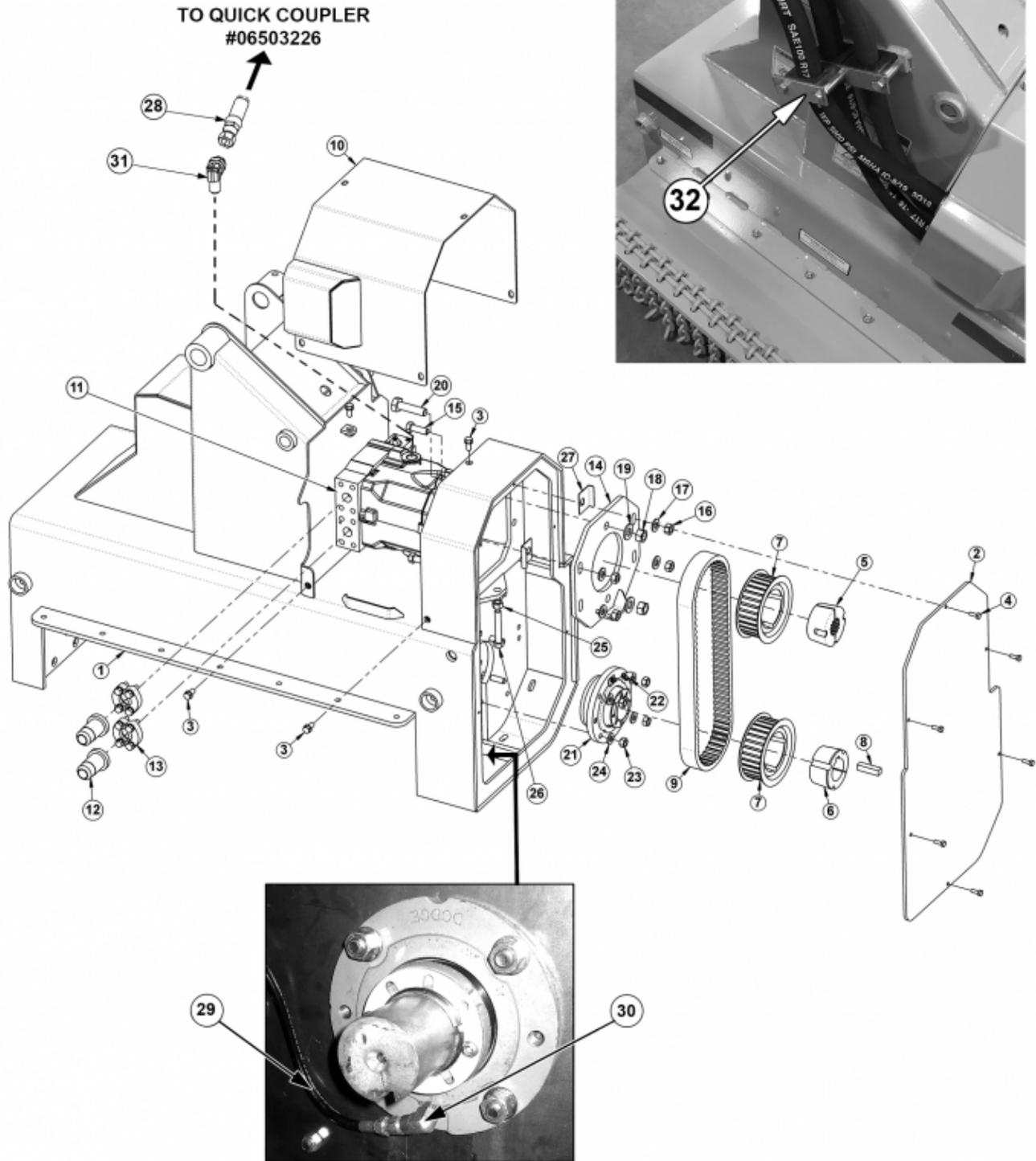


MULCHER HEAD

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	----	1	BONNET,MULCHER
2	06370302	1	COVER,DRIVE,MULCHER,36
3	06370305	1	MNT,SKID,LH,MULCHER,36
5	06412061	1	SKID SHOE,MULCHER,RH,36
6	06412076	1	SKID SHOE,MULCHER,LH,36
7	06403255	4	GUARD,STRING,MLCHR,36
8	06520089	1	BEARING,CUTTERSHAFT (NON-DRIVE END)
9	06533008	4	FLATWASHER,7/16,SAE,L9
10	06531011	4	HEX NUT,7/16 NC,L9
11	30570	1	ELBOW,1/8X90,STEEL-HP
12	06403571	1	COVER,NONDRIVE,MULCHER,36,2
13	21530	9	CAPSCREW,1/4" X 1" NC
14	2A361612	32	PLOW BOLT,3/8X1 1/2,NC,GR5
15	21627	32	NYLOCK NUT,3/8",NC
16	22016	8	FLATWASHER,3/8",GR8
17	06320233	1	CTTRSHFT,MULCHER,36,2
18	06520593	42	TOOTH,QUADCO,MULCHER
19	21633	1	CAPSCREW,3/8X1 3/4NC,GR8
20	06505362	1	HOSE, GREASE
21	06744077	1	TOOTH KIT, COMPLETE SET (NOT SHOWN)

DRIVE - BENGAL MULCHER HEAD

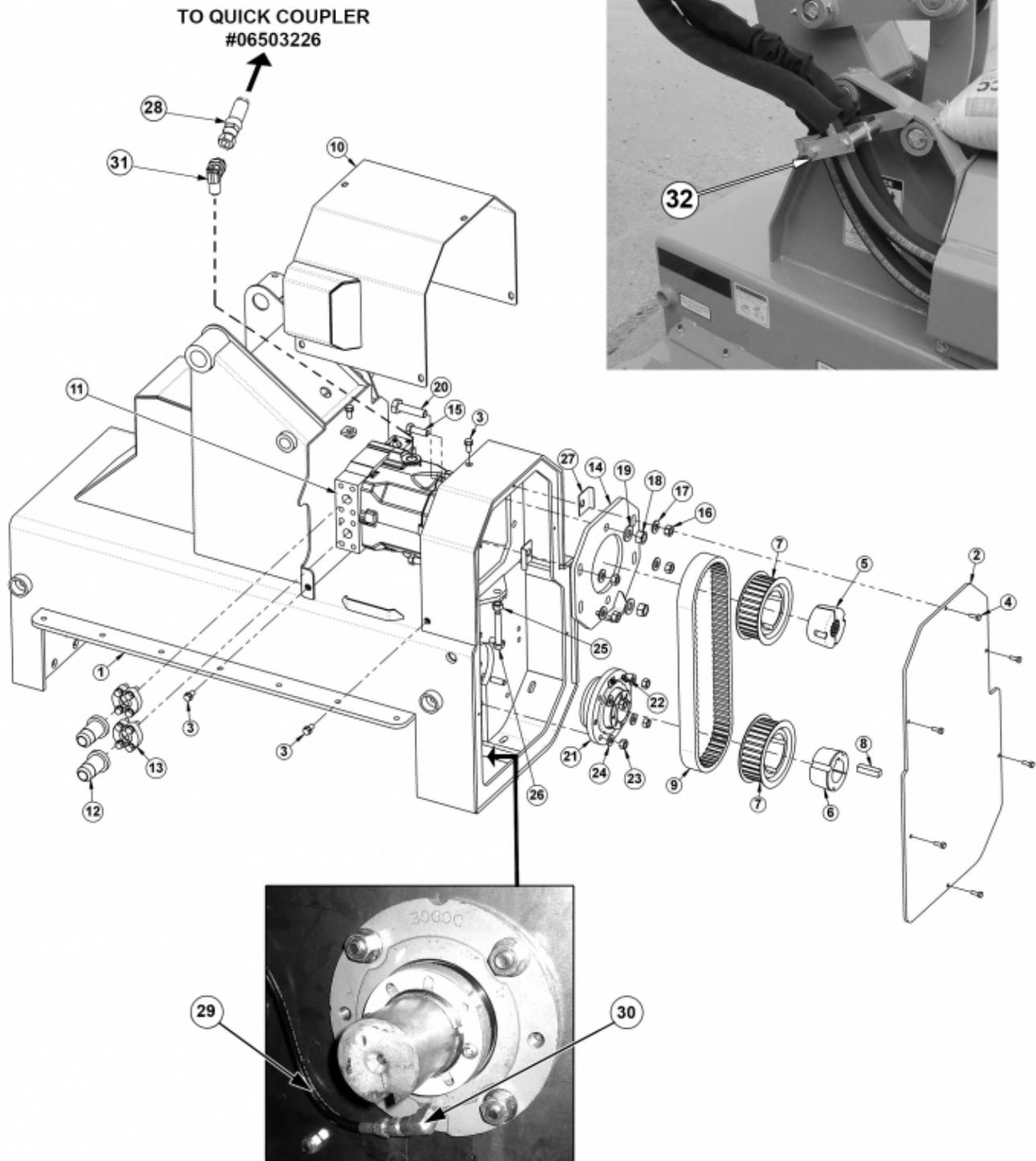


DRIVE - BENGAL MULCHER HEAD

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	----	1	BONNET,MULCHER
2	06403570	1	COVER,DRIVE,MULCHER,36,2
3	33881	6	CAPSCREW,FLG, 3/8 X 3/4,NC
4	21530	6	CAPSCREW,1/4" X 1" NC
5	06770119	1	BSHNG,1 1/4SPLN14,06520601
6	06520494	1	BUSHING,TAPER LOCK,1.94SHFT
7	06520600	2	SPROCKET,HT500,5.26X14MM
8	26142A	1	KEY,1/2 X 1/2 X 2
9	06520602	1	BELT,HT500,8MMPX1120MM
10	06370307	1	COVER,MOTOR,MULCHER,36,2
11	06504150	1	MOTOR,PISTON,075,LINDE
12	06501229	2	HOSE, 1" X 55"
13	06503224	2	KIT,FLANGE,#16,CODE62,METRIC
14	06370306	1	MOUNT,MOTOR,MULCHER,36,2
15	6T2279	4	CAPSCREW, 1/2 X 1 1/2,NC,GR 8
16	31580	4	HEX NUT, 1/2" NC,GR 8
17	06533004	4	FLAT WASHER,1/2,SAE,GR 8
18	32838	2	HEX NUT, 5/8" NC GR8
19	33764	2	FLATWASHER,5/8",GR 8,SAE
20	21785	2	CAPSCREW, 5/8 X 2 1/2,NC, GR8
21	06520089	1	BEARING,CUTTERSHAFT (DRIVE END)
22	30570	1	ELBOW,1/8X90,STEEL-HP
23	06531011	4	HEX NUT,7/16 NC,L9
24	06533008	4	FLATWASHER,7/16,SAE,L9
25	21700	1	HEX NUT, 1/2", NF
26	27589	1	CAPSCREW, 1/2 X 3,NF,GR8
27	06412439	2	SHIM, 18GA, MULCHER 2
28	06501230	1	CASE DRAIN HOSE
29	06505362	1	HOSE, GREASE
30	30570	1	ELBOW, GREASE HOSE
31	06503225	1	ELBOW
32	06505376	1	CLAMP KIT, HOSE, 2 X 1.40, 1 X 1.3

DRIVE - SABER MULCHER HEAD

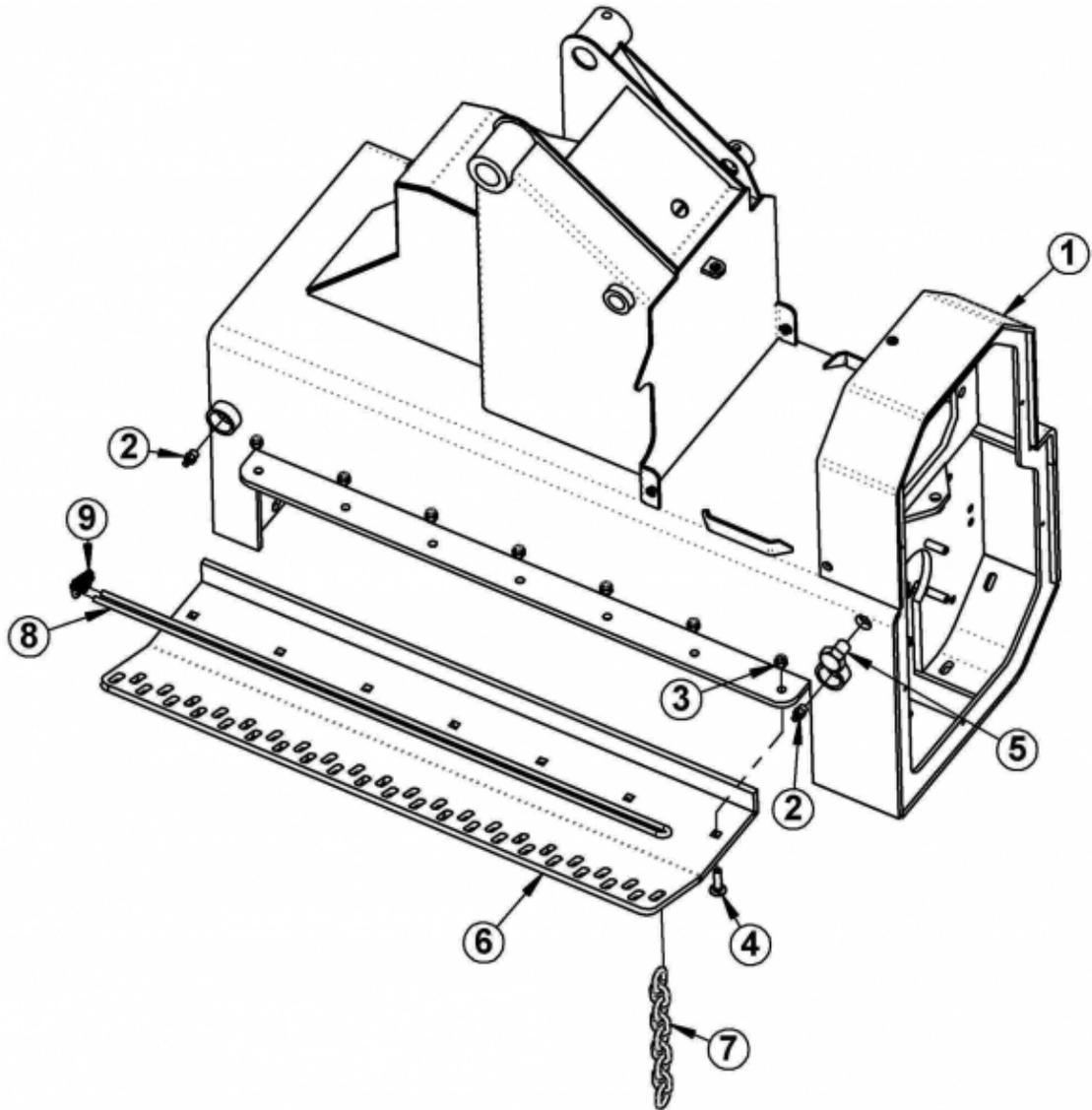


DRIVE - SABER MULCHER HEAD

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	----	1	BONNET,MULCHER
2	06403570	1	COVER,DRIVE,MULCHER,36,2
3	33881	6	CAPSCREW,FLG, 3/8 X 3/4,NC
4	21529	6	CAPSCREW,1/4" X 3/4" NC
5	06770119	1	BSHNG,1 1/4SPLN14,06520601
6	06520494	1	BUSHING,TAPER LOCK,1.94SHFT
7	06520600	2	SPROCKET,HT500,5.26X14MM
8	26142A	1	KEY,1/2 X 1/2 X 2
9	06520602	1	BELT,HT500,8MMPX1120MM
10	06370307	1	COVER,MOTOR,MULCHER,36,2
11	06504150	1	MOTOR,PISTON,075,LINDE
12	06501246	2	HOSE, 1" X 51"
13	06503224	2	KIT,FLANGE,#16,CODE62,METRIC
14	06370306	1	MOUNT,MOTOR,MULCHER,36,2
15	6T2279	4	CAPSCREW, 1/2 X 1 1/2,NC,GR 8
16	31580	4	HEX NUT, 1/2" NC,GR 8
17	06533004	4	FLAT WASHER,1/2,SAE,GR 8
18	21777	2	NYLOCK HEX NUT, 5/8
19	33764	2	FLATWASHER,5/8",GR 8,SAE
20	21785	2	CAPSCREW, 5/8 X 2 1/2,NC
21	06520089	1	BEARING,SABER,CUTTERSHAFT
22	30570	1	ELBOW,1/8X90,STEEL-HP
23	06531011	4	HEX NUT,7/16 NC,L9
24	06533008	4	FLATWASHER,7/16,SAE,L9
25	21700	1	HEX NUT, 1/2", NF
26	27589	1	CAPSCREW, 1/2 X 3,NF,GR8
27	06412439	2	SHIM, 18GA, MULCHER 2 (AS NEEDED)
28	06501247	1	CASE DRAIN HOSE, 3/4" X 57"
29	06505362	1	HOSE, GREASE
30	30570	1	ELBOW, GREASE HOSE
31	06503225	1	ELBOW
32	06505376	1	CLAMP KIT, HOSE, 2 X 1.40, 1 X 1.3

MULCHER HEAD ANVIL-CHAIN OPTION

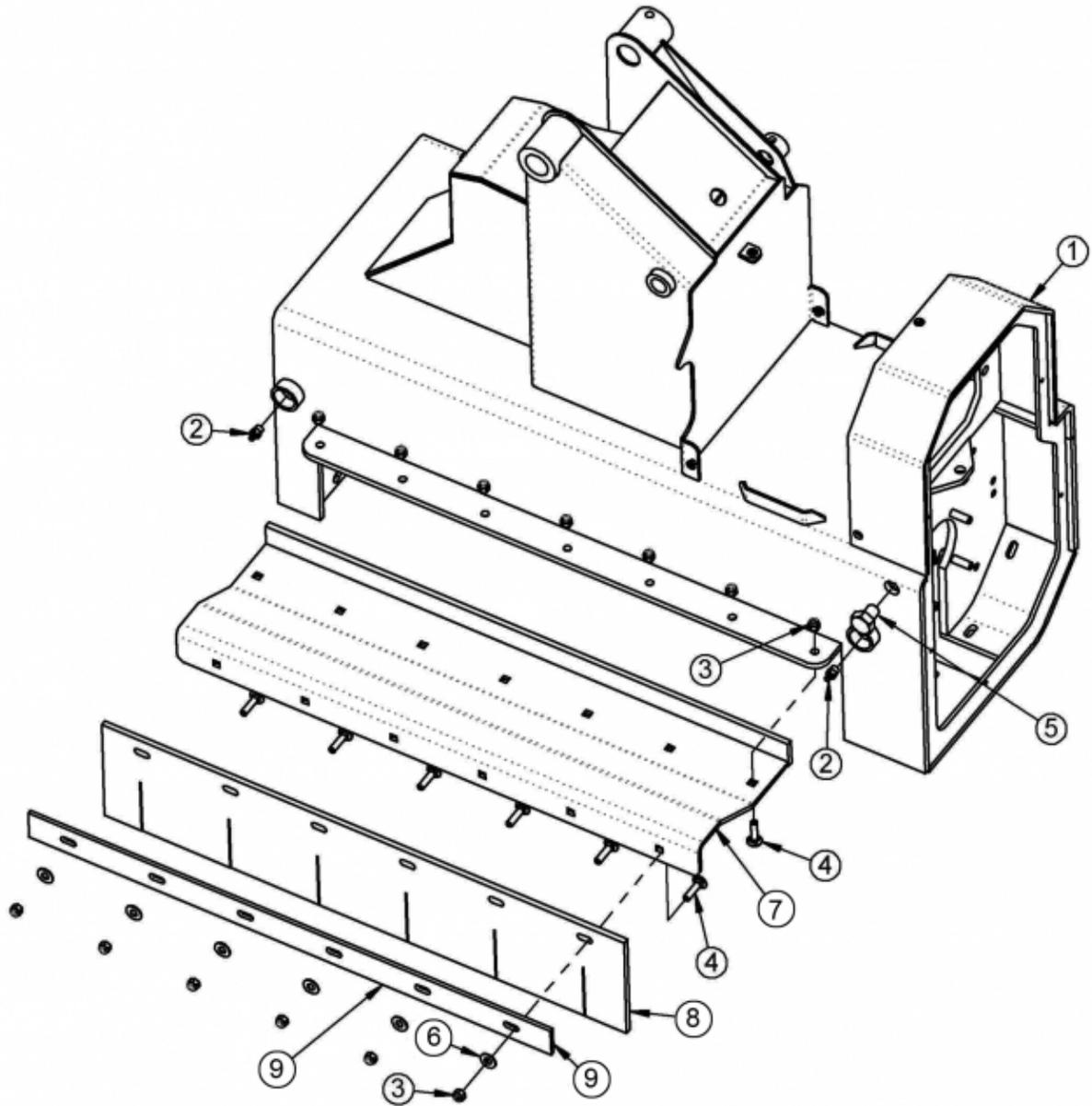


MULCHER HEAD ANVIL-CHAIN OPTION

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	---	1	BONNET, MULCHER
2	TF1033	2	GREASE ZERK, 1/8" FPT
3	21627	7	NYLOCK NUT, 3/8" NC
4	06537049	7	CARRIAGE BOLT, 3/8" X 1-1/2" NC
5	21828	1	CAPSCREW, 3/4" X 1" NC
6	06370319	1	ANVIL, CHAIN, MULCHER, 36
7	22993	40	CHAIN, 9 LINK
8	28407	1	CABLE
9	28408	2	U-BOLT, CABLE, 5/16"

MULCHER HEAD ANVIL - FLAP OPTION

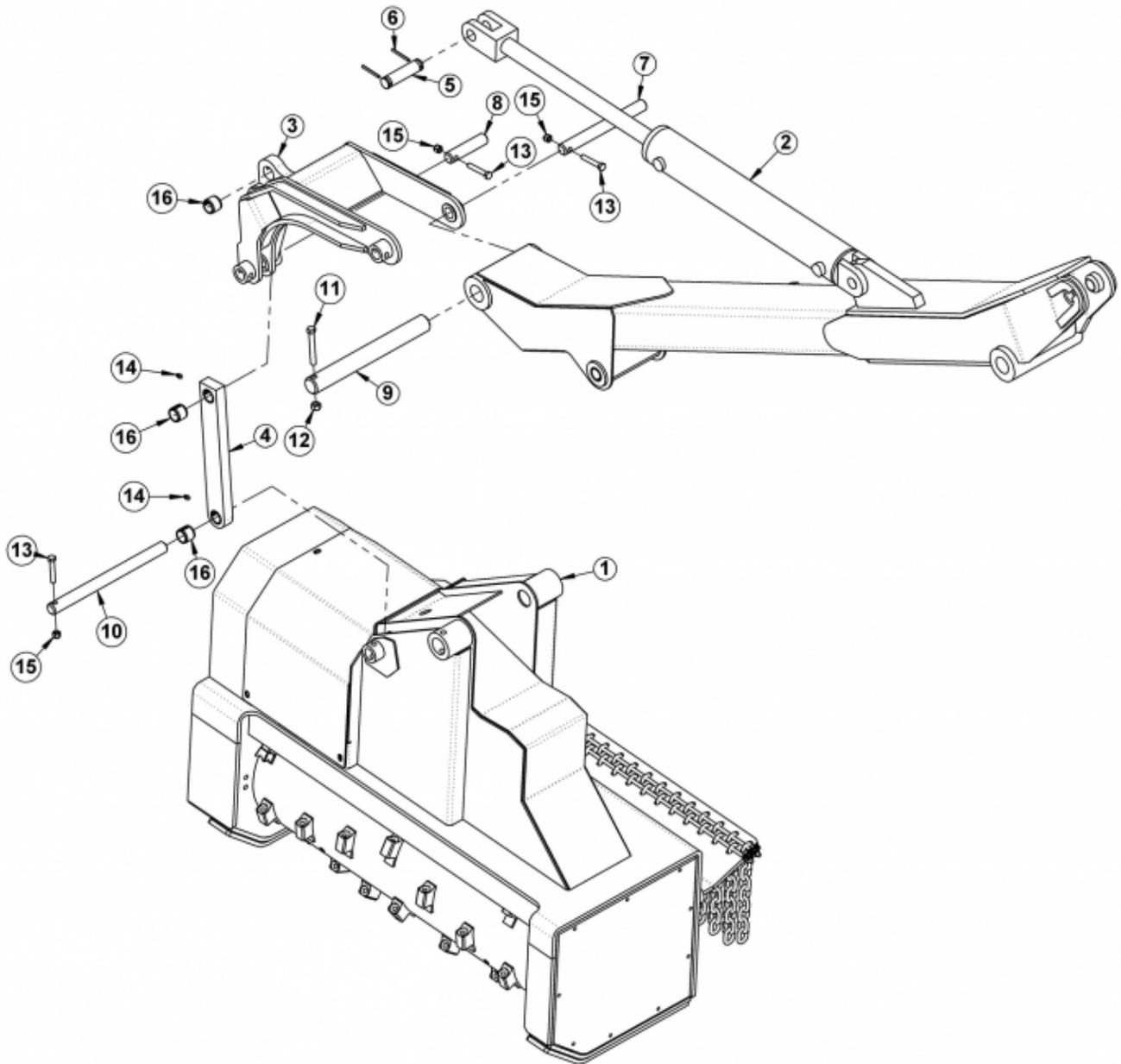


MULCHER HEAD ANVIL - FLAP OPTION

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	---	1	BONNET, MULCHER
2	TF1033	2	GREASE ZERK, 1/8" FPT
3	21627	13	NYLOCK NUT, 3/8" NC
4	06537049	13	CARRIAGE BOLT, 3/8" X 1-1/2" NC
5	21828	1	CAPSCREW, 3/4" X 1" NC
6	22016	6	FLATWASHER, 3/8"
7	06370346	1	ANVIL, FLAP, MULCHER, 36
8	06499034	1	FLAP, MULCHER, 36
9	06403682	1	BAR, FLAP, MULCHER, 36

MULCHER HEAD BENGAL BOOM

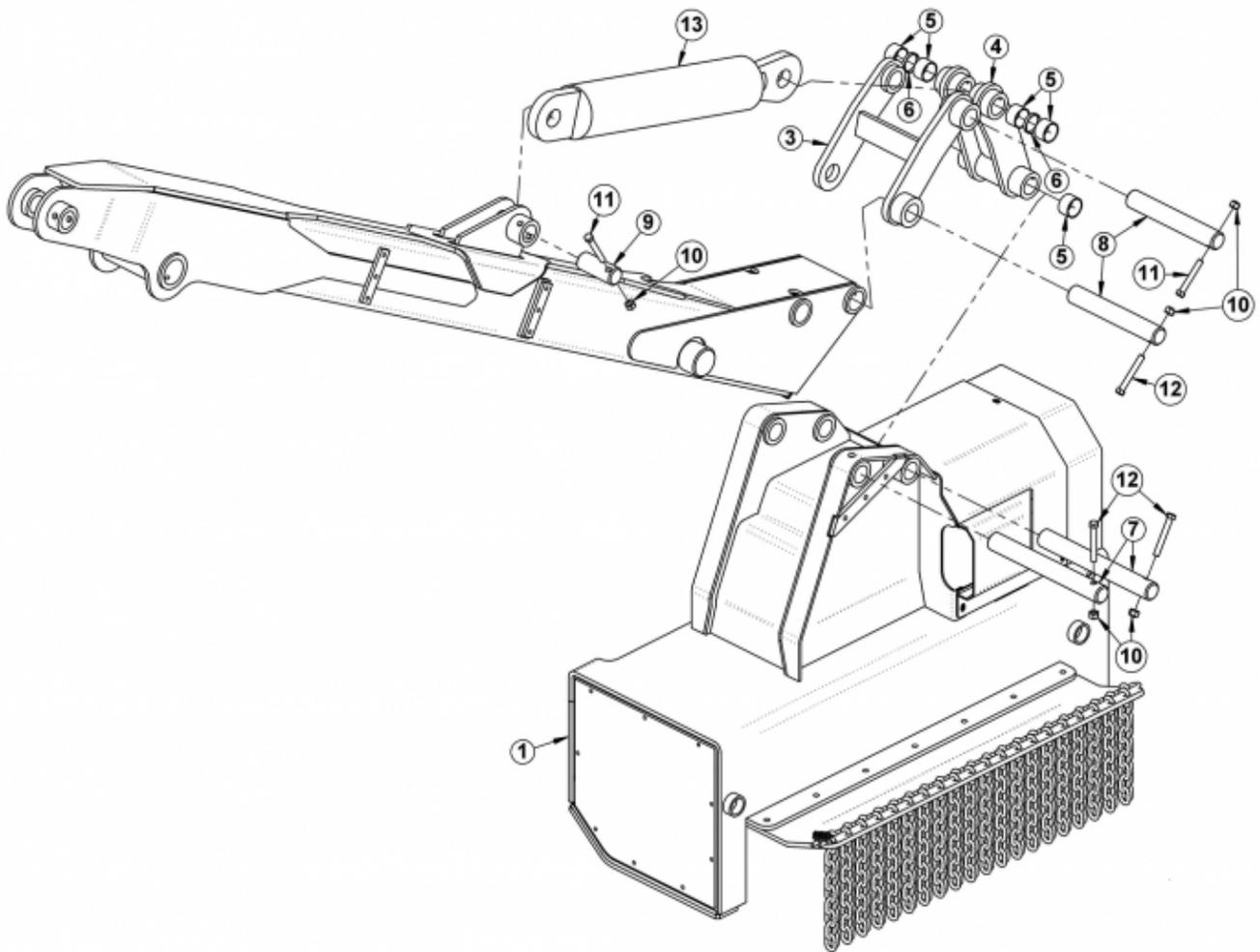


MULCHER HEAD BENGAL BOOM

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06320242	1	BONNET, MUCHER, 36, BNGL, 2
2	-----	1	CYLINDER (REFER TO BOOM ARM ASSY)
3	TB1032	1	DOGLEG
4	TB1028	1	LINK, DOGLEG, W/BUSHING & ZERKS
5	TB1033	1	PIN,CLEVIS,1X4
6	06537021	2	ROLL PIN, 5MM X 50MM
7	TF3097	1	PIN,DECK PVT ARM 1X9-1/2
8	TB1030	1	PIN,PVT ARM 1" X 4-1/4"
9	33985	1	PIN,BOOM,50"
10	33986	1	PIN,BOOM,50"
11	21688	1	CAPSCREW, 7/16 X 3 1/4,NC
12	21677	1	NYLOCK NUT,7/16 NC
13	21635	3	CAPSCREW,3/8X2 1/4,NC
15	21627	3	NYLOCK NUT,3/8",NC
16	TB3010	3	BUSHING,1

MULCHER HEAD SABER BOOM

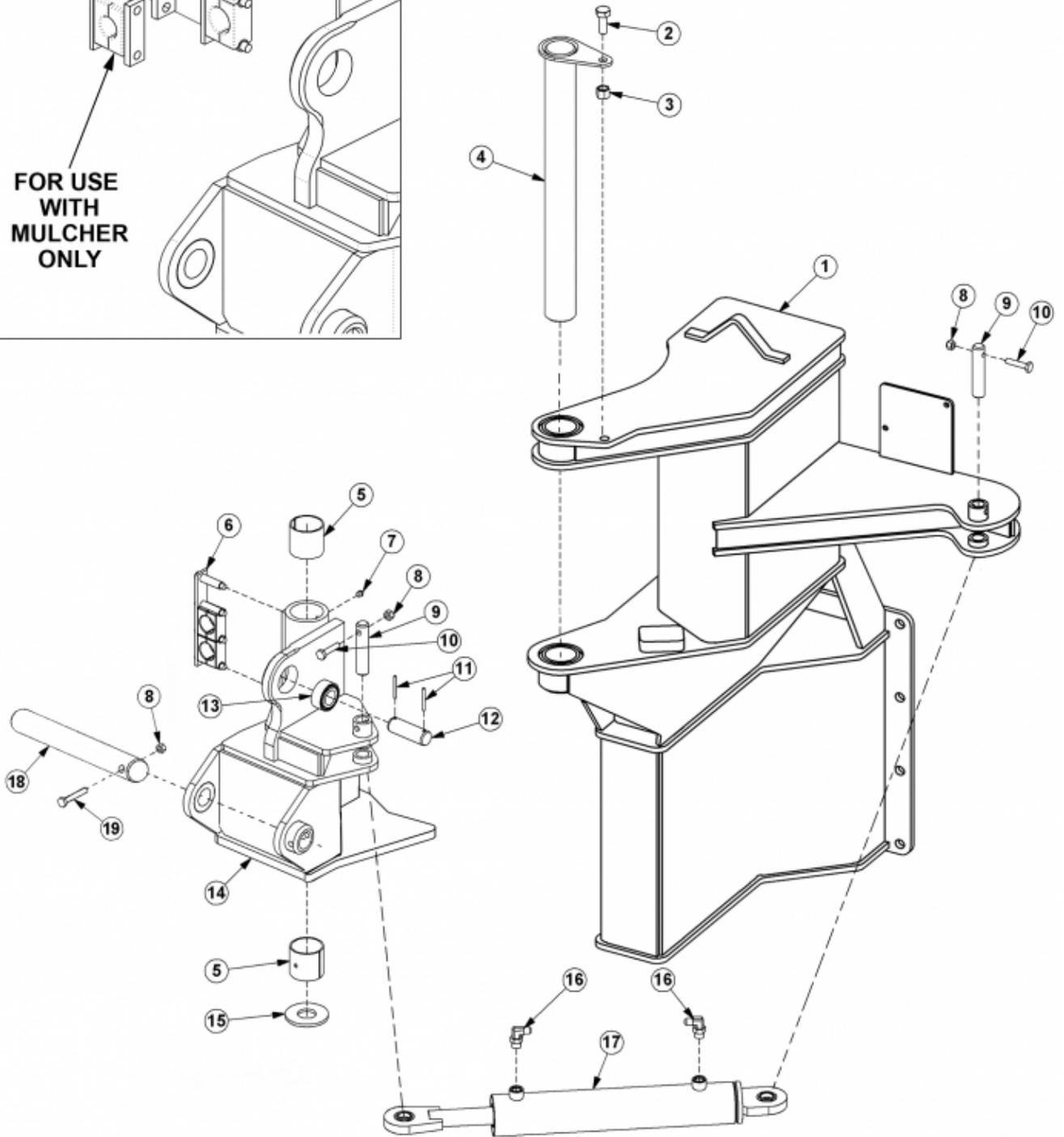
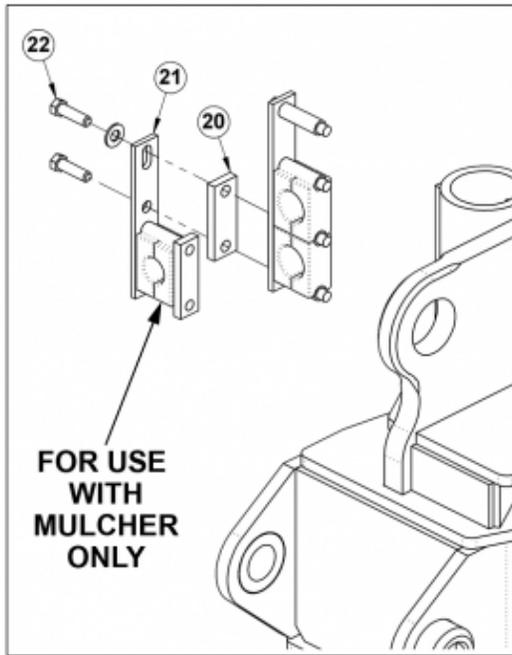


MULCHER HEAD SABER BOOM

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06320243	1	BONNET, MULCHER, 36, SBR, 2
2	06310164	1	BOOM, SEC, SBR, T4
3	32316	1	LINKAGE, BOOM TO CYLINDER, SABER
4	32317	1	LINKAGE, CYLINDER TO SWIVEL
5	32318	6	BEARING, DX, 1-1/2 X 1 LONG
6	33784	2	SPACER, 1.655 X .27
7	32313	2	PIN, MOUNT, SWIVEL, HEAD, MOWER
8	32319	2	PIN, LINKAGE, BOOM
9	32375	1	PIN, 1-1/2 X 3-13/16, W/HOLE
10	21677	5	NYLOCK NUT, 7/16 NC
11	21687	2	CAPSCREW, 7/16 X 3, NC
12	21688	3	CAPSCREW, 7/16 X 3-1/4, NC
13	32365	1	CYLINDER, 4 X 15

BOOM SWIVEL AND CLAMP

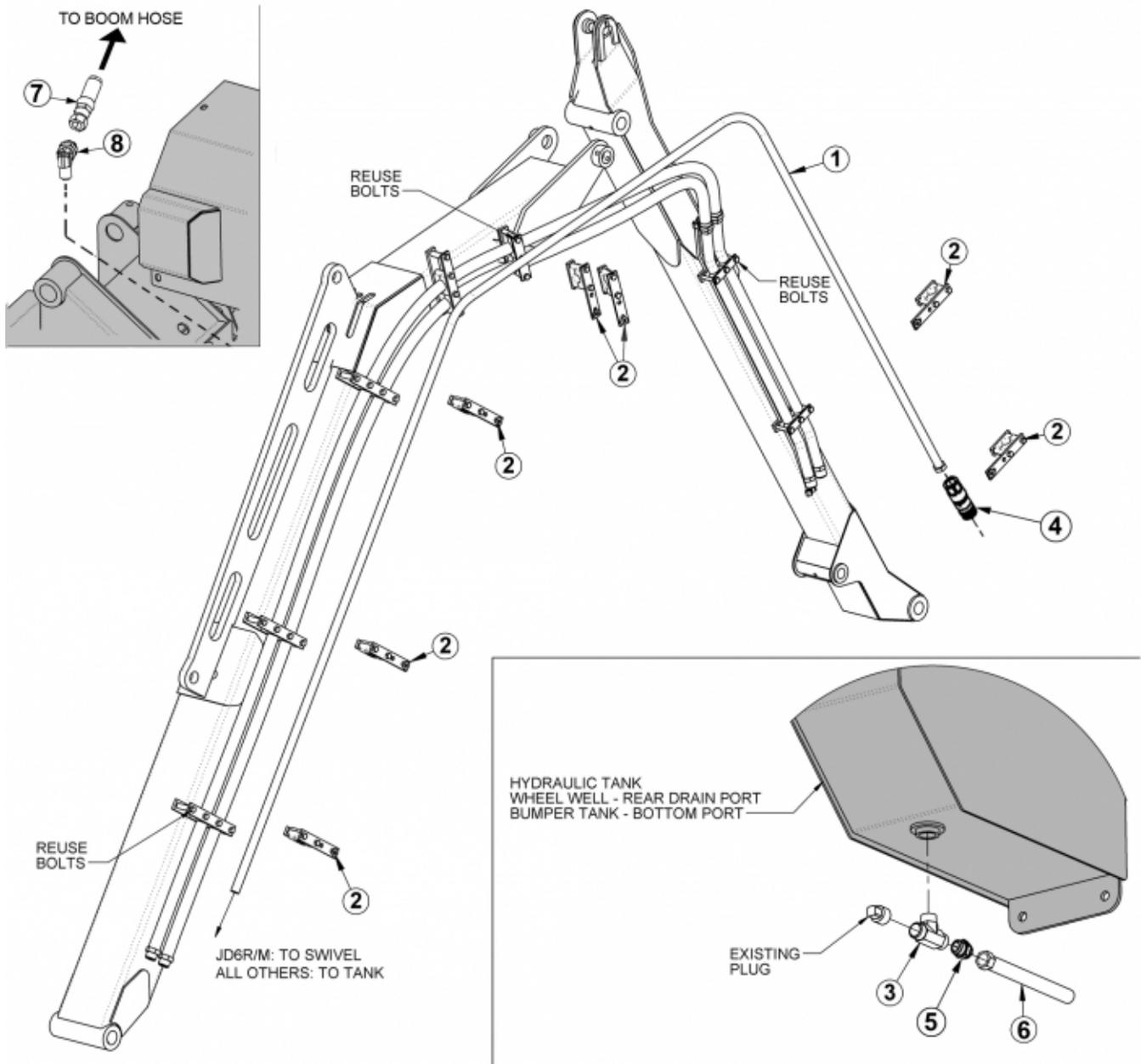


BOOM SWIVEL AND CLAMP

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	-	MAINFRAME *REFER TO TRACTOR MOUNT KIT
2	21782	1	CAPSCREW,5/8" X 1-3/4",NC
3	21777	1	NYLOCK NUT,5/8",NC
4	32381	1	PIN,CAPPED
5	32322	2	BUSHING
6	06505185	1	CLAMP KIT
7	6T3211	2	GREASE ZERK,1/8"NPT
8	21677	3	NYLOCK NUT,7/16",NC
9	32380	2	PIN,1"
10	21683	2	CAPSCREW,7/16" X 2",NC
11	TB1023	2	ROLL PIN
12	06420100	1	PIN,1-1/4"
13	-----	-	SPHERICAL BEARING *NOT FOR SALE
14	06700185	1	SWIVEL ASSEMBLY
---	06310150	1	SWIVEL WELDMENT
15	06520250	1	BEARING,WASHER
16	32810	2	ADAPTER,ELBOW
17	06501029	1	CYLINDER,3" X 13.88"
18	06420022	1	PIN, 1/5" X 12"
19	21688	1	CAPSCREW, 7/16" X 3-1/4"
20	06403689	1	SPACER
21	06505375	1	CLAMP KIT, HOSE
22	21681	1	CAPSCREW, 7/16" X 1-1/2" NC

CASE DRAIN BOOM AND TANK



ITEM	PART NO.	QTY.	DESCRIPTION
1	----	1	BOOM CASE DRAIN HOSES (CHART ON NEXT PAGE)
2	06505375	1	CLAMP KIT, HOSE, 1 X 1.13, ADD ON
3	06503228	1	TEE, BRANCH, 3/4FP X 3/4MP Z 3/4FP
4	06503227	1	QUICK COUPLER, FEMALE, FLAT, 5/8 X 3/4 OR
5	06503230	1	ADAPTER, 3/4MP X 3/4MJ
6	----	1	CASE DRAIN HOSE TO TANK (CHART ON NEXT PAGE)
7	---	1	HEAD TO BOOM CASE DRAIN HOSE (CHART ON NEXT PAGE)
8	06503225	1	ELBOW

CASE DRAIN HOSE CHART

JD6M 2015 OR NEWER

BOOM SIZE	ON BOOM	ON HEAD	HOSE TO TANK
18	06501244	06501230	06501232
22	06501233	06501230	
24	06501231	06501230	
BRUTE	06501241	06501230	
SABER	06501248	06501247	

ALL OTHER TRACTORS 2015 OR NEWER

BOOM SIZE	ON BOOM	ON HEAD	HOSE TO TANK
18	06501243	06501230	06501237
22	06501239	06501230	
24	06501240	06501230	
BRUTE		06501230	
SABER	06501249	06501247	

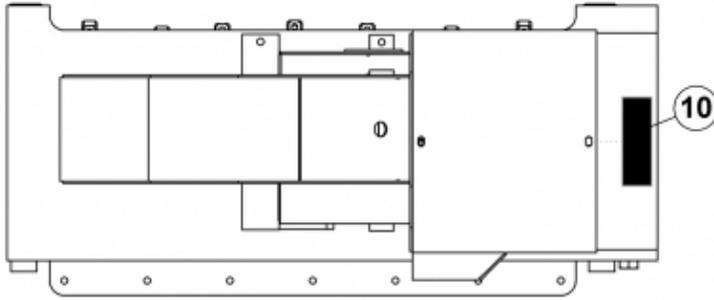
ALL TRACTORS OLDER THAN 2015

BOOM SIZE	ON BOOM	ON HEAD	HOSE TO TANK
18	06501242	06501230	06501238
22	06501239	06501230	
24	06501240	06501230	
BRUTE		06501230	
SABER	06501249	06501247	

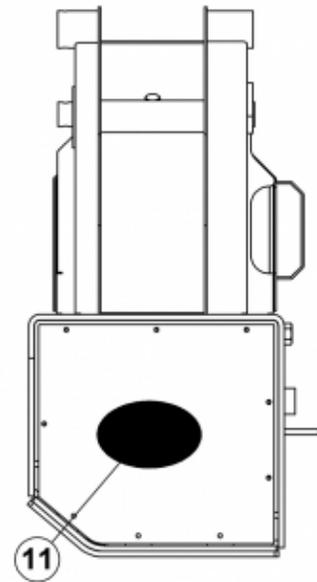
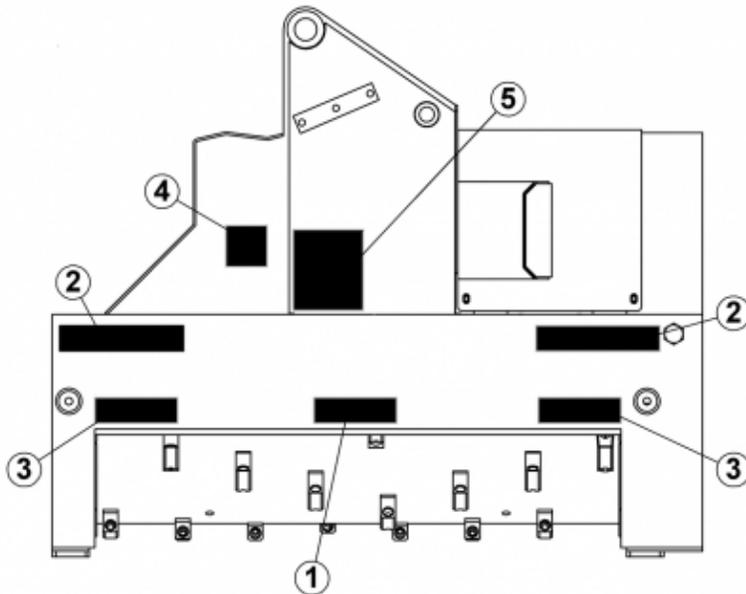
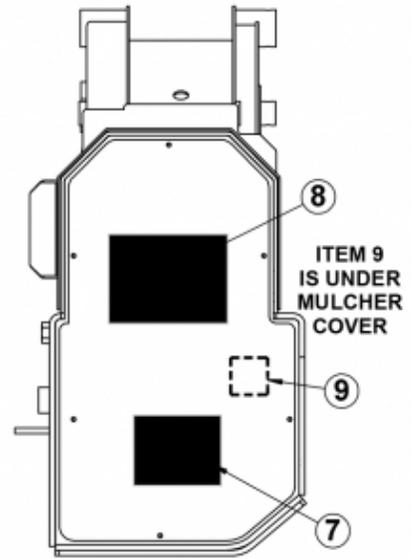
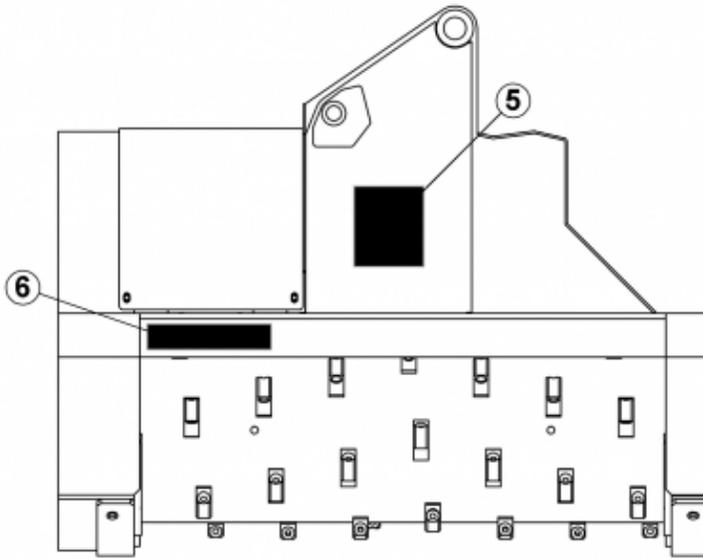
TRUCKAT

BOOM SIZE	ON BOOM	ON HEAD	HOSE TO TANK
22	06501239	06501230	06501236

DECAL MAP



DECALS 12 AND 13 APPLIED TO PRESSURE AND RETURN HOSES AT ASSEMBLY



DECAL MAP

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	6T3249A	1	DECAL, CAUT, TF1018 LUBE INSTR4
2	42399	2	DECAL, RED REFLECTOR
3	22839	2	DECAL, CAUT, HAND GREASE ONLY
4	D637	1	DECAL, SOLENOID DISCONNECT
5	D983	2	DECAL, DANGER, CTTRSHFTROT 3FT
6	4240006	1	DECAL, YELLOW REFLECTOR
7	6T3236	1	DECAL, MADE IN U.S.A.
8	31522	1	DECAL, LOGO, TIGER, 10X5.5
9	D646	1	DECAL, DANGER, GUARD MISSING
10	00758194	1	DECAL, WARNING, BELT SHIELD
11	06550006	1	DECAL, GENUINE PARTS
12	06550057	1	DECAL, DOT, RED, PRESSURE
13	06550058	1	DECAL, DOT, BLUE, RETURN

NOTES

NOTES

**WARRANTY
SECTION**

WARRANTY INFORMATION

Tiger Corporation, 3301 N. Louise, Sioux Falls, South Dakota, warrants to the original Retail Customer, the new Tiger equipment is free of defects in material and workmanship. Any part of equipment that in Tiger's judgement, show evidence of such defects will be repaired or replaced without charge, provided that the failure of part(s) shall have occurred within twelve (12) months from the date of delivery of said equipment to the Retail Customer. Expendable components such as knives, oil, chain sprockets, skid shoes, knife mounting disks and the like are excluded but not limited to this warranty.

The Retail Customer must pay the transportation cost to and from the Tiger Dealer's service shop for warranty service. Warranty service will be performed by the Tiger Dealer from whom the equipment was purchased, during service shop regularly scheduled days and hours of operation.

All Tiger obligation under this warranty shall be terminated if the equipment is modified or altered in ways not approved in writing by Tiger, if repair parts other than genuine Tiger repair parts have been used, or if the equipment has been subject to misuse, neglect, accident, improper maintenance or improper operation.

Tiger Corporation reserves the right to make improvements in design or changes in specification at any time without incurring any obligation to owners of equipment previously sold.

No agent or person has authority to alter, add to or waive the above warranties which are agreed to be in the only warranties, representations or promises, expressed or implied, as to the quality or performance of the products covered and which do not include any implied warranty of merchantability or fitness. In no event will Tiger be liable for incidental or consequential damages or injuries, including, but not limited to, loss of profits, rental or substitute equipment or other commercial loss.

**THERE ARE NO WARRANTIES WHICH EXTEND
BEYOND THOSE EXPRESSED HEREIN.**

It is the Purchasers obligation to sign the warranty registration form **AFTER** he / she has Read and Understands the Operation and Safety Instructions stated within this manual.

ONE LAST WORD

This manual cannot possibly cover all of the potentially hazardous situations you will encounter. By being familiar with the safety rules, operating and maintenance instructions in this manual you can help prevent accidents. The objective of this manual is to help make you a better operator. Remember, **SAFETY IS YOU!**



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Your safety and the safety of those around you depends on **YOU**. Common sense should play a large role in the operation of this machine.

Since we at Tiger Corporation are constantly striving to improve our products, we reserve the right to change specifications or design at any time.

TO THE OWNER / OPERATOR / DEALER



To keep your implement running efficiently and safely, read your manual thoroughly and follow these directions and the Safety Messages in this manual and on the machine. The table of contents clearly identifies each section where you can easily find the information you need.

The Occupational Safety and Health Act (OSHA 1928.51 subpart C) makes the following minimum requirements for tractor operators.

OWNER REQUIREMENTS:

1. Provide a Roll-Over-Protective Structure that meets the requirements of this Standard; and
2. Provide Seatbelts that meet the requirements of this Standard and SAE J3C; and
3. Ensure that each employee uses such Seatbelt while the tractor is moving; and
4. Ensure that each employee tightens the Seatbelt sufficiently to confine the employee to the protected area provided by the ROPS.

OPERATOR REQUIREMENTS:

1. Securely fasten seatbelt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near steep ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going – especially at row ends, on roads, and around trees.
6. Do Not permit others to ride.
7. Operate the tractor smoothly – no jerky turns, starts, or stops.
8. Hitch only to the draw-bar and hitch points recommended by the tractor manufacturer.
9. When the tractor is stopped, set brakes securely and use park lock, if available



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