

ROTARY AXE OPERATOR'S AND PARTS MANUAL



PM-000101-E

SERIAL NUMBER: MODEL NUMBER:



READ ENTIRE OPERATOR'S & PARTS MANUAL BEFORE OPERATING!

DANGER! ROTATING BLADE HAZARD! STAY BACK!



OBJECTS CAN BE THROWN!

Operators should keep the Rotary Axe as low as possible during operation in order to minimise the risk of flying debris

DO NOT operate near bystanders.



DO NOT place hands or feet under deck while in operation or with engine running.

DO NOT operate without a shatterproof door (or front shield) installed on loader.

WARNING! Before leaving the operator's seat: Lower the lift arms against frame



and place unit on skid shoes. Disengage auxiliary hydraulics. Stop Engine. Engage parking brake. Remove key.

DANGER! FLYING DEBRIS HAZARD. CLEAR AREA OF BYSTANDERS AND LIVE-



STOCK BEFORE OPERATING. THE ROTARY AXE IS CAPABLE OF PRODUCING LARGE AMOUNTS OF FLYING DEBRIS IN ALL DIRECTIONS.

WARNING! Lift Limiting chains must be properly installed before operation.



WARNING! The Digga Rotary Axe should never be operated with the back of the unit more than 12" (305 mm) above the ground.

If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer.

PREFACE

GENERAL COMMENTS

Congratulations on the purchase of your new DIGGA product! This product was carefully designed and manufactured to give you many years of dependable service. Only minor maintenance (such as cleaning and lubricating) is required to keep it in top working condition. Be sure to observe all maintenance procedures and safety precautions in this manual and on any safety decals located on the product and on any equipment on which the attachment is mounted.

This manual has been designed to help you do a better, safer job. Read this manual carefully and become familiar with its contents.



Never let anyone operate this unit without reading the "Safety Precautions" and "Operating Instructions" sections of this manual. Always choose hard, level ground to park the vehicle on and set the brake so the unit cannot roll.

Unless noted otherwise, right and left sides are determined from the operator's control position when facing the attachment.

NOTE: The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the attachment as may be necessary without notification.

BEFORE OPERATION

The primary responsibility for safety with this equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understand this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer to obtain further assistance. Keep this manual available for reference. Provide the manual to any new owners and/or operator's.



SAFETY ALERT SYMBOL

This is the "Safety Alert Symbol" used by this industry. This symbol is used to warn of possible injury. Be sure to read all warnings carefully. They are included for your safety and for the safety of others working with you.

SERVICE

Use only manufacturer replacement parts. Substitute parts may not meet the required standards. Record the model and serial number of your unit on the cover of this manual. The parts department needs this information to insure that you receive the correct parts.

SOUND AND VIBRATION

Sound pressure levels and vibration data for this attachment are influenced by many different parameters: some items are listed below (not inclusive):

- Prime mover type, age, condition, with or without cab enclosure and configuration.
- Operator training, behavior and stress level.
- Job site organization, working material condition and environment.

Based on the uncertainty of the prime mover, operator, and job site, it is not possible to get precise machine and operator sound pressure levels or vibration levels for this attachment.

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PREFACE 4

EQUIPMENT SAFETY PRECAUTIONS

WARNING!

KNOW WHERE UTILITIES ARE



Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call your local utilities for location of buried utility lines, gas, water, and sewer, as well as any other hazard you may encounter.

WARNING!

EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA DUST ALONG WITH OTHER HAZARDOUS DUSTS MAY CAUSE SERIOUS OR FATAL RESPIRATORY DISEASE.

It is recommended to use dust suppression, dust collection and if necessary person-al protective equipment during the operation of any attachment that may cause high levels of dust.

WARNING!

REMOVE PAINT BEFORE WELDING OR HEATING



Hazardous fumes/dust can be generated when paint is heated by welding, soldering or using a torch. Do all work outside or in a well ventilated area and dispose of paint and solvent properly. Remove paint before welding or heating.

When sanding or grinding paint, avoid breathing the dust. Wear an approved respira-tor. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

WARNING!

END OF LIFE DISPOSAL



At the completion of the useful life of the unit, drain all fluids and dismantle by sepa-rating the different materials (rubber, steel, plastic, etc.). Follow all federal, state and local regulations for recycling and disposal of the fluid and components.

WARNING!

DO NOT MODIFY MACHINE OR ATTACHMENTS



Modifications may weaken the integrity of the attachment and may impair the function, safety, life, and performance of the attachment. When making repairs, use only the manufacturer's genuine parts, following authorised instructions. Other parts may be substandard in fit and quality. Never modify any ROPS (Roll Over Protection Structure) or FOPS (Falling Object Protective Structure) equipment or device. Any modifications must be authorised in writing by the manufacturer

A

OPERATING THE ATTACHMENT

Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, dimensions, and all safety requirements. See your machine's manual for these instructions.

- Keep all step plates, grab bars, pedals, and controls free of dirt, grease, debris, and oil.
- Let others know when and where you will be working. Make sure no one is behind the equipment or for several hundred feet in any direction around the equipment when in operation.
 Never allow anyone to be around the equipment when it is operating.
- Do not allow riders on the attachment or the prime mover.
- Do not operate the equipment from anywhere other than the correct operator's position.
- Do not alter or remove any safety feature from the prime mover or this attachment.
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation.
- Block off work area from bystanders, livestock, et, Flying debris can cause severe injury or death. The brush cutter is capable of producing large amounts of flying debris in all directions.
- Do not raise the attachment when the blades are rotating.
- Test all controls before you begin operation.
- Do not operate without a shatterproof (demolition) cab door or front shield installed on the prime mover.
- Be sure all covers, front deflector chains and lifting limiting chain(s) are properly installed before operating the unit.

EQUIPMENT SAFETY PRECAUTIONS



OPERATING THE ATTACHMENT

- Operators to keep the Rotary Axe as low as possible during operation in order to minimise the risk of flying debris
- When mounted onto a skid steer loader, do not operate the rotary axe with the back of the attachment over 12" above the ground.
- Do not lift loads in excess of the capacity of the prime mover. Lifting capacity decreases as the loader is moved further away from the unit.
- Do not exceed rated operating capacity of prime mover.
- Never try to board or exit equipment while it is running.
- When operating on slopes, drive up and down, not across. Avoid steep hillside operation, which could cause the prime mover to overturn.
- Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.
- An operator must not use drugs or alcohol, which can change his or her alertness or coordination. An operator taking prescription or over-the-counter drugs should seek medical advice on whether or not he or she can safely operate equipment.
- Never leave the attachment unattended when in the raised position. Always make sure both skids are on the ground, parking brake is engaged, engine is turned off and the keys are removed before exiting the prime mover.



TRANSPORTING THE ATTACHMENT

- Travel only with the attachment in a safe transport position to prevent uncontrolled movement. Drive slowly over rough ground and on slopes.
- When transporting on a trailer: Secure attachment using tie down accessories that are capable of maintaining attachment stability.
- Use extra care when loading or unloading the attachment onto a truck or trailer. Disconnect hydraulic couplers during transporting when installed on prime mover.
- When driving on public roads use safety lights, reflectors, Slow Moving Vehicle signs etc., to prevent accidents. Check local government regulations that may affect you.
- Do not drive close to ditches, excavations, etc., cave in could result.
- Do not smoke when refueling the prime mover. Allow room in the fuel tank for expansion. Wipe up any spilled fuel. Secure cap tightly when done.



MAINTAINING THE ATTACHMENT

- Before performing maintenance, disengage auxiliary hydraulics, lower the attachment to the ground, turn off the engine, remove the key and apply the brakes. Be sure all rotation has stopped before making any adjustments or repairs.
- Never perform any work on the attachment unless you are authorized and qualified to do so. Always read the operator manual's before any repair is made. After completing maintenance or repair, check for correct functioning of the attachment. If not functioning properly, always tag "DO NOT OPERATE" until all problems are corrected.
- If attachment must be left raised for maintenance or any other reason, block the unit securely to prevent accidental release of the lifting mechanism. Serious damage or personal injury could result.
- Worn, damaged, or illegible safety decals must be replaced. New safety decals can be ordered from DIGGA.
- Never make hydraulic repairs while the system is under pressure. Serious personal injury or death could result.
- Never work under a raised attachment.
- Do not wear loose clothing or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tools for the job at hand. Make sure they are in good condition for the task required.
- Wear the protective equipment specified by the tool manufacturer.



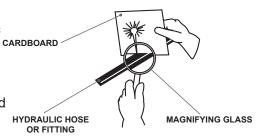
EQUIPMENT SAFETY PRECAUTIONS

 Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.

If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask them to research it immediately to

determine proper treatment.

 Wear safety glasses, protective clothing, and use a piece of cardboard or wood when searching for hydraulic leaks. DO NOT USE YOUR HANDS! SEE ILLUSTRATION.

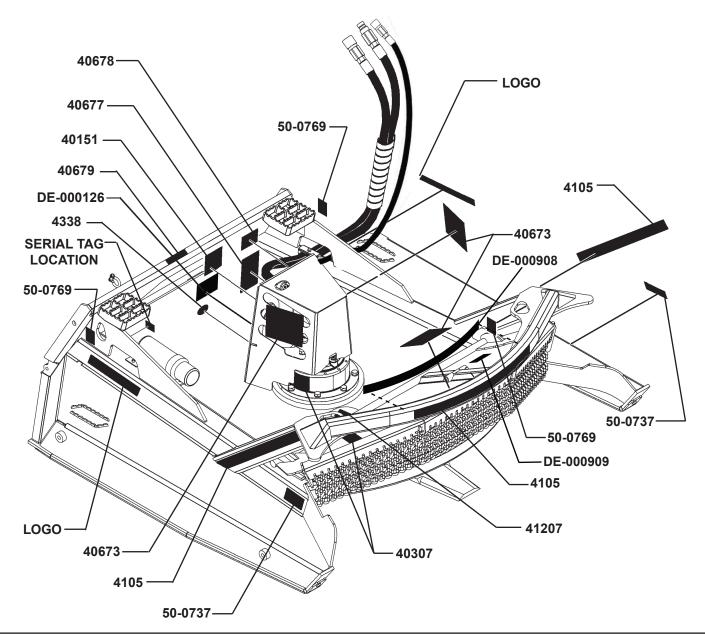


DECALS

DECAL PLACEMENT

GENERAL INFORMATION

The diagram on this page shows the location of all the decals used on your attachment. The decals are identified by their part numbers, with reductions of the actual decals located on the following pages. Use this information to order replacements for lost or damaged decals. Be sure to read all decals before operating the attachment. They contain information you need to know for both safety and backhoe longevity.



DECALS

IMPORTANT: Keep all safety signs clean and legible. Replace all missing, illegible, or damaged safety signs. When replacing parts with safety signs attached, the safety signs must also be replaced.

REPLACING SAFETY SIGNS: Clean the area of application with nonflammable solvent, then wash the same area with soap and water. Allow the surface to fully dry. Remove the backing from the safety sign, exposing the adhesive surface. Apply the safety sign to the position shown in the diagram above and smooth out any bubbles.



DANGER! ROTATING BLADE PART #40673



WARNING! HIGH PRESSURE FLUID PART #40151



DANGER! GUARD MISSING PART #40307

SAFETY INSTRUCTIONS

AVOID STALLING ROTARY CUTTER

Continuous blade rotation is required to prevent overheating of hydraulic system.

TO RESTART BLADE ROTATION:

- Disengage auxiliary hydraulics.
- Remove rotary cutter from debris.
- Engage auxiliary hydraulics to start blade rotation.

REPEATED STALLING OF ROTATING BLADE:

- Disengage auxiliary hydraulics.
- Remove rotary cutter from debris.
- Review operating conditions and size/density of material.
- Make necessary corrections to avoid future stalling.
- Engage auxiliary hydraulics to start blade rotation.

SEE OPERATOR'S MANUAL FOR MORE INSTRUCTIONS.

SAFETY INSTRUCTIONS PART #40677

A WARNING

BEFORE LEAVING OPERATOR'S SEAT:

- 1. Lower lift arms against frame and place unit on the ground.
- 2. Disengage auxiliary hydraulics.
- 3. Stop Engine and Remove Key.
- 4. Engage Parking Brake.

WARNING! BEFORE LEAVING OPERATOR'S SEAT PART #40678

A WARNING

LIFT LIMITING CHAIN MUST BE PROPERLY INSTALLED DURING OPERATION OF ROTARY CUTTER.

#40679

WARNING! LIFT LIMITING CHAIN PART #40679

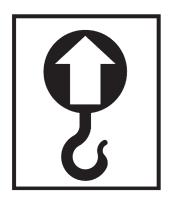
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DECALS



DANGER STAND CLEAR PART #4105





LIFT POINT PART #50-0769



WARNING! PINCH POINT PART #50-0737



WARNING! MOVING PARTS PART #41207

<<<< BLADE DIRECTION <<<<

BLADE DIRECTION PART #DE-000908

ACAUTION

DO NOT OPERATE UNIT WITHOUT CASE DRAIN HOSE CONNECTED

CAUTION! CONNECT CASE DRAIN HOSE #DE-000126

NOTE: CONTACT YOUR LOCAL DEALER TO PURCHASE LOGO DECALS.

PREOPERATION

GENERAL INFORMATION

Your attachment is operated by the prime mover's auxiliary hydraulics and mounts to the toolbar/quick attach mechanism for easy operator hook-up.

Your skid steer loader must have an auxiliary hydraulic system and a shatter proof door or front shield to operate the rotary axe.

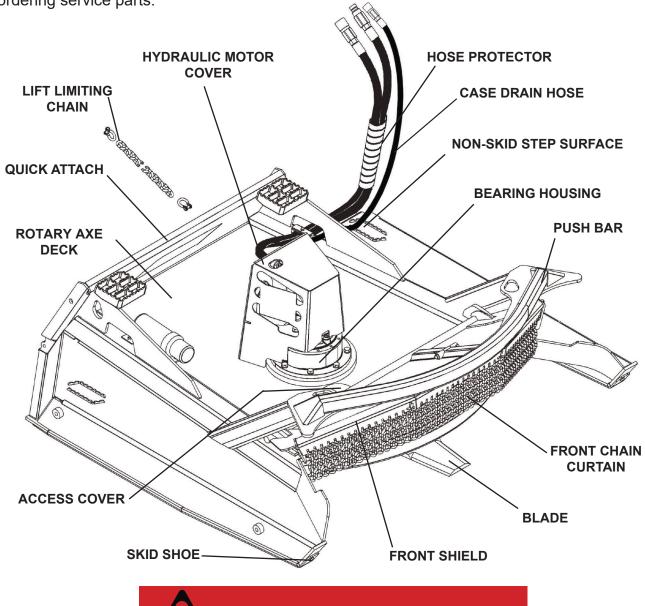
DANGER!



To AVOID SERIOUS PERSONAL INJURY OR DEATH THE DIGGA ROTARY AXE MUST NOT BE ATTACHED TO ANY POWER UNIT THAT DOES NOT HAVE A SHATTER PROOF DOOR (OR FRONT SHIELD) INSTALLED.

NOMENCLATURE

The purpose of this diagram is to acquaint you with the various names of the rotary axe components. This knowledge will be helpful when reading through this manual or when ordering service parts.



INSTALLATION INSTRUCTIONS

GENERAL INFORMATION

The following instructions will help you to mount your rotary cutter onto your skid steer loader. The rotary axe uses the quick-attach system for ease of installation. Therefore, if you know how to attach your loader bucket, attaching the rotary axe should prove no problem. Remember to read all safety warnings, decals and operating instructions before operating the attachment. If there is any portion of this manual that you do not understand, contact vour dealer.

DANGER!



TO AVOID SERIOUS PERSONAL INJURY OR DEATH THE DIGGA ROTARY AXE MUST NOT BE ATTACHED TO ANY POWER UNIT THAT DOES NOT HAVE A SHATTERPROOF DOOR (OR FRONT SHIELD) INSTALLED.

ATTACHING TO SKID STEER LOADER

NOTE: Before attaching the rotary axe to your loader, make sure a shatter proof door (or front shield) has been installed onto the front of your skid steer loader.

- 1. Remove any attachments from the front of the loader.
- 2. Following all standard safety practices and the instructions for installing an attachment in your skid steer operator's manual, install the rotary axe onto your skid steer loader.

NOTE: It is important to make sure the locking mechanism on your quick attach is engaged, therefore locking the attachment onto the skid steer loader.

- 3. Lower the unit to the ground and remove the key. IMPORTANT: YOU MUST ENSURE THE ROTARY AXE IS LOWERED FULLY TO THE GROUND, DO NOT ALLOW A PERSON TO PUT THEMSELVES BETWEEN LIFTED ARMS AND THE MACHINE.
- Connect the Lift Limiting Chain to the front of your skid steer loader. The back of the rotary axe 4. should never be more than 250mm off the ground for safe operation. (With the rotary axe resting flat on level ground ensuring loaders arms cannot drop any further, route the end of the Lift Limiting Chain from the back of the rotary axe and then through the tie down mechanism(s) on the front of your skid steer loader. Tie the chain securely back to itself with the shackle provided to limit the lifting capabilities of the cutter to 250mm maximum.)
- 5. After making sure that there is not any foreign matter on the hydraulic couplers, connect the couplers to the auxiliary hydraulic system of your skid steer loader.
- Connect the case drain hose. 6.

DETACHING FROM SKID STEER LOADER

- On firm, level ground, lower the attachment so both skids are on the ground, parking brake is engaged, engine is turned off and the keys are removed.
- Follow your skid steer loader operator's manual to relieve pressure in the hydraulic lines. 2.
- Disconnect couplers and either connect them together or install dust caps and plugs to 3. prevent contaminants from entering the hydraulic system. Store hoses on attachment, off the around.
- 4. Disconnect the Lift Limiting Chain ensuring the rotary axe is fully lowered so the loader arms cannot drop any further and that no persons put themselves between the loader arms and the machine.
- Follow your prime mover operator's manual for detaching (removing) 5. an attachment.

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INTENDED USE: The Digga Rotary Axe is designed for cutting brush and small trees up to 7" (178mm) in diameter while still maintaining a 12" (305mm) maximum ground clearance. When equipped with the optional tooth kit, the attachment will also grind the remaining stumps down to ground level. Use in any other way is considered contrary to its intended use

GENERAL INFORMATION

The rotary axe attaches to the toolbar/quick-attach mechanism of your skid steer loader. Due to this arrangement, thorough knowledge of the skid-steer controls is necessary for machine operation. Read and understand your skid steer operator's manual for information regarding skid steer operation before attempting to use the rotary axe. Follow all installation instructions for the proper installation of the unit onto your skid steer before attempting to operate your rotary axe.

OPERATING TIPS

Continuous rotation of the blades is required during operation to prevent overheating of the hydraulic system. If the rotary axe stalls, disengage auxiliary hydraulics, and remove cutter from debris before restarting.

Blade rotation is maintained by monitoring system pressure and operating the attachments at pressures below relief valve settings of 4000PSI (275bar). Over heating of the hydraulic system is caused if hydraulic oil is repeatedly forced over the relief valve setting on either the prime mover or rotary cutter (whichever is less). Taking note of the maximum pressure gauge reading when the system goes over relief on your application (prime mover and rotary axe combination) and then careful monitoring of the pressure gauge on the rotary axe will help you prevent repeatedly forcing your unit to go over relief and therefore causing overheating of the hydraulic system and also stalling of the blade carrier.



WARNING! Before leaving the operator's seat: Lower the lift arms against frame and place both skid shoes on the ground. Disengage auxiliary hydraulics. Stop Engine. Engage parking brake. Remove the key.

DANGER! ROTATING BLADE HAZARD! STAY BACK!



OBJECTS CAN BE THROWN!

DO NOT operate near bystanders.

DO NOT place hands or feet under deck while in operation or with engine running.

DO NOT operate without a shatterproof door (or front shield) installed on loader.

WARNING! Lift limiting chain must be properly installed before operation.



CAUTION! The front guard should always be in the down position except during operation



Blade must rotate one way only. Failure to heed this warning may cause damage to the attachment.



CUTTING OPERATION

- Raise the back of the unit off of the ground approximately 4" (102mm) to allow the material to clear from under the cutting deck as you travel forward.
- 2. Place the front skid shoes 2-6" (51-152mm) off the ground. This is the preferred position for cutting grass and heavy vegetation.
 - Never drive your skid steer with the front of the rotary axe tilted to the point your view is obstructed. Always make sure you can see what you are cutting.
 - Check the work area. Never operate the rotary axe in populated areas where thrown objects could injure persons or damage property.
 - Never raise the unit and expose yourself or anyone else to the rotating blades. If you can see the blades then the back of the unit is raised too high. Maximum ground clearance at any time is 12" (305mm).
- Activate the auxiliary hydraulics with the engine at idle. Increase engine speed. 3.
- Be sure the rotary axe is operating smoothly and at full speed, and then start forward 4. travel while monitoring pressure gauge.

NOTE: The rotary axe has a pressure gauge located on the back of the motor cover. Monitor hydraulic pressure to prevent forcing your prime mover or attachment from repeatedly going over relief and therefore causing overheating of the hydraulic system.

CUTTING LARGE BRUSH AND SMALL TREES UP TO 7" (178mm) IN DIAMETER:

WARNING! Trees can fall in any direction. It is the operator's responsibility to be certain the area is safe and clear of people, animals and personal property.

When cutting large brush and small trees:

- Roll the front of the rotary axe up 1-2 feet (305-610mm). DO NOT LIFT THE BACK OF 1. THE CUTTER!
- 2. Slowly drive into the tree. The front shield will raise up allowing the push bar on the rotary axe to push against the tree. Due to the angle of the rotary axe this will allow the blades to notch into the tree which will allow the push bar to bend the tree over and finish the cut.
- 3. If the push bar is unable to bend the tree, reverse the skid steer loader and increase the angle of the rotary axe slightly.
- Repeat Step #2 and #3 until the notch is sufficient (for the size of brush or tree you are 4. cutting) to permit the push over bar to bend the tree.
- 5. When the cut is complete the remaining tree stump can be cut shorter using the rotary cutter blades or it can be easily ground down with the optional tooth kit.
- 6. The tree can now be mulched by rotating the front up slightly and driving forward several feet. Repeat, if necessary. Remember do not lift the back of the axe.

OPTIONAL TOOTH KIT OPERATION:

After felling large brush or small trees, position the rotary axe over the stump(s) and using a plunging motion, grind the stump(s) down to ground level while monitoring the pressure gauge to prevent unit from going over relief. To get maximum performance, maintain full speed of the blade carrier when grinding. To achieve this, periodically lift the cutter off of the stump to allow the blade carrier to return to full rpm.

AVOID STALLING ROTARY CUTTER: Continuous rotation is required to prevent overheating of the hydraulic system. Overheating of the hydraulic system is caused if hydraulic oil is repeatedly forced over the relief valve setting on either the prime mover or rotary axe (whichever is less). Taking note of the maximum pressure gauge reading when the system goes over relief on your application (prime mover and rotary axe combination) and then careful monitoring of the pressure gauge on the rotary axe will help you prevent repeatedly forcing your unit to go over relief and therefore causing overheating of the hydraulic system and also stalling of the blade carrier.

TO RESTART BLADE ROTATION: Disengage auxiliary hydraulics. Remove rotary axe from debris. Engage auxiliary hydraulics to start blade rotation. (Be sure the rotary axe is operating smoothly and at full speed, and then start forward travel while monitoring the pressure gauge.)

REPEATED STALLING OF ROTATING BLADES: Disengage auxiliary hydraulics. Remove rotary axe from debris. Review operating conditions and the size/density of material being cut. Make necessary corrections. Engage auxiliary hydraulics to start blade rotation. (Be sure the rotary axe is operating smoothly and at full speed, and then start forward travel while monitoring pressure gauge.)

TROUBLESHOOTING OPERATING CONDITIONS:

Below are listed a few operating conditions that may cause repeated stalling of your rotary axe, and suggestions on how to correct them.

GRASS TOO LONG OR THICK: If cutting heavy vegetation, you may need to slow travel speed or make smaller passes (less than full cut) to prevent overloading and stalling the unit. Although the rotary axe is not designed for mowing grass, by monitoring blade sharpness and travel speed this can be accomplished.

BRUSH TOO BIG IN DIAMETER: The rotary axe is NOT designed to cut trees larger than 7" (178mm) in diameter. If brush is smaller than 7" (178mm) in diameter and the cutter is stalling, check sharpness of the blades (see "Maintenance") and cut using the procedure described earlier in this section for "CUTTING LARGE BRUSH AND SMALL TREES".

BRUSH TOO THICK OR HEAVY: If cutting heavy or thick brush, you may need to slow travel speed or make smaller passes (less than full cut), to prevent overloading. If the blades seem to be unable to handle the volume of brush, slow down the travel speed until the unit reaches full speed before proceeding.

SCALPING THE GROUND or BOTTOMING OUT: Be aware of changes in the terrain. Stay alert for drop-off's and holes. Check the terrain and the deck position before restarting and continuing cutting.

STRIKING FOREIGN OBJECTS: Stay alert for rocks, fencing, abandoned wells, septic tanks or other foreign objects. If the rotary axe comes into contact with a foreign object, stop the unit, shut off the engine and disconnect the hydraulic couplers from the skid steer. Inspect the unit and repair any damage before restarting and continuing cutting. (Never try to weld or straighten damaged blades.) Inspect the work area for any other items, and if they are too large to be removed from the area, they should be flagged clearly.

NOTE: When blades are bent or damaged they will become wedged between the blade carrier plates. This will cause excessive vibration and the blades must be replaced before proceeding (see "Maintenance").

STORAGE

The following storage procedure will help you to keep your rotary axe in top condition. It will also help you get off to a good start the next time your cutter is needed. We therefore strongly recommend that you take the extra time to follow these procedures whenever your unit will not be used for an extended period of time.

- Clean the unit thoroughly, removing all mud, dirt, and grease.
- Sharpen or replace blades. Replace all blades at the same time and do not try to weld or straighten damaged blades; loss of integrity may result.
- Inspect for visible signs of wear, breakage, or damage. Order any parts required, and make
 the necessary repairs to avoid delays when starting next season. NOTE: Purchase only
 approved replacement parts.
- Tighten all loose nuts, capscrews, and hydraulic connections.
- Check the drive bearing housing for proper lubricant level.
- Seal hydraulic system from contaminants and secure all hydraulic hoses off the ground to help prevent damage.
- Replace decals if damaged, or in unreadable condition.
- Apply a rust-preventive spray to all moving parts and to the bottom of the deck.
- Store the unit in a dry and protected place. Leaving the unit outside will materially shorten its life.

Additional Precautions for Long Term Storage:

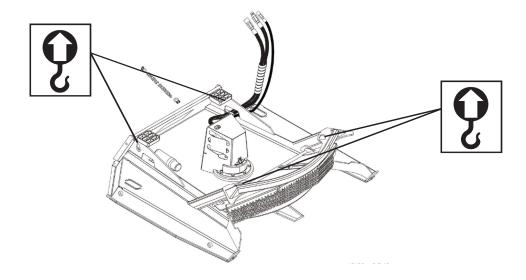
Touch up all unpainted and exposed areas with paint, to prevent rust.

REMOVING FROM STORAGE

- Remove all protective coverings.
- Check hydraulic hoses for deterioration, and replace if necessary.
- Check all nuts and bolts for proper tightness, especially those securing the motor, bearing housing and blades.

LIFT POINTS

Lifting points are identified by lifting decals where required. Lifting at other points is unsafe and can damage attachment. Do not attach lifting accessories around cylinders or in any way that may damage hoses or hydraulic components. See Diagram



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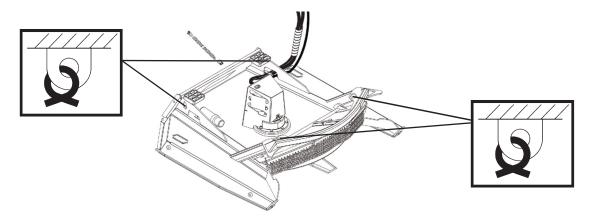
- Attach lifting accessories to unit at recommended lifting points.
- Bring lifting accessories together to a central lifting point.
- Lift gradually, maintaining the equilibrium of the unit.



WARNING! Use lifting accessories (chains, slings, ropes, shackles and etc.) that are capable of supporting the size and weight of your attachment. Secure all lifting accessories in such a way to prevent unintended disengagement. Failure to do so could result in the attachment falling and causing serious personal injury or death.

TIE DOWN POINTS

Tie down points are identified by tie down decals where required. Securing to trailer at other points is unsafe and can damage attachment. Do not attach tie down accessories around cylinders or in any way that may damage hoses or hydraulic components. See Diagram



- Attach tie down accessories to unit as recommended.
- Check unit stability before transporting.



WARNING! Verify that all tie down accessories (chains, slings, ropes, shackles and etc.) are capable of maintaining attachment stability during transporting and are attached in such a way to prevent unintended disengagement or shifting of the unit. Failure to do so could result in serious personal injury or death.

TRANSPORTING

Follow all local government regulations that may apply along with recommended tie down points and any equipment safety precautions at the front of this handbook when transporting your attachment.

LUBRICATION

GENERAL INFORMATION

Economical and efficient operation of any machine is dependent upon regular and proper lubrication of all moving parts with a quality lubricant. Neglect leads to reduced efficiency, wear, breakdown, and needless replacement of parts.

WEEKLY

The oil level in the drive bearing housing should be checked once a week. Fill as necessary with a mild extreme pressure lubricant API-GL-5, NO. SAE 80 or 90 weight gear lubricant.

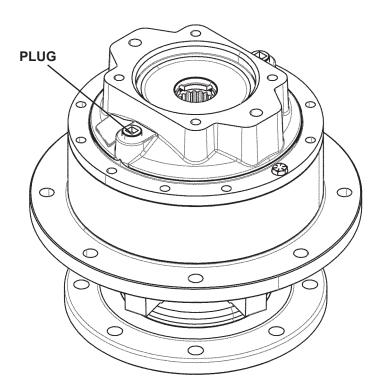
TO CHECK:

Remove plug from front of drive bearing housing. Lubricant should be visible.

TO ADD:

Remove plug from end of front of the drive bearing housing and add lubricant until full. Replace plug.

DRIVE BEARING HOUSING



GENERAL INFORMATION

Regular maintenance is the key to long equipment life and safe operation. Maintenance requirements have been reduced to an absolute minimum. However, it is very important that these maintenance functions be performed as described.



WARNING! Avoid serious injury. Lower the rotary axe so both skid shoes are on the ground, set the parking brake, stop the skid steer engine, and remove the key before leaving the operator's seat. If unit must be left raised for maintenance, block the unit securely to prevent accidental release of the lifting mechanism. Disconnect the hydraulic couplers.

PROCEDURE	DAILY	EVERY 40 HOURS	1200 HOURS
Check skid steer loader hydraulic system to ensure an adequate level of hydraulic oil.	~		
Check mounting hardware on blades and tighten if necessary. See Bolt Torque Specifications.	~		
Check all other hardware and tighten, if necessary. See Bolt Torque Specifications.	~		
Check hydraulic system for hydraulic oil leaks.	~		
Check blades for damage and replace or sharpen as needed.	~		
Check all safety guards and ensure that all devices are installed correctly.	~		
Check for missing or illegible Safety / Warning Decals.	~		
Check oil level in drive bearing housing and add if necessary.		~	
Change oil in drive bearing housing.			~



WARNING! Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands to search for suspected leaks.

> Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.

> If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research it immediately to determine proper treatment.



WARNING! Avoid serious injury. Lower the rotary axe so both skid shoes are on the ground, set the parking brake, stop the skid steer engine, and remove the key before leaving the operator's seat. Be sure all rotation has stopped before making any adjustments or repairs. If unit must be left raised for maintenance, block the unit securely to prevent accidental release of the lifting mechanism. Disconnect the hydraulic couplers.

REPLACING BLADES

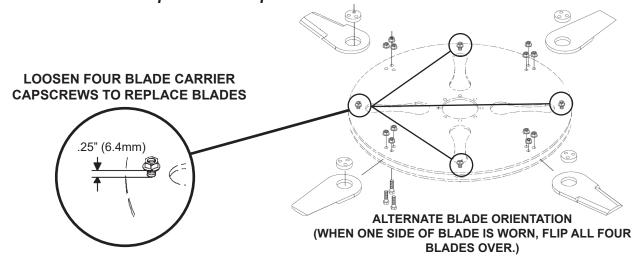
When replacing, flipping, or sharpening the blades, the unit does not require blocking. Place unit firmly on the ground and disconnect the hydraulic couplers.

The blades should be inspected regularly (every 8 hours) to ensure they are sharp, tightened correctly, intact and not wedged between the blade carrier plates. We recommend replacing or flipping all four blades at the same time and NEVER try to weld or straighten damaged blades, as loss of blade integrity may result.

- 1. With unit firmly on the ground and hydraulic couplers disconnected, loosen the capscrews on the access cover and rotate cover open.
- Remove the front shield and loosen the four blade carrier capscrews by rotating the 2. blade carrier until the capscrews are visible in the top access opening.
- After all four blade carrier capscrews are loosened, position one of the blades in the ac-3. cess opening and remove the three capscrews securing the blade to the blade carrier. Remove blade.

NOTE: When replacing the blades with new ones or sharpening the blades, be sure to install the blades in the same orientation as they were in when removed. If flipping the blades over to utilize the opposing edge, be sure to flip all four blades. The blades need to be installed with opposing blades in the same orientation. See Diagram

NOTICE: If for any reason one blade must be replaced, its opposing blade must be replaced at the same time to insure proper balance of the blade carrier. Improper balance will cause vibration and possible component failure.



4. Replace, flip or sharpen blade and then loosely bolt blade into position on the carrier. (Install capscrews from the bottom up, with the lock nut towards the access opening.)

NOTE: With one hand under the blade carrier holding the capscrew into the bolt head recess, loosely install one capscrew and then rotate the blade with spacer installed around to align the remaining two holes.

- 5. Repeat steps #3 and #4 for the remaining three blades.
- 6. After all four blades have been replaced, torque all hardware on the blades and the blade carrier to specification. See Bolt Torque Specifications
- 7. Shut access cover and tighten hardware.
- 8. Reinstall front shield.

REPLACING HYDRAULIC MOTOR

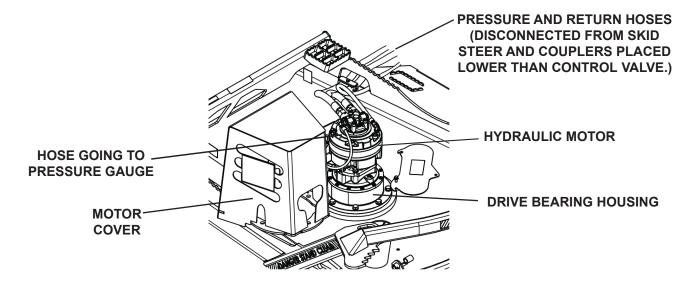
When replacing the hydraulic motor the unit should be sitting firmly on the ground with the hydraulic couplers disconnected. **Be sure all rotation has stopped before making any adjustments or repairs.**

NOTE: Field replacement of the internal motor seals voids warranty.

1. Remove motor cover (Two capscrews, one on each side of bearing housing.)

NOTE: Set cover aside taking extra care to not put any strain on the hose going to the pressure gauge.

2. Remove hydraulic hoses.



3. Remove the capscrews holding the motor to the drive bearing housing, and remove the motor. Check motor seal for damage and replace if required.

NOTE: If motor shaft seal was damaged you will need to drain the existing oil from the drive bearing housing and replace with new before installing the new motor. See instructions for Changing Oil in Drive Bearing Housing.

- 4. Grease the new motor spline shaft and install the new motor with o'ring onto the drive bearing housing using the existing hardware. Torque to specifications. See Bolt Torque Specifications.
- 5. Re-install motor cover using existing hardware and torque to specification. See Bolt Torque Specifications.

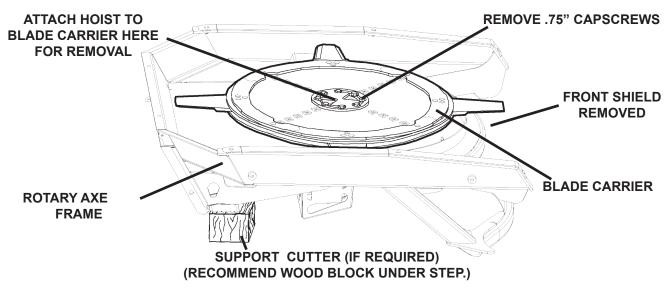
REPLACING DRIVE BEARING HOUSING

When replacing the drive bearing housing, the unit must be detached from the prime mover in a clean, open location with a hoist available that has adequate lift capacity for lifting the attachment. Be sure all rotation has stopped before making any adjustments or repairs.

1. With the unit disconnected from the prime mover and the front shield removed, attach a hoist to the two front lift locations on the push bar and slowly lift the rotary axe and place it upside down with the blade carrier wheel exposed.

NOTE: Be prepared for possible shifting of the rotary axe as it is clears the ground. Block the cutter, if required, to ensure it is completely stable before proceeding.

2. Remove the eight .75" capscrews securing the drive bearing housing to the blade carrier. See diagram



- 3. Attach the hoist to the blade carrier assembly and remove from the rotary axe and set aside. (NOTE: The blade carrier weighs approximately 600 lbs (272 kgs).
- 4. With the blade carrier assembly removed. Attach the hoist onto the front lifting holes on the push bar and set the unit back onto the skid shoes.
- 5. Remove motor cover. (Two capscrews, one on each side of bearing housing.)

NOTE: Set cover aside taking extra care to not put any strain on the hose going to the pressure gauge.

- 6. Remove the capscrews holding the motor to the drive bearing housing, and remove the motor, setting it into a clean container to help prevent any contaminants from entering the hydraulic system. Check motor o'ring for damage and replace if required.
- 7. Remove the .62" capscrews securing the drive bearing housing to the cutter deck and install new housing using the existing hardware. Torque to specification. See Bolt Torque Specifications
- 8. Remove plugs from top of housing and fill with a mild extreme pressure lubricant API-GL-5, No. 80 or 90 weight gear lubricant. Replace plugs.
- 9. Grease the hydraulic motor spline shaft and install the motor assembly and o'ring onto the drive bearing housing using the existing hardware.
- 10. Re-install motor cover using existing hardware and torque to specification. See Bolt Torque Specifications.
- 11. Re-attach the hoist to the two front lift locations on the push bar and slowly lift the rotary axe and place it upside down..

NOTE: Be prepared for possible shifting of the rotary axe as it is clears the ground. Block the cutter, if required to ensure it is completely stable before proceeding.

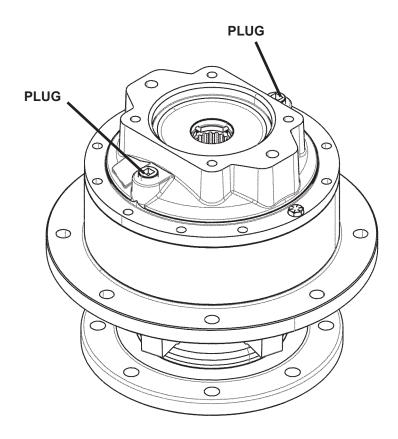
- 12. Attach the hoist to the blade carrier assembly and set it into place aligning the holes on the blade carrier to the ones on the bearing housing. (NOTE: The blade carrier weighs approximately 600 lbs (272 kgs).
- 13. Reinstall the eight .75" capscrews securing the drive bearing housing to the blade carrier. Torque to specification. See Bolt Torque Specifications
- 14. Attach the hoist onto the front lifting holes on the push bar and set the unit back onto the skid shoes.

Follow the installation procedure for attaching the unit onto your prime mover.

CHANGING OIL IN DRIVE BEARING HOUSING

When changing the oil in the drive bearing housing the unit should be setting firmly on the ground with the hydraulic couplers disconnected. We recommend removing the existing oil with a fluid removal pump.

- 1. Remove one of the plugs in the drive bearing housing and place the extraction hose into the housing so that it reaches the bottom.
- 2. Place the output hose into an approved container or drum that will hold the waste oil.
- 3. Following the instructions for your fluid removal pump, remove all oil from the drive bearing housing.
- 4. Once the oil has been drained from the housing, remove the pump and refill the housing with approximately 3.75 quarts (3.54 liters) of a mild extreme pressure lubricant API-GL-5, No. SAE 80 or 90 weight gear lubricant.
- 5. Replace plug. Torque to specification. See Bolt Torque Specifications



TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
EXCESSIVE VIBRATION	Blades bent. (Blades will become stuck between blade carrier plates and cause an imbalance.)	Replace bent blades. (Blades positioned directly opposite of each other will need to be replaced at the same time.)
	Blades damaged or worn.	Replace worn blades as a set. (Blades positioned directly opposite each other need to be equal in weight; therefore a new blade should not be placed opposite a worr blade.)
	Bearing failure. (To diagnose bearing failure; rotate blade carrier slowly and listen for bearing noise.)	Replace Drive Bearing Housing.
	Foreign material in blade carrier assembly.	Remove any foreign material from blade carrier assembly.
CUTTER STALLS TOO EASILY OR LOSS OF POWER	Pressure and return hoses reversed. (This unit will turn in reverse direction until placed under load, then hydraulic flow will bypass drive motor.)	Check flow direction and switch hydraulic couplers.
	Bearing failure. (To diagnose bearing failure; rotate blade carrier slowly and listen for bearing noise. Bearing failure will reduce power available to function correctly.)	Replace Drive Bearing Housing.
	Foreign material in blade carrier assembly.	Remove any foreign material from blade carrier assembly.
	Imbalance of blade carrier assembly.	Check excessive vibration section for possible causes and remedies.
	Control valve cartridge or o-ring failure.	Replace as required.
STUMP GRINDING STALLS CUTTER OR	Incorrect operating technique.	See "Optional Tooth Kit Operating instructions" for correct operating procedure.
TAKES EXCESSIVE AMOUNT OF TIME TO COMPLETE.	Damaged or worn stump grinding teeth.	Check for worn or damaged teeth and replace as required.
	Bearing failure. (To diagnose bearing failure; rotate blade carrier slowly and listen for bearing noise. Bearing failure will reduce power available to function correctly.	Replace Drive Bearing Housing.
	Control valve cartridge or o-ring failure.	Replace as required.

BOLT TORQUE SPECIFICATIONS

GENERAL TORQUE SPECIFICATION TABLES

Use the following charts when determining bolt torque specifications when special torques are not given. Always use grade 5 or better when replacing bolts.

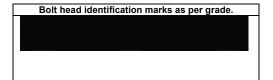
SAE BOLT TORQUE SPECIFICATIONS

NOTE: The following torque values are for use with extreme pressure lubricants, plating or hard washer applications Increase torque 15% when using hardware that is unplated and either dry or lubricated with engine oil.

		SAE	GRAD	E 5 TO	RQUE	SA	E GRAD	E 8 TOR	QUE	
Во	It Size	Pound	s Feet	Newtor	n-Meters	Pound	ds Feet	Newto	n-Meters	Bolt head identification marks as per grade. NOTE: Manufacturing Marks Will Vary
Inches	Millimeters	UNC	UNF	UNC	UNF	UNC	UNF	UNC	UNF	
1/4	6.35	8	9	11	12	10	13	14	18	
5/16	7.94	14	17	19	23	20	25	27	34	
3/8	9.53	30	36	41	49	38	46	52	62	
7/16	11.11	46	54	62	73	60	71	81	96	
1/2	12.70	68	82	92	111	94	112	127	152	
9/16	14.29	94	112	127	152	136	163	184	221	
5/8	15.88	128	153	174	207	187	224	254	304	
3/4	19.05	230	275	312	373	323	395	438	536	
7/8	22.23	340	408	461	553	510	612	691	830	
1	25.40	493	592	668	803	765	918	1037	1245	GRADES
1-1/8	25.58	680	748	922	1014	1088	1224	1475	1660	
1-1/4	31.75	952	1054	1291	1429	1547	1700	2097	2305	
1-3/8	34.93	1241	1428	1683	1936	2023	2312	2743	3135	
1-1/2	38.10	1649	1870	2236	2535	2686	3026	3642	4103	

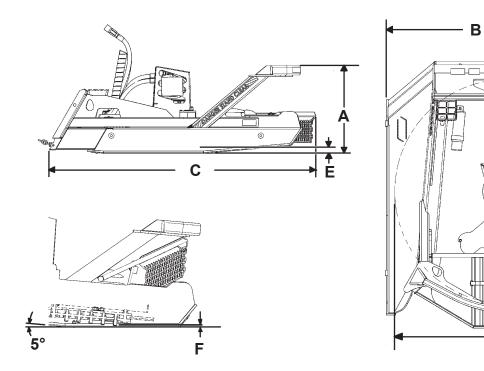
METRIC BOLT TORQUE SPECIFICATIONS

NOTE: The following torque values are for use with metric hardware that is unplated and either dry or lubricated with engine oil. Reduce torque 15% when using hardware that has extreme pressure lubricants, plating or hard washer applications.



Size of Bolt	Grade No.	Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
	5.6		3.6-5.8	4.9-7.9		-	-
M6	8.8	1.0	5.84	7.9-12.7	-	-	-
	10.9		7.2-10	9.8-13.6		-	-
	5.6		7.2-14	9.8-19		12-17	16.3-23
М8	8.8	1.25	17-22	23-29.8	1.0	19-27	25.7-36.6
	10.9		20-26	27.1-35.2		22-31	29.8-42
	5.6		20-25	27.1-33.9		20-29	27.1-39.3
M10	8.8	1.5	34-40	46.1-54.2	1.25	35-47	47.4-63.7
	10.9		38-46	51.5-62.3		40-52	54.2-70.5
	5.6		28-34	37.9-46.1		31-41	42-55.6
M12	8.8	1.75	51-59	69.1-79.9	1.25	56-68	75.9-92.1
	10.9		57-66	77.2-89.4		62-75	84-101.6
	5.6		49-56	66.4-75.9		52-64	70.5-86.7
M14	8.8	2.0	81-93	109.8-126	1.5	90-106	122-143.6
	10.9		96-109	130.1-147.7		107-124	145-168
	5.6		67-77	90.8-104.3		69-83	93.5-112.5
M16	8.8	2.0	116-130	157.2-176.2	1.5	120-138	162.6-187
	10.9		129-145	174.8-196.5		140-158	189.7-214.1
	5.6		88-100	119.2-136		100-117	136-158.5
M18	8.8	2.0	150-168	203.3-227.6	1.5	177-199	239.8-269.6
	10.9		175-194	237.1-262.9		202-231	273.7-313
	5.6		108-130	146.3-176.2		132-150	178.9-203.3
M20	8.8	2.5	186-205	252-277.8	1.5	206-242	279.1-327.9
	10.9		213-249	288.6-337.4		246-289	333.3-391.6

SPECIFICATIONS

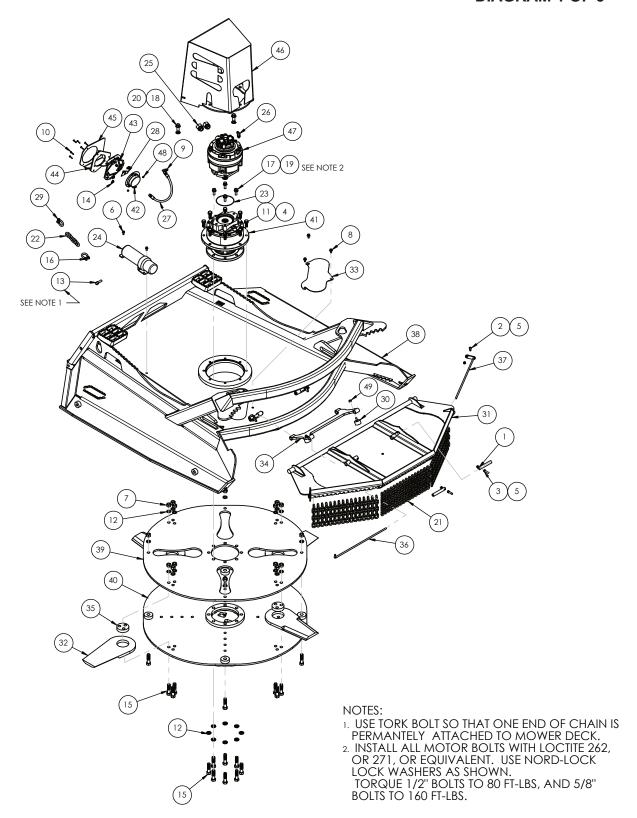


DESCRIPTION	BC72GS
A. Overall Height B. Overall Width C. Overall Length D. Cutting Width E. Minimum Cutting Height (Skid Shoes On Ground) F. Minimum Stump Grinding Height (with Optional Tooth Kit)	28.13" (715 mm) 77.38" (1965 mm) 85.59" (2174 mm) 72.00" (1829 mm) 3.25" (83 mm) .38" (10 mm)
Cutting Capacity (Maximum Tree Diameter) 7.00" (178 mm) Deck Thickness 1/4" High Strength Steel Maximum Operating Pressure (Attachment) 4000 psi (275 bar) Recommended 30-45 gpm(114-170 lpm) Required Skid Steer Lifting Capacity 2200 lbs (998 kg) Weight 2008 lbs (911 kg)	
SPECIFICATIONS AND DESIGN ARE SUBJECT TO CHANGE WITHOUT NOTICE LIABILITY THEREFOR.	AND WITHOUT

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ASSEMBLY #30272-0000

DIAGRAM 1 OF 3



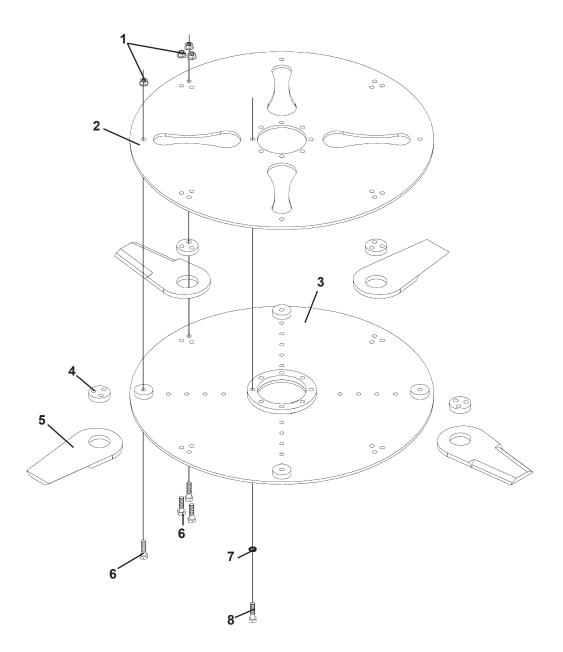
ASSEMBLY #30272-0000

LIST 1 OF 3

<u>ITEM</u>	REQ'D	PART NO.	DESCRIPTION
1	4	13-50267	PIN, .75 X 5.06, PLD
2	2	1043	.38-16 UNC X 1.00 HHCS, GR5
3	4	1045	CAPSCREW, HEX, .38NC X 1.50, GR5, ZC
4	8	1506	.62 LOCK WASHER
5	6	1837	.38-16 UNC TORQUE LOCK NUT
6	2	1930	.31-18 UNC X .75 HHFS
7	16	1936	.75-10 UNC TORQUE LOCK NUT
8	3	1953	.38-16 UNC X 0.75 HHCS FLANGE, GR5
9	1	3417	ELBOW, 4MBOO-6MJ
10	6	10030	SCREW PHM, #10-24NC X 1.00
11	8	10070	.62-11 UNC X 1.75 HHCS
12	24	10191	.75 NORD LOCK WASHER
13	1	10280	TORK BOLT PIN 0.44-14 X 1.50 PLD
14	6	10292	NUT 10-24, U-STYLE CLIP NUT
15	24	10300	SCREW HHC 0.75-10NC X 3.00
16	1	10303	SHACKLE, 38 SCREW PIN
17	4	10309	SCREW HFH .50-13 X 1.50 GR8 PO
18	2	10310	SCREW HFH .62-11 UNC X 1.50 GR8, PO
19	4	10311	WASHER NORD-LOCK .50 SP
20	2	10312	WASHER NORD-LOCK .62 SP
21	48	15326	CHAIN, 31 X 8.25
22	1	18169	LIFT LIMITING CHAIN
23	1	22609	MOTOR O-RING, 2-159
24	1	25453	STORAGE TUBE, MANUALS
25	2	30292	FTG 12FB-16MB
26	1	30516	ELBOW 90 6MJ-4MBSPP
27	1	38871	HOSE .25 X 22 4FP-6FJ 100R16 HS
28	1	41258	DECAL, PRESSURE GUAGE OVERLAY
29	1	89968	SHACKLE, .38 STRAIGHT
30	2	102064	BUMPER, RUBBER, 1.72 X 1.03
31	1	116613	SHIELD WMT, 72" HD CUTTER
32	4	116620	BLADE, DOUBLE EDGE, 72" HD CUTTER
33	1	116627	PLATE, ACCESS COVER
34	1	116628	PIVOT LINK WMT
35	4	116800	SPACER, BLADE MOUNTING
36	1	116804	ROD, CHAIN RETAINER
37	2	116805	ROD WMT, CHAIN RETENTION, BOLTED
38	1	117130	DECK WMT, 72" HD CUTTER
39	1	117139	PLATE, CIR, BLADE CARRIER, UPPER
40	1	117140	BLADE CARRIER WMT, LOWER
41	1	117145	DRIVE BEARING HOUSING
42	1	117880	GUAGE, PRESSURE/BAR, 1/4NPT, 4"
43	1	123344	SHEET 16GAX7.18 X 7.73
44	1	123346	RUBBER ISOLATOR
45	1	123347	BRACKET, GUAGE MTG
46	1	123380	WMT, MOTOR HOOD, HD BRUSH CUTTER
47	1	125351	MOTOR 12.26 CID 17T SAE C-2/4, BOLT, SAI
48	6	2002078	NUT LOCK CENTLOK 10-24 PLD
49	2	2005510	NUT, HEX FLG 3/8-16 UNC

ASSEMBLY #30272-0000

DIAGRAM 2 OF 3



ASSEMBLY #30272-0000

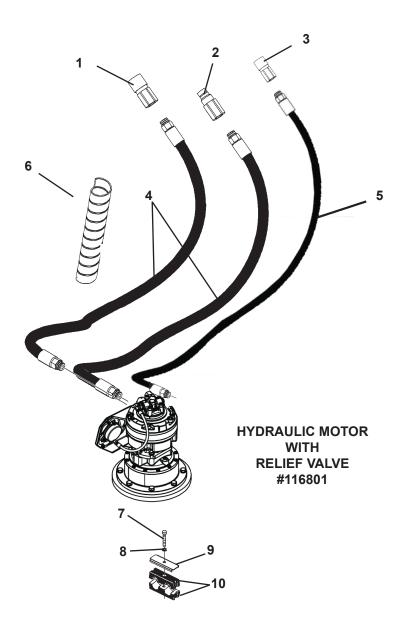
LIST 2 OF 3

<u>ITEM</u>	REQ'D	PART NO.	DESCRIPTION
1	16	RHW8604	.75" UNC Flange Top Lock Nut Grade 8
2	1	117139	Upper Blade Carrier
3	1	117140	Lower Blade Carrier
4	4	116800	Blade Mounting Spacer
5	4	116620	Double Edged Blade
6	16	10245	.75" UNC X 2.75" Hex Capscrew Grade 8
7	8	10191	.75" Nord Lock Washer
8	8	10060	.75" UNC X 3.00" Hex Capscrew Grade 8

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ASSEMBLY #30272-0000

DIAGRAM 3 OF 3



ASSEMBLY #30272-0000

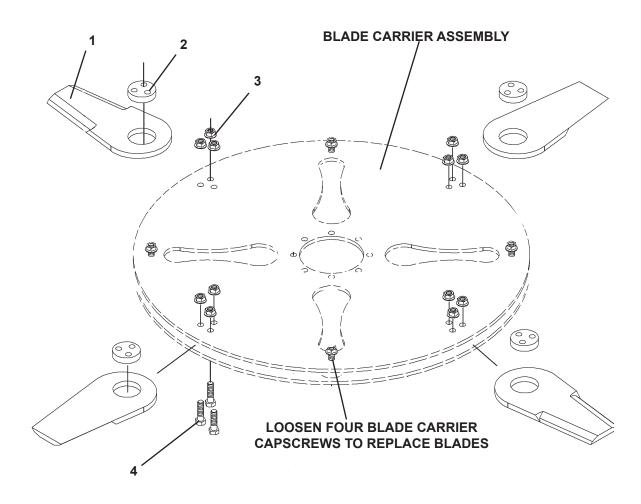
LIST 3 OF 3

<u>ITEM</u>	REQ'D	PART NO.	DESCRIPTION
1	1	22518	Female Quick Coupler 12FBo .50" Body
	-	84921	Female Quick Coupler 12FBo .62" Body
	-	22520	Female Quick Coupler 12FBo .75" Body
2	1	22519	Male Quick Coupler 12FBo .50" Body
	-	84922	Male Quick Coupler 12FBo .62" Body
	-	22521	Male Quick Coupler 12FBo .75" Body
3	1	84928	Female Quick Coupler 8FBo .38 Body
4	2	38742	Hose, 75" X 96" 12MBo-12MBo-Hose Sock
5	1	38162	Hose, .38 X 112" 6FJ-8MB-Hose Sock
6	1	34146	Hose Protector Coil
7	1	1026	.31 UNC X 2.00" Hex Capscrew
8	1	1502	.31" Lock Washer
9	1	22315	Hose Clamp Plate
10	1	22316	1" Hose Clamp Cushion

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REPLACEMENT BLADE KIT

ASSEMBLY #117194

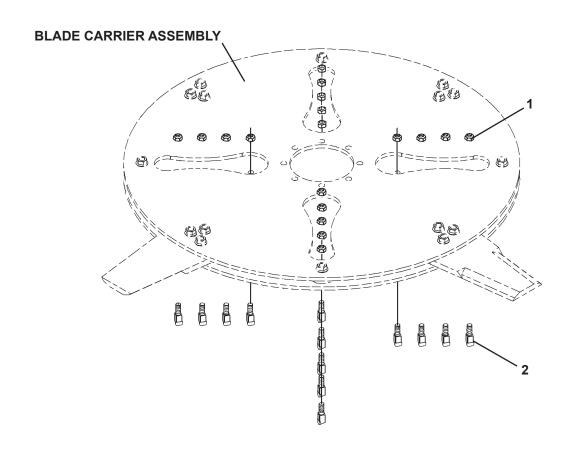


ALTERNATE BLADE ORIENTATION (WHEN ONE SIDE OF BLADE IS WORN, FLIP ALL FOUR BLADES OVER.)

<u>ITEM</u>	REQ'D	PART NO.	DESCRIPTION
1	4	116620	Blade
2	4	116800	Spacer
3	12	RHW8604	.75" UNC Flangehead Lock Nut - Grade 8
4	12	10245	.75" UNC X 2.75" Hex Capscrew - Grade 8

OPTIONAL CARBIDE TOOTH KIT

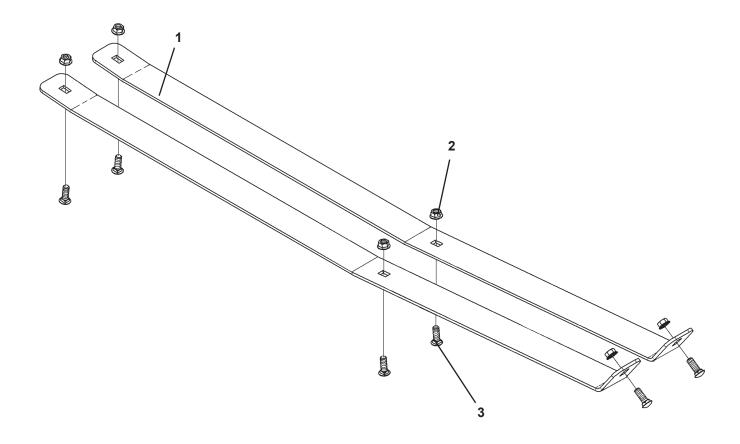
ASSEMBLY #117193



<u>ITEM</u>	REQ'D	PART NO.	<u>DESCRIPTION</u>
1	18	10003	.62" UNF Deformed Lock Nut
2	18	19917	Threaded Carbide Tooth

WEAR PLATE KIT

ASSEMBLY #117192



<u>ITEM</u>	REQ'D	PART NO.	DESCRIPTION
1	2	117191	Skid Shoe Wear Plate
2	6	1790	.50" UNC Flangehead Lock Nut
3	6	1872	.50" UNC X 1.50" Plow Bolt

Limited Warranty

Except for the Excluded Products as described below, all new products are warranted to be free from defects in material and/or workmanship during the Warranty Period, in accordance with and subject to the terms and conditions of this Limited Warranty.

- Excluded Products. The following products are excluded from this Limited Warranty:

 (a) Any cable, part that engages with the ground (i.e. sprockets), digging chain, bearing, teeth, tamping and/or demolition head, blade cutting edge, pilot bit, auger teeth and broom brush that either constitutes or is part of a product.
 - (b) Any product, merchandise or component that, in the opinion of Digga Australia, has been (i) misused; (ii) modified in any unauthorized manner; (iii) altered; (iv) damaged; (v) involved in an accident; or (vi) repaired using parts not obtained through Digga Australia.
- 2. Warranty Period. The Limited Warranty is provided only to those defects that occur during the Warranty Period, which is the period that begins on the first to occur of: (i) the date of initial purchase by an end-user, (ii) the date the product is first leased or rented, or (iii) the date that is six (6) months after the date of shipment by Digga Australia as evidenced by the invoiced shipment date (the "Commencement Date") & ends on the date that is twelve (12) months after the Commencement Date.
- 3. Terms and Conditions of Limited Warranty. The following terms and conditions apply to the Limited Warranty hereby provided:
 - (a) Option to Repair or Replace. Digga Australia shall have the option to repair or replace the product.
 - (b) Timely Repair and Notice. In order to obtain the Limited Warranty, (i) the product must be repaired within thirty (30) days from the date of failure, and (ii) a claim under the warranty must be submitted to Digga Australia in writing within thirty (30) days from the date of repair.
 - (c)Return of Defective PartorProduct. Ifrequested by Digga Australia, the alleged defective part or product shall be shipped to Digga Australia at its manufacturing facility or other location specified by Digga Australia, with freight PRE-PAID by the claimant, to allow Digga Australia to inspect the part or product.

Claims that fail to comply with any of the above terms and conditions shall be denied.

LIMITATIONS AND EXCLUSIONS.

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