



# RUT MFG EXCAVATOR DISC MULCHER

## WARNING!

For safe operation, read these rules and instructions carefully to avoid accidents that could result in Death or Serious Injury.

TO THE OWNER/OPERATOR OF THIS IMPLEMENT Please read this manual “before” unpacking or using this implement for the first time. This manual provides you with the necessary instructions to safely install and use your purchase. Do not let other people use this attachment without first being instructed how to safely use it.

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# Importance of Safety

Accidents can be very costly to human life and property. As the operator is the #1 safety device on all types of vehicles or equipment, it is important that the operator read, learn and know all safety recommendations for this product. The user is responsible to his family, friends and co-workers to operate in a safe manner. Ensure that everyone who operates or assists in the operation or maintenance of this product read and understand all the elements required to safely operate this piece of equipment. This attachment has a spinning blade which adds additional danger. Throughout this manual you will find safety notes which are very important to read and understand before operating this piece of equipment. These classifications alert you to situations that could be harmful to you or bystanders.

## Operator Safety Training Tips

It is the responsibility of the operator using this attachment to be acquainted with the safe operation. In addition to reading this manual, it is important that the operator read the excavator's operation manual and follow its manufacturer's recommendations!

- Before lifting or lowering the mulcher, make sure the area is clear of bystanders or objects.
- Machinery parts sometimes have sharp edges. Wear work gloves when moving parts. Always use caution around mulcher teeth as they often are very sharp.
- Never use drugs or alcoholic drinks when operating or servicing this piece of equipment.
- Always wear the proper personal protection equipment when servicing or operating this piece of equipment. Never service or operate this attachment with bare feet, sandals, or another light footwear.
- Always use eye protection during operation. Mount this attachment on a excavator equipped with thermoplastic polycarbonate door panel and side panels.
- Speed Kills! Operate this implement at a safe working speed. When transporting the implement, keep a safe speed to avoid losing control of the attachment or prime mover.
- Keep proper clearance between the implement and objects (utilities, large rocks, buildings, etc.). Contacting these objects with the implement or prime mover could cause a loss of control or damage to the implement or property.
- Before each operation of this implement, check all hardware (bolts, nuts, pins, etc.) for their proper location and tightness.
- Stop the engine on the Excavator and set the brake to avoid the implement rolling forward or backwards while you are exiting the prime mover
- Store this implement in an area not frequented by children
- Allow no riders on this attachment. Keep all bystanders clear of attachment during operation.
- Always replace worn, torn or missing safety decals before operating.
- Never operate the mulcher when bystanders are within 300 feet (91 m) of the work area.
- Cut only during daylight

# Excavator Requirements

Your mulching disc should only be used on a excavator with a minimum weight of 5,000lbs. These disc mulchers can operate from 10gpm-45gpm.

The range of flow of your excavator loader may determine which model mulching disc motor will work best.

To protect the operator from any flying debris, it is important that the excavator should be equipped with a thermoplastic polycarbonate windshield or similar material, and similar protection on the sides of the operator's cab.

**Make sure your excavator is in good working condition. Follow the operating instructions found in the manual that accompanied your excavator. Failure to do so could result in Minor or Serious Injury.**

## Unpacking Your Shipment

Your attachment arrives from the factory banded to a wooden pallet and requires no final assembly before use. Careless removal of the shipping bands that secure the implement to the pallet could result in Minor or Serious Injury. Clear the area of all bystanders and stand to the side when cutting the bands with a pair of sheet metal shears.

## Using Your Attachment

### Connecting Mulcher to Excavator

Attach the mulcher to the excavator boom with either you quick attach or your pin on hookup.

**Wipe off any dirt or dust from the male or female hydraulic flat-face couplers with a clean rag before attaching hoses, to keep contaminants from entering the hydraulic system.**

Connect the attachment hydraulic hoses to the auxiliary supply couplers located on your excavator boom.

When running the mulcher, the excavator should be in hammer mode. Refer to your owner's manual for instructions. If your return line pressure exceeds 300 psi a case drain will need to be installed to your machine.

Check the surrounding area for bystanders and clear them before starting the excavator or attachment.

Before operating the attachment, always visually inspect and verify that the coupler is secured properly.

### Pre-Operation Walk-around Inspection

Before every use, it is important to perform a short inspection and certain maintenance on your mulcher

- Check that all shields and guards are in place.
- Look for loose bolts and tighten them if necessary.
- Check that all safety decals are in place and can be read. Replace them if necessary.

- Refer to disk manual regarding safety checks and maintenance of blade and teeth.
- Take care of our environment. Repair any hydraulic leaks.

### Mulcher Boom Controls

Your mulcher is designed to run off the excavator's auxiliary hydraulic system and is activated and deactivated by a control in the operator's cab. Consult your excavator's operator's manual for precise instructions on how to activate and deactivate the auxiliary circuit. Height and tilt functions of the mulcher are operated with the control handles or pedals in the cab. Consult your excavator's operator's manual for precise instructions regarding these functions.

### Engaging Mulcher the First Time

**If this is your initial startup with this attachment on this machine, check the excavator's hydraulic oil level and add oil, if necessary, before and after doing steps 1- 3 below.**

**Make sure the case drain hose is properly attached to the prime mover's case drain connection. Do not operate this attachment without the case drain hose attached.**

After starting the excavator, lift the attachment 6" (152mm) off the ground surface:

1. With the excavator's engine RPMs just above idle, slowly engage the auxiliary hydraulic flow to the mulcher. Use your machine's auxiliary hydraulic flow lever or switch, activate the auxiliary flow to the mulcher.
2. Allow the mulcher to run for 30 seconds to purge the air from the system. Ensure that the rotation is correct. The rotation of this unit is clockwise. Turn off the mulcher drive, allowing it to come to a complete stop.
3. Lower the mulcher attachment to the ground and shut off the excavator's engine and exit the operator's compartment.
4. Check the excavator's hydraulic oil level and add oil if necessary.
5. Inspect the hydraulic plumbing for any noticeable leaks. Correct these leaks before continuing.
6. Restart the excavator. With the attachment raised off the ground and the engine throttle set just above idle, engage the drive circuit. Allow mulcher to speed up before increasing flow.

### Starting the Mulcher

**Moving or engaging the mulcher with bystanders in the area could result in Death or Serious Injury. Before engaging mulcher hydraulics, always make sure the area is clear of bystanders.**

Engage the mulcher drive hydraulics with the prime mover's engine at a low rpm. Slowly raise the excavator's engine's rpm to the correct and desired speed. Use the excavator's hand throttle to set the speed.

**If the mulcher ever creates a vibration when ramping up speed, turn the mulcher attachment to the off position and investigate cause. Refer to the troubleshooting section in this manual.**

### Stopping the Mulcher

When stopping the mulcher, raise the mulcher slightly and lower the excavator's engine RPMs to an idle, and allow the mulcher to slow down.

After the mulcher has slowed down you may turn the auxiliary hydraulics to the "off" position.

### Getting Familiar with the Attachment

**Never operate the mulcher when bystanders are within 300' (91 m) of your work area. Flying debris could result in Death or Serious Injury.**

**Be cautious when operating on un-level ground surfaces. A machine rolls over could result in Minor or Serious Injury. Always wear your seat belt when operating this type of machinery.**

Before starting the excavator engine with this mulcher attached, make sure you are knowledgeable and comfortable with the operation of the mulcher controls as outlined in the previous and following sections of this manual.

When operating the mulcher, set the excavator throttle at a speed that will produce the required flow. Refer to your excavator manual or call your local excavator dealer for additional help, if necessary. Your excavator dealer can measure the flow available on your machine and recommend throttle setting that is compatible with this attachment.

Listen and feel for any strange vibration when working the mulcher. A bad vibration felt when mulching could indicate a damaged disc, or material trying to be cut at too fast a pace. Slow down the excavator to see if vibration stops. If it does not, stop the mulcher, turn off the excavator's engine and investigate cause of vibration. Refer to the troubleshooting section in this manual for further instructions.

Always be aware of your surroundings. While watching the mulcher, also pay attention to what obstacles or terrain are in front of the mulcher and prime mover's tracks. Maintain a safe speed while cutting.

**Cutting tree branches with the mulcher in an elevated position could result in Death or Serious Injury if the excavator becomes unstable. Never raise the cutter more a few feet off the ground without extreme caution.**

### Before Cutting

Inspect the area to be cut and make sure it is free of any utilities, rocks, fence posts, or any other objects that you do not want to cut or that would damage the mulcher.

Determine a safe cutting pattern before the start of the cut.

Do not enter an area to be cut before the mulcher rotation come up to the operating speed.

### Cutting Tips

Never operate this attachment when bystanders are in proximity of the work area, this could result in Minor or Serious Injury from flying debris.

1. Always inspect work area before starting the mulcher. Locate and mark any utilities, steel posts, rocks or any other objects that could be damaged or would damage the mulcher during operation. Never assume the work area is safe and never skip the inspection before the start of operation.
2. Operate at a safe comfortable pace that will allow you to watch the area ahead of the mulcher.

3. Make sure you are operating the excavator's engine at an rpm that will produce the volume of oil flow required for this attachment.

**Do not operate the mulcher if you (the operator) can see the disc. If the operator can see the disc, the back of the cutter is raised TOO HIGH and should be lowered to avoid debris being thrown back at the operator and causing Minor or Serious Injury.**

Always allow mulcher to come up to operating speed before moving attachment into the material you wish to cut.

## Maintaining your Attachment

### Lubrication Check & Add

The use and maintenance of proper lubrication is critical to the successful operation and performance of the engineered bearing housing.

Level the attachment. Remove the motor from the gear box. If oil level is low, add 90w gear oil lubricant to the housing until the gearbox is filled. Reattach motor to gearbox. For seasonal oil change, while motor is off gear box, tilt attachment to drain oil out of gear box or siphon oil out. Refill to proper level when emptied and reattach motor.

### Before Every Use

- Check that all fasteners (nuts, bolts, pins, keepers) are in their right place and are tight.
- Inspect and replace any worn, torn or missing safety decals.
- Investigate the location of any oil leaks and repair.

### Every Week

Check the condition of the teeth by raising the attachment off the ground and tilt the attachment forward to the 90° position. Lower the attachment to the ground. Sharpe teeth will cut more efficiently than dull ones.

### After Every Season

Inspect the implement for any loose or worn parts that may need to be replaced prior to the next mulching season.

The gearbox oil should be changed every 2500 operating hours, old oil should be drained and measured, and the same amount of new oil should then be refilled. The bearings should be greased every time the oil is changed. Use a grease gun to fill cavity until it is full.

The disc assembly should be disassembled and inspected every 1000 operating hours or sooner.

Visually inspect the teeth and disc as described in manual. Clean, sand & repaint any area that looks worn or scratched to prevent further rusting. Use an equipment- paint found at your local hardware store or building center.

Store your implement in a shed or cover with a water-proof tarp to protect it from the weather. Store in an area not frequented by children.

### Disc Removal

**Unhook the unit from the excavator and lower the back to the ground to where the disc is at a 90-degree angle from the ground. Use a hoist, power jack, or forklift under the disc to support the disc. Carefully remove the 6 bolts that attach the disc to the bearing housing.**

**Be cautious during the steps detailed. The blade cutter could fall resulting in Minor or Serious Injury. Stand to the side.**

### Teeth Removal & Replacement

**Teeth can be very sharp and could cause Minor or Serious Injury if mishandled. Always wear protective gloves and footwear.**

**To avoid an accident that could result in Death or Serious Injury, never find yourself in a position where any body part is located under an unsupported cutter deck when servicing this attachment.**

### Hydraulic System

**A small stream of oil from a pinhole leak could penetrate your skin if contacted. To avoid an accident that could result in Death or Serious Injury, never use your hand or other body parts to locate a hydraulic leak.**

**Always release the hydraulic system pressure from the mulcher circuit prior to removing the attachment or any hydraulic system service work.**

**Make sure the case drain hose is properly attached to the prime mover's case drain connection. Do not operate this attachment without the case drain hose attached and connected to the excavator's case drain circuit**



## Hardware Torque

	Grade8 lb-ft
3\8	45
1\2	110
3\4	380

## Parts

When requiring any parts for your implement, please collect the following information:

Attachment Model Number

Attachment Serial Number

Cut Width

Part Description

Quantity Required

Ship-to Name & Address Payment Method

## Troubleshooting

ISSUE	CAUSE	SOLUTION
Mulcher bogs down	<ol style="list-style-type: none"><li>1. Dull Teeth</li><li>2. Mulcher speed too slow</li></ol>	<ul style="list-style-type: none"><li>● (1) Replace dull or damaged teeth.</li><li>● (2) Raise engine RPMs or investigate other low oil flow problems.</li></ul>
Vibration felt when running mulcher	<ol style="list-style-type: none"><li>1. Missing, loose, damaged, or unbalanced cutting disc</li><li>2. Gearbox loose on deck</li><li>3. Cutting height too low for cutting in sandy or rocky soils</li></ol>	<ul style="list-style-type: none"><li>● (1) Replace teeth with new or sharpened and equally balanced teeth.</li><li>● (2) Tighten gearbox mounting bolts or replace bolts if needed.</li><li>● (3) Raise mulcher height</li></ul>
Teeth get dull too quickly	<ol style="list-style-type: none"><li>1. Teeth have contacted solid objects such as rock or steel.</li></ol>	<ul style="list-style-type: none"><li>● (1) Clear cutting area of solid objects before hitting them. Raise the cutter height also to be sure you clear solid objects.</li></ul>
Teeth Breaking	<ol style="list-style-type: none"><li>1. Excessive shock loads</li></ol>	<ul style="list-style-type: none"><li>● (1) Avoid hitting large solid objects</li></ul>

Hydraulic oil level goes down during operation	<ol style="list-style-type: none"> <li>1. Leak at mulcher motor or other plumbing issues.</li> <li>2. Leaks in Excavator hydraulic system</li> <li>3. Motor seal leak</li> </ol>	<ul style="list-style-type: none"> <li>● (1) Investigate and repair</li> <li>● (2) Investigate and repair</li> <li>● (3) cutter run without case drain connected to skid steer.</li> </ul>
Disc Does not spin when flow is activated	<ol style="list-style-type: none"> <li>1. No oil flows</li> <li>2. Motor or drive shaft failed</li> </ol>	<ul style="list-style-type: none"> <li>● (1) Check that skid steer auxiliary circuit is activating</li> <li>● (2) Call your dealer</li> </ul>

