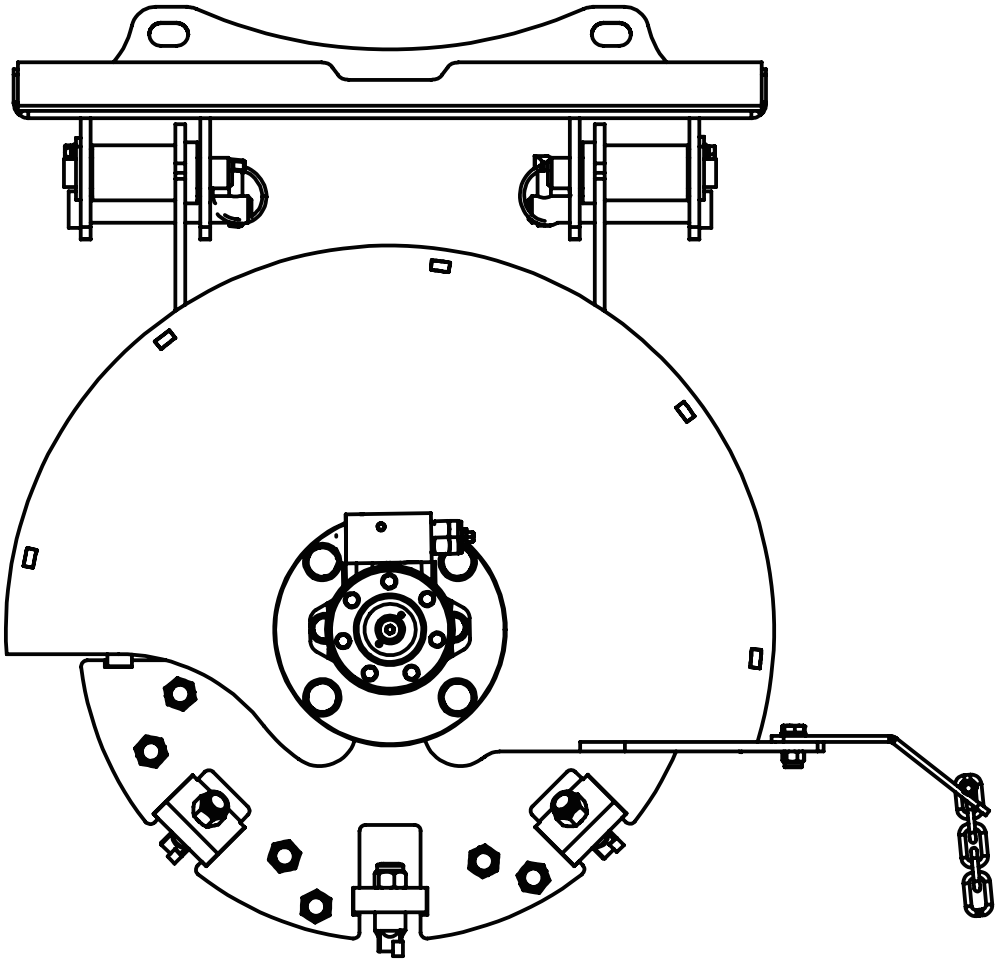
MSG20

SKID STEER STUMP GRINDER



Operator's Manual

CROBA

READ AND UNDERSTAND THE ENTIRE MANUAL BEFORE OPERATING MACHINE

INTRODUCTION

Overview

Thank you for choosing the MechMaxx MSG20 Skid Steer Stump Grinder. This equipment has been engineered and manufactured to deliver efficient stump grinding performance and dependable operation.

The compact and innovative design allows for economical manufacture while providing excellent convenience for storage and transport. The self-feeding frame design, combined with enhanced operator visibility, makes the stump grinder easy to use and efficient to operate. Hydraulic controls are designed for convenient adjustment and compatibility with most skid steer loaders.

Each stump grinder is equipped with a debris shield as standard equipment. The stump grinder must not be operated unless the debris shield is properly installed.

To ensure safe, efficient, and trouble-free operation, all persons who operate, service, or maintain this equipment must read and understand the Safety, Operation, Maintenance, and Troubleshooting information provided in this Operator's Manual.

This manual covers the MechMaxx MSG20 Skid Steer Stump Grinder. Refer to the Table of Contents to locate specific information. Keep this manual available for future reference and provide it to any subsequent operator or owner.

If you require assistance, further information, or additional copies of this manual, please contact your MechMaxx dealer, distributor, or visit www.mechmaxx.com.

Intended Use and Operator Qualification

This stump grinder shall be operated only by experienced personnel who have been trained in the safe operation of the carrier machine and who are familiar with the hazards associated with stump grinder operation and its intended application.

Operators shall use appropriate personal protective equipment to minimize the risk of injury from hazards that cannot be fully eliminated or controlled by the design of the equipment.

During operation, care shall be taken to prevent contact between the stump grinder and metal objects, stones, or other foreign materials.

This equipment is not designed for use in hazardous atmospheres where flammable gases or vapors may create a risk of fire or explosion. Operation in such environments is prohibited.

Improper use of this equipment may result in serious injury or death to the operator or bystanders, and may also cause damage to the carrier machine or the attachment.

TABLE OF CONTENTS

INTRODUCTION 1
TABLE OF CONTENTS 2
SPECIFICATIONS 3
SAFETY INSTRUCTIONS 4
SAFETY SYMBOL 4
PERSONAL SAFETY 4
MAINTENANCE SAFETY 5
SAFETY SIGNS 6
KNOW YOUR MACHINE 8
OPERATION 9
ATTACH TO SKID STEER 9
DETACH FROM SKID STEER 10
STUMP GRINDING PROCEDURE 11
MAINTENANCE 12
REPLACING TEETH 12
SHIELD REPLACEMENT 12
TROUBLESHOOTING 13
PARTS DIAGRAM 14
PARTS LIST 15

SPECIFICATIONS

Model	MSG20
Cutting Wheel Diameter	20 in
Number of Teeth	24
Tooth Configuration	Carbide Steel
Hydraulic GPM	10-17
Hydraulic pressure max:	2900psi
Speed max	540r/min
Operating Pressure	2,538 psi
Cutting Height (Above Ground)	Determined by the skid steer
Cutting Depth (Below Ground)	7 in
Overload Protection	Relief Valve
Weight	309 lb

SAFETY INSTRUCTIONS

General safety messages are provided in this section. Specific safety messages are included throughout this manual where potential hazards may arise if procedures or instructions are not followed correctly and completely.

SAFETY SYMBOL

This is the international safety alert symbol. When used with a signal word and a message, it alerts you to potential hazards that could result in injury or death.

A signal word such as "DANGER," "WARNING," or "CAUTION" is used with the safety alert symbol.

DANGER: Indicates an imminent hazard which, if not avoided, will result in serious injury or death.

WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.

CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or damage to the product or property.

Safety decals bearing the signal words "DANGER," "WARNING," or "CAUTION" are affixed to the trencher near specific hazards. Read this manual and review all decals on the trencher before operating the machine.

PERSONAL SAFETY

Do not allow children to operate this machine at any time.

Keep children, pets, and all unauthorized persons away from the work area. Remain alert and shut down the machine immediately if anyone enters the work area. Children must be kept under the supervision of a responsible adult at all times.

Stay alert and use common sense when operating the skid steer and stump grinder attachment. Do not operate the machine while tired or under the influence of drugs, alcohol, or medication. A moment of inattention may result in serious injury or death.

Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep hair, clothing, and gloves away from moving parts. Loose clothing, jewelry, or long hair may become entangled in moving components.

Wear appropriate personal protective equipment at all times. Use safety glasses or goggles with side shields that comply with applicable safety standards. Use a face shield if required by operating conditions. In dusty conditions, wear a dust mask or respirator as appropriate. Wear hearing protection, a hard hat, gloves, and sturdy non-slip safety footwear. This requirement applies to both the operator and anyone working nearby.

Do not overreach. Maintain proper footing and balance at all times when entering, leaving, or working around the machine.

Never allow anyone to ride on the stump grinder attachment or the carrier machine unless a proper operator's station is provided.

Identify hazards and take appropriate precautions to avoid accidents and reduce risk. Hazards may include, but are not limited to, rotating parts, thrown objects, machine movement, machine weight, attachment weight, and ground conditions.

Inspect the work area thoroughly before operation. Remove debris and other obstacles that could create a hazard during grinding. Operate only on firm, level ground whenever possible.

Never place any part of your body in an area where injury could occur if the machine, attachment, or components move during operation, inspection, maintenance, repair, loading, or transport.

Keep all bystanders and pets at least 75 ft (23 m) away from the work area. If anyone approaches the machine, stop operation immediately.

WARNING
- **Use the stump grinder only for its intended applications.**
- **Any other use may result in personal injury, equipment damage, and may void the warranty.**

The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product but must be supplied by the operator.

MAINTENANCE SAFETY

Only trained and qualified personnel shall perform maintenance or repairs on the skid steer stump grinder. Before performing any service, inspection, adjustment, cleaning, repair, or storage procedure, park the machine on firm, level ground, shut off the engine, engage the parking brake, remove the key, and relieve all hydraulic pressure.

Keep all guards, shields, and safety devices in place and in good condition. Never service the machine while it is running. Do not place any part of your body near the cutting wheel, teeth, or moving components until all motion has stopped. The cutting teeth are sharp and can cause serious injury even when not moving.

Use caution when working with the hydraulic system. Hydraulic fluid under pressure can penetrate the skin and cause serious injury. Never use your hands to check for leaks. Before disconnecting any hose or fitting, make sure all pressure has been relieved.

Inspect the stump grinder regularly. Check cutting teeth, fasteners, hydraulic hoses, fittings, guards, and safety decals for wear, damage, or looseness. Replace damaged or missing parts before operating the machine.

Keep the machine clean and free of wood chips, dirt, grease, and debris. Never work under a raised or unsupported attachment. Use proper lifting and support devices whenever the attachment must be raised for service.

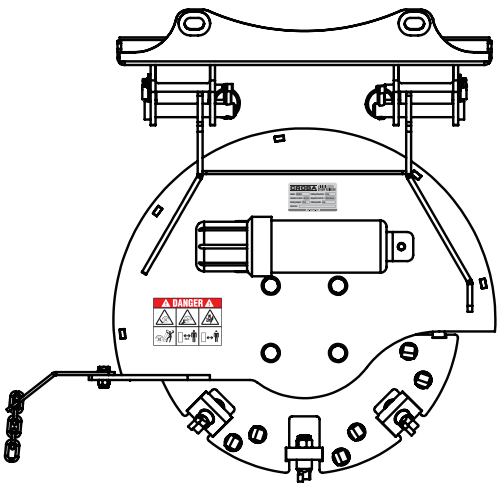
Failure to follow proper maintenance safety procedures may result in serious injury, death, or equipment damage.

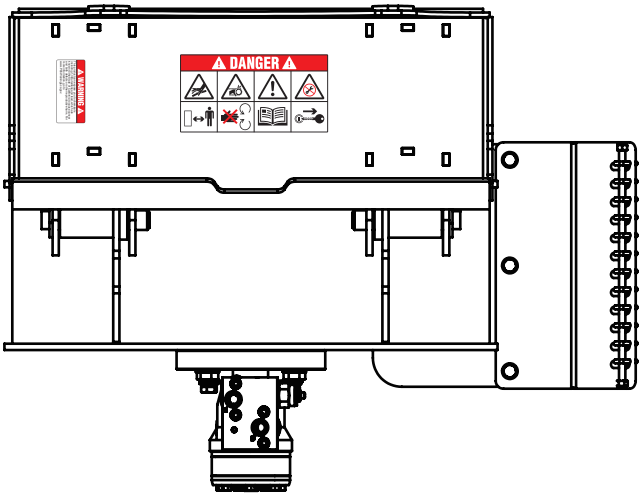
WARNING
- **Moving parts can crush or cut. Keep clear of all moving components.**

SAFETY SIGNS

The rating plate on your machine may show symbols. These represent important information about the product or instructions on its use.

If any decals are missing, damaged, or not understood, contact your dealer immediately.







1.Keep hands away from hazardous areas.
Do not place your hands near cutting, pinching, or chain-driven components. Serious injury, including amputation, may result.

2.Stay clear of rotating and moving parts.
Sprockets, chains, and other moving components can cause severe injury. Keep a safe distance from all moving parts during operation.

3.Be alert to general hazard warnings.
This machine presents multiple hazards. Use extreme caution during operation, inspection, maintenance, and service.

4.Do not operate with improper tools or unsafe conditions.
Never operate the machine if it is damaged, improperly maintained, or being serviced with unsuitable tools or methods.

5.Maintain a safe distance from the machine.
Operators and bystanders must remain clear of the hazard area while the machine is in operation.

6.Never reach into moving components by hand.
Do not attempt to clear, adjust, or touch rotating parts by hand. Always stop the machine before performing any cleaning or service.

7.Read the operator's manual before use.
All operators must read and understand the operator's manual before operating the machine.

8.Shut off the machine and remove the key before servicing.
Before adjustment, cleaning, lubrication, repair, or maintenance, shut off the engine, remove the key, and wait for all moving parts to come to a complete stop.

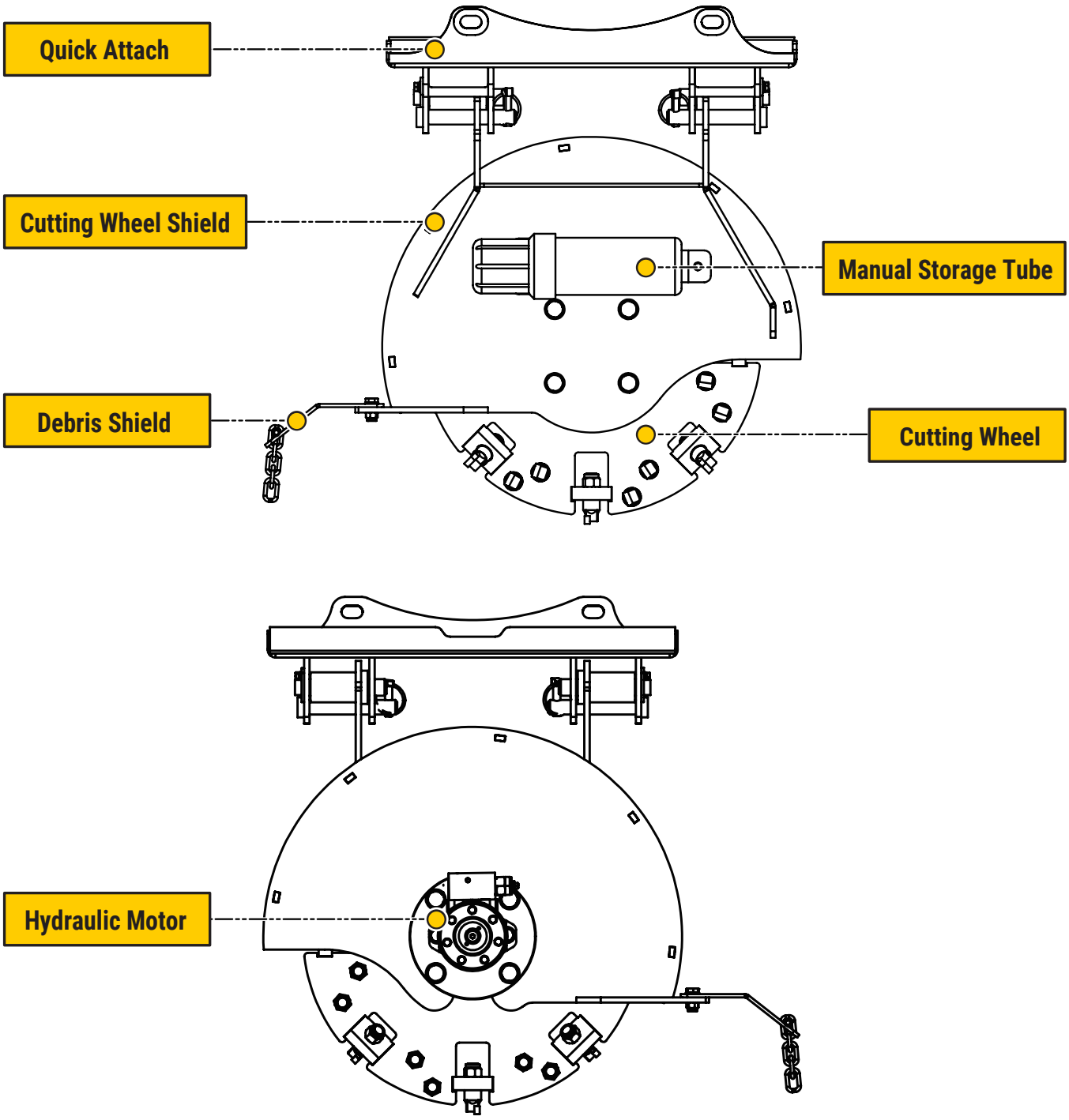


1.Keep clear of the rotating cutting wheel.
The rotating cutting wheel can cause severe injury, including amputation.
2.Keep hands and feet away from moving parts.
Do not place hands, feet, or any part of the body near the rotating wheel or other moving components.
3.Be aware of underground hazards.
Contact with buried rocks, metal, or other hidden objects may cause sudden machine movement or flying debris.
4.Protect against thrown objects.
During operation, the machine may throw wood chips, stones, dirt, and other debris, which can cause serious injury.
5.Keep bystanders away from the work area.
All bystanders must remain at least 246 ft (75 m) away from the machine during operation.
6.Maintain a safe distance on all sides of the machine.
Hazardous flying debris and moving parts may cause injury to anyone entering the danger area.



Remove the pin before operating the skid steer stump grinder. Operating the machine with the pin installed may cause damage to the machine.

KNOW YOUR MACHINE



OPERATION

Before operating the stump grinder, read and understand this manual and the skid steer loader Operator's Manual. Only trained and qualified operators shall operate the skid steer loader and stump grinder. Before use, inspect the machine, attachment, hydraulic hoses, guards, shields, decals, and cutting teeth. Do not operate the equipment if any component is damaged, loose, missing, or not functioning properly.

Before starting work, make sure the stump grinder is securely attached to the skid steer and that all quick-attach locking devices are fully engaged. Verify that all hydraulic connections are clean, properly connected, and free of leaks. Keep all bystanders, pets, and unauthorized persons away from the work area. Flying debris may cause serious injury or death.

Operate the stump grinder only from the operator's seat of the skid steer. Always wear appropriate personal protective equipment, including eye protection, hearing protection, sturdy footwear, gloves, and other protective equipment as required by the working conditions. It is recommended that the carrier machine be equipped with a forestry guard or equivalent operator protection.

Before grinding, inspect the work area for rocks, metal, wire, buried utilities, and other foreign objects. Have all underground utilities properly located and marked before beginning operation. Never operate the stump grinder near power lines or in hazardous atmospheres containing flammable dust, gases, or vapors.

Position the skid steer on firm, level ground whenever possible. Approach the stump slowly and lower the stump grinder into the working position. Engage the auxiliary hydraulics according to the skid steer manufacturer's instructions. Bring the cutting wheel up to operating speed before contacting the stump. Begin grinding with light, controlled passes. Do not force the cutting wheel into the stump. Move the attachment gradually from side to side and lower it in small increments to remove material evenly.

Maintain full control of the skid steer at all times during operation. Operate at a safe speed and use extra caution on uneven, soft, or sloped ground. Keep the attachment as low as practical during movement. Avoid sudden starts, stops, or sharp turns. If excessive vibration, unusual noise, hydraulic leakage, or abnormal machine movement occurs, stop operation immediately and inspect the equipment before continuing.

Never allow anyone to approach the stump grinder while it is operating. Keep hands, feet, and all parts of the body away from the cutting wheel and moving components. Do not attempt to clear debris, make adjustments, or inspect the attachment while the engine is running or while hydraulic power is engaged.

When grinding is complete, disengage the auxiliary hydraulics and allow the cutting wheel to come to a complete stop. Raise the attachment to a safe transport position and move the machine carefully away from the work area. Before leaving the operator's seat, lower the attachment as required, place the controls in neutral, engage the parking brake, shut off the engine, and remove the key.

ATTACH TO SKID STEER

WARNING:
To prevent serious injury, death, or machine damage, place the skid steer transmission in PARK, lower the attachment mounting plate as required, engage the parking brake, shut off the engine, and remove the key before attaching the stump grinder. Never position yourself between the skid steer and the stump grinder during the attachment process. The skid steer and stump grinder shall be operated only by experienced and properly trained personnel.

- Read, understand, and follow all safety instructions before attaching the stump grinder.
- Attach the skid steer to the stump grinder in accordance with the skid steer Operator's Manual.
- Verify that the quick-attach mechanism, pins, or locking levers are fully engaged and secured in the correct position.
- Connect the hydraulic hoses. Make sure all hydraulic connections are clean and secure, and verify that the hoses are routed clear of pinch points, sharp edges, and moving parts.

- Move the machine to a clear, open area and test all attachment functions to confirm proper installation and operation before use.

Failure to attach the stump grinder correctly may result in attachment separation during operation or transport, which could cause serious injury, death, or equipment damage. Hydraulic fluid under pressure can penetrate the skin and cause serious injury. Pinch points, crushing hazards, and unexpected attachment movement may also result in severe injury during attachment, connection, or function testing.

DETACH FROM SKID STEER

WARNING:
To prevent serious injury, death, or machine damage, park the skid steer on a firm, level surface before detaching the stump grinder. Lower the attachment to the ground, place the transmission in PARK, engage the parking brake, shut off the engine, and remove the key. Never position yourself between the skid steer and the stump grinder during the detachment process. Only trained and qualified personnel shall detach the attachment.

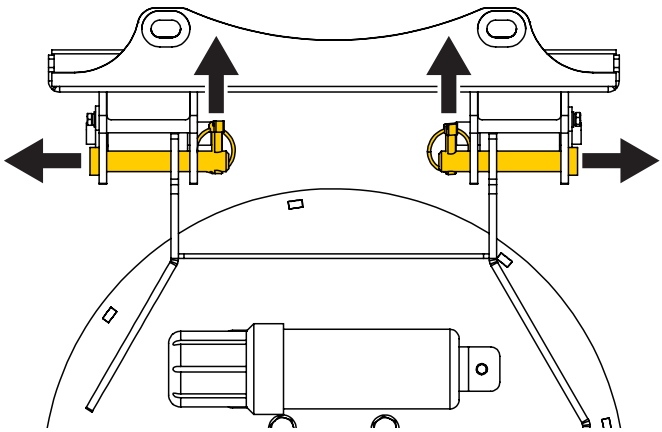
- Park the skid steer and stump grinder on a firm, level surface.
- Lower the stump grinder until it is fully supported on the ground.
- Shut off the engine, engage the parking brake, and remove the key.
- Relieve hydraulic pressure in accordance with the skid steer Operator's Manual.
- Disconnect the hydraulic hoses and install the protective caps or plugs, if equipped. Make sure the hoses are positioned to prevent contamination or damage.
- Release the quick-attach locking levers, pins, or locking mechanism.
- Start the skid steer if required, and carefully back the machine away from the stump grinder until the attachment is completely clear.

Failure to follow the proper detachment procedure may result in unexpected attachment movement, crushing hazards, pinch point injuries, hydraulic fluid injection injury, or attachment tip-over. Never place hands, feet, or any part of the body under or between the skid steer and the stump grinder during removal.

STUMP GRINDING PROCEDURE

Remove the pin before operating the skid steer stump grinder. Operating the machine with the pin installed may cause damage to the machine.

Remove the pin before operation.



After completing operation of the skid steer stump grinder, reinstall and secure the pin in its original position.

Before moving the machine into position, remove loose chunks of wood, stones, wire, and other debris from the stump and work area that might be thrown, causing injury or damage.

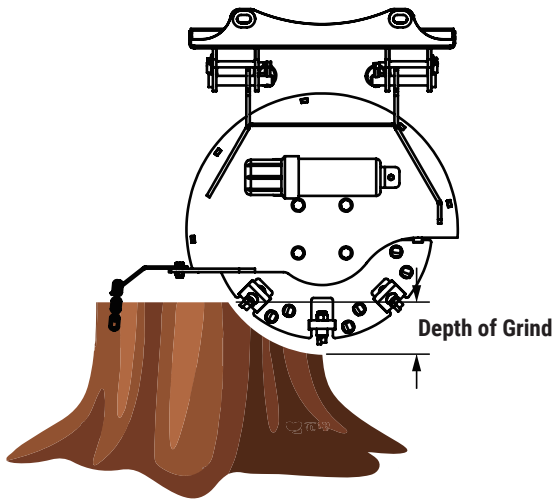
When cutting a stump, the operator must wear eye protection and must stay on the power unit seat.

When grinding a tree stump, always start from the right-hand side of the stump and proceed gradually toward the left, pulling the grinder straight across the stump with each pass.

For softwoods such as pine, spruce, and poplar, a cutting depth of up to 2 in. (50 mm) per pass may be acceptable. For hardwoods such as oak, ash, and birch, which are generally denser, the cutting depth should be limited to approximately 1 in. (25 mm) per pass.

If the chassis sways as described in the previous section, or if the grinder exhibits vibration or bouncing, reduce the cutting depth or feed rate as necessary.

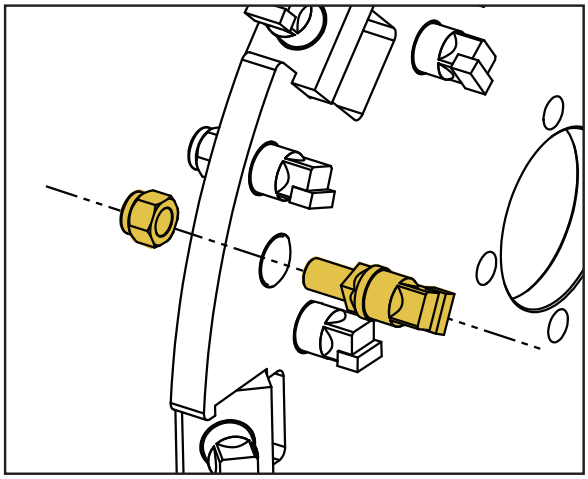
Continue lowering the passes in this manor until stump is completely removed.



MAINTENANCE

Proper maintenance is essential for safe operation, reliable performance, and long service life of the stump grinder. Before performing any inspection, adjustment, lubrication, or repair, park the carrier machine on a level surface, lower the attachment to the ground, shut off the engine, remove the key, and relieve all hydraulic pressure. Routinely inspect the cutting teeth, tooth pockets, mounting hardware, hydraulic hoses, fittings, guards, and safety decals. Replace any worn, damaged, or missing parts before operating the machine.

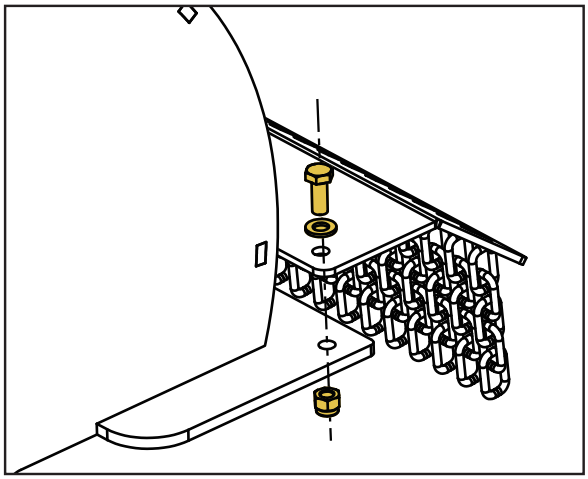
REPLACING TEETH



1. Park the machine on a level surface, lower the attachment to the ground, shut off the engine, remove the key, and relieve all hydraulic pressure.
2. Wait until the grinding wheel has come to a complete stop.
3. Remove the M16 × 1.5 hex lock nut and take off the worn tooth.
4. Clean the mounting area and inspect related parts for wear or damage.
5. Install the new tooth in the correct position.
6. Reinstall and tighten the M16 × 1.5 hex lock nut securely.
7. Make sure all teeth are secure before returning the machine to service.

Check cutting teeth every 4 hours of use.

SHIELD REPLACEMENT

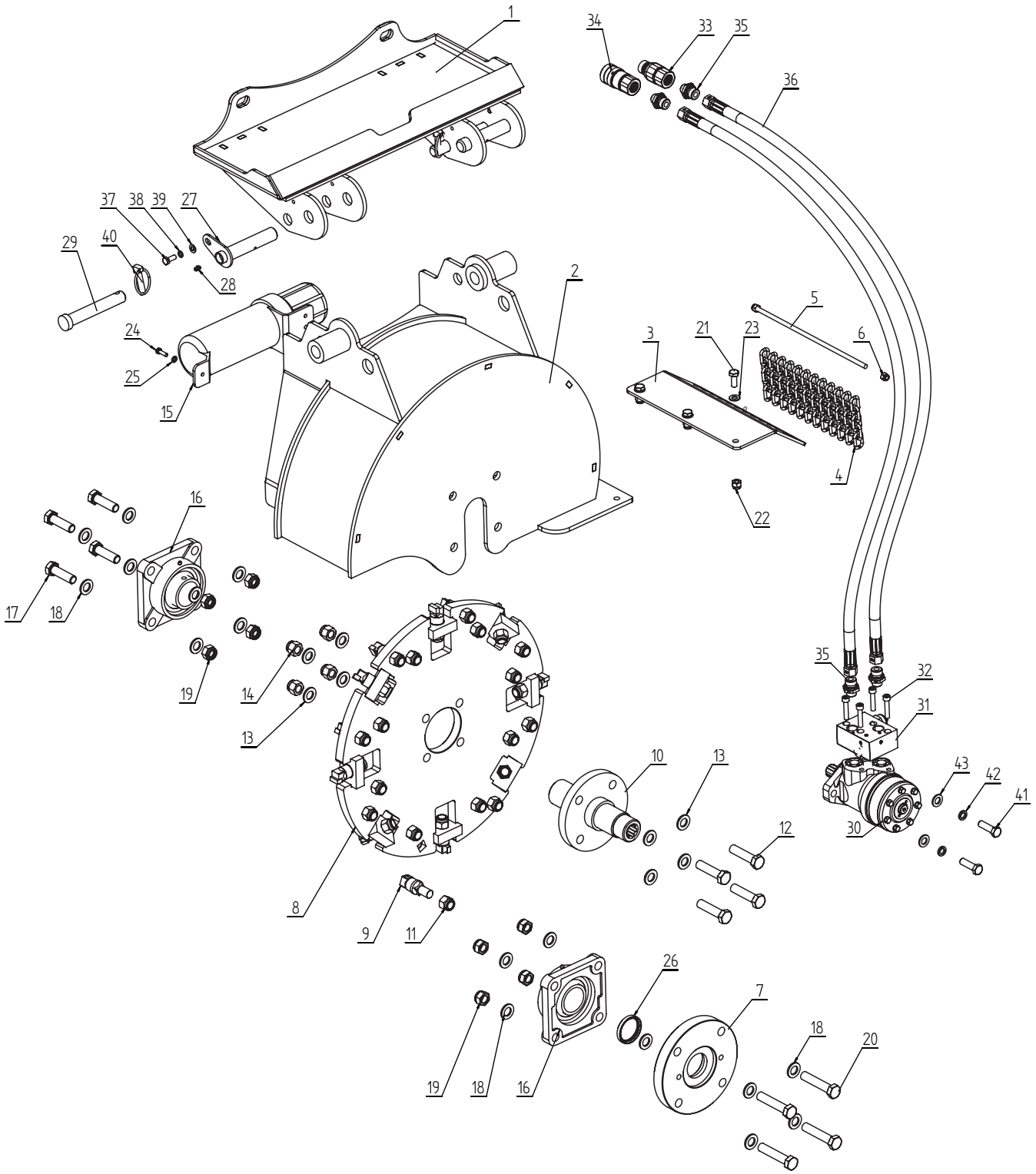


1. Park the machine on a level surface, lower the attachment to the ground, shut off the engine, remove the key, and relieve all hydraulic pressure.
2. Remove the damaged shield.
3. Remove the M10 × 25 full-thread hex head bolts, M10 nylon-insert hex lock nuts, and Class A 10 flat washers securing the shield.
4. Position the new shield correctly.
5. Reinstall the M10 × 25 full-thread hex head bolts, Class A 10 flat washers, and M10 nylon-insert hex lock nuts.
6. Tighten all hardware securely.
7. Make sure the shield is properly installed before returning the machine to service.

TROUBLESHOOTING

PROBLEM	CHECK	SOLUTION
Cutting wheel does not spin.	Cutting wheel is jammed.	Remove any material jammed in the cutting wheel.
	Hydraulic oil level is low.	Check the hydraulic oil level in the skid steer and add oil if necessary.
	Hydraulic oil flow is insufficient.	Check the hydraulic flow setting on the skid steer.
	Hydraulic coupler is damaged or disconnected.	Contact your dealer and replace the coupler if necessary.
Rotor does not have much power.	Low oil.	Check the hydraulic oil level in the skid steer and add oil if necessary.
	Oil filter plugged.	Replace the skid steer hydraulic oil filter.
	Not enough oil flow.	Check the hydraulic flow control setting on the skid steer. Consult your dealer if necessary.

PARTS DIAGRAM



PARTS LIST

Item No.	Description	Qty.
1	Mounting Assembly Weldment	1
2	Main Body Weldment	1
3	Guard Plate	1
4	Chain	12
5	Stud	1
6	Nylon Insert Hex Lock Nut, M8	2
7	Motor Mounting Bracket	1
8	Cutting Wheel Weldment	1
9	Cutter Tooth	24
10	Main Shaft	1
11	Nylon Insert Hex Lock Nut, Fine Thread M16×1.5	24
12	Hex Head Bolt, M16×65	4
13	Flat Washer, Class A, 16	8
14	Nylon Insert Hex Lock Nut, M16	4
15	Large Spacer Sleeve	1
16	Square Flange Bearing Unit, UCFU210	2
17	Hex Head Bolt, Full Thread, M16×50	4
18	Flat Washer, 16	16
19	Thin Nylon Insert Hex Lock Nut, M16	8
20	Hex Head Bolt, Full Thread, M16×80	4
21	Hex Head Bolt, Full Thread, M10×25	3
22	Nylon Insert Hex Lock Nut, M10	3
23	Flat Washer, Class A, 10	3
24	Hex Head Bolt, Full Thread, M6×20	2
25	Flat Washer, Class C, 6	2
26	Oil Seal, 45×55×8	1
27	Welded Pin Shaft	2
28	Straight Grease Nipple, M6	2
29	Pin	2

Item No.	Description	Qty.
30	Hydraulic Motor	1
31	Pressure Relief Valve	1
32	Socket Head Cap Screw, M8×40	4
33	Quick Coupler, Male, G1/2	1
34	Quick Coupler, Female, G1/2	1
35	Straight Adapter	4
36	Quick Coupler Connecting Hydraulic Hose	2
37	Hex Head Bolt, Full Thread, M8×20	2
38	Spring Washer, 8	2
39	Flat Washer, 8	2
40	Ring Pin, Q10	2
41	Hex Head Bolt, Full Thread, M12×40	2
42	Spring Washer, 12	2
43	Flat Washer, 12	2


CROBA