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Operator's Manual

Keep this manual with the machine at all times

R18HD • R25HD

Hydraulic Skid Steer Stump Grinder

DOMINATOR



CAUTION

Operational Hazard

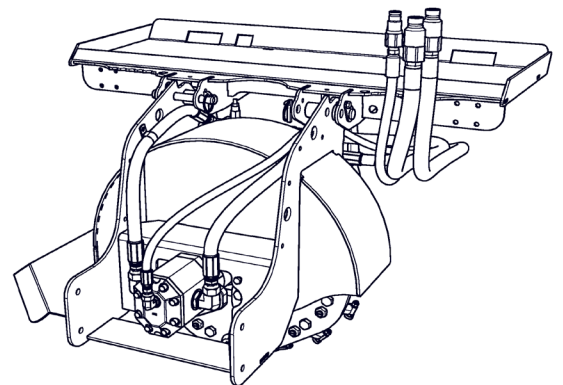
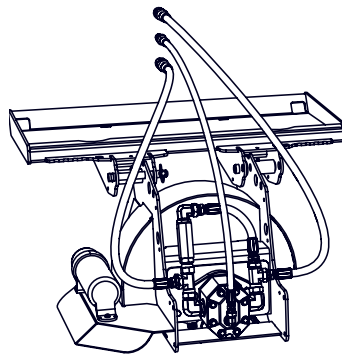
Grind safe - avoid underground utilities! Always contact your local utility companies (electrical, telephone, gas, water, sewer, and others) before starting



CAUTION

Operational Hazard

Personal Protection Equipment (PPE) is required when operating or maintaining this machine.



Do not attempt to operate the equipment without thoroughly reviewing this manual for safe and proper operation.

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INTRODUCTION

Congratulations on your choice of a Reist Industries **R18HD or R25HD Hydraulic Skid Steer Stump Grinder** to complement your stump grinding operation. This equipment has been designed and manufactured to meet the needs of a discriminating buyer for efficient grinding of stumps.

Model R18HD features 10 teeth on a 15 in. cutting wheel, R25HD features 18 teeth on a 23 in. cutting wheel, both result in longer tooth life and smoother cutting for less wear on the skid steer. Heavy tooth population means less cutting per tooth and makes finer mulch and smoother operation.

The cutting wheel is driven by the hydraulic motor powered with your skid steer. Grease zerks are provided at major pivot points for extended service life. The debris shield is standard equipment on all stump grinders. It is recommended that the stump grinder never be operated without one.

Safe, efficient and trouble free operation of your stump grinder requires that you and anyone else who will be operating or maintaining the stump grinder, read and understand the Safety, Operation, Maintenance and Troubleshooting information contained within the Operator's Manual.

Use the Table of Contents as a guide to locate required information. Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Reist dealer, distributor or the factory if you need assistance, information or additional copies of the manuals.

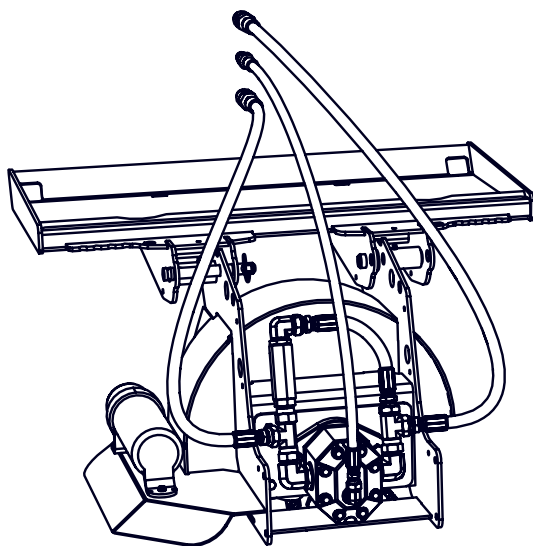
When this machine is worn out and no longer in use, it should be returned to the retailer or other party for recycling.

HYDRAULIC SERIES MODELS :

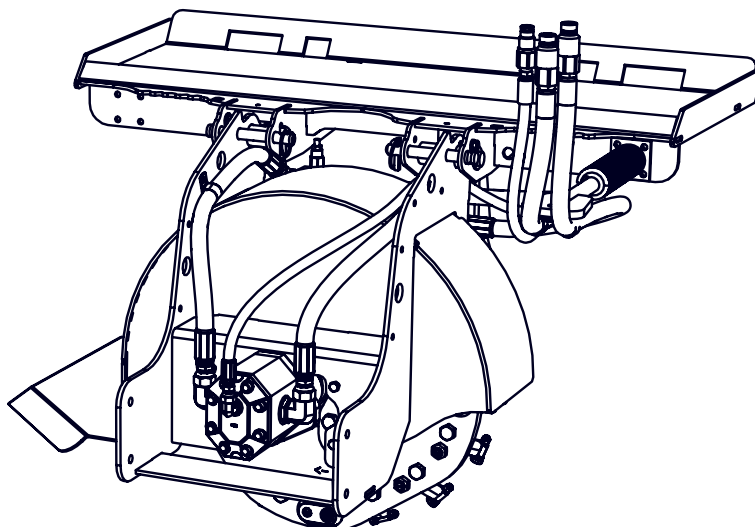
R18HDMB26G	R25HDSK50G
R18HDMS26G	R25HDSK63G
R18HDSK36G	R25HDSK90P

OPERATOR ORIENTATION

The directions left, right, front and rear, as mentioned throughout this manual, are as seen from the power unit driver's seat and facing in the direction of travel, unless noted otherwise.



R18HD



25HD

DOMINATOR

GENERAL INFORMATION

The purpose of this manual is to assist you in safely operating and maintaining your **R18HD or R25HD Stump Grinder** in a safe manner. Read this manual carefully to obtain valuable information and instructions that will help you achieve safe and dependable service.

The stump grinding tool is designed to be used by experienced operators, trained in the safe operation of the power unit and trained in the hazards related to using the stump grinder and the safe use of the grinder for the intended purpose. Operators will require personal protective equipment to reduce the risk from some hazards that cannot be completely eliminated or controlled by the design of the tool.

The **R18HD or R25HD** is intended to be used within the stump size limits shown in the catalog and in the implement specifications in the manual. Care is required to ensure that the stump grinding tool will not come across metallic objects, stones or other materials while grinding.

The **R18HD or R25HD** is not designed for use in hazardous atmospheres where there is a risk of fire or explosion due to flammable gases or vapors. Use in hazardous, explosive atmospheres is prohibited. Serious injury or death of the operator or bystanders may be caused if the tool is misused. Misuse may also cause damage to the power unit carrying the implement.

The illustrations and data used in this manual were current at the time of printing, but due to possible engineering and or production changes, this product may vary slightly in detail. Reist Industries reserves the right to update and or change components as necessary without notification.

In this manual the **R18HD or R25HD** may be referred to as grinder, stump grinder, machine, implement or attachment.

Skid steer refers to any power unit attached to a **R18HD or R25HD**.

INTENDED USE

The **R18HD or R25HD Hydraulic Skid Steer Stump Grinder** is intended for attachment and use on qualified power units for the sole purpose of grinding tree stumps within the specifications listed in this manual.

CALIFORNIA PROPOSITION 65

You may see a warning label like the following:

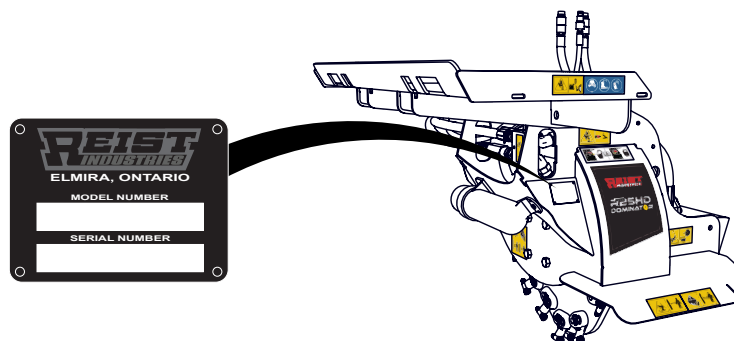
This warning is required by California Proposition 65 (Prop 65), which is meant to notify California residents of exposures to Prop 65-listed chemicals. For more information go to 'www.P65Warnings.ca.gov'.



SERIAL NUMBER LOCATION

The serial number for your **R18HD or R25HD** is located mid point between the frame weldment and rotor guard.

Please record your serial number here as a handy reference. In case of warranty issues, your dealer will ask for the serial number to verify your warranty.



Model Number _____

Serial Number _____

SAFETY



This Safety Alert Symbol means:
ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The Safety Alert symbol identifies important safety messages on the implement and in the manual. When you see this symbol, read and understand the message, be alert to the potential hazard in the message. Follow the instructions in the safety message.

SAFETY MESSAGES

Throughout this manual, the terms **DANGER**, **WARNING**, **CAUTION** and **IMPORTANT** are used to indicate the degree of hazard to personnel if proper safety procedures and guidelines are not followed. The appropriate term for each message has been selected using the following guide-lines:

DANGER - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury, and includes most extreme situations typically for implement components which, for functional purposes, cannot be guarded.

WARNING - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

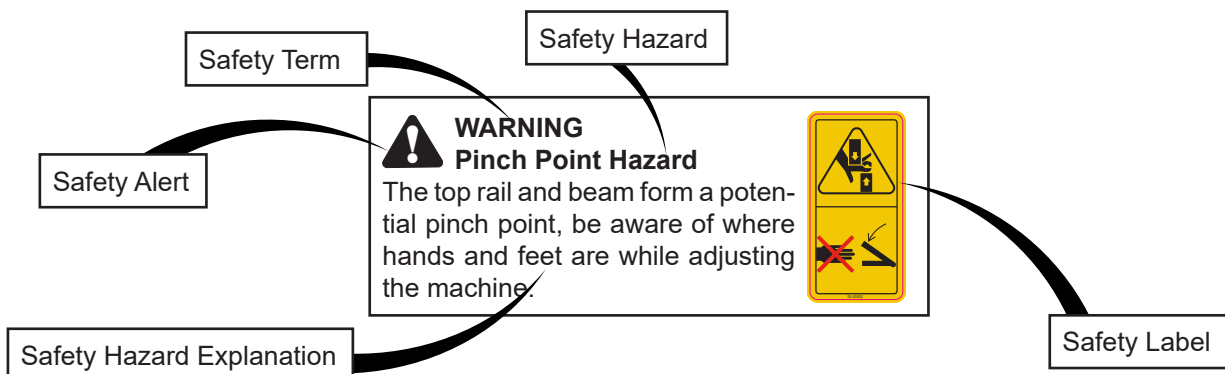
CAUTION - Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

IMPORTANT - Indicates a situation that could result in damage to the implement or other property.

In the owners manual, when a hazard is present you will see a safety message box. The box may contain:

- The safety alert symbol,
- The safety term
- The safety hazard
- The safety hazard explanation

When applicable you may also see the appropriate safety label displayed with the message, as shown below.



The safety information given in this manual does not replace any safety codes, insurance needs, government and local laws.

ACCIDENT PREVENTION

ACCIDENTS CAN BE PREVENTED WITH YOUR HELP!

YOU are responsible for the SAFE operation and maintenance of your implement. **YOU** must ensure that you and anyone else who is going to use, maintain or work around the implement be familiar with the work and maintenance procedures and related SAFETY information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be used.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices an effective part of your day to day work habits. Be certain that EVERYONE using this implement is familiar with the recommended maintenance and work procedures and follow all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.



The best accident prevention is a careful operator.

Reist Industries and your dealer ask that YOU be that careful, responsible equipment operator.

YOU ARE THE KEY TO SAFETY:










•Familiarize yourself, and anyone else who will operate, maintain, or work around this product, with the safety and operation information contained in this manual.

- Read and understand the safety labeling which appears on the implement.
- Have a first-aid kit available for use should the need arise and know how to use it. 
- Pay attention to the job at hand. Do not let your mind lose concentration on what you are doing. No accident prevention program can be successful without the wholehearted cooperation of the person who is directly responsible for the operation of the implement.
- Have a fire extinguisher available for use should the need arise and know how to use it. 
- Reduce the risk of injury or death by following all safety precautions and by using good safety practices.
- Accidents can to be prevented: that prevention will come from equipment operators who accept their complete responsibility and anticipate the results of their actions.

- Never exceed the limits of the implement. Safety of the operator and safe operation are the main concerns in designing a safe product, however ignoring implement specifications by the operator can result in a accident which could have been prevented.



- Do not allow riders on the implement, loaded or empty.
- Do not operate this implement under the influence of drugs or alcohol.
- Be responsible for the SAFE operation and MAINTENANCE of YOUR implement.
- Wear appropriate personal protective equipment (PPE). This list includes but is not limited to:
 - Hard hat 
 - Heavy gloves 
 - Hearing Protection 
 - Protective foot wear 
 - Protective eye wear 
 - Safety Vest 
 - Dust Mask 

SAFETY GUIDELINES

Safety of the operator and bystanders is one of the chief concerns in developing and designing equipment. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more cautious approach to handling equipment.

You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury or death, study the following precautions and insist those working with you, or for you to follow them.

In addition to the design and configuration of this implement, including safety labels and safety devices, hazard control and accident prevention are dependent upon the awareness, concern, and proper training of personnel involved in the operation, transport, maintenance, and storage of the implement. Refer also to safety messages and operation instruction in each of the appropriate sections of the power unit and implement manuals. Pay close attention to the safety labeling affixed to the implement.

1. In order to provide a better view, certain illustrations in this manual may show an assembly with a safety device removed. However, equipment should never be used in this condition. Keep all safety devices in place, if removal becomes necessary for repairs, replace the device prior to use.
2. Replace any safety label or instruction sign that is unreadable or is missing. Location of safety signs is indicated in this manual.
3. Never use alcoholic beverages or drugs which can hinder alertness or coordination while using this implement. Consult your doctor about using this implement while taking prescription medications.
4. Under no circumstances should young children be allowed to work with this implement.
5. This implement is dangerous to persons unfamiliar with its operation. Do not allow persons to use or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works. Review the safety instructions with all users annually.
6. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated. Assistants should be a responsible, properly trained and physically able person familiar with machinery and trained in this implement's operations.
7. Never exceed the limits of the implement. If its ability to do a job, or to do so safely, is in question - DON'T TRY IT.
8. Do not modify the implement in any way. Unauthorized modification may result in serious injury or death and may impair the function and life of the implement.

SAFETY TRAINING

A person who has not been trained or has not read and understood all use and safety instructions is not qualified to use the implement. An untrained operator exposes himself and bystanders to possible serious injury or death.

- Train all new personnel with the instructions alongside the implement. Be certain only a properly trained and physically able person will use the machinery.
- Working with unfamiliar equipment can lead to careless injuries. If this implement is used by any person other than yourself, or is loaned or rented, it is the implement owner's responsibility to make certain that the operator, prior to using:
 - Reads and understands the operator's manuals.
 - Is instructed in safe and proper use of the implement
 - If the elderly are assisting with the work, their physical limitations need to be recognized and accommodated.
- Operators or maintenance personnel who are not fully able to read and understand this manual should not operate or work on the implement:
- Make certain that all operators and maintenance personnel have complete understanding of the full and exact contents of this manual and safety labeling.
- ALL information contained in this manual and labeling on the implement must be conveyed CLEARLY and FULLY, in order to be able to operate safely and knowledgeably.
- Review the implement and instructions regularly with existing workers.

PREPARATION

1. Grind safe - avoid underground utilities! Always contact your local utility companies (electrical, telephone, gas, water, sewer, and others) before starting work so that they may mark the location of any underground services in the area. Be sure to ask how close work can be done to the marks they positioned.
2. Inspect implement for shipping damage. If damage does exist, do not use. Notify your dealer immediately to have damaged parts replaced or repaired.
3. Assembly may be required depending on how you purchased your equipment. Follow the assembly procedures as outlined in the manual, ensure all hardware is secure.
4. When traveling on a public road at 32 km/h (20mph) or less, ensure a rear facing slow-moving-vehicle (SMV) emblem has been installed.
5. Ensure safety chain, straps, tires are not damaged and in good condition.
6. Inspect all fasteners that they are not loose or missing. Ensure fasteners are torqued according to the torque chart at the back of this manual
7. If traveling at night, ensure provincial state and local laws concerning lighting requirements have been met.
8. Ensure that all applicable safety decals are installed and legible.
9. Personal protection equipment (PPE) including hard hat, safety glasses, safety shoes, dust mask, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, cleaning, or moving the unit. Do not allow long hair, loose fitting clothing or jewelry to be around equipment.
10. **PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!**
Gas or diesel powered equipment can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis. Noise over 85dB on a long-term basis can cause severe hearing loss. Noise over 90db adjacent to the Operator over a long-term basis may cause permanent, total hearing loss.
11. When not attached to the power unit support the implement to prevent movement.

WOOD DUST HAZARD

Avoid Wood Dust Inhalation: Exposure to wood dust has been associated with health issues due to the natural chemicals in wood or substances in the wood, such as bacteria, molds, or fungi.

Wood dust is considered carcinogenic to humans (Group 1) according to the International Agency for Research on Cancer (IARC).

Wood dust is also associated with toxic effects, irritation of the eyes, nose and throat, dermatitis, and respiratory system effects which include decreased lung capacity and allergic reactions.

Wood Dust is Flammable: wood dust can cause a fire or explosion if the particles are the right size and in the right concentration. Work only in well ventilated areas away from sources of ignition.

STORAGE SAFETY

1. Store the unit in an area away from human activity.
2. Do not allow children to play on or around the stored implement.
3. Store the unit in a dry, level area. Cover if stored outside.
4. Guard any sharp corners.
5. Ensure components and safety features are not damaged and in good condition before storing the implement. Make repairs now to be ready for the following season.
6. Secure the implement to prevent unwanted movement.

OPERATION SAFETY

1. NEVER allow helpers or bystanders under or near the machine.
2. Make sure that the machine is fastened securely to the power unit before moving.
3. Inspect all fastening devices, do not use if worn or damaged.
4. Make sure that everyone is clear before moving the implement. NEVER position yourself between the power unit and the implement.
5. Do not permit riders while transporting this implement.
6. Where possible, avoid operating near ditches, embankments and holes.
7. Slopes are a major factor related to loss of control and tip-over accidents, which can result in severe injury or death. Operating the machine on any slope or uneven terrain requires extra caution.
8. Call before you dig: call your local utilities for location of buried utility lines, gas, water, sewer and any other buried hazard.

MAINTENANCE SAFETY

1. Good maintenance is your responsibility, follow the maintenance schedule. Poor maintenance is an invitation to trouble.
2. Follow good shop practices.
 - Keep service area clean and dry.
 - Be sure electrical outlets and tools are properly grounded.
 - Use adequate light for the job at hand.
3. Never work under or around the implement unless it is blocked securely.
4. Use personal protection equipment (PPE) such as eye, hand and hearing protectors.
5. Never adjust, service, clean or lubricate the implement until all power is shut off when attached to the power unit.
6. Ensure hardware is torqued according to the torque chart at the back of this manual.
7. Disconnect battery ground cable before servicing any part of the electrical system.

SAFE WORK AREA

Not all work spaces are the same, but the principles presented here can be applied to any work space.

Survey the work site, remove debris and make note of nearby or overhead obstructions, knowing your work area will make the clearing job easier and safer.

Where possible, avoid operating near ditches, embankments and holes.

For worker safety a prework site visit is recommended. Make a plan to identify hidden obstacles, structures and debris areas. Sudden impact from obstacles hidden under the surface may cause injury.

Be aware of:

Bystanders or any one not directly involved with the work are only allowed outside of the work area, minimized hazards.

Workers helping the operator must wear the appropriate PPE and must always make eye contact with the operator before entering the work area. Unauthorized Workers or bystanders are not allowed in the work area. Hazards are present.

Operator, do not operate the implement outside of the operator area.

TRANSPORT SAFETY

1. Check power unit tires before proceeding:
 - Inflation - correct pressure
 - Tread - unusual wear, exposed cord
 - Rims - damaged or bent
 - Wheel bolts - all secure, not loose
 - Replacement tires must be same type and rating
2. Just before transport, perform a circle check to ensure everything is safe.
3. Be sure all markers required by local traffic regulations are in place, clean and working. SMV: required if traveling at 32 km/h (20 mile/h) or less on a public road.
4. If traveling at night, ensure provincial state and local laws concerning lighting requirements have been met. Lighting is not required for daytime transport, however generally lighting is required one-half hour before sunset to one-half hour after sunrise and at any other time when there is insufficient light or unfavourable atmospheric conditions.
5. Reduce speed when turning, crossing slopes and rough, slick or muddy surfaces.
6. Stopping distance increase with speed, weight and on slopes.

HYDRAULIC SAFETY

1. Make sure that all the components in the hydraulic system are kept in good condition and are clean.
2. Before applying pressure to the system, inspect for leaks at all components, and that lines, hoses, connections and couplings are not damaged and leak free.
3. Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tapes, clamps or cements. The hydraulic system operates under extremely high pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.
4. Wear proper hand and eye protection when searching for a high pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.
5. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.
6. Turn off the power unit and relieve pressure on hydraulic system before maintaining or working on system.
7. All hydraulic work must be done by qualified personnel.

SAFETY LABELS

Safety labeling is an important part of the overall safe use of the implement. Safety labeling alerts and warns against potential injury or death, and is important to follow these points to help keep your implement safe for you and others who may be using it.

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current sign.
- Safety signs are available from your authorized Distributor or the factory order desk.

SAFETY LABEL DESCRIPTIONS



Caution: read and understand ALL safety and operating instructions in the manual, read and understand ALL safety labels located on the machine. The most important safety device on this equipment is an informed SAFE operator.



Caution: do not place your hand or any part of your body on or near the front mount while coupling to the power unit. Parts moving together present a pinch point and may cause serious injury. Possible laceration, crushing, amputation hazard.



Caution: when repairing or maintaining the unit ensure power unit is off and the key is removed and pocketed. Possible entanglement and amputation hazard.



Caution: Moving parts present a potential pinch hazard and could result in a serious injury. Use caution and be aware of parts as they are being moved or adjusted. Possible crushing and amputation hazard.



Caution: Personal Protection Equipment (PPE) is required when operating or maintaining this machine. Failure to wear PPE will result in personal injury.



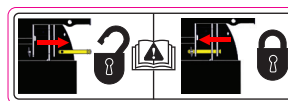
Caution: grinder blade causes flying material. Use caution and never grind toward people, buildings, vehicles or other objects. Possible laceration, bruises or impalement.



Caution: do not place your hand or any part of your body on or near the grinder wheel while the machine is in operation. Rotating parts are in motion and serious injury could result. Possible entanglement, amputation or death.



Caution: Hydraulic fluid is under pressure, be aware that hydraulic leaks could develop with out warning. Do not check for leaks with your hand or fingers while the system is pressurized, serious injury could result. Possible burns or poisoning from pressurized fluid injection.



Notice Label: This label indicates the use of the lock pin and refer to the manual for details.

Lock pin must be removed during operation to allow the rotor head to pivot.

Lock pin must be in place whenever the grinder is in storage or being transported to keep the rotor head in place.

IF LABELS NEED TO BE REPLACED:

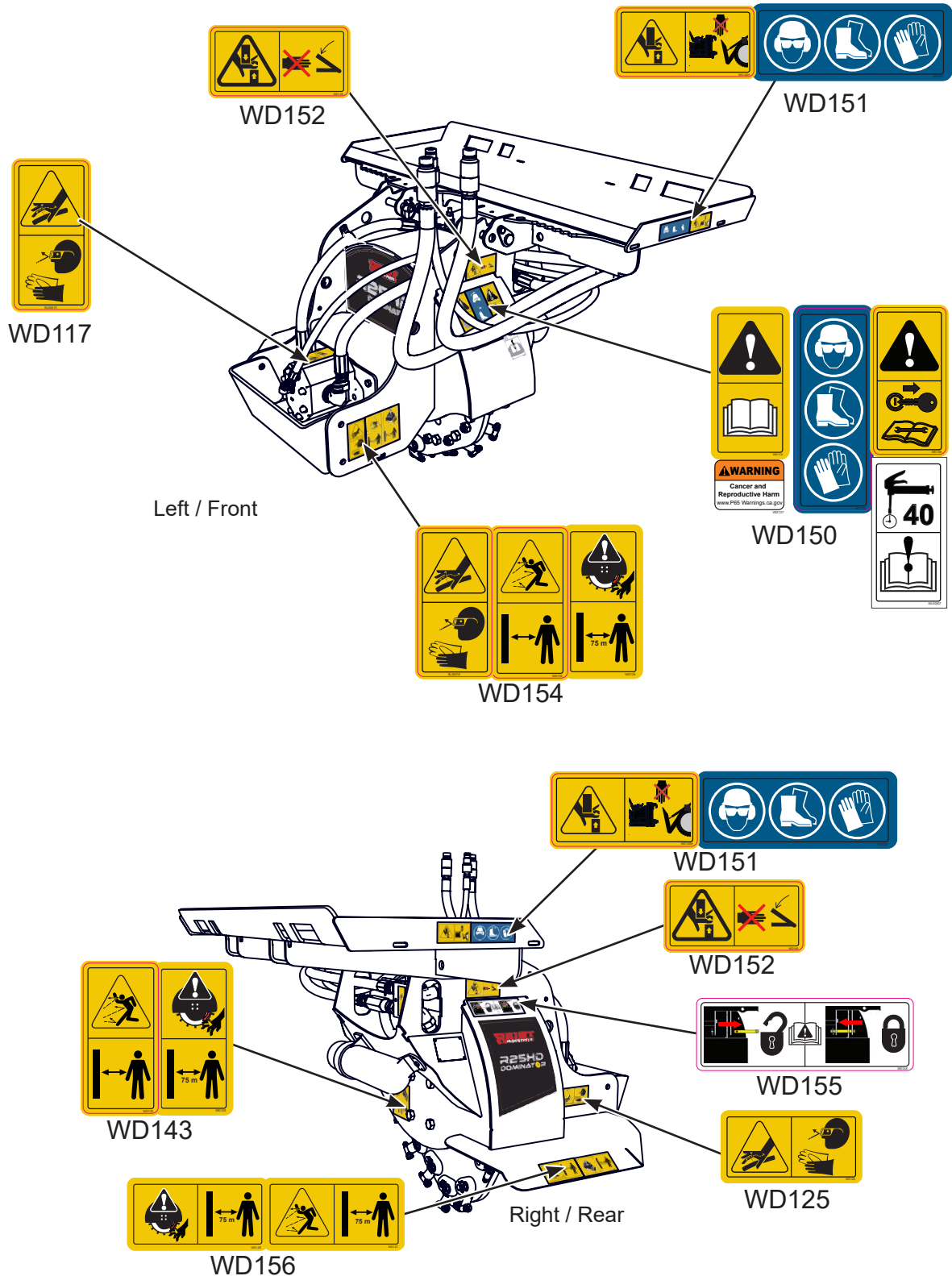
- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50°F (10°C).
- Determine exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

SAFETY LABEL LAYOUT

Safety signs and locations on the equipment are shown in the illustrations below. .

Good safety practice requires that you familiarize yourself with the label and the safety message it is delivering. Be aware of the equipment or particular equipment feature that requires your SAFETY AWARENESS.

If safety labels have been damaged or removed, new labels must be applied. New safety signs are available from your dealer or contact Horst Welding

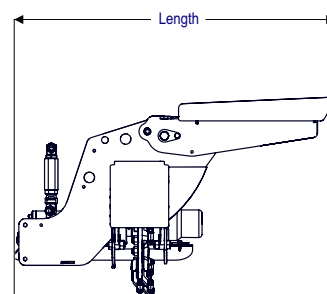
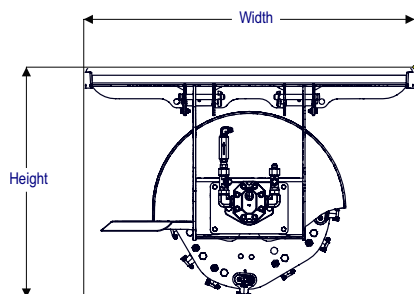


SPECIFICATIONS AND DIMENSIONS

SPECIFICATIONS

Stump Grinder Specifications		R18HD			R25HD		
Hydraulics	Hydraulic Motor Size & Type (case drain required)	26 cc gear type		39 cc gear type	50 cc gear type	63 cc gear type	90 cc piston type
	Recommended GPM	10 - 15		15 - 20	16 - 20	20 - 25	27 - 38
	Hydraulic Connectors	Flow / Return / Case Drain					
	Drive Line Protection	Check Valve	Flow Regulator Check valve	Flow Regulator Check valve Pressure Relief Valve		Check Valve	
	Valve	Reverse Flow Prevention					
Cutting Diameter		18"			25"		
Tooth Construction		Carbide Tipped Replaceable - Bolt into Pocket Rotatable - Three Sided					
Number of teeth		10			18		
Cutting Wheel rotation		Couter-clockwise Rotation (from the drivers seat looking forward)					
Cutting Wheel Speed		G.P.M. Dependant					
Cutting Height (below grade)		6"			10"		
Cutting Depth (per pass)		2"			5"		
Cutting Width (per pass)		12"			22"		
Mount		Mini Skid Steer Mini Bobcat Universal Skid Steer			Universal Skid Steer		
Weight - Lbs		290	240	305	475		
Length		37.75"			40.5"		
Width		36.0"			47"		
Height		24.0"			32.75"		

DIMENSIONS



COMPONENTS AND FEATURES

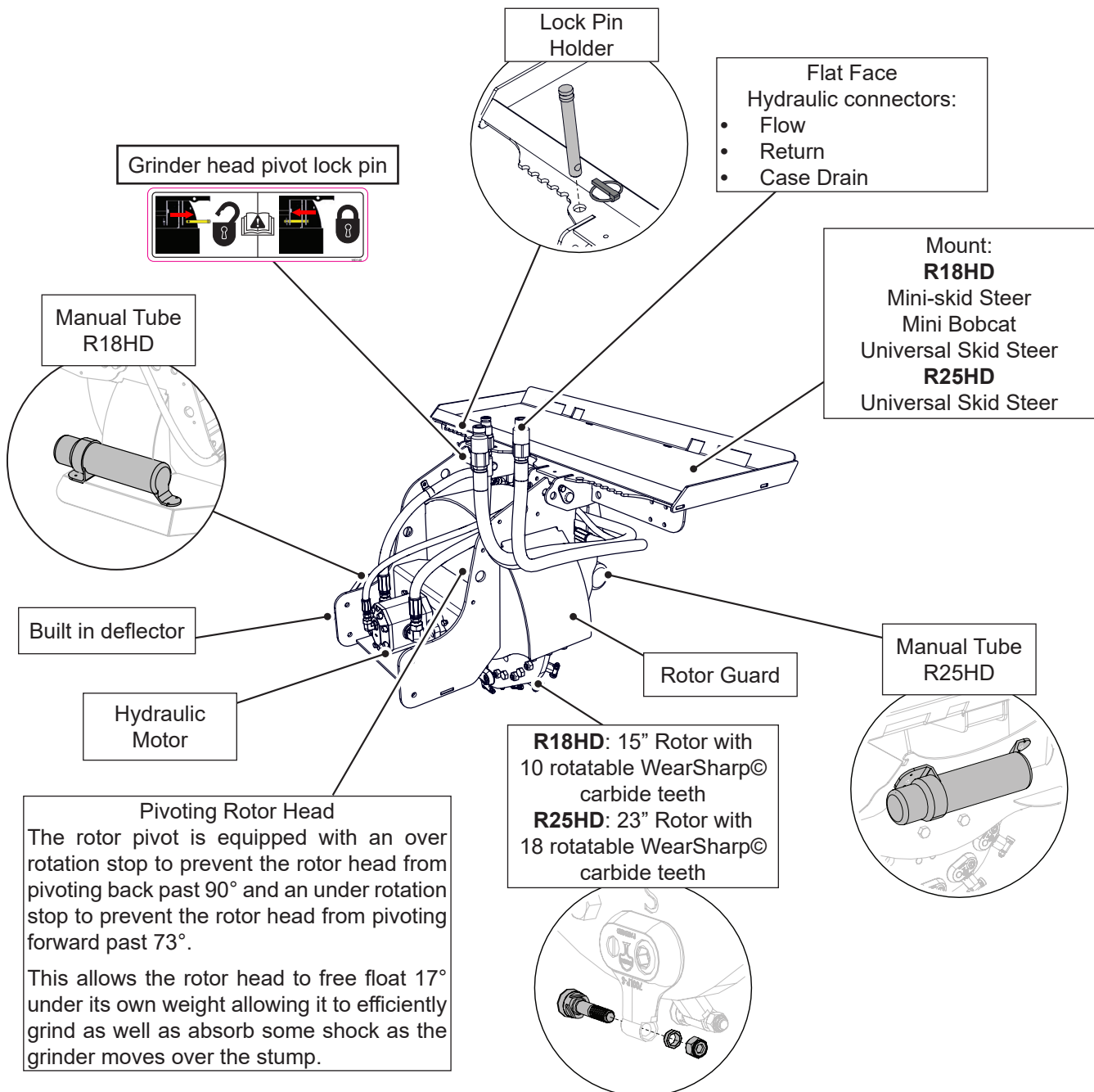
The Reist Industries **R18HD & R25HD Hydraulic Skid Steer Stump Grinder** are designed and manufactured to meet the needs of a discriminating buyer for efficient grinding of stumps.

The owner or operator has the responsibility of being familiar with all the features of the grinder and know how to operate it. Each owner or operator must train all other operators before they start working with the machine.

Read this section carefully to learn how to use the stump grinder safely and how to set it to provide maximum field efficiency. By following instructions in conjunction with a good maintenance program, your Reist stump grinder will provide many years of trouble-free service.

Do not operate this machine if you are not familiar with its features.

The R25HD is illustrated below showing its basic components and features. Features are similar for all model variations unless noted otherwise. Review the various components and their position, the names of the components will be used to describe where they are and how they work through-out the manual.



INSPECTION AND CHECK

After receiving your machine, inspect machine for damaged or loosened parts. If damaged or loosened parts exist, do not use. Notify your dealer immediately to have affected parts replaced or repaired.

MOUNTING

Inspect the mounts to ensure they are undamaged and mount the grinder. Follow the instructions that came with your power unit to mount the stump grinder to the power unit. Test fitting ahead of time ensures a safe and secure attachment to the power unit with no surprises.

Lift the grinder and remove the grinder head lock pin, check the grinder head to ensure that it is free from obstruction and can pivot smoothly without binding.

Check that all pins and latches are in good shape and hold the grinder securely to the power unit.



WARNING **Pinch Hazard**

Keep hands away from mounting points while attaching to the power unit. Potential pinch hazard exist between the machine and power unit



HYDRAULICS

Hydraulic connections from the stump grinder to the power unit are made at the power unit. Hydraulic hoses with flat faced connectors are included.

- Flow
- Return
- Case Drain

The following describes the typical connection. Customizing the connections is possible (alternate style quick connects, etc) and is up to the customer. See your power unit manual on how to operate your auxiliary hydraulics.

Caution: only qualified personnel should make modifications and connections to the stump grinders hydraulic system.

At the grinder, route the hydraulic hoses to the power unit's auxiliary remote hydraulic quick connects.

- Thoroughly clean the quick couplers before making connections. Dirt can quickly damage the hydraulic system.
- Ensure the hydraulic hose is long enough to avoid stretching, and is secured and protected from snags, crimping or pinching.
- Do not energize the hydraulic system until the hoses are connected and secured.
- Do not lock the auxiliary hydraulics in the "ON" position.



WARNING **High Pressure Hazard**

Be aware that hydraulic leaks could develop with out warning. Do not check for leaks with your hand or fingers while the system is pressurized.



CAUTION **Operational Hazard**

At first use the hydraulic motor or cylinders and hoses on this product may contain air or an air-fluid mixture. Failure to remove all the air from the hydraulic system can cause dangerous uneven, jerky movement during use or unwanted movement when not being operated.

TEST INSTALLATION:

- Attach the grinder to the power unit, and remove the grinder head lock pin. Stow the pin in the lock pin holder.
- Ensure that the hose ends and fittings are free of dirt and contamination, and connect the hydraulic hoses to the auxiliary ports on the power unit.
- At first use be aware of potential air in the hydraulic lines.
- Verify that all mounting procedures have been successfully completed.
- Start the power unit, refer to the starting and operating instructions.
- Once it is safe to do so, carefully raise the grinder and cycle the loader arms to check clearances and ensure the hydraulic hoses do not bind or rub and are clear of moving parts.
- Run the grinder briefly, verify that the rotor spins freely in a counter-clockwise direction when viewed from the drivers seat.
- If the rotor does not turn, reverse hydraulic flow or the hydraulic connections need to be reversed by a qualified technician.
- Raise and lower the grinder and run the rotor briefly, one last time to ensure everything is working properly.
- Stop the grinder rotor, shut off the power unit, replace the grinder head lock pin.

FIELD OPERATION

This section describes how to safely and effectively operate the R18HD or R25HD Stump Grinder in the field of operation. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the work site. Not all situations and conditions can be addressed, proceed with care & caution and use safety as your guide.

Consult your power unit's Operator's Manual to determine proper weight requirements and maximum weight limitations. Stump grinder performance may vary due to material conditions and type & density of material. Ensure rotor rotation is correct: counter clockwise sitting in the drivers seat facing forward.

The owner or operator has the responsibility of being familiar with the operation of the R18HD or R25HD and must train all other operators before they start working with the machine.

Wear appropriate breathing protection: if the work site contains wood dust, silica, chemicals or other materials that become hazardous when airborne.

Work in a safe manner and follow all instructions exactly, safety is everyone's business. Untrained operators are not qualified to use the machine.

OPERATION SAFETY CHECKLIST

- | | |
|---|--|
| ✓ Avoid wearing loose clothing, scarves, jewelry or anything that may get caught in rotating parts. | ✓ Be aware of underground utilities! Ensure local utility companies have inspected and marked the location of any underground services in the area. Be sure to ask how close work can be done to the location marks. |
| ✓ Make sure that the machine is securely mounted before using. | ✓ Wear adequate safety gear, including dust mask, safety glasses with side shields, appropriate hearing protection and protective gloves. |
| ✓ Do not allow you or anyone to place hands or any body part on or near the machine while the machine is in operation | ✓ Do not operate a unit during or after the use of medication, drugs or alcohol. Safe operation requires your complete and unimpaired attention at all times. |
| ✓ Do not permit riders while using or transporting machine | ✓ Operate only when there is good visibility and light. |
| ✓ Do not allow bystanders near front or sides of the machine. Flying objects could be ejected at high speed. | |

PREPARE

- Clear the area of bystanders, especially small children.
- Training: each operator must be trained and familiar with the set up and operation of the product and its components.
- Review:
 - Components and Features.
 - Operation Safety Checklist.
 - Power unit safe operating instructions.
 - Connection procedures: hydraulics, hitch attachment.
- Survey the work site, remove large debris and make note of nearby or overhead obstructions.
- The stump should be cut as close to ground level as possible
- Before use, inspect the machine (see service & maintenance section) and check the following:
 - Inspect your power unit, it must be in good operating condition (see power unit owner manual).
 - Check all cutting teeth, pins, nuts, bolts and screws and ensure they are all properly secured.
 - Ensure the rotor is spinning in the correct direction.
- It is recommended that each person wear appropriate Personal Protective Equipment (PPE). This list includes but is not limited to:
 - Dust mask appropriate for the material.
 - Safety shoes with slip resistant soles.
 - Safety glasses.
 - Hearing protection.
 - Heavy or leather gloves.

MOUNT

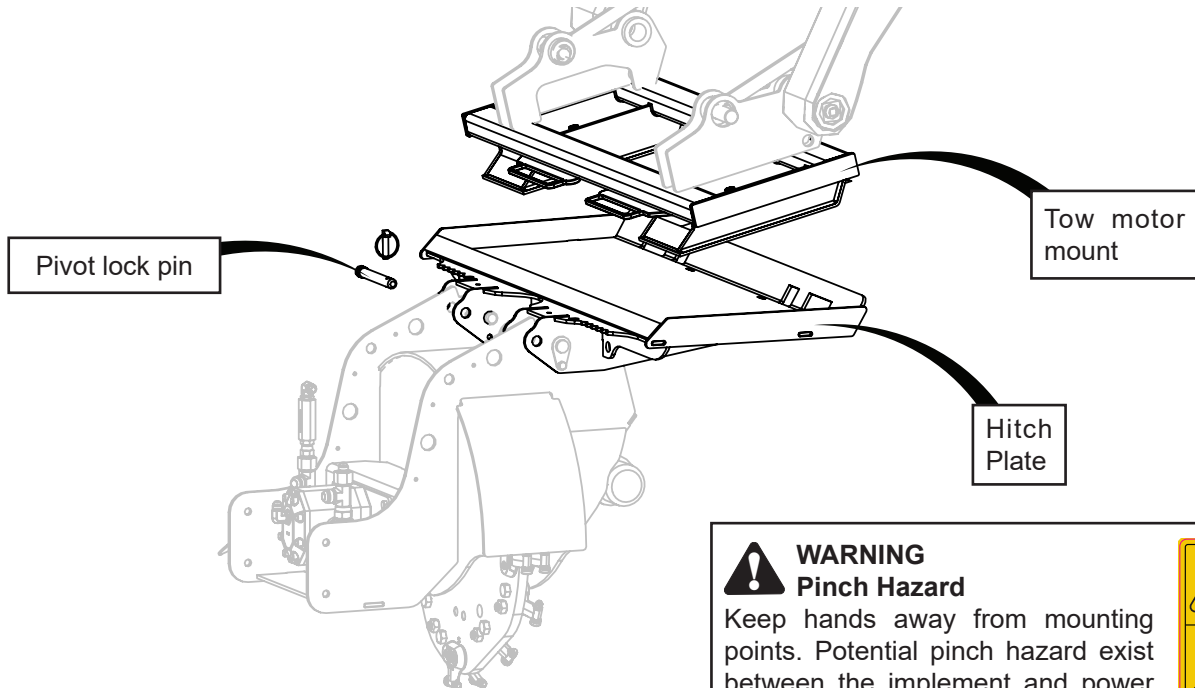
Ensure your attachment system is secure on the power unit. Mounting procedure will vary based on system used: skid steer, or mini skid steer.

Verify there is sufficient visibility and maneuverability to move up to stump grinder. The stump grinder should be in position according to the power units mounting instructions. Verify any pins or locks are secure in the correct position.

- Attach the skid steer or mini-skid steer per power units operators manual.
- Raise the stump grinder off the ground slightly.
- Do not engage the grinder rotor.
- Remove the grinder head pivot lock pin, and store in the pin holder.



Pivot lock pin must be removed for proper operation of the stump grinder.



WARNING Pinch Hazard

Keep hands away from mounting points. Potential pinch hazard exist between the implement and power unit.



HYDRAULICS

Review the auxiliary connection and operating instructions for your power unit.

- Ensure hydraulic quick couplers are clear & clean.
- Connect the grinder hydraulic hoses to the power unit's auxiliary hydraulic connectors:
 - Flow
 - Return
 - Case Drain.
- Ensure the connection is secure and the hoses are free to move without snagging or stretching.



WARNING High Pressure Hazard

Be aware that hydraulic leaks could develop with out warning. Do not check for leaks with your hand or fingers while the system is pressurized.



OPERATING THE STUMP GRINDER

Ensure your power unit is off, all pins and safety shields are secured and pivot lock pin is removed. Inspect the work site and be aware of any underground utilities.


OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned in this section, are as seen from the driver's seat and facing forward, unless mentioned otherwise.

Stump grinding is always back to front across the stump with rotor rotating counter clockwise (from the drivers seat) into the stump, and the power unit moving away from the stump. Always lower cutting wheel in front the stump, do not try cutting down, always cut moving the power unit backward across the stump.

When grinding softwoods the stump grinder may be able to remove up to the maximum material per pass. However, hardwoods are more dense and the depth of grind may be much less. Adjust as required, the first pass will determine the optimum depth.

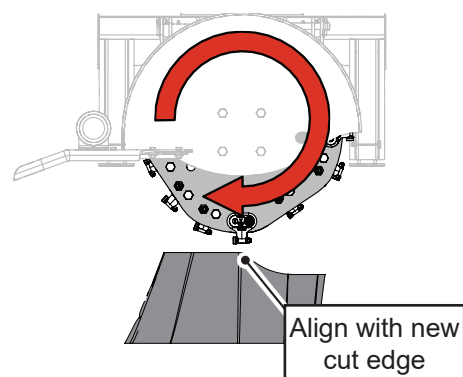
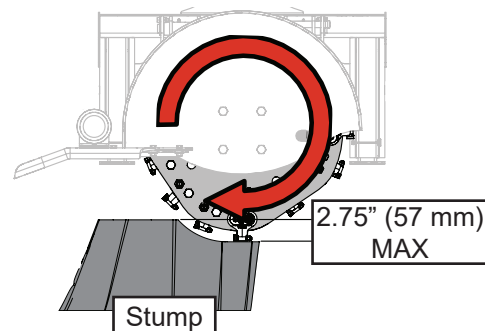
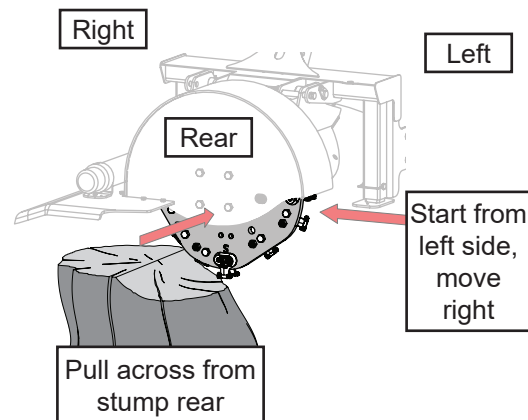
If the stump grinder begins to bounce or is vibrating heavily, it means either the power unit is advancing faster than the grinder can remove material or that too much material is being removed per pass. If this is the case, immediately stop cutting and reposition the power unit and stump grinder and take a slower pass and/or shallower cut if necessary.

- Raise the Stump grinder to clear the stump,
- Orient the grinder so that the centre of the rotor is over the left edge of the stump.
- Approach with the grinder up over the stump to the front edge. (the edge that is farthest from the power unit), check the position of the stump grinder to the stump. This is your starting position.
- At idle engage the hydraulics, bring cutting wheel up to speed and slowly lower it in a controlled manner to the optimum grinding depth. Slowly move the power unit backward, cutting into the stump.
- After a complete pass, raise the grinder and move the power unit over to the right, so that the centre of the rotor is over the new left cut edge, move to starting position and lower cutting wheel to the optimum grinding depth for next pass.
- When done the first layer, continue passes from left to right until ground level is reached.
- Grind to the maximum depth below ground surface to where the stump roots branch out, be aware of hard objects in the dirt.

 **Keep a look out for hard foreign objects below grade. Rocks or buried metal can damage or break the teeth resulting in poor grinding performance.**

Throttle down the power unit to an idle.

- Disengage power unit hydraulics.
- Replace the pivot lock pin, shut off engine and remove key.



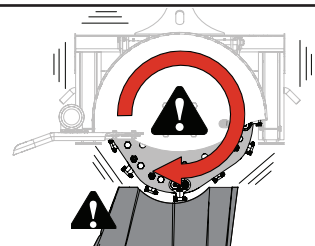
WARNING **Operational Hazard**

Do not place your hand or any part of your body on or near the grinder wheel while the machine is in operation. Rotating sharp parts are in motion and serious injury could result.



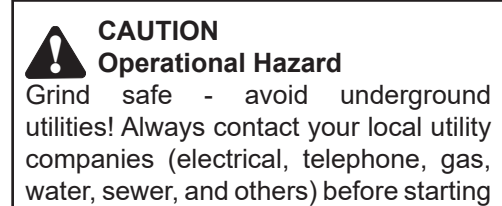
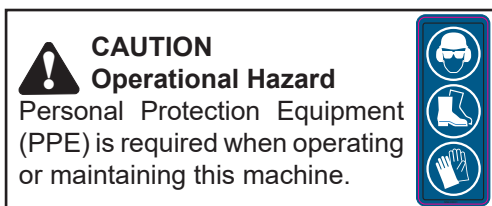
CAUTION **Operational Hazard**

Do not start at the right side or pull through the centre of a stump. This will induce severe vibration and cause the grinder to jump and bounce. It may also damage the machine and/or break teeth.



R18HD / R25HD User Tips

- Before you begin, make sure the power unit is turned off and the hydraulics are disengaged and inspect the work site.
- Check that the area around the stump is free from stones and metal, visible and concealed, to prevent damage to the stump grinder.
- Be sure to check for underground utilities.
- Familiarize yourself with the view of the stump grinder from the power unit seat.
 - Stand to the side of the stump grinder and observe the center point on the bottom of the cutting wheel.
 - Now sit on the power unit seat and observe the center point again.
 - Orient yourself with the rotor position from the operators seat.
 - Never attempt to operate the grinder when not in the operators seat.
- The stump grinder should never be pulled through the centre of a stump or ground from right to left. This will induce severe vibration and cause the grinder to bounce dangerously.
- Many variables, such as the type of tree, age, size, amount of moisture, and condition, affect the required amount of time and effort to grind a stump.
- Check the rotation of the rotor: counter clockwise from the operators seat.
- Test all operating functions in an open area with the power unit at idle speed to get a feel for the controls.
 - Start with a small stump, and take your time. The cutting wheel is shielded from view when sitting on the operators seat so it is difficult to accurately determine the progress.
 - Make the first pass, disengage the hydraulics and check the progress, exit the power unit to see how much you have removed.
 - Check progress after each pass.
 - The ability to judge the positioning improves with practice and experience.
- Operation should be smooth and grinding should be done gradually.
- In areas where debris from the stump grinder needs to be contained use a debris screen. A debris screen is available from your dealer or Reist order desk: **# DS510 Debris Screen 10'x5' (4 posts)**.
- If the stump grinder is jumping or bouncing off the stump, you are applying too much force. Applying too much force will shorten the life of the cutting teeth and may damage the stump grinder.
- If the stump is on a grade, position the power unit lower on the grade with the cutting wheel on the stump grinder higher up the grade.
- All cutting is done on the side of the rotor, not the bottom of the rotor. Always pull the rotor through a stump.
- Follow the root system, taking as much of the larger surface roots as possible. If these are not removed they can eventually protrude from the ground in areas where there is a heavy freeze/ thaw cycle.
- Never operate stump grinder when other people are in the vicinity.
- Always use engine full operating speed to run the hydraulics.
- Check the condition of the grinding teeth before each job.
- Be sure the pivot lock pin is installed and securely pinned anytime you are transporting the stump grinder.
- Be prepared for machine "kickback" when initially contacting the stump.
- The stump grinder is equipped with a over rotation stop to prevent the rotor head from pivoting up past 90° and a under rotation stop to prevent the rotor head from pivoting down past 74°.



STORAGE

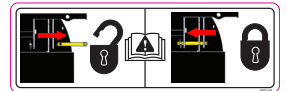
STORAGE SAFETY CHECKLIST

- | | |
|---|--|
| ✓ Store the implement away from work area's and livestock. | ✓ Secure the implement to prevent unexpected movement. |
| ✓ Do not permit children to play on or around the stored machinery. | ✓ Ensure all pins, latches and locks are secure. |
| | ✓ Guard any sharp corners. |

After the season's use or when the machine will not be used for a period of time, completely inspect all parts of the stump grinder. Replace or repair any worn or damaged components to prevent any unnecessary down time at the beginning of the next season. Your implement is an important investment. Spending some time to protect it from rust and corrosion will result a safer, longer service life and better performance..

PREPARE FOR STORAGE:

1. Ensure the pivot lock pin is Inserted in either the left or right side of machine, and secure with snap pin.
2. Thoroughly wash the machine with a pressure washer or water hose to remove all dirt, mud or debris.
3. Remove all remaining material and debris from the machine.
4. Inspect for damaged or worn parts. Repair or replace before next season.
5. Replace any missing or unreadable safety decals.
6. Repaint any chipped or scraped areas to prevent rust and corrosion.
7. Perform a maintenance on the grinder.



PLACING IN STORAGE:

It is best to store the machine in a inside area. If that is not possible, cover with a waterproof tarpaulin and tie down securely. Use a flat, level, dry and clean storage area. To help protect the cutting teeth place a board or similar under the teeth that are resting on the floor.

1. Use the power unit to position the stump grinder in the storage area.
2. Lower the stump grinder onto storage area.
3. Disengage the hydraulics, turn off the engine, remove and pocket the key, and check that all rotating parts have come to a standstill before approaching the implement.
4. Disconnect the hydraulic hoses.
5. Remove the stump grinder from the power units hitch system.
6. To protect the hydraulics from damage or contamination always use hydraulic hose connector covers when the unit is in storage.



CAUTION

Heavy or bulky parts

Prevent potential strain injury, use approved lifting equipment or ask for help when lifting or moving heavy, bulky parts.



WARNING

Puncture Hazard

Rotor teeth have sharp edges, cover and protect from people coming in direct contact, serious injury could result.

SERVICE & MAINTENANCE

Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

To keep your Reist Stump Grinder in good working condition, and increase bearing life as well as maintain ease of operation, periodic lubrication is essential. This also helps to flush out moisture and dirt.

By following a careful service and maintenance program for your machine, you will enjoy many years of trouble-free operation.

Replacement of parts should be done by a qualified personnel only. Keep a record of all maintenance, to ensure scheduled inspections and maintenance are performed.

MAINTENANCE SAFETY CHECKLIST

- ✓ Follow good shop practices.
- ✓ Keep service area clean and dry.
- ✓ Use adequate light for the job at hand.
- ✓ Never work under equipment unless it is blocked securely
- ✓ Parts replacement should be performed by qualified personnel to ensure safe and complete installation.
- ✓ A fire extinguisher and first aid kit should be kept readily accessible.
- ✓ Always use personal protection devices such as eye, hand, foot and hearing protectors.
- ✓ Use heavy gloves when handling heavy or sharp components.
- ✓ When replacing parts, ensure hardware is properly torqued.

GENERAL MAINTENANCE

Before lubricating and inspection, ensure the grinder is clean and free of debris. Check around the hydraulic drive, and guards for any buildup.

On a regular basis check all nuts, bolts and screws and ensure they are all properly secured.

On a regular basis check the condition of all hydraulic lines, hoses and fittings. Replace any that are damaged. Re-route those that are rubbing, pinched or crimped. Tighten any fitting that is leaking. Ensure fittings are clean and free of dirt.


HYDRAULICS

OIL


Hydraulic oil is an important part of your stump grinder. Monitoring your hydraulic oil will prevent hydraulic failures and result in long lasting equipment with good performance. Hydraulic oil level in the power unit should be checked daily, and the quality of the oil should be inspected every 50 hrs. If the oil is dirty or smells burnt, it should be replaced. Be sure to relieve the system of pressure before performing any service to the system. (see power unit owner manual)

COMPONENTS


Hydraulic motor and selector valve may require maintenance if leakage or drop in performance is observed. Maintenance on hydraulic components should be carried out by qualified personnel.

 **WARNING**
High Pressure Hazard
Be aware that hydraulic leaks could develop with out warning. Do not check for leaks with your hand or fingers while the system is pressurized.



 **CAUTION**
Operational Hazard
Personal Protection Equipment (PPE) is required while assembling or maintaining this machine.



 **WARNING**
Hydraulic Oil Hazard
Personal injury can result from hydraulic oil pressure and hot oil. Hydraulic oil pressure can remain in the hydraulic system after the engine has been stopped. Serious injury can be caused if this pressure is not released before any service is done on the hydraulic system. Make sure all of the attachments have been lowered and the oil is cool before removing any components or lines. All hydraulic parts replacement should be performed by qualified personnel.

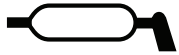
LUBRICATION

The R25HD is illustrated below showing lubrication points. Lubrication is similar for R18HD and all model variations unless noted otherwise.

GREASE:

Inspect bearings and components before each use. Unusual play or noise could be an indication of worn parts. Parts replacement should be performed by qualified personnel.

To prevent premature wear the grease zerks on the stump grinder bearings should be greased every 20 hrs or daily with heavy use.



This symbol indicates a grease zerk location shown in the illustrations below.

- Lubricate with an good Lithium EP2 grease or equivalent.
- Use a hand-held grease gun for all greasing, one shot of grease is usually adequate. A full bearing with slight leakage through the seal is the best protection against contaminant entry.
- Wipe grease zerk with a clean cloth before greasing, to avoid injecting dirt and grit.
- Replace any broken zerk fittings immediately.
- If grease zerk will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fittings if necessary.

LUBRICATE:

Inspect the grinder components before each use. Unusual play or noise could be an indication of worn parts. Parts replacement should be performed by qualified personnel.

To ensure freedom of movement and prevent corrosion the stump grinders components should be lubricated every 20 hrs or more often with heavy use.



This symbol indicates a lubrication point shown in the illustrations below.

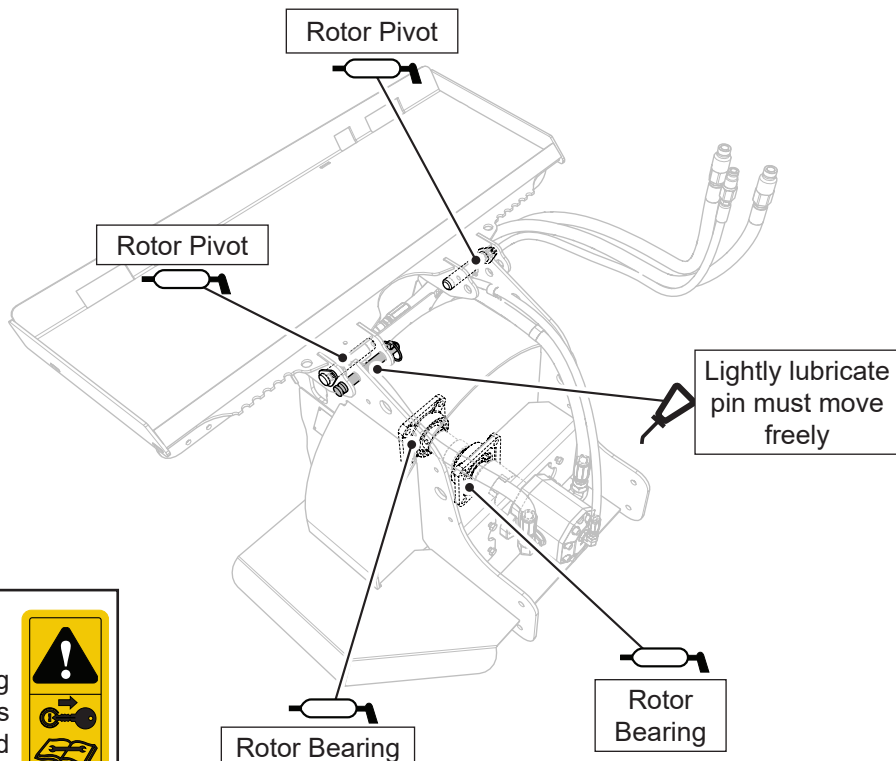
- Use a light oil or lubricating spray.

WARNING **Puncture Hazard**

Rotor teeth have sharp edges, use caution when working around the rotor, serious injury could result .

CAUTION **Operational Hazard**

Personal Protection Equipment (PPE) is required when operating or maintaining this machine.



CAUTION **Operational Hazard**

When repairing or maintaining the unit ensure power unit is off and the key is removed and pocketed.



CUTTING WHEEL

The grinder rotor is equipped with replaceable WearSharp® carbide cutting teeth, mounted in alloy steel tooth pockets. Periodic inspection of the cutting teeth and pockets is recommended to keep the stump grinder performing at its best. Due to the high wear nature of these parts, and the vibration they are subjected to, we recommend you inspect your teeth after each use and check all pocket fasteners weekly at a minimum.

For stability we recommended that the stump grinder is attached to the power unit when replacing rotor components.

- Park power unit on a level surface.
- Engage park brake.
- Stop hydraulic flow.
- Shut off engine and remove key.
- Support grinder frame with safety stands to prevent accidental lowering.

CAUTION
Operational Hazard
When repairing or maintaining the unit ensure power unit is off and the key is removed and pocketed.



Tooth replacement is relatively straight forward and can be done in the field. We recommend that pocket holders be replaced in shop, as they may require some extra effort to remove and ensure they are secure.

New cutting teeth, lock-nuts, spacers and pockets are available from your dealer or call Reist Industries order desk.

INSPECT CUTTING TEETH

The rotor is equipped with replaceable teeth equipped with three cutting edges on each tooth. The teeth can be indexed (rotated) twice from their original position allowing for extended tooth life. Due to the wear and shock these parts are subjected to, when replacing teeth we recommend replacing lock-nuts and spacers at the same time.

A good indication it is time to rotate them:

- If you are noticing decreased cutting performance and or rotation speed is noticeably reduced.
- Visibly noting the relief angle on the tooth approaches approximately 50% of the carbide thickness (decreased diameter).
- In extreme cases when teeth are chipped, broken or missing, replacement is required.

INDEXING CUTTING TEETH

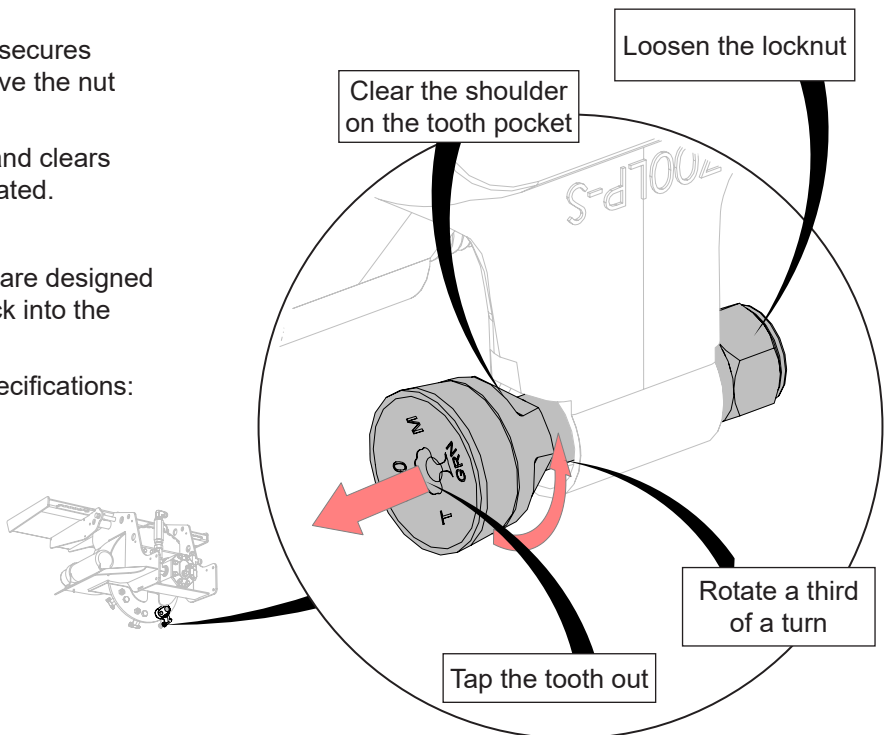
Tools needed: ½" Wrench, wire brush.

- Use a wire brush to clean around the pockets and hardware.
- Using the wrench, loosen the locknut that secures the tooth into the pocket (no need to remove the nut completely).
- Tap the tooth out so that the tooth is free and clears the shoulder on the pocket and can be rotated.
- Rotate the tooth a third of a turn.
- Reposition the tooth in it's seat. The teeth are designed to rotate in thirds and should fit snugly back into the pocket.
- Re-tighten the locknut to proper torque specifications:
20 ft.lbs. (27 Nm)



WARNING **Operational Hazard**

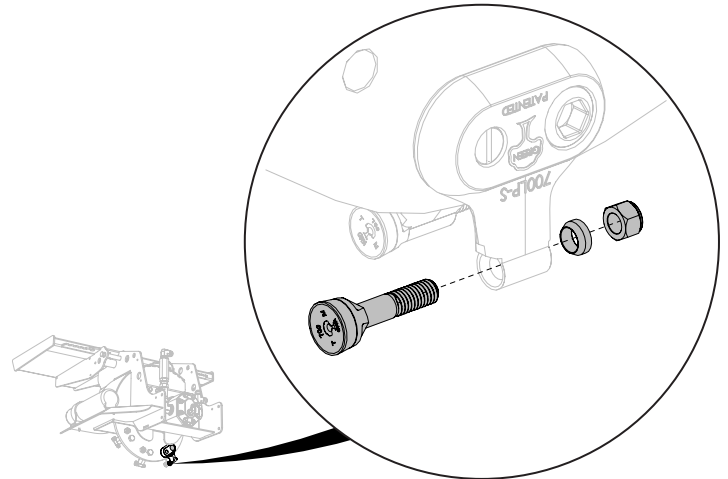
Replacement parts must be properly torqued, under or over torque can cause premature wear or damage leading to personal injury.



REPLACING CUTTING TEETH

To replace the tooth, follow the indexing instructions and simply remove the locknut and replace the worn tooth with a new one.

- Using a wire brush, clean around the pockets and hardware to make removal easier.
- Using the wrench remove the locknut and spacer then discard.
- Tap the tooth so that the tooth is free from it's seat, remove and discard.
- Position the tooth in it's seat, it should fit snugly into the pocket.
- Assemble the spacer and hand tighten the locknut.
- Tighten the locknut to proper torque specifications: **20 ft.lbs. (27 Nm)**



REPLACING TOOTH POCKETS

If the pocket is damaged or broken it will have to be replaced. Due to the wear and shock these parts are subjected to, when replacing pockets we recommend replacing both bolts and nuts at the same time.

There are three types of pockets mounted on the rotor, determine which pocket you require:

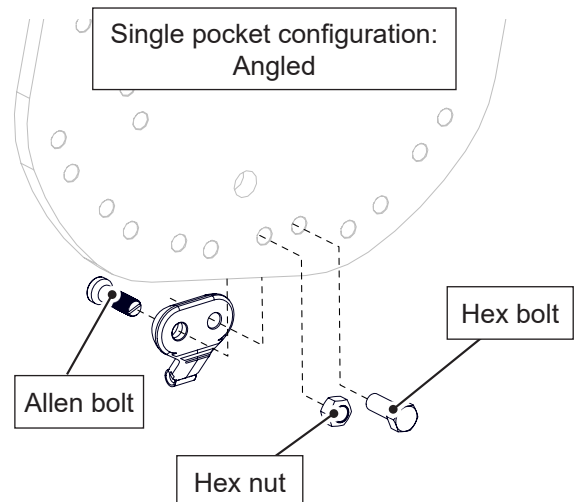
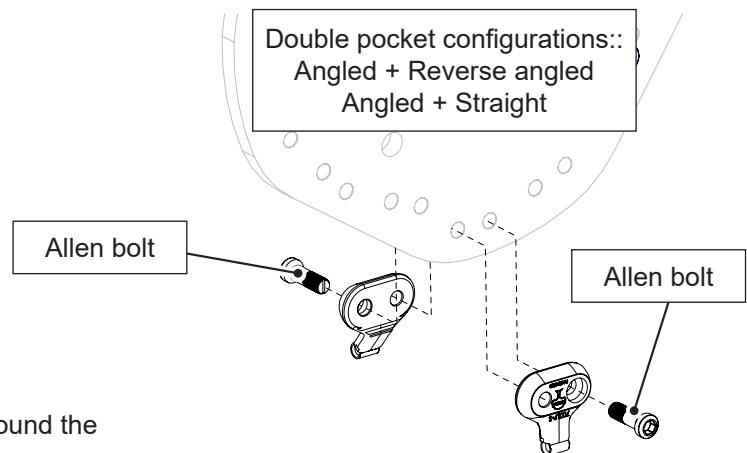
- Angled
- Straight
- Reverse Angled

Tools needed:

- Wire brush
- $\frac{15}{16}$ " Wrench
- $\frac{1}{2}$ " Wrench
- $\frac{1}{2}$ " 6pt Allen Wrench
- Anti Seize Compound

To replace a pocket:

- Using a wire brush, clean both sides of the rotor around the pockets and hardware to make removal easier.
- Make note of the orientation and type of the pocket to be removed.
- Using the $\frac{1}{2}$ " allen and $\frac{15}{16}$ " wrench to remove the bolts from each side of the pocket. (allen wrench only for double pockets)
- Discard the old bolts and tooth pocket.
- Using a wire brush, clean both sides of the wheel where it will come in contact with the pockets and hardware. Be sure to remove all dirt and debris so the pocket is seated tightly against the wheel.
- Fit the new matching pocket on the rotor in the same orientation and side as the old one.
- Using a dab of anti seize on the new bolt threads, install the bolts on each side of the pocket.
- Tighten the bolts to torque specs: **180 ft.lbs - 244 Nm .** (240 ft.lbs. - 325 Nm, with out anti-seize).
- Complete the installation by following the steps under 'Replacing Cutting Teeth' to install the cutting teeth.



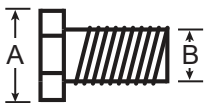
BOLT TORQUE TABLE

These tables are offered as the suggested maximum torque values for dry (not lubricated) threaded products and are only a general guide.

Check tightness of bolts periodically, replace hardware with the same strength bolt.

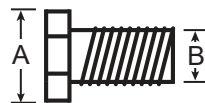
Torque specification for bolts are identified by their head markings as shown.

METRIC TORQUE SPECIFICATIONS



Wrench Size: "A"	Thread Size: "B" Fine	Class 8.8		Class 10.9		Thread Size: "B" Coarse	Class 8.8		Class 10.9	
		N-m	lbs-ft	N-m	lbs-ft		N-m	lbs-ft	N-m	lbs-ft
10 mm	6 x 0.75	---	---	---	---	6 x 1.0	11.3	8.3	16.5	12.2
13 mm	8 x 1.0	27	20	38	28	8 x 1.25	27.3	20.1	40.1	29.6
16 mm	10 x 1.25	52	38	73	54	10 x 1.5	54	40	49	36
18 mm	12 x 1.25	95	70	135	100	12.1.75	93	69	137	101
21 mm	14 x 1.5	150	111	210	155	14 x 2.0	148	109	218	161
24 mm	16 x 1.5	225	166	315	232	16 x 2.0	230	170	338	249
27 mm	18 x 1.5	325	240	460	339	18 x 2.5	329	243	469	346
30 mm	20 x 1.5	460	339	640	472	20 x 2.5	464	342	661	487
34 mm	22 x 1.5	610	450	860	634	22 x 2.5	634	468	904	667
36 mm	24 x 2.0	780	575	1100	811	24 x 3.0	798	588	1136	838
41 mm	27 x 3.0	---	---	---	---	27 x 3.0	1176	867	1674	1234
46 mm	30 x 2.0	---	---	---	---	30 x 3.0	1597	1178	2274	1677

SAE TORQUE SPECIFICATIONS



Wrench Size: "A"	Thread Size: "B" Fine	SAE 2		SAE 5		SAE 8		Thread Size: "B" Coarse	SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
7/16"	1/4-28	6	8.1	10	13.6	14	19.0	1/4-20	5	6.8	8	10.8	12	16.3
1/2"	5/16-24	13	17.6	19	25.7	27	36.6	5/16-18	11	14.9	17	23.0	25	33.9
9/16"	3/8-24	23	31.2	35	47.4	49	66.4	3/8-16	20	27.1	31	42.0	44	59.6
5/8"	7/16-20	36	48.8	55	74.5	75	101.6	7/16-14	32	43.4	49	66.4	70	94.9
3/4"	1/2-20	55	74.5	85	115.2	120	162.6	1/2-13	49	66.4	75	101.6	107	145.0
13/16"	9/16-18	79	107.0	122	165.3	172	233.1	9/16-12	70	94.9	109	147.7	154	208.7
15/16"	5/8-18	110	149.1	170	230.4	240	325.2	5/8-11	97	131.4	150	203.3	212	287.3
1-1/8"	3/4-16	192	260.2	297	402.4	420	569.1	3/4-10	173	234.4	266	360.4	376	509.5
1-5/16"	7/8-14	184	249.3	474	642.3	668	905.1	7/8-9	166	224.9	429	581.3	606	821.1
1-1/2"	1.0-12	274	371.3	705	955.3	995	1348.2	1.0-8	250	338.8	644	872.6	909	1231.7

TROUBLE SHOOTING

On the following pages, we have listed many of the causes and solutions to issues that you may encounter.

If you encounter a issue that is difficult to solve, even after having read through this trouble shooting section, please call your local distributor or dealer. Before you call, please have this Operator's Manual and serial number ready

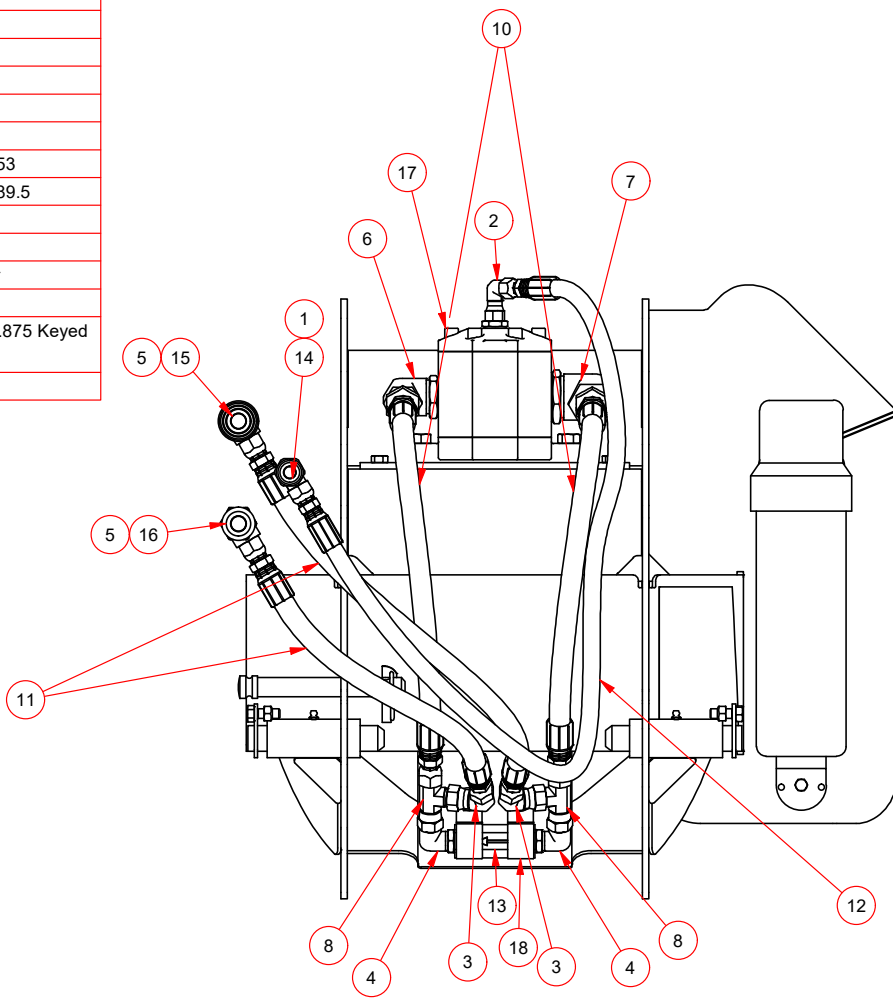
Problem	Cause	Solution
Broken or damaged cutting teeth or tooth pockets	Impact with foreign objects	Check for imbedded objects in the stump or rocks or buried metal below the soil
Cutting wheel turns too slow	Skid Steers pressure is too low.	Hitch Stump Grinder to a skid steer with a higher pressure rating.
	Skid Steer oil flow volume is low.	Hitch Stump Grinder to a skid steer with a higher flow volume.
Cutting wheel won't turn	Cutting too deep.	Decrease cutting depth
	Cutting too fast	Move slower across the stump
	Rotor jammed.	Remove jam material from rotor
	Quick disconnect couplers are attached to the wrong hydraulic hoses.	Switch quick disconnect couplers on the hydraulic hoses
	Hydraulic hoses are not coupled to the skid steer.	Reattach quick disconnect couplings to the skid steer.
	Hydraulic hoses and/or fittings are damaged.	Replace damaged hydraulic hoses and fittings.
Cutting wheel stops turning	Making deep cuts in the stump.	Make shallower cuts in the stump.
	Stump is made of a very hard wood or has hardened with age.	Take smaller bites out of the stump and go slower across the top of the stump.
	Carbide tips are dull.	Index or replace with new teeth.
	Skid Steers pressure is too low.	Hitch Stump Grinder to a skid steer with a higher pressure rating.
	Carbide tips are missing on the teeth.	Replace teeth with new teeth.
Hydraulic hoses are stretched and/or damaged	Hydraulic hoses are catching on tree limbs, debris, or other solid objects.	Replace hydraulic hoses. Stay away from objects that can catch on hydraulic hoses. Stop immediately if hoses are catching on an object and remove object. Adjust hose routing.
	Hoses are too short.	Install longer hoses.
Hydraulic fittings are damaged	Hydraulic hoses are catching on tree limbs, debris, or other solid objects causing fittings to become damaged.	Replace hydraulic fittings. Stay away from objects that can catch on hydraulic hoses. Stop immediately if hoses are catching. Adjust hose routing.
Stump Grinder is loosely attached to the Skid Steer	Quick Attach Hitch is not properly attached to skid steer.	Re-attach hitch before using Stump Grinder.
Stump Grinder vibrates excessively	Making deep cuts in the stump.	Make shallower cuts in the stump.
Smoke or burning smell	Cutting too fast, worn teeth	Move slower across the stump, perform maintenance on cutting teeth

PARTS DIAGRAMS

R18HD

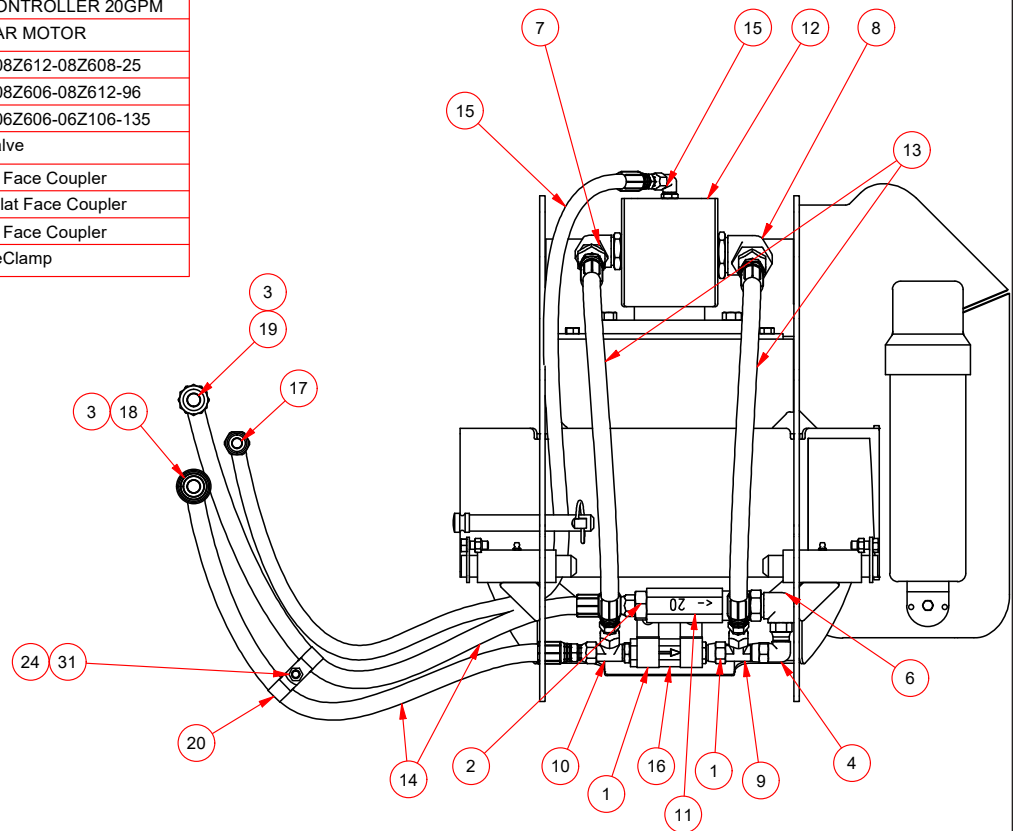
HYDRAULICS 26cc

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	5405*8	Elbow Fitting
2	1	5506*6	JIC Swivel Elbow 90 6
3	2	5506*8	JIC Swivel Elbow 90 8
4	2	5515*8	90 Elbow Fitting
5	2	5515*8*12	90 Elbow Fitting
6	1	5515*12*16	90 Elbow Fitting
7	1	5515*12*20	90 Elbow Fitting
8	2	5706*8	Swivel Nut Run Tee
9	1	9002-0606	06 BSPP x 06 JIC
10	2	135512-AA	H28008-08608-08612-22
11	2	135519-AA	H28006-06Z608-06Z608-53
12	1	135525-AA	H28006-06Z606-06Z608-89.5
13	1	CVT-04-A1-2590	Check Valve
14	1	FEM372-6FP	Male Flat Face Coupler
15	1	FEM501-12F0	Female Flat Face Coupler
16	1	FEM502-12FO	Male Flat Face Coupler
17	1	GMHP3A0B26	26CC SAE B Gear Motor .875 Keyed Shaft Case Drain
18	2	HK2117	1 1/4 "HoseClamp

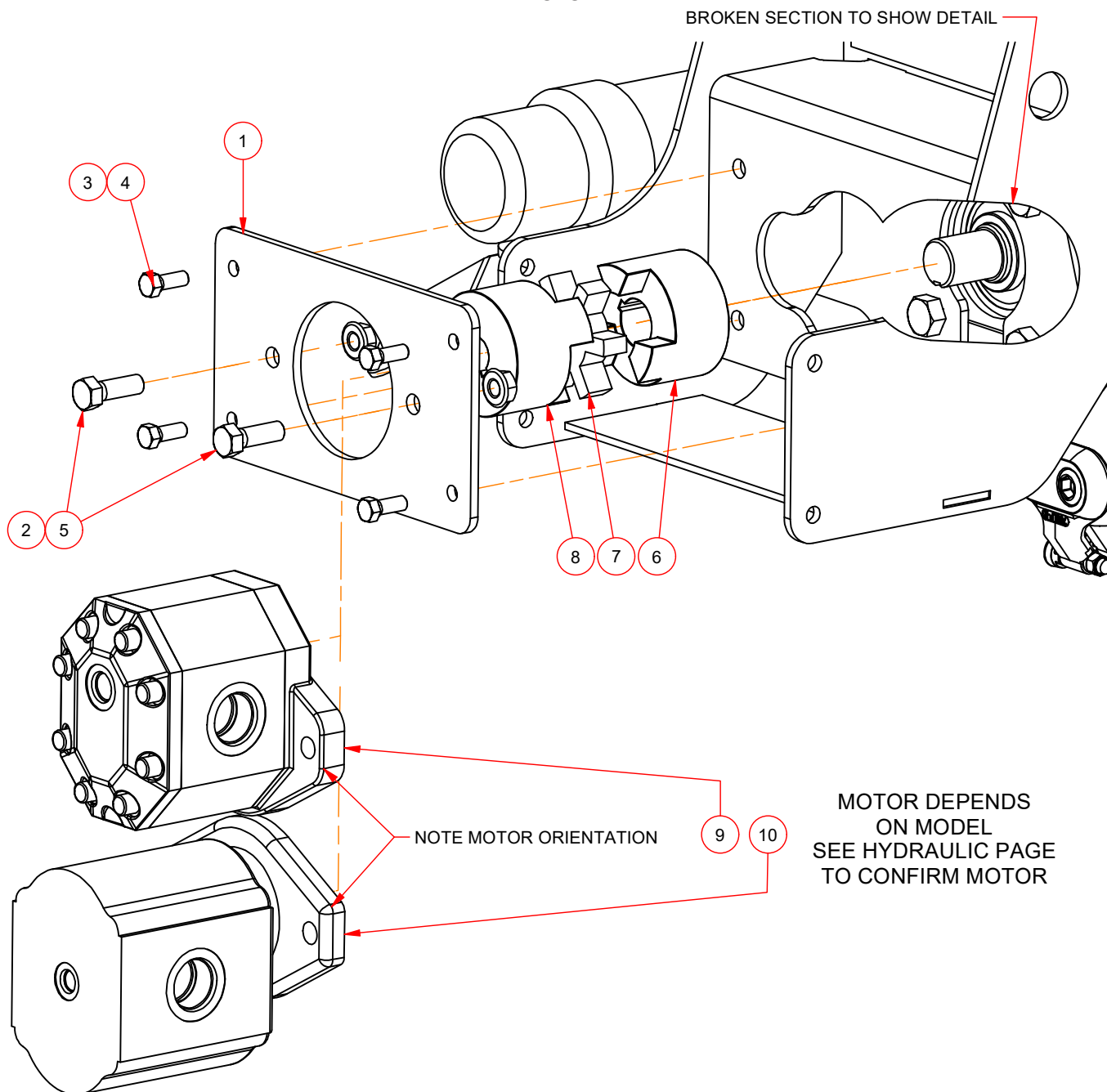


HYDRAULICS 39cc

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	5216*8*8	JIC / ORing Swivel
2	1	5315*8*12	Fitting
3	2	5315*12	Fitting
4	1	5506*8	JIC Swivel Elbow 90 8
5	1	5515*6	90 Elbow Fitting
6	1	5515*8*12	90 Elbow Fitting
7	1	5515*12*16	90 Elbow Fitting
8	1	5515*12*20	90 Elbow Fitting
9	1	5706*8	Swivel Nut Run Tee
10	1	6804-080808	Straight thread Run Tee
11	1	24012-20	FLOW CONTROLLER 20GPM
12	1	134930-AA	39cc GEAR MOTOR
13	2	135534-AA	H28008-08Z612-08Z608-25
14	2	135542-AA	H28008-08Z606-08Z612-96
15	1	135548-AA	H28006-06Z606-06Z106-135
16	1	CVT-04-A1-2590	Check Valve
17	1	FEM372-6FP	Male Flat Face Coupler
18	1	FEM501-12F0	Female Flat Face Coupler
19	1	FEM502-12FO	Male Flat Face Coupler
20	2	HK1313	3/4 "HoseClamp

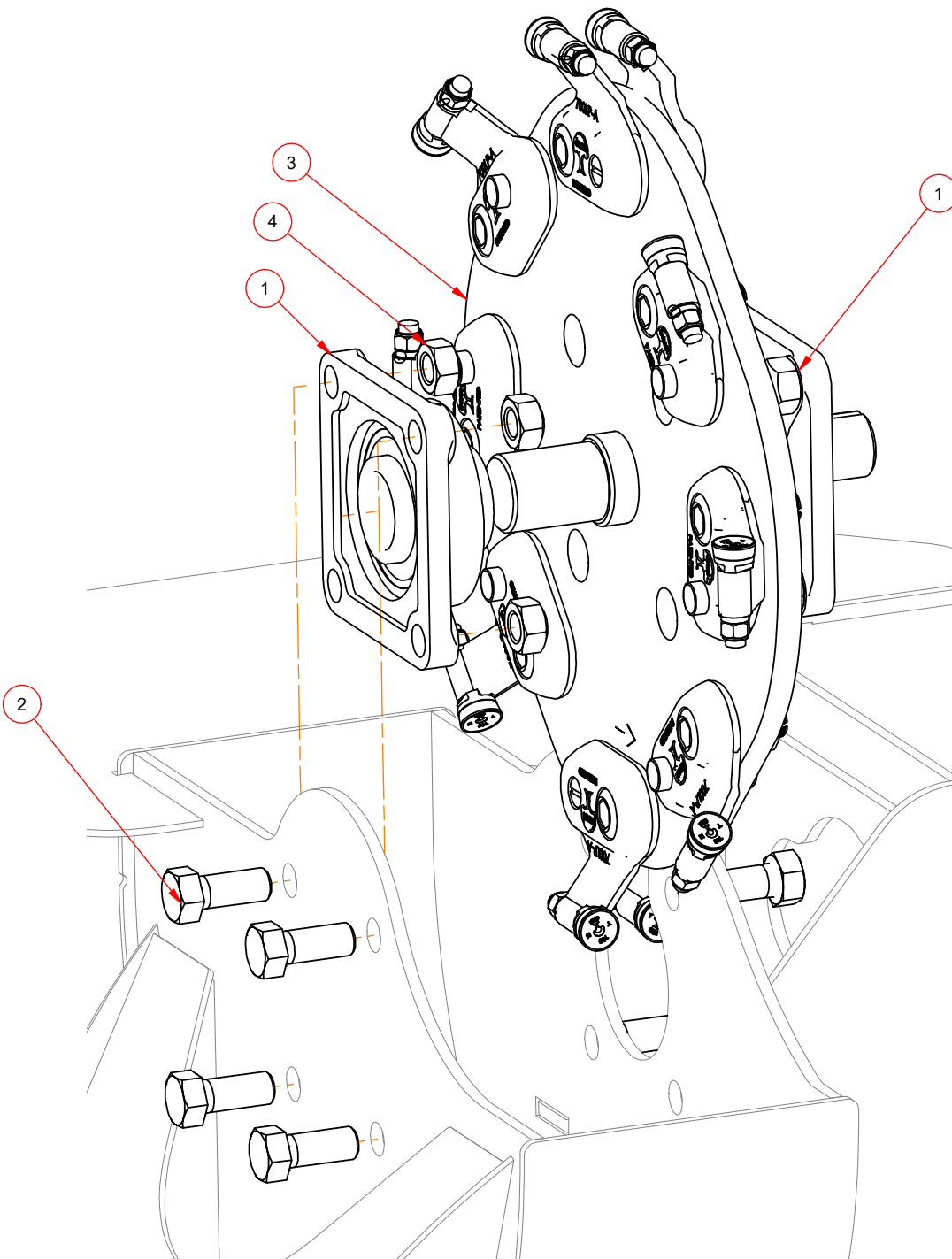


MOTOR



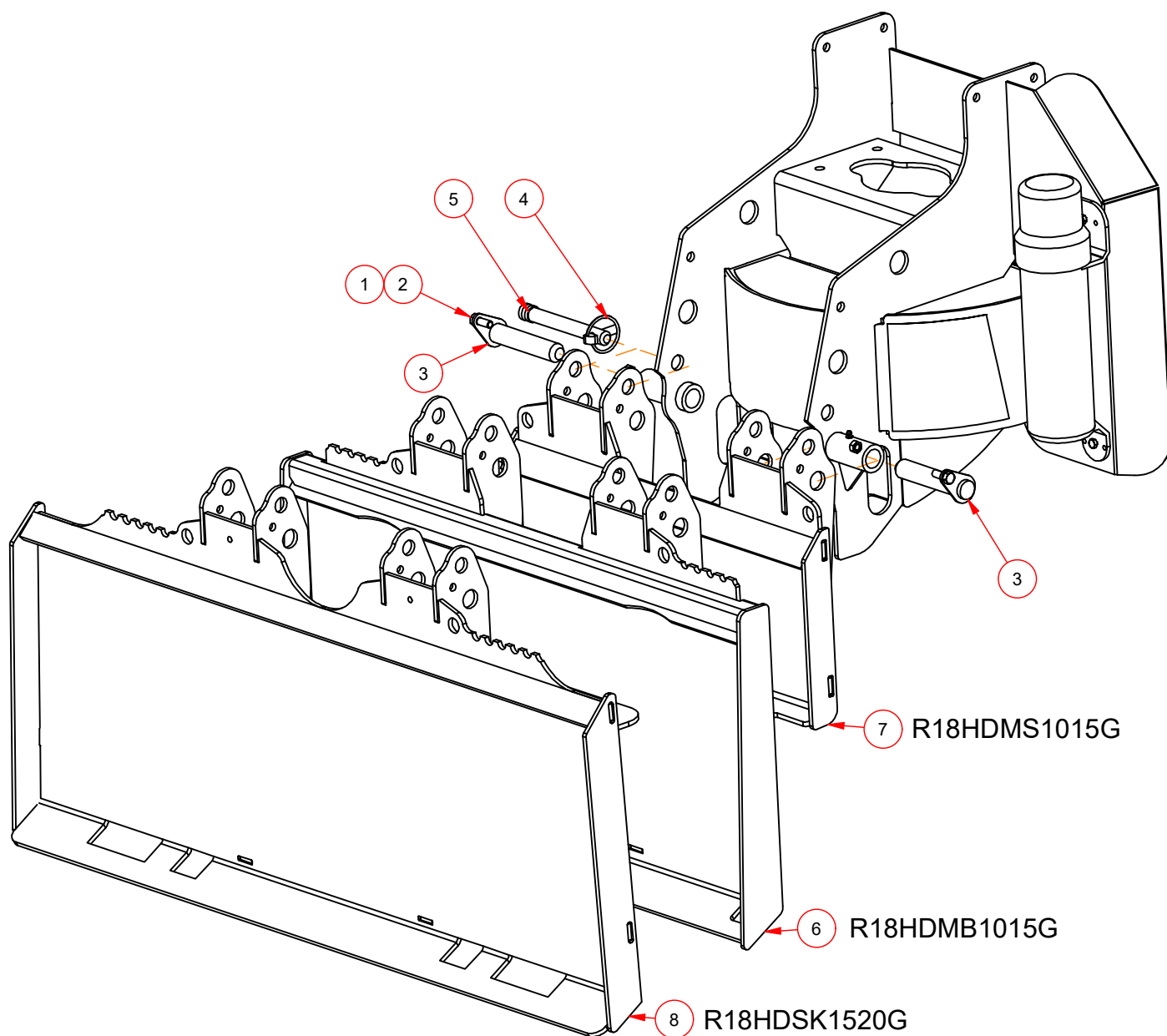
ITEM	QTY	PART NUMBER	DESCRIPTION
4	4	381	Hex Bolt
3	4	38FSLN	Flange Nut
1	1	133043-AA	SAE B Motor Mount Plate
2	2	12FSLN	1/2" Flange Nut
5	2	12112	Hex Bolt
6	1	131665-AA	L110 Coupler 1.25 Bore
7	1	131666-AA	L110 Coupler Spider
8	1	133030-AA	L110 Coupler 0.875 Bore
9	-	GMHP3A0B26	26CC SAE B Gear Motor .875 Keyed Shaft Case Drain
10	-	134930-AA	39cc GEAR MOTOR

WHEEL



ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	UCF208-108	4 Bolt Flange Bearing
2	8	58112	Hex Bolt
3	1	133075-AA	R18HD Grinding Wheel Assy
4	8	58CLN	NC Lock Nut

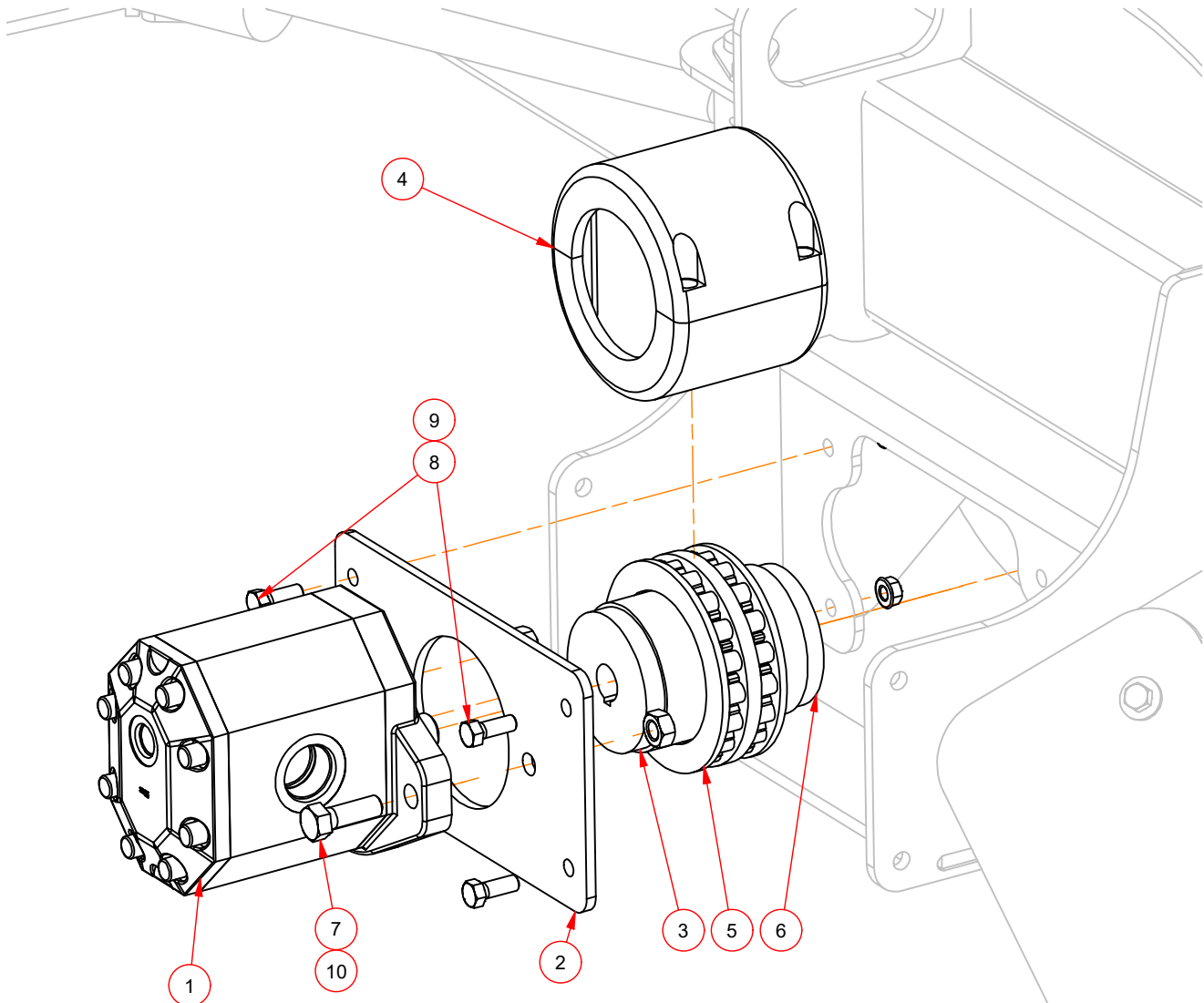
HITCH



ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	38CLN	NC Lock Nut
2	2	381	Hex Bolt
3	2	131311-AA	1 in. Flange Grease Pin Assembly
4	1	385507	7/16 Lynch Pin
5	1	387504	Top Link Pin
6	-	131669-AA	Mini Bobcat Hitch
7	-	133659-AA	Mini Skid Steer Hitch
8	-	133703-AA	skid steer stump grinder hitch

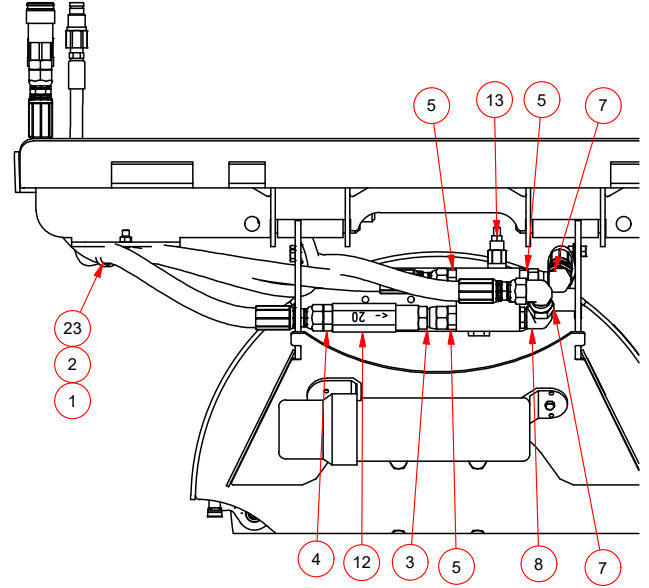
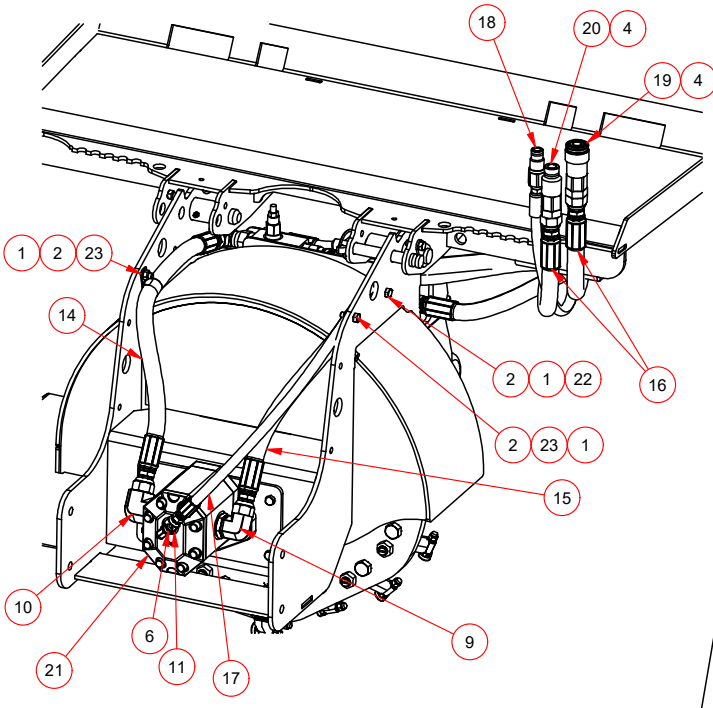
HITCH DEPENDS ON MODEL

R25HD HYDRAULICS 50cc



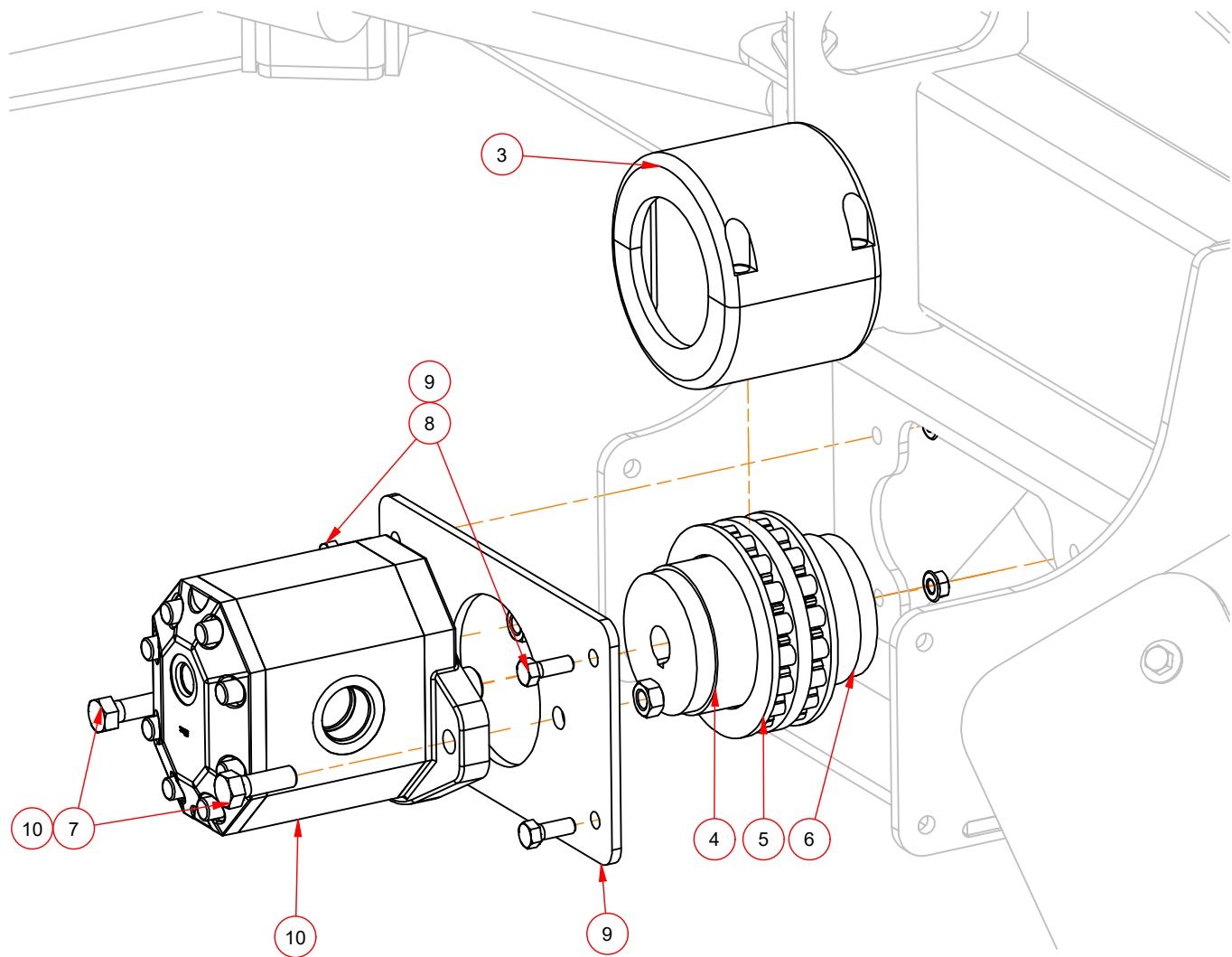
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	GMHP3A0B50	50CC SAE B Gear Motor .875 Keyed Shaft Case Drain
2	1	133043-AA	SAE B Motor Mount Plate
3	1	135050-AA	CHAIN COUPLER SPROCKET 7/8" BORE
4	1	134666-AA	COUPLER COVER
5	1	134512-AA	COUPLER CHAIN
6	1	134511-AA	COUPLER SPROCKET 1-1/4 BORE
7	2	12112	Hex Bolt
8	4	381	Hex Bolt
9	4	38FSLN	Flange Nut
10	2	12CLN	NC Lock Nut

HYDRAULICS 50CC EXT.



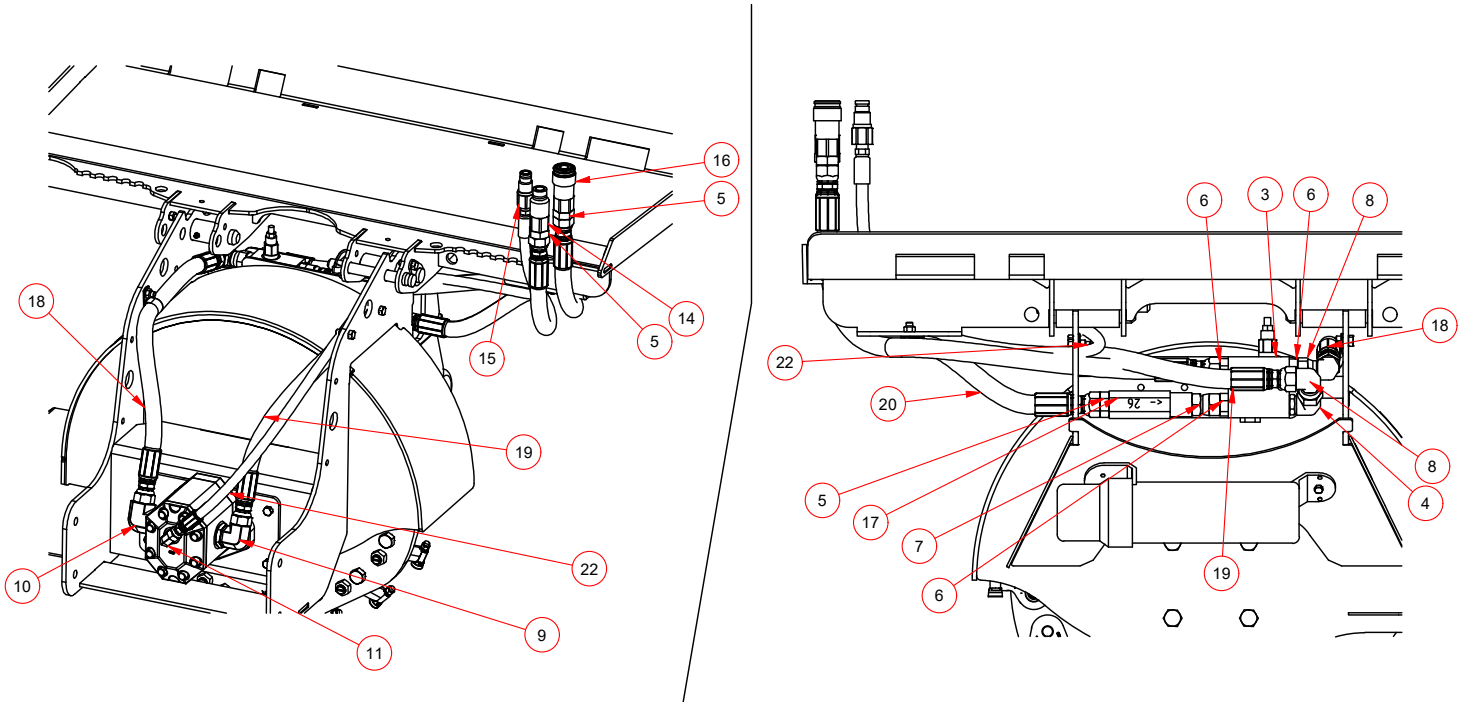
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	38CLN	NC Lock Nut	12	1	24012-20	FLOW CONTROLLER 20GPM
2	4	381	Hex Bolt	13	1	134293-AA	C510 Valve
3	1	5216*12*12	JIC / ORing Swivel	14	1	135165-AA	H14512-12Z612-12Z612-29
4	3	5315*12	Fitting	15	1	135207-AA	H14512-12Z612-12Z612-43
5	3	5315*12*10	Fitting	16	2	135210-AA	H14512-12Z612-12Z612-95
6	1	5506*6	JIC Swivel Elbow 90 6	17	1	135216-AA	H24506-06Z606-06Z106-118
7	2	5506*12	JIC Swivel Elbow 90 12	18	1	FEM372-6FP	Male Flat Face Coupler
8	1	5515*12*10	90 Elbow Fitting	19	1	FEM501-12F0	Female Flat Face Coupler
9	1	5515*12*16	90 Elbow Fitting	20	1	FEM502-12FO	Male Flat Face Coupler
10	1	5515*12*20	90 Elbow Fitting	21	1	GMHP3A0B50	50CC SAE B Gear Motor .875 Keyed Shaft Case Drain
11	1	9002-0606	06 BSPP x 06 JIC	22	1	HK0913	1/2 "HoseClamp
				23	4	HK1713	1 "HoseClamp

HYDRAULICS 63CC



ITEM	QTY	PART NUMBER	DESCRIPTION
3	1	134666-AA	COUPLER COVER
4	1	135050-AA	CHAIN COUPLER SPROCKET 7/8" BORE
5	1	134512-AA	COUPLER CHAIN
6	1	134511-AA	COUPLER SPROCKET 1-1/4 BORE
7	2	12112	Hex Bolt
8	4	381	Hex Bolt
9	4	38FSLN	Flange Nut
10	2	12CLN	NC Lock Nut
9	1	133043-AA	SAE B Motor Mount Plate
10	1	135047-AA	63CC GEAR MOTOR

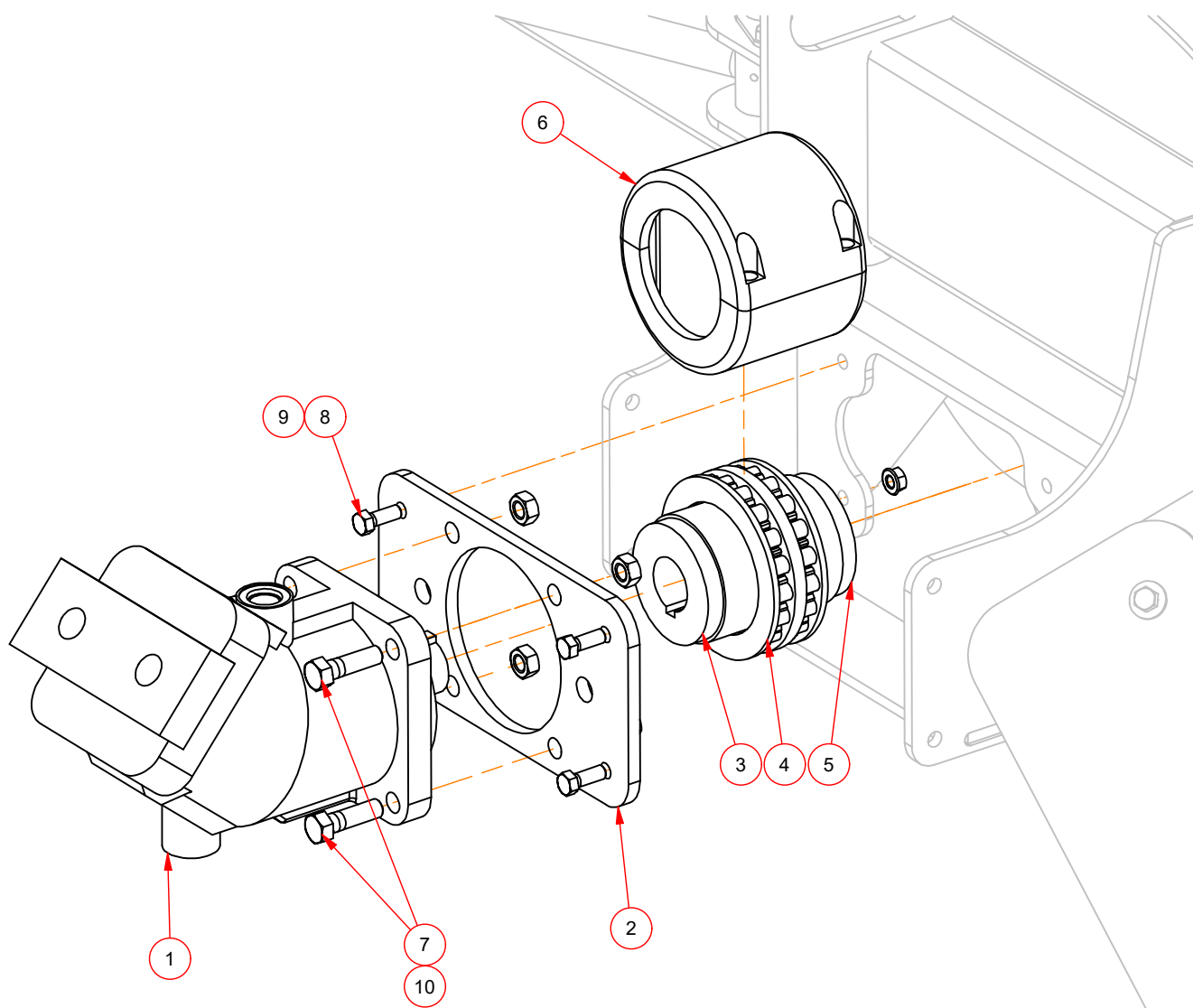
HYDRAULICS 63CC EXT.



ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	381	Hex Bolt
2	4	38CLN	NC Lock Nut
3	1	134293-AA	C510 Valve
4	1	5515*12*10	90 Elbow Fitting
5	3	5315*12	Fitting
6	3	5315*12*10	Fitting
7	1	5216*12*12	JIC / ORing Swivel
8	2	5506*12	JIC Swivel Elbow 90 12
9	1	5515*12*16	90 Elbow Fitting
10	1	5515*12*20	90 Elbow Fitting
11	1	5515*8	90 Elbow Fitting

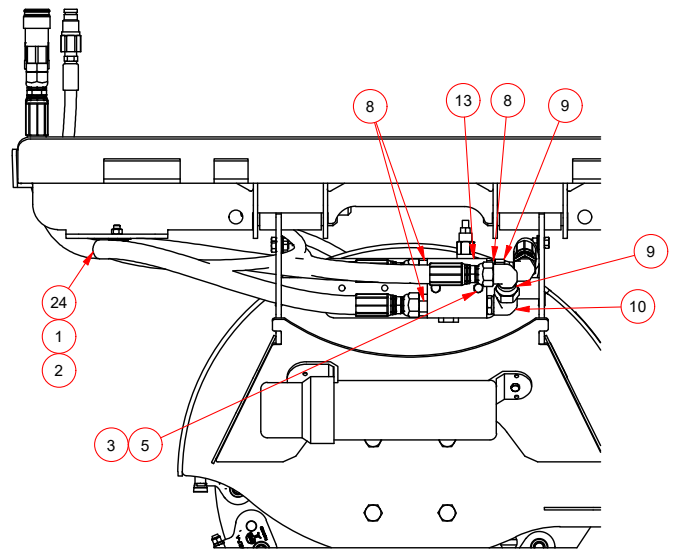
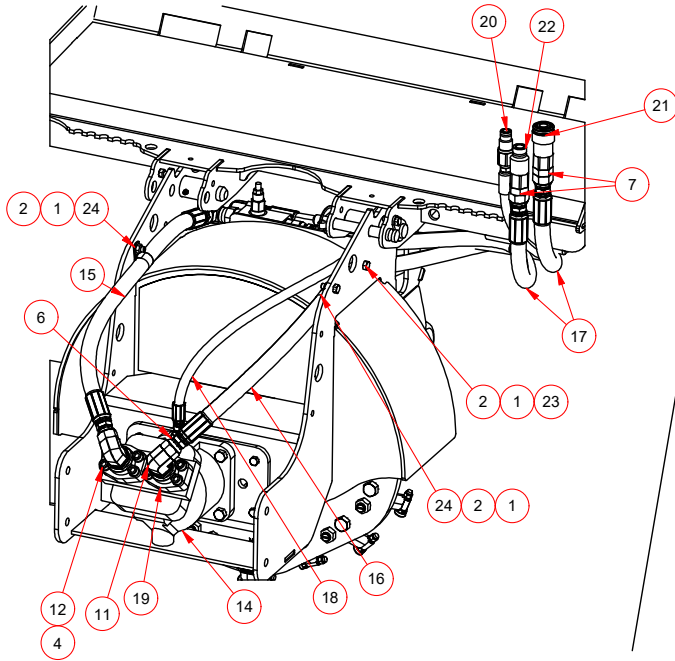
ITEM	QTY	PART NUMBER	DESCRIPTION
12	4	HK1713	1 "HoseClamp
13	1	HK0913	1/2 "HoseClamp
14	1	FEM502-12FO	Male Flat Face Coupler
15	1	FEM372-6FP	Male Flat Face Coupler
16	1	FEM501-12F0	Female Flat Face Coupler
17	1	24012-26	FLOW CONTROLLER 26GPM
18	1	135165-AA	H14512-12Z612-12Z612-29
19	1	135207-AA	H14512-12Z612-12Z612-43
20	2	135210-AA	H14512-12Z612-12Z612-95
22	1	135216-AA	H24506-06Z606-06Z106-118

HYDRAULICS 90cc



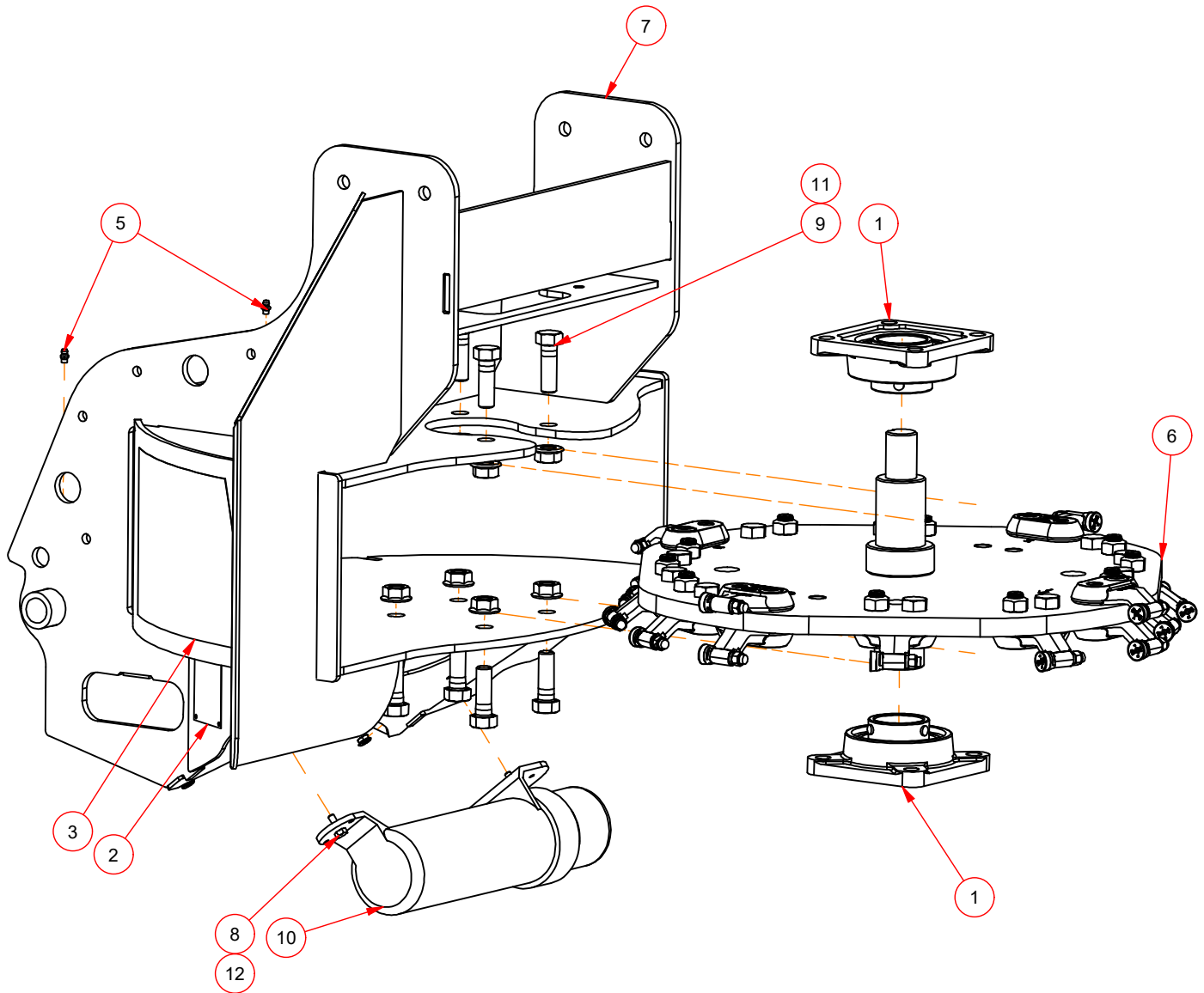
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	134822-AA	90cc BENT AXIS MOTOR
2	1	134105-AA	SAE C MOUNT MOTOR PLATE
3	1	135052	CHAIN COUPLER SPROCKET 1-1/2" BORE
4	1	134512-AA	COUPLER CHAIN
5	1	134511-AA	COUPLER SPROCKET 1-1/4 BORE
6	1	134666-AA	COUPLER COVER
7	4	12134	Hex Bolt
8	4	381	Hex Bolt
9	4	38FSLN	Flange Nut
10	4	12CLN	NC Lock Nut

HYDRAULICS 90cc EXT.

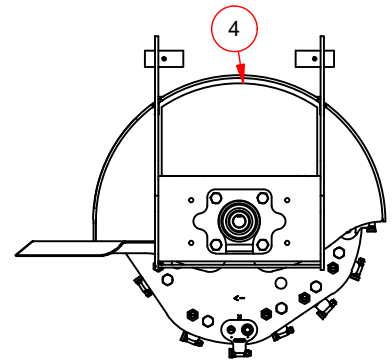


ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	38CLN	NC Lock Nut	13	1	134293-AA	C510 Valve
2	4	381	Hex Bolt	14	1	134822-AA	90cc BENT AXIS MOTOR
3	2	516FSLN	Flange Nut	15	1	135165-AA	H14512-12Z612-12Z612-29
4	8	716L	Lock Washer	16	1	135207-AA	H14512-12Z612-12Z612-43
5	2	5162	Hex Bolt	17	2	135210-AA	H14512-12Z612-12Z612-95
6	1	5315*8*10	Fitting	18	1	135216-AA	H24506-06Z606-06Z106-118
7	2	5315*12	Fitting	19	2	135266-AA	CODE 62 1" SAE FLANGE
8	3	5315*12*10	Fitting	20	1	FEM372-6FP	Male Flat Face Coupler
9	2	5506*12	JIC Swivel Elbow 90 12	21	1	FEM501-12F0	Female Flat Face Coupler
10	1	5515*12*10	90 Elbow Fitting	22	1	FEM502-12FO	Male Flat Face Coupler
11	2	5515*12*16	90 Elbow Fitting	23	1	HK0913	1/2" Hose Clamp
12	8	7162CSH	Socket Head	24	4	HK1713	1" Hose Clamp

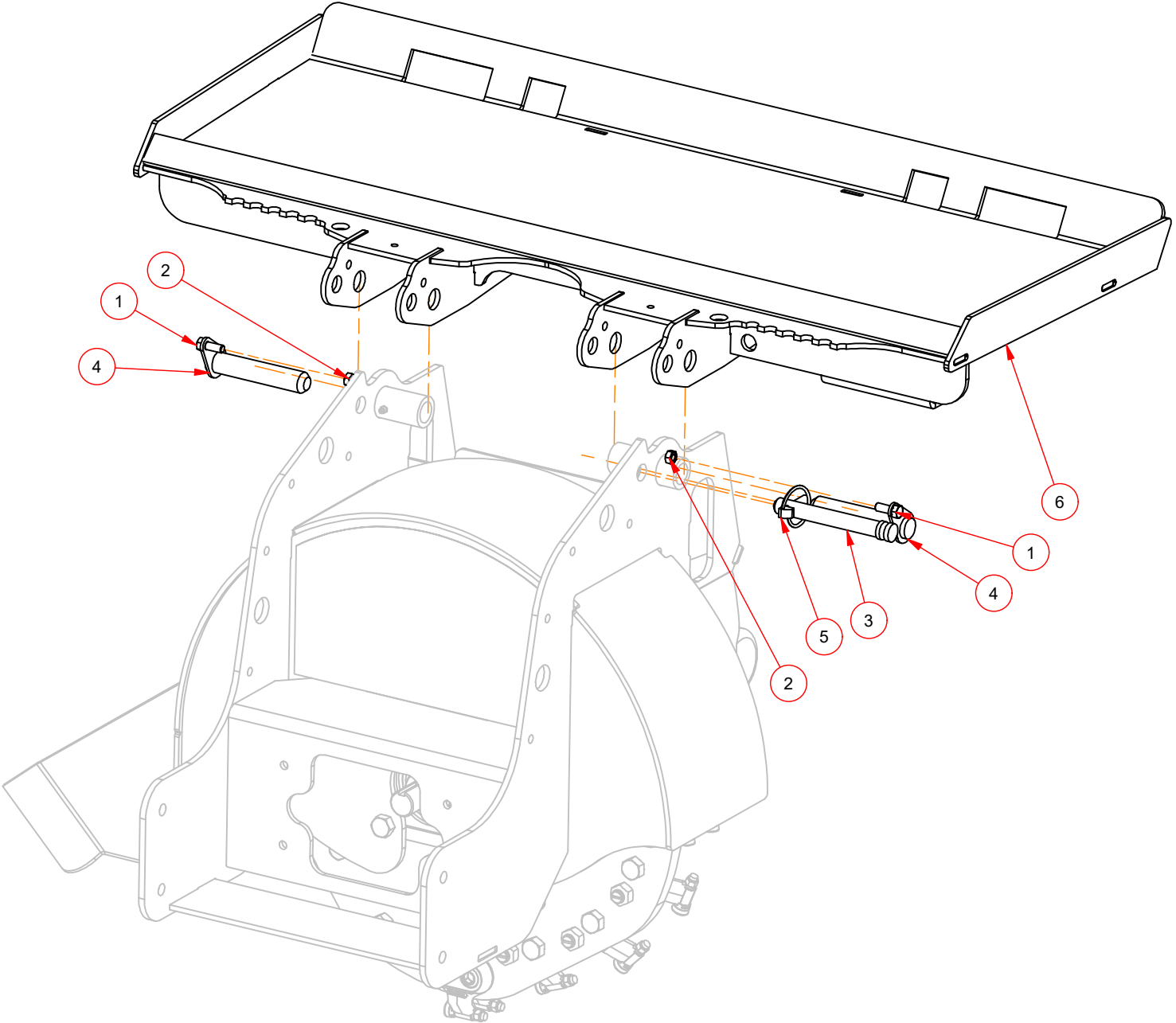
WHEEL



ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	UCF210-200	4 Bolt Flange Bearing
2	1	Serial	Serial # Plate
3	1	RD166	R25HD MODEL DECAL - SIDE
4	1	RD165	R25HD MODEL DECAL - FRONT
5	2	GF	1/16 NPT ST Zerk
6	1	133740-AA	R24HD WHEEL ASSY
7	1	133678-AA	HOOD WLDMT
8	2	1434	Hex Bolt
9	8	582	Hex Bolt
10	1	67.222.000	Manual Holder
11	8	58FSLN	Flange Nut
12	2	14FSLN	Flange Nut



HITCH



ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	381	Hex Bolt
2	2	38CLN	NC Lock Nut
3	1	387504	Top Link Pin
4	2	131311-AA	1 in. Flange Grease Pin Assembly
5	1	385507	7/16 Lynch Pin
6	1	133703-AA	skid steer stump grinder hitch

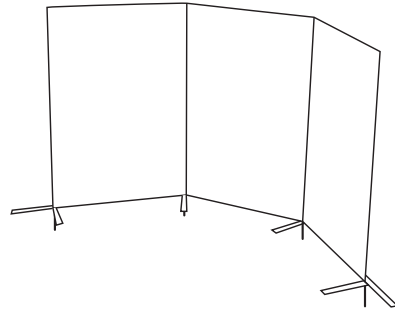
ACCESSORIES

For accessories or replacement parts, call your dealer for pricing and availability or go to reistindustries.com.

DS510 DEBRIS SCREEN

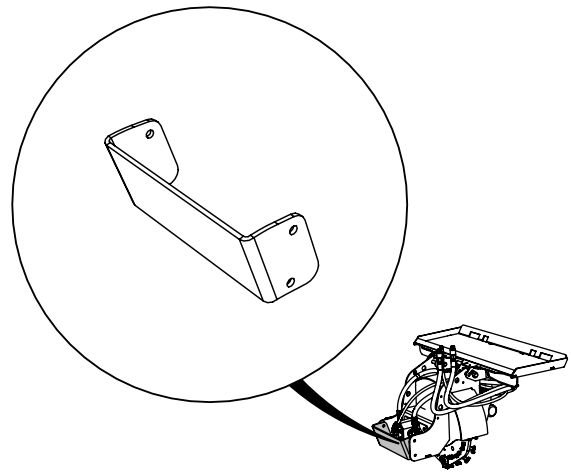
Used in areas where debris from the stump grinder needs to be contained, includes 4 posts with integrated ground spikes.

- 10' wide by 5' high
- 9 oz 1000D woven PVC coated polyester



HYDRAULIC HOSE SHIELD

- Mounted at the front of the grinder, acts as a shield to prevent potential damage to hydraulic motor and hoses. Available for R18HD and R25HD.





WARRANTY

Warranty for R18HD / R25HD Hydraulic Skid Steer Stump Grinder

All new Reist machinery is warranted to be free from defects in material or workmanship, which may cause failure under normal usage and service when used for the purpose intended, for a period of 12 months. This warranty applies only to a new Reist product, there being no warranty of any nature in respect to new products that have been modified or altered, repaired, neglected, or used in any way, which, in the opinion of Reist adversely affects its performance.

In the event of failure of a part or parts, and upon inspection, Reist is satisfied that failure is due to defective material or workmanship within 12 calendar months, from the date of delivery to an end user, such defective part or parts will be repaired or replaced by Reist at his business location. It is the responsibility of the buyer, at his expense, to transport the machine or equipment to the manufacturer service shop or, to an authorized service depot or, alternatively, to reimburse Reist for any travel or transportation expense involved in fulfilling this warranty.

When requested by Reist, part or parts shall be returned for inspection, transportation prepaid, to a place designated by Reist. IN NO EVENT SHALL THE BUYER BE ENTITLED TO RECOVER FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOSS OF PRODUCT, INCONVENIENCE, RENTAL OR REPLACEMENT EQUIPMENT, LOSS OF PROFIT, OR OTHER COMMERCIAL LOSS.

This warranty becomes void and null if the equipment is modified, breaks down as the result of an accident, is not operated according to manufacturers recommendations, damaged by negligence or if maintenance has not been carried out as specified.

THIS WARRANTY IS NOT TRANSFERABLE



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www.reistindustries.com