



Stump Grinder Attachment

Regular and High Flow User's Manual



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Safety Precautions

Stout Stump Grinder

Safety Levels



Danger: Indicates an eminently hazardous situation which, if not avoided, will result in death or serious injury. This is limited to the most extreme situations, typically for machine components which, for functional purposes, cannot be guarded.



Warning: indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. This also alerts against unsafe practices.



Caution: indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It also alerts against unsafe practices.

General Information

The Safety Precautions section of this manual serves to remind you of safety concerns for the operator, helpers, and bystanders in and around the vicinity of the Stump Grinder. Serious injury, and even death, can occur without proper safety measures. Ignoring these measures can also cause damage to the equipment itself.

Take the time to completely read all statements within this manual prior to the operation of the Stout Stump Grinder.

To the Operator

The primary responsibility for safety with this and any equipment falls in the hands of the operator. Ensure that all equipment is operated only by a responsible, competent, and healthy individual with the proper instruction. Familiarize yourself with the operation of the equipment, its capabilities, movement, and how all controls operate. Visually and physically inspect your equipment before you begin. DO NOT operate equipment that is not in proper working condition.



Before You Start

1. Read the entire manual for both your Skid Loader and the Stump Grinder.
2. DO NOT use the regular flow Stump Grinder on high flow hydraulic systems. Increased GPM and pressure from a high flow hydraulic system forced through a regular flow machine poses the potential for severe injury or damages.
3. Always wear the correct safety gear such as eye and hearing protection and ensure that all equipment shields are properly in place.
4. Follow all safety labels on equipment. DO NOT remove the labels, and replace if needed.
5. Be knowledgeable of the equipment, the operation of all controls, and emergency shut-down procedures. Test all controls before you begin.
6. Keep all step surfaces, pedals, and controls free from dirt, grease and oil to avoid slip and fall hazards. Use handholds and step plates when getting on or off machine.
7. Never allow passengers.



Operating with the Stump Grinder

1. Do not operate the unit near bystanders, traffic, pets, livestock or buildings. Keep bystanders at least 50 feet away from your work area at all times.
2. Do not allow others to approach while Stump Grinder is in operation. If another person, or pet, approaches the machine while in operation, stop the engine immediately.
3. Never board equipment while it is running.
4. Operate during sufficient daylight or with artificial daylight.
5. Check your work area: remove any excess debris; contact your local utility companies and have them locate all utility lines, both above and below ground.
6. Never operate machinery under the influence of alcohol, prescription/non-prescription drugs, or illegal drugs that may impair physical and mental capability.
7. Always be sure the attachment is on the ground and keys removed prior to leaving the machine.
8. Turn off the engine, remove the keys, and disconnect hydraulic couplers prior to maintenance.
9. Verify that any guards and covers are installed and in place prior to operating.
10. Stay clear of all moving parts and be aware of pinch hazards.
11. Be sure the Grinder wheel has stopped moving before raising it above ground. Carry the attachment close to the ground when moving.
12. Do not exceed operating limits which could result in the loss of control.
13. Do not smoke while refueling, and clean any fuel or oil spills immediately.

Transporting the Stump Grinder

1. Adhere to all federal, state and local regulations and laws when transporting machinery.
2. Use extra care when loading and unloading onto truck or trailer. Be sure to use sturdy tie down equipment to secure load.
3. Insert locking pin into bottom hole to secure the attachment (Fig. 1)



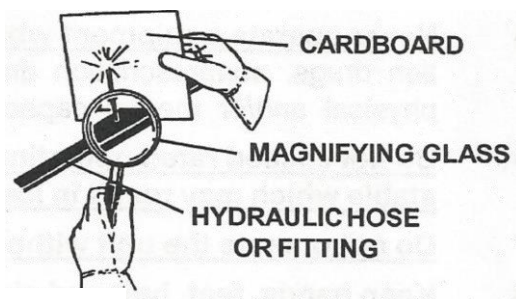
(Fig. 1)



Maintenance

See also Appendix D, E and F

1. Always lower attachment to the ground, turn off machinery, remove key and disconnect couplers prior to performing any maintenance.
2. Hydraulic repairs should never be done while under pressure.
3. Perform regularly scheduled maintenance in order to keep in safe and proper working order.
4. Always wear eye protection and hearing protection while operating equipment.
5. Use only manufacturer recommended replacement parts intended for their original purposes.
6. Do not use hands or other body parts to check for hydraulic leaks; use cardboard or wood. If pressurized leak penetrates skin, seek medical attention immediately! (Fig. 2)



(Fig. 2)

Recommended method for checking hydraulic leaks.

Pre-operation

Stout Stump Grinder

General Information

The Stout Stump Grinder is designed to be a user-friendly attachment for skid-steers for the purpose of reducing tree/bush stumps in landscaping and agricultural applications. The ability of a skid-steer to easily move and navigate a variety of terrain allows the operator to access areas with the stump grinder. The compact size of the attachment allows for use near buildings and fence lines. The attachment is ideal for individuals, contractors, and farmers.



The Stout Stump Grinder is designed to work using the auxiliary hydraulic connections of a skid-steer. The size of the attachment is smaller than traditional stump grinders which allows for greater visibility during use. A strong familiarity with the controls of the skid-steer is required and assumed during the operation of the attachment.

It is necessary to read and understand the “Safety Precautions” and “Pre-operation” sections before proceeding to “Operation.” Reading of the manual and instructions is necessary before the attachment is installed and used. Any misunderstandings should be clarified before use; contact your dealer or manufacturer if you have any questions prior to use.

NOTE: Illustrations and data used in this manual are based upon current information at the time of printing. We reserve the right to redesign and change the grinders and related materials as necessary without prior notification.





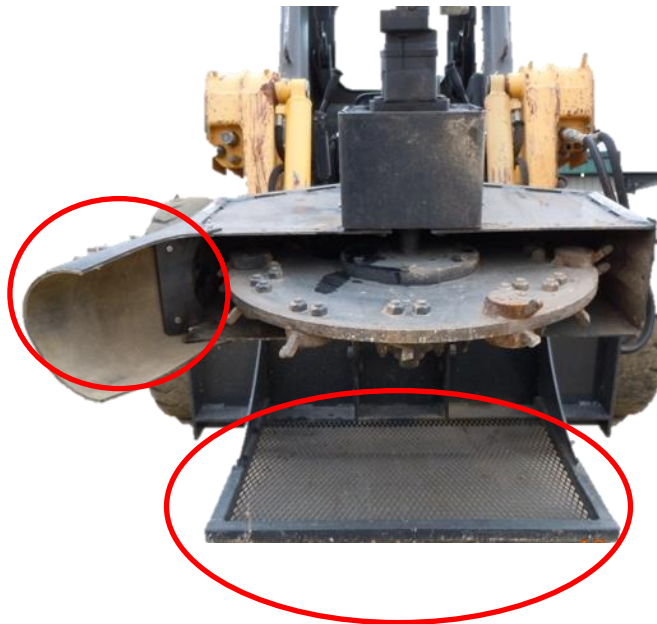
Before You Begin

The Operator is responsible for the safety of the equipment, bystanders, and other users. Be sure that equipment is only operated by trained individuals that have also read and understood this manual. ALWAYS inspect the equipment and practice the appropriate safety measures outlined in this manual; and in federal, state, and local regulations. Complete familiarity with the controls of your skid-steer and familiarity with the attachment connected is necessary for successful operation.

Before you use the attachment, be sure all guards are intact and in place on the attachment. The dense rubber boot and the brush screen (Fig. 3) are not meant to completely protect and stop all debris. Skid Steers without cab enclosures require the operator to use a full face shield on a helmet with ear muffs (Type 1). Check all grinding teeth and replace any that are broken or worn.



(Type 1)

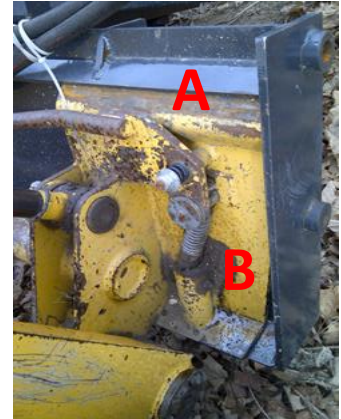


(Fig. 3)

Attaching the Stump Grinder



With attachment lying on ground or hard surface, hook the lift-arm attachment plate into top flange of stump grinder (A). Then secure the two spring loaded locking pins into the bottom of attachment plate (B).



Once at the work site, remove the bottom pin in order to free the hinge swing of the stump grinder.



Before using the stump grinder, be sure that all measures have been taken to ensure the safest work environment.

Have underground utilities marked by your local utility companies, all helpers at a safe distance (min. 50 ft.), and all obstacles identified.

Hydraulic Connections

All hydraulic connections should be secure and tightened to ensure that no leaks or loss of pressure will occur during operation.



Operation

Stout Stump Grinder

Stump Grinding Operation



CONTACT YOUR LOCAL UTILITY COMPANIES TO LOCATE AND IDENTIFY ALL UTILITY LINES ABOVE AND BELOW GROUND BEFORE OPERATING THE STUMP GRINDER.



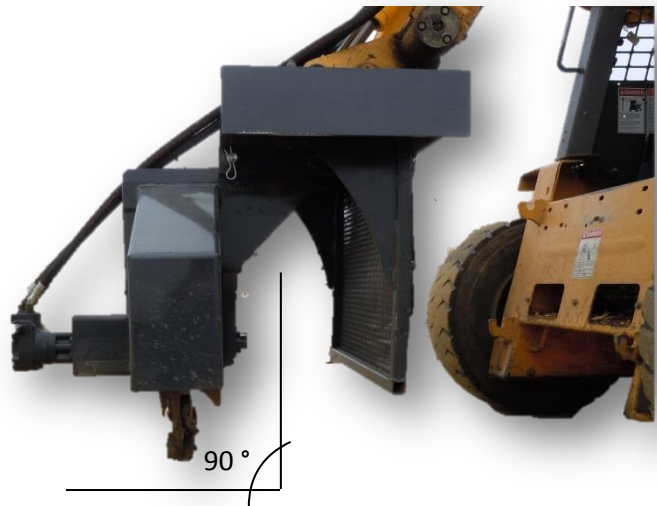
THE OPERATOR SHOULD BE INSIDE THE SKID-STEER CAB TO OPERATE THE STUMP GRINDER ATTACHMENT.

Follow all instructions for the proper installation of the attachment onto your skid-steer before operating. Follow all proper operating procedures for your skid steer.

Stump Grinder Operation

Lift attachment off the ground and point grinding wheel in a 90° angle to the stump surface.

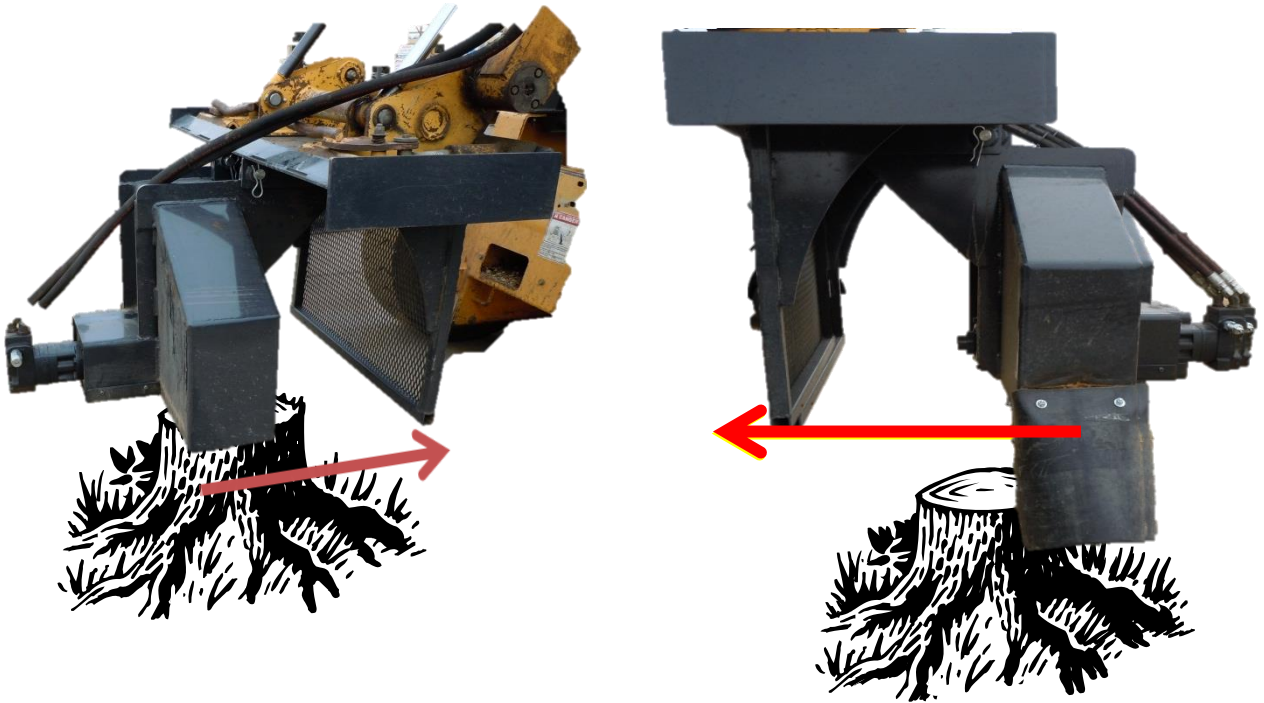
Debris guard/screen will be between operator and stump grinder. The rubber boot will be to the right of the operator in the direction of debris outflow.



Operation (continued)

Stout Stump Grinder

Initiate hydraulic flow to start the grinder wheel. Set the wheel on the opposite side of the tree stump and drag towards the skid steer. Gravity will feed the grinding wheel into the stump.



Continue to grind out sections of the stump, always working from the outside back towards the skid steer.

Be aware of flying debris that may ricochet off of nearby trees, large stones, buildings, etc.



Grind stumps down 6"-8" below ground level.



Operation (continued)

Stout Stump Grinder



When pulling the grinder across the stump, be prepared for the possibility of kickback and stoppage. Rocks, heavy growth, harder woods, and various ground conditions may change the way the grinder moves through the stump.



Warning! The Stout Stump Grinder should not be operated in reverse. Operating the Stump Grinder in reverse could result in permanent damage to the hydraulic motor.

After Work Is Completed

Set the stump grinder back on the ground, turn off the skid steer, and remove the key. Inspect the attachment for broken and loose teeth. Also check for any mechanical problems and possible repairs or maintenance that may be needed.

(See Appendix D, E and F for maintenance requirements)

- ★ Before leaving the site, re-insert the lock pin in the bottom hole of the attachment to secure it. Transport the attachment off of the ground but low enough to have a clear line of sight.



Safety and Hazard Guide-Appendix A

HAZARD TYPE	HAZARD SOURCE/DESCRIPTION	METHOD TO REMOVE HAZARD
Physical	The combined noise of the skid steer and attachment is extremely loud for the operator and bystanders.	Persons operating and working around the skid steer and running attachment must wear hearing protection to protect hearing.
Physical	When in operation the attachment and skid steer are in constant motion (forward, backward, side-to side).	Using reflective stakes and caution tape set up a perimeter restricting access to only those who must be in the vicinity of operation. Ensure backup alarm is working on skid steer, and use caution lights on implement.
Physical	Flying wood chips and other debris	Rubber boots must be installed on one end of the housing where the rotating chipper is exposed and discharge is expelled. Persons operating and working around the skid steer and running attachment must wear hardhats with face shields.
Mechanical	The removal and replacement of the pin between the plate and the attachment to allow the attachment to swing freely over work.	Always install and remove pin with machine off and attachment securely on the ground or hard surface.
High Energy	Coupling and uncoupling the hydraulic hose connectors.	Ensure that the skid steer is off and pressure is released in hoses. Wear rubber gloves before coupling or uncoupling hoses.
High Energy	Checking for leaks in hoses that are under pressure.	Ensure that the skid steer is off and pressure is released in hose. Wear rubber gloves before coupling or uncoupling hoses. Use a piece of wood or cardboard to move along hoses to check for leaks.
Chemical	Exposure to hydraulic fluid.	Wear appropriate Personal Protection Equipment such as long pants, long sleeved shirt, and gloves.
Biological	Animals, Insects, and plants that may be disrupted while operating equipment.	Be aware of animal, plant, and insect species in work area. Poisonous and noxious plant species should be marked and indicated.
Physical	Improper transport and maneuvering.	Persons operating and working around the skid steer and running attachment must remain fully aware of their surroundings. They must load, unload, and maneuver machinery abiding by all applicable laws, policies and procedures.

Stump Grinder Specifications-Appendix B

Hydraulic Requirements

The Stout Stump Grinder is designed to attach Track Loaders and/or Skid Steers with the following minimum requirements:

Hydraulic Pressure Rating..... 1,500-3,000 psi

Hydraulic Connections..... 2-Hydraulic Outlets
(1/2"flat-faced couplers provided)

Hydraulic Flow in GPM

Model SG13-R (Regular)5 to max. 20 GPM

Model SG13-High Flow..... 10 to max. 30 GPM

Hydraulic hoses: 5/8" / 3,045 PSI

Specifications

Dimensions	Model SG13-R	Model SG13-High Flow
Overall Width	45-1/2"	45-1/2"
Overall Height	40"	41"
Overall Length	37"	37"
Below Ground Depth	11"	11"
Number of Cutting teeth	20 Total (3 left-hand, 15 right-hand, 2 straight)	20 Total (3 left-hand, 15 right-hand, 2 straight)
Wheel Diameter	26"	26"
Weight	615 lbs.	625 lbs.

Troubleshooting-Appendix C

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
Motor will not operate	Auxiliary Hoses not hooked up to the skid-steer	Engage couplers
	Obstruction in hydraulic lines	Remove obstruction and replace if necessary
	Skid Steer auxiliary valve not engaged	Engage auxiliary valve
Wheel Rotates Sluggishly	Insufficient hydraulic flow from the skid steer	Refer to skid-steer's owner's manual
	Damaged quick coupler	Replace if necessary
	Oil filter on skid-steer is dirty	Refer to skid-steer's owner's manual
	Internal motor leakage	Rebuild motor
Leaking Oil	Loose or damaged hydraulic line	Tighten or replace
	O-rings on fittings damaged	Replace if necessary
	Fittings loose or damaged	Tighten or replace
	Motor seals damaged	Replace motor seals
Insufficient Power	Insufficient hydraulic flow from the skid-steer	Refer to skid-steer's owner's manual
	Relief valve setting adjusted too low	Refer to skid-steer's owner's manual
	Oil filter on skid steer is too low	Refer to skid-steer's owner's manual
Excessive oil temperature	Hydraulic oil level too low	Refer to skid-steer's owner's manual
	Excessive stalling of cutting wheel	Decrease cutting depth
	Obstruction in hydraulic lines	
	Hydraulic oil or oil filter in skid-steer is dirty	Refer to skid-steer's owner's manual
	Relief valve setting adjusted too low	Refer to skid-steer's owner's manual
Excessive vibration	Broken, damaged, or missing teeth	Replace as necessary
	Bent motor shaft	Replace motor shaft

Maintenance-Appendix D

GENERAL INFORMATION

Regular maintenance is the key to long equipment life and safe operation. Maintenance requirements have been reduced to a minimum. However, it is important that these maintenance steps be performed as stated below.



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

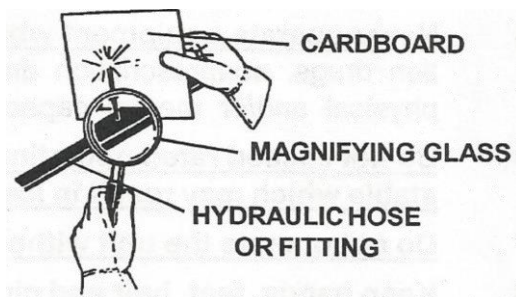
DAILY MAINTENANCE

- Check the skid-steer loader hydraulic system to ensure adequate level of hydraulic oil.
- Check mounting hardware on teeth and torque to minimum 154-maximum 180 ft. lbs.
- Check hydraulic system for hydraulic oil leaks. (See instructions below)
- Check teeth for damage and replace as necessary.
- Check all safety guards and devices are installed correctly.
- Check for missing or illegible Safety/Warning Decals. (See appendix G for decal list and placement)
- Grease all grease fittings. (See Appendix E for lubrication instructions)
- Check Chain Coupler. (See Appendix F for instructions)



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

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



Maintenance-Appendix D (continued)

STORAGE MAINTENANCE

Preparation for storage:

- Clean Unit thoroughly removing all mud, dirt, grease, and wood chips
- Replace any worn or chipped teeth. Replace any teeth that are missing the carbide tip.
- Inspect the unit for visible signs of wear, breakage or damage. Order any parts required and make the necessary repairs immediately.
- Tighten all loose nuts, cap screws, and hydraulic connections.
- Connect the couplers together to protect the hydraulic system from contaminants.
- Touch up all unpainted and exposed areas with paint to prevent rust.
- Replace decals if damaged or in unreadable condition. (See appendix G)
- Grease all fittings. (See appendix E)
- Store the unit in a dry, protected place. Leaving the unit outside will materially shorten its life.
- When removing from storage, perform daily maintenance laid out in Appendix D, E and F.

Lubrication-Appendix E

GENERAL INFORMATION

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

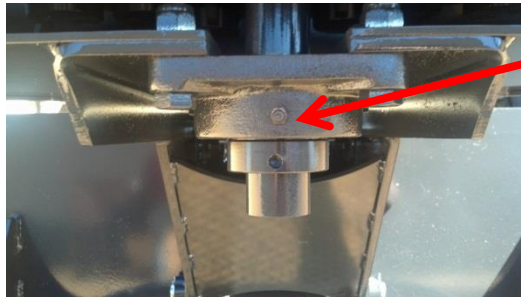
As recommended in Appendix D, grease fittings should be lubricated daily. If any grease fittings are missing, replace them immediately. Clean all fittings thoroughly before using the grease gun. Lubricate daily with SAE Multi-Purpose Lubricant or equivalent type grease.

IMPORTANT: Avoid excessive greasing. Dirt collects on exposed grease and greatly increases wear. After greasing, wipe off excessive grease from fittings.



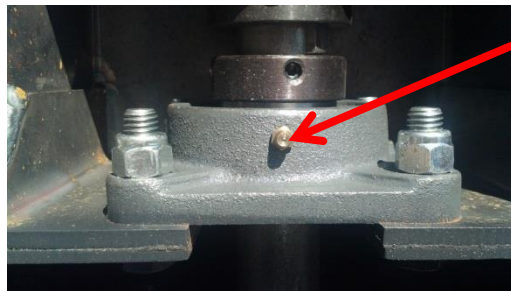
**CAUTION! SHUT OFF ENGINE AND REMOVE KEY
BEFORE LUBRICATING EQUIPMENT.**

Grease Fitting #1 is located on the bottom of the wheel shaft on the side of wheel closest to Skis Steer mount.



Grease Fitting #1

Grease Fitting #2 is located inside the motor casing.



Grease Fitting #2

Checking the Chain Coupler-Appendix F

GENERAL INFORMATION

The diagram below shows the placement and location of the coupler casing and the chain coupler.

As noted in Appendix D, recommended maintenance requires checking the Chain Coupler daily. Check for any wear to the chain and make sure that all set screws are tightened. This requires removal of the coupler casing.

1. Remove cover screws for coupler casing and store in a safe place.
2. Lift the cover of the casing off, revealing the coupler.
3. If the chain shows signs of wear, replace immediately.
4. If the set screws are loose, tighten them.
5. After inspecting the Chain Coupler, replace the coupler casing cover using the same screws that were removed prior to inspection.

1. Remove Coupler Casing screws



2. Remove Coupler Casing cover



3.-4. Inspect chain and set screws-replace if necessary.



5. Replace Coupler Casing cover and screws.

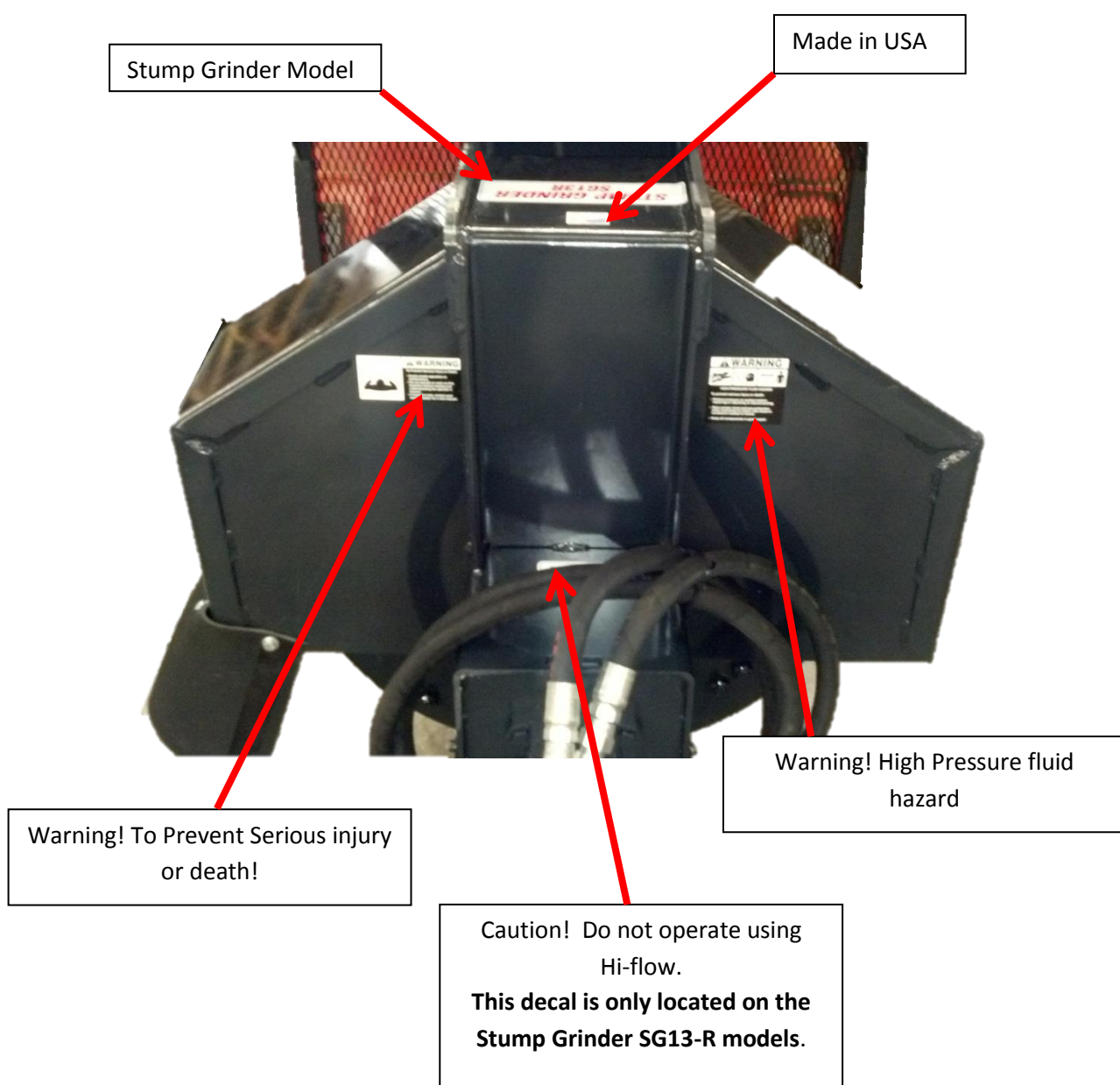


Safety/Warning Decals-Appendix G

GENERAL INFORMATION

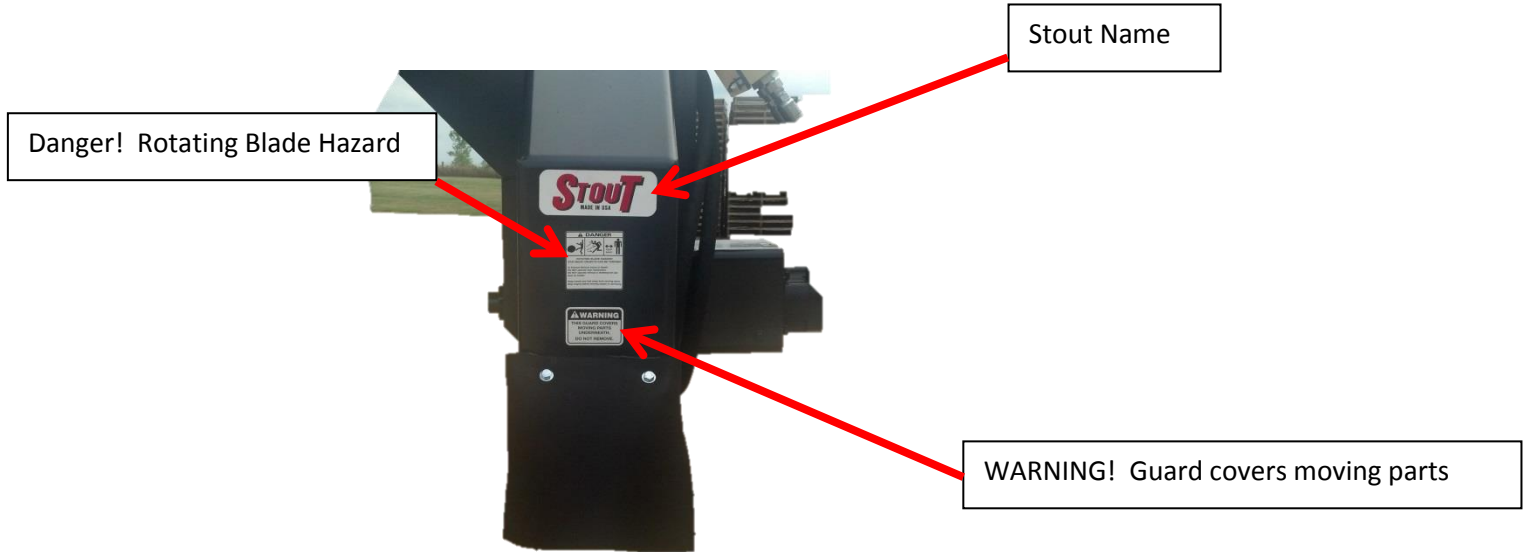
The diagrams to follow show the placement of the information and warning decals on the Stout Stump Grinder. The decals are identified by their name, with enlarged pictures of each decal located on the following pages. Use this information to order replacements for lost or damaged decals. Be sure to read all decals before operating the Stout Stump Grinder. They contain information you need to know for the safe operation of this unit.

Stump Grinder-FRONT VIEW

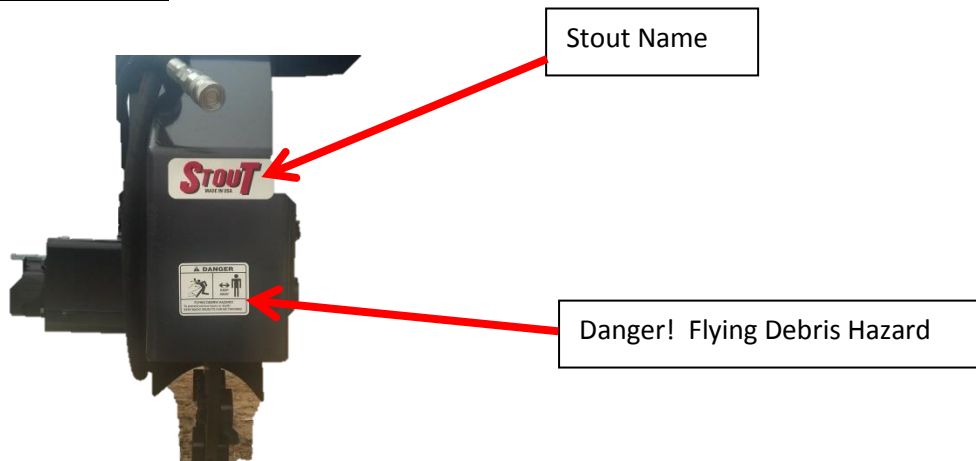


Safety/Warning Decals-Appendix G (continued)

Stump Grinder-Left side view



Stump Grinder-Right side view



IMPORTANT! Keep all safety decals clean and legible. Replace all missing, illegible, and/or damaged decals.

Instructions on replacing safety decals: Clean the area of application with a non-flammable solvent, and then wash the same area with soap and water. Allow the surface to dry. Remove the backing from the decal, exposing the adhesive surface. Apply the safety decal to the position shown in the picture above and smooth out any air bubbles.

Safety/Warning Decals-Appendix G (continued)
Enlarged decals

Stout Name



Made in USA



Stump Grinder Model



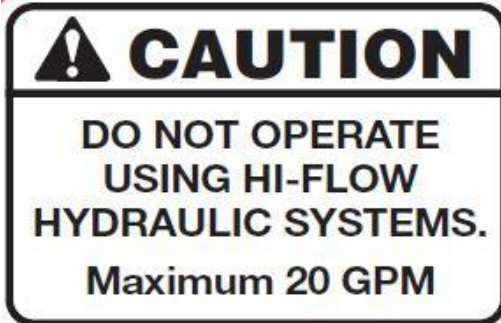
Stump Grinder Model



Safety/Warning Decals-Appendix G Enlarged decals (continued)

Caution! Do not operate using
Hi-flow.

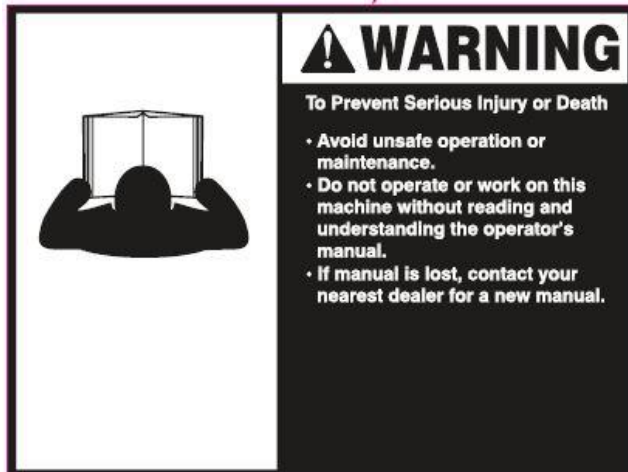
This decal is only located on the
Stump Grinder SG13-R models.



WARNING! Guard covers moving parts



Warning! To Prevent Serious injury or death!



Warning! High Pressure fluid
hazard



**Safety/Warning Decals-Appendix G Enlarged decals
(continued)**

Danger! Rotating Blade Hazard



Danger! Flying Debris Hazard



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