

GRAPPLE SAW MANUAL

HWP-200GS Heavy Duty Grapple Saw



**Halverson Wood Products, Inc
205 College Street
Pine River, MN
Ph. 218-587-2065**

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CONGRATULATIONS

Congratulations on the purchase of a HWP-200GS Grapple Saw from Halverson Wood Products, Inc. This machine was built with the strength of the logging industry in mind!

Please take time to read through this manual so you may better understand our commitment to safety and satisfaction.

The HWP-200GS grapple saw is designed to operate with a standard auxiliary hydraulic flow of 15 to 20 gallons per minute (GPM). A flow rate of over 20 GPM will exceed the saw motor capabilities and can cause premature failure. If your machine exceeds 20 GPM you will want to run it at a reduced throttle setting to ensure the output **DOES NOT EXCEED 20 GPM!!** *If you run over 20 GPM, any damage caused will not be warrantied.*



Never run the machine on high flow or without a case drain. This will cause back pressure to the saw motor and result in internal damage to the hydraulics and saw motor.

The HWP-200GS is designed to operate with hydraulic pressure between 2850 psi and not to exceed 3000 psi. If the pressure is lower than 2850 psi your saw will perform poorly (stall out or chatter). If you exceed 3000 psi you may cause damage to the valve body or to the saw motor. ***Running over 3000 psi and any damage this causes will not be warrantied.***

In addition to the standard pressure and return lines the HWP-200GS requires a low pressure 3/8" case drain line. The saw motor has a small amount of internal leakage to provide lubrication to the motor's internal moving parts. The leakage collects in a cavity behind the motor shaft seal. If the oil can't escape, it can build enough pressure to damage the saw shaft seal. **Do Not** tee the case drain line into the main return line of your machine. The main return line passes through the hydraulic filter and creates enough back pressure that would cause the saw motor to be damaged. The 3/8" low pressure line must be connected directly to the reservoir of your machine with no restrictions. ***Failure to install a 3/8" low pressure line without restrictions and any damage this may cause will not be warrantied.***

**NEVER RUN
MACHINE ON
HIGH FLOW!!**

AND

**NEVER RUN
MACHINE
WITHOUT A
CASE DRAIN!!**

GENERAL SAFETY

GRAPPLE SAW CAPABILITIES AND LIMITS

- Used to process logs, do not use for other purposes.
- Process only wood that is within the recommended size limits.
- Process one log at a time.
- Do not modify the grapple saw except as noted in this manual.
- Make sure all skid steer safety devices are in working order.
- Before exiting cab, shut down the engine on the skid steer.
- When entering or exiting cab, maintain 3 points of contact.
- Before performing any maintenance or inspection, shut down the skid steer engine.

Operator Requirements

- Operators must be adults and familiar with the operation of the skid steer and grapple
- Never operate while impaired.

General Safe Operating Practices

- Keep all bystanders at least 50 feet away while operating grapple. Do not allow bystanders directly in front of or directly behind grapple.
- Operate only from within enclosed cab.
- Keep hands and feet away from grapple's moving parts. **WARNING!!** Never load wood into or remove wood from the grapple by hand.
- Make sure all skid steer safety devices are in working order.
- Before exiting cab, shut down the engine on the skid steer.
- When entering or exiting cab, maintain 3 points of contact.
- Before performing any maintenance or inspection, shut down the skid steer engine.

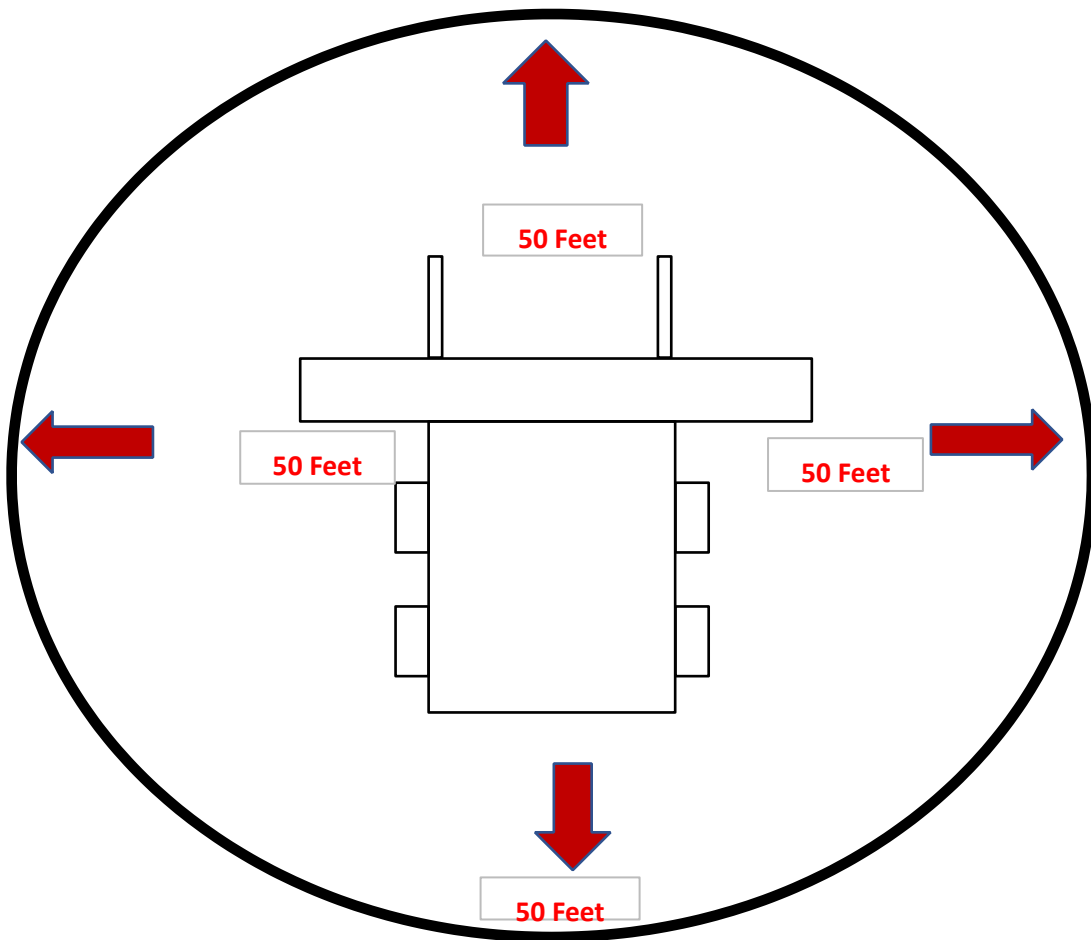
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GENERAL SAFETY



Keep everyone at least **50 Feet** away from machine while in operation!!

Operating this grapple saw safely is necessary to prevent or minimize the risk of serious injury or death. Unsafe operation can create a number of hazards for you. Always take the following precautions when operating this log splitter.



Precautions

Ensure all personnel are safely out of the way when operating the grapple and make sure that no one is in line with the chain saw.

THE CHAIN SHOT AREA. SERIOUS INJURIES AND DEATH HAVE BEEN REPORTED WHEN HIGH SPEED CHAIN SAW COMPONENTS SEPARATE AND BECOME HIGH SPEED PROJECTILES.

Know where all personnel are around the skid steer at all times. The cutting function often produces dangerous flying debris and wood particles. **KEEP PEOPLE AT LEAST 50 FEET AWAY FROM THE**

MACHINE WHILE RUNNING.

Chain Shot **What**

is chain shot?

Chain shot is the high velocity separation and ejection of a piece or pieces of cutting chain from the end of a broken chain in mechanized timber harvesting. Chain shot exposes both machine operators and bystanders to a risk of serious injury or death. Chain shot typically occurs near the drive end of the cutting system but can also come from the bar tip area.

Industry research indicates an average of 1 in 50 broken chains had parts missing that may have been the result of a chain shot event.

How does chain shot occur?

A chain shot consists of two breaks in a chain.

First, the loop of chain breaks and forms two ends. One end moves past the drive sprocket or bar nose and is rapidly accelerated due to a whip-like motion of the chain end. The “whip action” causes the second break releasing small parts at supersonic speed.

Chain shot can cause chain parts to be thrown in many directions, especially those along the plane of the saw bar.

What does a typical chain shot piece look like?

The most dangerous chain shot parts consist of one to four parts as shown:



How can operators reduce the risk of chain shot?

- Operators and bystanders must never be in the plane of the bar when the chain is in motion on the bar.
- Appropriate windshield material must be installed.
- Chain speed must be 8000 ft/min(40m/s) or less for .404 pitch Oregon® chain and 7000 Ft/min (35m/s) or less for 3/4 pitch Oregon® Harvester chain.
- A chain shot guard should be installed near the drive sprocket.
- Chains should be inspected frequently and damaged or cracked chains removed from service.
- Always use new Oregon® parts when repairing Oregon® chain.
- Industry groups recommend that chains should be discarded after the second break.
- Remove all dull and/or worn chains from service.
- Always sharpen Oregon® chains to Oregon® factory specifications.
- Maintain proper bar and chain lubrication.

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- Maintain proper chain tension. Replace the drive sprocket when it has visible signs of wear for additional information see the Oregon® Mechanical Timber Harvesting Handbook.

https://oregonproducts.com/pdfs/Harvester_HandbookA106976af.pdf

INSTALLATION

Fitting the Grapple to the Skid Steer

- 1) Engage the upper portion of the skid steer's quick-attach mount, and then rotate the mount into position against the grapple's main mounting plate.
- 2) Lock the pins or wedges to secure the grapple to the skid steer mount. Make sure the locks, pins or wedges are fully engaged into the slots on the grapple mount. **WARNING!** If you need to raise the boom to check that the locks are engaged, observe from a safe distance. DO NOT allow anyone underneath a suspended grapple.
- 3) SLOWLY rotate the grapple fully back to ensure it does not come into contact with the skid steer or its boom houses and wiring.
- 4) Lower the grapple and detach from the quick-attach mount to allow easier access to the skid steer cab while installing the wiring.

****CONTACT YOUR DEALER BEFORE ADJUSTING ANY VALVES****

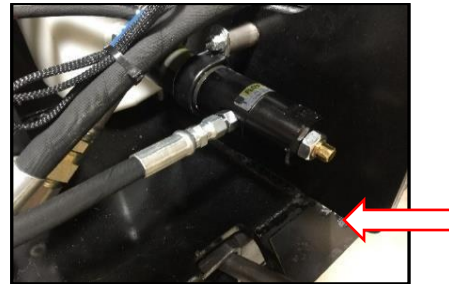
Adjustments & Control Functions

SAW OILER:

It is common to have excess oil dripping off the saw bar, the oiler may need to be adjusted.

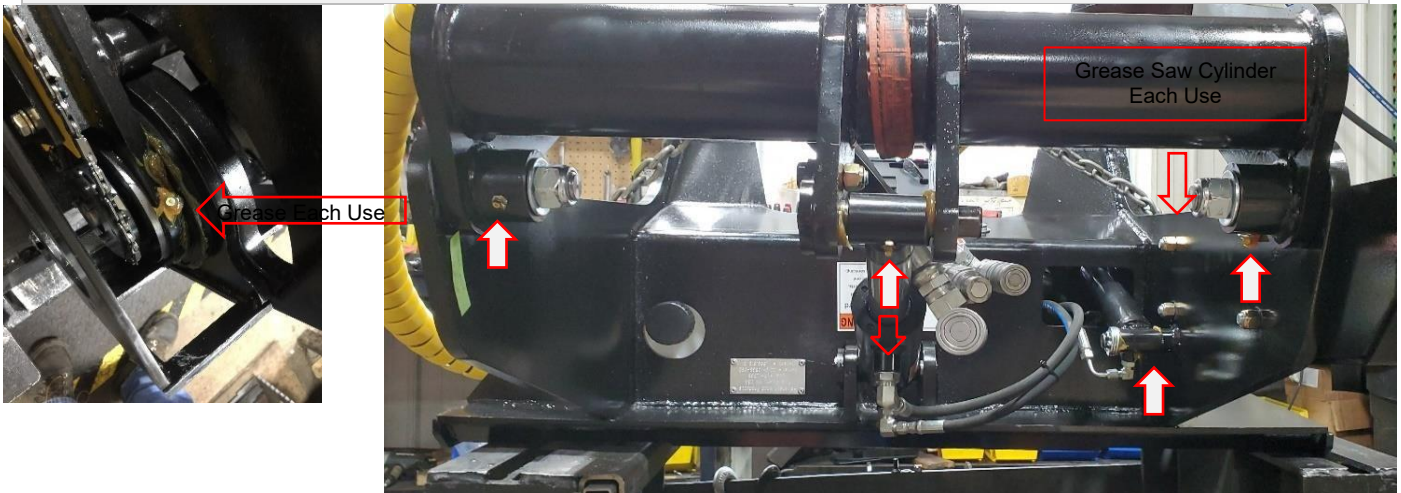
You should see a mist of oil when saw button is pushed.

- Turn adjustment in for less oil
- Turn adjustment out for more oil



Lubrication Intervals:

-Saw cylinder pivot points (daily) -saw swivel head(daily) - other cylinder points (as needed)



LUBRICATION POINTS:

-Saw cylinder pivot points-Daily as used

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- Saw swivel head-Daily as used
- Cylinders-As needed

Replacing the Chain

STEP ONE:

While holding the saw down button, lower bar half way down.

STEP TWO:

Shut skid steer motor off.

STEP THREE:

Remove plate. (See picture to right)

STEP FOUR:

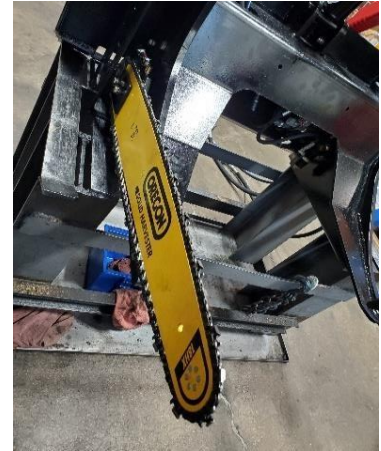
Loosen saw clamp bolts.(See picture below)

STEP FIVE:

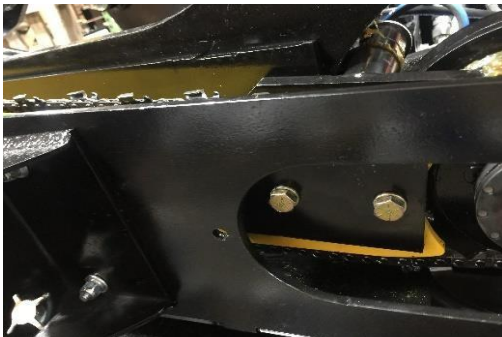
Turn the tension screw 4-5 turns to loosen chain (see below)

STEP SIX:

Remove Chain(See picture below right)



SAW

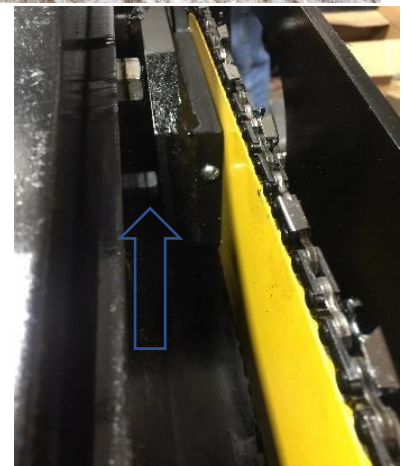


CHAIN TENSIONING:

Maintain proper chain tension by adjusting the saw bar tension screw. If the chain runs too loose, it can hit the inside of the guard and become dull.

The chain is properly adjusted when you can pull the tie straps 1/8" from the surface of the bar's rails in the center of the bar. Do not tighten it when it is hot as it will shrink when it cools and will stress the chain and the bar's sprocket nose.

-Regularly monitor the bar oil flow to ensure the chain is being lubricated sufficiently but not excessively. Use only quality bar and chain oil. -Regularly monitor the condition of the chain's cutters and sharpen as required. Failure to do so will result in reduced saw performance.



MOUNTING NEW CHAIN:

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Reverse steps to mount new chain

Note:

Chain requires a 7/32" file to sharpen.

Trouble Shooting

PROBLEM

POSSIBLE CAUSE

SOLUTION

SAW STALLS WHEN LOWERED:

-RPM too low

-Bar is not getting oil

-Rev the motor

-Check; tank, check valve, bar oil canal through the bar holder to the saw bar

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- Too much down pressure
- Adjust counter balance clockwise on the valve body.(see below)

OILER WILL NOT OIL:

- Low oil
- Fill oil
- Hose to saw bar is kinked or cut
- Straighten or replace
- Oiler is plugged
- Clean check valve or replace

OIL RESERVOIR DRAINS OUT OVERNIGHT

- Check valve stuck open
- Clean or replace check valve
- Oil delivery hose worn or broken
- Replace hose

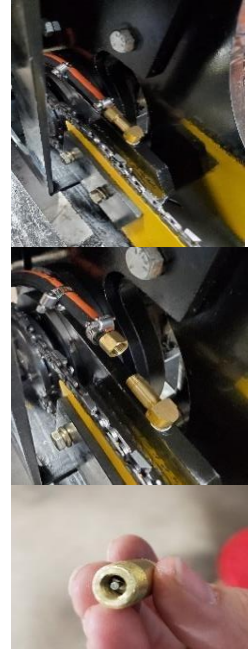
SAW COMES DOWN AND CHAIN IS SPINNING BUT DOESN'T CUT

- Chain dull
- Sharpen Chain
- Bar is rough on the edges
- Replace Bar

SAW CAVITATES OR BOUNCES WHEN CUTTING

- Not enough down pressure
- Adjust counter balance counter-clockwise (see next page)
- Not getting enough oil flow to processor
- Increase RPM

How to clean or change check valve.



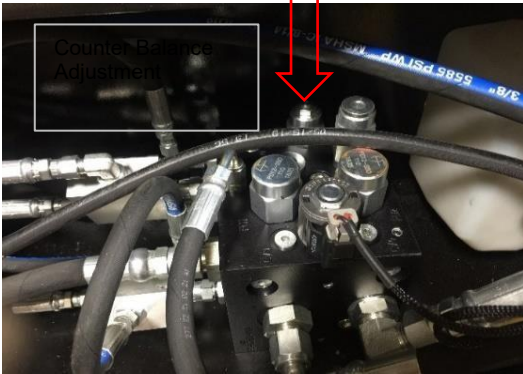
- 1) Remove brass manifold located by bar/chain
- 2) Take out check valve with valve stem core tool.
- 3) Flush out
- 4) Clean the spring area on the valve.
- 5)Return to brass manifold and

Call our Technical Support at 218-587-2065

14 PIN CONNECTION

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VALVE BODY



SPECS

GRAPPLE HWP-200GS

LENGTH 33"
WIDTH 46"
HEIGHT 41"
WEIGHT 770 lbs

MATERIAL 3/8" - 5/8" Steel

HYDRAULICS

-MINIMUM PRESSURE 2850
-FLOW 15 to 20gpm
-CONNECTIONS 1-Pressure, 1-Return 1-Case Drain

MAX LOG DIAMETER 27"
MIN LOG DIAMETER 3"
GRAB ARMS OPENING 44"
SAW BAR 31 inches/80 cm
SAW CHAIN .404 pitch/18HX
SAW MOTOR Bent Axis Piston
SAW OILER Automatic 2 Qt Tank
MAX SAW CUT 27"
IN-FEED Grapple
MOUNTING Universal Quick

6 MONTH WARRANTY

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Warranty Duration

Unless otherwise provided in writing by Halverson Wood Products Inc., Halverson Wood Products makes the following warranty to the first retail purchaser of each attachment:

6 Months from the date of delivery to the first retail purchaser.

Warranty Coverage

This warranty applies to the HWP-200GS grapple saw manufactured by Halverson Wood Products, Inc. All parts and components of the HWP-200GS which, delivered to the original purchaser, are found to be defective in materials and/or workmanship, will be repaired or replaced as Halverson Wood Products Inc. elects without charge for parts or repair labor if such defect appears within the warranty period as measured from the date of delivery to the first retail purchaser and if the delivery is reported within 30 days of delivery to:

Halverson Wood Products Inc.
205 College St, Pine River MN 56474, or
Phone: 218-587-2065, or
E-mail: halversonwoodproducts@halversonwp.com

Obtaining Warranty Service

All Warranty repair work must be authorized by Halverson Wood Products Inc *prior* to having the work performed. Call 218-587-2065 for authorization. At the time of requesting warranty service, the purchaser must be prepared to present evidence of the date of delivery of the HWP-200GS.

*** Without Halverson Wood Products Inc's authorization the Warranty is Void!**

Warranty Exclusions

Halverson Wood Products obligations shall not apply to any part or component not manufactured, furnished or installed by Halverson Wood Products nor failures caused by such items.

Specifically excluded are failures of and damage to any vehicle or other piece of equipment either rubber tired or tracked upon which the HWP-200GS is attached and any damage to the HWP-200GS caused by failure on a vehicle or other piece of equipment upon which the firewood processor is attached.

Purchaser's Responsibilities

- The cost of normal maintenance and depreciation
- Consequences of negligence, misuse or accident involving the HWP-200GS
- Consequences of service performed by someone other than a party authorized to perform warranty service, if such service, in Halverson Wood Products' judgment, has adversely affected the performance or reliability of the processor
- Consequences of any modification or alteration of the machine or the attachment not approved by Halverson Wood Products Inc. These include, but are not limited to hydraulic pressure settings, contamination of the hydraulic system, changes to the main frame, saw pivot and wedge mounts.
- The effects of hydraulic system neglect as manifested in hydraulic motor pitting, scoring, erosion, valve spool sticking and other internal component caused by cavitations, contamination, high oil temperatures and excessive hydraulic pressure
- Consequences of excessive system back pressure within the machine to which the HWP-200GS is attached. Excessive back pressure can cause degraded performance from the processor.
- Any premium for overtime labor requested by the purchaser
- Costs of transporting the processor to and from the location at which the warranty service is performed. Costs incurred in gaining access to the machines or attachments. Overcoming physical barriers such as walls, fences, ditches, streams or similar structures impeding access to the HWP-200GS or rental of cranes or similar construction of ramps or lifts.

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WARRANTY (continued)

Purchaser's Responsibilities, cont.

- Incidental travel costs including tolls, meals, lodging and similar expense
- Service outlet costs incurred in solving or attempting to solve non-warranty problems
- Services performed by a party other than authorized Halverson Wood Products Inc. Personnel Charges by dealers for initial machine set up, installation, start up and inspection deemed unnecessary by Halverson Wood Products Inc. when operation and maintenance instructions supplied with the HWP-125HDGS are followed
- Cost of interpreting or translating services

No Representation or Implied Warranty!

Where permitted by law, neither Halverson Wood Products Inc. nor any company affiliated with it makes any guaranties, warranties, conditions, representations or promises express or implied, oral or written, as to the non-occurrence of any defect or the quality of performance of its machines or attachments other than those set forth in the document and DOES NOT MAKE ANY IMPLIED WARRANTY OR CONDITIONS OF MERCHANTABILITY OR FITNESS otherwise provided in the Uniform Commercial Code or required by any Sale of Goods Act or any other statute. This exclusion includes fundamental terms. In no event will a Halverson Wood Products Inc. authorized dealer or a Halverson Wood Products Inc. authorized service facility, or Halverson Wood Products Inc. or any company affiliated with Halverson Wood Products Inc., be liable for incidental or consequential damages or injuries including, but not limited to, loss of profits, loss of firewood contracts, rental of substitute equipment or other commercial loss or damage suffered by the purchaser as a result of fundamental breaches of contract or breach of fundamental terms unless such damages are caused by the gross negligence or intentional acts of the foregoing parties.

Remedy Limitations

The remedies set forth in this warranty are the purchaser's exclusive remedies in connection with the performance of or any breach of guarantee, condition, or warranty in respect of the Halverson Wood Products Inc. firewood processors and grapple saws. In the event that the above warranty fails to correct purchaser's performance problems caused by defects in workmanship and or materials, purchaser's exclusive remedy shall be limited to payment by Halverson Wood Products Inc. of actual damages in an amount not to exceed the cost of the HWP-125HDGS grapple saw.

No Sellers Warranty

No person or entity other than Halverson Wood Products Inc. who sells the HWP-125HDGS grapple saw makes any guaranty or warranty of its own on any grapple saw warranted by Halverson Wood Products Inc. unless it delivers to the purchaser a separate written guarantee certificate specifically guaranteeing the grapple saw, in which case, Halverson Wood Products Inc. will have no obligation to the purchaser. Neither equipment distributors, equipment dealers, nor any other person or entity, has the authority to make a representation or promise on the behalf of Halverson Wood Products Inc. or to modify its terms in any way.

Replacement Parts Warranty

New Halverson Wood Products Inc. parts installed during grapple saw warranty service are warranted for 6 months (certain major parts may be warranted for longer periods) or the remaining warranty period of the grapple saw, whichever is longer. A new grapple saw replacing a failed grapple saw is warranted for the remaining period of the original grapple saw.

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Warranty Transfer

The remainder of the original warranty may be transferred to the subsequent owner of the HWP-125HDGS only by express written consent. Please report the transfer of ownership to Halverson Wood Products Inc. by phone at 218-587-2065 or by E-mail at halversonwoodproducts@halversonwp.com

Manual Release Form

By signing below, the Customer (Purchaser) acknowledges the following:

- I have received the HWP-200GS Operations/Safety Manual
- I have read and understand the HWP-200GS Operations/Safety Manual
- Halverson Wood Products Inc. accepts no responsibility for misuse of the HWP-200GS Grapple Saw.
- Any modifications to the HWP-200GS Grapple Saw not performed by authorized service technicians will void Warranty.

6 Month Warranty Registration

Model # HWP-125HDGS Grapple Saw

DATE PURCHASED: _____

SERIAL # _____

WHO PURCHASED:
COMPANY(IF APPLICABLE): _____

NAME: _____

ADDRESS: _____

PHONE: _____

E-MAIL: _____

Return to:
Halverson Wood Products, Inc.
205 College St
Pine River, MN 56474
or

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E-mail: halversonwoodproducts@halversonwp.com