



HUTTO WOOD PRODUCTS

OPERATOR'S MANUAL FOR STATIONARY BOXES

HU-24S, HU-36S, HU-236S, HU-448S



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WARRANTY CONTRACT

This Agreement made on _____, between **HWP Shavers, LLC** hereinafter referred to as the **Seller**, and _____, hereinafter referred to as the **Buyer**.

1. Description of Machine

Seller hereby sells, and buyer hereby purchases, _____ shaving machine.

2. Terms of Sale

The total purchase price of the shaving machine is _____.

3. Warranties

- A. Seller hereby gives a warranty for 60 days from today's date on all major parts of the shaving machine.
- B. Labor is excluded from all warranty agreements.
- C. There is a one year manufacturing warranty on the hydraulic pumps and valves beginning on this day, _____.
- D. Seller hereby gives a warranty of 30 days on metal fatigue on the shaving machine.
- E. These warranties listed herein above as 3A, 3B, 3C, and 3D are the only warranties given by the Seller, and all other warranties, express and/or implied are excluded.

4. Limitation of Warranties

- A. Seller does not warrant that the shaving machine is fit for any particular purpose.
- B. Buyer shall be solely responsible for determining the adequacy of the shaving machine for any and all uses to which the Buyer may apply the shaving machine, and the application of the shaving machine by the Buyer shall not be subject to any implied warranty of fitness for that purpose, and Buyer assumes all risk involved in operating said shaving machine.
- C. Any warranty contained in this Agreement shall not apply if the shaving machine is repaired or altered outside the Seller's facilities or in any way so as, in the Seller's

judgment, to affect its stability or reliability, or which has been subject to misuse, negligence, or accident.

- D. Seller shall not be liable for any injury to Buyer or Buyers' employees and agents who may operate the shaving machine.
- E. Seller shall not be liable for any injury to property caused from operating the shaving machine.
- F. Seller's return policy states that if the customer has a defective part, the seller will send a new part and the buyer will return the defective part to the seller. If the seller sees negligence to the part received, the buyer is responsible for the cost and shipping of the new part. Failure to pay for the part will void the warranty contract.

5. Release of all Claims and Indemnification

- A. Buyer for himself, his Heirs, assigns, and employees, releases Seller, its successors and assigns from any and every claim, demand, action or right of action, of whatever kind or nature, either in law or inequity arising from or by reason of any bodily injury or personal injuries know or unknown, death or property damage resulting or to result from an accident which may occur as a result of operating the shaving machine.
- B. Buyer agrees to indemnify Seller against and from all loss, expense, liability, claims or damages, of whatsoever kind of character, including any and all costs, expenses and reasonable attorney's fees, which may be incurred by reason of any claims, demands, actions, or law suits which may be filed or claimed to exist arising out of use of the shaving machine.

6. Entire Agreement

- A. This instrument contains the entire agreement between the parties, and no statement, promises, or inducements made by either party or agent of either party that is not contained in this written contract shall be valid or binding; and this contract may not be enlarged, modified, or altered except in writing signed by the parties and endorsed hereon.
- B. This agreement shall inure to the benefit and be binding upon the heirs, executors, administrators, assignees, and successors of the respective parties.

GIVEN UNDER OUR HANDS AND SEALS THE DAY AND YEAR FIRST ABOVE WRITTEN.

HWP Shavers, LLC

By _____

Seller

Date: _____

Buyer

Date: _____

Warranty is void until signed by both parties

TERMS OF SALE

All sales over \$15,000 require a 50% deposit before building the machine, and the balance before shipping. Customers may pay the full amount for the deposit if they so choose, but no less than half of the total selling price. All sales under \$15,000 require full payment up front before building or shipping. Money orders or wire transfers are preferred forms of payment. For overseas sales, wire transfers are the only form of payment accepted. Personal checks can be accepted in certain situations inside the United States at the seller's discretion. All sales are final. Any equipment that sits on site for more than 30 days after customer has been notified of completion is subject to a storage fee. Storage fees can be up to \$500 per month. If machinery is left on site for more than 60 days, the customer is subject to lose the deposit. Machinery is no longer HWP liability after it leaves the premises. Any damage that is done to machinery in transit will be on the shipper. There will be no refunds or credits on the machinery purchased. Freight is subject to change based on the time it takes to complete the machine and ship it. If there is a change, the freight charge will be adjusted on the final payment. Machinery and freight quotes are only good for 30 days. Warranty is guaranteed for 60 days by HWP on all new parts and equipment. Hydraulic hoses and labor are excluded from the warranty. There is a one year manufacturer warranty on all new hydraulic components excluding hydraulic hoses. See warranty contract for more warranty details.

Seller HWP Shavers, LLC.

Buyer:

Warranty is void until signed by both parties



HUTTO WOOD PRODUCTS

HWP Shavers, LLC

1660 Poplar Springs Rd, Aiken, SC 29805

803-564-7173 (office)

803-564-5676 (fax)

SAFETY PRECAUTIONS



DANGER : Indicates an immediately hazardous situation which, if not avoided, will result in death or serious injury.

BEFORE OPERATION

1. Know how to use the controls and how to stop the wood shaving machine quickly.
2. Be sure that the carriage is free from any and all tools from inside the wood shaving machine before starting it.
3. Keep all children and all bystanders away from the working area when machine is in operation.
4. Keep all shields, safety devices, and decals in place. If a shield, safety device or decal is defective or damaged, repair or replace it before operating. Also, check all nuts, bolts and screws for proper tightness, to assure the wood shaving machine is in safe operating condition.
5. Do not operate the wood shaving machine while wearing sandals, scarf or loose fitting clothing that could get caught in moving parts. Always wear long pants and sturdy shoes. Wearing safety glasses , earplug and safety shoes is advisable and required by some local ordinances and insurance regulations.
6. Keep hands away from moving parts of the wood shaving machine. Do not remove shaving , saw dust and/or blocks with your bare hands. Always use a broom or a brush.
7. Be sure all guards are securely in place when the wood shaving machine is operating.
8. Be sure all tools are securely attached or stored.
9. Before closing the cover, be sure that all knives are secured and installed properly and the gibs well fixed.

DURING OPERATION

1. Cutting-head will still be running even when the emergency stop button is OFF.
WARNING: You must disengage the PTO, stop the tractor and disconnect the universal joint in order to stop cutting head. Shut-off the motor when using the electric motor wood shaving machine.
2. Wood shaving machine needs attention at all times. DO NOT OPERATE WITHOUT SUPERVISION.
WARNING: NEVER CROSS OVER THE UNIVERSAL JOINT BETWEEN TRACTOR AND WOOD SHAVING MACHINE AND KEEP A 5' DISTANCE FROM EITHER SIDE. It is the operator's responsibility to secure the working zone.
3. The use of branches, wood blocks or trims, boards, logs shorter than 26" to 9 ' feet depending on the model, is not recommended by the manufacturer. Can cause serious injury or death.
4. Never touch hydraulic hose when pressurized (particularly when motor is on). Fluid under high pressure may penetrate the skin and cause serious injury.
WARNING : Never step on the platform when operating the wood shaving machine. You must disengage PTO, stop the tractor and disconnect the universal joint. In the case of electric wood shaving machine a mechanic locking device must be installed on the main circuit switch feeding the motor. The wood shaving machine is designed with a ladder and a platform for loading logs into the hopper. It is the operator's responsibility to make sure that no one reaches the platform when the wood shaving machine is in operation causing risk of major injury.

OPERATION

OPERATION PARAMETERS

1. Wood shaving machine moveable box models, see log specifications according to model number. Wood shaving machine stationary box models, see log specifications according to model number.
2. Shaving is produced from entire logs with or without bark, green or dry, soft or hard wood.
3. Be sure that the wood shaving machine is well leveled before operating. Use the adjustable legs.
4. Be sure that knives are installed and equally leveled.
5. The wood shaving machine design is based on 540 RPM. **IMPORTANT: Do not over run the machine. USE OF 1000 RPM IS PROHIBITED.** This could cause major damage on mechanic and hydraulic of the wood shaving machine. Not applicable on wood shaving machine with electric motor.
6. The required PTO RPM for all HWP shavers is 540 RPM.
7. When starting the tractor **DO NOT REACH,540 RPM IN ONE STEP.** Move slowly till you reach the desired RPM (540 RPM). Not applicable on wood shaving machine with electric motor.
8. HWP Shavers cannot be responsible for the shaving's volume. Many factors related to production can affect the volume control:
 - Quality of logs, species, log diameters, logs placing in the hopper.
 - The right adjustment of speed of the hopper and the platen adjustment in front of the cutting-head.
 - Sharpening or weariness of the knives.
9. Do not modify or alter this wood shaving machine or any of its components or operating functions. Please see Warranty Contract, item 4-C for details. Please consult with HWP representative.

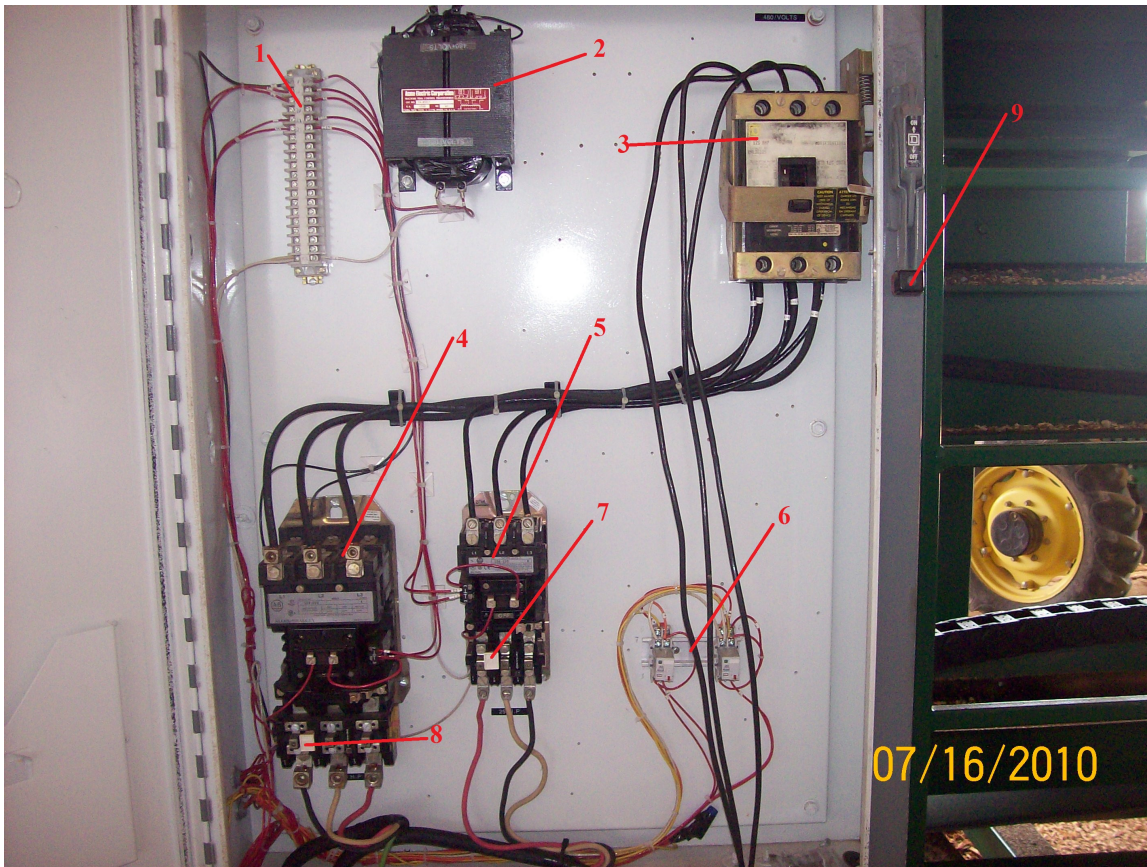
LOADING LOGS

1. Be sure that all logs to be processed are free of earth, sand, gravel, rocks, nails, screws or whatever material which could damage knives and reduce its life expectancy.
2. Never stop the hopper on top of the cutting head when loading logs. Always be sure that the hopper is located at the end of the wood shaving machine properly identified "loading zone". By doing so, the knives will be protected. In the contrary, risk of major damage can occur to the knives. **IMPORTANT: Never drop logs more than 3 feet high in the hopper.** This will eliminate possible risk of mechanical breaks.
3. It is important to always maintain a level of maximum capacity inside the box in order to keep a maximum load on top of logs being cut. This will assure superior production.

STARTING MACHINE

1. Connect the universal joint of the wood shaving machine to the tractor. Not applicable on wood shaving machine with electrical motor.
2. Be sure the emergency stop push-button is pushed down. This way, the hopper will not function when starting up the machine.
3. Start the tractor and move slowly until you reach up 2000 RPM. Cutting-head and hydraulic pump for carrier are now in function.
4. Pull the emergency stop push-button towards you. This will start the moving of the hopper.
5. For electric models only - All buttons and motors are pre-wired from factory. Make absolutely sure that both head motors and hydraulic drive motors are turning proper rotation. Failure to turn hydraulic motor pump in proper direction can lead to pump failure. Direction arrows are located on all motors indicating direction of motor rotation.

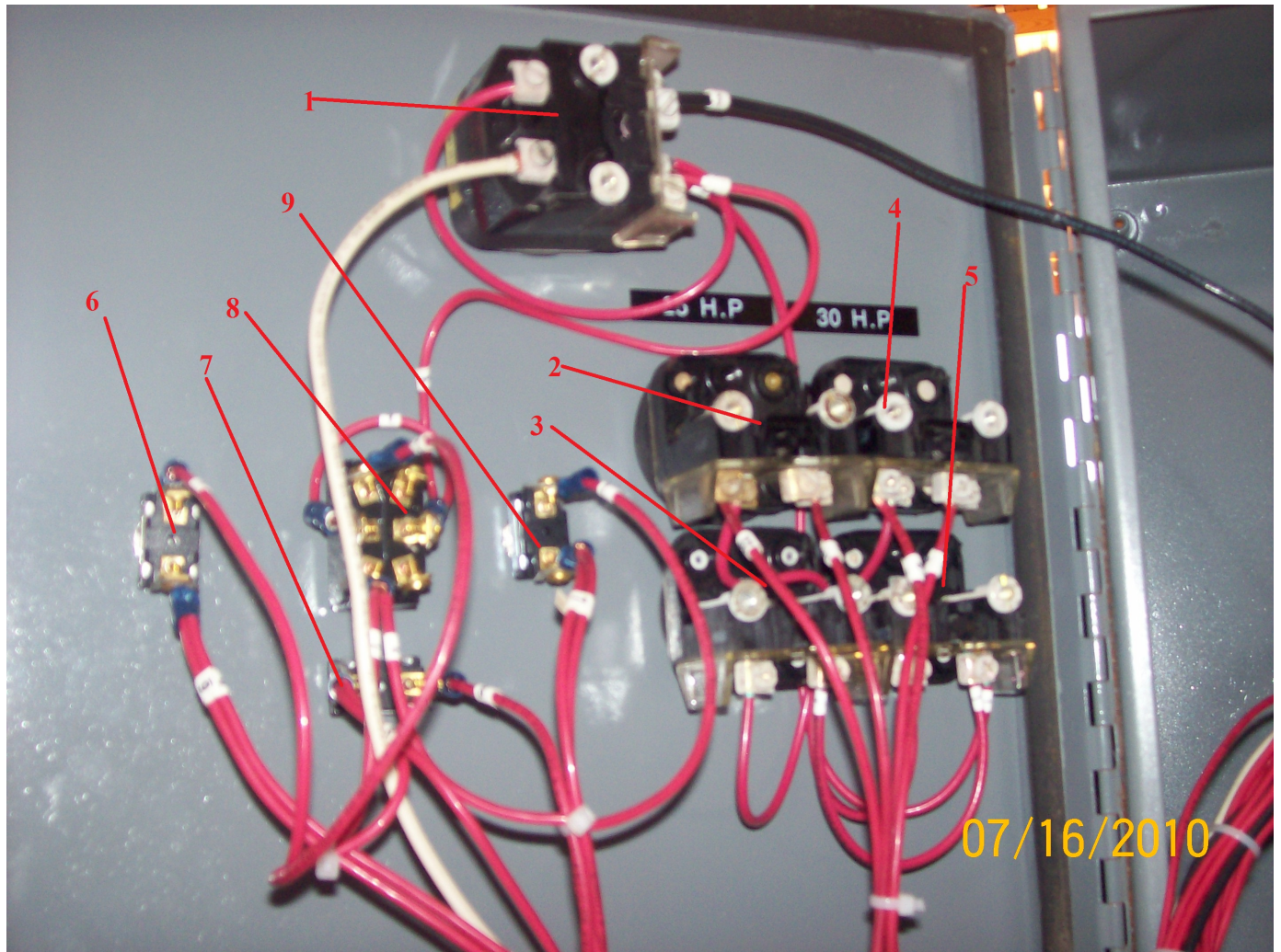
PARTS IDENTIFICATION



Inside view of electrical control panel, #1.

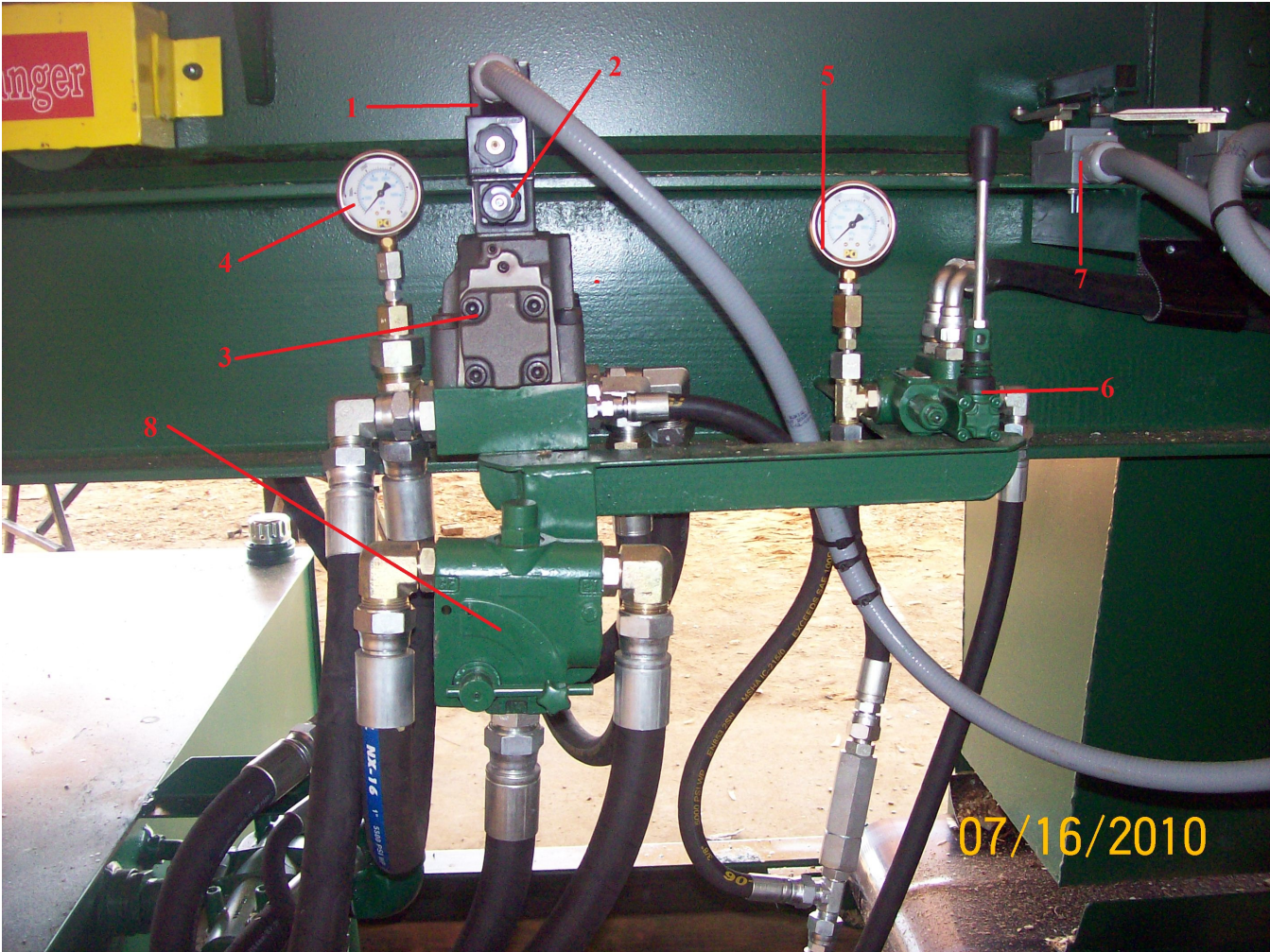
1. Wiring terminal.
2. Control transformer for start/stop buttons, relays and all controls on machine. NOTE: Voltage on transformers can be different depending on voltage required to run shaver. All control power to buttons and switches will be 110 volts through transformer.
3. Main disconnect. Main disconnect size can vary from machine to machine depending on amperage use.
4. Starter for head.
5. Hydraulic pump motor.
6. Relay control for limit switches. NOTE: Only used on some models.
7. Overload reset for starter on hydraulic pump motor.
8. Overload reset for starter on shaving head.
9. Through the door on/off main breaker switch.

All electrical components located in main control panel are subject to change depending on machine model number



Inside view of electrical control panel, #2.

1. Emergency stop. E-stop must be pulled out for machine to work.
2. Start button for hydraulic pump motor.
3. Stop button for hydraulic pump motor.
4. Start button for head motor.
5. Stop button for head motor.
6. Manual override button for cylinder (forward). NOTE: Forward and reverse can vary from machine to machine.
7. No longer used.
8. Auto or manual selector switch.
9. Manual override button for cylinder (reverse). NOTE: Forward and reverse can vary from machine to machine.



1. Solenoid valve is used to switch cylinder from A to B ports on hydraulic.
2. Modular flow valve between solenoid and sub-plate is used as a cushion between shifts. For smoother transition from piston to rod end stroke, adjust dials up or down: up for slower and down for faster.
3. Subplate valve assembly
4. Pressure gauge for cylinder valve. Operating pressure for cylinder valve should be between 500 and 1500 PSI.
5. Belt valve pressure gauge. Operating pressure should be between 300 and 750 PSI depending on additional outfeed belt option.
6. Belt valve detent to operate belt motor.
7. Limit switch to operate #1 solenoid valve for cylinder.
8. Speed control for carriage, 0 to 10. Maximum speed for maximum production dial would need to be on 10. Also this is a relief for cylinder on carriage.

NOTE: All pressures and relief settings have been preset from the factory. If ever needed to be adjusted, please seek service technician's assistance. Improper settings on relief valves can cause catastrophic hydraulic malfunction.



1. V-wheel roller guard.
2. Head bearing on drive side of carriage.
3. Head and head motor belt guard.
4. Main control panel.
5. 20 hp hydraulic motor.

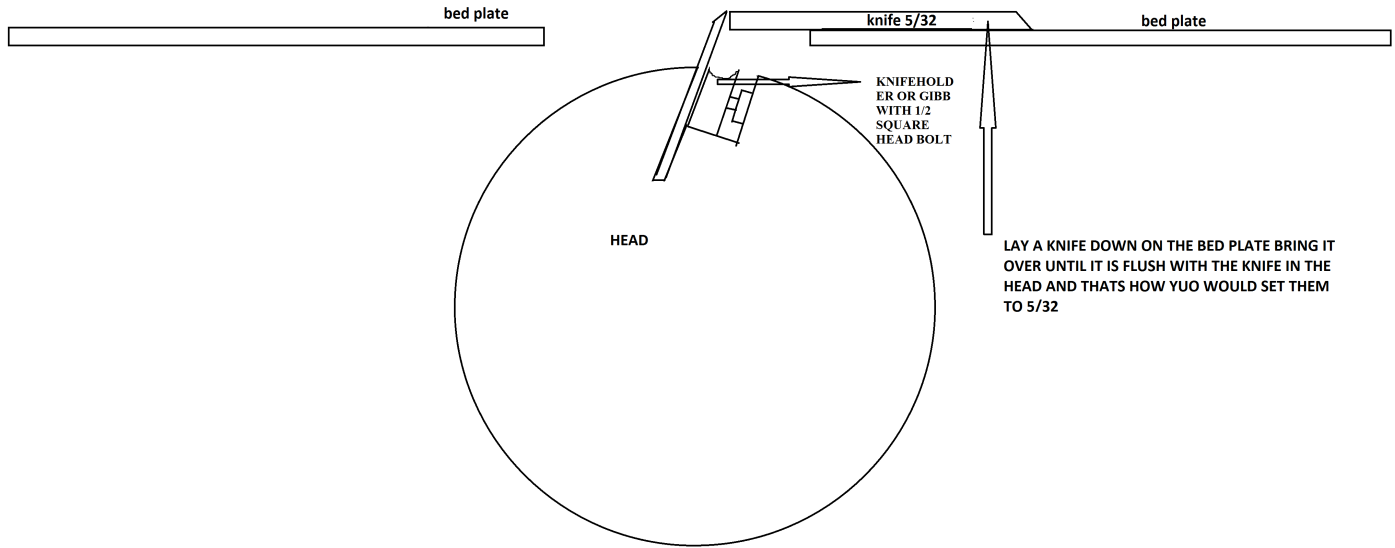


1. Head bearing on idle side of carriage.
2. V-wheel roller guard.
3. V-wheel roller on carriage.
4. Return hydraulic filter.
5. 60 gallon hydraulic reservoir.
6. Hydraulic reservoir oil cap.
7. Hydraulic reservoir site glass and temperature gauge.
8. Hydraulic pump for carriage cylinder and belt motor.
9. 20 hp hydraulic motor pump.
10. Out-feed belt idle roller and bearing.
11. Belt tensioner for out-feed belt.
12. 40 hp head drive motor.
13. Electrical wiring harness and chain (track).
14. V-wheel roller guard.
15. V-wheel roller on carriage.



1. Out-feed belt under shaver.
2. Quick coupler hook-up for additional out-feed belt.
3. Hydraulic belt motor.
4. Hydraulic belt motor and drive pulley guard for out-feed belt.
5. Belt lacing.

KNIFE INSTALLATION



PARTS LIST AND MAINTENANCE GUIDE

DRIVE COMPONENTS

HYDRAULIC COMPONENTS

2102..... Hydraulic tank JIC-60. Located inside the frame at back of machine under cylinder. Once every 2000 hours the tank should be drained and wiped clean. Strainer should be changed and new oil put in. HWP's recommended oil is AW32 or AW46.

2302..... Hydraulic cylinder. Located at back of machine over tank to move carriage. Every 50 hours or as needed, cylinder should be greased with lithium based grease.

3102..... Solenoid valve for cylinder. Located at back of machine by tank black with 2 indicator lights on top, used to work cylinder for carriage movement. Every 2000 hours check to make sure indicator lights are working properly.

3103..... Sub-plate for solenoid valve cylinder. Located under solenoid valve stacked. No maintenance required.

3104..... Modular flow control between solenoid and sub-plate. Used to cushion cylinder stroke on head and piston end. To make cylinder shift more smoothly, increase the dial on each direction the cylinder moves. To make cylinder shift faster, decrease the dial on each direction the cylinder moves.

3502..... Cylinder pump. Hooked to the 20 hp motor under back of machine by tank. Used to pump oil to cylinder for motion. Every 500 hours check bolt tension and check for leaks.

3503..... Belt motor pump. Hooked to back of cylinder pump under back of machine by tank. Used to drive belt roller. Every 500 hours check bolt tension and check for leaks.

3701..... Oil cooler. By the tank at back of machine, black with fan hooked to it. Used to cool oil operating temp 100F-200F. Remove any debris around or inside fins on oil cooler every 50 hours.

3801..... Belt motor. Under belt conveyor coming out the end of machine. Used to drive belt pulley moving shavings out from under machine. Every 100 hours check belt motor chain for tension.

3608..... Flow control. Located at back of machine by solenoid valve. Used to control speed of carriage. Every 500 hours check bolt tension and for leaks.

2901..... Strainer. Screwed into front of tank at bottom filter for suction side of pump. Strainer should be changed and new oil put in every 2000 hours.

2802..... Filter assembly complete. Hydraulic oil filter on return side of hydraulic system at back of machine by filter. Change filter every 400 hours or according to filter gauge.

DRIVE COMPONENTS

301..... Hydraulic belt motor drive sprocket. Sprocket that goes on hydraulic motor. Every 500 hours check bolt tension and set screws.

303..... Belt roller drive sprocket. Sprocket hooked to belt drive roller. Every 500 hours check bolt tension and set screws.

401..... 50 drive chain for belt motor and links. Used between hydraulic belt motor and belt roller drive sprocket. Lubricate every 500 hours with WD-40 and check tension of chain every 100 hours.

504..... Belt bearings. Used on drive and idle roller on belt. Grease with high temp lithium based grease every 50 hours. NOTE: Do not over-grease as it could result in seal and bearing malfunction.

507..... Head bearings. Used on head. Grease with high temp lithium based grease every 50 hours. NOTE: Do not over-grease as it could result in seal and bearing malfunction.

627..... Sheave for head. Pulley that goes on head for belts. Check bolt tension every 500 hours.

628..... Sheave for motor. Pulley that goes on motor for belts. Check bolt tension every 500 hours.

1400..... Lovejoy coupling for motor. Coupling that goes on motor between pump. Check tension and alignment every 500 hours.

1401..... Lovejoy coupling for hydraulic pump. Coupling that goes on pump between pump and motor. Check tension and alignment every 500 hours.

1402..... Spider gear for motor and pump coupling. Gear between motor and pump couplings. Check for wear and alignment after 500 hours.

102..... Track roller for carriage VTR 4.50. Check bolt tension every 500 hours.

818..... Head belts. Drive belts head pulley and motor pulley. Check for wear and tension daily.

900..... UHMW wear plates located inside box. Check clearance between UHMW wear plate and bed plate every 50 hours.

901..... Limit switch used to switch solenoid from A to B port and move carriage back and forward. Check bolt tension and wire tension every 500 hours.

MAINTENANCE AND STORAGE

1. Disengage PTO and stop the tractor's engine when you apply lubricant or do a maintenance. In the case of a motorized wood shaving machine a mechanic locking device must be installed on the main circuit switch feeding the motor.
2. Always wear safety glasses when cleaning or servicing the wood shaving machine.
3. Be sure the machine is in safe operating condition by keeping nuts, bolts, and screws properly tightened and check the mounting bolts and nuts more frequently. If needed, tightened as required in the torque specification table of this manual. **WARNING:** Be alert with rotating parts when you are in a dangerous zone.
4. If the tractor (or the electric motor) must be running to perform a maintenance, keep hands, feet, clothing and other parts of the body away from the moving parts (ex. Conveyor belt alignment)
5. Make sure all shields and guards are securely in place following maintenance, cleaning or repair work.
6. Check for loose hardware. Tighten if needed. **NOTE:** To reduce potential fire hazard, keep the wood shaving machine free of excessive grease or accumulations of dirt.

For all electrical motors, grease every 50 hours with a minimal amount of grease. Once every 500 hours, cut off and lock out all power to electrical control panel and check tension on all connections.