

Firewood Processor

27T Series

Owners Manual



MachineryDB

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Note: Any modification to Processor will void all warranty

Warning



Read this manual. Serious injury or death can result if safety instructions are not followed.



Engine is shipped without oil.

Before starting engine, fill with SAE 10/30 motor oil.

See engine manual for engine oil capacity.

Hydraulic reservoir is shipped without oil.

When adding oil, use the dipstick to gauge amount, Approximately 26 liters (6 gallons) of AW Type Hydraulic Oil only.

Closely inspect all processor components and ensure all exterior bolts are tightened

If components are damaged during delivery, please contact the freight company that delivered the unit and file a claim.



DANGER (red) indicates an imminently hazardous situation which, if not voided, could result in death or serious injury



WARNING (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION (yellow) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury



CAUTION (yellow) used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage



You must be 16 or older to operate this machine.



Keep untrained people out of work zone.



Never leave the firewood processor unattended, while the engine is running.



The wedges can cut through skin and break bones. Keep both hands away from wedges and ram cylinder. Serious accidents can happen when other people are allowed inside the work zone. Keep everyone else out of the work zone while operating Processor.



Never wear loose clothing, when operating the firewood processor.



Only operate the firewood processor in daylight.



Wear safety glasses to avoid eye injury as pieces of log may fly out while splitting.



High pressure hydraulic fluid can inject under skin resulting in serious injury including amputation.



Make sure all fittings are tight before applying pressure. Relieve system pressure before servicing.



Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks.



If skin injection happens, seek immediate "Medical Assistance".



Serious injury or death can occur if towing safety rules are not followed.



Review towing safety warnings in your towing vehicle manual.



Drive safely. Be aware of the added length of the firewood processor.



Never ride or transport cargo on the firewood processor.



Drive the vehicle with the firewood processor securely attached.



Choose a level surface to operate the firewood processor.
Block the firewood processor wheels to prevent unintended movement.



Never tow or operate this processor while under the influence of alcohol, drugs, or medication.



Risk of fire and explosion.

Hot exhaust fumes from engine can cause fire. Gasoline is highly flammable and explosive. You can be burned or seriously injured when handling fuel.



Position muffler at least 213 cm (7 feet) from combustible objects.



Before adding fuel, stop the engine and keep heat, sparks, and flame away. Do not add fuel when engine is running or still hot. Do not smoke near the engine while fueling.



Do not pump fuel directly into engine at gas station. Static charge can build and ignite fuel. Use a safety approved fuel container to transfer gas to the engine. Wipe up fuel spills immediately.



Only store and handle fuel outdoors. Gasoline vapors can ignite if they collect inside an enclosure. Explosion may result.



Do not change or add to exhaust system. Fire may result.



Do not change or add fuel tanks or fuel lines. Fire may result.



Before each use, check fuel tank and fuel lines for leaks. Any fuel leak is a fire hazard. Fix any fuel leaks before starting engine.



During transportation take precautions to make sure machine will not tip over and cause a fuel leak fire hazard.



Poisonous fumes from engine can kill you. Do not operate indoors even if ventilated. For outdoor use only.



Do not touch the muffler as you may get burned.

Note: Any modification to Processor will void all warranty

Component Identification



1. **2" Coupler:** Attaches the firewood processor to your ATV or vehicle. Fits only 2" hitch balls.
2. **Safety Chains:** for attaching to tow vehicle along with 2" coupler.
3. **Front Wheel:** Used for moving on even stable ground & raising or lowering coupler height.
4. **Leg:** The leg helps support the firewood processor while operating. The leg should be pulled out of the sleeve and reinserted from top down while towing (see Operation Instructions)
5. **Engine:** The air cooled engine powers the hydraulic pump.
6. **Hydraulic Cylinder:** The hydraulic cylinder has a 192.5cm (22") stroke. It is rated to 3500 PSI
7. **Gear Pump:** The gear pump makes the hydraulic oil flow through the system. The 27T has a 2 stage pump.
8. **Hydraulic Filler Cap:** Unscrew the cap to add hydraulic oil to the tank, oil should be midway up the sightglass
9. **Tires:** Maximum rated speed is: 27T - 12" Wheels - 80Kph (50 Mph).
10. **Log Deck:** The log deck is angled to help keep the log against the deck wall without operator assistance.
11. **Log Roller Bar:** When this is unfolded it allows longer logs to be loaded onto the Log Deck.
12. **Saw Bar:** Pull the lever down to engage the chain, cut your log , put the bar up and the splitter part will start by it self
13. **Bar Oil Tank:** Fill this with bar oil to lubricate the cutting chain.
14. **Manual Engagement Lever:** Pushing this down manually engages the splitting ram.

15. **Wedge Height Adjuster:** The wedge features wedge wings and a taper that makes splitting easier. Added is the optional side wedges for splitting 6 ways
16. **Safety Screen:** Stops hydraulic operations when screen is raised.
17. **Safety Cover Splitter/Chainsaw:** This cover has to be in the down position for processor to operate, when it lifts up the chainsaw and bar will stop and not operate until it is lowered again.
18. **Conveyor Belt:** The belt moves the wood up the conveyor, it should be tensioned so that if a piece of wood jams the belt will stop moving.
19. **Output Conveyor:** Shown folded up in travel mode, when unfolded the conveyor can be adjusted to the output height needed.
20. **Conveyor Leg:** When conveyor is unfolded the safety chain must be attached to this leg to keep the conveyor at the desired height.

Operation

Proper Operation of the Firewood Processor

1. Preset the cut off length using the measuring bar, loosen the 2 wing nuts and slide the bar to the correct position, re-tighten the wing nuts.
2. Load a log onto the log cradle and slide into processor until the end of the log touches the measuring bar.
3. Open the ball valve to start the flow of bar oil.
4. Gently pull the Saw Bar handle downwards with the chain running and cut through the wood.
5. The cut piece will drop into the splitter area, raise Saw Bar e and ram will engage.
6. Once the log has been pushed through the splitter, the ram will automatically retract.
7. Repeat steps above, when a stub piece needs to be cut, make sure to cut the short piece off so that the longer piece is on log deck, this keeps hands away from moving chain.
8. Serious accidents may happen when other people are allowed inside the work zone.
9. It is recommended to have a minimum 7 metre (20 ft) radius safe work zone.
10. Keep all non-essential people out of the work zone while operating processor.
11. Make sure hands are clear of crush hazard zones.
12. Clear the split wood from the work zone.

Maintenance

Before performing maintenance, the firewood processor must be placed in maintenance mode.

- 1.) Turn off engine.
- 2.) Move the saw bar handle down and up multiple times to relieve hydraulic pressure.

After performing maintenance, make sure all guards, shields, and safety features are put back in place. Failure to follow this warning can result in serious injury.

Refer to the engine owner's manual for engine maintenance.

Failure to do regular maintenance will void warranty

Only Use AW Series Hydraulic Oil, Use of any other Oil will Void All Warranties

Check The Following Each time the Processor is Used

What	How
Hoses	Inspect for exposed wire mesh and leaks. Replace all worn or damaged hoses before starting engine
Hydraulic Fittings	Inspect for cracks and leaks. Reseal or replace all damaged fittings before starting engine
Nuts and Bolts	Visually Check for loose bolts
Moving Parts	Clear debris
Ram Valley	Clean Sawdust from slider area after every use to prevent possible jamming
Grease	Grease Ram slider & log length adjuster every use
Chain	Check saw chain for sharpness and correct tension
Bar Oil	Ensure Bar Oil tank is full
Conveyor	If Conveyor Belt is not centered on pulleys use adjusting bolts to correct position of belt, run

10 Hour Maintenance - Every 10 Hours of Operation

Nuts and Bolts	Snug and Tighten all Bolts, Including Motor Mounts and large nut on hydraulic ram
Grease	Grease 3 Conveyor Bearings
Grease	Grease wheel hubs
Grease	Log Rollers
Engine Oil	Check level and cleanliness Use 10/30 Oil
Hydraulic Oil	Check level and cleanliness Use AW Series Hydraulic Oil Only
Air Filter	Check & Clean Engine Air Filter if Necessary

Saw and Ram engagement Adjustments

1. Saw and Ram Engagement

When the saw descends to cut the wood, the splitting ram automatically engages. This is due to an adjustable cable, with a threaded end, that triggers the hydraulic spool of the ram.

If the ram does not engage after the cut, you will need to readjust the cable by reajust its tension or length.

2. Automatic Ram Return

When the splitting ram returns to its initial position, a small metal lever triggers the spool and allows this automatic return. This lever is also adjustable. If the ram does not return properly, you will need to adjust this lever to ensure smooth operation.

3. Chain Sharpening

When it's time to sharpen the chains, they should always be sharpened using a machine specifically designed for chain sharpening.

Additionally, it's important to note that the saw's descent is controlled by an air-over-hydraulic cylinder. In other words, the saw is lifted hydraulically, while it descends using air pressure. This design ensures that when the chain no longer cuts, the saw won't continue pushing into the wood, preventing damage to the blade.

Therefore, it's crucial to check the chain whenever it stops cutting. Replace or inspect the chain as needed, and also verify the air pressure, which should be set at (58-65) PSI or 0.4 to 0.4.5 MPa.

Troubleshooting

Problem	Solution
Cylinder rod will not move	SOLUTION: A,D,E,H,J
Slow cylinder rod speed when extending or retracting	SOLUTION: A,B,C,H,I,K,L
Wood will not split or splits extremely slowly	SOLUTION: A,B,C,F,I,K
Engine bogs down during splitting	SOLUTION: G,L
Engine stalls under low load condition	SOLUTION: D,E,L,M,O

Cause	Solution
A -Insufficient oil to pump	Check oil level in reservoir
B -Air in oil	Check oil level in reservoir
C -Excessive pump inlet vacuum	Check pump inlet hose for blockage or kinks
D -Blocked hydraulic lines	Flush and clean the processor hydraulic system
E -Blocked control valve	Flush and clean the processor hydraulic system
F -Low control valve setting	Adjust control valve with a pressure gauge
G -High control valve setting	Adjust control valve with a pressure gauge
H -Damaged control valve	Return control valve for authorized repair
I -Internal control valve leak	Return control valve for authorized repair
J -Internal cylinder leak	Return cylinder for authorized repair
K -Internally damaged cylinder	Return cylinder for authorized repair
L -Engine Control out of adjustment	Adjust idle control nuts
M -Engine is loaded during idle down mode	Use shorter log length (24" or less) to allow engine to speed up before contact.
N -Coupler between engine and hydraulic pump disconnected	Ensure the rubber coupler is in place and tighten hex screw.
O -Dirty Air Filter	Clean or Replace Filter

Specifications

Model	27T 27 Ton Firewood Processor
Engine	Kohler 14HP
Maximum Splitting Force	27 Tons
Bar	22"
Chain	22" .325" .063" 86 drive teeth
Hydraulic Oil Capacity	26 litres (5.75 gallons) AW32
Maximum Log Length (cut)	60 cm (22")
Maximum Log Diameter	45.72 cm (18")
Pump Capacity	83L/Min 2 Stage Pump 3625 Psi
Saw Motor	28.8L/Min 6000 RPM
Conveyor	320 cm (128")
Conveyor Pump	18L/min 3000 Psi
Trailer Coupler	2"
Hydraulic Cylinder Stroke	50 cm (20")
Cycle Time	7 seconds
Maximum Towing Speed	70 km/h (45 mph)

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

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Spare Parts

	22" Chain
	22" Bar
	6 Way Splitter
	12" Tire & Rim Assembly
	Ram Engagement Cable
	Saw Motor
	Conveyor Motor
	Hydraulic Pump, 2 Stage
	Hydraulic Valve, Ram Engagement
	Conveyor Belt
	Battery
	Slider Wear Plate
	95 Series Lovejoy Rubber Coupler
	18mm Hydraulic Pump Coupler
	1" Engine Coupler
	P55-1551 Donaldson Hydraulic Filter (or equivalent)
	Chainsaw Drive Sprocket
	Saw Motor Oil Seal

This equipment comes with a 12 month warranty against Manufacturer's defects and excludes wear parts. If any product or part is proved to be defective within 12 months from date of purchase, by reason of improper workmanship and/or material we will replace, or repair at Machinerie DB. discretion, that part or product at no charge to you, excluding any freight costs.

Manufacturer's defects and excludes wear parts.

Items not covered:

Wear parts -including Saw Bar, Saw Chain, Drive Sprocket, Lovejoy Coupling & Rubbers, Tires, Bearings, Etc.
(Conveyor Belt - does not include rips or tears)

The engine is warranted separately by the engine manufacturer (Honda, Lifan, Kohler, Princess Auto, Subaru, Etc.)

The warranty begins on the date of sale and is warranted by Machineire DB. to the original purchaser only. This Warranty does not cover items that have been damaged by accident, alteration, abuse or improper lubrication. If the equipment is used commercially (Over 50 cords of firewood per year for processor) or a rental, warranty for this product is limited to a period of 90 days from the date of purchase.

Warranty cancellation

Unauthorized modification voids the warranty, Including but not limited to, welding, engine modification, pump and hydraulic system modification. The warranty is void if the user violates the assembly and/or operating & maintenance instructions.

Machinerie DB shall not be liable under any circumstances for any incidental or consequential damages or expenses of any kind, including but not limited to - the cost of equipment rental, loss of profits, or cost of hiring services to perform tasks normally performed by the equipment.

Machinerie DB. obligation under this warranty shall be exclusively limited to repairing or replacing (at Machinerie DB discretion) products which are determined by Machinerie DB. to be defective upon delivery F.O.B. (return freight paid by customer) Machinerie DB., and on inspection by Machinerie DB This warranty does not apply to defects due, directly or indirectly, to misuse, abuse, negligence, accidents, unauthorized repairs, alterations, lack of maintenance, acts of nature, or items that would normally be consumed or require replacement due to normal wear. In no event shall Machinerie DB be liable for death, personal or property injury, or damages arising from the use of its products. Machinerie DB. does not issue credits or refunds on products purchased directly from a distributor or dealer.