

North Forest Series **FHC** Firewood Processor



NORTHFOREST
POWER EQUIPMENT



Owners Manual

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Note: Any modification to Processor will void all warranty

This unit is designed to have only one operator at the time of operation.

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 hydraulic **oil (0W32), Approximately 28 litres**
 Closely inspect all processor components and ensure all exterior bolts are tightened
 If components are damaged during delivery, please contact the freight company



DANGER (red) indicates an imminently hazardous situation which, if not avoided, 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 .

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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.

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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 .



Pay attention to the conveyor height, if the conveyor is too high or split wood lengths too long the wood will jam into the conveyor or belt instead and possibly tear it, conveyor can be at a higher angle with shorter lengths of wood.



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.

Proper Operation of the Firewood Processor

1. Preset the cut off length using the measuring bar, loosen the 2 bolts and slide the bar to the correct position, re-tighten the bolts.
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. Pull the Saw Bar Handle down to engage the chain.
5. Gently pull the Saw Bar handle downwards with the chain running and cut through the wood.
6. When pulling the saw bar down and the saw is getting close to cutting through the log you will notice tension on the bar as the cable to engage the ram starts to be activated, keep drawing the saw blade down until cut is complete.
7. The cut piece will drop into the splitter area, raise Saw Bar Handle and ram will engage.
8. Once the log has been pushed through the splitter, the ram will automatically retract.
9. 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 the log deck, this keeps hands away from moving chain.
10. Serious accidents may happen when other people are allowed inside the work zone.
11. It is recommended to have a minimum 7 metre (20 ft) radius safe work zone.
12. Keep all non-essential people out of the work zone while operating processor.
13. Make sure hands are clear of crush hazard zones.
14. 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	Lightly lubricate 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

10 Hour Maintenance – Every 10 Hours of Operation

NB: Kohler Engine motor oil has to be change after the first 5hrs (refer to engine manual)

Nuts and Bolts	Snug and Tighten all Bolts, Including Motor Mounts
Grease	Grease 3 Conveyor Bearings
Grease	Grease wheel hubs
Grease	Log Rollers
Engine Oil	Check level and cleanliness Use 10/30 Oil or as recommended in Engine Manual
Hydraulic Oil	Check level and cleanliness Use AW32 Series Hydraulic Oil Only
Air Filter	Check & Clean Engine Air Filter if Necessary



Adjustments

Fig.1



NB :

interrupter (switch) should always be press in with the sawblade into up position when the unit is not running, or else the battery will drain out .

Fig.2

The Saw Chain engagement arm is used to control when the chain starts to spin. This is an on/off valve, when the engagement arm is in the up position the bolt head from the lever touches the bolt on the valve, (Fig. 1)Auto Lube Switch Fig. 2 shows when the engagement arm is pulled forward, allowing the valve to automatically move to the on position, starting the saw motor.

Fig.3**Fig.4**

The ram engagement cable is used to engage the ram at the end of the sawing process, The cable should be adjusted so that when the saw bar is at its lowest position the ram engagement valve arm is pulled to the left. If the cable is too tight it will stretch & possibly fray or break, if it is too loose then the arm will not move enough to engage the ram.



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Fig. 5



If the emergency stop switch is depressed, turn the red button slowly until it pops up into the run position.



NB :make sure to check both these adjustments from time to time .

If they become out of adjustment the ram cycle will be defective.

Fig. 7



When returning to the home position, if the ram hits hard, stalls the engine or lugs the engine, loosen these 2 -13mm nuts at the front of the ram cover and slide the bracket to the right, when adjusting this the ram face

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should stick out 1-2mm from the blue processor body, if the face sits inside the processor body metal then adjust the bracket more to the right until it sits even or slightly protrudes from the body.

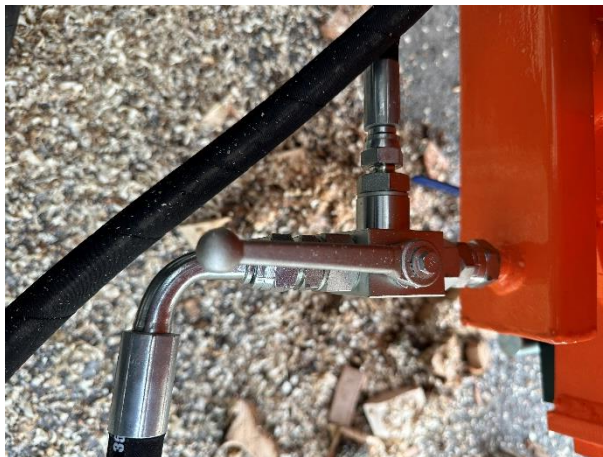
Fig. 8



The hydraulic bypass valve at the back of the Splitter/Chainsaw Safety Cover puts the hydraulic circuit for the chainsaw and ram into bypass when the cage is open and they can not operate. When the cage is closed this valve must be fully depressed or partial bypass will happen and you will have less saw speed and ram power. **Be sure to have this valve grease at all times.**

Fig. 9 Conveyor valve

always



keep the valve close at starting the unit.

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open position

Fig. 10

This valve at the rear, engine side of the processor controls oil flow to the conveyor or secondary hydraulic circuit.

Fig. 10

**Fig. 12** Hydraulic Outlet

Those connectors avec to be use with Live decks and Log Lift Tables

Fig 13**Infeed Chain adjustments**

Infeed Chain requires time to time adjustments and tension should be just enough so the chain clears the under sections of the deck .. Not to Tight, also make sure the chain is always grease.

**Fig 14****Auto -Lube Valve.**

This is the close position . make sure to open when operating!

**Fig 15**

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Flow valve for Chain saw descent.

This valve is set to ½ turn out to 1 turn out. It will adjust the speed descent of you blade. Most times you should get from slow to fast within 1 ½ turn.



FIG 16
INDEPENDENT FLOW VALVES:

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(LEFT) this is to adjust the speed flow to you **SAW-BAR SPEED**. They are factory set but sometimes they require adjustment time to time. Turn clock-wise to add speed

(RIGHT) this is to adjust the speed flow to **LOG GRAPPLE SPEED**. They are factory set but sometimes they require adjustment time to time. Turn clock-wise to add speed



FIG 17

SAW DRIVE MOTOR VALVE.

This is to adjust the UP position to you saw blade. This valve will start your saw motor when it is in vertical position. Make sure it is greased at all times.

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Qc, Canada

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FIG 18: the Hydraulic oil should be always full.
This is the minimum oil requirement on this picture.

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FIG 20

CHAINSAW MOUNT:

The system is very similar to a standard chain saw, 2 bolts 13mm for the block and 1 Hex 5mm for the tensioner. Make sure it is not too tight, and on re-assembly clean and be careful to place the same size bolt in place.

(the one close to the sprocket is shorter)



Specification:

Model	NF-T29FHC
Engine	KOHLER C-440
Maximum Splitting Force	27 Tons
Bar	22 North Forest
Chain	7/8 74 drive teeth
Hydraulic Oil Capacity	27 litres (7 gallons) AW32
Maximum Log Length (cut)	60 cm (21")
Maximum Log Diameter	38.75 cm (18")

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Pump Capacity	40L/Min 2 Section Pump 2750 Psi
Saw Motor	29 L/Min 6200 RPM
Conveyor	Optional (320 cm (128"))
Conveyor Pump	18L/min 3000 Psi
Trailer Coupler	2"
Hydraulic Cylinder Stroke	61 cm (24")
Cycle Time	8 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.

Note: Any modification to Processor will void all warranty

Failure to do regular maintenance will void warranty

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

Specifications

Model	T29FHC Firewood Processor
Engine	Kohler 14HP
Maximum Splitting Force	27 Tons
Bar	22 Inches North Forest BAR
Chain	3/8
Hydraulic Oil Capacity	28 litres AW32
Maximum Log Length (cut)	60 cm (21")

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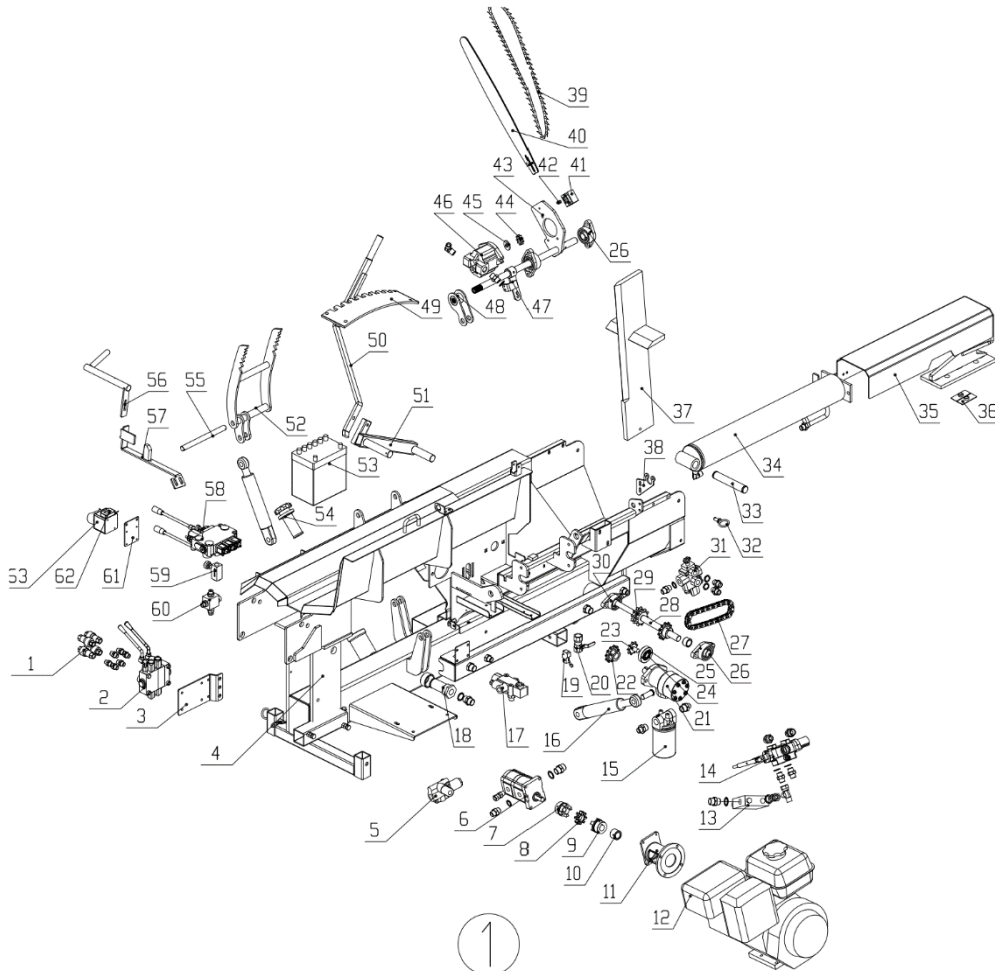
Maximum Log Diameter	38.75 cm (15.5")
Pump Capacity	36L/Min 2 Section Pump 3250 Psi
Saw Motor	28.8L/Min 6000 RPM
Conveyor	320 cm (128")
Conveyor Pump	18L/min 3000 Psi
Trailer Coupler	2"
Hydraulic Cylinder Stroke	61 cm (24")
Cycle Time	7 seconds
Maximum Towing Speed	70 km/h (45 mph)

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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Parts List

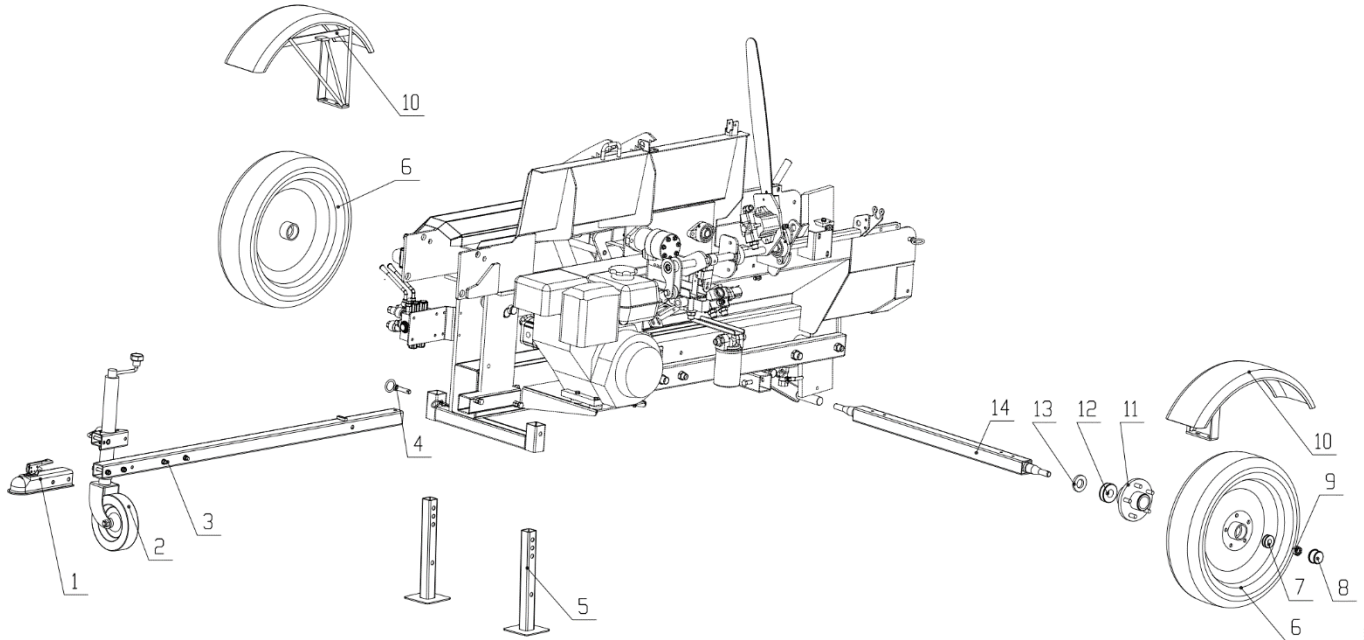
No.	Model	QTY
1	quick joint G3/8	2
2	2-joint valve	1
3	2-joint valve plate	1
4	main body	1
5	divert valve	1
6	gear pump 12/05	1
7	coupler XL2	1
8	washer XL2	1
9	coupler XL2	1
10	spacer sleeve	1
11	pump seat	1
12	Kohler engine	1
13	J6 valve	1
14	CEBE valve	1
15	oil return filter SP-06X100	1
16	cylinder 40*25*100	2
17	CHG valve	1
18	inner filter	1
19	switch	1
20	ball valve G3/4	1
21	motor BMP160	1
22	sprocket wheel	2
23	sprocket wheel	1

23	sprocket wheel	1
24	bearing 6004	1
25	bearing sleeve	1
26	bearing UCF205	1
27	chain	1
28	sprocket wheel shaft 1	1
29	double sprocket wheel	1
30	bearing UCF204	1
31	CHG2 valve	1
32	conveyor pin	2
33	cylinder pin	1
34	cylinder 4"-610/80	1
35	pushing head	1
36	plate	2
37	4-ways knife	1
38	ears of left cover	1
39	chain	1
40	22inch chainsaw bar	1
41	pressing seat	1
42	adjusting screw	1
43	motor fixing plate	1
44	sprocket wheel	1
45	sprocket wheel washer	1set
46	gear motor GM5-8	1

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47	block	1
48	cylinder fixing plate	1
49	knife position plate	1
50	knife lifting handle	1
51	knife lifting shaft	1
52	log presser	1
53	battery	1
54	air filter EF2-32	1
55	log presser pin	1
56	handle	1
57	rod	1
58	block	1
59	two control three valves	1
60	one valve LA-H10L	1
61	overflow valve	2
62	switch box fixing plate	1
63	timer	1
64	emergency stop switch	1
1	head cover	1
2	guide wheel	1
3	towing bar	1
4	leg shaft	1
5	leg	2
6	13inch wheel	2

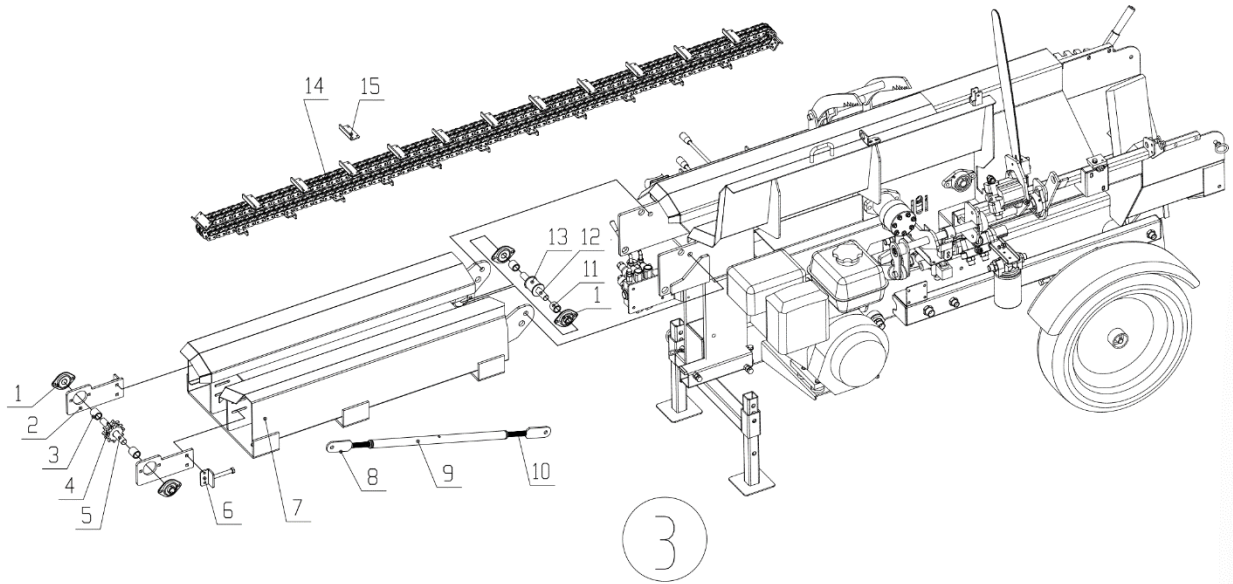
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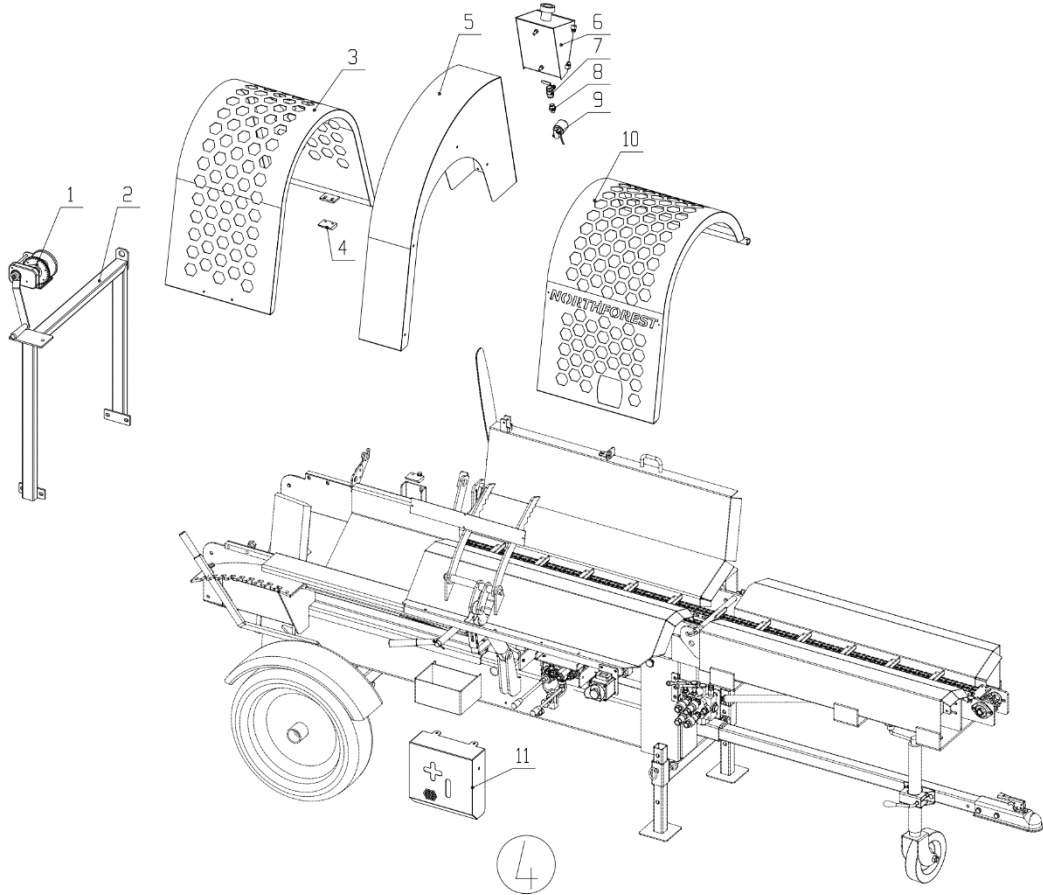
1	head cover	1
2	guide wheel	1
3	towing bar	1
4	leg shaft	1
5	leg	2
6	13inch wheel	2

7	bearing 11949	2
8	wheel cap	2
9	nut	2
10	fender	2
11	shaft head	2
12	bearing 67049	2
13	seal	2
14	wheel axle	1



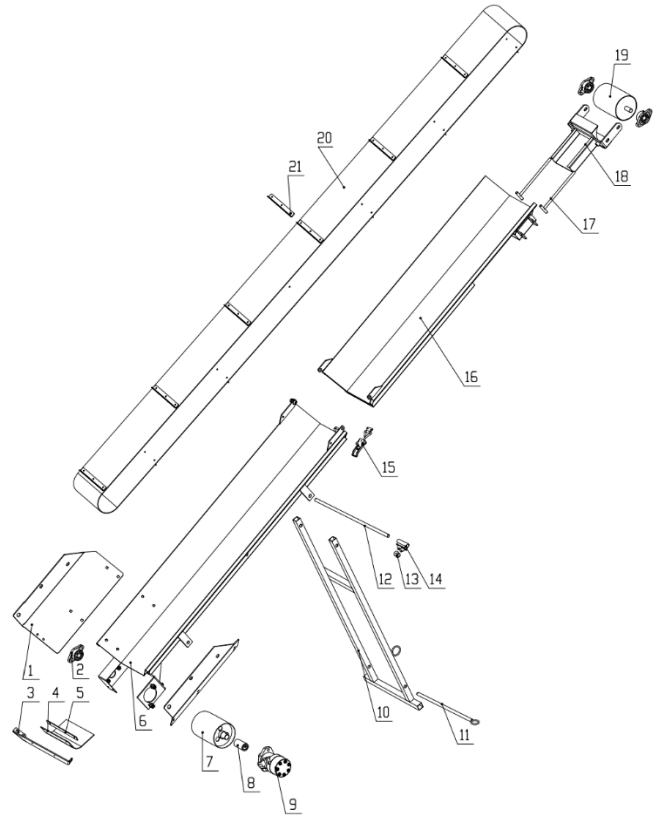
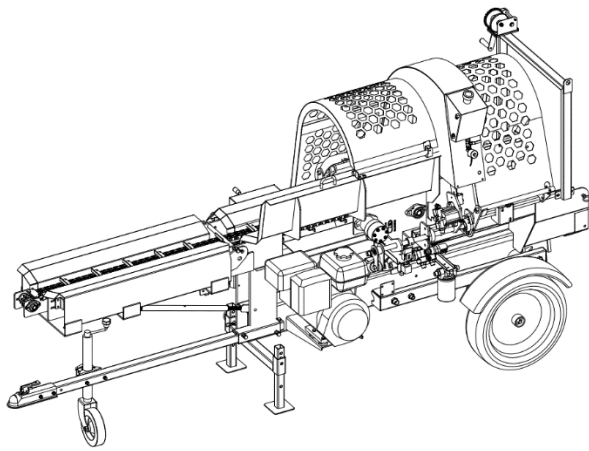
1	bearing 204	4
2	bearing seat plate	2
3	sprocket wheel sleeve	2
4	sprocket wheel	1
5	sprocket wheel shaft	1
6	seat	2
7	infeed	1
8	left pull bar	1
9	infeed supporting bar	1
10	right pull bar	1
11	auxiliary wheel sleeve	2
12	auxiliary wheel shaft	1
13	auxiliary wheel	1
14	infeed chain	1
15	chain plate	24

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2	winch fixing frame	1
3	left cover	1
4	CHG2 valve block	1
5	chainsaw cover	1
6	lubrication oil tank	1
7	3/8 ball valve	1
8	screw joint G3/8-G1/4	1
9	valve	1
10	right cover	1
11	valve cover	1
1	conveyor connecting plate	2
2	bearing UCF204	3
3	hopper plate	1
4	conveyor rubber plate	1
5	fixing plate	1
6	hopper	1
7	roller B	1
8	connecting sleeve	1
9	motor BMP160	1
10	hopper leg	1
11	hopper leg shaft	1
12	hopper shaft	1
13	rail wheel	2
14	tube	2

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1	conveyor connecting plate	2
2	bearing UCF204	3
3	hopper plate	1
4	conveyor rubber plate	1
5	fixing plate	1
6	hopper	1
7	roller B	1
8	connecting sleeve	1
9	motor BMP160	1
10	hopper leg	1
11	hopper leg shaft	1
12	hopper shaft	1
13	rail wheel	2
14	tube	2
15	lock	1
16	hopper 2	1
17	adjusting rod	2
18	adjusting seat	1
19	roller A	1
20	conveyor belt 6800*250*3	1
21	conveyor zinc plate	12

North Forest Power Equipment

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 North Forest Dealers. discretion, that part or product at no charge to you, excluding any freight costs.

Items not covered:

Wear parts –including Saw Bar, Saw Chain, Drive Sprocket, Lovejoy Coupling & Rubbers, Ram Cable, Tires, Bearings, Etc.

(Conveyor Belt – does not include rips or tears)

The engine is warranted separately by the engine manufacturer Kohler The warranty begins on the date of sale and is warranted by North Forest Power Equipment to the original purchaser only. This Warranty does not cover items that have been damaged by accident, alteration, abuse or improper lubrication.

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.

North Forest Power Equipment . 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.

North Forest Power Equipment. obligation under this warranty shall be exclusively limited to repairing or replacing (North Forest Power Equipment discretion) products which are determined by North Forest Power Equipment. to be defective upon delivery F.O.B. (return freight paid by customer) North Forest Power Equipment, and on inspection North Forest Power Equipment. 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 North Forest Power Equipment be liable for death, personal or property injury, or damages arising from the use of its products. North Forest Power Equipment. does not issue credits or refunds on products purchased directly from a distributor or dealer.