

LST30

30 TON LOG SPLITTER

INSTRUCTION MANUAL



READ ALL INSTRUCTIONS AND WARNINGS BEFORE USING THIS PRODUCT.

This manual provides important information on proper operation & maintenance. Every effort has been made to ensure the accuracy of this manual. These instructions are not meant to cover every possible condition and situation that may occur. We reserve the right to change this product at any time without prior notice.

IF THERE IS ANY QUESTION ABOUT A CONDITION BEING SAFE OR UNSAFE,
DO NOT OPERATE THIS PRODUCT!

DO NOT RETURN THIS PRODUCT TO THE RETAILER - CONTACT CUSTOMER SERVICE.

If you experience a problem, have questions or need parts for this product, call Customer Service at **1-888-287-6981, Monday-Friday, 8 AM - 4 PM Central Time**. A copy of the sales receipt is required.

Visit online <http://www.sportsmanseriesbrand.com>

FOR CONSUMER USE ONLY – NOT FOR PROFESSIONAL USE.

KEEP THIS MANUAL, SALES RECEIPT & APPLICABLE WARRANTY FOR REFERENCE.



WARNING: Your Responsibility - Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

SAVE THESE INSTRUCTIONS!

SPECIFICATIONS

Engine Displacement	196cc
Fuel Tank Capacity	0.95 Gallon (3.6 Liters)
Gas Type	Unleaded Gasoline
Max. Output	6.5 HP / 3,600 rpm
Engine Oil Capacity	20.25 ounces (0.6 Liter) SAE 10W-30 oil
Spark Plug Gap	0.8mm
Max. Splitting Force	30 Ton
Max. Splitting Length	21 inches
Wedge Height	5 inches
Hydraulic Oil Capacity	3.38 Quarts (3.2 Liter) AW All Weather ISO 32
Hitch	Pin Style
Tandem Hitch	Pin or ball style (ball hitch not included)
Weight	205 lbs
Spark Plug	LD: F7RTC NGK: BPR6ES DENSO: W20EPR-U
Engine Type	4-Stroke CARB Approved

LOOSE PARTS

Unpacking



WARNING! Use extreme caution when unpacking this machine. Some components are very heavy and will require additional people or mechanical handling equipment.

Note: If any parts are damaged or missing, do not attempt to operate this machine until the damaged or missing parts are obtained and are installed correctly

Loose Parts

Check all loose parts from the box with the list below. Assemble according to the instructions.

IMPORTANT SAFE OPERATION PRACTICES



WARNING! This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in injury. When you see this symbol. **HEED ITS WARNING!**



CALIFORNIA PROPOSITION 65

WARNING: Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.



DANGER! This machine was built to be operated according to the safe operation practices in this manual. As with any type of power equipment, carelessness or error can result in serious injury. **machine is capable of amputating hands and feet and throwing debris. Failure to observe the safety instructions could result in serious injury or death.**

Training

1. Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage.
3. Never allow children under 16 years of age to operate this machine. Children 16 and over should read and understand the instructions and safe operation practices in this manual and on the machine and be trained and supervised by an adult.
4. Never allow adults to operate this machine without proper instruction. Do not use if under the influence of alcohol or drugs.
5. Many accidents occur when more than one person operates the machine. If a helper is assisting in stacking logs, never activate the control until the helper is a minimum of 10 feet from the machine.
6. Keep bystanders, pets, and children at least 20 feet from the machine while it is in operation.
7. Never allow any one to ride on this machine.
8. Never transport cargo on this machine.
9. Hydraulic fluids are made up of chemicals and additives. They can be extremely irritating to the skin. Protect exposed skin from the liquid. Immediately use soap and water to wash any areas that came into contact with the fluid.
 - a. Do not operate machine with frayed, kinked, cracked, or damaged hoses, fittings, or tubing.
 - b. Stop the engine and relieve hydraulic system pressure before changing or adjusting fittings, hoses, tubing, or other system components.
 - c. Do not adjust the pressure settings of the pump or valve.

IMPORTANT SAFE OPERATION PRACTICES

10. Leaks can be detected by passing cardboard or wood, while wearing protective gloves and safety glasses, over the suspected area. Look for discoloration of cardboard or wood.
11. If injured by escaping fluid, see a doctor immediately. Serious infection or reaction can develop if proper medical treatment is not administered immediately.
12. Keep the operator zone and adjacent area clear for safe, secure footing.
13. If your machine is equipped with an internal combustion engine and is intended for use near any unimproved forest, brush, or grass covered land, the engine exhaust should be equipped with a spark arrester. Make sure you comply with applicable local, state, and federal codes. Take appropriate firefighting equipment with you.
14. This machine should be used for splitting wood only, do not use it for any other purpose.
15. Following the instructions in the manual(s) provided with any attachment(s) for this machine.

Preparation

1. Always wear safety shoes or heavy boots.
2. Always wear safety glasses or safety goggles when operating this machine.
3. Never wear jewelry or loose clothing that might become entangled in moving or rotating parts of the machine.
4. Make sure machine is on a level surface before operating.
5. Always block wheels to prevent unintended movement, and lock beam in either the horizontal or vertical position.
6. Always operate this machine from the operator zone(s) specified in the manual.
7. Logs should be cut with square ends prior to splitting.
8. Use log splitter in daylight or under good artificial light.

Safe Handling of Gasoline

To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.

- a. Use only an approved gasoline container.
- b. Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- c. Never fuel machine in doors.
- d. Never remove gas cap or add fuel while the engine is hot or running.
- e. Allow engine to cool at latest two minutes before refueling.
- f. Never overfill the fuel tank. Fill tank to no more than 1/2 inch below bottom of filler neck to provide space for fuel expansion.
- g. Replace gasoline cap and tighten securely.
- h. If gasoline is spilled, wipe it off the engine and equipment and move machine to another area. Wait five (5) minutes before starting the engine.
- i. Never store the machine or fuel container inside where there is an open flame, spark or pilot light as on a water heater, space heater, furnace, clothes dryer or other gas appliances.
- j. Allow machine to cool at least five (5) minutes before storing.

IMPORTANT SAFE OPERATION PRACTICES

Operation

1. Before starting this machine, review the "Safety Instructions". Failure to follow these rules may result in serious injury to the operator or bystanders.
2. Never leave this machine unattended with the engine running.
3. Do not operate machine while under the influence of alcohol, drugs, or medication.
4. Never allow anyone to operate this machine without proper instruction.
5. Always operate this machine with all safety equipment in place and working. Make sure all controls are properly adjusted for safe operation.
6. When loading a log, always place your hands on the sides of the log, not on the ends, and never use your foot to help stabilize a log. Failure to do so, may result in crushed or amputated fingers, toes, hand, or foot.
7. Use only your hand to operate the controls.
8. Never attempt to split more than one log at a time unless the ram has fully extended and a second log is needed to complete the separation of the first log.
9. For logs which are not cut square, the least square end and the longest portion of the log should be placed toward the beam and wedge, and the square end placed toward the end plate.
10. Always keep fingers away from any cracks that open in the log while splitting. They can quickly close and pinch or amputate your fingers.
11. Keep your work area clean. Immediately remove split wood around the machine so you do not trip over it.
12. Do not change the engine governor settings or overspeed the engine. The governor controls the maximum safe operating speed of the engine.
13. This machine should not be towed on any street, highway or public road without checking the existing federal, state, or local vehicle requirements. Any licensing or modifications such as taillights, etc., needed to comply, is the sole responsibility of the purchaser. If a "Statement of Origin" is required in your state, see your local dealer.
14. Do not tow machine over 15 mph and do not move this machine while the engine is running.
15. See "Towing The Log Splitter" section in this manual for proper towing instructions once all federal, local, or state requirements are met.

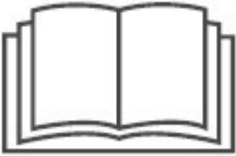

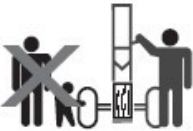




Maintenance and Storage

1. Stop the engine, disconnect the spark plug and ground it against the engine before cleaning or inspecting.
2. Stop the engine and relieve hydraulic system pressure before repairing or adjusting fittings, hoses, tubing, or other system components.
3. To prevent fires, clean debris and chaff from the engine and muffler areas. If the engine is equipped with a spark arrester muffler, clean and inspect it regularly according to manufacturers' instructions. Replace if damaged.
4. Periodically check that all nuts and bolts, hose clamps, and hydraulic fittings are tight to be sure equipment is in safe working condition.
5. Check all safety guards and shields to be sure they are in the proper position. Never operate with safety guards, shields, or other protective features removed.
6. The pressure relief valve is preset at the factory. Do not adjust the valve.
7. Never attempt to move this machine over hilly or uneven terrain without a tow vehicle or adequate help.

8. For your safety, replace all damaged or worn parts immediately with original equipment manufacturer's (O.E.M.) parts only. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
9. Do not alter this machine in any manner, alterations such as attaching a rope or extension to the control handle, or adding to the width or height of the wedge may result in personal injury.

Safety Symbols

Read, understand, and follow all instructions & safety symbols before attempting to assemble and operate.

Symbol	Description
	READ THE OPERATOR'S MANUAL(S) Read, understand, and follow all instruction in the manual(s) before attempting to assemble and operate.
	WARNING----CRUSHING HAZARD Keep hands away from wedge, end plate, partly split wood and moving parts
	BYSTANDERS Keep bystanders, helpers and children at least 10 feet away.
	SINGLE OPERATOR Only one person should operate the machine at a time. The adult who loads and holds log must be the one who operates control handle.
	WARNING----PRESSURIZED FLUID Never check for hose leaks with your hands. High pressure fluid can escape through a pin hole leak and cause serious injury by puncturing the skin and causing blood poisoning.
	EYE PROTECTION Always wear safety glasses or safety goggles when operating this machine.
	WARNING----MOVING WEDGE Keep hands away from wedge and moving parts.

IMPORTANT SAFETY INSTRUCTIONS

STOP!

Before using this log splitter, if you have any questions regarding the hazard and safety notices listed in this manual, call 1-888-287-6981, Monday - Friday, 8 AM - 4 PM Central Time.

OPERATING INSTRUCTIONS		CAUTION!	WARNING!	WARNING!	WARNING!
3 POSITIONS OF CONTROL HANDLE FORWARD NEUTRAL REVERSE  <ul style="list-style-type: none">Place log splitter on flat dry solid ground and block wheels.Lock the beam in either the Horizontal or Vertical position.Start the engine as instructed in the Engine Operator's manual included.Load the log onto the beam against the end plate.If necessary, stabilize the log with your left hand on its sides, NEVER on the ends or the top.Move the control handle to the FORWARD position with your right hand to split the log. Remove your left hand when the wedge just contacts the log.Release the control handle to stop the wedge movement.Move the control handle to the REVERSE position to return the wedge and dislodge the log.		 <ul style="list-style-type: none">Read and understand safety and operating instructions in owner's manual completely. Failure to do so may result in serious injury or death.Always wear safety glasses, safety shoes, protective hearing devices, and tight fitting gloves during operation.Set up log splitter on clear, level, dry and solid ground. Keep off slopes and slippery surfaces. Always block the wheels.Do not leave the engine running unattended.Only split wood in the direction of the grain.	 <ul style="list-style-type: none">No one under the age of 18 should operate log splitter.Only one person is permitted to load logs and operate controls. Keep bystanders, children, pets and helpers at least 25 ft. away.Always stay in operator zone specified by manufacturer during operation.Keep work area clear of split wood, debris, and other obstacles.Do not operate log splitter under the influence of alcohol or drugs.Do not stand on or reach over log splitter.	 <ul style="list-style-type: none">Keep hands, feet and all body parts away from splitting wedge, end plate, partially split wood, and moving parts.Never check for leaks with your hands during operation. High pressure fluid can escape from small holes and cause serious injury by puncturing skin which could result in blood poisoning.NEVER use your hands to dislodge a log from the wedge. This log splitter is equipped with log dislodge, lodged log will be removed automatically when wedge is fully retracted.	 <ul style="list-style-type: none">Do not refill hydraulic oil while engine are hot or running.Do not refuel a hot or running engine. Allow the engine to cool at least 10 minutes before refueling.Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.Engine parts, especially the muffler, become extremely hot during operation. Do not touch.

WARNING!

To minimize risk of serious injury or death to you or others, when towing this log splitter:

- Read instruction manual for how to properly attach coupler to hitch ball and how to tow safely.
- Never attempt to move this machine over uneven or hilly terrain without a tow vehicle or adequate help.
- Use the ball of correct size.
- Do not exceed weight capacity of ball or load limits of coupler.
- Always use safety chains.
- Never exceed 45 mph.
- Avoid sharp turns and steep angles.
- Make sure of the coupler tightness each time before towing and after towing 50 miles.
- Replace damaged ball or coupler immediately.

DANGER!

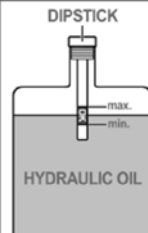
- Do not use your hands to dislodge log from wedge.
- Keep hands away from wedge, end plate, partially split wood and moving parts.
- If wedge moves FORWARD when control handle released, STOP USE IMMEDIATELY! Valve may be damaged.

DANGER

KEEP HANDS AND FEET AWAY!



NOTICE



DIPSTICK

HYDRAULIC OIL

- Maintain oil level within the range specified on dipstick. Check before each use when oil is cold. DO NOT OVERFILL! Never run the log splitter without sufficient oil. The hydraulic pump could be ruined.
- Change hydraulic oil every 100 hours of use. AW32 universal Hydraulic oil is recommended. Dextron II transmission fluid can be used as a substitute should AW32 oil not be available. Do NOT mix AW32 hydraulic oil with Dextron II transmission fluid. Drain the reservoir if you wish to use Dextron II.
- Use only the filter of original equipment manufacturer's (O.E.M.).

⚠ DANGER

Carbon Monoxide Gas: When in operation, the exhaust from this log splitter contains poisonous carbon monoxide gas. Carbon monoxide gas is both odorless and colorless AND may be present even if you do not see or smell gas. Breathing this poison gas can lead to headaches, dizziness, drowsiness, loss of consciousness and eventually death.

- USE THIS LOG SPLITTER ONLY OUTDOORS IN NON-CONFINED AREAS. DO NOT SECURE THE LOG SPLITTER WITH A CHAIN OR ROPE, AS THIS WILL MAKE IT DIFFICULT TO MOVE IN AN EMERGENCY.
- Keep at least several feet of clearance on all sides to allow proper ventilation.

⚠ WARNING

Chemicals: According to the State of California, the exhaust from this log splitter contains chemicals known to cause cancer, birth defects, or other reproductive harm.

WARNING

Flammable Gasoline: This log splitter may emit highly flammable and explosive gasoline vapors, which can cause severe burns or even death. A nearby open flame can lead to an explosion even if not directly in contact with gasoline.

- Do not operate this log splitter near open flame.
- Do not smoke near this log splitter.
- Always operate this log splitter on a firm, level surface.

Gasoline is highly flammable and explosive. Handling fuel can result in serious injury or burns.

- Always shut down this log splitter before refueling. Refuel in a well-ventilated area. Keep heat, sparks and flame away while refueling and away from the location where gasoline is stored. Never refuel indoors where gasoline fumes may reach flames and/or sparks.
- Allow this log splitter to cool for at least 2 minutes before removing the fuel tank cap. Loosen the cap slowly to relieve pressure in the fuel tank.

Avoid spilling fuel.

- Do not fill the fuel tank above the upper limit line. Gasoline may expand during operation. Do not fill to the top of the tank.
- Always check for spilled gasoline and immediately wipe it up before starting this log splitter.
- Empty the fuel tank before storing or transporting this log splitter.
- Always handle fuel outdoors.
- Before transporting, turn the fuel valve to the "OFF" position and disconnect the spark plug.

ASSEMBLY & SET-UP INSTRUCTIONS



WARNING! Use extreme caution unpacking this machine. Some components are very heavy and will require additional people or mechanical handling equipment.

NOTE: All references in this manual to the left or right side and front or back of the log splitter are from the operating position only. Exceptions, if any, will be specified.

UNPACKING THE CONTAINER

Step 1: Use a 14mm wrench to remove all the bolts and washers on the metal crate, put aside the packing top and side frames, then remove the cardboard box.

Step 2: Remove all loose parts included in the container, including operator's manual, wheels, hardware box and engine box.

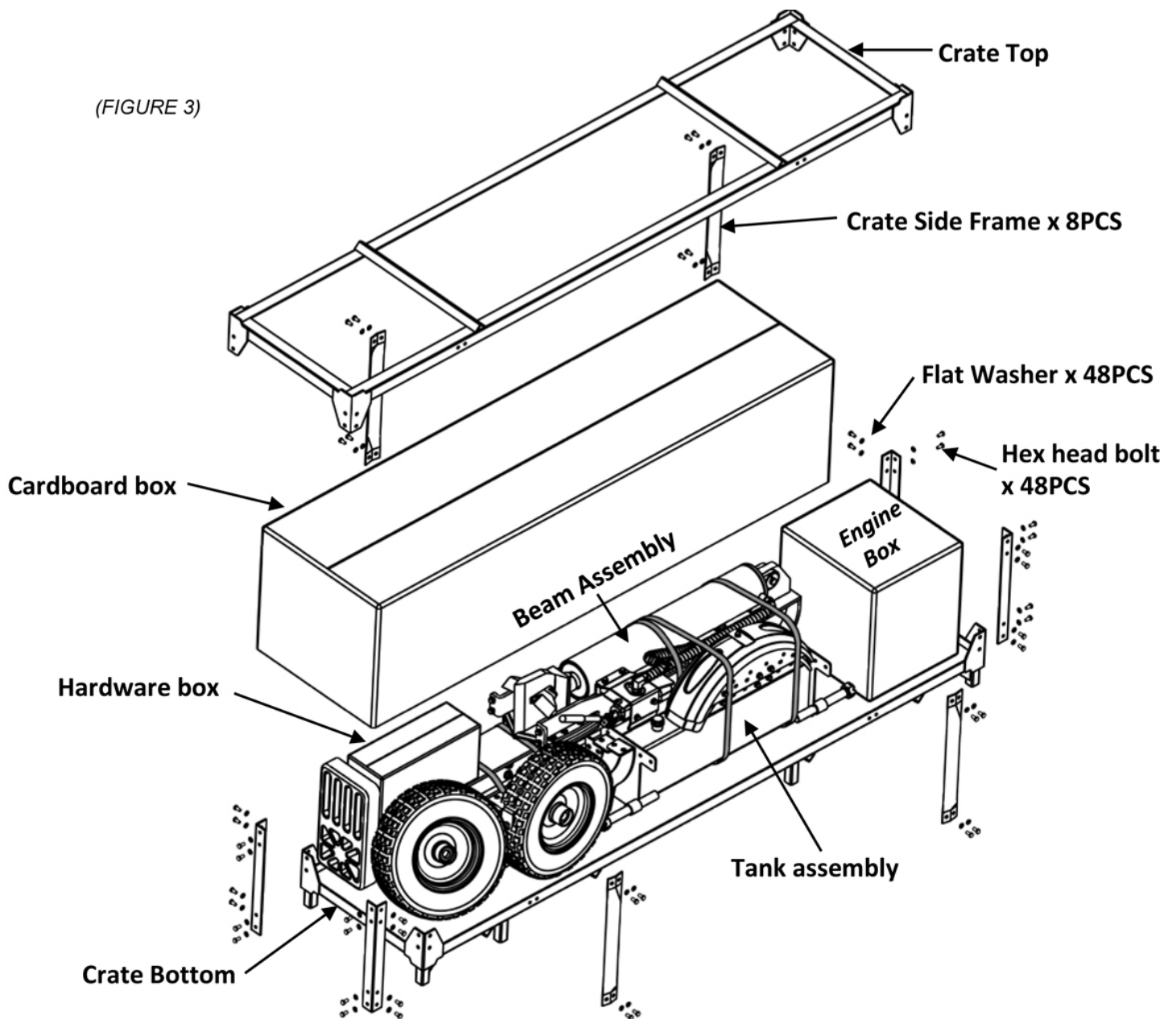
Step 3: Use scissors or a knife to cut and remove the straps securing the parts to the beam or tank assembly, including fenders, tongue assembly, log tray & log dislodger assemblies, then put aside these parts for assembly.

NOTE: DO NOT remove the strap securing the hydraulic hoses assemblies to the beam at this time, until you do the assembly procedure of the hoses.

Step 4: Use a pry bar or claw hammer to remove the plywood splinters securing the beam and tank assemblies on the crate bottom. Take out the two assemblies.

Step 5: Inspect all component assemblies, parts and accessories according to the packing list.

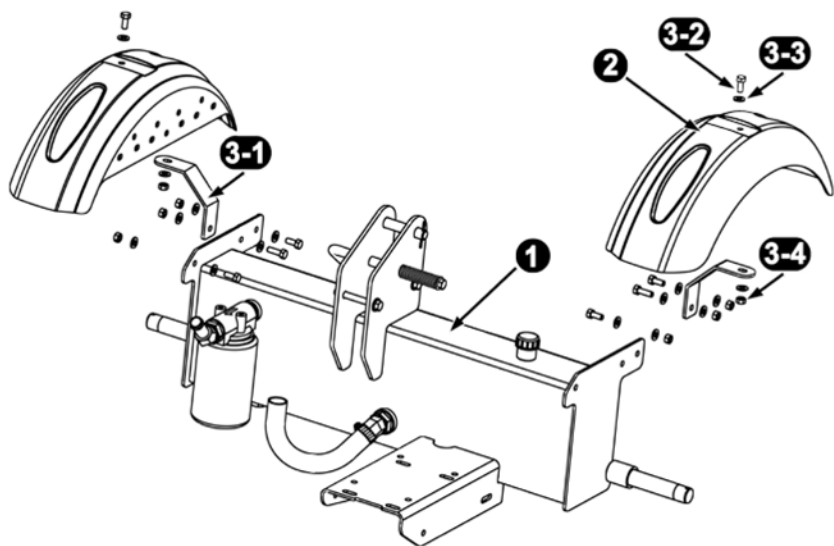
(FIGURE 3)



Unpacking tools needed:

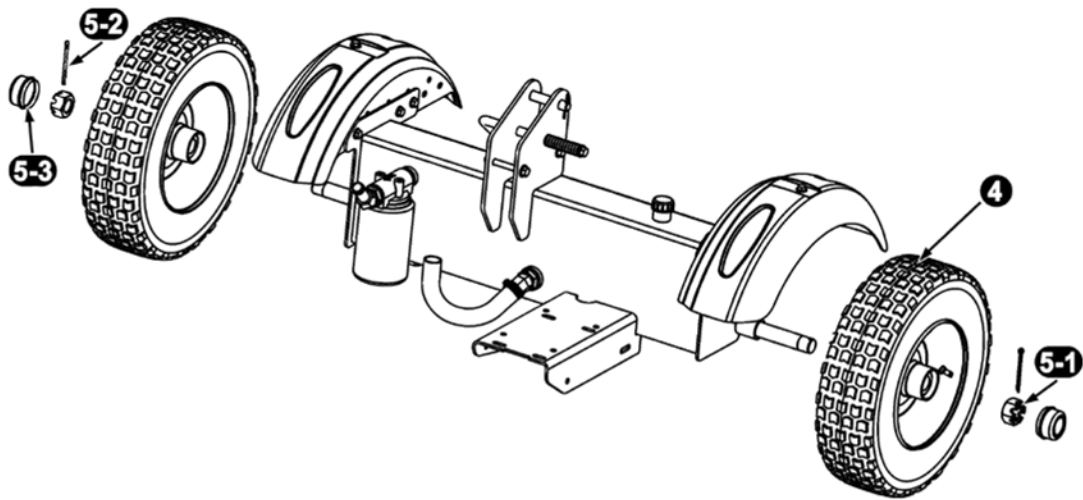
1. Wrench 14mm
2. Scissors or knife
3. Pry bar or claw hammer

Step 1: Assemble the fenders to the reservoir assembly.



REF. NO.	DECSRIPTION	QTY.
1	Reservoir tank assembly	1
2	Fender	2
3	Hardware kit #1(not shown)	1
	Including:	
3-1	Fender support	2
3-2	Hex head bolt / M8 x 25	8
3-3	Flat washer / M8	16
3-4	Lock nut / M8	8

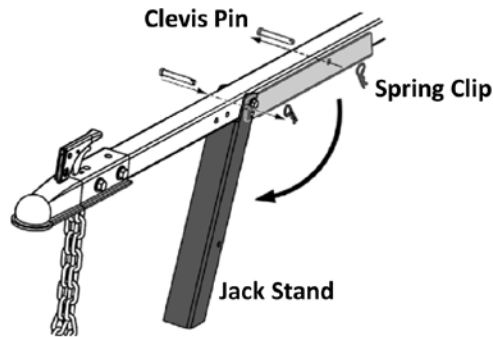
Step 2: Attach the two wheels to the tank assembly wheel spindles.



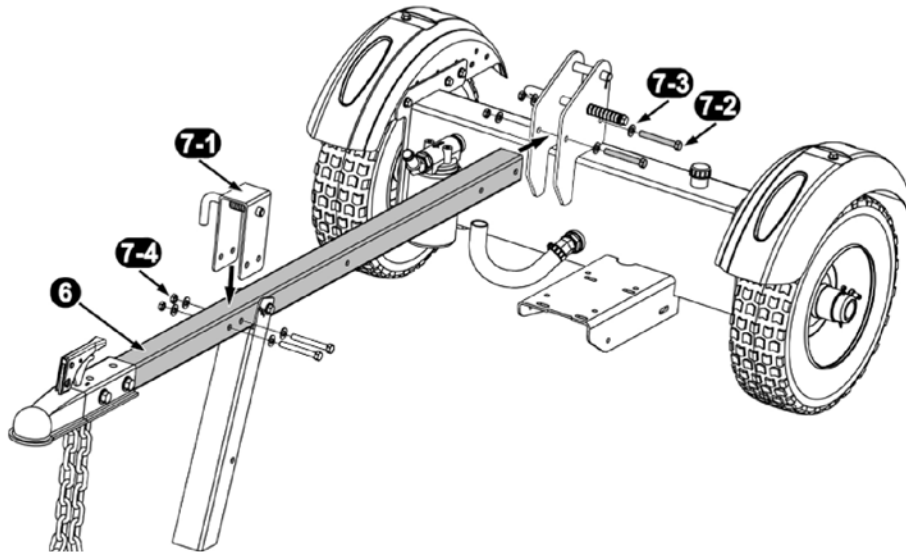
REF. NO.	DECSRIPTION	QTY.
4	Road-Speed Tire and Wheel	2
5	Hardware Kit #2 (not shown)	1
	Including:	1
5-1	Castle nut / 1-14	2
5-2	Split Pin / $\varnothing 4 \times 35$	2
5-3	Hub cap	2

STEP 3: Attach the tongue and jack stand assembly to the reservoir assembly.

1. Remove the spring clip ($\varnothing 3$) and clevis pin ($\varnothing 6 \times 50$) from the jack stand on the tongue, and then pivot the jack stand towards the ground into the operating position. Secure the jack stand in position with the clevis pin and spring clip just removed.



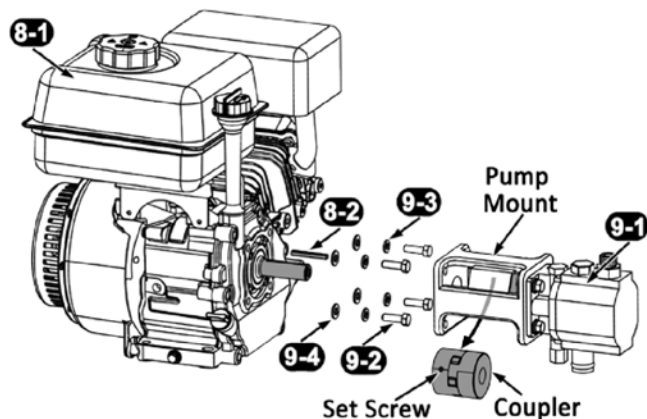
2. Attach the horizontal beam lock to the tongue, and then attach the tongue to the reservoir assembly.



REF. NO.	DECSRIPTION	QTY.
6	Tongue & Jack stand assembly	1
7	Hardware Kit #3 (not shown)	1
	Including:	
7-1	Horizontal beam lock	1
7-2	Hex head bolt / M10 x 80	4
7-3	Flat washer / M10	8
7-4	Lock nut / M10	4

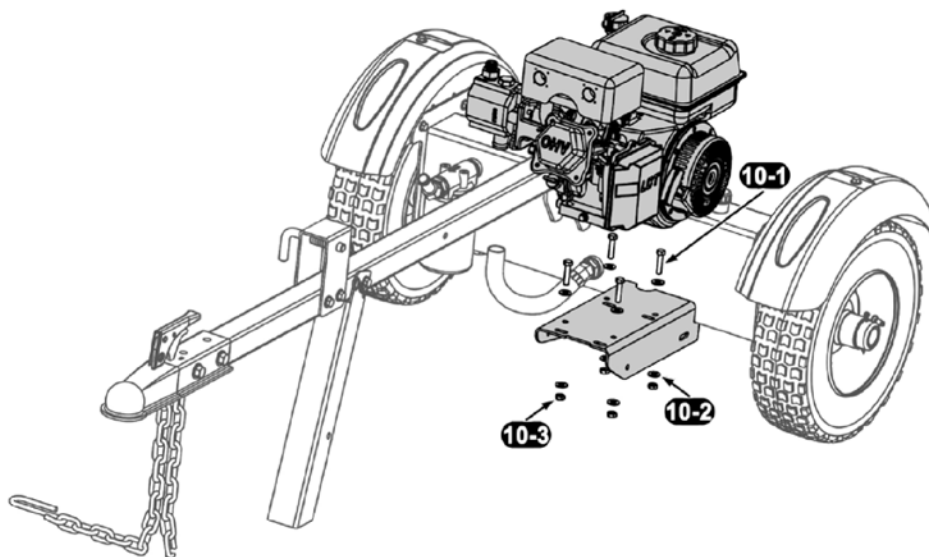
STEP 4: Assemble the pump assembly to the engine.

1. Loosen the set screw on the coupler at the engine side.
2. Place the engine shaft key into the slot on the engine shaft.
3. Insert the engine shaft into the center hole of coupler, pivoting the pump assembly to ensure the engine shaft key to fit in the slot of the coupler center hole. Then tighten the set screw just loosened.
4. Rotate the engine shaft to align the fixing holes on both pump mount and engine, and ensure the open side of the pump mount facing down as shown in the illustration below, then screw on the hardware and tighten.



REF. NO.	DESCRIPTION	QTY.
8	Engine assembly (in engine box, not shown), including:	1
8-1	Engine	1
8-2	Engine shaft key	1
9	Hardware Kit #4 (not shown)	1
	Including:	1
9-1	Two stage pump assembly	1
9-2	Hex head bolt / 5/16-24	4
9-3	Spring washer / 5/16	4
9-4	Flat washer / 5/16	4

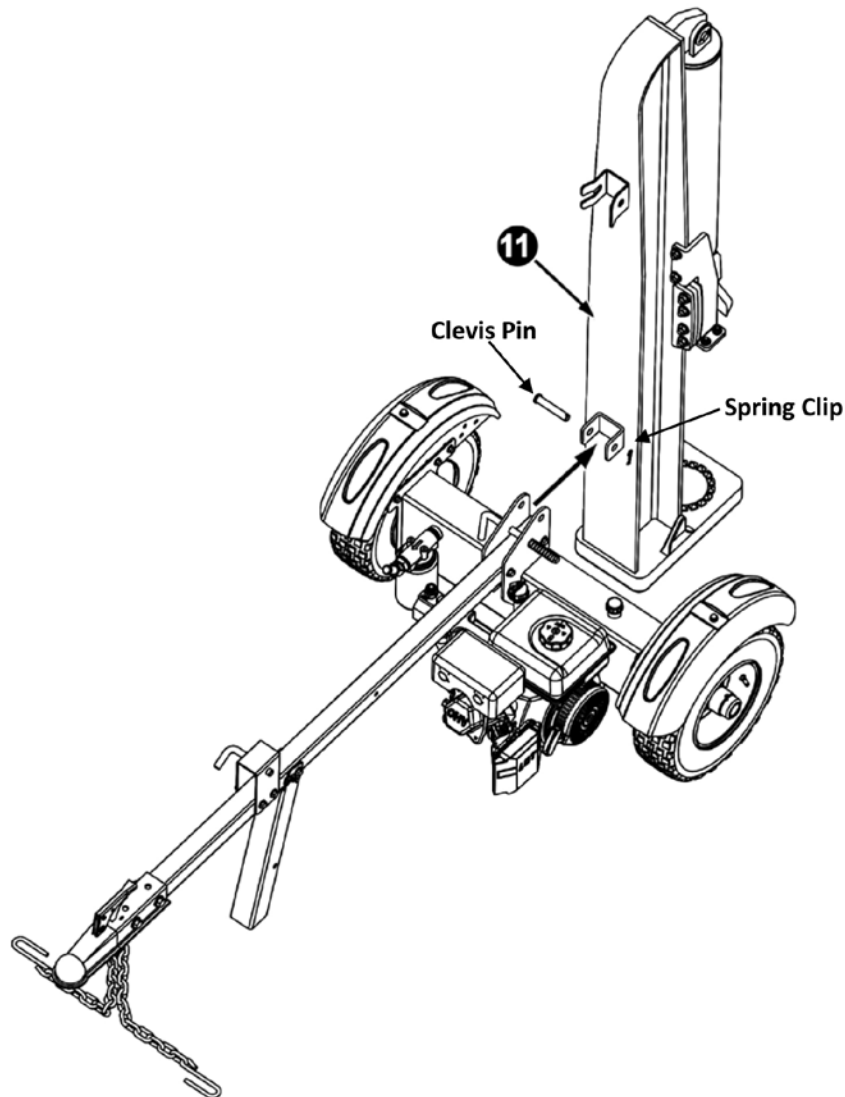
STEP 5: Attach the engine assembly to the engine mount plate on the reservoir assembly.



REF. NO.	DECSRIPTION	QTY.
10	Hardware kit #5 (not shown) Including:	1
10-1	Hex head bolt / M8 x 40	4
10-2	Flat washer / M8	8
10-3	Lock nut / M8	4

STEP 6: Assemble the beam.

1. Stand the beam up on end. Two or more people may be needed for this step to ensure safety. Make sure that the beam is stable and on a level surface.
2. Remove the clevis pin and spring pin from the tank brackets. Roll the tongue/ tank assembly into position between the two tabs on the beam. Slide the clevis pin through the aligned holes and lock in place with the spring clip.



REF. NO.	DECSRIPTION	QTY.
11	Beam assembly	1

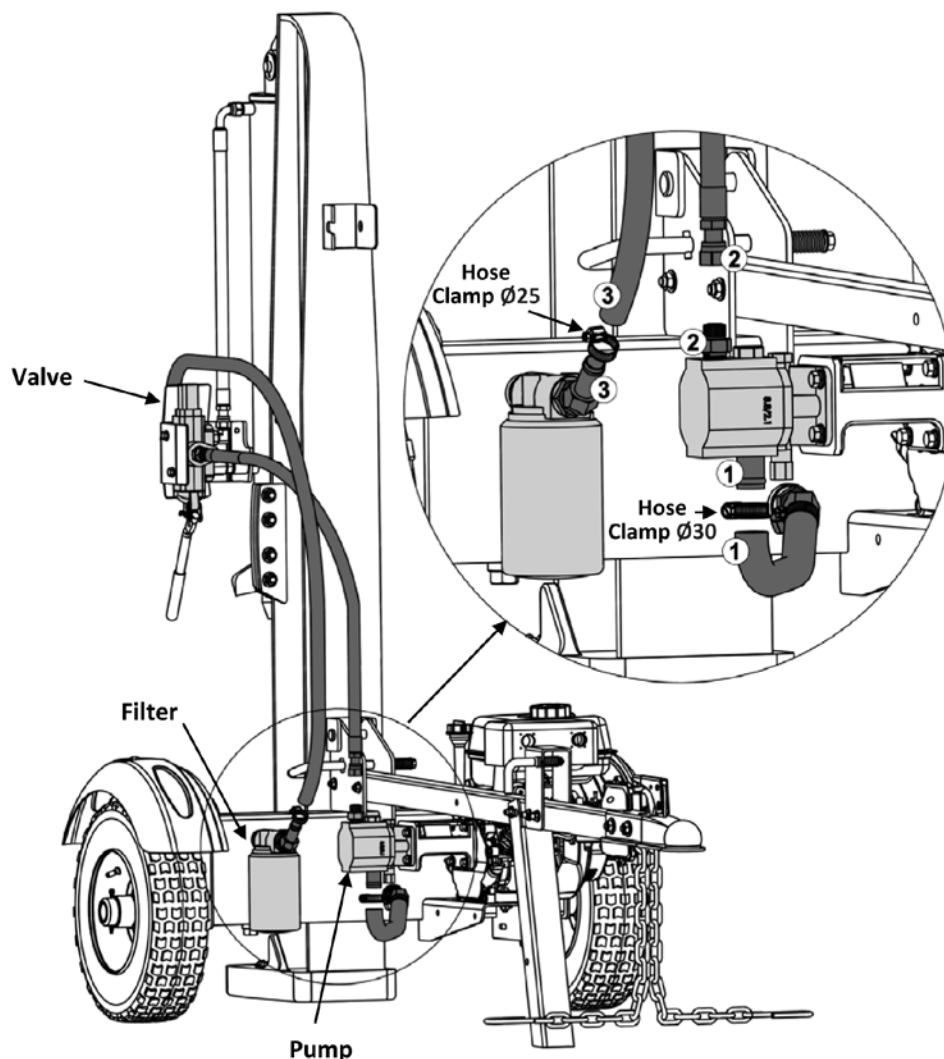


WARNING! Take extra care when raising and lowering the beam as it is fairly heavy. Having a second person assist with raising or lowering the beam is recommended. Be sure to keep hands away from any possible pinch points.

STEP 7: Connect the open ends of the hydraulic hoses to their corresponding fittings.

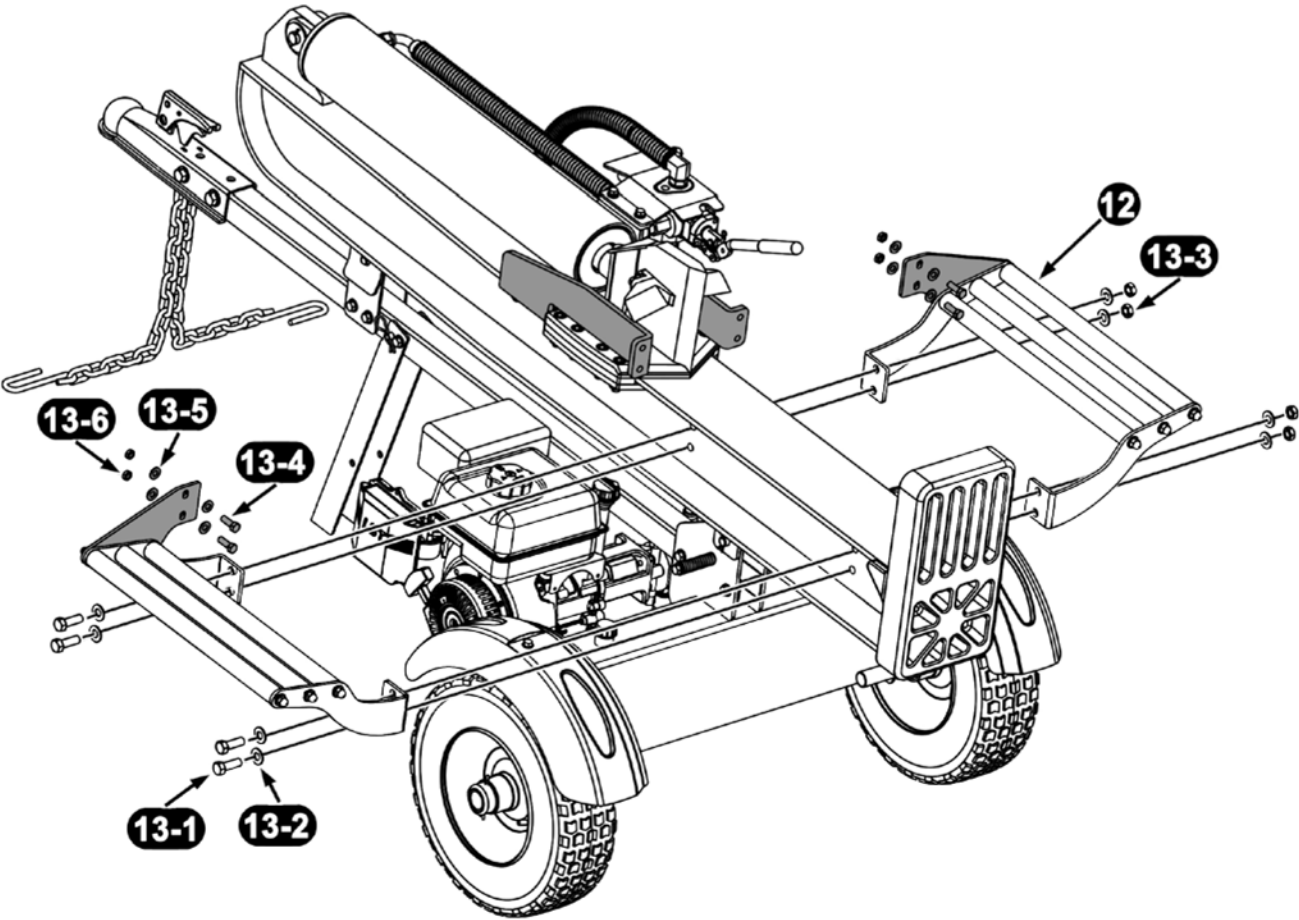
There are three hydraulic hoses listed below, each of them has one end fixed on the linkage part assembly at the manufacturer's field, the other open end needs you to attach. For clear view of the hydraulic hoses, the hose protective springs are not shown in the illustration below.

1. Oil suction hose / $\varnothing 25 \times 310$ mm, labeled as ①, comes from the tank.
Loosen the hose clamp / $\varnothing 30$ on the open end of this hose, then connect the hose to the fitting on the bottom of the pump, which is labeled of a same ①. Tighten the hose clamp.
2. Pump / Valve connecting hose / $\varnothing 19 \times 900$ mm, labeled as ②, comes from the bottom of the valve.
Screw the open end of this hose onto the fitting on top of the pump, which is labeled of a same ②.
3. Oil return hose / $\varnothing 19 \times 1500$ mm, labeled as ③, comes from the top of the valve.
Loosen the hose clamp / $\varnothing 25$ on the open end of this hose, then connect the hose to the fitting on the filter, which is labeled of a same ③. Tighten the hose clamp.



STEP 8: Assemble the log dislodger and log tray.

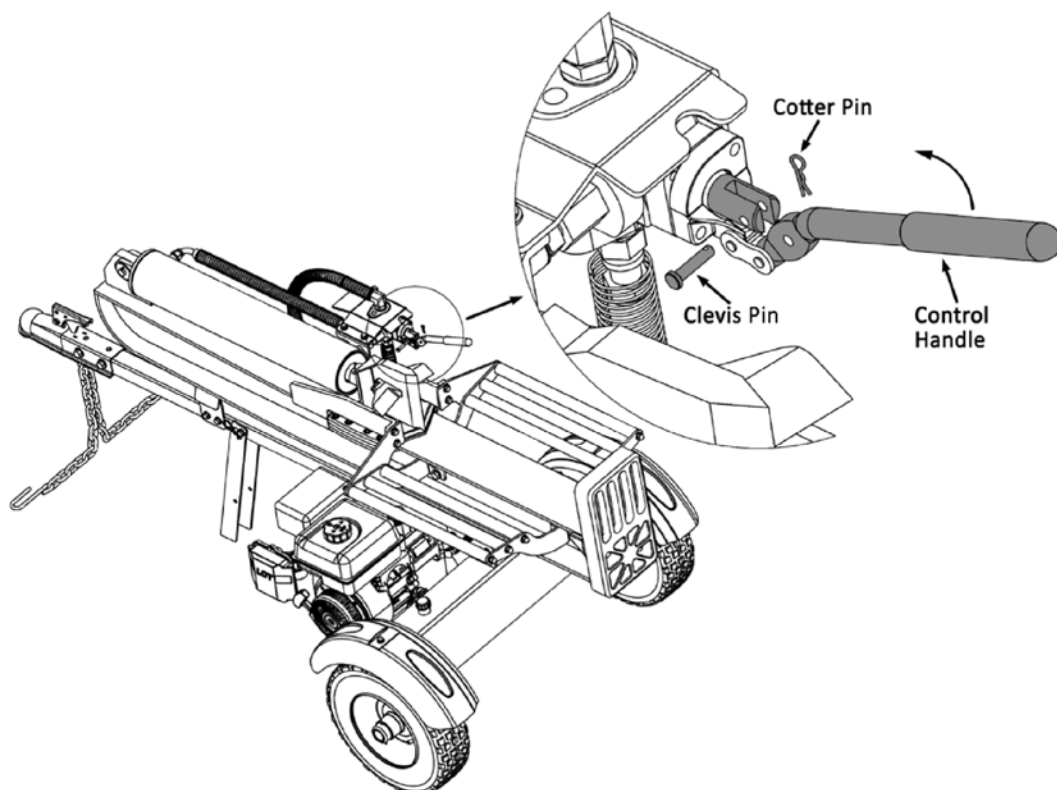
1. Attach the log tray to the beam, and log dislodger to its link part (see highlighted parts in illustration below).
You could perform this procedure when the beam in horizontal or vertical position.



REF. NO.	DECSRIPTION	QTY.
12	Log tray & Log dislodger assembly	2
13	Hardware Kit #6 (not shown)	1
	Including:	
13-1	Hex head bolt / M12 x 45	4
13-2	Flat washer / M12	8
13-3	Lock nut / M12	4
13-4	Hex head bolt / M10 x 35	4
13-5	Flat washer / M10	8
13-6	Lock nut / M10	4

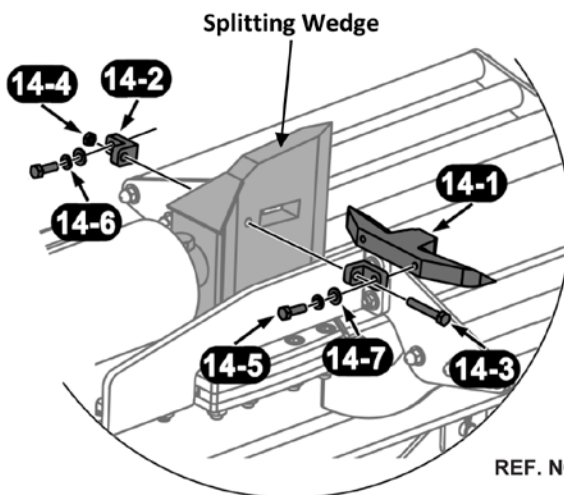
STEP 9: Assemble the control handle. The control handle is shipped hanging from the valve on the handle link.

1. Remove the clevis pin and bow-tie cotter pin from the control handle.
2. Rotate the control handle into the operating position and secure with the clevis pin and bow-tie cotter pin removed in step above.



STEP 10: If your log splitter doesn't include a cross wedge, while you buy one separately, please refer to following instructions to assemble the cross wedge. See FIGURE 14.

1. Insert the cross wedge to the rectangular hole on the splitting wedge.
2. Align the holes on the cross wedge, splitting wedge and the L-shape support, then secure the hardware included in the cross wedge package.



REF. NO.	DECSRIPTION	QTY.
14	Cross wedge assembly package (not shown), including	1
14-1	Cross wedge	1
14-2	L-shape support	2
14-3	Hex head bolt / M8 x 55	1
14-4	Lock nut / M8	1
14-5	Hex head bolt / M8 x 25	2
14-6	Spring washer / M8	2
14-7	Flat washer / M8	2

Gas and Oil Fill-Up

Service the engine with gasoline and oil as instructed in the engine manual packed with your log splitter. Read the instructions carefully.



WARNING! Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel the machine indoors or while the engine is hot or running.

NOTE: Your log splitter is shipped without motor oil. You **MUST** check the oil level before operating. Be careful not to overfill. Gasoline can be added to the engine when the log splitter is in either the horizontal or vertical position. However, it may be easier when the splitter is in the vertical position. Engine Oil Capacity 20.25 ounces (0.6 Liter) SAE 10W-30 oil

Tire Pressure

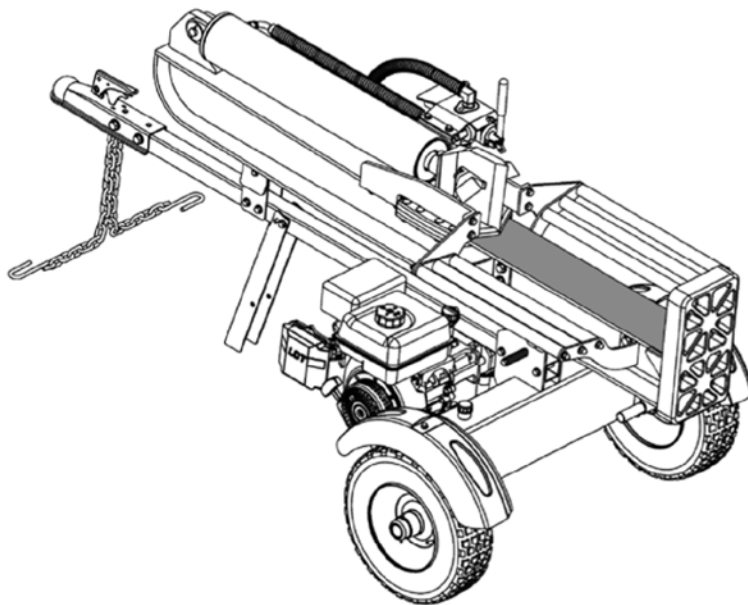
The max recommended operating pressure is 30 psi. Under any circumstances do not exceed the manufacturer's recommended psi. Maintain equal pressure on all tires.



WARNING! Excessive pressure when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

Preparing the Log Splitter

1. Lubricate the beam area (where the splitting wedge will slide) with engine oil. Do not use grease.



2. Fill hydraulic oil before your initial use.

NOTE: The log splitter is shipped without hydraulic fluid in the reservoir. Use the hydraulic oil your dealer provides, or buy the hydraulic oil recommended below.

NOTE: Approved fluids include Shell Tellus® S2 M 32 Hydraulic Fluid, Dexron® III / Mercon® automatic transmission fluid, Pro-Select™ AW-32 Hydraulic Oil or 10WAW-ISO viscosity grade 32 hydraulic oil. It is not recommended that fluids be mixed, to top off the reservoir tank during initial set-up use Shell Tellus® S2 M 32 Hydraulic Fluid only.

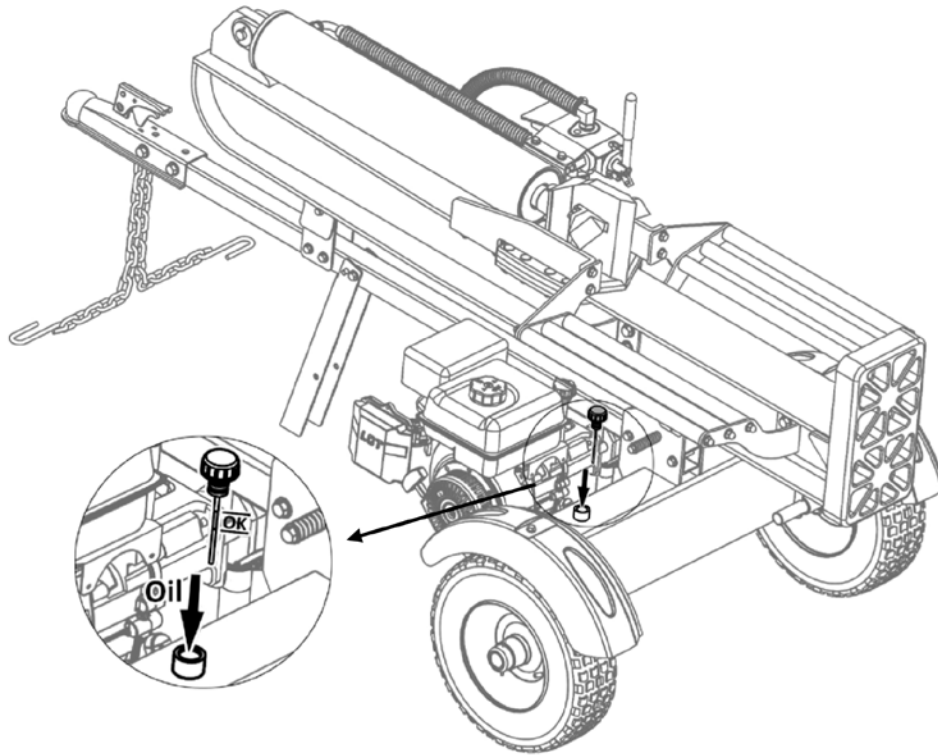
3. However, you **MUST** check the fluid level before each operating. If not filled, proceed with the following steps:

- 1) Remove the vented reservoir dipstick, which is located in front of the engine on top of the reservoir tank. See FIGURE 16.



WARNING! Much of the original fluid has been drawn into the cylinder and hoses. Make certain to refill the reservoir to prevent damage to the hydraulic pump.
DO NOT overfill.

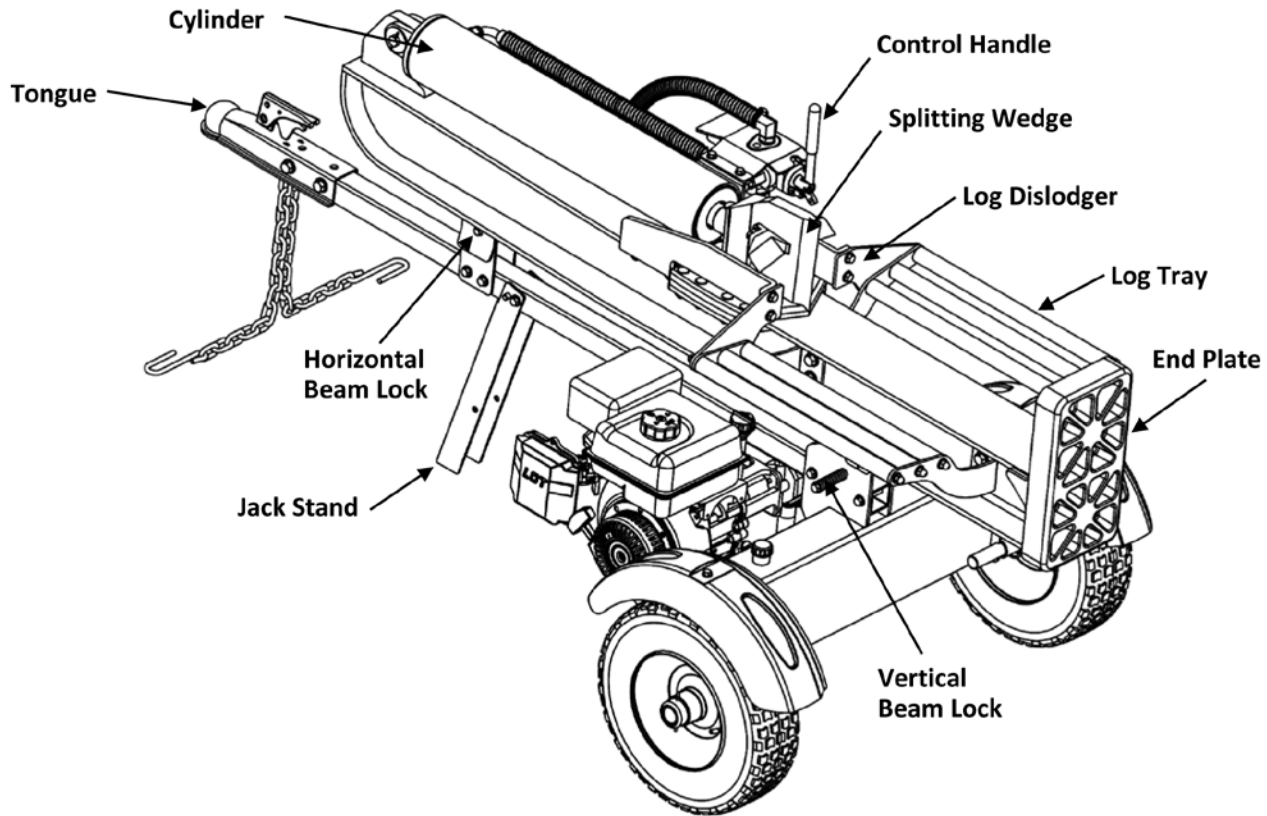
- 2) Check the fluid level using the dipstick.



- 3) Replace the vented dipstick securely, tightening it until the top of the threads are flush with top of the pipe.
- 4) Disconnect the spark plug and prime the pump by pulling the recoil starter as far as it will go. Repeat approximately 10 times.
- 5) Reconnect the spark plug wire and start the engine, following instructions in the Engine Operator's manual.
- 6) Use the control handle to engage the wedge to the farthest extended position. Then retract the wedge.
- 7) Refill the tank as specified on the dipstick if necessary.

NOTE: Failure to refill the tank will void the splitter's warranty.

- 8) Extend and retract the wedge 12 complete cycles to remove any trapped air in the system (the system is "self-bleeding").
 - 9) Refill the reservoir within the range marked on the dipstick if necessary. See FIGURE 25.
- NOTE:** Some fluid may overflow from the vent plug as the system builds heat and the fluid expands and seeks a balanced level.



NOTE: This Operator's Manual covers several models. Log splitter features may vary by model. Not all features in this manual are applicable to all log splitter models and the log splitter depicted may differ from yours.

Engine Controls

See the Engine Operator's Manual for the location and function of the controls on the engine.

Beam Locks

These two locks, as their name suggests, are used to secure the beam in the horizontal or the vertical position. The vertical beam lock is located next to the engine. The horizontal beam lock is located on the beam support latch bracket.

Control Handle

The control handle has three positions; Forward, Neutral and Reverse.

Splitting Wedge

The wedge is used to split the wood.

Log Dislodger

The log dislodger is designed to remove any partially split wood from the wedge. This may occur while splitting large diameter wood or freshly cut wood.

Log Tray

The log tray is designed to catch the log after it is split.

Tongue

The tongue is used to attach to a towing vehicle for transportation.

End Plate

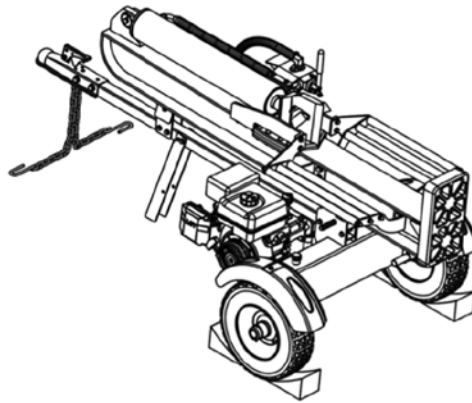
The end plate holds the log in place while the wedge splits the log.

STARTING & STOPPING THE ENGINE

Refer to the Engine Operator's manual packed with your log splitter for instructions on starting and stopping the engine.

OPERATING POSITIONS

1. Place the log splitter on flat, dry, solid ground.
2. Block the front and back of both wheels.



3. Place the beam in either the horizontal or vertical position and lock into place.



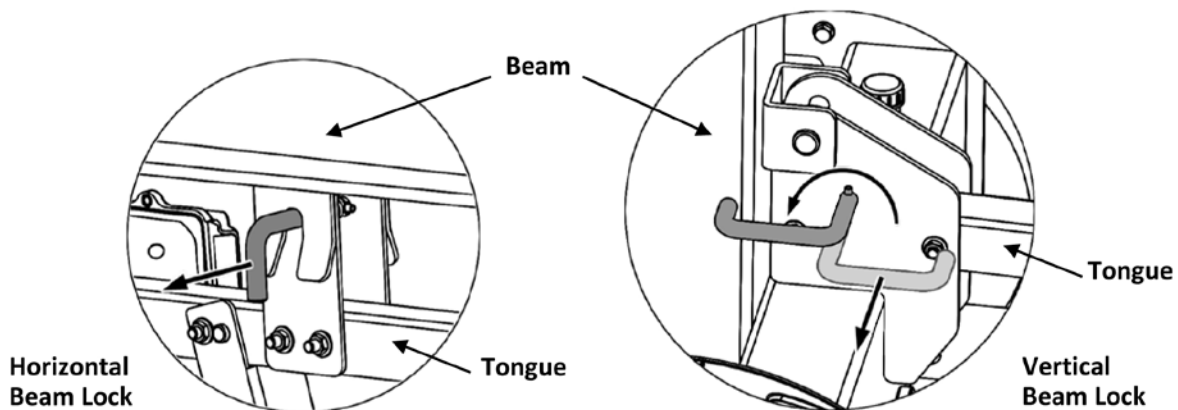
WARNING! Take extra care when raising and lowering the beam as it is fairly heavy. Having a second person assist with raising or lowering the beam is recommended. Be sure to keep hands away from any possible pinch points.

4. To place the beam in the *Vertical Position* proceed as follows:



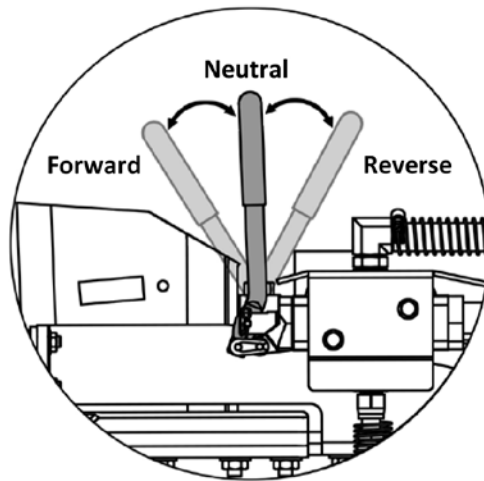
WARNING! Always use the log splitter in the vertical position when splitting heavy logs.

- 1) Pull the horizontal beam lock out to release the beam and pivot the beam to the vertical position.
 - 2) To lock the beam in the vertical position, pull out on the vertical beam lock and rotate it to secure the beam.
5. To place the beam in the *Horizontal Position* proceed as follows:
 - 1) Pull the vertical beam lock out and rotate it down. Pivot the beam to the horizontal position.
 - 2) The horizontal beam lock is self-locking. The spring loaded lock will snap into place when the beam is lowered into position.



USING CONTROL HANDLE

The control handle has three positions.



- **FORWARD** — To split wood. Move the control handle to the FORWARD position to move wedge toward the log to split.

NOTE: The control handle will return to the NEUTRAL position as soon as the handle is released (FORWARD position only).

- **NEUTRAL** — To stop wedge. Release the control handle or move the lever to the NEUTRAL position to stop the wedge movement.

- **REVERSE** — To return the wedge. Move the control handle to the REVERSE position to return the wedge toward the cylinder. The control handle returns to the NEUTRAL position automatically when fully retracted.

Do not hold the handle in the REVERSE position when fully retracted.

NOTE: The REVERSE position may also be moved back to the NEUTRAL position manually, if necessary.



WARNING! If the control handle on your log splitter is not functioning properly, STOP USE IMMEDIATELY and contact an authorized service dealer.



WARNING! Do not attempt to service, repair or replace control valve. Contact an authorized service dealer.



WARNING! Do not attempt to adjust or modify the control valve or the hydraulic system from its original settings or manufacturer in any way.

SPLITTING THE WOOD

1. Start the engine as instructed in the Engine Operator's manual included with the log splitter.
2. Place the log against the end plate and only split the wood in the direction of the grain.
3. To stabilize the log, place your left hand on the side of the log opposite the beam

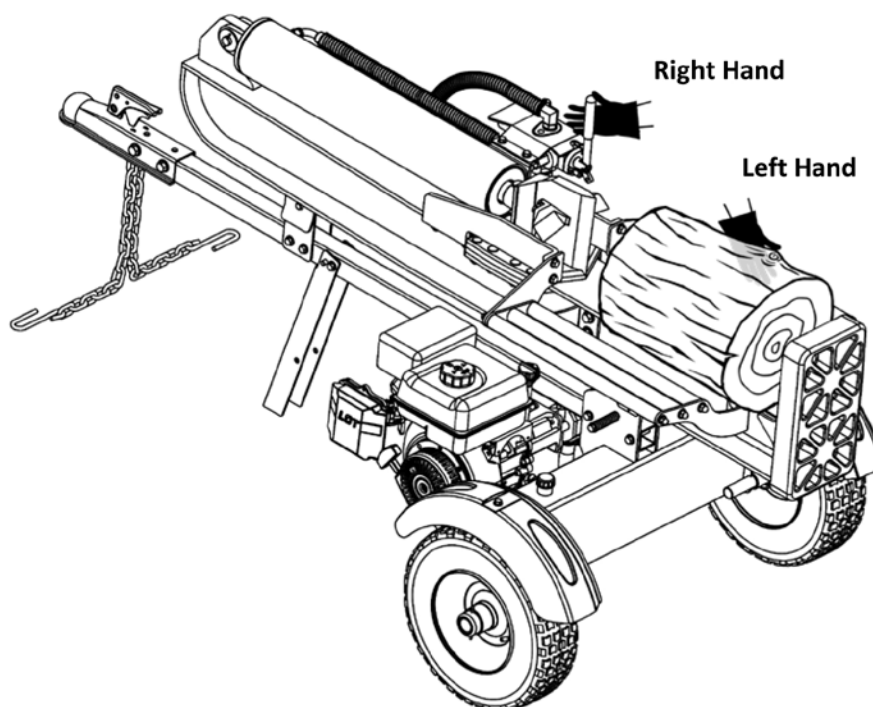


WARNING! Never place a hand on the ends of the log, between the log and the end plate or the log and the splitting wedge.



WARNING! Only one operator permitted. The adult who loads and stabilizes the log, must be the person who operates the control handle.

4. Move the control handle to the forward position to split the wood.
5. Remove left hand from the side of the log once wedge just contacts the log. Continue moving control handle forward to split the log.
6. Release the control handle to stop the wedge movement.
7. Move the control handle to the reverse position to return the wedge.



8. Remove partially split wood from wedge.
 - 1) Move the control handle to the REVERSE position until the wedge is fully retracted to allow split wood portion to contact the log dislodger.



WARNING! Never remove partially split wood from the wedge with your hands. Fingers may become trapped between the split wood.

- 2) Once removed from the wedge with the log dislodger, split the wood from the opposite end or in another location.

Always:

1. Use clean fluid and check the fluid level regularly.
2. Use an approved hydraulic fluid. Approved fluids include Shell Tellus® S2 M 32 Hydraulic Fluid, Dexron® III/Mercon® automatic transmission fluid, Pro-Select™ AW-32 Hydraulic Oil or 10WAW-ISO viscosity grade 32 hydraulic oil.

NOTE: It is recommended that fluids not be mixed.

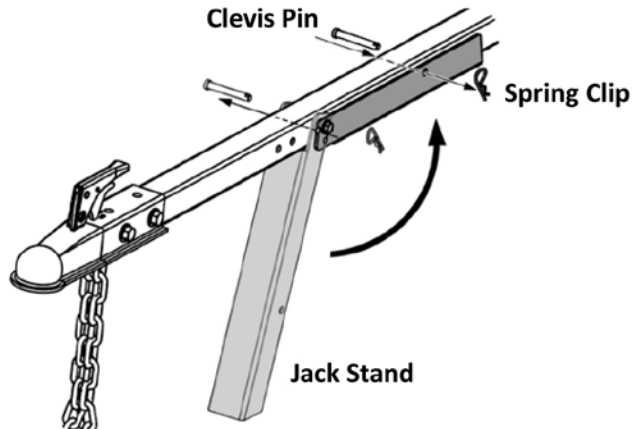
3. Use a filter (clean or replace regularly).
4. Use a breather cap on fluid reservoir.
5. Make sure the pump is mounted and aligned properly.
6. Use a flexible “spider” type coupling between the engine and pump drive shafts.
7. Keep the hoses clear and unblocked.
8. Bleed the air out of the hoses before operating.
9. Flush and clean the hydraulic system before restarting after servicing.
10. Use “pipe dope” on all hydraulic fittings.
11. Allow time for the engine to warm-up before splitting wood.
12. Prime the pump before the initial start-up by turning over the engine with the spark plug disconnected (if not already done at factory).
13. Split wood along the grain (lengthwise) only.

Never:

1. Use when fluid is below 20° F or above 150° F.
2. Use a solid engine/pump coupling.
3. Operate through relief valve for more than 5 seconds.
4. Attempt to adjust the unloading or relief valve settings.
5. Operate with air in hydraulic system.
6. Use teflon tape on hydraulic fittings.
7. Attempt to cut wood across the grain.
8. Attempt to remove partially split wood from the wedge with your hands. Fully retract the wedge to dislodge wood with log dislodger.

TRANSPORTING THE LOG SPLITTER

1. Lower the beam to its horizontal position. Make certain the beam is locked securely with the horizontal beam lock.
2. Change the jack stand to transporting position.
 - 1) Remove the spring clip and clevis pin from the jack stand.
 - 2) Support the tongue and pivot the jack stand up against the tongue.
 - 3) Secure with the spring clip and clevis pin previously removed.



3. Attach the coupler hitch to a class I or higher 2" ball on the towing vehicle latch securely.
 - 1) If the coupler hitch does not fit on the ball, turn the adjustment nut one turn counter-clockwise.
 - 2) If the coupler hitch is too loose on the ball, turn the adjustment nut one turn clockwise. Then recheck and adjust accordingly.
4. Connect the safety chains to the towing vehicle.



WARNING! Do not tow faster than 45mph and check the local, state and federal requirements before towing on any public road.

NOTE: Use caution when backing up, using a spotter outside the vehicle is recommended.



WARNING! Do not make any adjustments without first stopping the engine, disconnecting the spark plug wire and grounding it against the engine. Always wear safety glasses during operation or while performing any adjustments or repairs.

Engine

Refer to the Engine Operator's manual packed with your log splitter for all engine maintenance.

NOTE: When draining oil from the engine on this log splitter, shield the hoses from any oil that may run down the frame and drip onto the hoses. Thoroughly wipe any residual oil off the log splitter and hoses after completing service.

Tire Pressure

The max recommended operating pressure is 30 psi. Do not, under any circumstances, exceed the manufacturer's recommended psi. Maintain equal pressure on all tires.



WARNING! Excessive pressure when seating beads may cause the tire/rim assembly to burst with force sufficient to cause serious injury. Refer to the sidewall of the tire for the recommended pressure.

Hose Clamps

Check the clamps on the return hose before each use and check the clamps on the suction hose once a season.

Hydraulic Filter

Change the hydraulic filter every 50 hours of operation. Use only a 10 micron hydraulic spin-on filter, or buy from an authorized dealer. Order part # 51 in Exploded Diagram.

Flexible Pump Coupler

The flexible pump coupler, located between the pump and the engine shaft, has a nylon "spider" insert. Over time, the insert will harden and deteriorate. If you detect vibration or noise coming from the area between the engine and the pump contact an authorized dealer or Boss Industrial, Inc. Change a new coupler immediately (refer to the pump assembly *STEP 4* in if the coupler fails completely, you will experience a loss of hydraulic power.

Hydraulic Fluid

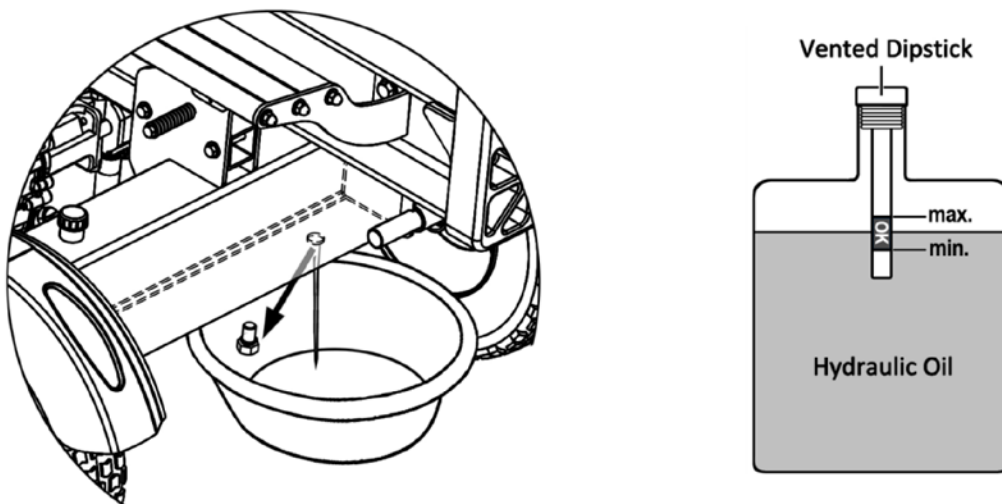
Check the hydraulic fluid level in the log splitter reservoir tank before each use. Maintain the fluid level within the range specified on the dipstick at all times.

Change the hydraulic fluid in the reservoir every 100 hours of operation. The filter should also be changed with each hydraulic fluid change. Follow the steps below:

1. Place a suitable oil collection container under the tank.
2. Disconnect the oil drain screw from the bottom of the reservoir tank.
4. Allow the fluid to drain into the container.

NOTE: The reservoir tank has a capacity of 3 gallons of hydraulic fluid for HVG22T640 and HVG28T640; and 4 gallons for HVG34T640.

(FIGURE25)



5. After draining, screw on the oil drain screw and tighten.
6. Refill the reservoir tank (Please follow the steps in Page 21 - 22 to fill the tank, and repel the air in the tank) .
7. Maintain the fluid level within the range specified on the dipstick at all times.

NOTE: When checking the fluid, always make sure to tighten the dipstick until the top of the threads are flush with the top of the pipe.

NOTE: Always dispose of any used hydraulic fluid and engine oil at approved recycling centers only. Contaminants in the fluid may damage the hydraulic components. Flushing the reservoir tank and hoses with kerosene whenever service is performed on the tank, hydraulic pump or valve is recommended.

Beam and Splitting Wedge

Lubricate top, sides and bottom of the beam and where it comes into contact with the splitting wedge with engine oil before each use.

If the wedge becomes dull or nicked, it can be sharpened.

Off-Season Storage

If the log splitter will not be used for more than 30 days, prepare it for storage as follows:



WARNING! Never store the machine with fuel in the fuel tank inside of building where fumes may reach an open flame or spark, or where ignition sources are present such as hot water and space heaters, furnaces, clothes dryers, stoves, electric motors, etc.

1. Refer to the Engine Operator's manual packed with your log splitter for information on the off-season storage of the engine.
2. Clean the log splitter thoroughly.

NOTE: The use of pressure washers or a garden hose to clean the splitter is not recommended. They may cause damage to the bearings or the engine. The use of water will result in a shortened life and reduce serviceability.

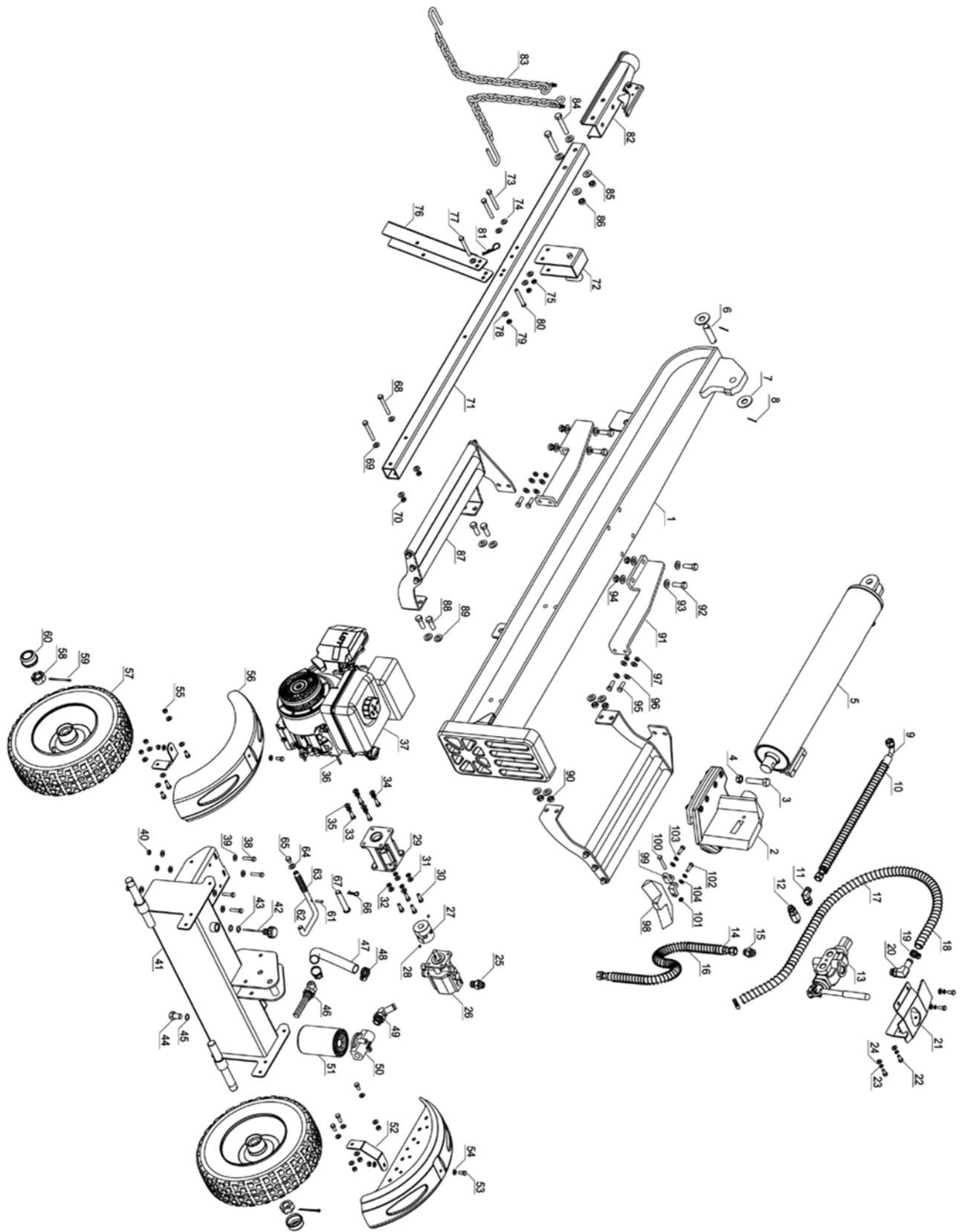
3. Wipe the machine with an oiled rag to prevent rust, especially on the wedge and the beam.
4. Store the log splitter in a clean, dry area. Do not store it next to corrosive materials, such as fertilizer.

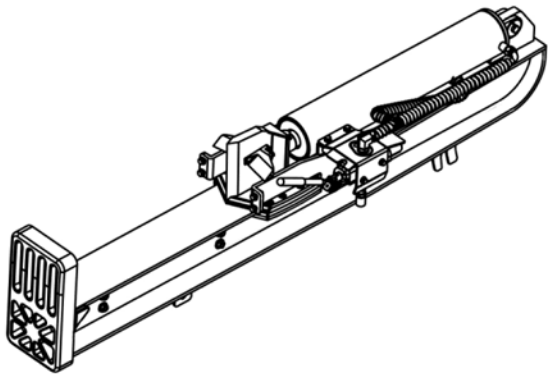
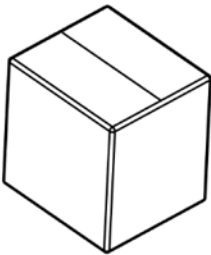
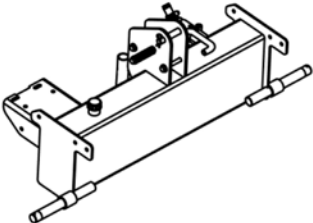
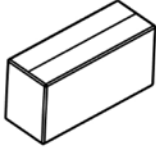
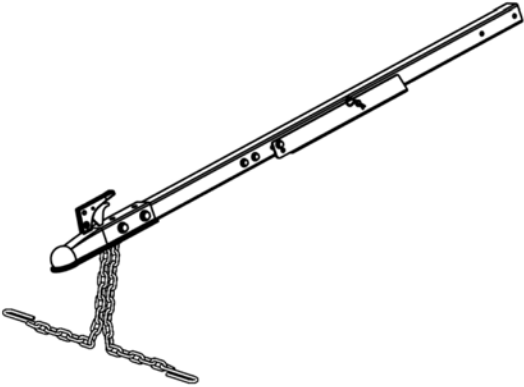
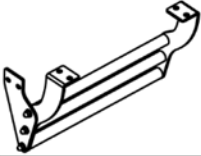


NOTE: If storing in an unventilated or metal storage shed, be certain to rustproof the equipment by coating it with a light oil or silicone.

Problem	Cause	Remedy
Cylinder rod will not move	<ol style="list-style-type: none"> 1. Broken drive shaft. 2. Shipping plugs left in hydraulic hoses. 3. Set screws in coupling not adjusted properly. 4. Loose shaft coupling. 5. Gear sections damaged. 6. Damaged relief valve. 7. Hydraulic lines blocked. 8. Incorrect oil level. 9. Damaged control valve. 10. Blocked control valve. 	<ol style="list-style-type: none"> 1. See authorized service dealer. 2. Disconnect hydraulic hoses, remove shipping plugs, and reconnect hoses. 3. See authorized service dealer. 4. Correct engine/pump alignment as necessary. 5. See authorized service dealer. 6. See authorized service dealer. 7. Flush and clean hydraulic system. 8. Check oil level. 9. See authorized service dealer. 10. Flush and clean hydraulic system
Slow cylinder shaft speed while extending and retracting	<ol style="list-style-type: none"> 1. Gear sections damaged. 2. Excessive pump inlet vacuum. 3. Slow engine speed. 4. Damaged relief valve. 5. Incorrect oil level. 6. Contaminated oil. 7. Control valve leaking internally. 8. Internally damaged cylinder. 	<ol style="list-style-type: none"> 1. See authorized service dealer. 2. Make certain pump inlet hoses are clear and unblocked. use short, large diameter inlet hoses. 3. See authorized service dealer. 4. See authorized service dealer. 5. Check oil level. 6. Drain oil, clean reservoir and refill. 7. See authorized service dealer. 8. See authorized service dealer
Leaking Cylinder	<ol style="list-style-type: none"> 1. Worn seals. 2. Scored cylinder. 	<ol style="list-style-type: none"> 1. See authorized service dealer. 2. See authorized service dealer.
Wood will not split or wood splits too slowly	<ol style="list-style-type: none"> 1. Small gear section damaged. 2. Pump check valve leaking. 3. Excessive pump inlet vacuum. 4. Incorrect oil level. 5. Contaminated oil. 6. Control valve leaking internally. 7. Overloaded cylinder. 8. Internally damaged cylinder. 	<ol style="list-style-type: none"> 1. See authorized service dealer. 2. See authorized service dealer. 3. Make certain pump inlet hoses are clear and unblocked. 4. Check oil level. 5. Drain oil, clean reservoir and refill. 6. See authorized service dealer. 7. Do not attempt to split wood against the grain. 8. See authorized service dealer.
Leaking pump shaft seal	<ol style="list-style-type: none"> 1. Broken drive shaft. 2. Engine/pump misalignment. 3. Gear sections damaged. 4. Damaged shaft seal. 5. Plugged oil breather. 	<ol style="list-style-type: none"> 1. See authorized service dealer. 2. Correct alignment as necessary. 3. See authorized service dealer. 4. See authorized service dealer. 5. Make certain reservoir is properly vented.
Wedge continues to move forward when control handle is released	<ol style="list-style-type: none"> 1. Damaged control valve 	<ol style="list-style-type: none"> 1. See authorized service dealer.
Control handle does not return to neutral when released from forward position	<ol style="list-style-type: none"> 1. Hydraulic fluid too cold. 2. Hydraulic fluid too thick. 3. Hydraulic fluid contaminated. 4. Damaged control valve. 	<ol style="list-style-type: none"> 1. Warm up engine. 2. Replace hydraulic fluid. 3. Replace hydraulic fluid. 4. See authorized service dealer.

Model		HVG22T640	HVG28T640	HVG34T640
Engine		See engine manual	See engine manual	See engine manual
Pump		Two-Stage, 9gpm	Two-Stage, 11 gpm	Two-Stage, 16 gpm
Cylinder (Bore x Stroke)		4 in. x 24 in.	4.5 in. x 24 in.	5 in. x 24 in.
Maximum Splitting Force		22 Tons*	28 Tons*	34 Tons*
Hydraulic Pressure		3400 psi*	3450 psi*	3500 psi*
Maximum Log Length		25 in.	25 in.	25 in.
Wedge Height		8 in.	8 in.	8 in.
Cycle Time	Forward	8 Seconds*	8 Seconds*	7 Seconds*
	Reverse	5 Seconds*	5 Seconds*	4 Seconds*
Wheels		16 x 4.8 x 8 in.	16 x 4.8 x 8 in.	16 x 4.8 x 8 in.
Hydraulic Capacity		3 Gallons	3 Gallons	4 Gallons
Height (Horizontal / Vertical Position)		41.5 / 71 in.	41.5 / 71 in.	41.5 / 71 in.
Length		87 / 84 in.	87 / 84 in.	87 / 84 in.
Width		41 in.	41 in.	41 in.
Net Weight		474 lbs	512 lbs	549 lbs

*Tonnage and cycle times may vary dependent upon mechanical and environmental conditions.

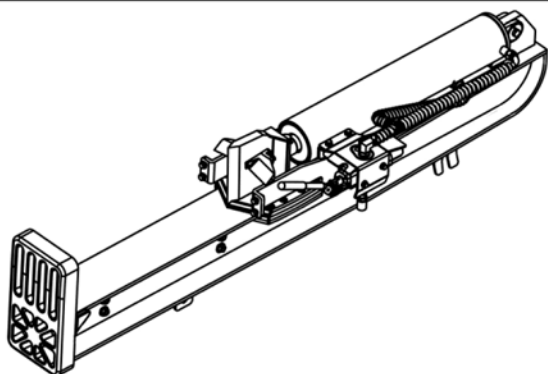


	
<p>Beam assembly x 1</p>	<p>Engine Box x 1</p>
	
<p>Reservoir tank assembly x 1</p>	<p>Hardware kits box x 1</p>
	
<p>Tongue assembly x 1</p>	<p>Log tray & Log dislodger assembly x 1</p>
	
<p>Wheel x 2</p>	<p>Fender x 2</p>

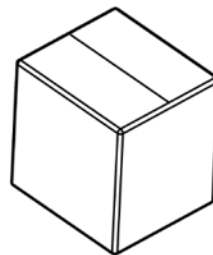
PARTS LIST

REF #	PART NAME	SPECIFICATIONS	QTY PER UNIT
1	Beam incl. End Plate	22 ton / 28 ton / 34 ton	1
2	Splitting Wedge		1
3	Hex Head Bolt	M16*70 (8.8)	1
4	Lock Nut	M16	1
5	Cylinder	4.0 in. / 4.5 in. / 5.0 in.	1
6	Pin	Ø20*72	1
7	Flat Washer	M20	2
8	Split Pin	Ø3*40	2
9	Hydraulic Hose for A-Capacity	Ø22*572	1
10	Protective Spring	Ø27*540*Ø1.5	1
11	Fitting for A-Capacity		1
12	Fitting for B-Capacity		1
13	Valve W/ Control Handle		1
14	Connecting Hydraulic Hose	Ø22*900	1
15	Fitting on Valve for Connecting Hose		1
16	Protective Spring	Ø27*920*Ø1.5	1
17	Oil Return Hose	Ø19*1500	1
18	Protective Spring	Ø27*1530*Ø1.5	1
19	Hose Clamp	Ø25	1
20	Fitting for Oil Return Hose		2
21	Valve Connecting Plate		1
22	Hex Head Bolt	M8*20 (8.8)	4
23	Spring Washer	M8	4
24	Flat Washer	M8	4
25	Fitting on Pump for Connecting Hose		1
26	Two Stage Pump	9 gpm / 11 gpm / 16gpm	1
27	Pump Coupler		1
28	Set Screw	M6*10	2
29	Pump Mount		1
30	Hex Head Bolt	M8*20 (8.8)	4
31	Flat Washer	M8	4
32	Spring Washer	M8	4
33	Hex Head Bolt	5/16-24*20 (8.8)	4
34	Flat Washer	5/16	4
35	Spring Washer	5/16	4
36	Engine Shaft Key	22 ton, 28 ton / 34 ton	1
37	Gas Engine	22 ton / 28 ton / 34 ton	1
38	Hex Head Bolt	M8*40 (22, 28 ton) / M10*40(34 ton)	4
39	Flat Washer	M8 (22, 28 ton) / M10 (34 ton)	8
40	Lock Nut	M8 (22, 28 ton) / M10 (34 ton)	4
41	Reservoir Tank	22, 28 ton / 34 ton	1
42	Vented Dipstick		1
43	O Seal Ring	Ø15*3.1	2
44	Oil Drain Screw	M16*15	1
45	O Seal Ring	Ø20*2.4	1
46	Fitting for Oil Suction Hose		1
47	Oil Suction Hose	Ø25*310	1
48	Hose Clamp	Ø30	2
49	Fitting on Filter for Oil Return Hose		1
50	Filter Cap		1

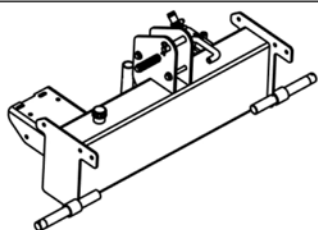
51	Filter		1
52	Fender Support		2
53	Hex Head Bolt	M8*25 (8.8)	8
54	Flat Washer	M8	16
55	Lock Nut	M8	8
56	Fender		2
57	Wheel	16*4.8*8 in.	2
58	Castle Nut	1-14	2
59	Split Pin	Ø4*35	2
60	Hub Cap		2
61	Check Pin	Ø6*25	1
62	Vertical Lock Lever		1
63	Spring		1
64	Flat Washer	M10	1
65	Hex Head Bolt	M10*20 (8.8)	1
66	Spring Clip	Ø25	1
67	Clevis Pin	Ø16*85	1
68	Hex Head Bolt	M10*80 (8.8)	2
69	Flat Washer	M10	4
70	Lock Nut	M10	2
71	Tonque		1
72	Horizontal Beam Lock		1
73	Hex Head Bolt	M10*80 (8.8)	2
74	Flat Washer	M10	4
75	Lock Nut	M10	2
76	Jack Stand		1
77	Hex Head Bolt	M10*80 (8.8)	1
78	Flat Washer	M10	2
79	Lock Nut	M10	1
80	Clevis Pin	Ø10*70	1
81	Spring Clip	Ø3	1
82	Hitch		1
83	Safety Chain		2
84	Hex Head Bolt	M12*80 (8.8)	2
85	Flat Washer	M12	4
86	Lock Nut	M12	2
87	Log Tray W/ Log Dislodger		2
88	Hex Head Bolt	M12*45 (8.8)	4
89	Flat Washer	M12	8
90	Lock Nut	M12	4
91	Dislodger Connecting Plate		2
92	Hex Head Bolt	M12*45 (8.8)	4
93	Flat Washer	M12	8
94	Lock Nut	M12	4
95	Hex Head Bolt	M10*35 (8.8)	4
96	Flat Washer	M10	8
97	Lock Nut	M10	4
98	Cross Wedge		1
99	L-shape Support		2
100	Hex Head Bolt	M8*55 (8.8)	1
101	Lock Nut	M8	1
102	Hex Head Bolt	M8*25 (8.8)	2
103	Spring Washer	M8	2



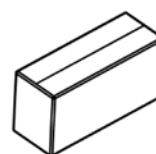
Beam assembly x 1



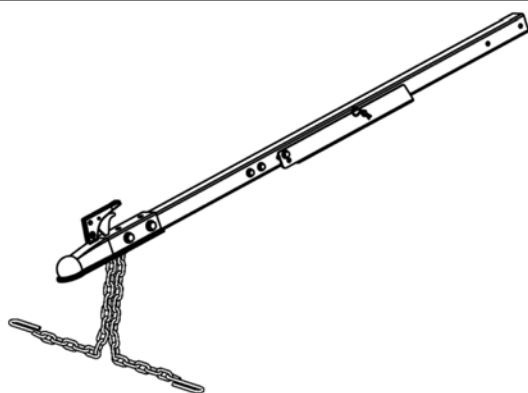
Engine Box x 1



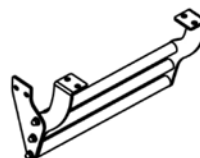
Reservoir tank assembly x 1



Hardware kits box x 1



Tongue assembly x 1



Log tray & Log dislodger assembly x 1



Wheel x 2



Fender x 2