



**DUAL ACTION
GAS LOG SPLITTER
20 TON**



MODEL NO.: 126 LS20HTL

Owner's Manual

ASSEMBLY & OPERATING INSTRUCTIONS

Purchase Date _____ Serial NO. _____

Dealer _____

To The Owner

Thank You!

Thank you for purchasing a BE Log Splitter. It was carefully engineered to provide excellent performance when properly operated and maintained.

Please read this entire manual prior to operating the equipment. It instructs you how to safely and easily set up, operate and maintain your machine. Please be sure that you, and any other persons who will operate the machine, carefully follow the recommended safety practices at all times. Failure to do so could result in personal injury or property damage.

All information in this manual is relative to the most recent product information available at the time of printing. Review this manual frequently to familiarize yourself with the machine, its features and operation. We reserve the right to change product specifications, designs and equipment without notice and without incurring obligation.

All the power testing information used to establish the power rating of the engine equipped on this machine can be found at the engine manufacturer's manual or website. If you have any problems or questions concerning the machine, phone an authorized service dealer or contact us directly. BE Industrial's customer support phone number, website and mailing address can be found on this page. We want to ensure your complete satisfaction at all times.

Throughout this manual, all references to right and left side of the machine are observed from the operating position. The engine manufacturer is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's/Operator's Manual, packed separately with your machine, for more information.

Read and thoroughly understand all instructions and safety information before assembling or operating this log splitter. Failure to do so may cause serious injury or death. Do not allow familiarity with tools to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

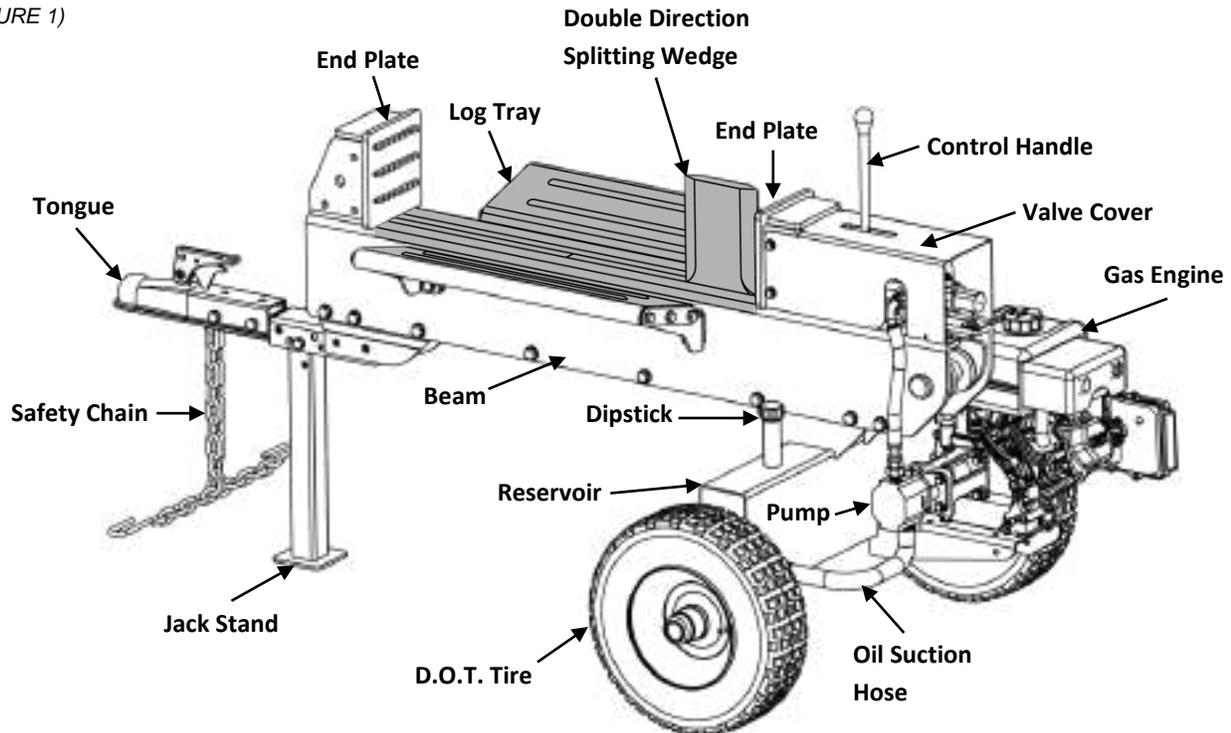
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SECTION I: KNOW YOUR LOG SPLITTER

LOG SPLITTER OVERVIEW

(FIGURE 1)

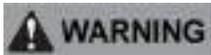


DANGER! This machine was built to be operated according to the safe operation practices in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating hands and feet and throwing debris. Failure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

The following signal words and meanings are intended to explain the levels of risk associated with this product.



DANGER indicates a hazardous situation which, if not followed, will result in serious injury or death.



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



CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is important information about the proper use of your machine. Failure to follow this instruction could result in damage to your machine.

SAFETY DECALS

Make sure that all safety warning decals are in good condition and readable. Always replace missing or defaced decals.

1. Safety Warning / Operating Label (Part #: 410-169)

OPERATING INSTRUCTIONS

3 POSITIONS OF CONTROL HANDLE

FORWARD NEUTRAL REVERSE

- Place log splitter on flat dry solid ground and block wheels.
- Start the engine as instructed in the Engine Operator's manual included.
- Move control handle fully extended back and forth for several cycles to bleed residual air.
- Grab the sides of the log to load it 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 retract the wedge to split a log on the other side.

CAUTION!

- 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.
- No one under the age of 18 should operate log splitter.
- Always stay in operator zone specified by manufacturer during operation.
- Do not stand on or reach over log splitter.
- Only one person is permitted to load logs and operate controls. Keep bystanders, children, pets and helpers at least 25 ft. away.
- Keep work area clear of split wood, debris, and other obstacles.

WARNING!

- Do not operate log splitter under the influence of alcohol or drugs.
- 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.
- Do not refill hydraulic oil while engine is 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.

Part #: 410-169

2. Pinch Point Warning Label (Part #: 410-233, 410-235)

KEEP HANDS / FEET AWAY!

- 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!

Part #: 410-233

DANGER!

KEEP HANDS / FEET AWAY!

- 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.

Part #: 410-235

3. Towing Safety Label (Part #: 410-249)

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.

Part #: 410-249

4. Oil Label (Part #: 410-647)

NOTICE

- 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.).

Part #: 410-647

5. Serial NO. / Spec. Label (Part #: 410-518)

BOSS[®] 20 Ton Log Splitter
INDUSTRIAL GD20T24

Max. splitting force: 20 Ton
 Max. splitting length: 24 inch
 Max. splitting diameter: 16 inch
 Net weight: 449 lbs
 Serial NO.:

Meets ANSI B71.7-1985 Safety Standard

Boss Industrial, Inc.
 1208 N. Independence Blvd, Romeoville, IL 60446
 www.boss-industrial.com, 1-800-780-2677

Part #: 410-518

This page depicts and describes safety symbols that may appear on this product. Read, understand, and follow all instructions on the machine before attempting to assemble and operate.

Symbol	Description
	<p>READ THE OPERATOR'S MANUAL(S) Read, understand, and follow all instructions in the manual(s) before attempting to assemble and operate.</p>
	<p>FACE PROTECTION Always wear safety goggles or safety glasses with side shields, or a face shield when operating this product as well as ear protection.</p>
	<p>WARNING— MOVING WEDGE Keep hands away from wedge, moving part, end plate, and partially split wood.</p>
	<p>BYSTANDERS Keep bystanders, helpers and children at least 25 feet away.</p>
	<p>SINGLE OPERATOR Only one person should operate the machine at a time. The adult who loads and stabilizes the log must be the person who operates control handle.</p>
	<p>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.</p>
	<p>WEAR GLOVES Always wear nonslip, heavy-duty protective gloves when operating this product.</p>
	<p>WEAR SAFETY FOOTWEAR Always wear nonslip steel-toed safety footwear when operating this product.</p>
	<p>WARNING—GASOLINE IS FLAMMABLE Allow the engine to cool at least ten minutes before refueling.</p>
	<p>WARNING— CARBON MONOXIDE Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.</p>
	<p>WARNING— HOT SURFACE Engine parts, especially the muffler, become extremely hot during operation. Allow engine and muffler to cool before touching.</p>

CALIFORNIA PROPOSITION 65



WARNING! Engine Exhaust, some of its constituents and certain components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm. For more information, please go to www.P65Warnings.ca.gov.

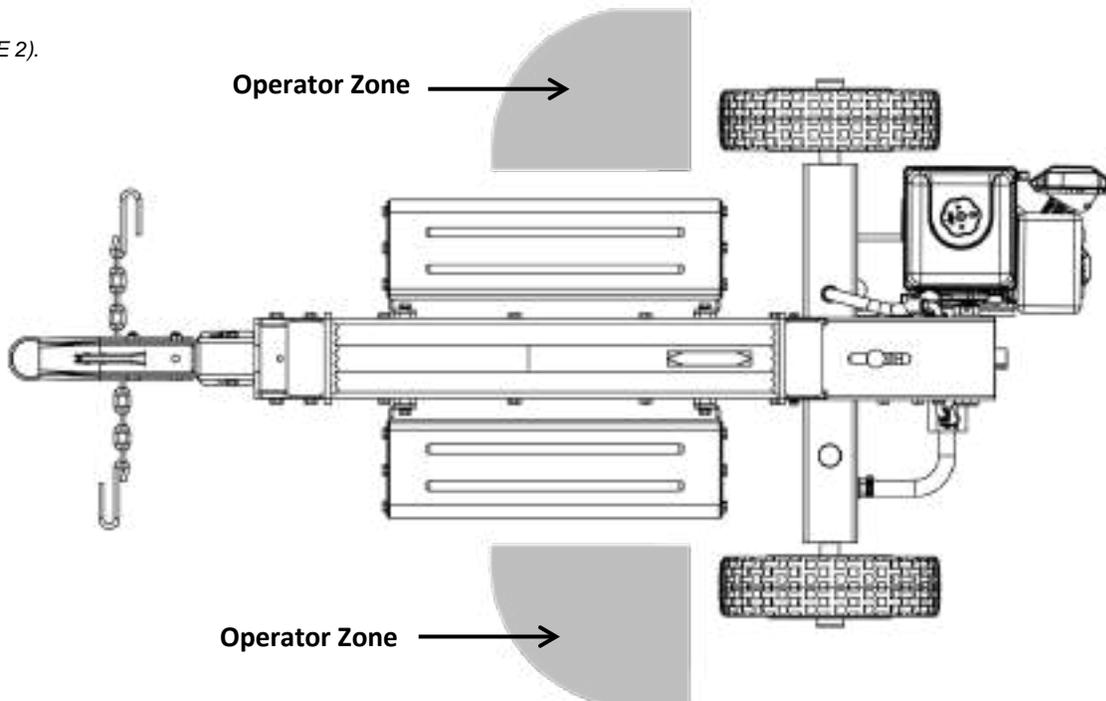
IMPORTANT TIPS

1. **DO NOT** discard packing materials until you have carefully inspected and satisfactorily operated the tool.
2. Read, understand, and follow all instructions on the machine and in this manual and the engine manual before attempting to assemble and operate. Keep the manuals in a safe place for future and regular reference and for ordering replacement parts.
3. Lubricate the wedge and upper side of the machine body for splitting smoothly. See *FIGURE 1*
4. Check the hydraulic oil level, engine oil level and fuel before every operation.
5. Sharpen the wedge periodically.
6. **DO NOT** continue to push on the control handle more than 3 seconds if the wedge can't cut through an oversized or extremely hard log. Force the tool will cause permanent damage and void warranty.
7. Try to split from another end or cut a small piece from the border instead of the center when you fail to cut through an oversized log.
8. **Release** the handle lever right before the cylinder is extended or retracted fully. Keep holding the control handle lever as the wedge reaches to the farthest positions will cause the valve squeezed. When this happens, you must turn off the engine to relieve the pressure and restart the tool to operate.
9. Move the control handle to Forward or Backward position gently to operate. Push or pull hard on the control handle lever won't help create more power, but break the handle or damage the internal valve parts and void warranty.
10. **DO NOT** expose this machine to rain or use in a damp environment. An optional log splitter cover is recommended.

OPERATOR ZONE

ONLY operate the log splitter from the operator zones as shown below. The operator has the safest and most efficient access to the control valve and the beam in this location. Failure to operate the log splitter in this position can result in serious injury or death. See *FIGURE 2*

(FIGURE 2).



FIRE PREVENTION

Gasoline is a highly flammable liquid and the vapors are explosive. To avoid personal injury or property damage, use extreme care in handling gasoline. Always follow these precautions below, and refer to the Engine Manual for more safety instructions.

1. **ALWAYS** take a Class B fire extinguisher with you when operating this log splitter in dry areas.
2. **NEVER** operate your log splitter near a flame or spark or smoke during operation. Extinguish all cigarettes, cigars, pipes, and other sources of ignition. Hydraulic oil and gasoline are flammable and can explode.
3. When gasoline is spilled on yourself or your clothes, wash your skin and change clothes immediately.
4. **NEVER** refuel the gas tank while the engine is hot or running. Allow the engine to cool before refueling.
5. **ONLY** refuel your log splitter in an open clear area with no gas fumes or spilled gas. Never fuel the machine indoors.
6. 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.
7. If gasoline is spilled out, wipe it off the engine and equipment, and move machine to another area. Wait five (5) minutes before starting the engine.
8. **ALWAYS** replace the gas cap securely. Never remove gas cap while the engine is hot or running.
9. To prevent fires, clean debris and chaff from the engine and muffler areas.
10. Allow machine to cool at least ten (10) minutes before storing.
11. 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.
12. If the engine is equipped with a spark arrestor muffler, clean and inspect it regularly according to manufacturer's instructions. Replace if damaged.



WARNING! This log splitter is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrestor meeting applicable local or state laws (if any). If a spark arrestor is used, it should be maintained in effective working order by the operator. In the state of California, a spark arrestor is required by law. Other states may have similar restrictions. Always follow Federal laws that apply on federal lands. A spark arrestor muffler is optional and available as an accessory at your nearest engine dealer. Always check the legal requirements in your area.

HYDRAULIC SAFETY

1. The hydraulic system of your log splitter requires careful inspection along with the mechanical parts. Be sure to replace frayed, kinked, cracked or otherwise damaged hydraulic hoses or hydraulic components.
2. Hydraulic log splitters develop high fluid pressures during operation. Fluid escaping through a pin hole can penetrate your skin and cause blood poisoning, gangrene, or death. **ALWAYS** seek professional medical attention immediately if injured by escaping hydraulic fluid.
3. **DO NOT** check for leaks with your hand. Leaks can be detected by passing a piece of cardboard over the suspected leak and looking for discoloration.
4. **ALWAYS** be sure to relieve all pressure by shutting off the engine and moving the control handle back to stop position.
5. **NEVER** remove the ventilator cap from the hydraulic tank or reservoir while the log splitter is running. The tank could contain hot oil under pressure which could result in serious injury.
6. **NEVER** adjust the hydraulic valve. The pressure relief valve on your log splitter is preset at the factory. Only a qualified service technician should perform this adjustment.

SECTION II: PRE-OPERATION INSTRUCTIONS

UNPACKING

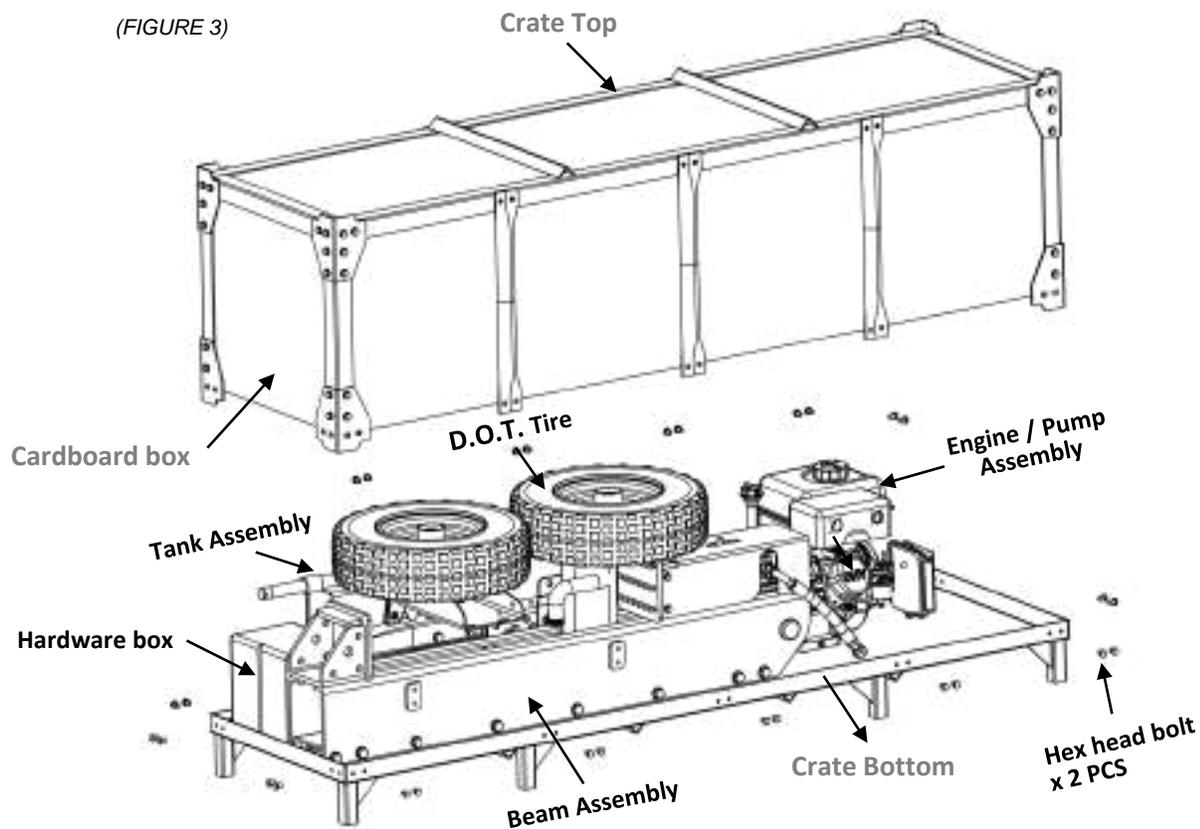


WARNING! This product has been shipped partially assembled. Use extreme caution unpacking this machine. Some components are very heavy and will require additional people or mechanical lifting tools.

Unpacking tools needed:

1. Wrench 13mm
2. Scissors or knife
3. Pry bar or claw hammer

Step 1: Use a 13mm wrench to remove the bottom bolts securing the crate side frames onto the crate bottom, lift the crate top and the cardboard box up and put them aside together. See *FIGURE 3*.



Step 2: Carefully remove all loose parts included in the container, e.g. hardware box.

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

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

Step 4: Use scissors or a knife to cut and remove the straps securing the engine / pump assembly to the crate bottom, and then place aside carefully for installation.

Step 5: 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 heavy assemblies.

NOTE: Due to the weight / size of the two assemblies, it's recommended two or more adults to assist lifting and moving them. Lifting tools such as hoist, crane, jack, etc. are also recommended.

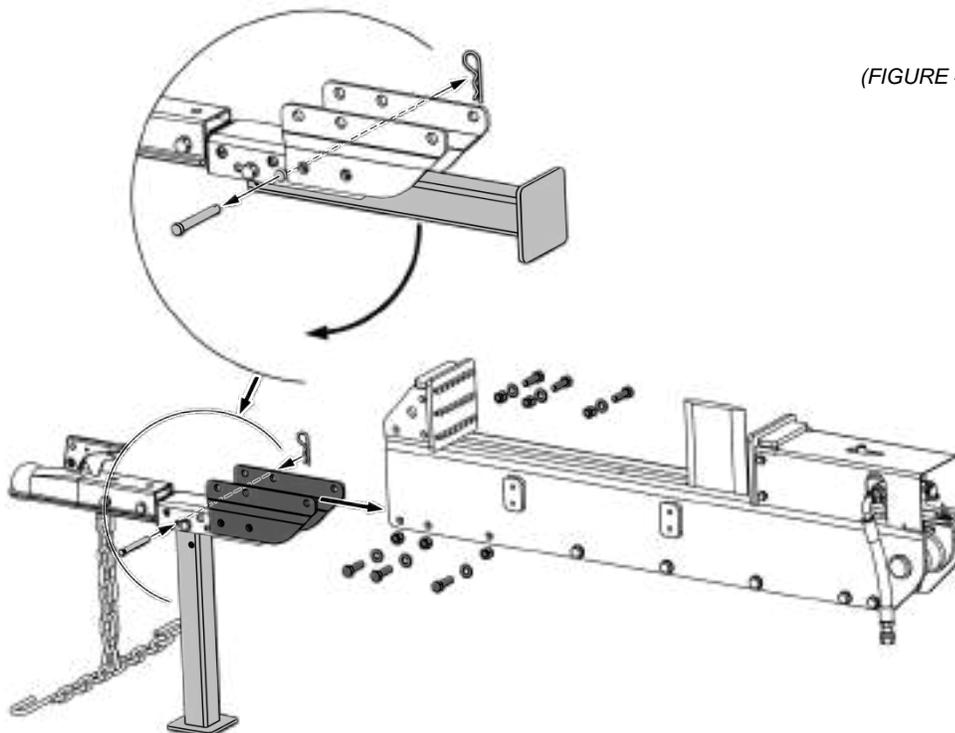
ASSEMBLING

Assembling tools needed:

1. Wrench 13mm x 2
2. Wrench 18, 19, 27mm one each
3. Adjustable wrench x 1
4. Thread locking compound x 1
5. Needle nose pliers x 1
6. Flat head screwdriver x 1
7. Soft faced hammer x 1

STEP 1: Install the tongue and jack stand assembly. See *FIGURE 4*.

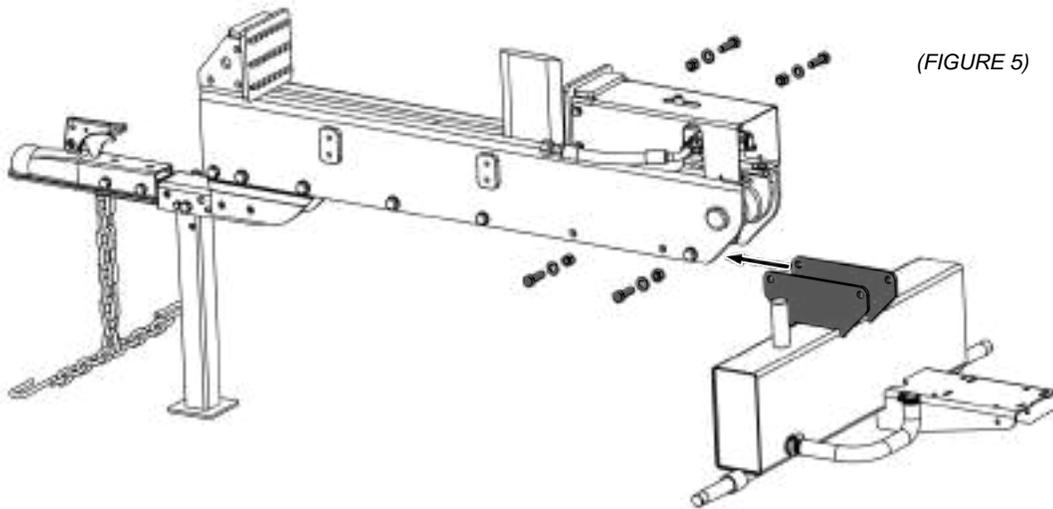
1. Raise the beam assembly cross onto one end of the crate cover. Two or more people are recommended to assist with raising the beam and securing it while the other(s) install the jack stand and reservoir tank.
2. Remove the spring clip ($\varnothing 3$) and clevis pin ($\varnothing 10 \times 85$) which hold jack stand on the tongue, and then pivot the jack stand towards the ground. Secure the jack stand in position with the clevis pin and spring clip just removed.
3. Remove the 6 sets of M12 hardware on both sides of the front end of the beam.
4. Position the mounting brackets of the tongue assembly inside the bottom of the main beam and align the holes. Screw on the Bolts M12 x 35 just removed and tighten using a 18mm wrench for the bolts and a 19mm wrench for the lock nuts.



(FIGURE 4)

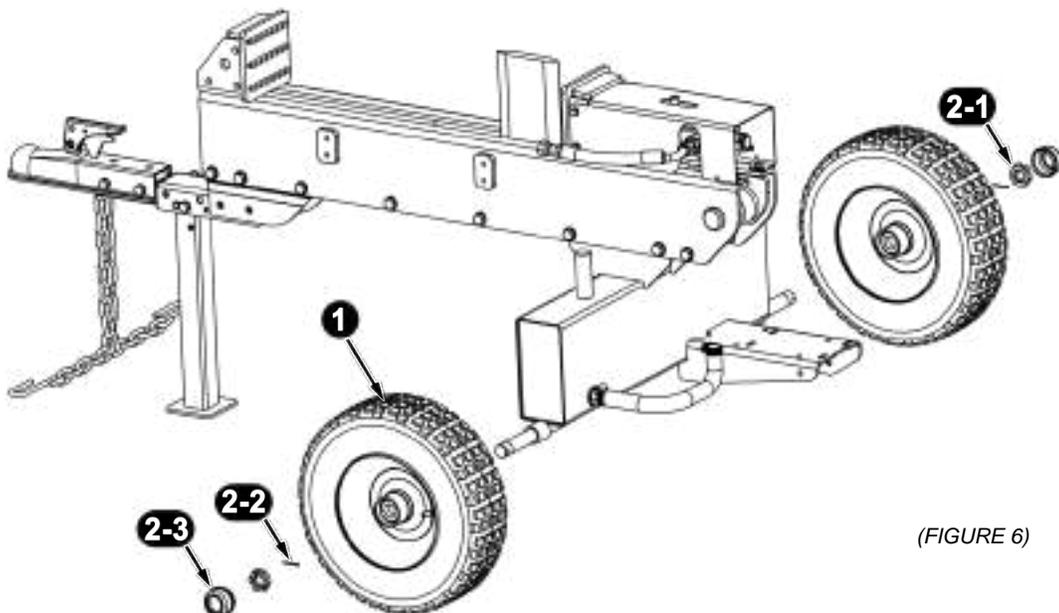
STEP 2: Install the reservoir tank. See *FIGURE 5*

1. Remove the 4 sets of M12 hardware on both sides of the rear end of the beam.
2. Position the beam support brackets on the tank assembly inside the bottom of the main beam and align the holes. Screw on the Bolts M12 x 35 just removed and tighten using a 18mm wrench for bolts and a 19mm wrench for the lock nuts. You may need another helper to lift up the tank to align the holes.



STEP 3: Install the two wheels. See *FIGURE 6*.

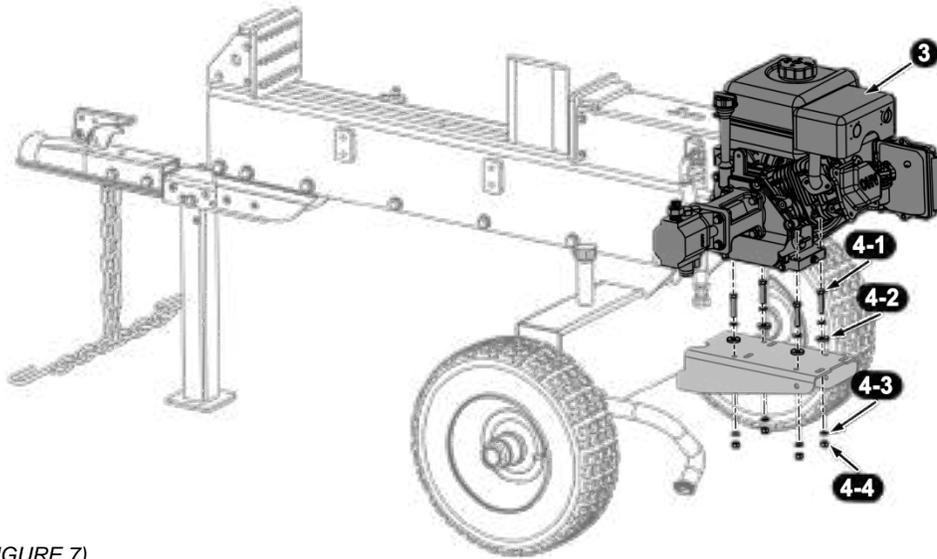
1. Remove the plastic shipping caps from the wheels and slide the wheels onto the wheel axels.
2. Screw the castle nuts onto the axels and tighten with an adjustable wrench to seat the bearings. Then back the castle nuts off one half turn and snug them up to the bearings, so they line up with the hole in the axel.
3. Insert the split pin into the slot of castle nut and the hole in the axel, and then bend the ends of the pin with needle nose pliers keeping it close to the castle nut so the dust cap fits over it.
4. Tap the dust caps onto the wheel using a soft faced hammer.
5. Raise the towing hitch up and stand the machine down to the ground.



REF. NO.	DESCRIPTION	QTY.
1	D.O.T. Tire / Wheel	2
2	Hardware Kit #2, including:	1
2-1	Castle nut / 1-14	2
2-2	Split pin / Ø4 x 50	2
2-3	Dust cap	2

STEP 4: Install the engine / pump assembly. See *FIGURE 7*.

1. Insert a vibration isolator between the engine and the mount plate at each of the four mounting hole positions.
2. Secure the engine with the M8 hardware, and then tighten the hardware using two 13mm wrenches.



(FIGURE 7)

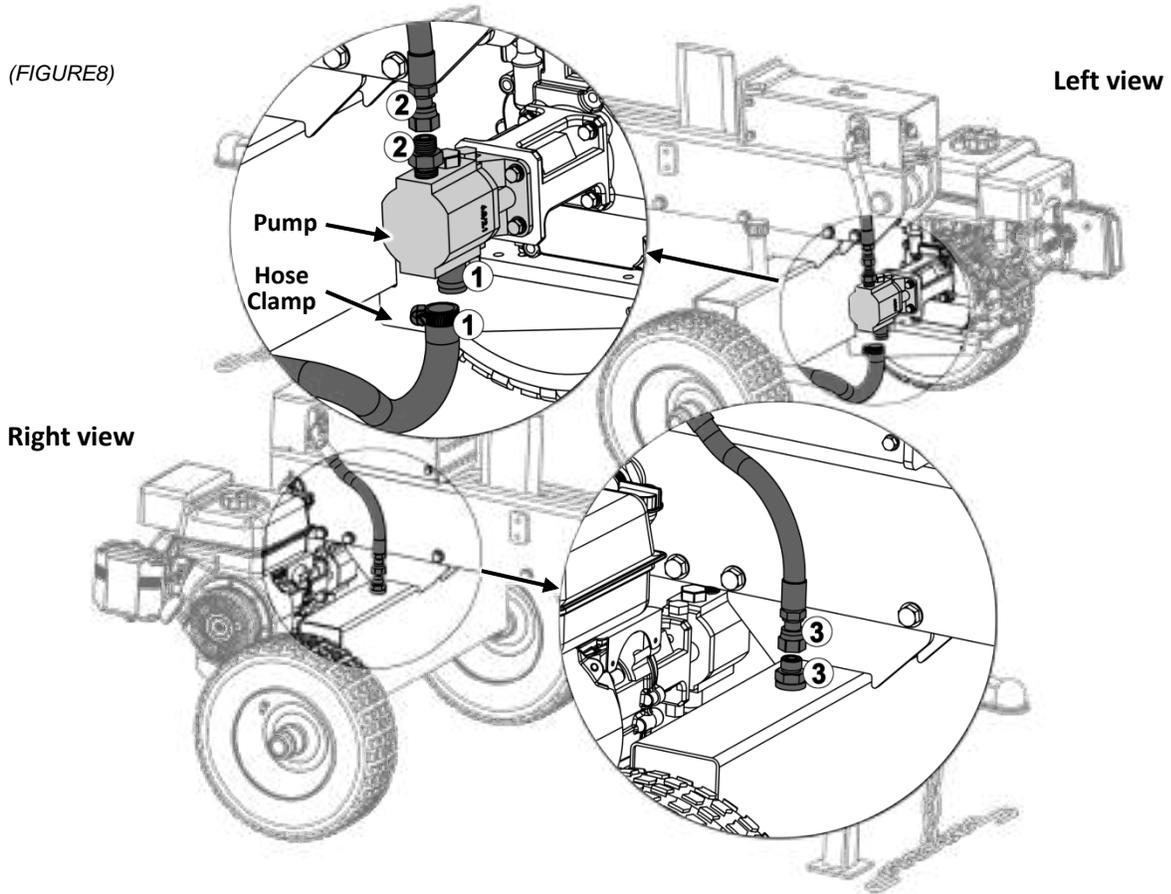
REF. NO.	DESCRIPTION	QTY.
3	Engine / Pump assembly	1
4	Hardware kit # 5-1, including:	1
4-1	Hex head bolt / M8 x 40	4
4-2	Flat washer / M8	8
4-3	Lock nut / M8	4
4-4	Vibration isolator / Ø9	4

STEP 5: Attach the hoses. See *FIGURE 8*.

The three hydraulic hoses listed below, each of them has one end fixed on the log splitter by manufacturer, the other end left open to be attached.

1. Oil suction hose Ø24, labeled as ①, comes from the bottom of the reservoir. Loosen the hose clamp on the open end of this hose using a flat head screwdriver, then connect the hose to the fitting on the bottom of the pump, which is also labeled as ①. Tighten the hose clamp.
2. Pump / Valve connecting hose ½", labeled as ②, comes from the left side of the valve on the beam assembly. Screw the open end of this hose onto the fitting on top of the pump, which is also labeled as ②. Tighten using a 27mm wrench or an adjustable wrench.
3. The oil return hose 1/2" labeled as ③ comes from the right side of the valve on the beam assembly, screw the open end of this hose onto the fitting on the reservoir, which is also labeled as ③. Tighten the hose fitting using a 27mm wrench or an adjustable wrench.

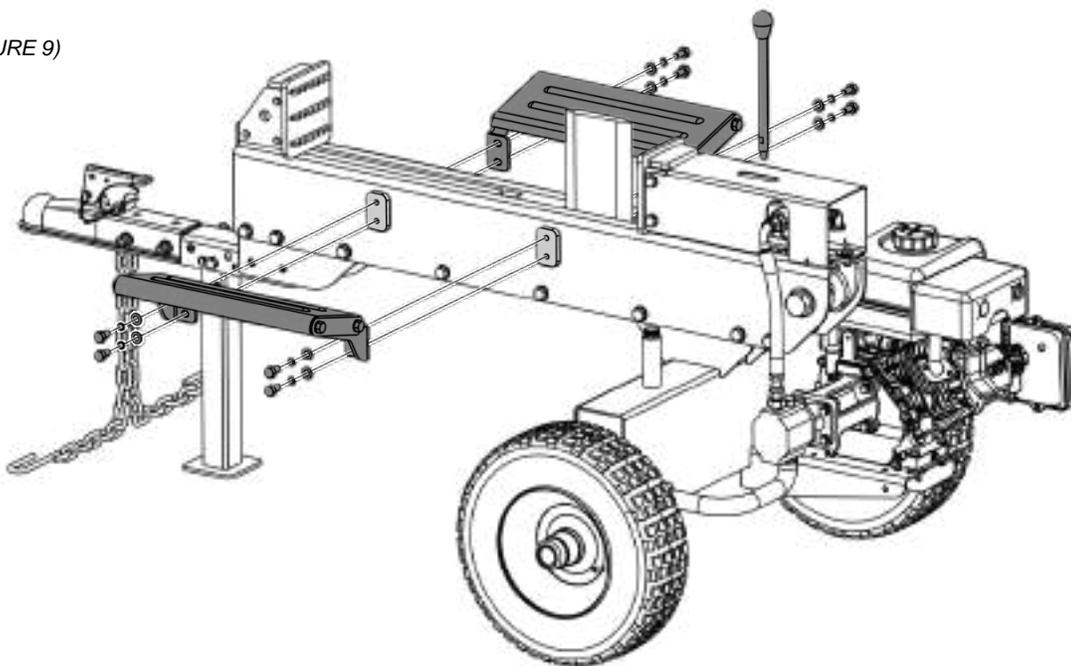
(FIGURE 8)



STEP 6: Install the log tray assemblies and control handle lever. See FIGURE 9.

1. Remove the M8 hardware fixed on the tabs on both sides of the beam. Align the holes on the log tray frames and the tabs, and secure with the M8 hardware just removed using a 13 mm wrench.
2. Screw the control handle lever into its linkage part on top of the valve.

(FIGURE 9)



STEP 7: Engine oil and Gasoline fill-up.

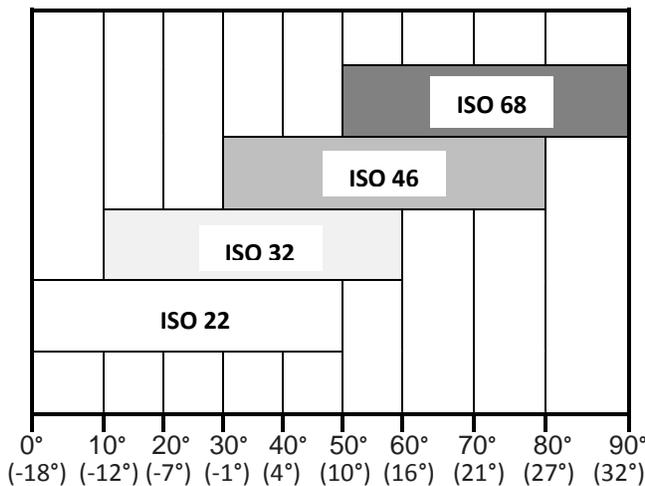
Your log splitter may be shipped without engine oil. You **MUST** check the engine oil level before initial operating. Refer to the engine manufacturer's instruction manual to fill the engine oil and gasoline.

STEP 8: Fill hydraulic oil. See *FIGURE 10*.

The log splitter is shipped without hydraulic fluid in the reservoir. You must fill the reservoir before your initial use. The oil dipstick is packed in the hardware kit box.

1. Please select the oil based on the outside temperature range the log splitter will be used in. Refer to the chart provided to select the appropriate hydraulic oil. The machine was tested by the manufacturer using AW32 oil, so that AW32 oil is highly recommended for most users in most areas.

The reservoir tank has a capacity of 3.5 gallons of hydraulic fluid. You may need prepare more oil than the tank capacity because a lot of oil will be drawn into hydraulic cylinder, valve, pump and hoses.

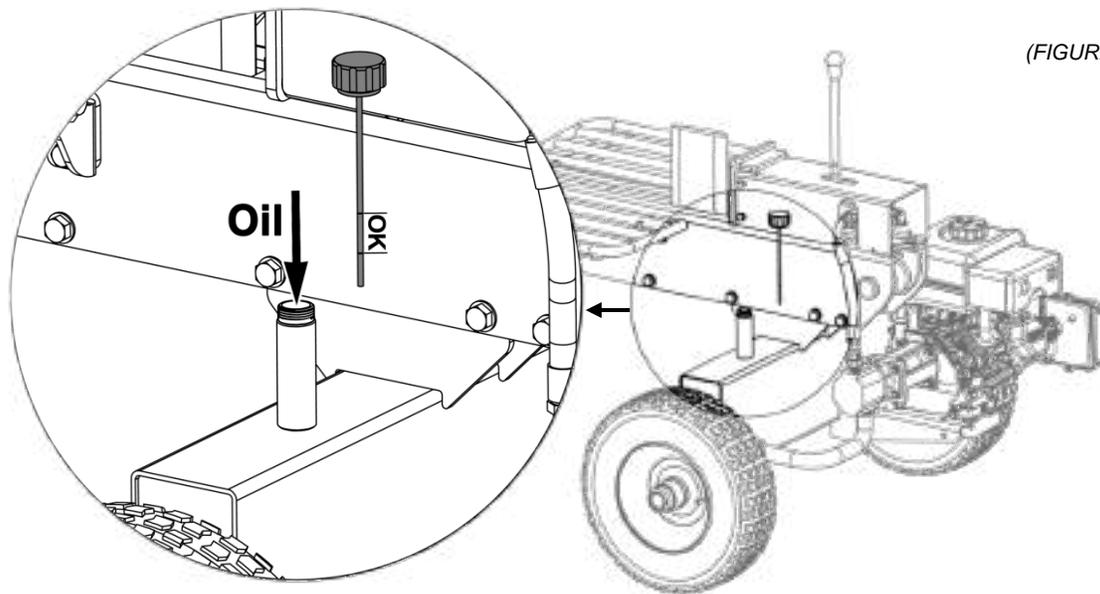


Approved fluids include Shell Tellus® S2 M 32 Hydraulic Fluid, Dexron® III / Mercon® automatic transmission fluid, Pro-Select™ AW-32 Hydraulic Oil or 10WAW-ISO viscosity grade 32 hydraulic oil. It is not recommended that fluids be mixed, to top off the reservoir tank during initial set-up use Shell Tellus®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

2. Slowly fill the reservoir until the oil level reaches the maximum line on the dipstick.
3. When checking the fluid, always make sure to push the dipstick all the way down to make sure you are getting an accurate reading.
4. Start the engine and use the control handle to engage the wedge to the farthest extended position and then retract fully. Repeat this operation for 12 cycles to repel the air trapped in the hydraulic system. Much of the fluid will be drawn into the cylinder and hoses. Stop the engine, and check the oil level as instructed below.

NOTE: Make sure the oil level is above the bottom line on the dipstick. If not, refill the reservoir to prevent damage to the hydraulic pump. **DO NOT overfill.** Some fluid may overflow from the ventilator as the system builds heat and the fluid expands and seeks a balanced level. Place a container underneath the tank to collect the spilled oil.

5. However, you **MUST** check the fluid level before each operating. If not filled, proceed with above steps.



(FIGURE10)

GETTING PREPARED

- Place the log splitter on flat, dry, solid ground in an open area.
- Lubricate the beam area (where the splitting wedge will slide) with engine oil. Do not use grease. See *FIGURE 1*.
- Block both wheels to prevent your log splitter from moving during operation.
- Check all nuts, bolts and hydraulic fittings are tight to be sure the equipment is in a safe working condition.
- Wear safety gear such as goggles or safety glasses, steel toed shoes and tight fitting gloves (without loose cuffs or draw strings), a protective hearing device and suitable work clothing. NEVER wear loose clothing or jewelry that can be caught by moving parts of the log splitter.
- Both ends of the log should be cut as square as possible to help prevent the log from riding out during operation.
- **ALWAYS** check the hydraulic oil level, engine oil level and gasoline before you start the log splitter.
- **ALWAYS** check the machine with no frayed, kinked, cracked, or damaged hoses, fittings, or tubing before operation.



NOTES:

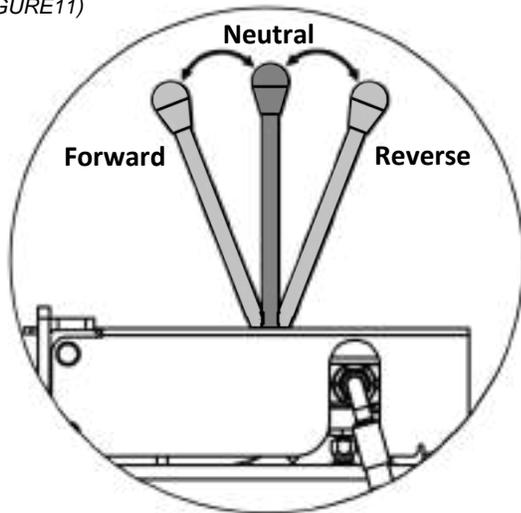
1. Read, understand, and follow all instructions in the manual(s) and decals on the machine before operating. Keep this manual and Engine manufacturer's manual in a safe place for future and regular reference and for ordering replacement parts.
2. **NEVER** use this log splitter for any purpose other than splitting wood. It is designed for this use only.
3. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
4. **NEVER** allow children under 16 years of age to operate this machine. NEVER allow adults lacking proper instructions and understanding to operate this log splitter.
5. **NEVER** operate the log splitter when tired or under the influence of alcohol, drugs or medication.
6. ALWAYS use eye protection which is marked to comply with ANSI Z87.1.

SECTION III: OPERATION INSTRUCTIONS

- Start the engine as the instructions in the Engine Operator's manual packed with your log splitter.
- Grab the log on the sides and place it firmly on top of the beam against one end plate to split the wood in the direction of the grain. See FIGURE 12.
- Use your right hand to push the control handle lever to the Forward or Reverse position to split the wood. See FIGURE 12.

The control handle has three positions. See FIGURE 11.

(FIGURE11)



FORWARD — Move the control handle to the FORWARD position which will engage the wedge forward to split the log.

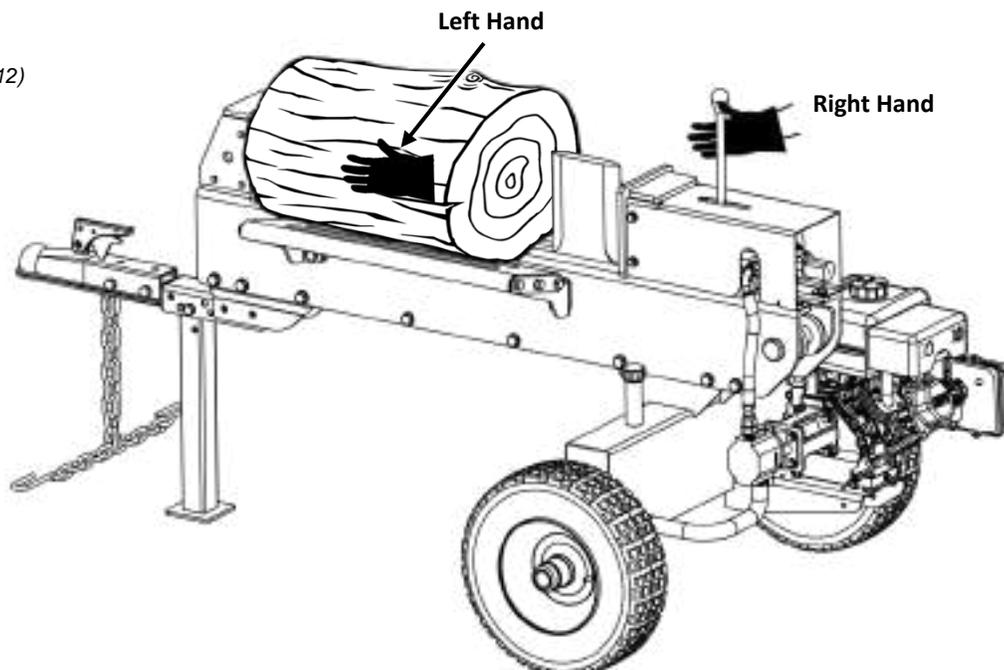
NEUTRAL — Release the control handle to the NEUTRAL position, the wedge stops moving at any point during splitting.

REVERSE — Move the control handle to the REVERSE position which will pull the wedge backward to split another log.

NOTE: DO NOT continue holding the handle when the wedge is fully extended or retracted to the farthest positions, which may cause the valve squeezed. When this happens, you must turn off the engine to relieve the pressure and restart the tool to operate.

- Stabilize the log using your left hand on the side of the log and remove your left hand immediately as the wedge starts to contact the log. See FIGURE 12
- Release the control handle to stop the wedge movement at any point in the splitting process if you feel an unsafe splitting condition is occurring. The control handle will return to the Neutral position automatically when you release it.

(FIGURE12)



- Remove partially split wood from wedge.
 - 1) If the log is clipped or jammed on the wedge, release the control handle and shut off the engine immediately. Gently knock off the log with a hammer or mallet (not with your hands).



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, split the wood from the opposite end or in another location.
- Shut off the engine after splitting and relieve hydraulic system pressure by cycling the valve control lever from forward to reverse several times. Leave the handle to neutral before storage or maintenance.



NOTES

1. **ALWAYS** operate your log splitter in daylight or under good artificial light.
2. **ALWAYS** keep the work area clean. Remove split wood from around the log splitter immediately so that you don't stumble over it.
3. **DO NOT** allow familiarity with tools to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.
4. **ONLY** a single operator is allowed to load and operate this log splitter. Keep bystanders, pets, and children at least 25 feet from the machine while it is in operation.
5. **ALWAYS** use your hand to operate the control lever on the valve. **NEVER** use your foot, a rope or any extension device.
6. **NEVER** place hands or feet body between the moving wedge and end plates. Failure to do so may result in crushed or amputated fingers, toes, hand, or foot.
7. **NEVER** try to cross split a log.
8. **NEVER** try to split two logs on top of each other.
9. **NEVER** attempt to load your log splitter when the ram is in motion.
10. **NEVER** reach crossly and attempt to catch a falling split wood — let it fall.
11. **NEVER** leave this machine unattended with the engine running.
12. **NEVER** operate your log splitter when it is in poor mechanical condition or in need of repair.
13. **DO NOT** force the tool. It is designed to operate within its maximum speed and tonnage. Release the handle immediately if you experience extremely hard wood to avoid permanent damage which will void warranty.
14. **ALWAYS clear the wood chips inside the machine body where the cylinder travels in case damages to the valve.**
15. **NEVER** touch the muffler and other hot areas of the engine during operation. Wait until the engine cools down.
16. **NEVER** tamper with the engine to run it at excessive speeds. The maximum engine speed is preset by the manufacturer and is within safety limits. Refer to the engine owner's manual for your particular log splitter.

SECTION IV: MAINTENANCE

OFF SEASON STORAGE

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

- Refer to the Engine Operator's manual packed with your log splitter for information on the off-season storage of the engine.
- Store unit in a clean, dry area. Do not store it next to corrosive materials, such as fertilizer.
- Clean the log splitter thoroughly. Wipe the machine with an oiled rag to prevent rust, especially on the wedge and the beam.

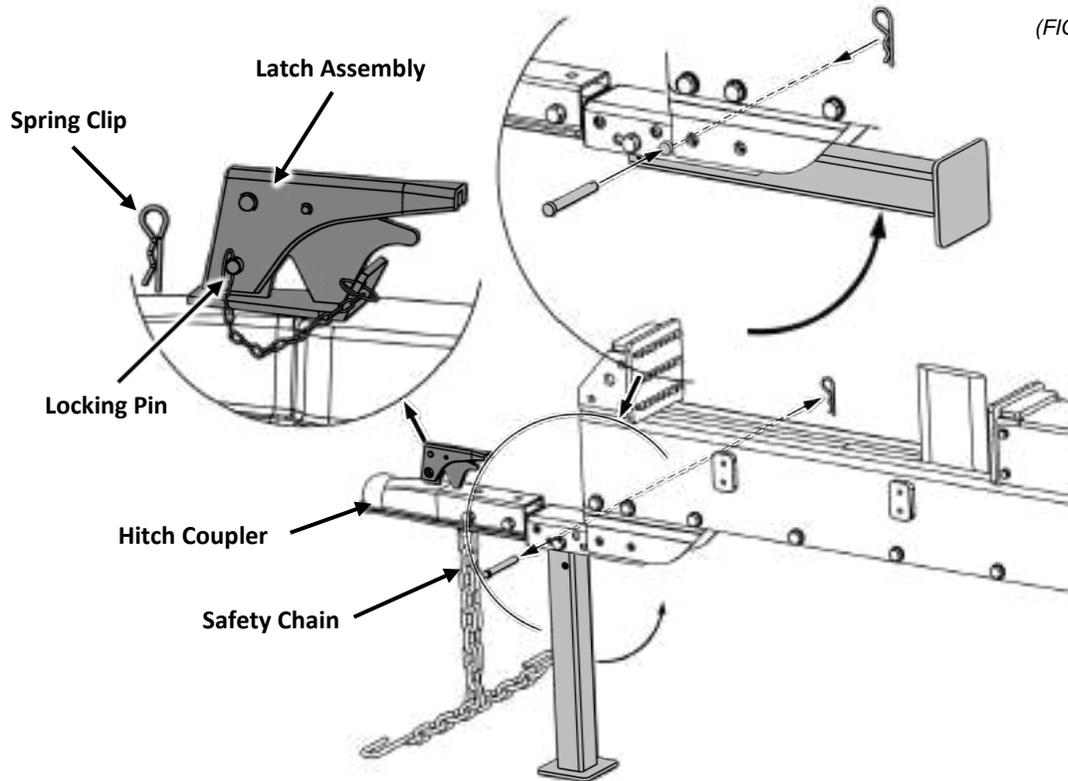
NOTES

1. Allow the machine to cool 30 minutes after use before storing.
2. Never store the machine with fuel in the fuel tank inside of building where fumes may reach an open flame or spark, or an ignition source such as hot water and space heaters, furnaces, clothes dryers, stoves, electric motors, etc.
3. DO NOT use pressure washers or a garden hose to clean the splitter which will cause damage to the bearings or the engine.
4. If storing in an unventilated or metal storage shed, be certain to rustproof the equipment by coating it with a light oil or silicone. A log splitter cover from the manufacturer is recommended.

TRANSPORTATION

- Hold the hitch coupler up when moving the log splitter. Get assistance if it feels too heavy to move by yourself.
- Towing the log splitter behind your vehicle with a Class I, 2" ball, pivot the jack stand upwards and secure onto the tongue. See *FIGURE 13*.
- Pull the latch on the hitch coupler up, position the hitch coupler over the tow ball behind your vehicle. (An optional wheeled trailer jack - Model #: TJ-20 helps raise the coupler up and lower down, and also help maneuver easily in your yard.)
- Close the latch to lock the ball securely.
 - 1) If the coupler hitch is too tight and does not fit onto 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.
- Attach the safety chains to the towing vehicle crossing each other under the tow ball, ensuring there is enough slack for turning.
- Insert the locking pin into the hole in the latch assembly, and lock with the spring clip.
- Use caution when backing up. Using a spotter outside the vehicle is recommended.

(FIGURE13)



NOTES

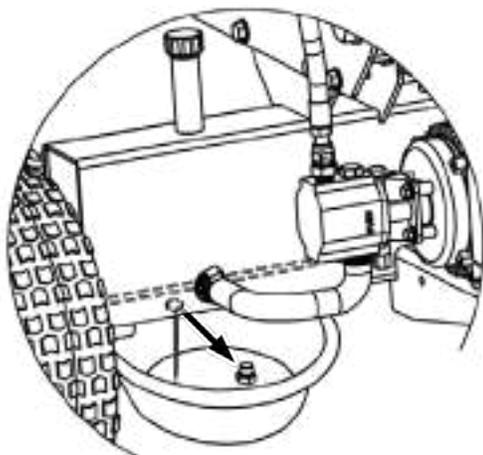
1. **NEVER** exceed 45 mph when towing your log splitter. Towing the log splitter at speeds higher than 45 mph could result in loss of control, damage to the equipment, or serious injury or death.
2. **NEVER** carry any cargo or wood on your log splitter.
3. **NEVER** allow anyone to sit or ride on your log splitter.
4. **ALWAYS** turn the engine to the "OFF" position before towing the log splitter. Failure to do so may result in flooding the engine.
5. **ALWAYS** check before towing to make sure that the log splitter is correctly and securely attached to the towing vehicle and that the safety chains are secured to the hitch or bumper of the vehicle with enough slack to allow turning.
6. **NEVER** exceed weight capacity of ball or load limits of coupler. **ALWAYS** replace ball or coupler if damaged.
7. **ALWAYS** allow for added length of your log splitter when turning, parking, and crossing intersections and in all driving situations.
8. Be extra cautious when towing over rough terrain, especially railroad crossings, and avoid sharp turns and steep angles when towing your log splitter. Use a tow vehicle if needed
9. **ALWAYS** disconnect your log splitter from the towing vehicle before operating it.
10. **ALWAYS** check all local and state regulations regarding towing, licensing, and lights before towing your log splitter on any public road. Any licensing or modifications such as taillights, etc., needed to comply, is the sole responsibility of the purchaser.

MAINTENANCE & ADJUSTMENTS

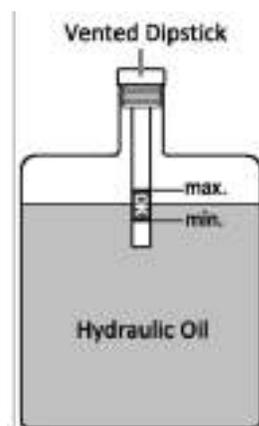
Regular maintenance is the way to ensure the best performance and long life of your machine.

- Refer to the Engine Operator's manual packed with your log splitter for all engine maintenance e.g. how to check and change the engine oil.
- 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.
- Relieve hydraulic system pressure by cycling the valve control lever from forward to reverse several times while engine is not running. Return it to neutral before repairing or adjusting fittings, hoses, tubing, or other system components.
- ALWAYS 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.
- Periodically clean the machine using an oiled rag to prevent rust.
- DO NOT attempt to modify this tool or create accessories not recommended for use with this tool. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.
- The tires coming with your log splitter are D.O.T. certified tires. 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. Excessive pressure when seating beads may cause the tire/rim assembly to burst with force sufficient to cause serious injury.
- 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 Manufacturer. Make sure to change a new coupler spider immediately when the coupler spider fails completely, or you will experience a loss of hydraulic power.
- If the wedge becomes dull or nicked, it can be sharpened.
- Change the hydraulic fluid in the reservoir every 100 hours of operation. Follow the steps below:
 - 1) Place a suitable oil collection container of no less than 5 gallon capacity under the tank.
 - 2) Disconnect the oil drain screw from the bottom of the reservoir tank. Allow the fluid to drain into the container. See FIGURE 14.
 - 3) After draining, put the oil drain plug back in and tighten.
 - 4) Refill the reservoir tank (Please follow the steps in Page 12 to fill the tank, and repel the air in the tank).
 - 5) Maintain the fluid level within the range specified on the dipstick at all times. See FIGURE 15.
 - 6) Always dispose of any used hydraulic fluid and engine oil at approved recycling centers only.
 - 7) 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.

(FIGURE14)



(FIGURE15)

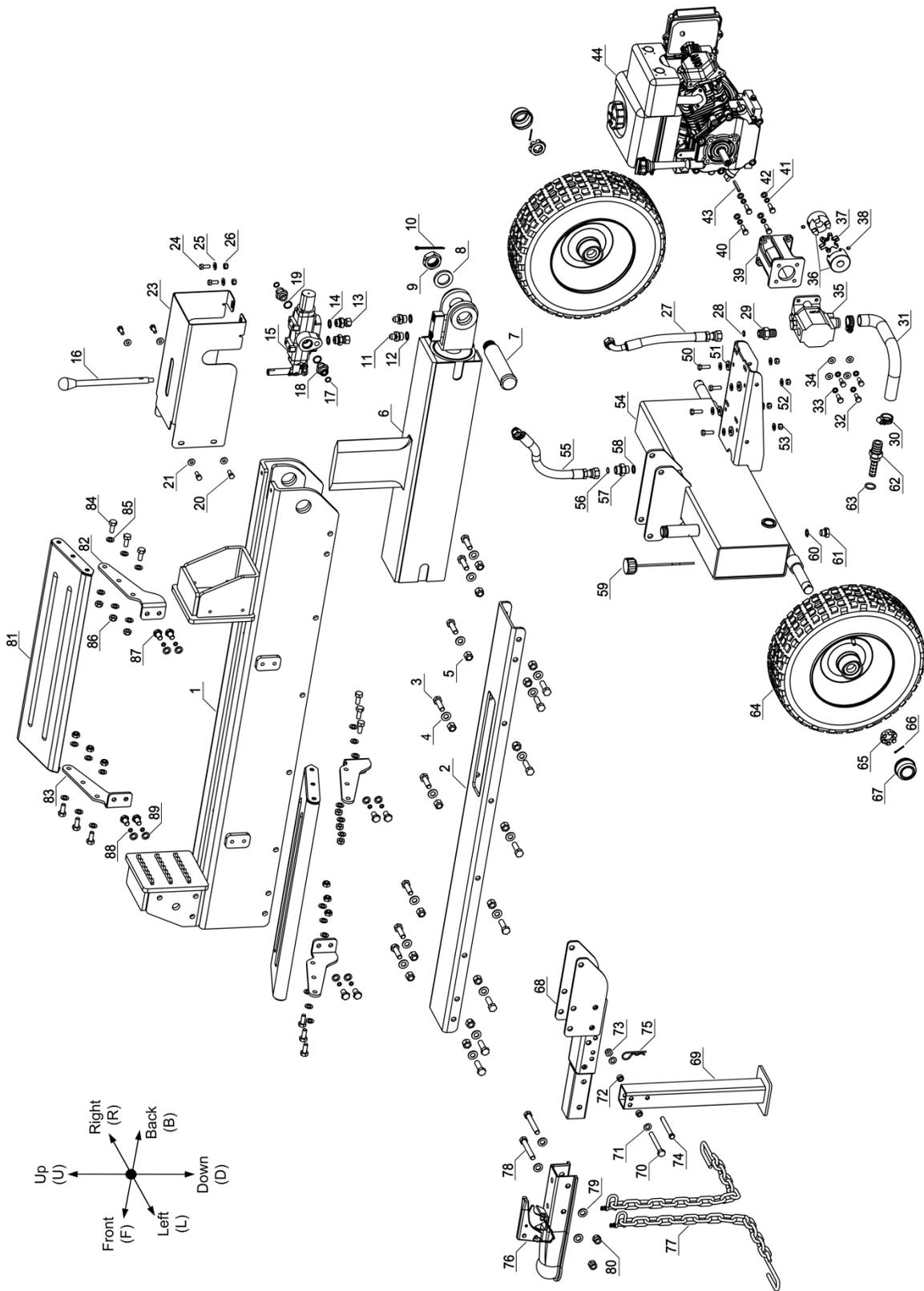


TROUBLESHOOTING

Most problems are easy to fix. Consult the trouble shooting Table below for common problems and their solutions. An unusual noise or vibration is generally a warning of trouble. Check for damaged parts and clean, repairs and / or replace as necessary.

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. Low oil level or air trapped in hydraulic system. 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. Fill oil or bleed air. 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. Low oil level or air trapped in hydraulic system. 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. Fill oil or bleed air. 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. Low oil level or air trapped in hydraulic system. 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. Fill oil or bleed air. 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.

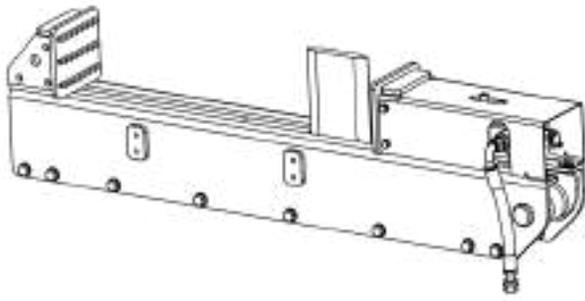
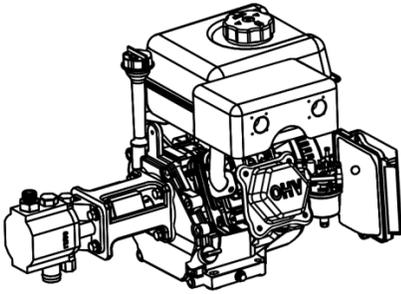
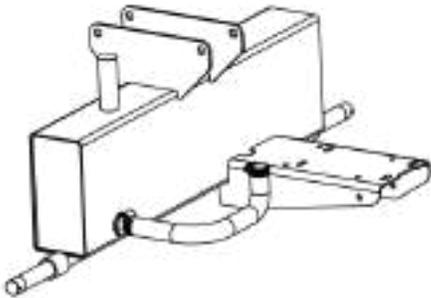
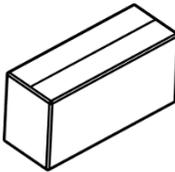
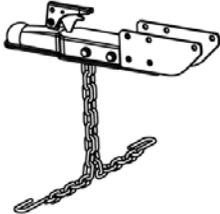
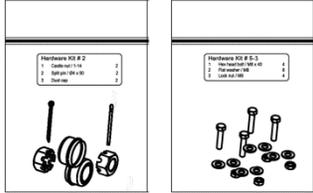
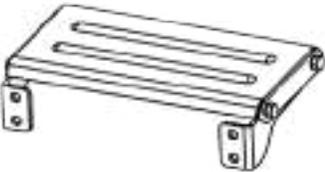
EXPLODED DIAGRAM & PARTS LIST



REF #	PART #	PART NAME	SPECIFICATIONS	QTY PER UNIT
1	310-866	Machine Body w/ End Plates	20T	1
2	310-867	Machine Body Bottom	20T	1
3	710-438	Hex Head Bolt	ZP, M12*35	16
4	750-621	Flat Washer	ZP, M12	16
5	720-536	Lock Nut	ZP, M12	16
6	530-484	Cylinder	4.0 in.	1
7	760-134	Pin	PH, Ø40-M32*185	1
8	750-677	Flat Washer	PH, M32	1
9	720-872	Bored Nut	PH, M32	1
10	760-744	Split Pin	Ø4*50	1
11	510-213	Hydraulic Adaptor	Straight, Hex24*43.5, 3/4-3/4	2
12	730-082	O Seal Ring	Ø22*2.4	2
13	510-228	Hydraulic Adaptor	Straight / Swing, Hex24*40.5, 3/ 4-3/4	2
14	730-082	O Seal Ring	Ø22*2.4	2
15	520-790	Hydraulic Valve w/ Short lever	20T	1
16	520-405	Control Handle Lever	Ø15*264	1
17	730-619	O Seal Ring	Ø15*1.9	2
18	510-448	Hydraulic Adaptor	Straight, Hex27*36, 7/8-13/16	2
19	730-088	O Seal Ring	Ø24*2.4	2
20	710-637	Hex Head Bolt	ZP, M8*20	4
21	750-638	Flat Washer	ZP, M8	4
23	350-209	Valve Cover	20T	1
24	710-637	Hex Head Bolt	ZP, M8*20	2
25	750-638	Flat Washer	ZP, M8	2
26	720-500	Lock Nut	ZP, M8	2
27	560-403	Hydraulic Hose (Pump - Valve)	SA-19/SS-19,1/2"*310	1
28	730-619	O Seal Ring	Ø15*1.9	1
29	510-432	Hydraulic Adaptor	Straight, Hex27*45, NPT1/2- 13/16	1
30	760-377	Hose Clamp	1"	2
31	560-315	Oil Suction Hose	Ø24*330	1
32	710-637	Hex Head Bolt	ZP, M8*20	4
33	750-834	Spring Washer	ZP, M8	4
34	750-638	Flat Washer	ZP, M8	4
35	550-412	Two Stage Pump	8.8 / 2.1, 11GPM	1
36	550-702	Coupler Shaft	3/4"	1
37	550-706	Spider		1
38	740-600	Set Screw	PH, M6*10	2
39	550-814	Pump Mount		1
40	710-632	Hex Head Bolt	ZP, 5/16-24*20	4
41	750-844	Spring Washer	ZP, 5/16	4
42	750-617	Flat Washer	ZP, 5/16	4
43	770-123	Engine Shaft Square Key	3/16 X 1.75	1

REF #	PART NAME	SPECIFICATIONS	QTY PER UNIT
44	SH265	Gas Engine (Kohler 6.5)	1
50	710-693	Hex Head Bolt	ZP, M8*40
51	960-429	Vibration Isolator 22/28 Ton	Ø24*Ø9*3
52	750-638	Flat Washer	ZP, M8
53	720-500	Lock Nut	ZP, M8
54	540-949	Reservoir Tank	D20T
55	560-409	Oil Return Hose	SA-19/SS-19, 1/2"*350
56	730-619	O Seal Ring	Ø15*1.9
57	510-443	Hydraulic Adaptor	Straight, Hex27*35, , 3 /4-13/16
58	730-082	O Seal Ring	Ø22*2.4
59	540-329	Dipstick w/ Ventilator	Ø4.35*186
60	730-064	O Seal Ring	Ø20*2.4
61	710-877	Oil Drain Bolt	PH, M16*15
62	540-074	Inlet Filter	Straight, Hex32-Ø24, Filter Ø20*55
63	730-602	O Seal Ring	Ø28*3.1
64	330-515	D.O.T. Tubeless Tire / Wheel	16*4.8*8 in.
65	720-836	Castle Nut	ZP, 1-14
66	760-744	Split Pin	ZP, Ø4*50
67	330-631	Dust Cap	
68	320-438	Tongue	20T
69	320-474	Jack Stand	5*5*42
70	710-539	Hex Head Bolt	ZP, M10*90
71	750-525	Flat Washer	ZP, M10
72	320-473	Spacer	PH, Ø16*9
73	720-120	Lock Nut	ZP, M10
74	760-155	Clevis Pin	ZP, Ø10*85
75	760-679	Spring Clip	ZP, Ø3
76	320-420	Hitch Coupler	2"
77	320-421	Safety Chain	
78	710-433	Hex Head Bolt	ZP, M12*75
79	750-621	Flat Washer	ZP, M12
80	720-536	Lock Nut	ZP, M12
81	320-938	Log Tray Plate	
82	320-931	Log Tray Frame (BR, FL)	
83	320-930	Log Tray Frame (FR, BL)	
84	710-516	Hex Head Bolt	ZP, M10*20
85	750-525	Flat Washer	ZP, M10
86	720-120	Lock Nut	ZP, M10
87	710-516	Hex Head Bolt	ZP, M10*20
88	750-355	Spring Washer	ZP, M10
89	750-525	Flat Washer	ZP, M10

PACKING LIST

		
<p>Beam assembly x 1</p>	<p>Engine-Pump x 1</p>	
		
<p>Reservoir tank assembly x 1</p>	<p>Hardware kits box x 1, including:</p>	
		
<p>Tongue assembly x 1</p>	<p>Hardware kit # 2, 5-1</p>	
		
<p>Log tray assembly x 2</p>	<p>Engine manual x 1</p>	<p>Instruction manual x 1</p>
		
<p>Wheel x 2</p>	<p>Control handle lever x 1</p>	<p>Dipstick w/ ventilator x 1</p>