



DUAL ACTION ELECTRIC LOG SPLITTER 16 TON



MODEL NO.: ED16T21 Owner's Manual

ASSEMBLY & OPERATING INSTRUCTIONS

Purchase Date _____ Serial No. _____
Dealer _____

Boss Industrial, Inc. • 1208 N. Independence Blvd • Romeoville, IL 60446 • USA
Phone: (800) 780-BOSS (2677) • Fax (331) 472-2976
www.boss-industrial.com

To The Owner

Thank You!

Thank you for purchasing a BOSS 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.

This unit is designed to use on a power supply that is 115 volts, 60 Hz, AC only (household current of 20 amp specially). If you have any problems or questions concerning the machine, phone an authorized service dealer or contact us directly. Boss 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. Boss Industrial, Inc. is responsible for all equipment-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the Warranty terms included in this Owner's/Operator's Manual 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.

Customer Support

Please do NOT return the machine to the retailer or dealer without first contacting the Customer Support Department.

If you have difficulty assembling this product or have any questions regarding the controls, operation, or maintenance of this machine, you can seek help from the experts. Choose from the options below:

- ◇ Visit us on the web at www.boss-industrial.com
- ◇ Call a Customer Support Representative at (800) 780-2677 or send an email to: service@boss-industrial.com
- ◇ Write to Boss Industrial, Inc., 1208 N. Independence Blvd, Romeoville, IL 60446

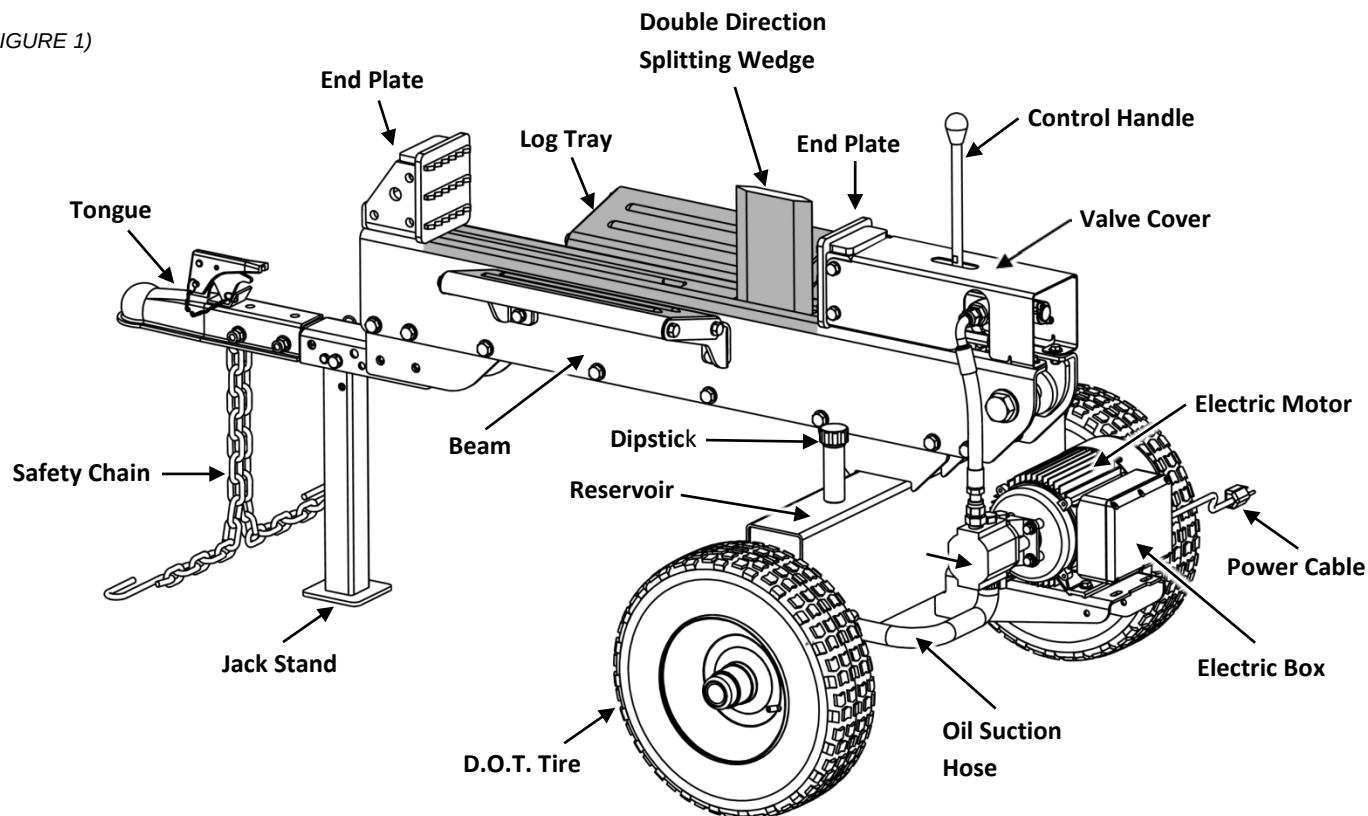
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SECTION I: KNOW YOUR LOG SPLITTER

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.

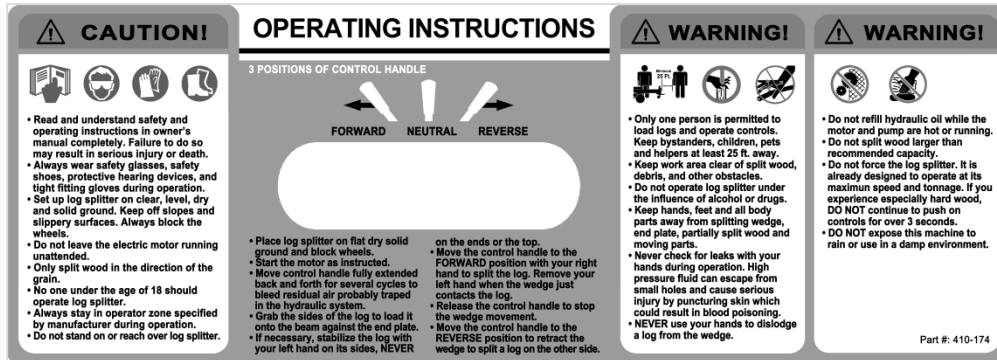


NOTICE is important information about the proper use of your machine. Failure to follow this instruction could result in damage to your machine.

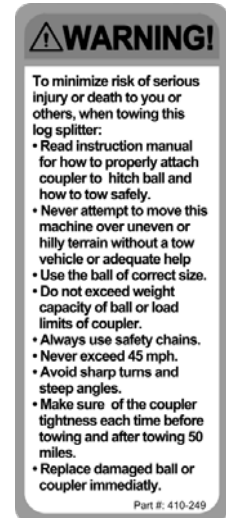
SAFETY DECALS

Make sure that all safety warning decals are in good condition and readable. Always replace missing or defaced decals. Contact Boss Industrial, Inc. at 1-800-780-2677 for replacement decals.

1. Safety Warning / Operating Label (Part #: 410-174)



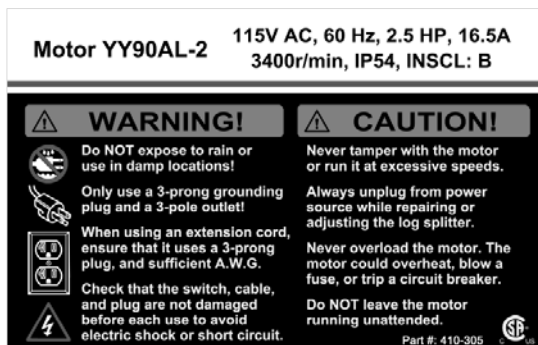
2. Towing Safety Label (Part #: 410-429)



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



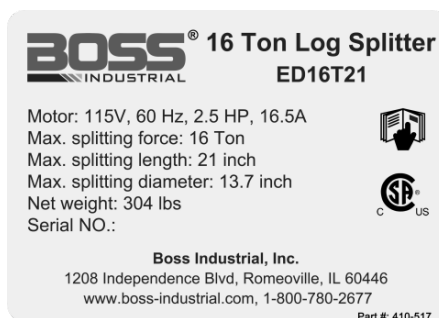
4. Motor Label (Part #: 410-305)



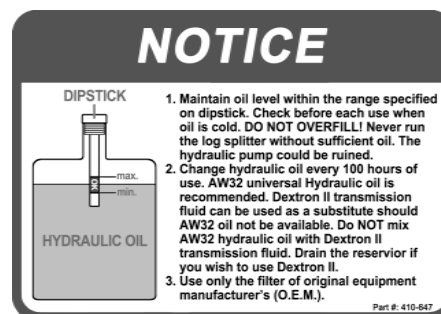
5. Switch Label (Part #: 410-159)



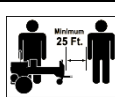
6. Serial NO. / Spec. Label (Part #: 410-517)



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



Study the following symbols used on this tool and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

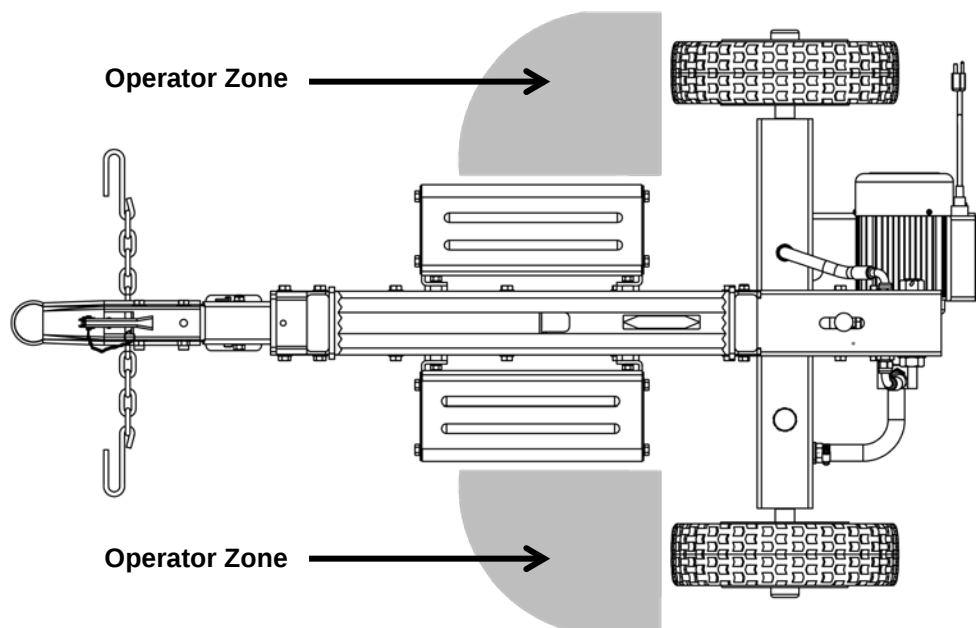
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
	Read The Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Eye, Face & Ear Protection	Always wear safety goggles or safety glasses with side shields, earplugs and a face shield when operating this product.
	Safety Alert	Precautions that involve your safety.
	Wear Gloves	Always wear nonslip, heavy-duty protective gloves when operating this product.
	Wear Safety Footwear	Always wear nonslip safety footwear when operating this product.
	Keep Bystanders Away	Always keep bystanders at least 25 ft. (7.5 m) away.
	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.
	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.
	Keep Hands Away	Always keep hands away from the wedge and the ram.
	Pinch Point	Never touch the cylinder bed, ram, or wedge during machine operation.
	Rotating & Moving Parts Alert	Beware of rotating and moving parts, serious injury could occur.
	Electric Shock Alert	Never touch damaged or exposed wires while the machine is connected to a power source.

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 oil level before every operation.
5. Sharpen the wedge periodically.
6. **USE** only an electrical circuit having adequate capacity as recommended.
7. **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.
8. 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.
9. **Release** the handle lever right before the cylinder is extended or retracted fully. Keep holding the control lever as the wedge reaches to the farthest positions will cause the valve squeezed. When this happens, you must turn off the motor to relieve pressure and restart the tool to operate.
10. Move the control handle to Forward or Backward position gently to operate. Push or pull hard on the control handle lever won't help generate more power, but break the handle or damage the internal valve parts and void warranty.
11. **DO NOT** expose this machine to rain or use in a damp environment.

OPERATOR ZONE

ONLY operate the log splitter from the operator zone 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)

ELECTRICAL SAFETY

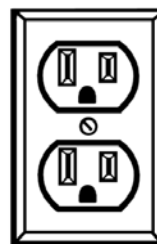
1. This tool is powered by a precision built electric motor. Use only an electrical circuit having adequate capacity as recommended by the manufacturer -- 115 volts, 60 Hz, 20 Ampere household current, AC only. Do not operate this tool on direct current (DC). If you choose to connect the tool to a generator, make sure the generator carrying the current (Amperes) or power output (Watts) at least 50% more than motor rated power.
2. A substantial voltage drop will cause a loss of power and the motor will overheat. If the machine does not operate when plugged into an outlet, double check the power supply.
3. For voltage, the wiring is as important as the motor's horsepower rating. A line intended only for lights cannot properly carry a power tool motor. Check the house wiring if you experience circuit breaker tripped or fuse blown even the motor is plugged into a wall outlet directly.
4. This tool is intended for use on a circuit that has an outlet like the one shown below (*FIGURE 3*). Ensure that the outlet has a grounding pin that is properly installed and grounded in accordance with all local codes and ordinances to reduce the risk of electric shock. Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.
5. Check that the switch, cable and plug are not damaged before each use to avoid electric shock or short circuit.
6. Use only 3-wire extension cords with 3-prong grounding plugs, and 3-pole receptacles that accept the tool's plug.
7. When using a power tool at a considerable distance from the power source, use an extension cord heavy enough to carry the current that the tool will draw. An undersized extension cord will cause a drop in line voltage, resulting in a loss of power and causing the motor to overheat.
8. Use the chart provided below to determine the minimum wire size required in an extension cord. Only round jacketed cords listed by Underwriter's Laboratories (UL) should be used.

**Ampere rating (on tool faceplate)

	0-2.0	2.1-3.4	3.5-5.0	5.1-7.0	1-12.0	12.1-16.0
Cord Length	Wire Size (A.W.G.)					
25'	12	12	12	10	10	10
50'	12	12	10	10	—	—
100'	10	10	10	—	—	—

**Used on 12 gauge - 20 amp circuit only.

NOTE: AWG = American Wire Gauge



(FIGURE 3)

9. When working with the tool outdoors, use an extension cord that is designed for outside use. This is indicated by the letters "WA" on the cord's jacket.
10. Keep the extension cord clear of the working area. Position the cord so that it will not get caught on lumber, tools or other obstructions while you are working with a power tool. Failure to do so can result in serious injury.
11. "BLOWING" a fuse or tripping a circuit breaker is usually a warning that you are overloading the machine or have too many devices taking power from the circuit, or both. DO NOT install a higher capacity fuse!
12. DO NOT leave the motor running unattended.
13. DO NOT expose the motor to rain or use / store in damp locations.

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. NEVER check for leaks of hydraulic fluid with your hand. Fluid escaping from a small hole can be almost invisible. Escaping fluid under pressure can have sufficient force to penetrate skin causing serious personal injury or even death. Leaks can be detected by passing a piece of cardboard over the suspected leak and looking for discoloration.
3. ALWAYS seek professional medical attention immediately if injured by escaping hydraulic fluid. Serious infection or reaction can develop if proper medical treatment is not administered immediately.
4. ALWAYS be sure to relieve all pressure by shutting off the motor and moving the control handle back to stop position.
5. NEVER remove the vent plug 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.
7. NEVER operate your log splitter near a flame or spark. Hydraulic oil is flammable and can explode.
8. ALWAYS take a Class B fire extinguisher with you when operating this log splitter in dry areas as a precautionary measure against possible flying sparks.



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.

SECTION II: PRE-OPERATION INSTRUCTIONS

UNPACKING

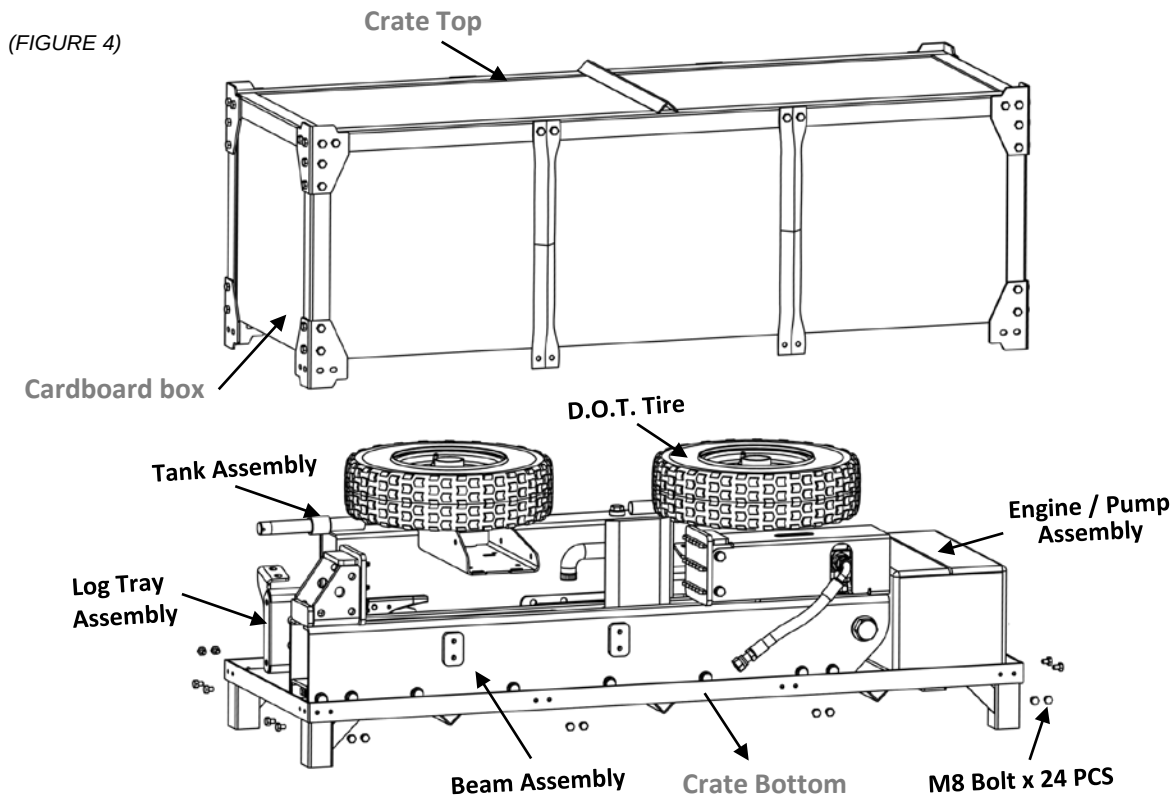


WARNING! This product has been shipped partially assembled. Use extreme caution unpacking this machine. Some components are very heavy and will require additional people or mechanical lifting tools.

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 4.



Step 2: Carefully remove all loose parts included in the container, e.g. Electric motor / pump box, etc.

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: Open the Motor / pump assembly box, and then put aside the parts and instruction manual 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 the two assemblies. Lifting tools such as hoist, crane, jack, etc. are also recommended.

Step 6: Inspect if all component assemblies, parts and accessories are included as listed in the Packing List (Page 24). If any parts are damaged or missing, please call our customer service department at 1-800-780-2677 or send an email to service@boss-industrial.com for assistance.

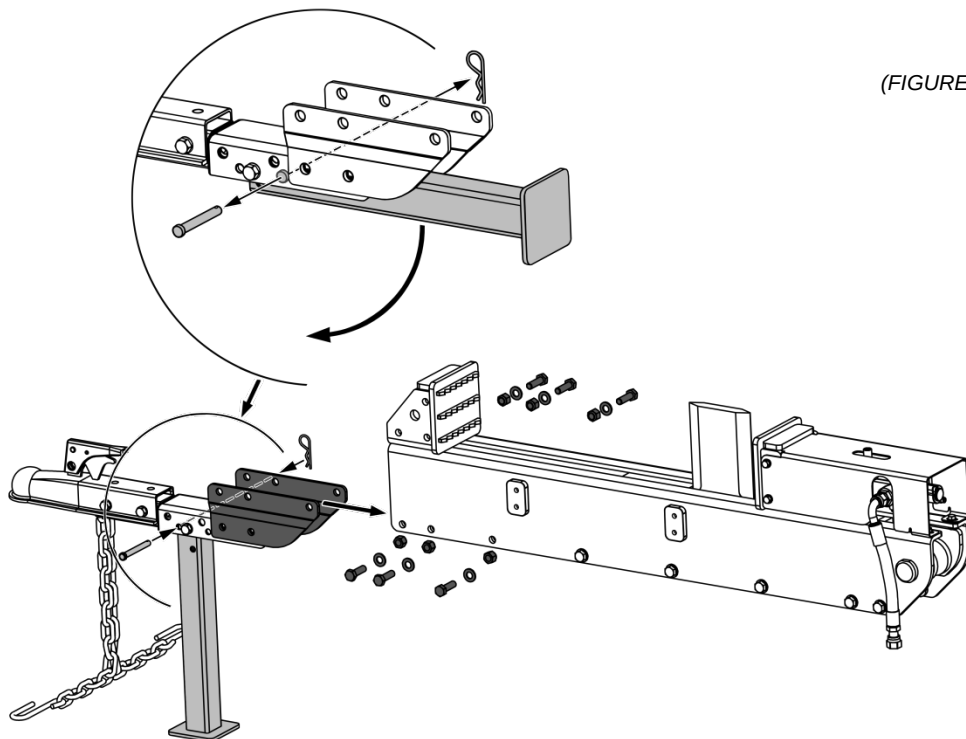
ASSEMBLING

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 5*.

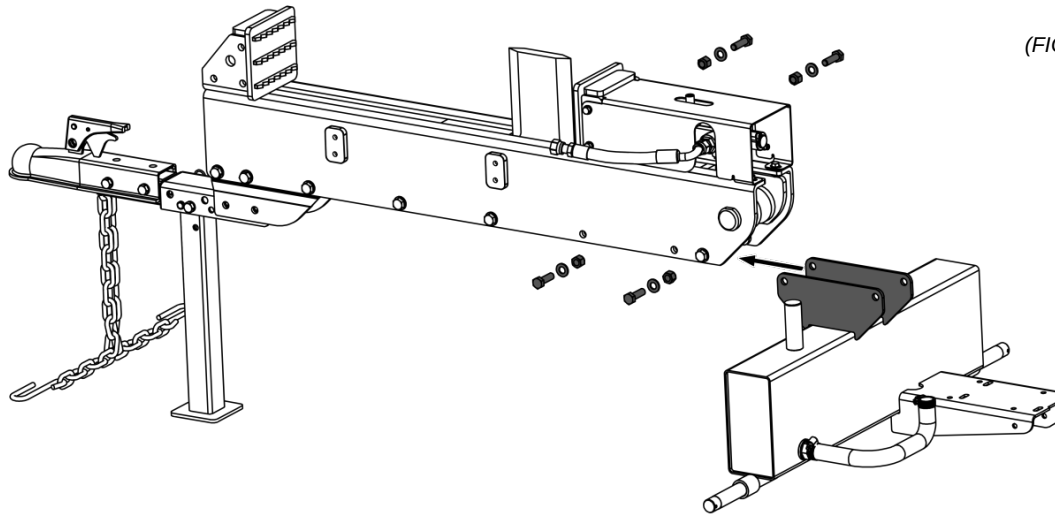
1. Raise the beam assembly cross onto one end of the crate cover. Two or more people are recommended to assist with raising the beam and securing it while the other(s) install the jack stand and reservoir tank.
2. Remove the spring clip (Ø3) and clevis pin (Ø10 x 85) which hold jack stand on the tongue, 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 5)

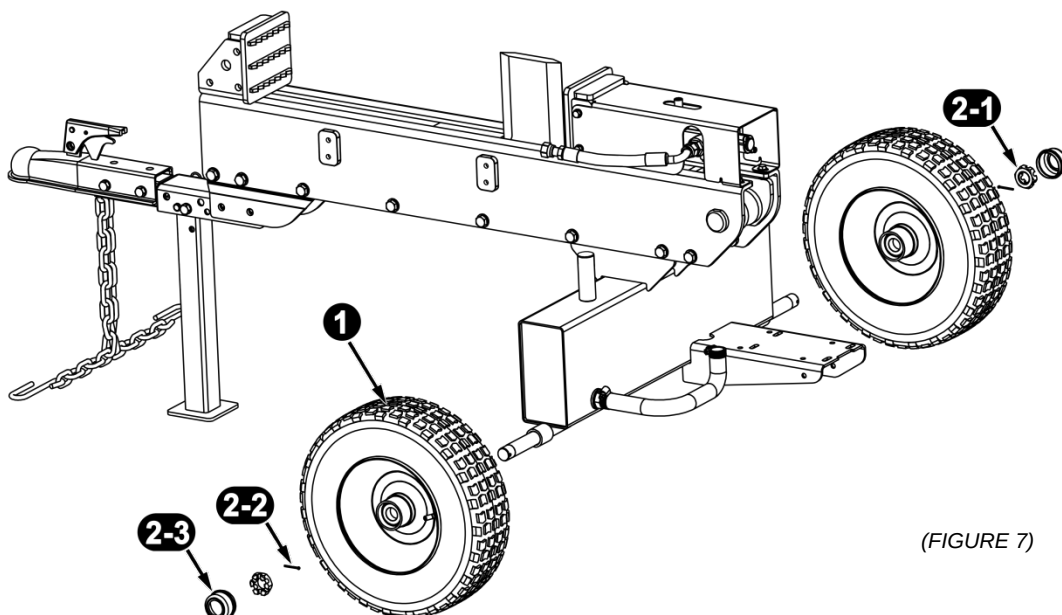
STEP 2: Install the reservoir tank. See *FIGURE 6*

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 7*.

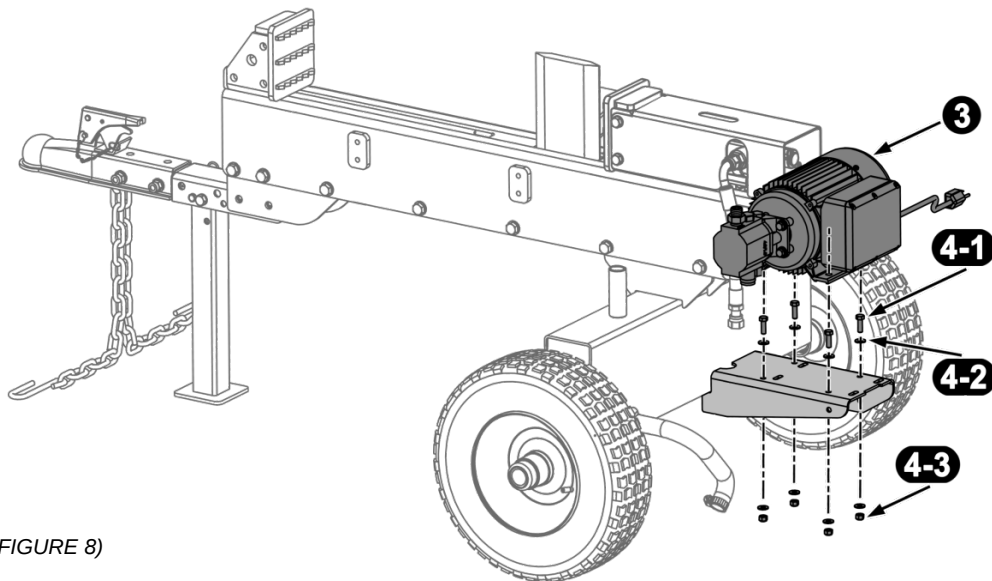
1. Remove the plastic shipping caps from the wheels and slide the wheels onto the wheel axels.
2. Screw the castle nuts onto the axels and tighten with an adjustable wrench to seat the bearings. Then back the castle nuts off one half turn and snug them up to the bearings, so they line up with the hole 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.	DECSRIPTION	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 motor / pump assembly. See *FIGURE 8*.

1. Align the four mounting hole positions on the motor and the mount plate.
2. Secure the motor with the M8 hardware, then tighten the harware using two 13mm wrenches.



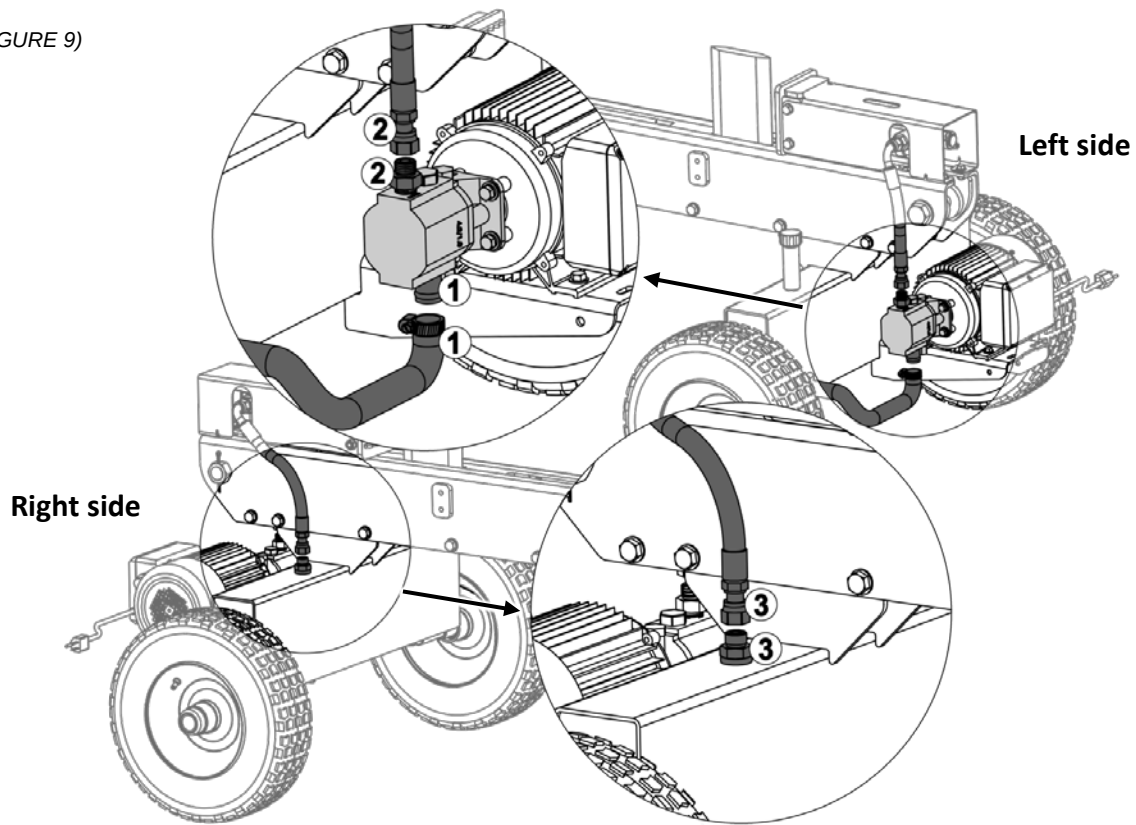
REF. NO.	DECSRIPTION	QTY.
3	Engine / Pump assembly	1
4	Hardware kit # 5-3, including:	1
4-1	Hex head bolt / M8 x 40	4
4-2	Flat washer / M8	8
4-3	Lock nut / M8	4

STEP 5: Attach the hoses. See *FIGURE 9*.

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.

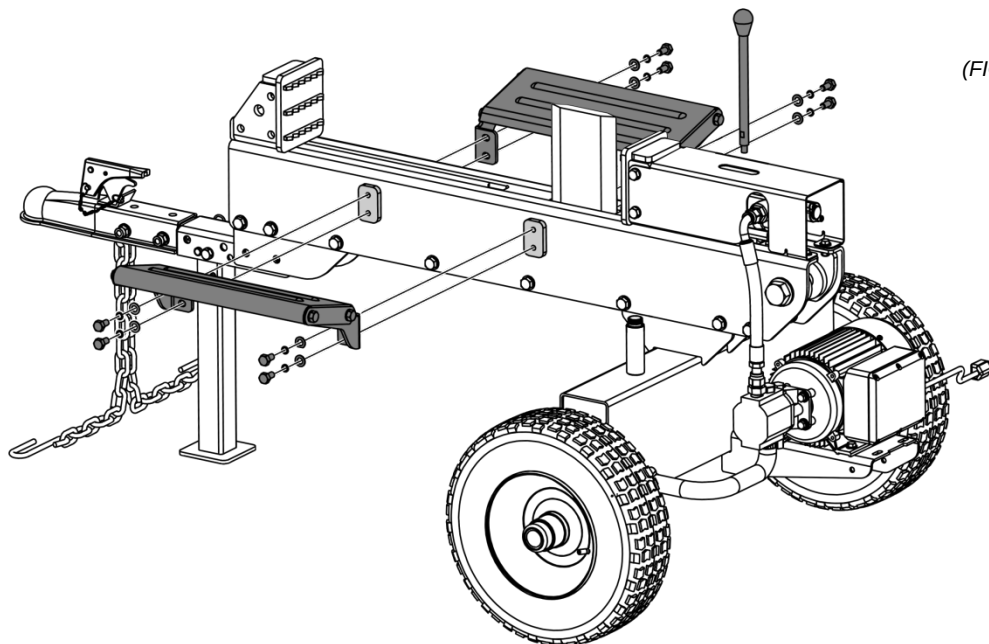
1. Oil suction hose Ø19, labeled as ①, comes from the bottom of the reservoir.
Loosen the hose clamp on the open end of this hose using a flat head screwdriver, and connect the hose to the fitting on the bottom of the pump, which is also labeled as ①. Tighten the hose clamp.
2. Pump / Valve connecting 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 for easy installation. Tighten the hose fitting using a 27mm wrench or an adjustable wrench.

(FIGURE 9)



STEP 6: Install the log tray assemblies and control handle lever. See *FIGURE 10*.

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.



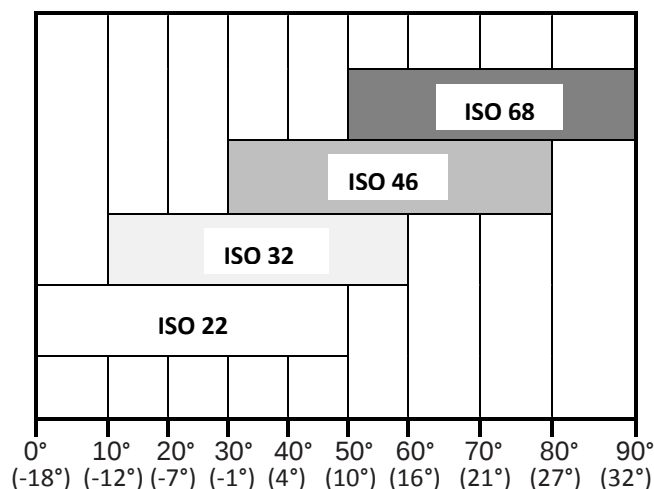
(FIGURE 10)

STEP 7: Fill hydraulic oil. See *FIGURE 11*.

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 Motor-Pump assembly 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.

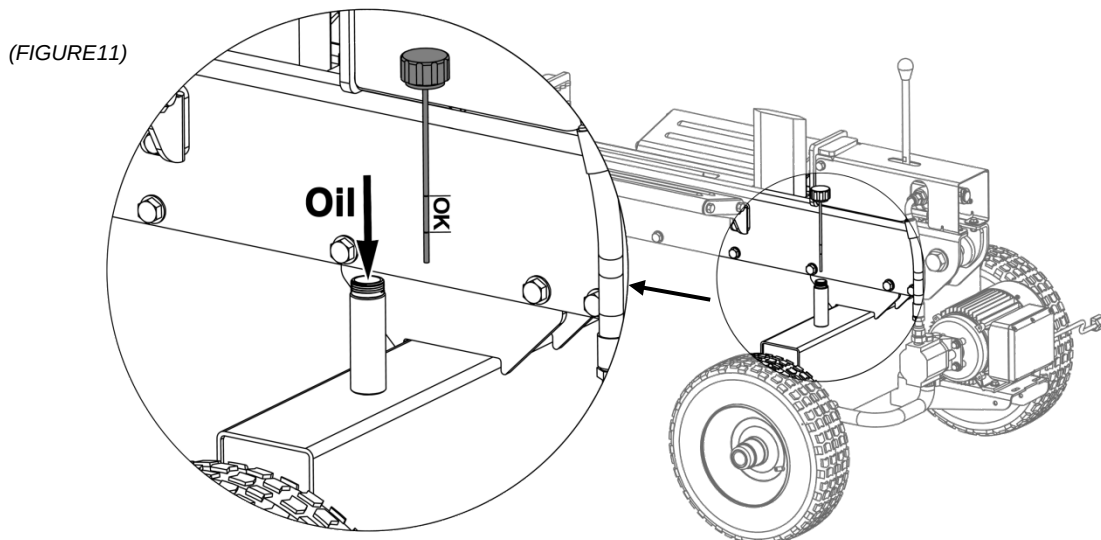


Approved fluids include Shell Tellus® S2 M 32 Hydraulic Fluid, Dexron® III / Mercon® automatic transmission fluid, Pro-Select™ AW-32 Hydraulic Oil or 10WAW-ISO viscosity grade 32 hydraulic oil. It is not recommended that fluids be mixed, to top off the reservoir tank during initial set-up use Shell Tellus®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

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



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 before you start the log splitter.
- **ALWAYS** check the machine with no frayed, kinked, cracked, or damaged hoses, fittings, or tubing before operation.



NOTES:

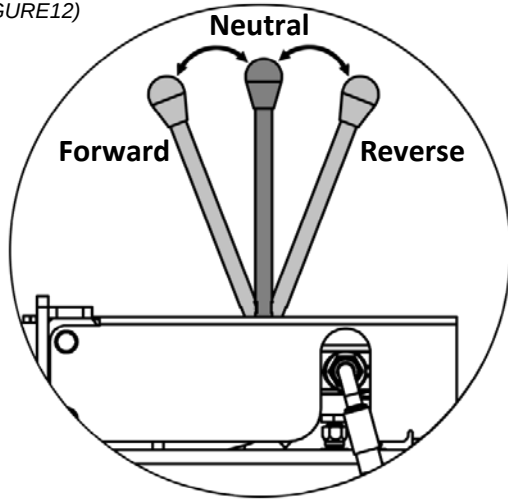
1. **ALWAYS** read the operator's manual before operation.
2. **NEVER** allow children under 16 years of age to operate this log splitter. NEVER allow adults lacking proper instructions and understanding to operate this log splitter.
3. **NEVER** operate the log splitter when tired or under the influence of alcohol, drugs or medication.
4. **ALWAYS** use eye protection which is marked to comply with ANSI Z87.1.
5. **NEVER** use this log splitter for any purpose other than splitting wood. It is designed for this use only. Any other use can cause serious injury or death.
6. Check that the switch, power cable and plug are not damaged (no cracks, etc.) to prevent the risk of electric shock or a short circuit.
7. Check that all nuts, bolts and hydraulic fittings are tight to be sure the equipment is in a safe working condition.
8. Ensure that the horizontal distance between the splitter and outlet is more than 5 feet.
9. Be familiar with all controls and proper operation. Know how to stop the machine quickly in the event of any malfunction or emergency.

SECTION III: OPERATION INSTRUCTIONS

- Plug the machine into a 3 pole outlet and start the motor (**20 AMP circuit required.**)
- Grab the log on the sides and place it firmly on top of the beam against the end plate. See *FIGURE 13*
- Use your right hand to push the control handle lever to the Forward or Reverse position to split the wood. See *FIGURE 13*.

The control handle has three positions. See *FIGURE 12*.

(FIGURE12)



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

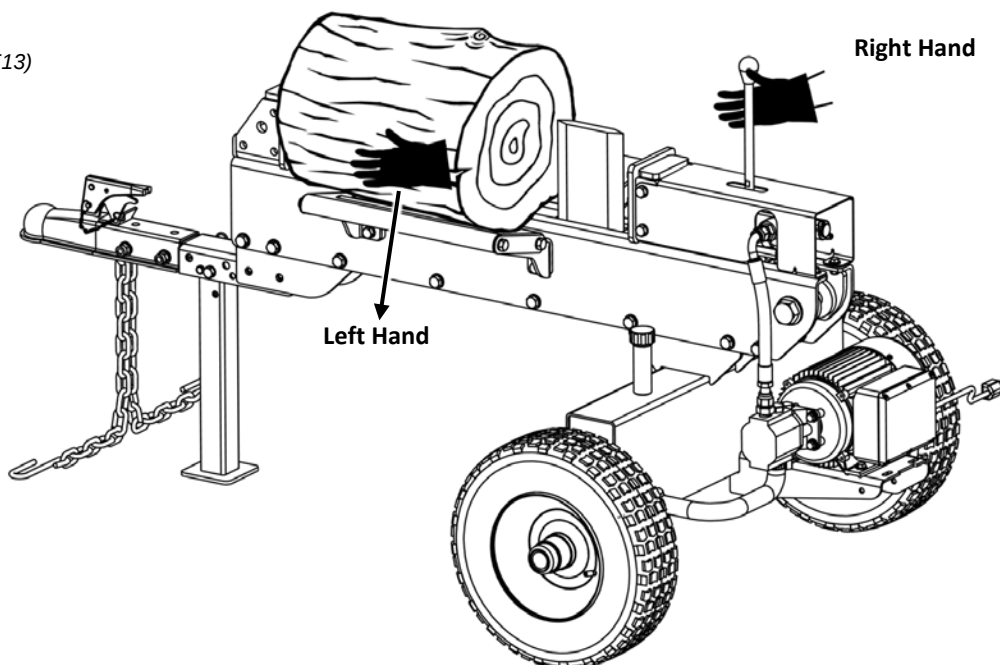
NEUTRAL — Release the control handle to the NEUTRAL position, the wedge stops moving at any point during splitting.

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 motor to relieve the pressure and restart the tool to operate.

- Stabilize the log using your left hand when needed. Remove your hand immediately as the wedge starts to contact the log.
- 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.

(FIGURE13)



- 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 motor 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. **NEVER** place hands or feet between the extending wedge and the end plates. Failure to do so may result in crushed or amputated fingers, toes, hand, or foot.
2. **NEVER** straddle or step over the log splitter during operation.
3. **NEVER** reach crossly and attempt to catch a falling split wood — let it fall.
4. **NEVER** try to split two logs on top of each other.
5. **NEVER** try to cross split a log.
6. **NEVER** attempt to load your log splitter when the wedge is in motion.
7. **ALWAYS** use your hand to operate the control lever on the valve. **NEVER** use your foot, a rope or any extension device.
8. **ONLY** operate your log splitter in daylight or under good artificial light.
9. **ALWAYS** keep the work area clean. Remove split wood around your log splitter immediately so that you don't stumble over it.
10. **DO NOT** allow familiarity with tools to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.
11. **ALWAYS** clear the wood chips inside the machine body where the cylinder travels in case damages to the valve.
12. **ONLY** a single operator is allowed to load and operate this log splitter. Keep bystanders, helpers, pets and children a sufficient distance at least 25 feet from the machine.
13. **DO NOT** force the tool. It is designed to operate within its maximum speed and tonnage. No continuing to push on the control handle for more than 3 seconds. If you experience extremely hard wood, release the control handle at once to avoid permanent damage which will void warranty. If the motor stops, turn off the motor and then turn it back on again to continue splitting.
14. **NEVER** leave this machine unattended with the engine running.
15. **NEVER** operate your log splitter when it is in poor mechanical condition or in need of repair.
16. **DO NOT** pull on the power supply cable to unplug the machine.

SECTION IV: MAINTENANCE

OFF SEASON STORAGE

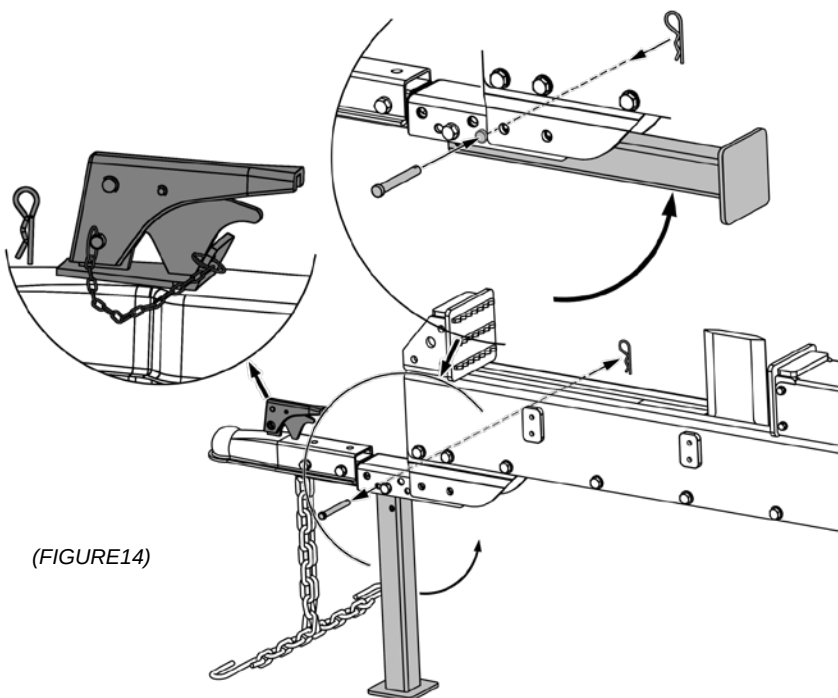
If the log splitter will not be used for more than 30 days, prepare it for storage as follows:

- Store unit in a clean, dry area inside. Make sure it's switched off and unplugged.
- Allow the machine to cool 5 minutes after use before storing.
- Protect power supply cable from heat, sunshine, aggressive liquids and sharp edges.
- Clean the log splitter thoroughly. Wipe the machine with an oiled rag to prevent rust, especially on the wedge and the beam.

NOTES: DO NOT store unit in unprotected areas outdoors. Never place near corrosive materials or in a damp environment.

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 a Class I, 2" ball, pivot the jack stand upwards and secure onto the tongue. See *FIGURE 14*.
- 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-16 helps raise the coupler up and lower it 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.



(FIGURE 14)



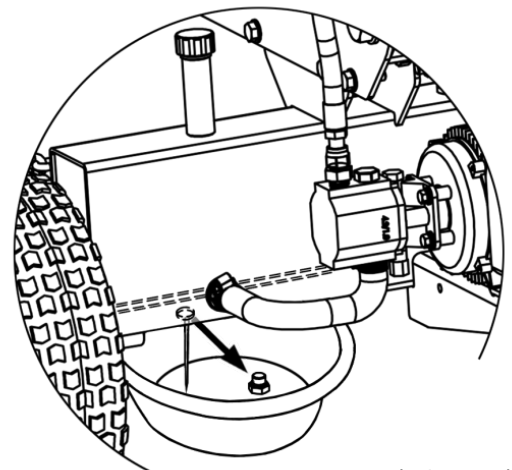
NOTES

1. **NEVER** move this machine while the motor is running.
2. **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.
3. **NEVER** carry any cargo or wood on your log splitter.
4. **NEVER** allow anyone to sit or ride on your log splitter.
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.

- **ALWAYS** unplug from the power source while repairing or adjusting the splitter.
- Sharpen the wedge when it gets dull or nicked. Using a fine-toothed file, smooth any burrs or crushed areas along the cutting edge.
- Periodically clean the machine using an oiled rag to prevent rust.
- Replace all damaged or worn parts immediately that must meet manufacturer's specifications.
- 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.
- 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 15*.
 - 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 11*.
 - 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.



(FIGURE15)

8) Flushing the reservoir tank and hoses with kerosene whenever service is performed on the tank, hydraulic pump or valve is recommended.

- **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.

TROUBLE SHOOTING

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. If you continue to experience problems, contact us at www.boss-industrial.com, call toll-free (800) 780 2677 or send an email to service@boss-industrial.com for support.

Problem	Possible Cause	Remedy
Motor fails to start.	• Overload Protection Device disengaged to protect the log splitter from being damaged.	• Switch off the motor and unplug the power cable. Let motor cool down for 5 min and restart. If this does not solve the problem, call us for support.
The log splitter won't split logs.	• Log is improperly positioned. • The size or hardness of the log exceeds the machine's capacity. • Wedge cutting edge is blunt. • Insufficient hydraulic oil. • Unauthorized adjustment was made on the Maximum Pressure Set Screw. The pressure was set lower. • Extension cable of insufficient A.W.G. • Ram is over held at the farthest positions which causes valve squeezed.	• Refer to <i>Operation</i> section for log loading. • Reduce the log size before splitting • Refer to "Sharpening The Wedge" in the <i>Maintenance</i> section. • Locate leak(s). Contact us for support. • Contact us for support. • Change an extension cable of higher A.W.G. • Turn off the motor and then restart to release the pressure,.
Wedge jerks, vibrates or does not move.	• Low oil level. • Excessive air trapped in the hydraulic system. • Log splitter is over forced. • Hydraulic lines blocked . • Hydraulic fluid too thick or too cold. • Cylinder is blocked by some wood chips.	• Check oil level for possible oil refilling. • Operate 12 cycles to repel air. • Turn off and restart the unit. If this doesn't solve the problem, contact us for support. • Change oil and clean or replace filter. • Change wrong oil or warm up. • Clean the wood chips inside periodically.
Oil leaks from points of the hydraulic system	• Air is sealed in hydraulic system and oil gets foamy while operating. • Tank is overfilled. • Transportation seal plug is not applied before moving the log splitter. • Oil drain bolt is not tight. • Hydraulic fitting(s) and/or seal(s) are worn.	• Breather is blocked. Pull out the breather during operating. • Put a container under the oil filling tube until it stops spilling oil. • Replace the transportation seal plug before moving the log splitter. • Tighten the oil drain bolt. • Contact the dealer.

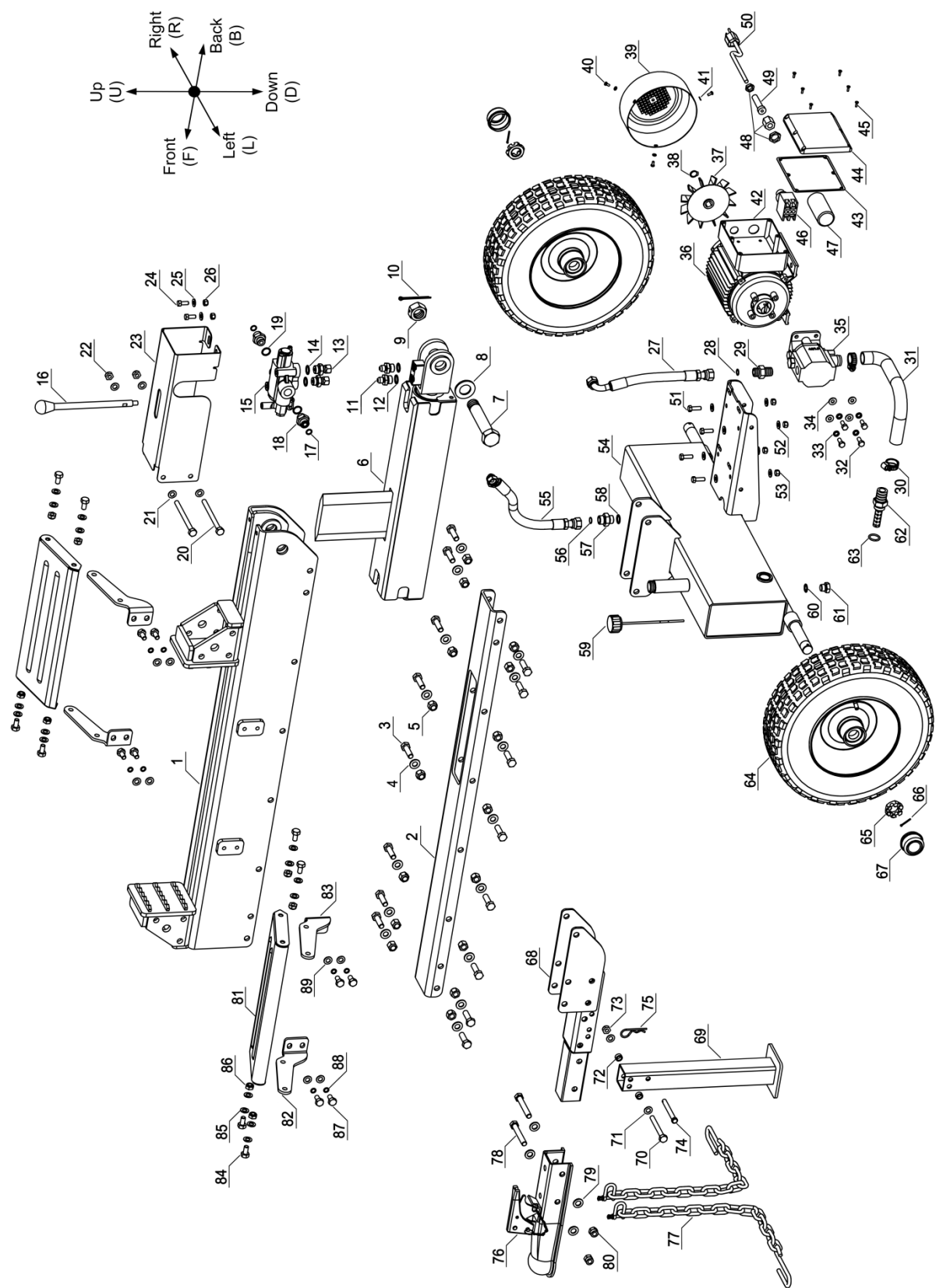
TECHNICAL SPECIFICATIONS

Electrical requirements	115V, 60Hz
Power output	1800W
Rated current	16.5A
Motor speed	3400 RPM
Power cable	SJTW 12 AWG (3.3mm ²)

Max. splitting force*		16 ton
Max. splitting length		20.5 in
Splitting wedge height		6.85 in
Hydraulic pressure		3800 PSI
Two stage pump flow		6 GPM
Cylinder bore * Stroke		3 in * 18.4 in
Cycle time*	Feed	7 sec
	Retract	6 sec
Wheels		D.O.T. 16 x 4.8 x 8 in.
Oil capacity		4 Gallon
Machine dimensions (L×W×H) (in)		69x40x36
Machine net weight		304 lbs

*Tonnage and cycle time may vary dependent upon electricity supply, mechanical and environmental conditions.

EXPLODED DIAGRAM & PARTS LIST



REF #	PART #	PART NAME	SPECIFICATIONS	QTY PER SECTION
1	310-857	Machine Body w/ End Plates	13TN	1
2	310-851	Machine Body Bottom	13T	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	530-480	Cylinder	3"x18.4"	1
7	760-137	Pin	PH, M27*141	1
8	750-623	Flat Washer	PH, M27*4	1
9	720-815	Bored Nut	PH, M27	1
10	760-744	Split Pin	Ø4*50	1
11	510-211	Hydraulic Adaptor	Straight, Hex24	2
12	730-082	O Seal Ring	Ø22*2.4	2
13	510-224	Hydraulic Adaptor	Straight, Hex24 – Swing, Hex19	2
14	730-082	O Seal Ring	Ø22*2.4	2
15	520-768	Hydraulic Valve w/ Short lever		1
16	520-405	Control Handle Lever	Ø15*190	1
17	730-619	O Seal Ring	Ø15*1.9	2
18	510-448	Hydraulic Adaptor	Straight, Hex27*35	2
19	730-082	O Seal Ring	Ø22*2.4	2
20	710-669	Hex Head Bolt	ZP, M10*130	2
21	750-525	Flat Washer	ZP, M10	4
22	720-120	Lock Nut	ZP, M10	2
23	350-200	Valve Cover	13TN	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"*300	1
28	730-619	O Seal Ring	Ø15*1.9	1
29	510-432	Hydraulic Adaptor	Straight, Z1/2, Hex27*45	1
30	760-377	Hose Clamp	1"	2
31	560-307	Oil Suction Hose	Ø19*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	550-652	Two Stage Pump	4.2 / 1.0, 5GPM	1
36	910-269	Electric Motor, Main Body	2.5 HP	4
37	910-194	Fan		1
38	760-548	Circlip for Shaft	Ø16	1
39	910-153	Fan Cover	Ø174	1
40	740-477	Cross Recess Pan Head Screw	ZP, M4*10	3
41	750-270	Flat Washer	ZP, M4	3
42	920-011	Connecting Box (Bottom)		1
43	920-506	Connecting Box (Rubber Ring)		1
44	920-853	Connecting Box (Cover)		1
45	740-603	Cross Recess Pan Head Screw	PH, M4*10	6
46	920-943	Power Switch		1
47	920-981	Capacitor	80uf	1

REF #	PART #	PART NAME	SPECIFICATIONS	QTY PER SECTION
48	930-880	Cable Fastener		1
49	930-511	Cable Bushing		1
50	930-183	Power Cable	STJW 3/C 12AWG, Ø3.31*200	1
51	710-661	Hex Head Bolt	ZP, M8*25	4
52	750-638	Flat Washer	ZP, M8	8
53	720-500	Lock Nut	ZP, M8	4
54	540-910	Reservoir Tank		1
55	560-409	Oil Return Hose	SA-19/SS-19, 1/2"*350	1
56	730-619	O Seal Ring	Ø15*1.9	1
57	510-448	Hydraulic Adaptor	Straight, Hex27*35	1
58	730-082	O Seal Ring	Ø22*2.4	1
59	540-329	Dipstick w/ Ventilator	Ø4.35*186	1
60	730-064	O Seal Ring	Ø20*2.4	1
61	710-877	Oil Drain Bolt	PH, M16*15	1
62	540-034	Inlet Filter	Straight, Hex32-Filter Ø20*55	1
63	730-602	O Seal Ring	Ø28*3.1	1
64	330-515	D.O.T. Tubeless Tire / Wheel	16*4.8*8 in.	2
65	720-836	Castle Nut	ZP, 1-14	2
66	760-744	Split Pin	ZP, Ø4*50	2
67	330-631	Dust Cap		2
68	320-434	Tongue	13TN	1
69	320-474	Jack Stand	5*5*42	1
70	710-539	Hex Head Bolt	ZP, M10*90	1
71	750-525	Flat Washer	ZP, M10	2
72	320-473	Spacer	PH, Ø16*9	2
73	720-120	Lock Nut	ZP, M10	1
74	760-155	Clevis Pin	ZP, Ø10*85	1
75	760-679	Spring Clip	ZP, Ø3	1
76	320-420	Hitch Coupler	2"*2"	1
77	320-421	Safety Chain		2
78	710-433	Hex Head Bolt	ZP, M12*75	2
79	750-621	Flat Washer	ZP, M12	4
80	720-536	Lock Nut	ZP, M12	2
81	320-942	Log Tray Plate	WD	2
82	320-945	Log Tray Frame (FL, BR)	ED	2
83	320-946	Log Tray Frame (FR, BL)	ED	2
84	710-520	Hex Head Bolt	ZP, M10*25	8
85	750-525	Flat Washer	ZP, M10	16
86	720-120	Lock Nut	ZP, M10	8
87	710-516	Hex Head Bolt	ZP, M10*20	8
88	750-401	Spring Washer	ZP, M10	8
89	750-525	Flat Washer	ZP, M10	8

WARRANTY

LIMITED WARRANTY STATEMENT

Boss Industrial, Inc., ("Boss Industrial") warrants to the original retail purchaser that this BOSS brand outdoor product is designed and made to the highest line standards applicable and agrees to repair or replace, at Boss Industrial's, discretion, any defective product in material and workmanship free of charge within these time periods from the date of purchase under the limited warranty terms below.

- Two years for all models if used for personal, family, or household use;
- 180 days for any unit used for other purposes, such as rental or commercial.

This warranty extends to the original retail purchaser only and commences on the date of the original retail purchase. Boss Industrial honors the return policy of registered retailers under the terms and conditions mutually specified and agreed. Otherwise, any part of this product manufactured or supplied by Boss Industrial and found in the reasonable judgment of Boss Industrial to be defective in material or workmanship will be repaired or replaced without charge for parts and labor by Boss Industrial or its authorized service center. **How to process a warranty claim? You must first call the BOSS INDUSTRIAL service hotline 1 800 780 2677 or send email to service@boss-industrial.com. Proofs of purchase will be required to substantiate any warranty claim. Our technical team will guide you in trouble shooting, repairing, or returning a defective part or machine. Any unauthorized repair or return will invalidate this warranty.** The expense of delivering the replacement part or product to the dealer or Boss Industrial for warranty work and the expense of returning it back to the owner after repair or replacement will be paid by the owner. Boss Industrial's responsibility in respect to claims is limited to making the required repairs or replacements and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any BOSS brand product. All warranty work must be performed by Boss Industrial or its authorized service center.

This warranty is limited to one hundred eighty (180) days from the date of original retail purchase for any Boss Industrial brand product that is used for rental or commercial purposes, or any other income-producing purpose.

This warranty does not cover any BOSS brand product that has been subject to misuse, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in this operator's manual. This warranty does not apply to any damage to the product that is the result of improper maintenance or to any product that has been altered or modified. The warranty does not extend to repairs made necessary by normal wear or by the use of parts or accessories which are either incompatible with the BOSS brand product or adversely affect its operation, performance, or durability. In addition, this warranty does not cover:

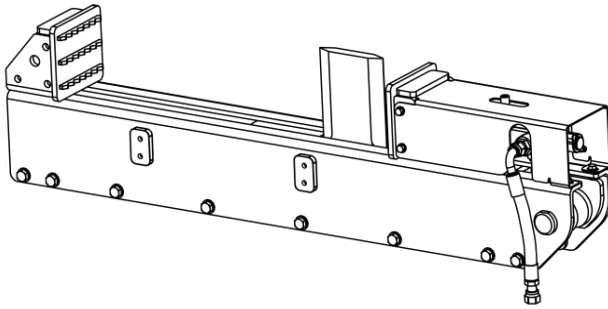
- A. Tune-ups – Switch, Capacitor, Cable fastener, Spark Plugs, Carburetors, Adjustments, Ignition, Filters, Handles
- B. Wear items – Tires, nylon liners, rubber seals, rubber hoses, hydraulic oil
- C. Gas Engines – as they are covered under the Engine Manufacturers' Warranty.

Boss Industrial reserves the right to change or improve the design of any BOSS brand product without assuming any obligation to modify any product previously manufactured.

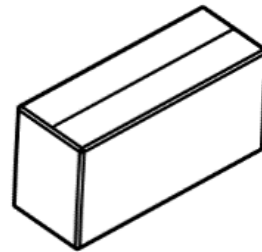
ALL IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE STATED WARRANTY PERIOD. ACCORDINGLY, ANY SUCH IMPLIED WARRANTIES INCLUDING MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, ARE DISCLAIMED IN THEIR ENTIRETY AFTER THE EXPIRATION OF THE APPROPRIATE TWO-YEAR, ONE-YEAR, OR NINETY-DAY WARRANTY PERIOD. BOSS INDUSTRIAL'S OBLIGATION UNDER THIS WARRANTY IS STRICTLY AND EXCLUSIVELY LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS AND BOSS INDUSTRIAL DOES NOT ASSUME OR AUTHORIZE ANYONE TO ASSUME FOR THEM ANY OTHER OBLIGATION. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. BOSS INDUSTRIAL ASSUMES NO RESPONSIBILITY FOR INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO, EXPENSE OF RETURNING THE PRODUCT TO AN AUTHORIZED BOSS INDUSTRIAL SERVICE CENTER AND EXPENSE OF DELIVERING IT BACK TO THE OWNER, MECHANIC'S TRAVEL TIME, TELEPHONE OR TELEGRAM CHARGES, RENTAL OF A LIKE PRODUCT DURING THE TIME WARRANTY SERVICE IS BEING PERFORMED, TRAVEL, LOSS OR DAMAGE TO PERSONAL PROPERTY, LOSS OF REVENUE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, OR INCONVENIENCE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This warranty applies to all BOSS brand products manufactured by or for Boss Industrial and sold in the United States, Canada.

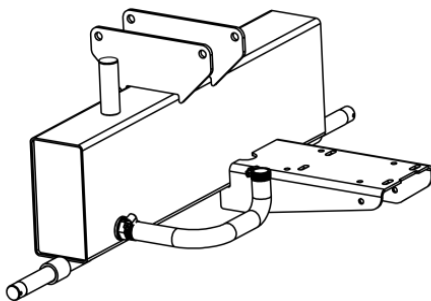
PACKING LIST



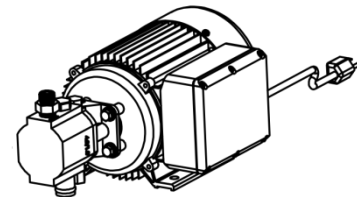
Beam assembly x 1



Motor-Pump box x 1, including:



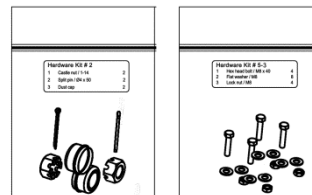
Reservoir tank assembly x 1



Motor / Pump assembly x 1



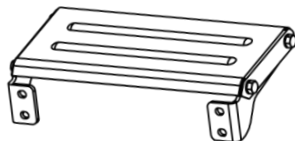
Wheel x 2



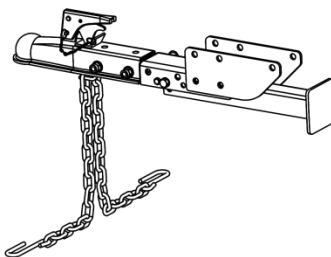
Hardware kit # 2, #5-3



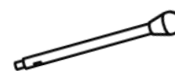
Instruction manual x 1



Log tray assembly x 2



Tongue assembly x 1



Control handle lever x 1



Dipstick w/ ventilator x 1



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