

# HORIZONTAL / VERTICAL GAS LOG SPLITTER 27 / 32 / 37 TON



# MODEL NO.: WD27T / 32T / 37T 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. Please be aware that this Operator's Manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable to all models. 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. 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. 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.

## **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:

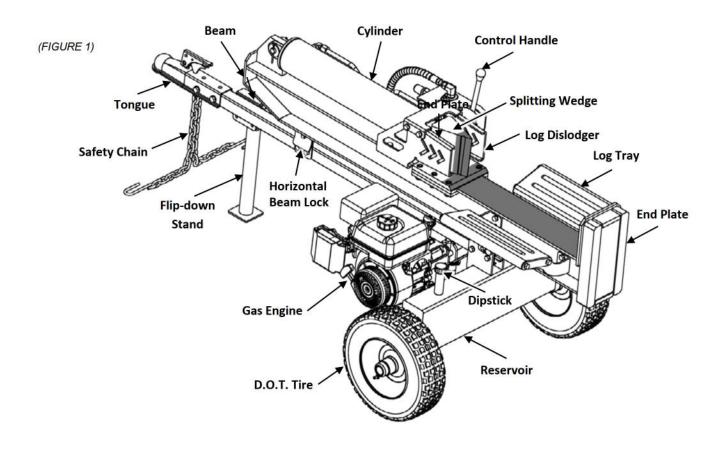
- ♦ Visit us on the web at www.boss-industrial.com
- ♦ Call a Customer Support Representative at (800) 780-2677 or send an email to: service@boss-industrial.com
- ♦ Write to Boss Industrial, Inc., 1208 N. Independence Blvd, Romeoville, IL 60446

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# **SECTION I: KNOW YOUR LOG SPLITTER**

## **LOG SPLITTER OVERVIEW**





**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

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

**WARNING** 

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

**A** CAUTION

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. Contact Boss Industrial, Inc. at 1-800-780-2677 for replacement decals.

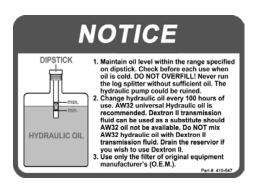
1. Safety Warning / Operating Label (Part #: 410-188)



2. Pinch Point Warning Label (Part #: 410-233, 410-237)



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





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



5. Serial NO. / Spec. Label (Part #: 410-534, 410-546, 410-588)







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
	READ THE OPERATOR'S MANUAL(S) Read, understand, and follow all instructions in the manual(s) before attempting to assemble and operate.
	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.
	WARNING— MOVING WEDGE Keep hands away from wedge, moving part, end plate, and partially split wood.
	BYSTANDERS Keep bystanders, helpers and children at least 25 feet 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.
	WEAR GLOVES Always wear nonslip, heavy-duty protective gloves when operating this product.
	WEAR SAFETY FOOTWEAR Always wear nonslip steel-toed safety footwear when operating this product.
Jack) to	WARNING—GASOLINE IS FLAMMABLE Allow the engine to cool at least ten minutes before refueling.
3	WARNING— CARBON MONOXIDE  Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
millinillin	WARNING— HOT SURFACE Engine parts, especially the muffler, become extremely hot during operation. Allow engine and muffler to cool before touching.



## **CALIFORNIA PROPOSITION 65**

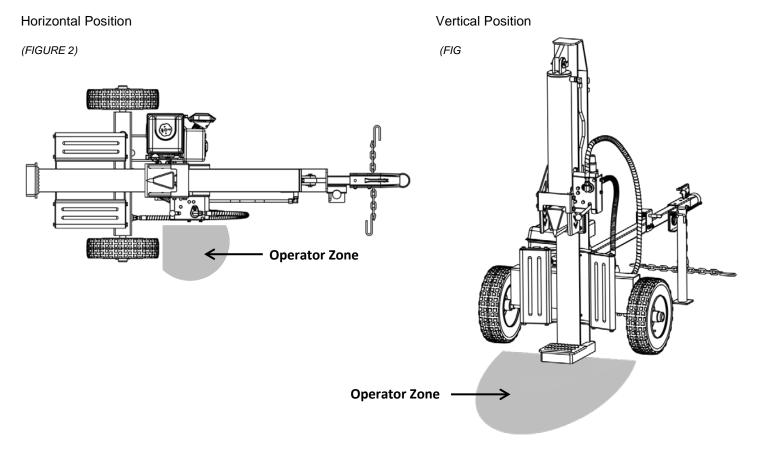
**WARNING!** Engine Exhaust, some of its constituents and certain components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm. For more information, please go to www.P65Warnings.ca.gov.

#### **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. 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.
- 9. 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 3



#### 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 arrester 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 arrester 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**

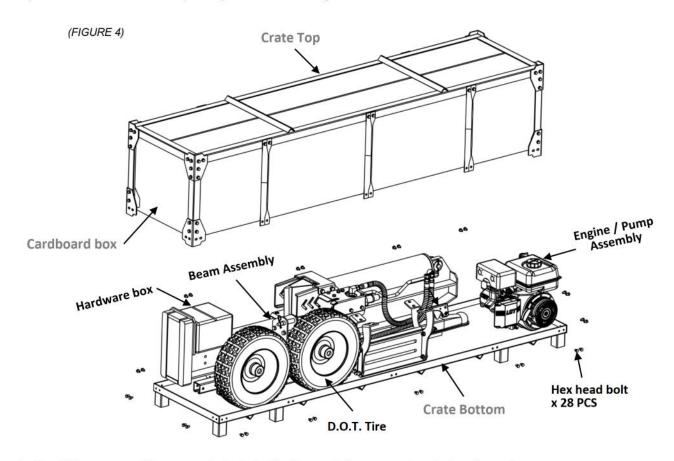


**WARNING!** This product has been shipped partially assembled. Use extreme caution unpacking this machine. Some components are very heavy and will require additional people or mechanical lifting tools.

#### Unpacking tools needed:

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

<u>Step 1:</u> 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. wheels, hardware box.

<u>Step 3:</u> Use scissors or a knife to cut and remove the straps securing the parts to the beam or tank assembly, including 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.

<u>Step 4:</u> 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.

<u>Step 5:</u> 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.

<u>Step 6:</u> Inspect if all component assemblies, parts and accessories are included as listed in the Packing List (Page 27). 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**

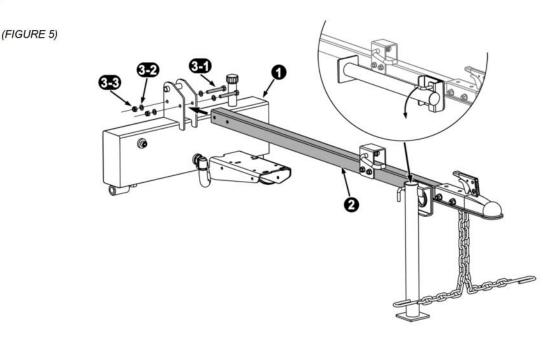
#### Assembling tools needed:

- 1. Wrench 13, 14mm two each
- 2. Wrench 16, 17, 27, 30mm 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. Cross head screwdriver x 1

STEP 1: Install the tongue and jack stand assembly. See FIGURE 5.

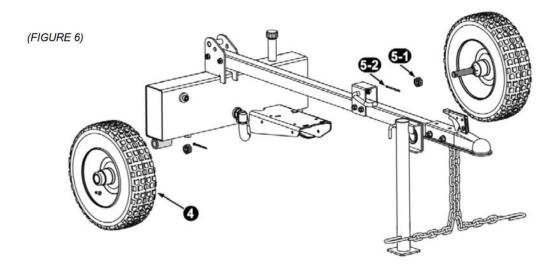
- 1. Pull out the spring loaded lock handle of flip-down stand which hold the stand on the tongue, and then the stand automatically flip down towards the ground and be secured in position.
- 2. Remove the M10 hardware from the beam support bracket on the tank using a 16mm wrench for bolts and a 17mm wrench for the lock nuts. Attach the tongue to the reservoir assembly and screw on the hardware just removed and tighten.



REF. NO.	DECSRIPTION	QTY.
1	Reservoir tank assembly	1
2	Tongue & Flip-down stand assembly	1
3	M10 Hardware on beam support bracket, including:	1
3-1	Hex head bolt / M10 x 75	2
3-2	Flat washer / M10	4
3-3	Lock nut / M10	2

#### STEP 2: Install the two wheels. See FIGURE 6

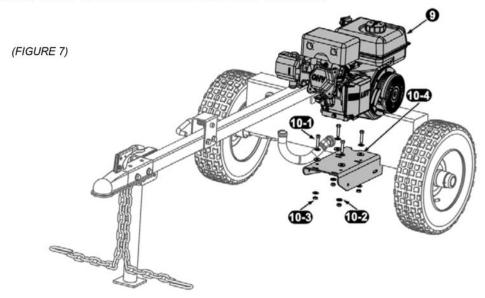
- 1. The wheel axels are attached on two wheels at the manufacturer's. Insert the wheel axels through the axle bracket tubes underneath the reservoir.
- 2. Screw the bore nuts onto the axels and tighten with an adjustable wrench. Align the holes of the nut and the axels.
- 3. Insert the split pin into the aligned holes axel, and then bend the ends of the pin with needle nose pliers.



REF. NO.	DECSRIPTION	QTY.
4	D.O.T. Tire / Wheel	2
5	Hardware Kit # 2-1, including:	1
5-1	Bored nut / M22	2
5-2	Split pin / Ø4 x 50	2

## STEP 3: Install the engine / pump assembly. See FIGURE 7.

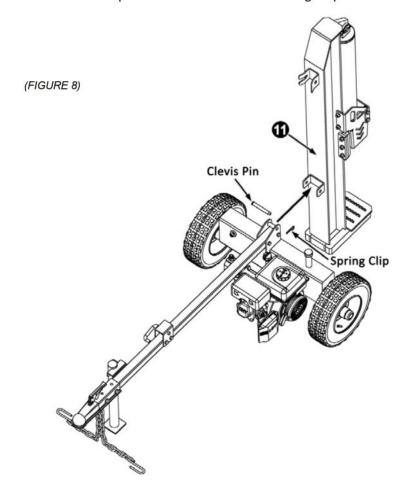
- 1. Insert a vibration isolator between the engine and the mount plate at each of the four mounting hole positions.
- 2. Secure the engine with the M8 hardware, and then tighten using two 13mm wrenches 25 ton model; or 16mm wrench on bolts, 17mm wrench on lock nuts for 30 / 35 ton model.



REF. NO.	DECSRIPTION		QTY.
9	Engine / Pump assembly		1
10	Hardware kit # 5-1 (27 / 32T)	or # 5-2 (37T), including:	1
10-1	Hex head bolt / M8 x 40 (27 / 32T)	or M10 x 40 (37T)	4
10-2	Flat washer / M8 (27 / 32T)	or M10 (37T)	8
10-3	Lock nut / M8 (27 / 32T)	or M10 (37T)	4
10-4	Vibration isolator / Ø9 (27 / 32T)	or Ø11 (37T)	4
//	O Seal ring / Ø15*1.9		2

#### STEP 4: Install the beam assembly. See FIGURE 8.

- 1. Stand the beam upright on a flat level. Two or more people are recommended to assist with raising and lowering the beam as it is very heavy. Have a helper support the beam as you perform the following steps. Be sure to keep hands away from any possible pinch points.
- 2. Remove the clevis pin and spring clip from the beam support bracket on the tank. Position the tongue / tank assembly so that the beam support bracket is in between the two tabs on the beam.
- 3. Slide the clevis pin through the aligned holes and secure with the spring clip. You may need another helper to lift up the tongue for the holes to align.
- 4. Leave the beam in the vertical position for continual assembling steps.

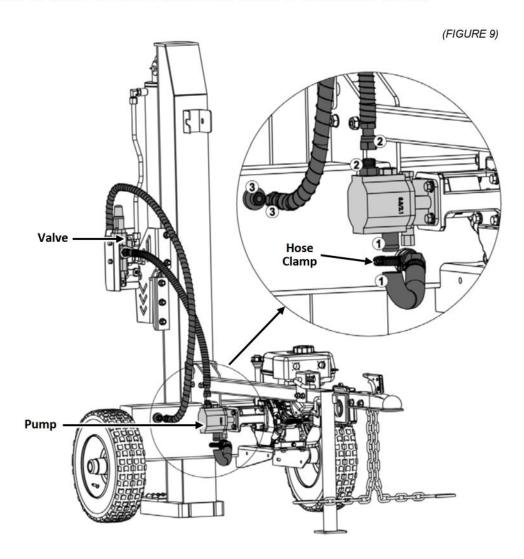


REF. NO.	DECSRIPTION	QTY.
11	Beam assembly	1

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

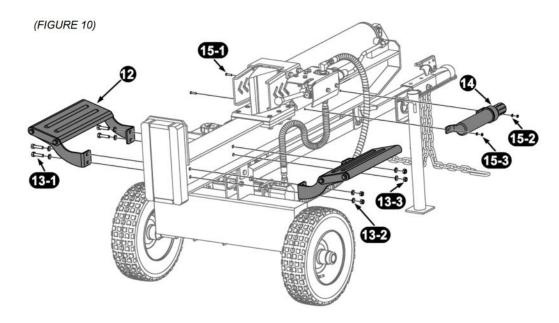
- 1. Oil suction hose Ø24, is included in the hardware kit box, labeled as ①

  Loosen the hose clamps on both ends using a flat head screwdriver, and then connect one end of the hose to the fitting at the bottom of the pump, the other end to the bottom fitting on the reservoir. Tighten the hose clamps.
- 2. Pump / Valve connecting hose 1/2" labeled as ②, comes from the bottom 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 top 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. Make sure an O-ring Ø15\*1.9 sitting inside the fitting slot. Or you could find a spare O-ring in your hardware kit # 5-1 or 5-2 (See page 9). Tighten the hose using a 27mm wrench or an adjustable wrench.



STEP 6: Install the log tray assemblies and the manual container to the beam. See FIGURE 10.

- 1. Lower the beam to horizontal position. Please refer to "Beam Operating Positions" section in Page 13.
- 2. Position the log tray frames onto the beam as shown below and secures with the M10 hardware loosely.
- 3. Tighten the M10 hardware using an 16mm wrench on the bolts, and a 17mm wrench on the lock nuts.
- 4. Attach the manual container to the beam with the M6 hardware using a cross head screwdriver.



REF. NO.	DECSRIPTION	QTY.
12	Log tray assembly	2
13	Hardware Kit # 6-1, including:	1
13-1	Hex head bolt / M10 x 45	4
13-2	Flat washer / M10	8
13-3	Lock nut / M10	4
14	Manual Container	1
15	Hardware Kit # 6-2, including:	1
15-1	Phillips screw / M6 x 25	2
15-2	Flat washer / M6	2
15-3	Lock nut / M6	2

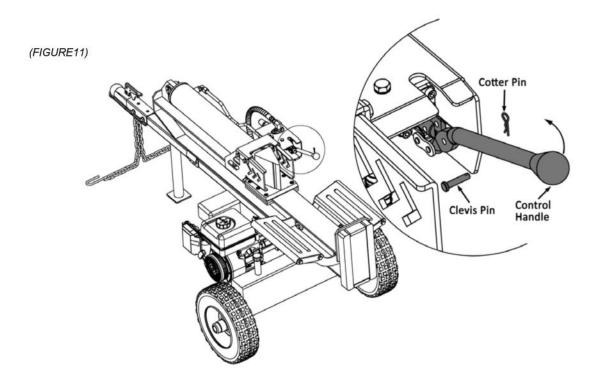
STEP 7: Assemble the control handle. See FIGURE 11 (next page).

The control handle is shipped hanging from the valve on the handle link.

- 1. Remove the clevis pin and bow-tie cotter pin from the valve.
- 2. Rotate the control handle up into the operating position and secure with the clevis pin and cotter pin just removed.

#### **STEP 8:** 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.

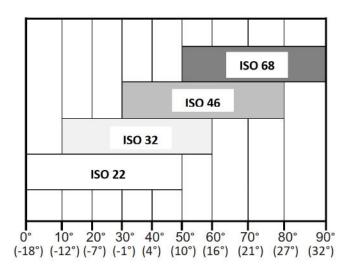


STEP 9: Fill hydraulic oil. See FIGURE 12.

The log splitter is shipped without hydraulic fluid in the reservoir. You must fill the reservoir before your initial use.

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. for 27 ton; and 5.5 gallons for 32 / 37 ton log splitter. While you may need more hydraulic fluid than the tank capacity, because a lot of oil will be drawn into hydraulic cylinder, valve, pump and hoses.



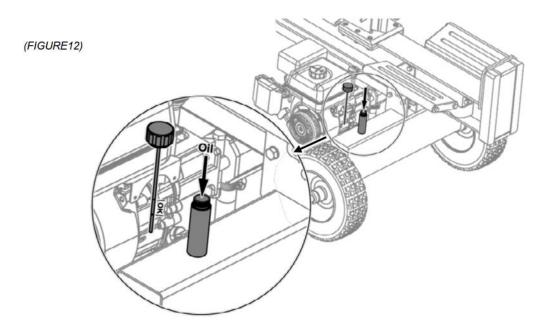
Approved fluids include Shell Tellus® S2 M 32 Hydraulic Fluid, Dexron® III / Mercon® automatic transmission fluid, Pro-Select™ AW-32 Hydraulic Oil or 10WAW-ISO viscosity grade 32 hydraulic oil. It is not recommended that fluids be mixed, to top off the reservoir tank during initial set-up use Shell Tellus®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

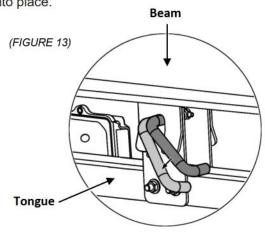
**NOTE:** Make sure the oil level is above the bottom line on the dipstick. If not, refill the reservoir to prevent damage to the hydraulic pump. **DO NOT overfill.** Some fluid may overflow from the ventilator as the system builds heat and the fluid expands and seeks a balanced level. Place a container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



## **GETTING PREPARED**

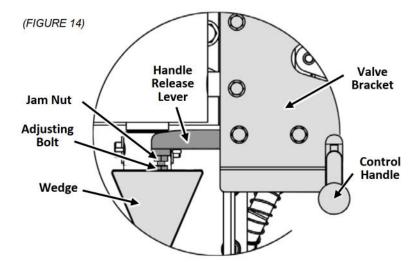
- Wear safety gear such as goggles or safety glasses, steel toed shoes and tight fitting gloves (without loose cuffs or draw strings), a protective hearing device and suitable work clothing. NEVER wear loose clothing or jewelry that can be caught by moving parts of the log splitter.
- Place the log splitter 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.
- Place the beam in either the horizontal or vertical position and lock into place.
  - 1. To place the beam in the *Vertical Position* proceeds as follows:
    - Pull the horizontal beam lock lever out and rotate it downward, so it rests against the side of the lock and remains unlocked. See FIGURE 13.
    - Use both your hands to lift up the beam, and flip it over to the vertical position, then rotate the horizontal lock lever back up the tongue to release the lock.



- 2. To place the beam in the Horizontal Position proceeds as follows:
  - 1) Pivot the beam to the horizontal position.
  - 2) The horizontal beam lock is self-locking. The spring loaded lock will snap into place when the beam is lowered into position.
- Check all nuts, bolts and hydraulic fittings are tight to be sure the equipment is in a safe working condition.
- Adjust handle release lever. Your log splitter is equipped with an external pressure release system which is attached
  under the valve bracket. When you set up the machine and try it, you will see the back of the wedge hits the handle
  release lever when the wedge is fully retracted. The control handle is then kicked back from reverse position to the
  neutral position automatically.

To adjust the handle release lever if the control lever does not automatically kick into the neutral position when the wedge is fully retracted. See *Figure 14* 

- 1. Loosen the Jam nut using a 14mm wrench.
- 2. Screw the adjusting nut counter clockwise to allow it contact with the wedge as soon as the wedge is fully retracted.
- 3. Tighten the jam nut after adjusting.



- 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.

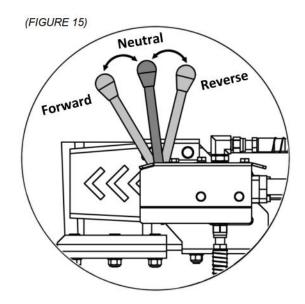
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#### NOTES:

- 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 the manual container for future and regular reference and for ordering replacement parts.
- 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. NEVER operate the log splitter when tired or under the influence of alcohol, drugs or medication.
- 5. ALWAYS use eye protection which is marked to comply with ANSI Z87.1.
- Always use the log splitter in the vertical position when splitting heavy logs.
- 7. **NEVER** operate the log splitter when tired or under the influence of alcohol, drugs or medication.

# **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 the end plate to split the wood in the direction of the grain. See *FIGURE 16*.
- Use your right hand to push the control handle lever to the Forward position to split the wood. See FIGURE 16.
   The control handle has three positions. See FIGURE 15.



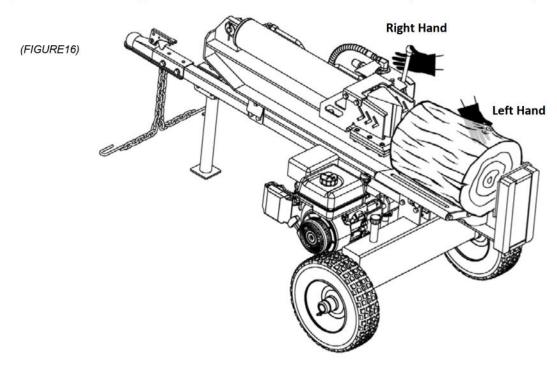
**FORWARD** — Move the control handle to the FORWARD position which will engage the wedge forward to split the log.

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

**REVERSE** — Engage the control handle to the REVERSE position, the wedge will travel backward automatically.

**NOTE:** DO NOT hold the handle at the FORWARD position when the wedge is fully extended. The over built up pressure may squeeze the pressure relief valve, and the control handle won't be released to NEUTRAL position automatically. Manually pull the handle to NEUTRAL or REVERSE position to recover. Or the hydraulic system may get damaged and void your warranty.

- 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 16
- 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.



- 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.

# **A** 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. **NEVER** touch the muffler and other hot areas of the engine during operation. Wait until the engine cools down.
- 15. **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.

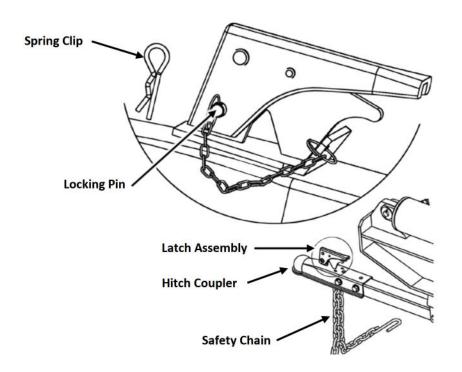
# **NOTES**

- 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

- Lower the beam to its horizontal position. Make certain the beam is locked securely with the horizontal beam lock.
- 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 17.
- 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-11** 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.

(FIGURE17)



# **▲** NOTES

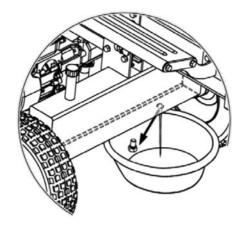
- 1. **NEVER** exceed 45 mph when towing your log splitter. Towing the log splitter at speeds higher than 45 mph could result in loss of control, damage to the equipment, or serious injury or death.
- 2. **NEVER** carry any cargo or wood on your log splitter.
- 3. **NEVER** allow anyone to sit or ride 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.
- 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.

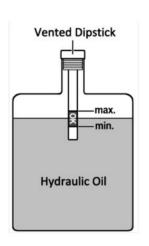
## **MAINTENANCE & ADJUSTMENTS**

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 7 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 18*.
  - 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 19.
  - 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.

(FIGURE18)





(FIGURE19)

## **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. If you continue to experience problems, contact us at <a href="www.boss-industrial.com">www.boss-industrial.com</a>, send an email to <a href="mailto:service@boss-industrial.com">service@boss-industrial.com</a>, or call toll-free (800) 780 2677 for support.

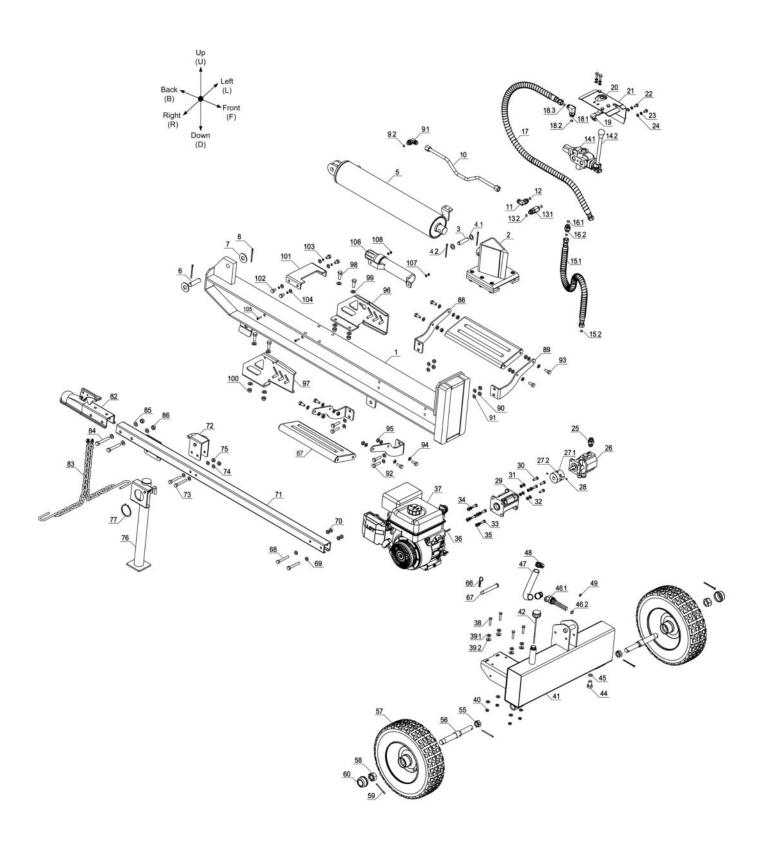
Problem	Cause	Remedy
Cylinder rod will not move	Broken drive shaft.     Shipping plugs left in hydraulic hoses.	See authorized service dealer.     Disconnect hydraulic hoses, remove shipping plugs, and reconnect hoses.
	<ol> <li>Set screws in coupling not adjusted properly.</li> <li>Loose shaft coupling.</li> <li>Gear sections damaged.</li> <li>Damaged relief valve.</li> <li>Hydraulic lines blocked.</li> <li>Low oil level or air trapped in hydraulic system.</li> <li>Damaged control valve.</li> <li>Blocked control valve.</li> </ol>	<ol> <li>See authorized service dealer.</li> <li>Correct engine/pump alignment as necessary.</li> <li>See authorized service dealer.</li> <li>See authorized service dealer.</li> <li>Flush and clean hydraulic system.</li> <li>Fill oil or bleed air.</li> <li>See authorized service dealer.</li> <li>Flush and clean hydraulic system</li> </ol>
Slow cylinder shaft speed while extending and retracting	Gear sections damaged.     Excessive pump inlet vacuum.	See authorized service dealer.     Make certain pump inlet hoses are clear and unblocked. Use short, large diameter inlet hoses.
	<ol> <li>Slow engine speed.</li> <li>Damaged relief valve.</li> <li>Low oil level or air trapped in hydraulic system.</li> <li>Contaminated oil.</li> <li>Control valve leaking internally.</li> <li>Internally damaged cylinder.</li> </ol>	<ol> <li>See authorized service dealer.</li> <li>See authorized service dealer.</li> <li>Fill oil or bleed air.</li> <li>Drain oil, clean reservoir and refill.</li> <li>See authorized service dealer.</li> <li>See authorized service dealer</li> </ol>
Leaking Cylinder	Worn seals.     Scored cylinder.	See authorized service dealer.     See authorized service dealer.
Wood will not split or wood splits too slowly	<ol> <li>Small gear section damaged.</li> <li>Pump check valve leaking.</li> <li>Excessive pump inlet vacuum.</li> <li>Low oil level or air trapped in hydraulic system.</li> <li>Contaminated oil.</li> </ol>	<ol> <li>See authorized service dealer.</li> <li>See authorized service dealer.</li> <li>Make certain pump inlet hoses are clear and unblocked.</li> <li>Fill oil or bleed air.</li> <li>Drain oil, clean reservoir and refill.</li> </ol>
	6. Control valve leaking internally. 7. Overloaded cylinder. 8. Internally damaged cylinder.	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> <li>Broken drive shaft.</li> <li>Engine/pump misalignment.</li> <li>Gear sections damaged.</li> <li>Damaged shaft seal.</li> <li>Plugged oil breather.</li> </ol>	<ol> <li>See authorized service dealer.</li> <li>Correct alignment as necessary.</li> <li>See authorized service dealer.</li> <li>See authorized service dealer.</li> <li>Make certain reservoir is properly vented.</li> </ol>
Wedge continues to move forward when control handle is released	Damaged control valve	See authorized service dealer.
Control handle does not return to neutral when released from forward position	Hydraulic fluid too cold.     Hydraulic fluid too thick.     Hydraulic fluid contaminated.     Damaged control valve.	Warm up engine.     Replace hydraulic fluid.     Replace hydraulic fluid.     See authorized service dealer.

# **TECHNICAL SPECIFICATIONS**

Model		WD27T	WD32T	WD37T
Engine		B&S, CR950	B&S, XR1150	B&S, XR1450
Pump		Two-Stage, 9 gpm	Two-Stage, 13 gpm	Two-Stage, 16 gpm
Cylinder (Bore x Stro	oke)	4 in. x 22.6 in.	4.5 in. x 22.6 in.	5 in. x 22.6 in.
Maximum Splitting F	orce	27 Tons*	32 Tons*	37 Tons*
Hydraulic Pressure		4050 psi*	3950 psi*	3800 psi*
Maximum Log Length		25 in.	25 in.	25 in.
Wedge Height		7 in.	8 in.	8 in.
Cycle Time	Forward	8 Seconds*	7.5 Seconds*	7.5 Seconds*
	Reverse	7 Seconds*	7 Seconds*	7 Seconds*
Wheels		D.O.T. 16 x 4.8 x 8 in.	D.O.T. 16 x 4.8 x 8 in.	D.O.T. 16 x 4.8 x 8 in.
Hydraulic Capacity		3.5 Gallons	5.5 Gallons	5.5 Gallons
Height (Horizontal / Vertical P	osition)	39.5 / 67 in.	39.5 / 67 in.	39.5 / 67 in.
Length (Horizontal / Vertical Position)		85.5 / 84 in.	85.5 / 84 in.	85.5 / 84 in.
Width		40 in.	40 in.	40 in.
Net Weight		475 lbs	509 lbs	544 lbs

<sup>\*</sup>Tonnage and cycle times may vary dependent upon mechanical and environmental conditions.

# EXPLODED DIAGRAM & PARTS LIST



REF#	PART#	PART NAME	SPECIFICATIONS	QTY PER UNIT
	310-658	Beam incl. End Plate 25 Ton	10-10-10	
1	310-346	Beam incl. End Plate 30 Ton	10-12-10	1
	310-471	Beam incl. End Plate 35 Ton	12-12-12	
	530-421	Splitting Wedge w/ Guides 25 Ton	Guide12, 7"	
2	530-422	Splitting Wedge w/ Guides 30 Ton	Guide12, 8"	1
	530-423	Splitting Wedge w/ Guides 35 Ton	Guide14, 8"	
3	760-118	Pin	PH, Ø16*69-Ø4.5	1
4.1	750-566	Flat Washer	PH, M16	2
4.2	760-734	Split Pin	ZP, Ø4*35	2
	530-468	Cylinder 25 Ton	4.0 in. * 22.6in.	
5	530-473	Cylinder 30 Ton	4.5 in. * 22.6in.	1
	530-485	Cylinder 35 Ton	5.0 in. * 22.6in.	
6	760-112	Pin	PH, Ø20*72-Ø3.5	1
7	750-423	Flat Washer	PH, M20	2
8	760-755	Split Pin	ZP, Ø3*40	2
9.1	510-356	Adapter	90 Degree, Hex19/ Hex24	1
9.2	730-077	O Seal Ring	Ø21*2.4	1
10	560-427	Hydraulic Hose for A-Capacity		1
11	510-356	Hydraulic Adaptor for A-Capacity	90 Degree, Hex19/ Hex24	1
12	730-077	O Seal Ring	Ø21*2.4	1
13.1	510-464	Hydraulic Adaptor for B-Capacity	Straight, Hex27*43	1
13.2	730-077	O Seal Ring	Ø21*2.4	2
14.1	520-799	Hydraulic Valve		1
14.2	520-452	Control Handle	Ø15*220, Ball Grip	1
15.1	560-454	Connecting Hydraulic Hose w/ Protection Sleeve	1/2"*900	1
15.2	730-619	O Seal Ring	Ø15*1.9	2
16.1	730-088	O Seal Ring	Ø24*2.4	1
16.2	510-448	Hydraulic Adapter on Valve for Connecting Hose	Straight, Hex27*36.5	1
17	560-523	Oil Return Hose w/ Protection Sleeve	1/2*1400	1
18.1	510-469	Hydraulic Adapter	90 Degree, Hex27, 1/2"hose	1
18.2	730-088	O Seal Ring	Ø24*2.4	1
18.3	730-619	O Seal Ring	Ø15*1.9	1
19	520-532	Handle Release Lever	WD	1
20	520-578	Extension Spring	Ø8*53	1
21	350-224	Valve Cover	WD	1
22	710-637	Hex Head Bolt	ZP, M8*20	4
23	750-834	Spring Washer	ZP, M8	4
24	750-638	Flat Washer	ZP, M8	4
25	510-432	Hydraulic Adapter on Pump for Connecting Hose	Straight, Hex27*45	1
	550-308	Two Stage Pump	9 gpm (27T)	
26	550-416	Two Stage Pump	13gpm (32T)	1
	550-533	Two Stage Pump	16gpm (37T)	
	550-702	Coupling Shaft	3/4" (27/32T)	
27.1	550-703	Coupling Shaft	1" (37T)	1
27.2	550-706	Coupling Spider	- X X	1
28	740-600	Set Screw	PH, M6*10	2
	550-814	Pump Mount	Al, 25 / 30T	
29	550-818	Pump Mount	Al, 35T	1
30	710-637	Hex Head Bolt	ZP, M8*20	4
31	750-638	Flat Washer	ZP, M8	4
31	750-050	indt yydonor	ZI , IVIO	*

REF#	PART#	PART NAME	SPECIFICATIONS	QTY PER UNIT
32	750-834	Spring Washer	ZP, M8	4
33	710-632	Hex Head Bolt	ZP, 5/16-24*20	4
34	750-617	Flat Washer	ZP, 5/16	4
35	750-844	Spring Washer	ZP, 5/16	4
20	770-123	Engine Shaft Square Key	3/16 X 1.75 (27 / 32T)	
36	770-125	Engine Shaft Square Key	1/4 X 2.165 (37T)	1
	CR950	Gas Engine (B&S 6.5)	25T	
37*	XR1150	Gas Engine (B&S 8.0)	30T	1
	XR1450	Gas Engine (B&S 10.0)	35T	
20	710-693	Hex Head Bolt	ZP, M8*40 (27 / 32T)	4
38	710-553	Hex Head Bolt	ZP, M10*40(37T)	4
20.4	750-638	Flat Washer	ZP, M8 (27 / 33T)	0
39.1	750-525	Flat Washer	ZP, M10 (37T)	8
20.0	960-429	Vibration Isolator 25 / 30Ton	Ø24*Ø9*3	
39.2	960-430	Vibration Isolator 35 Ton	Ø24*Ø11*3	4
40	720-500	Lock Nut	ZP, M8 (27 / 32T)	
40	720-120	Lock Nut	ZP, M10 (37T)	4
44	540-924	Reservoir Tank	WD27T	g a
41	540-931	Reservoir Tank	WD32/37T	1
42	540-329	Vented Dipstick	Ø4.35*186	1
44	710-877	Oil Drain Screw	PH, M16*15	1
45	730-064	O Seal Ring	Ø20*2.4	1
46.1	540-049	Suction filter	45 Degree Adapter, Hex32	1
46.2	730-122	O Seal Ring	Ø30*3.1	1
47	560-342	Oil Suction Hose	Ø24*300,Curved	1
48	760-377	Hose Clamp	1"	2
49	730-619	O Seal Ring	Ø15*1.9	1
55	720-840	Bored Nut	M22	2
56	330-083	Wheel Axel		2
57	330-524	Wheel	D.O.T. Tubeless, 16*4.8*8 in.	2
58	720-836	Castle Nut	ZP, 1-14	2
59	760-744	Split Pin	ZP, Ø4*50	4
60	330-631	Dust Cap		2
66	760-679	Spring Clip	ZP, Ø3	1
67	760-254	Clevis Pin	ZP, Ø15*120	1
68	710-580	Hex Head Bolt	ZP, M10*75	2
69	750-525	Flat Washer	ZP, M10	4
70	720-120	Lock Nut	ZP, M10	2
71	320-443	Tongue	WD	1
72	320-845	Horizontal Beam Lock	WD	1
73	710-568	Hex Head Bolt	ZP, M10*70	2
74	750-525	Flat Washer	ZP, M10	4
75	720-120	Lock Nut	ZP, M10	2
76	320-806	Flip-down Stand		1
77	760-522	Circlip	Ø65	1
82	320-420	Hitch Coupler	2"*2"	1
83	320-421	Safety Chain		2
84	710-433	Hex Head Bolt	ZP, M12*75	2
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REF#	PART#	PART NAME	SPECIFICATIONS	QTY PER UNIT
86	720-536	Lock Nut	ZP, M12	2
87	320-942	Log Tray Plate	WD	2
88	320-940	Log Tray Frame (FR, BL)	WD	2
89	320-948	Log Tray Frame (FL, BR)	WD	2
90	720-120	Lock Nut	ZP, M10	4
91	750-525	Flat Washer	ZP, M10	8
92	710-556	Hex Head Bolt	ZP, M10*45	4
93	710-520	Hex Head Bolt	ZP, M10*25	8
94	750-525	Flat Washer	ZP, M10	16
95	720-120	Lock Nut	ZP, M10	8
96	320-926	Log Dislodger (L)		1
97	320-927	Log Dislodger (R)		1
98	710-438	Hex Head Bolt	ZP, M12*35	4
99	750-621	Flat Washer	ZP, M12	8
100	720-536	Lock Nut	ZP, M12	4
101	320-949	Dislodger Top Plate		1
102	710-516	Hex Head Bolt	ZP, M10*20	4
103	750-401	Spring Washer	ZP, M10	4
104	750-525	Flat Washer	ZP, M10	4
105	740-324	Cross Recess Pan Head Screw	ZP, M6*25	2
106	310-248	Manual Container		1
107	750-273	Flat Washer	ZP, M6	2
108	720-532	Lock Nut	ZP, M6	2

## **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 retailors 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:

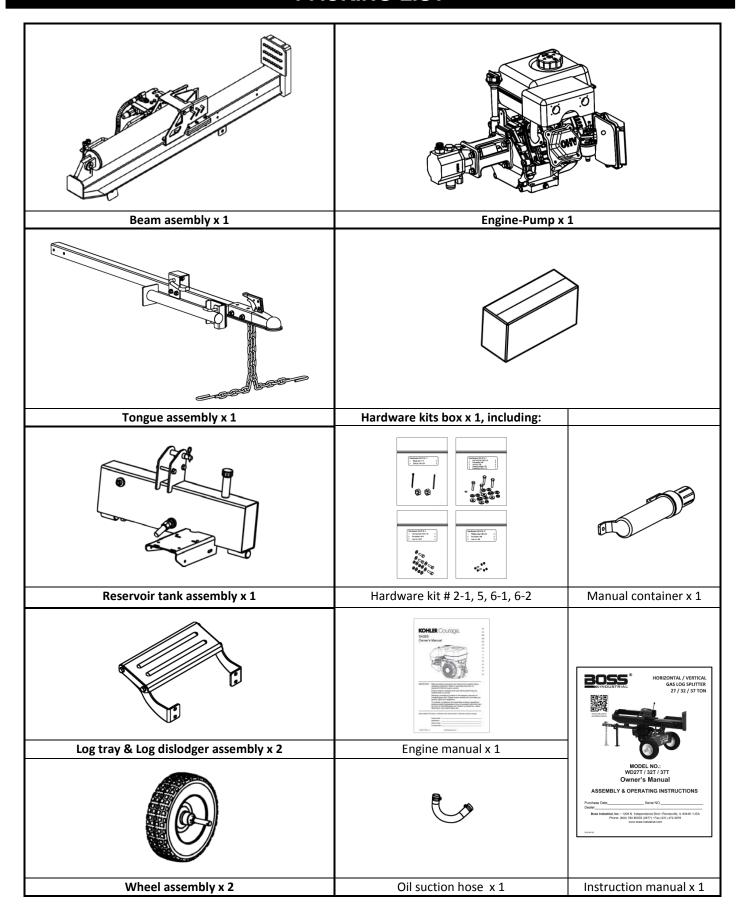
- A. Tune-ups Switch, Capacitor, Cable fastener, Spark Plugs, Carburetors, Adjustments, Ignition, Filters, Handles
- B. Wear items Tires, nylon liners, rubber seals, rubber hoses, hydraulic oil
- C. Gas Engines as they are covered under the Engine Manufacturers' Warranty.

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**





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