

# LOG SPLITTER BE-LS40TS390



## **OPERATIONS & PARTS MANUAL**

PURCHASE DATE	MODEL NO.	SERIAL NUMBER
DEALER		

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#### IMPORTANT SAFETY INFORMATION

WARNING: Read and thoroughly understand all instructions in this manual and on safety decals before assembling or operating this log splitter. Failure to do so may cause serious injury or death. Do not allow anyone can be dangerous if assembled or used improperly. Do not operate this log splitter if you have any questions concerning safe operation.



This SAFETY ALERT SYMBOL identifies important safety messages in this manual. Failure to follow this important safety information may result in serious injury death.

#### **CALIFORNIA PROPOSITION 65**

## **A** WARNING:

CALIFORNIA PROPOSITION 65 states that engine exhaust, some of its constituents and certain components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, please go to:

www.P65Warnings.ca.gov.com

## **A** 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:

#### **A** DANGER

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

#### **A** WARNING

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

## **A** CAUTION

Indicates a hazardous situation which, if not followed, could result in minor to moderate injury.

## **A** NOTICE

Is important information about the proper use of your machine.

Failure to follow this instruction could result in damage to your machine or property.

#### **SAFETY INFORMATION**

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, earplugs and a face shield when operating this product.	
	WARNING— MOVING WEDGE Keep hands away from wedge, moving part, end plate, and partially split wood.	
<b>1</b> 25 P. M	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.	
(Fun	WEAR GLOVES Always wear nonslip, heavy-duty protective gloves when operating this product.	
(3)	WEAR SAFETY FOOTWEAR Always wear nonslip steel-toed safety footwear when operating this product.	
JA (H)	WARNING—GASOLINE IS FLAMMABLE Allow the engine to cool at least ten minutes before refueling.	
*	WARNING— CARBON MONOXIDE  Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.	
entilitettites	WARNING— HOT SURFACE Engine parts, especially the muffler, become extremely hot during operation. Allow engine and muffler to cool before touching.	

## **MARNING**

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

#### **TRAINING**

- Read, understand and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual safe place for future and regular reference and for ordering replacement parts.
- Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly
- Never allow children under 18 years of age to operate this machine. Children 16 and over should read and understand the instructions and safe operation practices in this manual and on the machine and be trained and supervised by an adult.
- Never allow adults to operate this machine without proper instruction.
- Many accidents occur when more than one person operate the machine. No helpers is allowed to assist in stacking logs.
- Keep bystanders, pets and children at least 25 feet from the machine while it is in operation.
- Never allow anyone to ride on this machine.
- Never transport cargo on this machine.
- Hydraulic log splitters develop high fluid pressures during operation. Fluid escaping through a pin hole opening can penetrate your skin and cause blood poisoning, gangrene or death. Give attention to the following instructions at all times:
  - 1) Do not check for leaks with your hand.
  - 2) Do not operate machine with frayed, kinked, cracked or damaged hoses, fittings or tubing.
  - 3) Stop engine and relieve hydraulic system pressure by cycling the valve control lever from forward to reverse several times while engine is not running; returning to neutral before repairing or adjusting fittings, hoses, tubing or other system components.
  - 4) Do not adjust the pressure settings of the pump or valve.
- Leaks can be detected by passing cardboard or wood, while wearing protective gloves and safety glasses, over the suspected area. Look for discoloration of cardboard or wood.
- If injured by escaping fluid, see a doctor immediately. Serious infection or reaction can develop if proper medical treatment is not administered immediately.
- Keep the operator zone and adjacent area clear for safe, secure footing.
- If your machine is equipped with an internal combustion engine and is intended for use near any unimproved forest, brush or grass covered land, the engine exhaust should be equipped with a spark arrestor. Make sure you comply with applicable local, state and federal codes. Take appropriate firefighting equipment with you.

## **A** NEVER

Use this log splitter for any purpose other than splitting wood, It is designed for this use can cause serious injury or death.

#### **PRE-OPERATION**

- **BEFORE** operating this log splitter, make sure that you wear safety goggles or safety glasses, steel toed shoes and tight-fitting gloves (without loose cuffs or draw strings). Always wear a protective hearing device when operating this log splitter.
- **NEVER** wear loose clothing or jewelry that can be caught by moving parts of the log splitter. Keep clothing and hair away from all moving parts when operating this log splitter.
- Check all safety guards and shields to be sure they are in the proper position. Never operate with safety guards, shields or other protective features removed.
- Make sure machine is on a flat, dry, solid ground before operating.
- **ALWAYS** operate your log splitter in an open area. (Exhaust fumes contain carbon monoxide which can be deadly when inhaled).
- ALWAYS operate your log splitter in daylight or under good artificial light.
- **ALWAYS** operate your log splitter on level ground. (Operating on a slope could cause the log splitter to roll over or logs to fall off).
- **ALWAYS** block wheels to prevent unintended movement.
- **ALWAYS** keep the work area clean. Remove split wood around the log splitter immediately so that you don't stumble over it.
- Check all nuts, bolts and hydraulic fittings are tight to be sure the equipment is in a safe working condition.
- Both ends of the log should be cut as square as possible to help prevent the log from riding out of the splitter during operation. Do not split logs greater than 20.5 inches in length. Uneven logs (e.g., knotted, curved, etc.) should not be used.
- ALWAYS check the oil level before you start the log splitter.
- Do not allow familiarity with tools to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

## **A** WARNING

The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool, always wear safety goggles or safety glasses with side shields and when needed, wear a full-face shield and earplugs. We recommend a Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection marked to comply with ANSI Z87.1.

#### **OPERATION**

- **BEFORE** starting this machine, review the safe instructions in the manual. Failure to follow these rules may resulting in serious injury to the operator or bystanders.
- **NEVER** leave this machine unattended with the engine running.
- DO NOT operate machine while under the influence of alcohol, drugs or medication.
- NEVER allow anyone to operate this machine without proper instruction.
- **ALWAYS** operate this machine with all safety equipment in place and working, make sure all controls are properly for safe operation.
- When loading a log, always place your hands on the side of the log, not on the ends and never use your foot to help stabilize a log. Failure to do so may result in crushed or amputated fingers, toes, hand or foot.
- **NEVER** use your foot, a rope or any extension device to operate the control lever on the valve. Only use hand.
- Use only your right hand to operate the controls.

## **A WARNING**

When stabilize log with left hand, remove your hand when the wedge just contacts the log or serious injury may occur.

- For logs which are not cut square, the least square end of the log should be placed toward the beam andwedge, and the square end placed toward the end plate.
- **NEVER** place hands or feet between the log and splitting wedge during forward or reverse stroke as this could result in serious injury or death. NEVER attempt to load the log splitter when the ram or wedge is in motion.
- **ALWAYS** Keep fingers away from any cracks that open in the log while splitting. They can quickly close and pinch or amputate your fingers.
- Keep your work area clean. Immediately remove split wood around the machine so you don't stumble over it
- **NEVER** straddle or step over the log splitter during operation.
- **NEVER** reach or bend over the log splitter to pick up a log.
- NEVER try to split two logs on top of each other. NEVER try to cross split a log.
- NEVER operate your log splitter when it is poor mechanical condition or in need of repair.
- **NEVER** touch the muffler and other hot areas of the engine during operation. Wait until the engine cools down.
- **NEVER** tamper with the engine to run it at excessive speeds. The maximum engine speed is preset by the manufacturer and is within limits. Refer to the engine owner's manual for your particular log splitter.
- **NEVER** move the log splitter while the engine is running. Shut o the engine if you are leaving the log splitter, even for a short period of time.
- ALWAYS be careful when moving or lifting the log splitter. Get assistance if it feels too heavy to move
- yourself by yourself.

#### **SETTING UP**

## **A** WARNING

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

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

## Step 1: Attached Tow Bar to the Oil Tank

1. Fix the tow bar (#65) to the oil tank(#51) by using 4 sets of hex bolt M12x40 (#54), flat washer Ø12 (#33) and nylon lock nut M12 (#55).

2. Attach suction hose (#104) to the oil tank, and secure by hose clamp (#103).

54 33 55 65 51

## Step 2: Wheel Assembly

1. Fix the wheel (#77) to the oil tank (#51) axle by a flat washer Ø20 (#58), slotted nut M20 (#74), cotter pin Ø4x46 (#7) and attach the axle cap (#75).

Lay down the support leg

2. Use a black plastic bushing to fix the axle cap (#75) like below picture. Please cover the black bushing onto the axle cap, and use rubber/wooden hammer knocking the end of the plastic bushing and make the axle cap fixed on wheel.



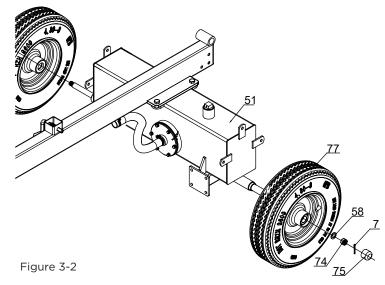
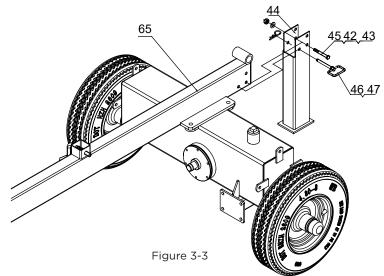


Figure 3-1

## Step 3: Assembly Rear Support Leg

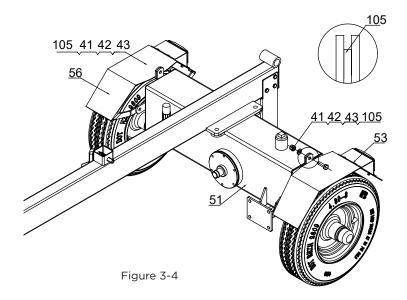
Fix the rear support leg (#44) to the tow bar (#65) by using hex bolt M10x75 (#45), lock nut M10 (#43), flat Washer  $\emptyset$ 10 (#8), flat washer  $\emptyset$ 10 (#42).



## **Step 4: Fenders Assembly**

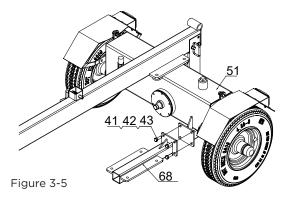
Assemble the right fender (#53) to right side to the oil tank, and left fender (#56) to another side, and fixed by hex bolt M10x30 (#41), flat wash  $\emptyset$ 10 (#42), lock nut M10 (#43).

Note: Put a rubber washer (#105) between fenders and oil tank.



## Step 5: Assembly Engine Mounting Plate

Assemble the engine mounting plate (#68) to oil tank (#51), fixed by using hex bolt M10x30 (#41), flat washer  $\emptyset$ 10 (#42) and lock nut M10 (#43).



## Step 6: Mounting H Beam to Tow Bar

- 1. Remove the hinge pin (#48) and cotter pin Ø4x40 (#49) from tow bar.
- 2. Attach beam to the tow bar secure with hinge pin (#48) and cotter pin Ø4x40 (#49).
- 3. Attach hydraulic hose (valve oil tank) (#101) to the return oil pipe connector of oil tank put a o ring 17x2.5 (#25) in the middle of them.

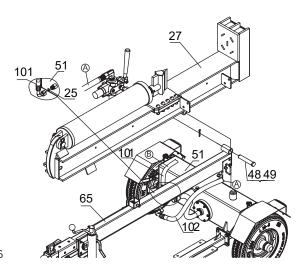


Figure 3-6

#### Step 7: Assembly Gear Pump

- 1. Take down the flat key (#97) from the engine shaft, put the engine bushing (#95) to the engine shaft, insert the flat key (#97) to the engine shaft again, then assemble the engine connector (#94) to the engine shaft.
- 2. Assemble the gear pump assembly to the engine by using hex bolt M8x25 (#86), lock washer Ø8 (#87) and flat washer Ø8 (#4).
- 3. Assemble the connector cover (#99) to the gear pump stand by using hex bolt M5x10(#98).

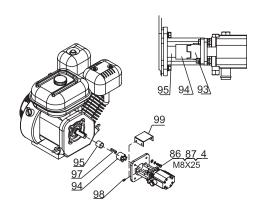
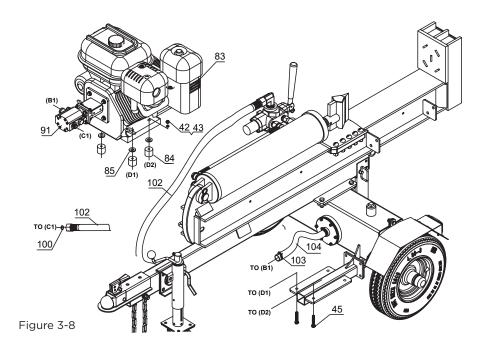


Figure 3-7

#### Step 8: Assembly Engine Components

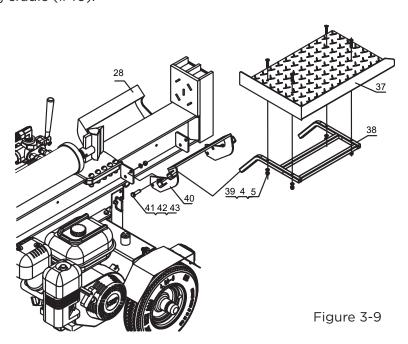
Assemble the engine component (#83) to mounting plate (#68), put polyurethane block (#84) and big flat washer  $\emptyset$ 10 (#85) in between engine and mounting plate. Fixed by hex bolt M10x75 (#45), flat washer  $\emptyset$ 10 (#42), nylon lock nut M10 (#43).

Assemble the suction hose (#104) into the connector of gear pump (B1), secure by hose clamp (#103). Assemble the hydraulic hose (valve-pump) (#102) into the connector of gear pump (C1), by o ring 14x2.5 (#100), then tighten.



#### **Step 9:** Log Cradle and Wood Tray Assembly

- 1. Assemble the left log cradle (#28) to mounting plate of H beam left side, and assemble the right log cradle (#40) to mounting plate of H beam right side. Fixed by hex bolt M10 M10x75 (#45), flat washer Ø10 (#42), nylon lock nut M10 (#43).
- 2. Assemble the wood tray (#37) to tray frame (#38), fixed by hex bolt M8x35 (#39), flat washer Ø8 (#4), nylon lock nut M8 (#5).
- 3. Attach the wood tray assembly to the right log cradle (#40).



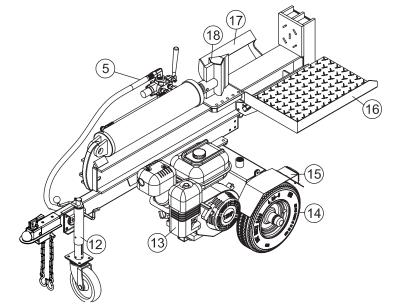
#### **OPERATION**

## **A** IMPORTANT

Your log splitter is shipped without motor oil in the engine. You MUST add the oil before operating. Be careful not to overfill.

## **Know Your Log Splitter**

- 1. 106 mm thickness End Plate
- 2. Beam. The beam is made of 6" wide flange beam
- 3. Rear Support Leg: The leg supports the log splitter steadily while operating.
- 4. Control Valve. Use the control valve handle to move the wedge slide forward and backward.
- 5. Hydraulic Oil Inlet Hose
- 6. Cylinder: The hydraulic cylinder has a 5" bore and a 19.4" stroke.
- 7. 2" Coupler. Attaches the log splitter to your vehicle. Fits only 2" hitch balls.
- 8. Safety Chains. A safety feature to prevent loss of log splitter while towing.
- 9. Beam Lock Pin
- 10. Hydraulic Oil Outlet Hose.
- 11. Gear Pump: 2-Stage, Max. 16 GPM.
- 12. Jockey Wheel
- 13. Engine: 13HP, 4-stroke, Gas engine manual start.
- 14. D.O.T Pneumatic Tire: Maximum rated speed is 45 MPH.
- 15. Fenders with Reflector Lamp
- 16. Large Wood Tray
- 17. Log Cradle: Keeps the log on the beam without operator assistance.
- 18. Cast Steel Wedge Component.



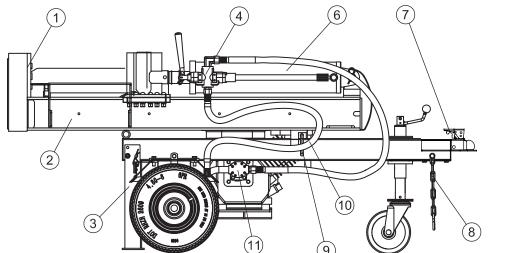


Figure 4-1

#### **Control Handle**

The control handle has three positions. See Figure 4-2.

- FORWARD: Move control handle FORWARD or DOWN to move wedge to split wood.
- NOTE: Control handle will return to neutral position as soon as handle is released. (Forward Position only)
- NEUTRAL: Release the control handle or move the lever to neutral position to stop the wedge movement.
- REVERSE: Move control handle BACK or UP to return the wedge toward the cylinder. The control handle stays in the return (Reverse) position and returns to neutral automatically when fully retracted.
  - NOTE: Reverse position may also be operated back to neutral position manually, if necessary.

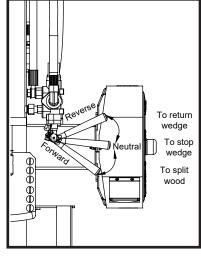


Figure 4-2

## **Stopping Engine**

- 1. Move throttle control handle to STOP or OFF position.
- 2. Turn off the engine switch.
- 3. Disconnect spark plug wire and ground against the engine to prevent unintended starting.

IMPORTANT: Your log splitter may be shipped without motor oil in the engine. You MUST check and add the oil before operating. Be careful not to overfill.

## **A** WARNING

Read, understand, and follow all instructions and warnings on the machine and in this manual before operating.

Wear leather work gloves, safety shoes, ear protection, and safety glasses when operating a log splitter. Ensure safe footing.

#### Gas and Oil Fill-Up

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

## **A** WARNING

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

**IMPORTANT:** Your log splitter is shipped with motor oil in the engine. However, you MUST check the oil level before operating. Be careful not to overfill.

NOTE: Gasoline can be added to the engine when the log splitter is in either the horizontal or vertical position. However, there are less obstructions when the unit is in the vertical position.

## **Starting Engine**

- 1. Attach spark plug wire to spark plug. Make certain the metal cap on the end of the spark plug wire is fastened securely over metal tip of the spark plug.
- 2. Turn fuel valve, if equipped, to the ON position.
- 3. Move choke lever, if equipped, to CHOKE position.
- 4. If the engine is equipped with a primer, follow instructions in the engine manual to prime it.
- 5. Turn the throttle control handle to the FAST position.
- 6. Grasp starter handle and pull rope out slowly until engine reaches start of compression cycle (rope will pull slightly harder at this point).
- 7. Pull rope with a rapid, full arm stroke. Keep firm grip on starter handle. Let rope rewind slowly. Repeat until engine cranks.
- 8. After engine starts, move choke lever (if equipped) to OFF position. Place throttle lever to the speed desired.
- 9. In cold weather, run wedge up or down beam 6 to 8 times to circulate the hydraulic fluid.

## **A** WARNING

When starting a warm engine, the muffler and surrounding areas are hot and can cause a burn. Do not touch.

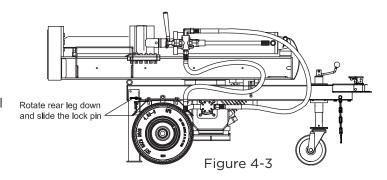
Never remove partially split wood from the wedge with your hands. Fingers may become trapped between split wood.

Always keep the rear support leg down, and secure by lock pin at any working position.

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

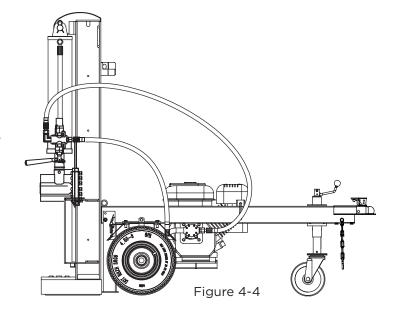
#### **Horizontal Position**

- 1. Rotate the vertical beam down. See Figure 4-3. Pivot beam to the horizontal position. The beam will lock automatically in horizontal position.
- 2. Stand behind the reservoir tank to operate control handle and to stabilize the log.



#### **Vertical Position**

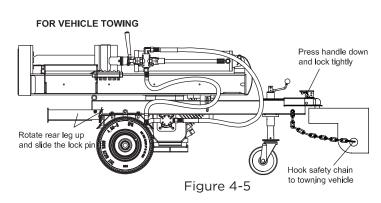
- 1. Pull the horizontal beam lock out to release the beam and pivot the beam to the vertical position.
- 2. Stand in front of the unit to operate the control handle and to stabilize the log. See Figure 4-4.

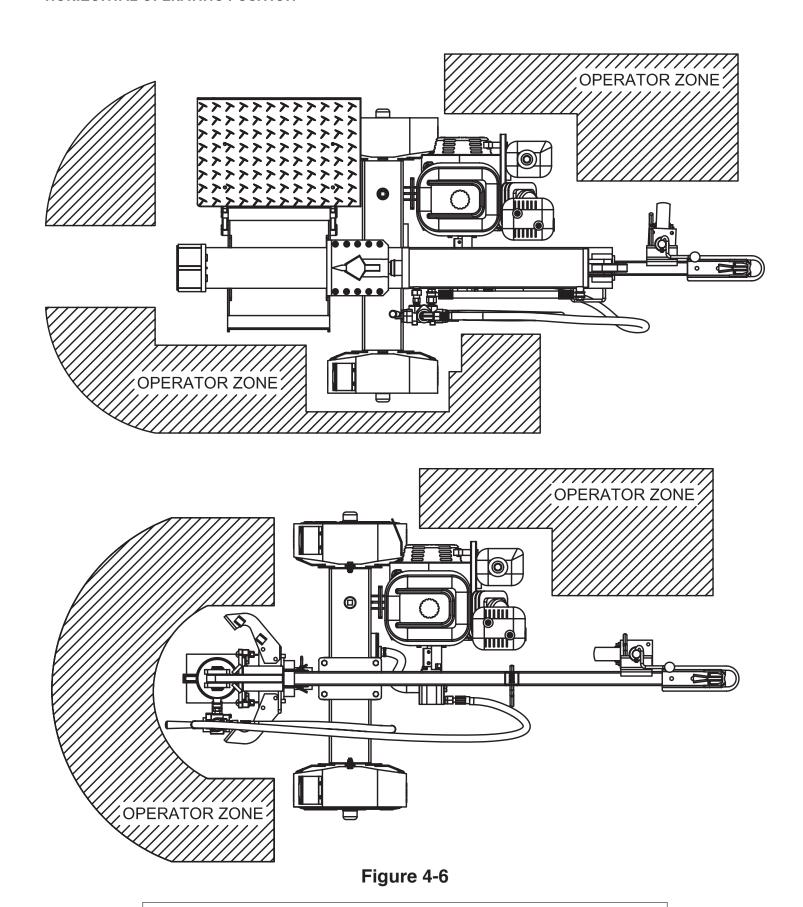


#### **Transporting**

IMPORTANT: Always turn fuel valve to OFF position before transporting the log splitter.

- 1. Lower the beam to its horizontal position. Make certain the beam is locked securely with the horizontal beam lock pin.
- 2. Rotate up the Rear Support Leg, secure by Lock
- 3. Swing Jockey Wheel up, See Figure 4-5.
- 4. Attach coupler hitch to a class I or higher ball on a towing vehicle; latch securely.
  - 1) If coupler hitch does not fit on ball: Turn adjustment nut one turn counter-clockwise.
  - 2) If coupler hitch is too loose on ball: Turn adjustment nut one turn clockwise.
- 5. Connect the safety chains to the towing vehicle.





## **A** WARNING

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

#### **Before Each Use**

- 1. Remove the dipstick and check hydraulic fluid level.
- 2. Check engine oil level. Refill if necessary.
- 3. Fill up gasoline if necessary.
- 4. Lubricate the beam area where splitting wedge will slide with engine oil. Do not use grease to lubricate. Make sure to lubricate both the front and the back of the beam face.
- 5. Attach spark plug wire to the spark plug.

## **Using the Log Splitter**

- 1. Place the log splitter on level, dry ground.
- 2. Place the beam in either the horizontal or vertical position and lock in place with the appropriate locking rod.
- 3. Block the front and back of both wheels.
- 4. Place the log against the end plate and only split wood in the direction of the grain.
- 5. To stabilize the log, place your hand only on sides of log. Never place hand on the end between the log and the splitting wedge.
- 6. Only one adult should stabilize the log and operate the control handle, so the operator has full control over the log and the splitting wedge.



#### **Control Handle**

- 1. Move control handle FORWARD or DOWN to split wood.
- 2. Release the control handle to stop the wedge movement.
- 3. Move control handle BACK or UP to return the wedge.

#### Log Dislodger

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

## **A** WARNING

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

- 1. To remove partially split wood from wedge, move control handle to REVERSE position until wedge is fully retracted to allow split wood portion to contact the log dislodger.
- 2. Once removed from wedge with log dislodger, split wood from opposite end or in another location.

#### **Operating Tips**

#### Always:

- 1. Use clean fluid and check fluid level regularly.
- 2. Use an approved hydraulic fluid. Such as: 10W AW-32, ASLE H-150, ISO 32
- 3. Use a filter (clean or replace regularly).
- 4. Use a breather cap on fluid reservoir.
- 5. Make sure pump is mounted and aligned properly.
- 6. Use a flexible "spider" type coupling between engine and pump drive shafts.
- 7. Keep hoses clear and unblocked, untouched any metal part.
- 8. Bleed air out of hoses before operating.
- 9. Flush and clean hydraulic system before restarting after servicing.
- 10. Use "pipe dope" on all hydraulic fittings.

- 11. Allow time for warm-up before splitting wood.
- 12. Prime the pump before initial start-up by turning over the engine with spark plug disconnected (if not already done at factory).
- 13. Split wood along the grain (lengthwise) only.

#### **Never:**

- 1. Use when fluid is below 20° F or above 150° F.
- 2. Use a solid engine /pump coupling.
- 3. Operate through relief valve for long.
- 4. Attempt to adjust unloading or relief valve settings without pressure gauges.
- 5. Operate with air in hydraulic system.
- 6. Use Teflon tape on hydraulic fittings.
- 7. Attempt to cut wood across the grain.
- 8. Attempt to remove partially split wood from the wedge with your hands. Fully retract wedge to dislodge wood with log dislodger

## **Raising The Beam**

- 1. Use control handle to run wedge up and down beam 6 to 8 times to circulate the hydraulic fluid, which will warm and thin the fluid.
- 2. Place log splitter on a firm, level surface. To raise the beam for vertical operation:
  - 1) Pull out the horizontal beam lock pin on two bar.
  - 2) Release the beam.
  - 3) Move the beam to the vertical position.

#### To lower the beam:

- 1. Pull out the vertical beam lock on the reservoir tank.
- 2. Pivot beam lock down to release the beam.
- 3. Carefully pull back on beam and lower it to the horizontal position. The horizontal beam lock will lock automatically. See Figure 4-1.

## **A WARNING**

Always KEEP REAR SUPPORT LEG DOWN AND SECURE BY LOCK PIN AT VERTICAL OR HORIZONTAL USING.

#### **Transporting the Log Splitter**

IMPORTANT: Always turn fuel valve to OFF position

before transporting the log splitter.

- 1. Lower the beam to its horizontal position. Make certain the beam is locked securely with the horizontal beam lock pin.
- 2. Rotate up the Rear Support Leg, secure by Lock Pin.
- 3. Swing Jockey Wheel up, See Figure 4-5.
- 4. Attach coupler hitch to a class I or higher ball on a towing vehicle; latch securely.
  - 1) If coupler hitch does not fit on ball: Turn adjustment nut one turn counter-clockwise.
  - 2) If coupler hitch is too loose on ball: Turn adjustment nut one turn clockwise.
- 5. Connect the safety chains to the towing vehicle.

## **A** WARNING

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

NOTE: Use caution when backing up. It is recommended to use a spotter outside the vehicle.

#### **MAINTENANCE**

## **A** WARNING

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

## **A WARNING**

Before cleaning, lubricating, repairing, or inspecting, disengage the control lever and stop engine. Disconnect the spark plug wire and ground it against the engine to prevent unintended starting. Always wear safety glasses during operation or while performing any adjustments or repairs.

## **A** WARNING

Higher pressure could cause the hoses to burst, cylinder to rupture, and intense fluid to be released, which could result in serious personal injury.

## **Conditions that Will Void Warranty**

- 1. Failure to maintain proper fluid level in reservoir
- 2. Changing the relief valve setting or pressure adjustment of control valve without proper knowledge and instruction from the factory
- 3. Disassembling the pump
- 4. Use of incorrect hydraulic fluid
- 5. Allowing the flexible pump coupler to deteriorate without proper and regular inspection
- 6. Lack of lubrication or improper lubrication of the beam or unit
- 7. Improper adjustment of splitting wedge
- 8. Excessive heating of the hydraulic system
- 9. Attempting to start unit in temperatures under 20°F without pre-heating fluid in reservoir
- 10. Unattended leaks in hydraulic system

## **Storing Your Log Splitter**

Prepare your log splitter for storage at the end of the season or if the log splitter will not be used for 30 days or more.

## **WARNING**

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

- 1. Clean the log splitter thoroughly.
  - NOTE: We do not recommend the use of pressure washers or garden hose to clean your unit. They may cause damage to bearings or the engine. The use of water will result in shortened life and reduce serviceability.
- 2. Wipe unit with an oiled rag to prevent rust, especially on the wedge and the beam.
- 3. Drain fuel tank. Always drain fuel into approved container outdoors, away from open flame. Be sure that engine is cool before draining the fuel. Do not smoke while handling fuel.
- 4. Start the engine and let it run until the fuel lines and carburetor are empty.
- 5. Remove spark plug. Holding a rag over the cylinder hole, pour approximately 1/2 ounce (approximately one tablespoon) of engine oil into cylinder and crank slowly to distribute the oil.
- 6. Replace spark plug.
- 7. Do not store gasoline from one season to another.
- 8. Replace your gasoline can if it starts to rust. Rust and/or dirt in the gasoline will cause problems.

9. Store unit in a clean, dry area. Do not store next to corrosive materials, such as fertilizer. NOTE: If storing in an unventilated or metal storage shed, be certain to rustproof the equipment by coating with a light oil or silicone.

## **Hydraulic Fluid and Inlet Filter**

- Check the hydraulic fluid level in the log splitter reservoir tank before each use. Maintain fluid level within the range specified on the dipstick at all times.
- Change the hydraulic fluid in the reservoir every 100 hours of operation. Follow the steps below:
  - 1) Discharge hydraulic fluid by unthread drain plug, and disconnect the suction hose from the bottom of the reservoir tank.
  - 2) Carefully unthread the inlet filter and clean it with penetrating oil. See Figure 5-2.
  - 3) Allow the fluid to drain into a suitable container.
  - 4) Reinsert the filter and refill the reservoir with three gallons of oil. Approved fluids include Dexron® III / Mercon® III automatic transmission fluid, a 10 Weight AW hydraulic oil or Pro-Mix™ AW-32 Hydraulic Oil.

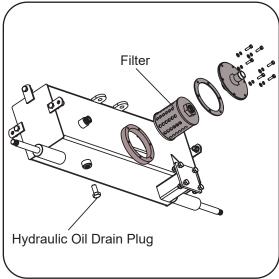


Figure 5-2

- Maintain fluid level within the range specified on the dipstick at all times. When checking the fluid, always make sure to tighten the dipstick until the top of the threads are flush with the top of the pipe. NOTE: Always dispose of used hydraulic fluid and engine oil at approved recycling centers only.
- Contaminants in 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. Contact an authorized service dealer.

#### **Hvdraulic Filter**

• Change the hydraulic filter every 50 hours of operation.

#### **Beam and Splitting Wedge**

- Lubricate both sides of the beam (where it comes into contact with the splitting wedge), before each use, with engine oil. The wedge plate on the log splitter is designed so the gibs on the side of the wedge plate can be removed and rotated and/or turned over for even wear.
- Make certain to readjust the adjustment bolts so wedge moves freely, but no excess space exists between the wedge plate and the beam.

#### **Hose Clamps**

• Check, before each use, if hose clamps on the suction hose (attached to the side of the pump) are tight. Check the hose clamps on the return hose at least once a season.

#### **Engine**

• Refer to the separate engine manual for all maintenance instructions.

#### **Tires**

See sidewall of tire for recommended pressure. Under any circumstances do not exceed manufacturer's recommended psi. Maintain equal pressure on all tires.

## **A** WARNING

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

NOTE: Always dispose of used hydraulic fluid and engine oil at approved recycling centers only.

## **A IMPORTANT**

Never hit the engine shaft in any manner, as a blow will cause permanent damage to the engine.

## **A WARNING**

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

## **A** NOTE

We do not recommend the use of pressure washers or garden hose to clean your unit. They may cause damage to bearings or the engine. The use of water will result in shortened life and reduce serviceability.

## **Storing Your Log Splitter**

Prepare your log splitter for storage at the end of the season or if the log splitter will not be used for 30 days or more.

- Clean the log splitter thoroughly.
   NOTE: We do not recommend the use of pressure washers or garden hose to clean your unit. They
  may cause damage to bearings or the engine. The use of water will result in shortened life and reduce
  serviceability.
- 2. Wipe unit with an oiled rag to prevent rust, especially on the wedge and the beam.
- 3. Drain fuel tank. Always drain fuel into approved container outdoors, away from open flame. Be sure that engine is cool before draining the fuel. Do not smoke while handling fuel.
- 4. Start the engine and let it run until the fuel lines and carburetor are empty.
- 5. Remove spark plug. Holding a rag over the cylinder hole, pour approximately 1/2 ounce (approximately one tablespoon) of engine oil into cylinder and crank slowly to distribute the oil.
- 6. Replace spark plug.
- 7. Do not store gasoline from one season to another.
- 8. Replace your gasoline can if it starts to rust. Rust and/or dirt in the gasoline will cause problems.
- 9. Store unit in a clean, dry area. Do not store next to corrosive materials, such as fertilizer. NOTE: If storing in an unventilated or metal storage shed, be certain to rustproof the equipment by coating with a light oil or silicone.

## **HYDRAULIC TROUBLESHOOTING**

For repairs beyond the minor adjustments listed here, contact an authorized service dealer.

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
	Gear sections damaged.	See authorized service dealer.
	Excessive pump inlet vacuum.	2. Make certain pump inlet hoses are clear and unblocked-
	<ol> <li>Slow engine speed.</li> </ol>	use short, large diameter inlet hoses.
Slow cylinder shaft speed	Damaged relief valve.	3. See authorized service dealer.
while extending and	5. Incorrect oil level.	4. See authorized service dealer.
retracting.	6. Contaminated oil.	5. Check oil level.
	7. Directional valve leaking internally.	Drain oil, clean reservoir, and refill.     See authorized service dealer.
	Internally damaged cylinder.	7. See authorized service dealer. 8. See authorized service dealer.
	Broken seals.	See authorized service dealer.     See authorized service dealer.
Leaking Cylinder	<ol> <li>Scored cylinder.</li> </ol>	See authorized service dealer.     See authorized service dealer.
	•	See authorized service dealer.  1. See authorized service dealer.
	Small gear section damaged.     Duran about value leaking.	
	2. Pump check valve leaking.	2. See authorized service dealer.
Engine runs but wood will	3. Excessive pump inlet vacuum.	3. Make certain pump inlet hoses are clear and unblocked.
not split or wood splits	4. Incorrect oil level.	4. Check oil level.
too slowly	5. Contaminated oil.	5. Drain oil, clean reservoir, and refill.
	6. Directional valve leaking internally.	6. See authorized service dealer.
	7. Overloaded cylinder.	7. Do not attempt to split wood against the grain.
	Internally damaged cylinder.	8. See authorized service dealer.
Engine stalls during	1. Low horsepower/weak engine.	See authorized service dealer.
splitting	2. Overloaded cylinder.	2. Do not attempt to split woodagainst the grain or see authorized service dealer.
	1 Facing /a.usan maigalianananh	
	Engine/pump misalignment.	Correct alignment as necessary.
Engine will not turn or	2. Frozen or seized pump.	See authorized service dealer.
stalls under low load conditions	Low horsepower/weak engine.	See authorized service dealer.
33.14.15.15	4. Hydraulic lines blocked.	4. Flush and clean hydraulic system.
	5. Blocked directional valve.	5. Flush and clean hydraulic system.
	1. Broken drive shaft.	See authorized service dealer.
	2. Engine/pump misalignment.	2. Correct alignment as necessary.
Leaking pump shaft seal	3. Gear sections damaged.	3. See authorized service dealer.
	4. Poorly positioned shaft seal.	4. See authorized service dealer.
	5. Plugged oil breather.	5. Make certain reservoir is properly vented.
	<ol> <li>Spark plug wire disconnected.</li> </ol>	1. Connect wire to spark plug.
	2. Fuel tank empty or stale fuel.	
	3. Choke, if equipped, not in CHOKE position.	<ol> <li>Fill tank with clean, fresh gasoline.</li> <li>Move choke to CHOKE position.</li> </ol>
Engine fails to start	4. Faulty spark plug.	·
Engine fails to start	5. Blocked fuel line.	4. Clean, adjust gap, or replace.  5. Clean fuel line.
	6. Engine (if equipped with a primer) notprimed	
	properly.	6. Prime engine.
	7. Throttle control lever not in correct starting position.	7. Move throttle lever to FAST position.
	·	1. Move choke lever to OFF position.
	1. Unit running with CHOKE applied, if so equipped	2. Connect and tighten spark plug wire.
	2. Spark plug wire loose.	3. Clean fuel line; fill tank with clean, fresh (less than 30 days
Engine runs erratic	3. Blocked fuel line or stale fuel.	old) gasoline.
	4. Water or dirt in fuel system.	4. Drain fuel tank. Refill with fresh fuel.
	5. Dirty air cleaner.	5. Clean or replace air cleaner.
	6. Carburetor not adjusted properly.	6. See authorized service dealer
	1. Engine oil level low.	1. Fill crankcase with proper oil.
Engine Overheats	2. Dirty air cleaner.	2. Clean or replace air cleaner.
	3. Carburetor not adjusted properly.	3. See authorized service dealer.
	Broken drive shaft.	See authorized service dealer.
		2. Disconnect hydraulic hoses, remove shipping plugs,
Cylinder rod will not	2. Shipping plugs left in hydraulic hoses.	reconnect hoses.
	3. Set screws in coupling not adjusted properly.	3. See operator's manual for correct adjustment.
	4. Loose shaft coupling.	4. Correct engine/pump alignment as necessary.
	5. Gear sections damaged.	5. See authorized service dealer.
move	6. Damaged relief valve.	6. See authorized service dealer.
	7. Hydraulic lines blocked.	7. Flush and clean hydraulic system.
	8. Incorrect oil level.	8. Check oil level.
	9. Damaged directional valve.	9. See authorized service dealer.
	10. Blocked directional valve.	10. Flush and clean hydraulic system.

#### **SPECIFICATIONS**

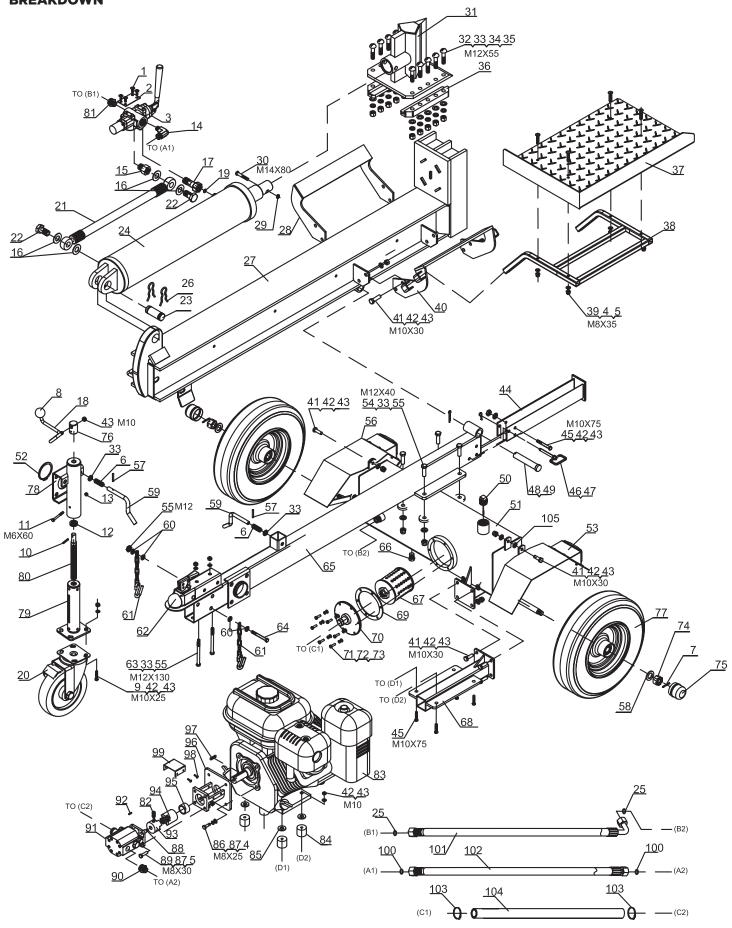
MODEL	BE-LS35TLE270GX
Max. Ram Force	40 TON
Cycle Time	18 Seconds
Hydraulic Tank Capacity	4.3 Gallon (16L)
Max Log Length	21.6 inch (55cm)
Tire Size	16 inches
Max Towing Speed	45 MPH
Engine	13hp, OHV, 4stroke,3600rpm
Cylinder Size	5" x 19.4" (127mmx493mm)
Hydraulic Fluid Type	10W AW32, ASLE H-150, ISO 32
Gear Pump	2-Stage,16GPM(57.6L/min)
Max. Pressure	3600psi (25Mpa)
Control Valve	Detent (auto-return)
OVERALL DIMENSIONS	
Height	36.2 inches(92cm)
Width	42.5 inches(108cm)
Lenght	84 inches (214cm)

## **Hydraulic Oil**

Oil Capacity is 3.4 gallons(12.8L). Use types 10W AW32, ASLE H-150, and ISO32.

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

## **BREAKDOWN**



REF	PART NO.	DESCRIPTION	QTY
1	9110-08010-DX	Screw M8x10	4
2	LSA22-00025	Valve Plate	1
3	LSM30-05000	Control Valve	1
4	9301-08000-DX	Flat Washer Ø8	8
5	9206-08000-DX	Hex Lock Nut M8	8
6	LSP25-00003-DX	Spring	2
7	9404-04036-DX	Cotter Pin Ø4x36	2
8	LSE20-07001	Handle Ball	1
9	9101-10025-DX	Hex Bolt M10x25	4
10	9402-05030-DX	Pin Ø5x30	1
11	9101-06060-DX	Hex Bolt M6x60	1
12	9608-51102	Push Bearing	1
13	9206-06000-DX	Nylon Lock Nut M6	1
14	LST37-00012	90° Angle Connector	1
15	LST37-00003	Valve Joiner A	1
16	9905-20000	Combination Washer Ø20	4
17	LSP25-17000	Combination Joiner	1
18	LST37-00013	Jockey Wheel Handle	1
19	9901-15*2.5	O ring Ø15x2.5	1
20	LST37-14000	8" Caster	1
21	LST37-00007	Hydraulic Hose (Valve-Cylinder)	1
22	LST37-00002	Bolt Connector M20	2
23	LSP30-00004-DX	Cylinder Mounting Pin	1
24	LST37-00007	Cylinder	1
25	9901-17*2.5	O Ring Ø17x2.5	2
26	LSP25-00005-DX	R Pin Ø5	2
27	LST37-01000	Beam Weldment	1
28	LST37-03000	Right Log Cradle	1
29	9206-14000-DX	Hex Lock Nut M14	1
30	9101-14080-DX8.8	Hex Bolt M14x80	1
31	LST37-05000	Wedge	1
32	9117-12055-DX12.9	Screw M12x55	10
33	9301-12000-DX	Flat Washer Ø12	18
34	9306-12000-DX	Lock Washer Ø12	10
35	9210-12000-DX	Thick Hex Nut M12	10
36	LSA22-03001	Keeper Plate	2
37	LST37-00001	Wood Tray	1
38	LST37-11000	Wood Tray Frame	1
39	9101-08035-DX	Hex Bolt M8x35	4
40	LST37-02000	Left Log Cradle	1
41	9101-10030-DX8.8	Hex Bolt M10x30	18
42	9301-10000-DX	Flat Washer Ø10	27
43	9206-10000-DX	Hex Lock Nut M10	28

REF	PART NO.	DESCRIPTION	QTY
44	LSA22-15000	Rear Support Leg	1
45	9101-10075-DX8.8	Hex Bolt M10x75	5
46	LSP22-16000	Hitch Pin	1
47	LSP25-00012	R Pin	1
48	LSA22-00015-DX	Hinge Pin	1
49	9404-04040-DX	Cotter Pin Ø4x40	1
50	LSP25-13000	Oil Bolt	1
51	LST37-10000	Oil Tank	1
52	9304-62000-FH	Circlip for Shafr Ø62	1
53	LSA22-18000	Right Protection Fender	1
54	9101-12040-DX8.8	Hex Bolt M12x40	4
55	9206-12000-DX	Hex Lock Nut M12	7
56	LSA22-17000	Left Protection Fender	1
57	9404-03030-DX	Cotter Pin Ø3x30	2
58	9301-20000-DX	Flat Washer Ø20	2
59	LSP25-00008-DX	Safety Pin	2
60	9399-12000-DX	Thick Flat Washer Ø12	4
61	LSA22-13000	Safety Chain with Hook	2
62	Z103	2" Coupler	1
63	9101-12130-DX8.8	Hex Bolt M12x130	2
64	9101-12090-DX8.8	Hex Bolt M12x90	1
65	LST37-06000	Tow Bar	1
66	LSP25-00010-DX	Oil Plug	1
67	LSP30-00007	Oil Filter	1
68	LST37-04000	Engine Mounting Plate	1
69	LSP30-00006	Rubber Washer	1
70	LSP30-15000-DX	Oil filter Mounting Plate	1
71	9101-06020-DX8.8	Hex Bolt M6x20	6
72	9306-06000-DX	Lock Washer Ø6	6
73	9301-06000-DX	Flat Washer Ø6	6
74	LSP25-00020-FH	Slotted Nut M20	2
75	LSP25-00009-DX	Axle Cap	2
76	NS10-02002-DX	Jockey Wheel Handle Bushing	1
77	LSP25-14000	Wheel / Tire Assembly	2
78	LST37-08000	Outside Wheel Bushing	1
79	LST37-09000	Moving Pipe	1
80	NS10-02001	Screw Rod	1
81	LST37-00016	Oil Return Pipe Connector	1
82	9121-06010-FH	Screw M6x10	1
83	LSP35-02001	Gasoline Engine 13HP	1
84	LSP35-00001	Polyurethane Block	4
85	9302-10000-DX	Big Flat WasherØ10	4
86	9101-08025-DX8.8	Hex Bolt M8x25	4

REF	PART NO.	DESCRIPTION	QTY
87	9306-08000-DX	Lock Washer Ø8	8
88	LSP25-10008-FH	Steel Wire Snap Ring for Shaft	1
89	9101-08030-DX8.8	Hex Bolt M8x30	4
90	LST37-00014	Outlet Connector of Pump	1
91	LSP35-02006	Gear Pump (1 6GPM)	1
92	8801-3X3X25	Flat Key	1
93	LSP35-02003	Gear Pump Connector	1
94	LSP35-02002	Engine Connector	1
95	LSP35-02004-DX	Engine Bushing	1
96	LSP35-02005	Gear Pump Stand	1
97	8801-7X7X40	Flat Key	1
98	9101-05010-DX8.8Q	Hex Bolt M5x10	4
99	LSP25-10006	Connector Cover	1
100	9901-14*2.5	O Ring 14x2.5	2
101	LST37-00006	Hydraulic Hose (Valve-Oil Tank)	1
102	LST37-00008	Hydraulic Hose (Valve-Pump)	1
103	LSP25-00011-DG	Hose Clamp	2
104	LST37-00011	Oil Pipe	1
105	LSA22-00021	Rubber Washer 2	6



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