

CHAMPION

POWER EQUIPMENT™

OWNER'S MANUAL AND OPERATING INSTRUCTIONS



15 Ton LOG SPLITTER

1 YEAR
LIMITED WARRANTY

MODEL NUMBER
91551

SAVE THESE INSTRUCTIONS
Important Safety Instructions
are included in this manual.

MADE IN CHINA
REV 91551-20120103

10006 Santa Fe Springs Road
Santa Fe Springs CA 90670
USA / 1-877-338-0999
www.championpowerequipment.com

Have questions or need assistance?

Do not return this product to the store!

WE ARE HERE TO HELP!

Visit our website:

www.championpowerequipment.com

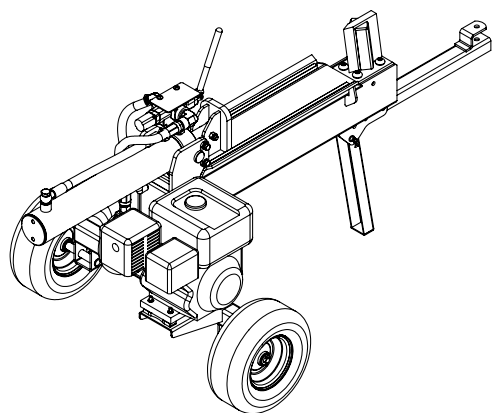
for more info:

- Product Info and Updates
- Tech Bulletins
- Frequently Asked Questions
- Product Registration

– or –

Call our Customer Care Team Toll-Free at:

1-877-338-0999



15 Ton LOG SPLITTER

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INTRODUCTION

Introduction

Congratulations on your purchase of a Champion Power Equipment log splitter. CPE designs and builds log splitters to strict specifications. With proper use and maintenance, this log splitter will bring years of satisfying service.

Portable Log Splitter

This unit is a gasoline engine driven hydraulic log splitter. It is designed to split wood logs for use as firewood for a stove or fireplace. This log splitter will only split logs lengthwise, with the grain only.

Accessories

Champion Power Equipment manufactures and sells accessories designed to help you get the most from your purchase. To find out more, please visit our website at:
→ www.championpowerequipment.com

This Booklet

Every effort has been made to ensure the accuracy and completeness of the information in this manual. We reserve the right to change, alter and/or improve the product and this document at any time without prior notice.

Record the model and serial numbers as well as date and place of purchase for future reference. Have this information available when ordering parts and when making technical or warranty inquiries.

Champion Power Equipment Support
1-877-338-0999
Model Number
91551
Serial Number
Date of Purchase
Purchase Location
For Oil Type see "Add Engine Oil" section. For Fuel Type see "Add Fuel" section.

This manual uses the following symbols to help differentiate between different kinds of information. The safety symbol is used with a key word to alert you to potential hazards in operating and owning power equipment.

Follow all safety messages to avoid or reduce the risk of serious injury or death.

 **DANGER**

DANGER indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury.

 **WARNING**

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

 **CAUTION**

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

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, **may** result in property damage.

 **NOTE**

If you have questions regarding your log splitter, we can help. Please call our help line at **1-877-338-0999**

SAFETY RULES

WARNING

Read this manual thoroughly before operating your log splitter. Failure to follow instructions could result in serious injury or death.

WARNING

The engine exhaust from this product contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.

DANGER

Log Splitter engine exhaust contains carbon monoxide, a colourless, odourless, poison gas. Breathing carbon monoxide will cause nausea, dizziness, fainting or death. If you start to feel dizzy or weak, get to fresh air immediately.

Operate log splitter outdoors only in a well ventilated area. DO NOT operate the log splitter inside any building, enclosure or compartment. DO NOT allow exhaust fumes to enter a confined area through windows, doors, vents or other openings. **DANGER CARBON MONOXIDE**, using a log splitter indoors **CAN KILL YOU IN MINUTES**.

DANGER

Rotating parts can entangle hands, feet, hair, clothing and/or accessories. Traumatic amputation or severe laceration can result.

Keep hands and feet away from rotating parts. Tie up long hair and remove jewellery. Operate equipment with guards in place. DO NOT wear loose-fitting clothing, dangling drawstrings or items that could become caught.

DANGER

Sparks can result in fire or electrical shock.

When servicing the engine:

Disconnect the spark plug wire and place it where it cannot contact the plug. DO NOT check for spark with the plug removed. Use only approved spark plug testers.

WARNING

Running engines produce heat. Severe burns can occur on contact. Combustible material can catch fire on contact.

DO NOT touch hot surfaces. Avoid contact with hot exhaust gases. Allow equipment to cool before touching. Maintain at least three feet of clearance on all sides to ensure adequate cooling. Maintain at least five feet of clearance from combustible materials.

WARNING

Crush Hazard

Wedge can cut through skin and break bones. Keep all limbs away from wedge and endplate.

WARNING

Projectile Hazard

Pieces of log may be ejected from the splitter while operating. **Wear ANSI approved safety glasses when operating. Be alert.**

WARNING

Keep Operator Work Zone Clear

Keep work zone clear of debris while working to ensure safe footing.

⚠ DANGER

Skin Injection Hazard. High pressure hydraulic oil can inject under your skin.

Make sure all fittings are tightly secure before applying pressure. Relieve system of pressure before servicing.

⚠ WARNING**Towing Hazard**

ALWAYS check all local and state regulations regarding towing, licensing and lights before towing your log splitter. Review towing safety warnings in your towing vehicle manual.

Drive safely. Be aware of the added length of the log splitter. NEVER ride or transport cargo on the log splitter. Choose a level surface to operate the log splitter.

NEVER EXCEED MAX. Towing Speed 15 MPH (24 KPH)

⚠ WARNING

Rapid retraction of the starter cord will pull hand and arm towards the engine faster than you can let go. Unintentional startup can result in entanglement, traumatic amputation or laceration. Broken bones, fractures, bruises or sprains could result.

When starting engine, pull the starter cord slowly until resistance is felt and then pull rapidly to avoid kickback.

⚠ CAUTION

Parts of the hydraulic circuit (cylinder, pump, valve-body, hoses) can become very hot during operation.

⚠ DANGER

Fuel and fuel vapours are highly flammable and extremely explosive.

Fire or explosion can cause severe burns or death. Unintentional startup can result in entanglement, traumatic amputation or laceration.

When adding or removing fuel:

Turn the engine off and let it cool for at least two minutes before removing the fuel cap. Loosen the cap slowly to relieve pressure in the tank. Only fill or drain fuel outdoors in a well-ventilated area. DO NOT overfill the fuel tank. Always keep fuel away from sparks, open flames, pilot lights, heat and other sources of ignition. DO NOT light or smoke cigarettes.

When starting the engine:

DO NOT attempt to start a damaged engine. Make certain that the gas cap, air filter, spark plug, fuel lines and exhaust system are properly in place. Allow spilled fuel to evaporate fully before attempting to start the engine.

Make certain that the log splitter is resting firmly on level ground.

When operating the log splitter:

DO NOT move or tip the log splitter during operation.

DO NOT tip the log splitter or allow fuel or oil to spill from the engine. Block the wheels to prevent unintended movement.

When storing the log splitter:

Store away from sparks, open flames, pilot lights, heat and other sources of ignition.

⚠ CAUTION

Improper treatment or use of the log splitter can damage it, shorten its life and void your warranty.

Use the log splitter only for intended uses. Operate only on level surfaces. DO NOT expose log splitter to excessive moisture, dust, or dirt.

DO NOT allow any material to block the cooling slots. DO NOT use the engine if:

- Equipment sparks, smokes or emits flames
- Equipment vibrates excessively

SAFETY RULES

Training

1. Read the Operator's Manual completely before attempting to use this log splitter.
2. Do not allow anyone to operate your log splitter who has not read the Operator's Manual or has not been instructed on the safe use of the log splitter.
3. Never allow children or untrained adults to operate this machine.
4. Many accidents occur when more than one (1) person operates the log splitter. If a helper is assisting in loading logs to be split, never actuate controls until helper is clear of the area.
5. Never allow anyone to ride on the machine.
6. Never transport cargo on the log splitter.
7. High fluid pressures are developed in hydraulic log splitters. Pressurized hydraulic fluid escaping through a pin hole opening can puncture skin and cause severe blood poisoning. Therefore, the following instructions should be heeded at all times.
 - a) Do not operate the unit with frayed, kinked, cracked or damaged hoses, fittings, or tubing.
 - b) Stop the engine and relieve hydraulic system pressure before changing or adjusting fittings, hoses, tubing, or other system components.
 - c) Do not adjust the pressure settings of the pump or valve.
 - d) Do not check for leaks with your hand. Leaks can be detected by passing cardboard or wood over the suspected area. Look for discoloration. If injured by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.
8. Keep the operator zone and adjacent area clear for safe, secure footing.
9. If your log splitter is equipped with an internal-combustion engine and 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 local, state, and federal codes. Take appropriate fire-fighting equipment with you.
10. Log splitters should be used only for splitting wood. Do not use for other purposes unless the manufacturer provides attachments and instructions.

Preparation

1. Be thoroughly familiar with all controls and with proper use of the equipment.
 - a) Always wear safety shoes or heavy boots.
 - b) Always wear safety glasses or goggles when operating the machine.
 - c) Never wear jewelry or loose-fitting clothing that might become entangled in moving or rotating parts of the machine.
2. Make sure the splitter is on a level surface. Block the machine as required to prevent unintended movement.
3. Always operate the splitter from the manufacturer's indicated operator zone.
4. Logs to be split on ram-type units should be as squarely as possible.
 - a) Use an approved fuel container.
 - b) Never add fuel to a running or hot engine.
 - c) Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
 - d) Replace gasoline cap securely and clean up spilled fuel.

Operation

1. Before starting this log splitter, review all safety rules. Failure to follow these rules may result in serious injury to the operator or bystanders.
2. Never leave the machine unattended with the power source operating.
3. Never operate the machine when under the influence of alcohol, drugs or medication.
4. The machine owner should instruct all operators in safe log splitter operation.
5. Always operate the log splitter with all safety equipment in place and all controls properly adjusted for safe operation.
6. Always operate the log splitter at manufacturer's recommended speed.
7. Always keep hands and feet clear of moving parts.
8. When loading a ram-type log splitter, place your hands on the sides of the log, not the ends. Never place your hands or any part of your body between a log and any part of the log splitter.
9. On ram-type log splitters, never attempt to split more than one (1) log at a time unless the ram has been fully extended and a second log is needed to complete the separation of the first log.
10. On ram-type log splitters on which the logs are not cut square, the longest portion of the log should be rotated down and the most square end placed against the ram.
11. Use only your hand to operate the log splitter controls.
12. Do not refuel the engine until it has cooled for several minutes.

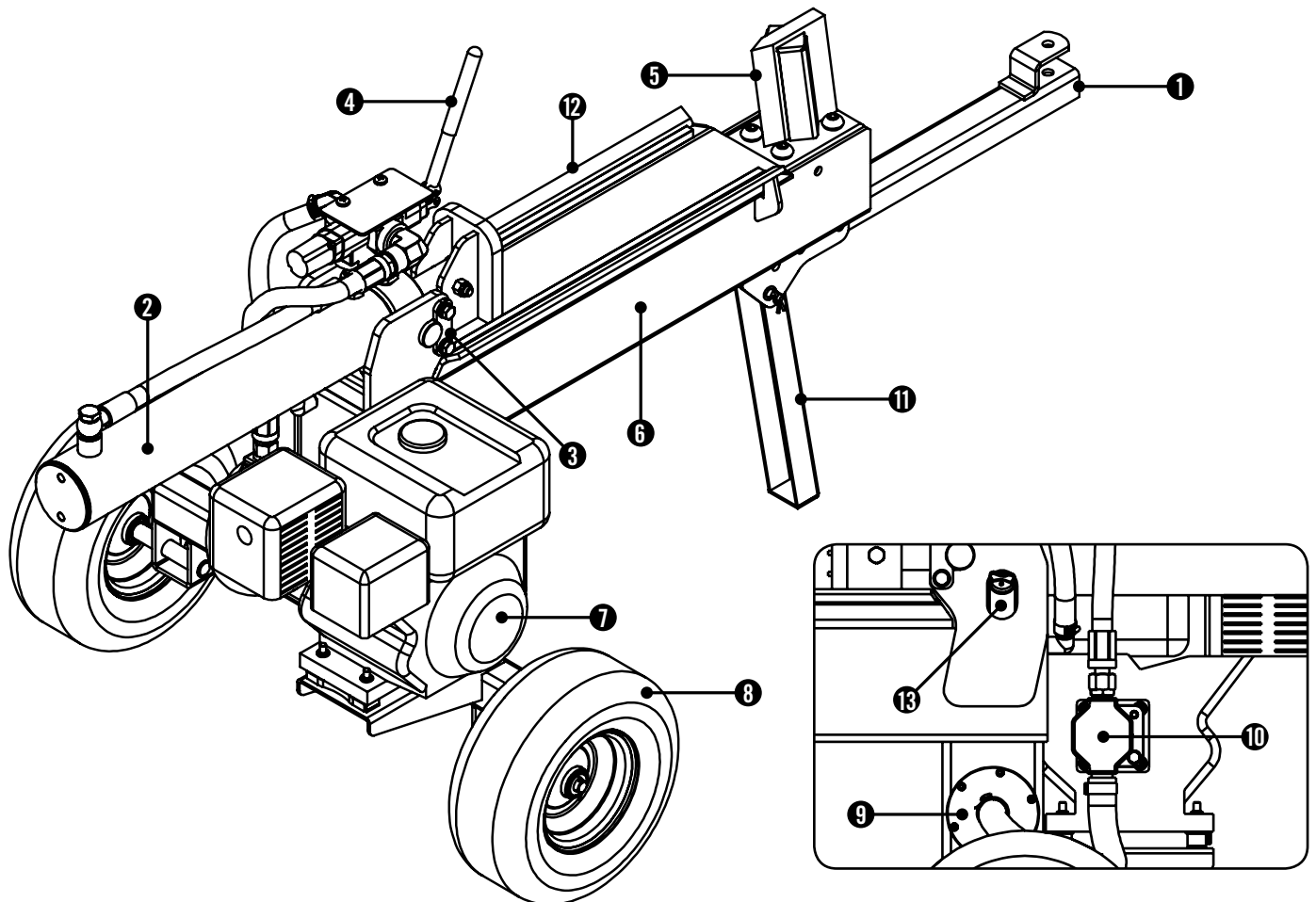
Maintenance and Storage

1. Always shut off the power source while repairing or adjusting the splitter except as recommended by the manufacturer.
2. Clean debris and chaff from the engine cylinder, cylinder head fins, blower house rotation screen, and muffler areas. If the engine is equipped with a spark arrestor muffler, clean and inspect it regularly (follow manufacturer's service instructions). Replace, if damaged.
3. Never store the equipment with fuel in the tank inside the building where fumes might reach an open flame spark. Allow the engine to cool before storing in any enclosure.
4. Clear debris from moveable parts, but only when the power source is shut off.
5. Check to be sure all nuts and bolts are tight to assure the equipment is in safe working condition.

CONTROLS AND FEATURES

Read this owner's manual before operating your log splitter. Familiarize yourself with the location and function of the controls and features. Save this manual for future reference.

Log Splitter



- | | |
|--|--|
| <p>(1) Yoke/Pin Style Tow Connection – For towing the log splitter behind an ATV, or lawn tractor.</p> <p>(2) Hydraulic Cylinder – Converts hydraulic pressure into linear force.</p> <p>(3) Mounting Plates – Holds hydraulic cylinder in place.</p> <p>(4) Control Valve Handle – Controls the movement of the thrust plate.</p> <p>(5) Wedge</p> <p>(6) Splitting Beam & Hydraulic Oil Tank</p> | <p>(7) Engine – 196cc, OHV, 4-stroke, air cooled.</p> <p>(8) Tires – Maximum travel speed is 15 MPH (24 KPH).</p> <p>(9) Hydraulic Fluid Strainer</p> <p>(10) Hydraulic Pump – Pumps hydraulic oil through the system.</p> <p>(11) Support Leg – Supports log splitter while operating. Raise leg for towing.</p> <p>(12) Log Cradle – Prevents log from rolling off the beam.</p> <p>(13) Hydraulic Oil Dipstick</p> |
|--|--|

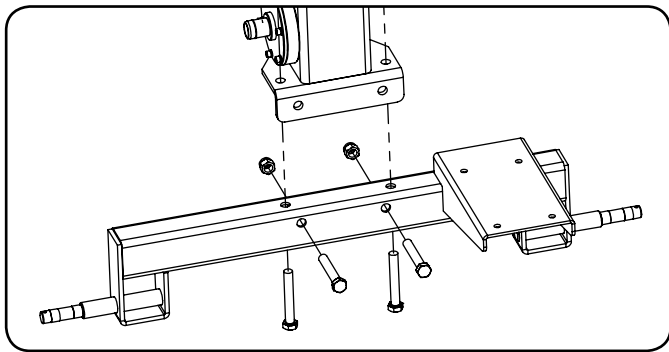
Your log splitter requires some assembly. If you have any questions regarding the assembly of your log splitter, call our help line at 1-877-338-0999. Please have your serial number and model number available.

Open Shipping Crate

1. Set the shipping crate on a solid, flat surface
2. Carefully cut the shipping bands and remove lid of shipping crate.
3. Locate all hardware before beginning assembly.

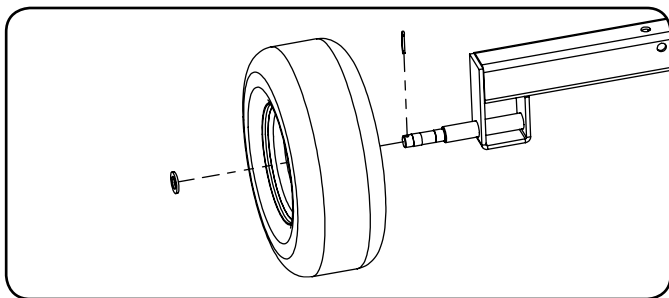
1) Attach Beam to Axle Assembly

1. Attach the splitting beam to the axle by inserting two M12x80 bolts into the bolt holes on the bottom of the axle and through the base plate on the bottom of the hydraulic oil tank below the splitting beam. Secure with two M12 lock nuts.
2. Insert two M12x75 bolts into the back of the axle and through the base plate on the bottom of the hydraulic oil tank. Secure with two M12 lock nuts.



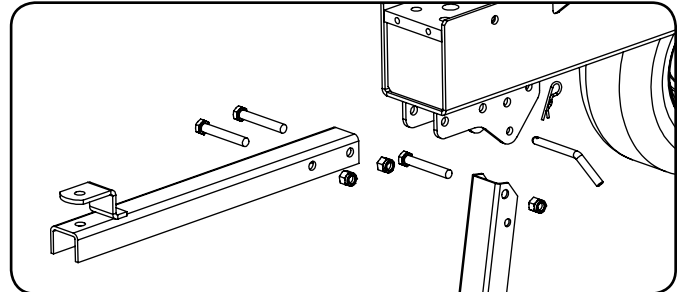
2) Install Wheels

1. Slide the wheel onto the axle.
2. Place washer on axle and secure with cotter pin.
3. Repeat for wheel on other side.



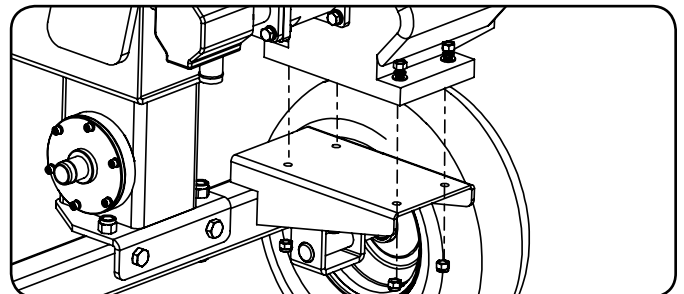
3) Install the Tow Bar and Support Leg

1. Attach the tow bar to the bracket on the bottom of the splitting beam opposite the axle. Secure with two M12x80 bolts and M12 lock nuts.
2. Attach the support leg to the same bracket on the bottom of the splitting beam. Secure with one M12x80 bolt and M12 lock nut.
3. Secure the support leg in the vertical position by inserting the L-pin through the bracket and support leg and securing with hair pin clip.



4) Install the Engine

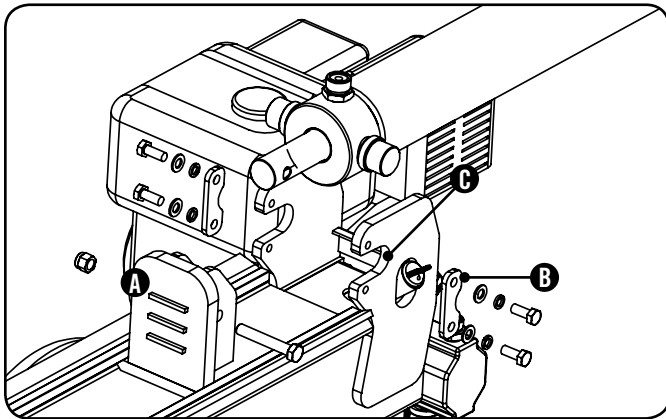
1. Place the engine on the engine bracket with the pump facing the cylinder.
2. Secure the engine with four M8x40 bolts, M8 washers, M8 lock washers and M8 nuts. Tighten to 18 ft-lb.



ASSEMBLY

5) Install the Thrust Plate and Cylinder

1. Slide the thrust plate (A) under the rails on the beam and push it to the front of the beam to make room for the cylinder.
2. Remove the cylinder retainer plates. (B)
3. Place the hydraulic cylinder into the mounting slots on the beam and slide all the way into the slots. (C)
4. Secure the cylinder by re-installing both cylinder retainer plates with two M12x25 bolts, M12 washers and M12 lock washers on each side.
5. Attach thrust plate to cylinder rod with M12x75 bolt and M12 lock nut. (A)

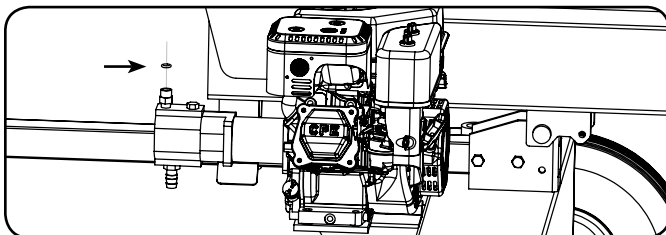


6) Install the Hydraulic Hoses

1. Place the O-ring into the counterbore in the pump outlet fitting.

NOTE

The pump outlet connection does NOT require teflon tape. The o-ring seals against the face of the fittings on the pump and hose. Tighten to approximately 12 ft-lb. Over-tightening can damage the pump.



2. Connect the high pressure hose from the inlet on the control valve to the pump outlet fitting.
3. Connect the oil return hose from to barbed fittings on the control valve to the barbed fittings on the beam/ hydraulic oil tank. Secure with hose clamps.
4. Connect the oil suction hose from the beam/hydraulic oil tank to the pump inlet. Secure with hose clamps.

Add Engine Oil

CAUTION

DO NOT attempt to crank or start the engine before it has been properly filled with the recommended type and amount of oil. Damage to the log splitter as a result of failure to follow these instructions will void your warranty.

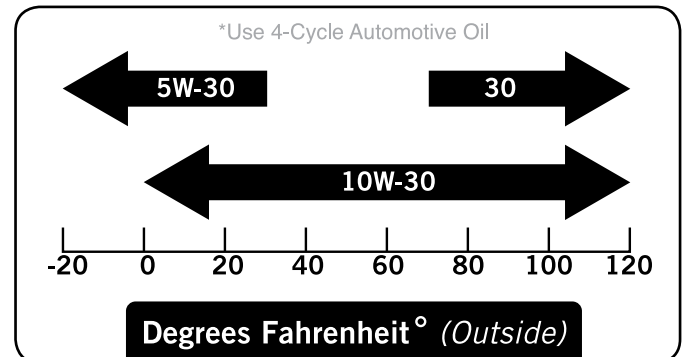
1. Make sure the log splitter is on a flat, level surface.
2. Remove oil fill cap/dipstick to add oil.
3. Add 0.63 qt (0.6 L) of oil (SAE 10W-30) - oil should cover all but 2 threads of filler hole. Replace oil fill cap/dipstick.
4. Check engine oil level daily and add as needed.

CAUTION

The engine is equipped with a low-oil-shutoff and will stop when the oil level in the crankcase falls below the threshold level.

NOTE

Check oil often during the break-in period. Refer to the Maintenance section for recommended service intervals.



Add Engine Fuel

1. Use clean, fresh, regular unleaded fuel with a minimum octane rating of 85 and an ethanol content of less than 10% by volume.
2. DO NOT mix oil with fuel.
3. Clean the area around the fuel cap.
4. Remove the fuel cap.
5. Slowly add fuel to the tank. DO NOT overfill. Allow approximately ¼ inch of space for fuel expansion.
6. Screw on the fuel cap and wipe away any spilled fuel.

⚠ CAUTION

Use regular unleaded gasoline with a minimum octane rating of 85.

Do not mix oil and gasoline.
 Fill tank to approximately ¼ inch below the top of the tank to allow for fuel expansion.
 DO NOT fill fuel tank indoors.
 DO NOT fill fuel tank when the engine is running or hot.
 DO NOT overfill the fuel tank.
 DO NOT light cigarettes or smoke when filling the fuel tank.

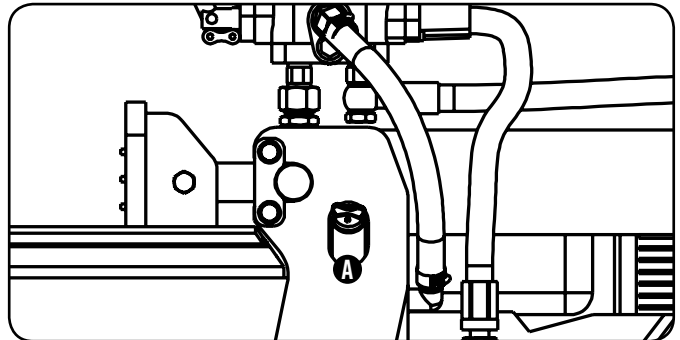
Add Hydraulic Oil

1. Make sure the log splitter is on a flat, level surface.
2. Remove the dipstick from the oil tank. (A)
3. Add 2 gal. (7.6 L) of hydraulic oil - 10W AW32, ASLE H-150, or ISO 32 Universal hydraulic oil are all acceptable types of fluid.

NOTE

When the outdoor temperature is below 32 °F, Dexron III transmission fluid can be used.

4. Check the hydraulic oil level using dipstick. Oil level should be between the two marks on the dipstick. (A)
5. Replace and tighten the dipstick.



⚠ WARNING

DO NOT remove the dipstick when the engine is running or hot. Hot oil can escape causing severe burns. Always allow the log splitter to cool completely before removing the hydraulic oil cap.
 High fluid pressure and temperatures are created in the hydraulic log splitters. Hydraulic fluid will escape through a pin-size hole opening and can puncture skin and cause severe blood poisoning.
 Inspect hydraulic system regularly for possible leaks. Never check for leaks with your hand while the system is pressurized. Seek medical attention immediately if injured by escaping fluid.

6. Start Engine. Extend and retract the cylinder to purge air from the hydraulic system. Cylinder motion should be smooth and continuous.
7. Check the hydraulic oil tank dipstick. Add additional hydraulic oil if needed.

NOTE

To check oil level, insert the dipstick into fill neck until it stops. Remove and read level. Do not thread dipstick into fill neck when checking oil.

OPERATION

Before Each Use Inspect the Log Splitter

1. Check the hydraulic oil level and visually inspect all hoses, attachments and cylinder for loose fittings, leaks, cracks, fraying or other damage.
2. DO NOT operate the log splitter if there is any indication of damage.
3. Inspect the engine and make sure the oil level is correct before operating. If the engine is equipped with a spark arrestor, clean and inspect it regularly (follow spark arrestor maintenance schedule).
4. The tires need to be fully inflated and in good repair. Reference the tire sidewall for recommended tire pressure.

WARNING

DO NOT over inflate tires. Serious injury can result if tires explode.
DO NOT tow the log splitter if the tires are worn or will not hold air.
DO NOT exceed the maximum 15 MPH (24 KPH) towing speed.

Towing Log Splitter Safety

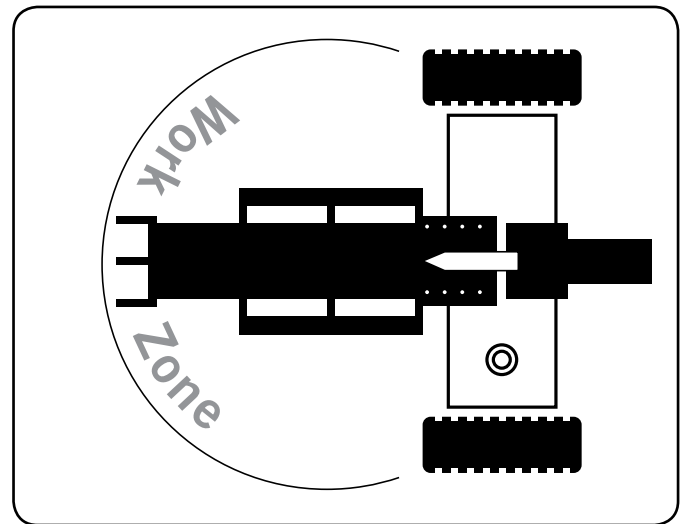
1. Always check local and state regulations regarding the requirements for towing, licensing and lights.
2. Before towing make sure the log splitter is correctly and securely attached to the vehicle and the safety chains attached with enough slack to allow for turning.
3. Never exceed the max. travel speed of 15 mph. Towing the log splitter at speeds greater than 15 mph could result in serious injury or death. Always adjust your towing speed according to the terrain and conditions.
4. Always disconnect the log splitter from the towing vehicle before operating.

Log Splitter Location

This log splitter must have at least seven feet of clearance from combustible material. Leave at least three feet of clearance on all sides of the log splitter to allow for adequate cooling, maintenance and servicing. DO NOT place the log splitter near vents or intakes where engine exhaust fumes could be drawn into occupied or confined spaces. **Always operate the log splitter outdoors.**

The log splitter needs to be on a dry level surface with good footing. DO NOT work on mud, ice, tall grass, brush or snow.

Only operate log splitter from work zone shown below.



Log Splitter Location Cont'd.

WARNING

ALWAYS use the log splitter for its intended use. The log splitter should only be used to split wood logs, length wise with the grain.

NEVER modify, alter or change the log splitter in anyway. Modifications will void the warranty.

NEVER attach a rope, cable or other device to the control lever on the log splitter.

DO NOT modify or change the engine and operating speeds or pressure settings. These changes can cause safety issues.

ONLY operate the log splitter in daylight.

NEVER operate, or let anyone else operate, the log splitter while under the influence of alcohol, drugs, or medication.

NEVER leave the log splitter unattended while the engine is running.

DO NOT change the splitting position with the engine running. Contact with the muffler can cause serious burns.

Always make sure the beam is in the locked position.

DO NOT let the beam drop as it could crush fingers or cause damage to the log splitter.

Starting the Engine

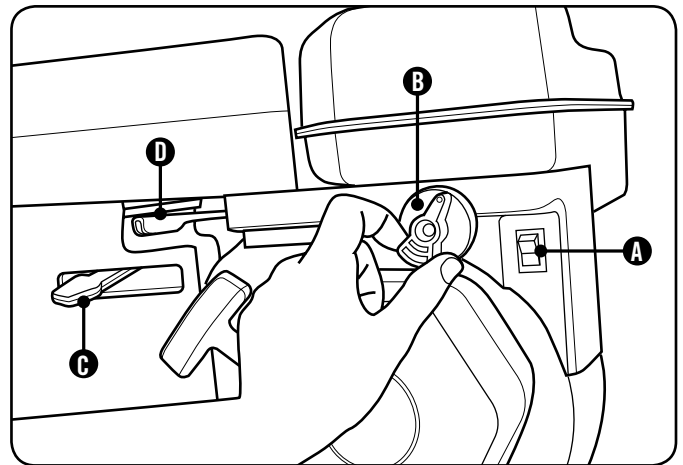
1. Make certain the log splitter is on a flat, level surface.
2. Flip engine switch to "ON" position (A).
3. Rotate the fuel valve to the "ON" position (to the left) (B).
4. Move the choke lever (C) to the "Choke" position (to the left).
5. Pull the starter cord slowly until resistance is felt and then pull rapidly. **SEE NOTE BELOW.**

NOTE

Keep choke lever in "Choke" position for only 1 pull of the recoil starter. After first pull, move choke lever to the "Run" position for up to the next 3 pulls of the recoil starter. Too much choke leads to spark plug fouling/engine flooding due to the lack of incoming air. This will cause the engine not to start.

6. As engine warms up, move the choke lever (C) to "Run" (to the right).
7. Move the throttle lever (D) to the "Fast" position.

Starting the Engine Cont'd.

**NOTE**

If the engine starts, but does not run, make certain that the log splitter is on a flat, level surface. The engine is equipped with a low oil sensor that will prevent the engine from running when the oil level falls below a critical threshold.

The hydraulic oil needs to be above -12°C (10°F) before starting the engine. Cold hydraulic oil can damage the hydraulic pump.

If outdoor air temperature is below 0°C (32°F) allow the log splitter to warm up by extending and returning the wedge several times before splitting wood.

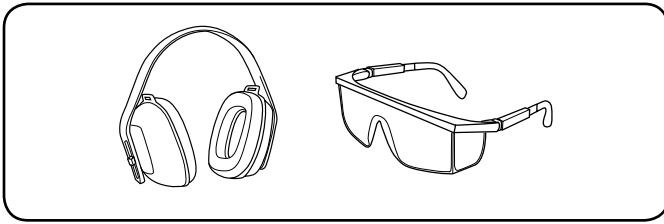
Stopping the Engine

1. Turn the ignition switch to the "Off" position.
2. Turn the fuel knob to the "Off" position.

OPERATION

Log Splitter Operation

1. ALWAYS wear ear and eye protection, protective clothing and safety gear.



2. Block tires and put support leg in the DOWN position to prevent unintended movement of the log splitter during operation.
3. Load a log onto the beam against the wedge.

! CAUTION

Back injury can result from lifting logs onto the log splitter if proper lifting techniques are not used.

4. Make sure all limbs are clear of crush zones.
5. Push and hold the control valve handle forward (towards the wedge) to split the log. The wedge will stop when the control valve handle is released, or when the cylinder reaches the end of stroke.
6. Push the control valve handle backward and release to return the wedge to its original position. The control valve handle will return to the neutral position when the wedge is fully retracted.
7. Clear the split wood from the work zone.

NOTE

The cylinder stroke is designed so the wedge stops approximately 1.5" from the end plate.

! CAUTION

Do not hold auto control valve in return position. Cylinder damage can occur.

NOTE

It is normal for the hydraulic fluid to become foamy or frothy during operation.

The owner/operator is responsible for all periodic maintenance.

WARNING

Never operate a damaged or defective log splitter.

WARNING

Improper maintenance will void your warranty.

NOTE

For service or parts assistance, contact our help line at **1-877-338-0999**.

Complete all scheduled maintenance in a timely manner. Correct any issue before operating the log splitter.

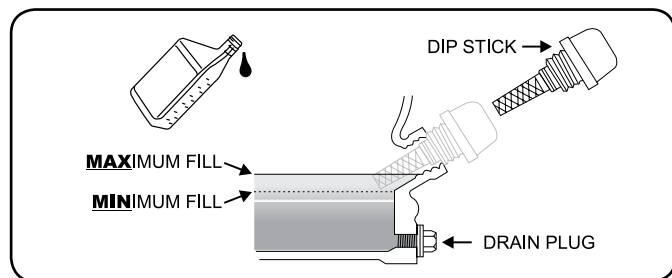
Engine Maintenance

To prevent accidental starting, remove and ground spark plug wire before performing any service.

Oil

Change oil when the engine is warm. Refer to the oil specification to select the proper grade of oil for your operating environment.

1. Remove the oil drain plug with a 12 mm socket and extension.
2. Allow the oil to drain completely.
3. Replace the drain plug.
4. Remove oil fill cap/dipstick to add oil.
5. Add 0.63 qt. (0.6 L) of oil and replace oil fill cap/dipstick.
6. Dispose of used oil at an approved waste management facility.



Spark Plugs

1. Remove the spark plug cable from the spark plug.
2. Inspect the electrode on the plug. It must be clean and not worn to produce the spark required for ignition.
3. Make certain the spark plug gap is 0.7 - 0.8 mm (0.028 - 0.031 in.).
4. Refer to the spark plug recommendation chart when replacing the plug.
5. Carefully thread the plug into the engine.
6. Use the spark plug tool to firmly install the plug.
7. Attach the spark plug wire to the plug.

Air Filter

1. Remove the snap-on cover holding the air filter to the assembly.
2. Remove the foam element.
3. Wash in liquid detergent and water. Squeeze thoroughly dry in a clean cloth.
4. Saturate in clean engine oil.
5. Squeeze in a clean, absorbent cloth to remove all excess oil.
6. Place the filter in the assembly.
7. Reattach the air filter cover and snap in place.

Cleaning

CAUTION

DO NOT use a garden hose to clean the engine or log splitter.

Water can contaminate the fuel system and can enter the engine through the cooling slots and damage the engine.

Clear the debris from the beam, wedge and endplate. Use a damp cloth to clean exterior surfaces of the engine and log splitter.

Use a soft bristle brush to remove excess dirt and oil. Use an air compressor (25 PSI) to clear dirt and small debris. Wipe all metal parts with an oily rag to help prevent rust and corrosion.

MAINTENANCE AND STORAGE

Maintenance Schedule

Follow the service intervals indicated in the schedule below. Service your log splitter more frequently when operating in adverse conditions. Contact our help line at **1-877-338-0999** to locate the nearest Champion Power Equipment authorized service dealer for your log splitter or engine maintenance needs.

Every 8 hours or daily	
	Check oil level
	Clean around air intake and muffler
First 5 hours	
	Change oil
Every 50 hours or every season	
	Clean air filter
	Change oil if operating under heavy load or in hot environments
Every 100 hours or every season	
	Change oil
	Clean/Adjust spark plug
	Check/Adjust valve clearance *
	Clean spark arrester
	Clean fuel tank and filter *
	Change hydraulic oil
Every 3 years	
	Replace fuel line

*To be performed by knowledgeable, experienced owners or Champion Power Equipment certified dealers.

Log Splitter Maintenance

Make certain that the log splitter is kept clean and stored properly. Only operate the unit on a flat, level surface in a clean, dry operating environment. DO NOT expose the unit to extreme conditions, excessive dust, dirt, moisture or corrosive vapours.

Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

Clean spark arrester every 100 hours (if equipped).

Check and tighten all bolts and nuts before operating the log splitter.

Hydraulic Oil

1. Change hydraulic oil when the log splitter is warm. Change after first 25 hours, then every 100 hours.
2. Place a collection pan under the tank.
3. Remove drain plug on the bottom of the tank and allow oil to drain completely.
4. Replace oil drain plug.
5. Remove dipstick and add 2 gallons of hydraulic oil.
6. Start engine and purge air from hydraulic system.

Log Splitter Storage Cont'd.

Storage

Refer to the Maintenance section for proper cleaning instructions.

Log Splitter Storage

1. The log splitter needs to be cool for at least 5 minutes before storing.
2. Clean the log splitter before storage according to the Maintenance section.
3. Retract the wedge to protect the rod from corrosion.
4. Wipe the beam and wedge with an oily rag to prevent rust and corrosion.

Engine stored for Less than 30 Days

1. Allow the engine to cool completely before storage.
2. Clean engine according to the Maintenance section.
3. To extend the fuel storage life add fuel stabilizer.
4. Turn the fuel valve to the "Off" position.

Engines Stored for Over 30 Days

1. Run the engine with the fuel valve in the "Off" position until the engine stops.
2. The engine needs to cool completely before storage.
3. Clean engine according to the Maintenance section.
4. Drain all fuel completely from the fuel line and carburetor to prevent gum from forming.
5. Add a fuel stabilizer into the fuel tank.
6. Change the oil.
7. The fuel valve needs to be in the off position.
8. Remove the spark plug and pour about 14 g (½ oz.) of oil into the cylinder. Crank the engine slowly to distribute the oil and lubricate the cylinder.
9. Reattach the spark plug.

WARNING

Never store the log splitter inside next to appliances where there is a source of heat or open flame, spark or pilot light because they can ignite gasoline vapours. DO NOT store a log splitter near fertilizer or any corrosive material. Even with an empty gas tank, gasoline vapours could ignite.

Log Splitter Specifications

- Ram Force 15 Ton
- Cycle Time, Max No-Load* 10 seconds
- Hydraulic Tank Capacity 2.1 gal. (7.9 L)
- Max Log Length 19.7-in. (50 cm)
- Max Log Weight 100 lb. (45 kg)
- Towing Yoke/Pin Style Connection
- Tire Size, Outside Diameter 12-in. (30.5 cm)
- Max towing speed 15 MPH (24 KPH)
- Engine 196 cc, OHV, 4 stroke
- Cylinder size 3.35-in. diameter (8.5 cm)
- Gear Pump 2-stage
- Max pressure 3500 psi
- Max flow 8 GPM
- Control Valve Detent (auto-return)
- **Overall Dimensions**
- Gross Weight 264.6 lb. (120 kg)
- Net Weight 242.5 lb. (110 kg)
- Length 70.6-in. (179.3 cm)
- Width 35.8-in. (90.9 cm)
- Height 38.4-in. (97.5 cm)

* Theoretical cycle time at nominal conditions. Actual time may vary with temperature, altitude, mechanical efficiency, and hydraulic efficiency.

Hydraulic Oil System

Total oil capacity is 2.7 gallons (10.2 L).

Use types 10W AW32, ASLE H-150, ISO32 or universal hydraulic fluid.

Engine Specifications

- Engine 196 cc OHV CPE
- PTO Rotation Counterclockwise
- Ignition Mode TCI (transistorized)
- Displacement 196 cc
- Torque (max) 8.7 ft. lb. @ 2800 RPM
- Compression 8.5:1
- Horizontal Shaft $\frac{3}{4}$ -in. x $2\frac{7}{16}$ -in.
 (1.91 cm x 6.17 cm)
- End Hole Tapped $\frac{5}{16}$ -in. 24 UNF
- Fuel Capacity 1.06 gallons (4 L)
- Weight 35.27 lb. (16 kg)
- Length 12.32-in. (31.3 cm)
- Width 14.8-in. (37.6 cm)
- Height 13.19-in. (33.5 cm)

Fuel

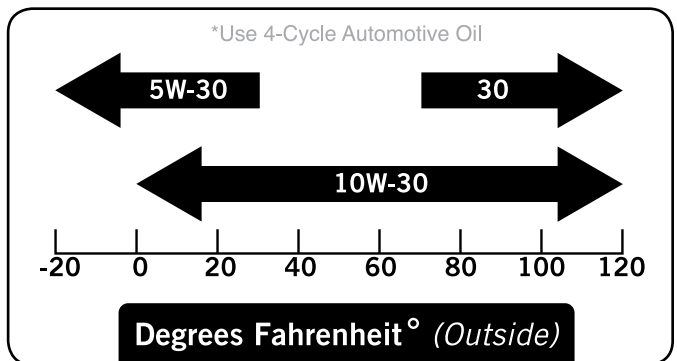
Fuel capacity is 1.06 gallons (4 L). Use regular unleaded gasoline with a minimum octane rating of 85 and an ethanol content of less than 10% by volume.

Oil

Use 4-Cycle automotive oil.

Oil capacity is 0.63 qt (0.6 L).

Please reference the following chart for recommended oil types for use in the log splitter.



Spark Plugs

Recommended replacement spark plug:

- **NGK BPR6ES or equivalent**

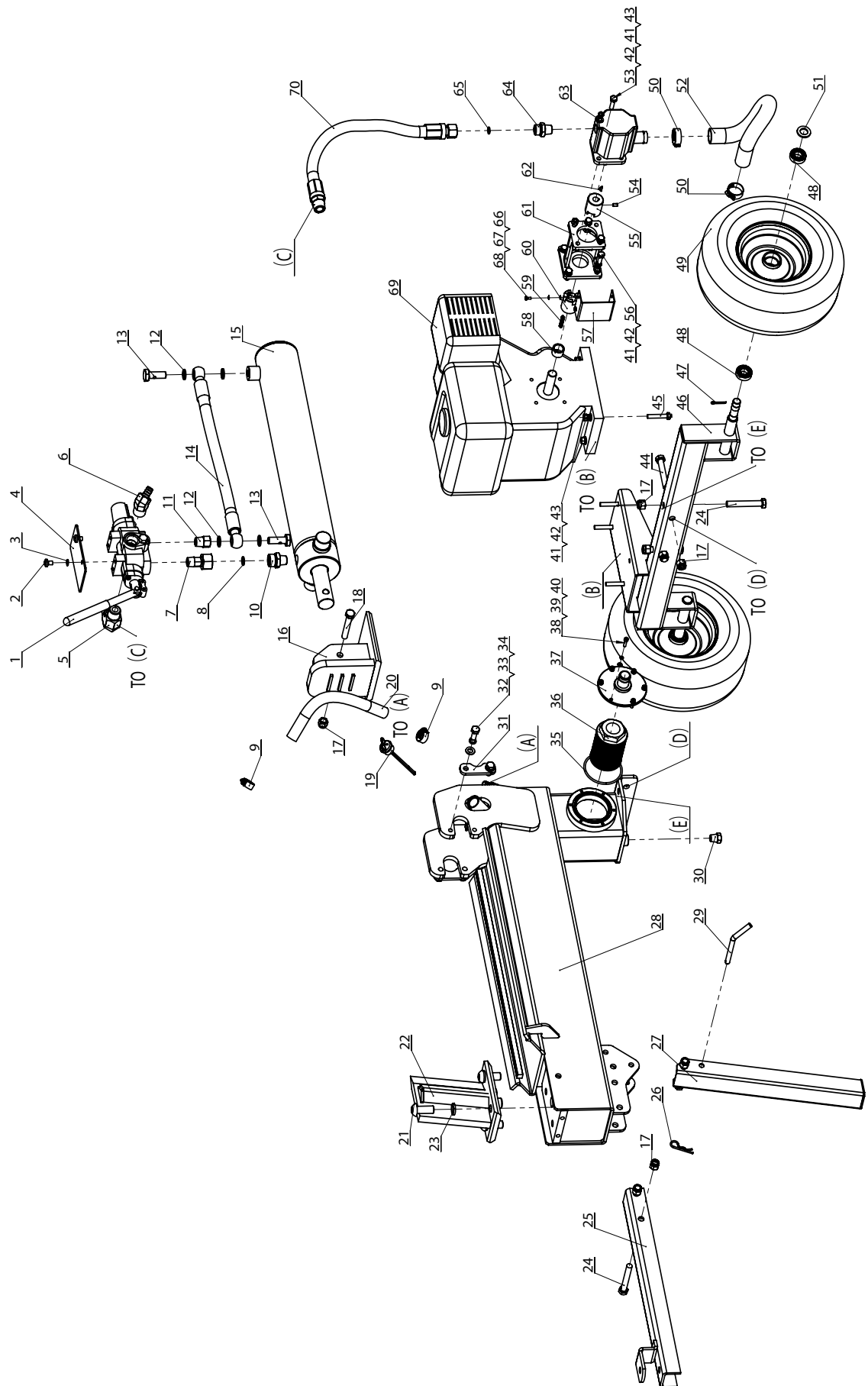
Make certain the spark plug gap is 0.7 - 0.8 mm or (0.028 - 0.031 in.).

Valve Clearance

- Intake: 0.13 – 0.17 mm (0.005 – 0.007 in.)
- Exhaust: 0.18 – 0.22 mm (0.007 – 0.009 in.)

SPECIFICATIONS

Parts Diagram

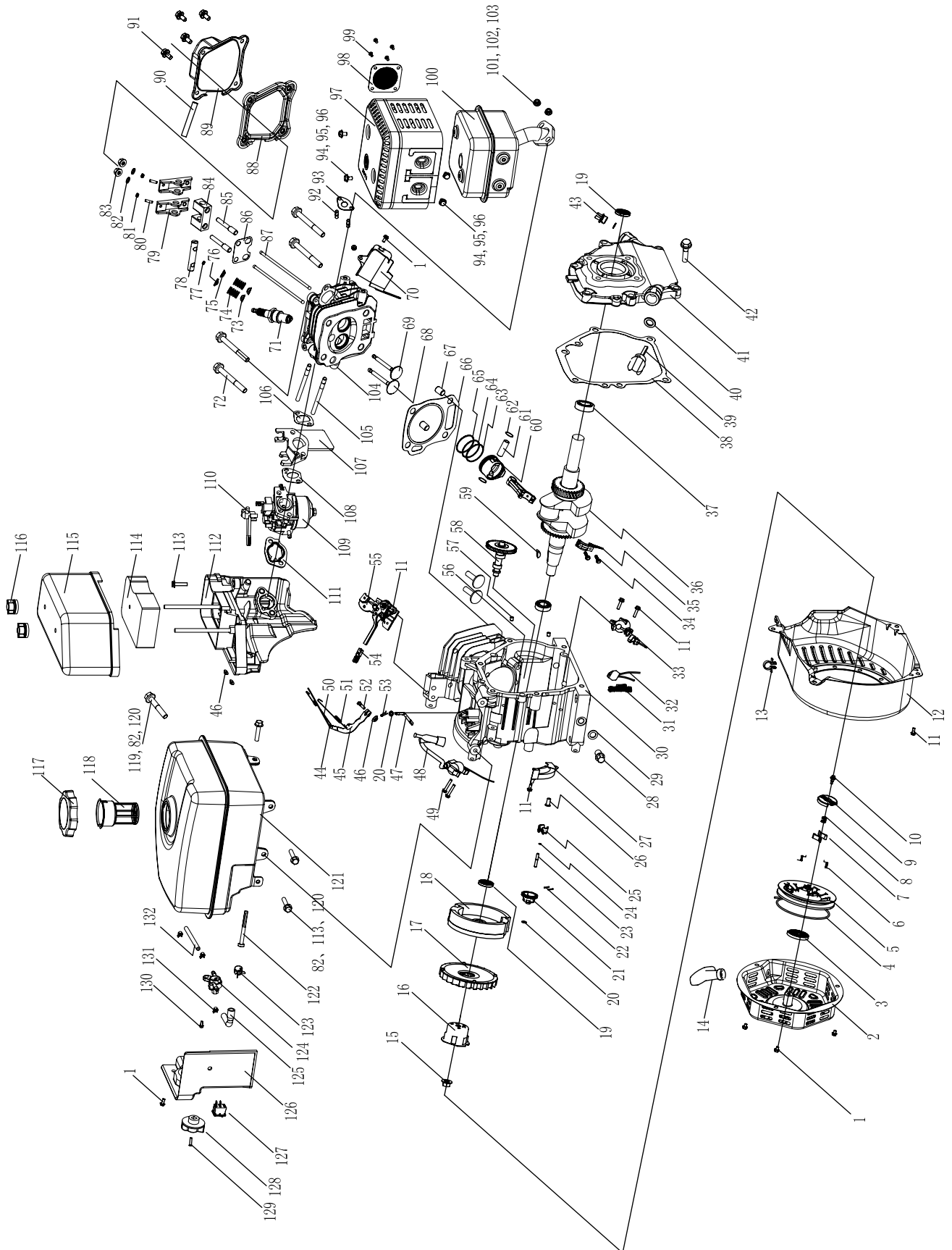


#	Part number	Description	Qty
1	PMJ22J-12	Control Valve	1
2	GB5781-B8-12	Bolt M8×12	2
3	GB93-LW-8	Lock Washer ø8	2
4	PMJ22J-22	Plate	1
5	PMJ22G-51	Filter Housing "IN" Connection	1
6	PMJ22G-49	Filter Housing "OUT" Connection	1
7	PMJ22G-25	Valve Joiner	1
8	GB/T-3452.1-92-14-2.65	"O" Ring 14×2.65	1
9	JB/T-8870-1999-25	Clamp d25	2
10	PMJ22G-22	Front Cover Connector	1
11	PMJ22G-24	Valve Joiner	1
12	JB-982-1977-14	Combination Washer 14	4
13	PMJ22G-23	Bolt Connector	2
14	PMJ15-15	Hydraulic Hose(Valve-Cylinder)	1
15	PMJ15-08-00	Cylinder	1
16	PMJ15-03	Thrust Plate	1
17	GB/T-889.1-2000-M12	Lock Nut M12	8
18	GB/T-5782-2000-M12-75	Bolt M12×75 (12.9)	1
19	PMJ15-11	Dipstick	1
20	PMJ15-13	Hydraulic Hose(Valve-Oil Tank)	1
21	GB/T-70.2-2000-M16-40	Bolt M16×40	4
22	PMJ15-02	Wedge Slide	1
23	GB/T-93-1987-16	Lock Washer 16	4
24	GB/T-5782-2000-M12-80	Bolt M12×80	5
25	PMJ15-06	Tow Bar	1
26	PMJ22G-30	R Pin	1
27	PMJ15-07	Front Support Leg	1
28	PMJ15-01	Beam + Oil Tank	1
29	PMJ15-16	Pin	1
30	PMJ22G-19	Oil Plug	1
31	PMJ15-05	Cylinder Fixed Plate	2
32	GB/T-5781-2000-M10-25	Bolt M10×25	4
33	GB90-W-10	Washer ø10	4
34	GB93-LW-10	Lock Washer ø10	4

#	Part number	Description	Qty
35	GB/T-3452.1-92-80-3.55	"O" Ring 80×3.55	1
36	PMJ22G-44	Filter	1
37	PMJ22G-07-00	Filter Fix Plate	1
38	GB1667-S5-20	Screw M5×20	6
39	GB93-LW-5	Lock Washer ø5	6
40	GB90-W-5	Washer ø5	6
41	GB90-W-8	Washer ø8	12
42	GB93-LW-8	Lock Washer ø8	12
43	GB41-N-8	Nut M8	8
44	GB/T-5782-2000-M12-75	Bolt M12×75	2
45	GB41-N-8	Bolt M8×40	4
46	PMJ15-04	Engine & Wheel Fixed Mount	1
47	GB/T-91-2000-CP3.2-25	Cotter Pin 3.2×25	2
48	GB/T276-94	Tapered Bearing	4
49	13X5.0-6	Wheel	2
50	JB/T-8870-1999-40	Clamp d40	2
51	GB90-W-16	Washer ø16	2
52	PMJ15-14	Oil Pipe	1
53	GB5781-B8-30	Bolt M8×30	4
54	GB1667-S6-10	Screw M6×10	1
55	PMJ22G-26	Gear Pump Connector	1
56	90038-096	Bolt 5/16"-24×1"	4
57	PMJ22G-32	Connector Cover	1
58	PMJ22G-29	Engine Bushing	1
59	GB/T-1096-1979	Flat Key	1
60	PMJ22G-28	Engine Connector	1
61	PMJ22G-27	Gear Pump Stand	1
62	GB/T-1099-1979	Semicircular Key	1
63	PMJ22G-42	Gear Pump	1
64	PMJ22G-21	Outlet Connector Of Pump	1
65	GB/T-3452.1-92-10-2.65	"O" Ring 10×2.65	1
66	GB90-W-4	Washer ø4	4
67	GB93-LW-4	Lock Washer ø4	4
68	GB5781-B4-10	Bolt M4×10	4
69	168F-2-F10	Engine	1
70	PMJ15-12	Hydraulic Hose(Valve-Pump)	1

SPECIFICATIONS

Engine Parts Diagram



#	Part Number	Description	Qty
1	GB5789-FB6-8	Flange Bolt M6x8	5
2	160.061100.32	Recoil Starter Cover	1
3	ST160F-1061005	Recoil Starter Spring	1
4	ST160F-1061009	Recoil Starter Rope	1
5	ST160F-1061001-A	Recoil Starter Reel	1
6	ST188F-1060006	Return Spring	2
7	ST188F-1060005	Starter Ratchet	2
8	ST188F-1060004	Ratchet Guide Spring	1
9	ST188F-1060003	Ratchet Guide	1
10	ST188F-1060002	Ratchet Guide Bolt	1
11	GB5789-FB6-12	Flange Bolt M6x12	11
12	ST168F-1080100-G	Fan Cover	1
13	ST168F-1070008-G	Tube Clip ø9.5	1
14	ST160F-1061200	Recoil Starter Knob	1
15	ST160F-1050010	Nut M14	1
16	ST160F-1060001-A	Start Hub	1
17	ST168F-1080001	Cooling Fan	1
18	ST168F-1120100	Flywheel	1
19	ST168F-1030100	Oil Seal	2
20	ST160F-1110108	Governor Washer	2
21	ST160F-1110101	Governor Weight Holder	1
22	ST160F-1110102	Governor Weight Pin	2
23	ST160F-1110104	Governor Shaft	1
24	ST160F-1110103	Governor Holder Clip	1
25	ST160F-1110107	Governor Weight	2
26	ST160F-1110105-A	Governor Cover	1
27	ST168F-1080200	Air Guide	1
28	ST160F-1030003	Bolt, Drain	2
29	ST160F-1030004	Washer, Drain	2
30	ST168F-2-1030012-G	Crankcase	1
31	168.120700.00	Wire Tie	1
32	ST160F-1126000	Diode Assembly	1
33	ST160F-1127000-A	Oil Level Switch	1
34	GB5789-FB7-35	Flange Bolt M7x35	2
35	ST168F-1050100	Connecting rod assembly	1
36	ST168F-2-1050001S	Crankshaft	1
37	GB/T276-94	Tapered Bearing	2
38	ST168F-1030008-G	Case Cover Packing	1
39	ST160F-1030001-B	Oil Filler Cap	1
40	ST160F-1030002	Oil Filler Cap Packing	2
41	ST168F-1030007-G	Crankcase Cover	1
42	GB5789-FB8-32	Flange Bolt M8x32	6
43	ST160F-1030005-B	Oil Filler Cap	1
44	ST168F-1110005	Throttle Return Spring	1
45	ST160F-1110003	Governor Arm	1
46	GB41-N-6	Nut M6	3
47	ST160F-1110001	Governor Arm Shaft	1
48	ST160F-1123000-G	Ignition Coil	1
49	GB5789-FB6-25	Flange Bolt M6x25	2
50	ST168F-1110006	Governor Rod	1
51	ST168F-1110007	Governor Spring	1
52	ST160F-1110004	Governor Arm Bolt	1
53	ST160F-1110008	Lock Pin	1
54	168.111008.01	Handle Bar Grip	1
55	168.111000.30	Control Assembly	1
56	ST168F-2-1040013	Valve Lifter	2
57	ST168F-1030015-G	Dowel Pin 9x14	2
58	ST168F-2-1041000	Camshaft Assembly	1
59	GB1099-79	Key 4x7.5x19	1
60	ST168F-2-1050005	Piston	1
61	ST168F-1050003	Piston Pin	1
62	ST168F-1050004	Piston Pin Clip	2
63	ST168F-1050200	Oil Ring Set	1
64	ST168F-1050006	Second Ring Set	1
65	ST168F-1050007	First Piston Ring, Chrome	1
66	ST168F-2-1030009-G	Cylinder Head Gasket	1

#	Part Number	Description	Qty
67	152FMD-1001007	Dowel Pin 10x16	2
68	ST168F-1040002	Intake Valve	1
69	ST168F-1040006	Exhaust Valve	1
70	ST168F-1080002-G	Shroud	1
71	F6RTC	Spark Plug	1
72	GB5789-FB8-55	Flange Bolt M8x55	4
73	ST168F-1040014	Oil Seal, Valve	2
74	ST160F-1040003	Valve Spring	2
75	ST160F-1040007	Exhaust Valve Spring Retainer	1
76	ST160F-1040001	Intake Valve Spring Retainer	1
77	ST160F-1040008	Rotator, Exhaust Valve	1
78	168.040202.34	Shaft, Rocker Arm	1
79	ST160F-1040022	Intake Rocker	2
80	ST160F-1040024	Rocker Arm Bolt	2
81	ST168F-1040025	Lock Nut	2
82	GB90-W-6	Washer ø6	6
83	GB41-N-6	Nut M6	2
84	168.040201.34	Valve Rocker Arm	1
85	ST168F-1040027	Pivot Bolt	2
86	168.040004.34	Guide, Push Rod	1
87	ST168F-1040005	Push Rod	2
88	ST160F-1020002-A	Head Cover Gasket	1
89	ST168F-1020100-C	Cylinder Head Cover	1
90	ST160F-1020001	Breather tube	1
91	GB5789-FB6-15	Flange Bolt M6x15	4
92	ST160F-1010002	Exhaust Stud	2
93	ST168F-1100200-G	Muffler Gasket	1
94	GB1667-S5-8	Screw M5x8	4
95	GB90-W-5	Washer ø5	4
96	GB93-LW-5	Lock Washer ø5	4
97	168.101200.34	Muffler Protector	1
98	188.101300.34	Spark Arrester	1
99	GB1667-S4-6	Screw M4x6	4
100	168.101100.34	Muffler	1
101	GB41-N-8	Nut M8	2
102	GB90-W-8	Washer ø8	2
103	GB93-LW-8	Lock Washer ø8	2
104	ST168F-2-1010100-G	Cylinder Head	1
105	ST160F-1010001	Stud Bolt M6x113	2
106	ST160F-1130002-CPE	Insulator Packing	1
107	ST168F-1130001	Insulator, Carburetor	1
108	ST160F-1130003-CPE	Carburetor Packing	1
109	ST168F-2-1131000-G	Carburetor	1
110	ST160F-1130100	Choke Lever	1
111	ST160F-1130004	Carburetor Washer	1
112	168.091100.34	Base, Air Cleaner	1
113	GB5789-FB6-20	Flange Bolt M6x20	4
114	168.091003.34	Element, Air Cleaner	1
115	168.091200.34	Cover, Air Cleaner	1
116	ST168F-1090100-C	Air Cleaner Cover Nut	2
117	ST160F-1070100H	Fuel Tank Cap	1
118	ST160F-1070006	Fuel Filter, Fuel Tank	1
119	GB5789-FB6-29	Flange Bolt M6x29	1
120	GB93-LW-6	Lock Washer ø6	4
121	168.071000.35	Fuel Tank	1
122	ST152FD-1070200	Fuel Filter	1
123	ST168F-1070006-F	Clip ø10.5	1
124	ST168F-1070200-G	Fuel Valve	1
125	ST168F-1070005-G	Tube, II	1
126	168.070010.34	Shroud, Fuel Tank	1
127	21.001000.00	Switch	1
128	ST168F-1070003-G	Fuel Valve Knob	1
129	GB818-88-B4-12	Bolt M4x12	1
130	GB5789-FB5-12	Flange Bolt M5x12	1
131	ST188FD-1070006A	Clip ø8	3
132	ST168F-1070004-G	Tube, I	1

TROUBLESHOOTING

Problem	Cause	Solution
Engine will not start	No fuel	Add fuel
	Faulty spark plug	Replace spark plug
Engine will not start; Engine starts but runs roughly	Low oil level	Fill crankcase to the proper level
		Place log splitter on a flat, level surface
	Choke in the wrong position.	Adjust choke
	Spark plug wire loose	Attach wire to spark plug
Engine shuts down during operation	Out of fuel	Fill fuel tank
	Low oil level	Fill crankcase to the proper level. Place log splitter on a flat, level surface
Engine cannot supply enough power or overheating	Insufficient ventilation	Check for air restriction. Move to a well ventilated area

For further technical support:

Technical Service

Mon – Fri 8:30 AM – 5:00 PM (PST/PDT)

Toll Free: 1-877-338-0999

24/7 Tech Line: 1-562-204-1188

tech@championpowerequipment.com

WARRANTY

CHAMPION POWER EQUIPMENT
1-YEAR LIMITED WARRANTY

Warranty Qualifications

Champion Power Equipment (CPE) will register this warranty upon receipt of your Warranty Registration Card and a copy of your sales receipt from one of CPE's retail locations as proof of purchase.

Please submit your warranty registration and your proof of purchase within ten (10) days of the date of purchase.

Repair/Replacement Warranty

CPE warrants to the original purchaser that the mechanical and electrical components will be free of defects in material and workmanship for a period of one (1) year from the original date of purchase (90 days for commercial and industrial use). Transportation charges on product submitted for repair or replacement under this warranty are the sole responsibility of the purchaser. This warranty only applies to the original purchaser and is not transferable.

Do Not Return The Unit To The Place Of Purchase

Contact CPE's Technical Service and CPE will troubleshoot any issue via phone or e-mail. If the problem is not corrected by this method, CPE will, at its option, authorize evaluation, repair or replacement of the defective part or component at a CPE Service Centre. CPE will provide you with a case number for warranty service. Please keep it for future reference. Repairs or replacements without prior authorization, or at an unauthorized repair facility, will not be covered by this warranty.

Warranty Exclusions

This warranty does not cover the following repairs and equipment:

Normal Wear

Log Splitter needs periodic parts and service to perform well. This warranty does not cover repair when normal use has exhausted the life of a part or the equipment as a whole.

Installation, Use and Maintenance

This warranty will not apply to parts and/or labour if this log splitter is deemed to have been misused, neglected, involved in an accident, abused, loaded beyond its limits, modified, and installed improperly. Normal maintenance such as spark plugs, air filters, adjustments, fuel system cleaning and obstruction due to buildup is not covered by this warranty.

Other Exclusions

This warranty excludes:

- Cosmetic defects such as paint, decals, etc.
- Wear items such as filter elements, o-rings, etc.
- Accessory parts such as starting batteries, and storage covers.
- Failures to due acts of God and other force majeure events beyond the manufacturer's control.
- Problems caused by parts that are not original Champion Power Equipment parts.

Limits of Implied Warranty and Consequential Damage

Champion Power Equipment disclaims any obligation to cover any loss of time, use of this product, freight, or any incidental or consequential claim by anyone from using this log splitter. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

A unit provided as an exchange will be subject to the warranty of the original unit. The length of the warranty governing the exchanged unit will remain calculated by reference to the purchase date of the original unit.

This warranty gives you certain legal rights which may change from state to state or province to province. Your state or province may also have other rights you may be entitled to that are not listed within this warranty.

Contact Information**Address**

Champion Power Equipment, Inc.
Customer Service
10006 Santa Fe Springs Rd.
Santa Fe Springs, CA 90670
www.championpowerequipment.com

Customer Service

Mon – Fri 8:30 AM – 5:00 PM (PST/PDT)
Toll Free: 1-877-338-0999
Fax no.: 1-562-236-9429

Technical Service

Mon – Fri 8:30 AM – 5:00 PM (PST/PDT)
Toll Free: 1-877-338-0999
tech@championpowerequipment.com