CHAMPION POWER EQUIPMENT™

92206
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1 YEAR LIMITED WARRANTY

10006 Santa Fe Springs Road
Santa Fe Springs, CA 90670 USA
Made in China

Owner's Manual and Operating Instructions



22 TON
LOG SPLITTER

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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.

This Owner's Manual contains important safety instructions and information. Read the manual completely before operating the log splitter. Failure to follow instructions could result in serious injury or death. **SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.**

Portable Log Splitter

This unit is a gasoline engine driven hydraulic log splitter. It is designed to split wood logs for use as fire wood for a stove or fire place. 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 web site 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
92206
Serial Number
Date of Purchase
Purchase Location

Manual Conventions

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 colorless, odorless, 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 jewelry.
Operate equipment with guards in place.
DO NOT wear loose-fitting clothing, dangling drawstrings or items that could become caught.

⚠ WARNING

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.

⚠ WARNING

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 province 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 45 MPH (72 KPH)

⚠ DANGER

Fuel and fuel vapors 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.

⚠ 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

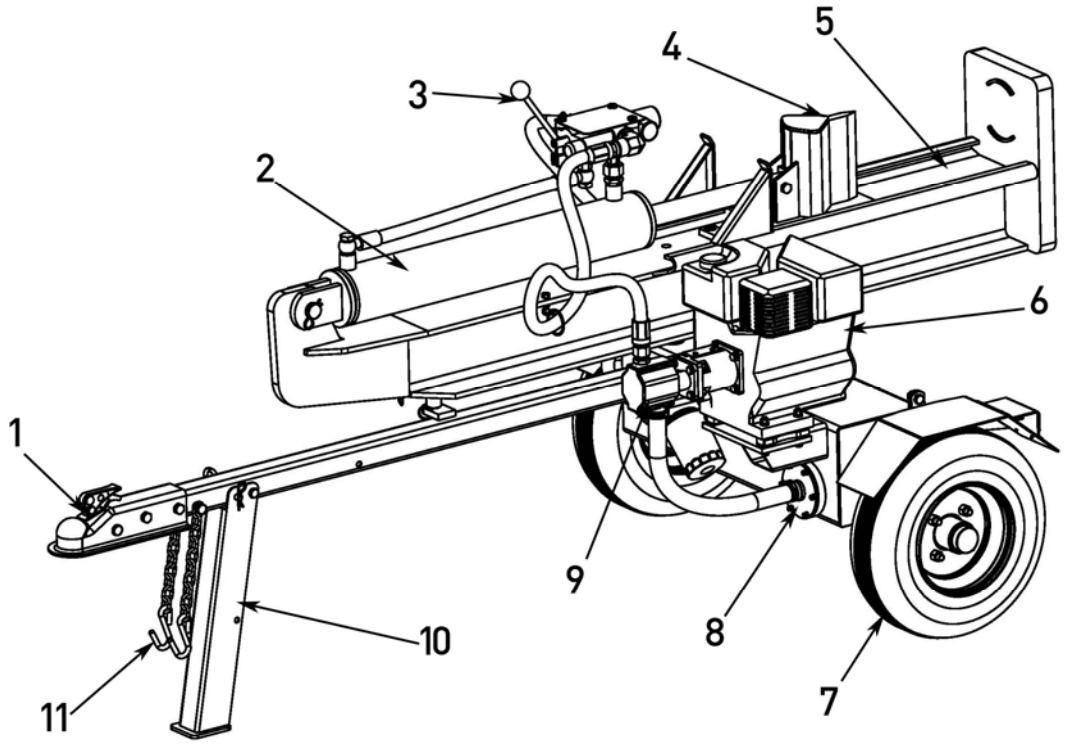
Improper treatment or use of the log splitter can damage it, shorten its life and void your warranty.

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

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



(1) 2" Ball Coupler– For towing the log splitter behind your vehicle.

(2) Hydraulic Cylinder – 4" bore x 23" stroke. Rated to 3500 psi.

(3) Control Valve Handle – Controls the movement of the cutting wedge.

(4) Wedge

(5) Beam

(6) Engine – 196cc, OHV, 4-stroke, air cooled.

(7) Tires – Maximum travel speed is 45 MPH (72 KPH).

(8) Filter

(9) Hydraulic Pump – Pumps hydraulic oil through the system.

(10) Support Leg – Supports log splitter while operating. Raise leg for towing.

(11) Safety Chains – For use while towing.

Assembly

Your log splitter is already assembled. Please review the assembly steps below and make sure that all hardware is secure and ready for towing and operation.

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 the lid and all 4 sides of the crate.
3. Remove single shipping bracket located underneath log splitter beam.

Prepare for Towing

1. Attach and secure the ball coupler using the two M12x80 bolts and M12 Nuts.

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 (SAE10W-30) and 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 the 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.
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.

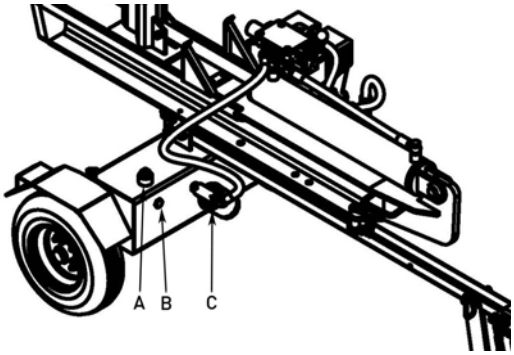
CAUTION

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

DO NOT mix oil and gasoline.
Fill tank to approximately ¼" 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 oil cap from the oil tank (A).
3. Add 5 gallons of hydraulic oil - 10W AW32, ASLE H-150, or ISO 32 all are acceptable types of fluid.
4. Oil level should be at the center of the sight glass (B).
5. Start engine and use the control valve handle to extend and retract wedge several times to remove air from the lines.
6. With the wedge retracted, check oil level again. Fill if necessary.
7. This unit is equipped with a Spin-On Filter (C).



WARNING

DO NOT remove the hydraulic oil fill cap 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.

Operation

Before Each Use Inspect the Log Splitter

1. Check the hydraulic oil level and visually inspect all hoses, attachments and cylinder for leaks, cracks, fraying or other damage.
2. DO NOT operate the log splitter if there is any indication of damage or oily residue.
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 45 MPH (72 KPH) towing speed.

Towing Log Splitter Safety

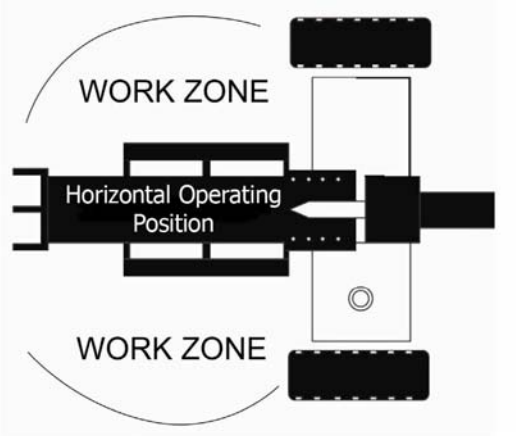
1. Always check local and province regulations regarding the requirements for towing, licensing and lights.
2. Before towing make sure the log splitter is correctly and securely attached to the vehicle and the safety chains attached with enough slack to allow for turning.
3. Never exceed the max. travel speed of 45 mph. Towing the log splitter at speeds greater than 45 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.

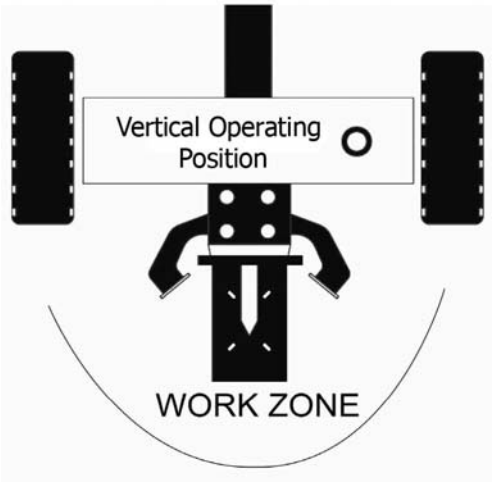
Log Splitter Location

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.





⚠ 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.

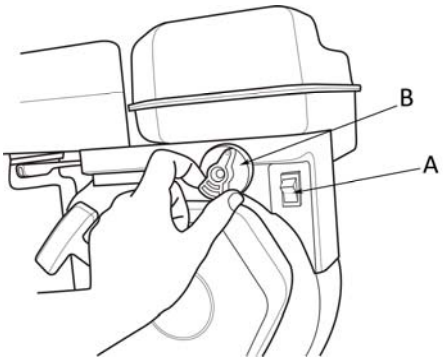
DO NOT change the splitting position with the engine running. Contact with the muffler can cause serious burns.

Always make sure the beam is in the locked position.

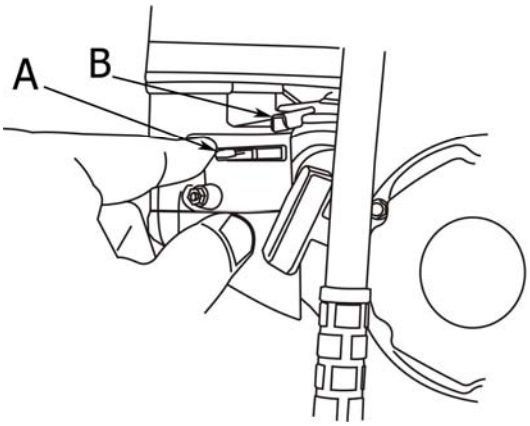
DO NOT let the beam drop as it could crush fingers or cause damage to the log splitter.

Starting the Engine

1. Make certain the log splitter is on a flat, level surface.
2. Flip engine switch to "ON" position (Item A)
3. Rotate the fuel valve to the "ON" position (to the left)(Item B). See image below



4. Move the choke lever (Item A) to the "Choke" position (to the left).



5. Pull the starter cord slowly until resistance is felt and then pull rapidly.
6. As engine warms up, move the choke lever to "Run" (to the right).
7. Move the throttle lever (Item B) to the "Fast" position.

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 10° F (-12° C) before starting the engine. Cold hydraulic oil can damage the hydraulic pump.

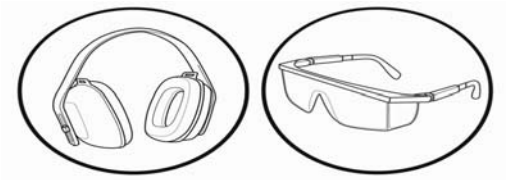
If outdoor air temperature is below 32° F (0° C) allow the log splitter to warm up by extending and returning the wedge several times before splitting wood.

Stopping the Engine

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

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. Set log splitter in either the horizontal or vertical position

> **NOTE**
>
> HORIZONAL position is used for lighter logs that can easily be loaded onto the beam.
>
> VERTICAL position is used for light logs as well as heavy logs that are difficult to load onto the beam.
>
> Back injury can result from lifting logs onto the log splitter if proper lifting techniques are not used.

4. Load a log onto the beam against the end plate (MAX LOG LENGTH – 23.75”).
5. Make sure all limbs are clear of crush zones.
6. Push the control valve handle forward (towards the end plate) to split the log.
7. Push the control valve handle backward to return the wedge to its original position.
8. DO NOT hold the lever in the return position after the wedge is fully returned as it may add undue stress to the pump and cylinder.
9. Clear the split wood from the work zone.

Adjustable Stop Block (ASB)

The ASB can be positioned on the I-Beam behind the wedge to limit the return stroke of the splitting wedge. This feature can be used to shorten the cycle time when splitting shorter logs. The ASB can be positioned for logs less than 16” long, and less than 20” long. The ASB is stored on the lower plate of the I-Beam.

Install the ASB

1. Remove the hairpin below the I-Beam that secures the ASB
2. Start the engine
3. Extend the wedge until the desired ASB holes are visible on the top of the I-Beam.
4. Turn the engine OFF
5. Place ASB in the holes at the desired position (16” or 20”).
6. Secure the ASB with the hairpin clip

> **NOTE**
>
> If a log gets stuck, embedded or will not split completely, push the control handle in the reverse direction and allow the splitter to strip the log from the wedge.
>
> ALWAYS keep hands clear of the log and wedge while it is retracting.

Maintenance

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.

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

NOTE

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

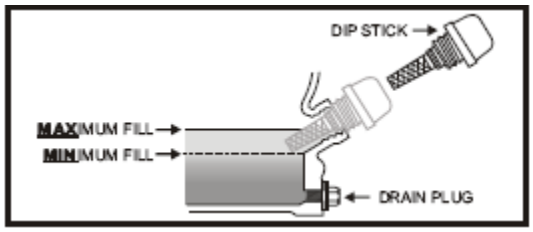
Engine Maintenance

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 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 engine oil
Every 50 hours or every season
Clean air filter
Change oil if operating in hot environments
Every 100 hours or every season
Change engine oil
Clean/Adjust spark plug
Check/Adjust valve clearance *
Clean spark arrester
Clean fuel tank and filter *
Change Hydraulic oil
Change Hydraulic oil filter (automotive style spin-on) with hydraulic oil change.
Every 3 years
Replace fuel line

* To be performed by knowledgeable, experienced owners or Champion Power Equipment authorized service 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 vapors.

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

Clean Spark arrester every 100 hours

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

Changing the Hydraulic Oil and Oil Filter

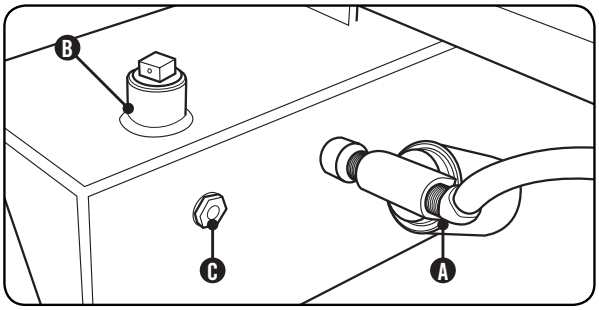
NOTE

Install a new hydraulic oil filter each time the hydraulic oil is changed

1. Begin with the cylinder retracted and the engine "OFF."
2. Turn the fuel valve "OFF."
3. Release any stored pressure by moving the valve lever forward and backward several times.
4. Place a container under the hydraulic tank. Make sure it is large enough to hold the contents of the tank.
5. To drain the oil, unscrew and remove the tank drain plug on the bottom of the hydraulic tank.
   a. Unscrew and remove the hydraulic oil filter.
   b. Drain any oil in the filter into the container.
6. Allow oil to completely drain from the tank into the container.
7. Install a new hydraulic oil filter. (A)
   a. Turn the filter counter-clockwise to remove it. A strap wrench may be used.
   b. Lubricate the gasket of the new filter with a thin film of clean oil.
   c. Screw the new filter on clockwise. Tighten 3/4 - 1 turn after the gasket makes contact.
8. Reinsert and screw in the tank drain plug. Tighten, but do not over tighten.

NOTE

The drain plug is sealed with Teflon tape. Add 2-3 wraps of new Teflon tape as needed when replacing the drain plug to prevent oil leak.



9. Unscrew and remove the tank fill plug, on top of the tank. Using a funnel add approximately 4 gal. (15.1 L) of hydraulic oil to the tank. Wipe up any spilled oil. (B)
10. Turn the fuel valve on, and start the engine. Purge the air from the system by extending and retracting the wedge several times until the motion is smooth.
11. Check the hydraulic oil level using the sight glass. Add 1 - 1.5 gal. (3.8 – 5.7 L) of hydraulic oil, so the oil level is visible in the sight glass. (C)
12. Dispose of used oil at approved recycling locations.

WARNING

Always shut off the engine, disconnect the spark plug, and relieve system pressure before cleaning, adjusting, or repairing the splitter. Relieve system pressure by moving split control lever back and forth several times.

NOTE

Change the hydraulic oil filter after the first 50 hours of use. Then every 100 hours or seasonally.

NOTE

Refer to Specifications for a list of compatible replacement filters or call Champion Power Equipment at 1-877-338-0999 to order a replacement OEM filter.

Storage

Log Splitter 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. The engine needs to cool completely before storage.
2. Clean engine according to the Maintenance section.
3. Drain all fuel completely from the fuel line and carburetor to prevent gum from forming.
4. Add a fuel stabilizer into the fuel tank.
5. Change the oil.
6. The fuel valve needs to be in the off position.
7. Remove the spark plug and pour about ½ ounce of oil into the cylinder. Crank the engine slowly to distribute the oil and lubricate the cylinder.
8. 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 vapors.

DO NOT store a log splitter near fertilizer or any corrosive material.

Even with an empty gas tank, gasoline vapors could ignite.

Specifications

Log Splitter Specifications

Ram Force	22 Ton
Cycle Time	18 seconds
Hydraulic Tank Capacity	5 gal (18.9 L)
Max Log Length	24 inches (61 cm)
Max Log Weight	100 lb. (45 kg)
Coupler Ball Size	2 inches (5 cm)
Tire Size	15 inches (38 cm)
Max towing speed	45 MPH (72 KPH)
Engine	196 cc, OHV, 4 stroke
Cylinder size	4" x 23" (10 cm x 58 cm)
Cylinder rod size	1.57 in. (3.9 cm)
Hydraulic Fluid Type	10W AW32, ASLE H-150, ISO 32
Gear Pump	2-stage
Max pressure	3500 psi
Max flow capacity	8 GPM
Control Valve	Detent (auto-return)
Overall dimensions	
Weight	467 lb. (212 kg)
Height	44inches (112 cm)
Width	41 inches (104 cm)
Length	88.12 inches (206 cm)

Hydraulic Oil

Oil capacity is 5 gallons (18.9 L).
Use types 10W AW32, ASLE H-150, and ISO32

Replacement filters: Fram PH9342, K&N HP-2008 or Wix 51361

Engine Specifications

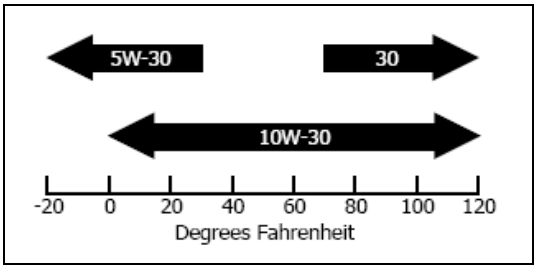
Engine	196 cc OHV CPE
PTO Rotation	Counterclockwise
Ignition Mode	TCI (transistorized)
Displacement	196 cc
Torque (max)	8.7 ft. lb. at 2800 RPM
Compression	8.5:1
Horizontal Shaft	¾" x 2 7/16" 1.91 cm x 6.17 cm
End Hole	Tapped 5/16" 24 UNF
Fuel Capacity	0.93 gallons (3.5 L)
Weight	37.5 lb. (17 kg)
Height	13.35 inches (33.9 cm)
Width	12.14 inches (30.8 cm)
Length	14.25 inches (36.2 cm)

Fuel

Fuel capacity is 0.93 US gallons (3.5 L). Use regular unleaded gasoline with a minimum octane rating of 85.

Engine Oil

Oil capacity is 0.63 qt (0.6 L).



Spark Plugs

Your engine comes equipped with a ¾" long reach plug (19 mm).

Intermittent use (less than 1 hour/month) or colder temperatures (below 60°F):
NGK BR6ES or equivalent

Moderate use (less than 3 hours/month) or seasonal temperatures (50-80°F):
NGK BR7ES or equivalent

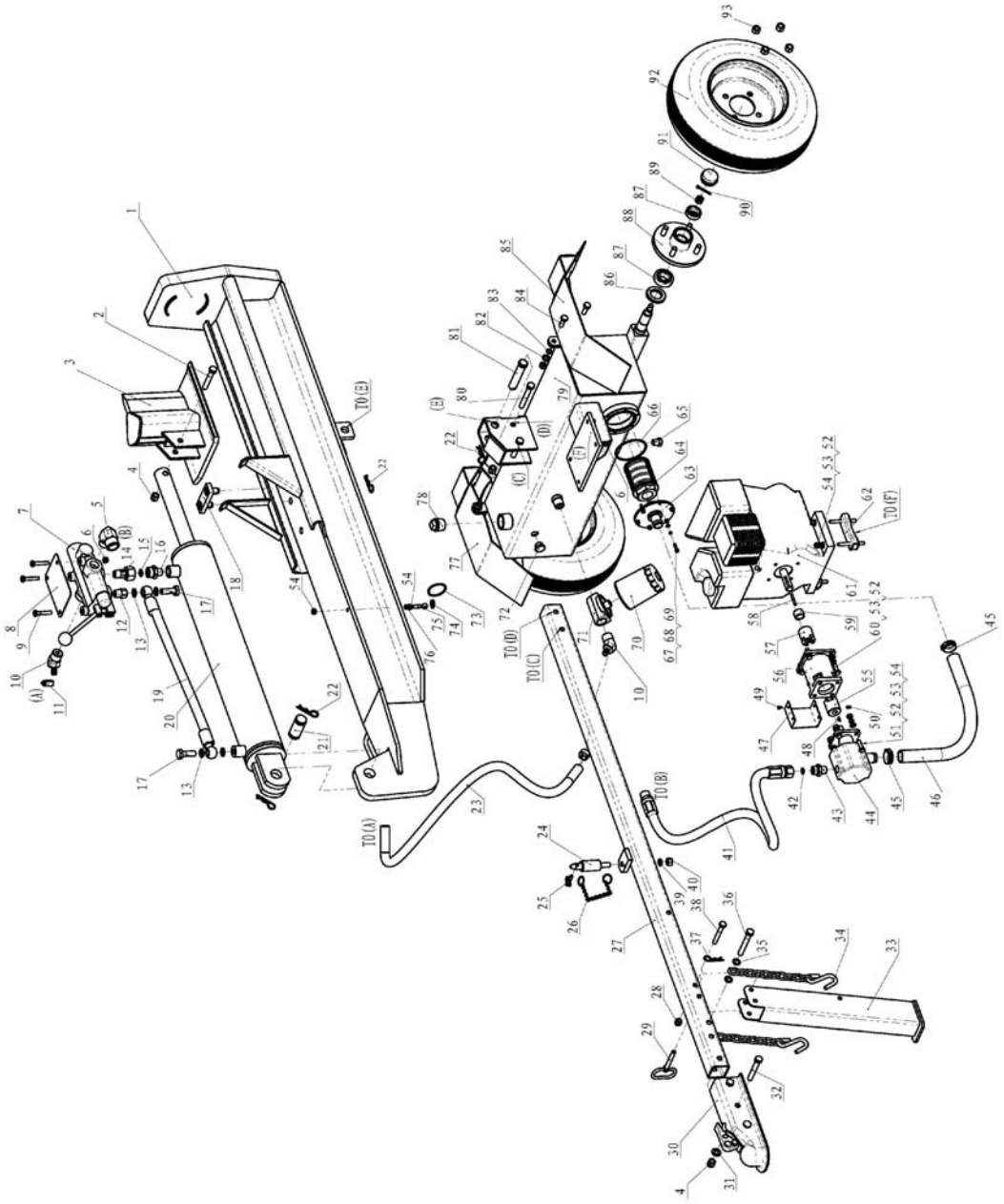
Extreme use (continuous) or hot climates (80-100°F):
NGK BR8ES or equivalent

Make certain the spark plug gap is 0.7 - 0.8 mm (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.)

Parts Diagram

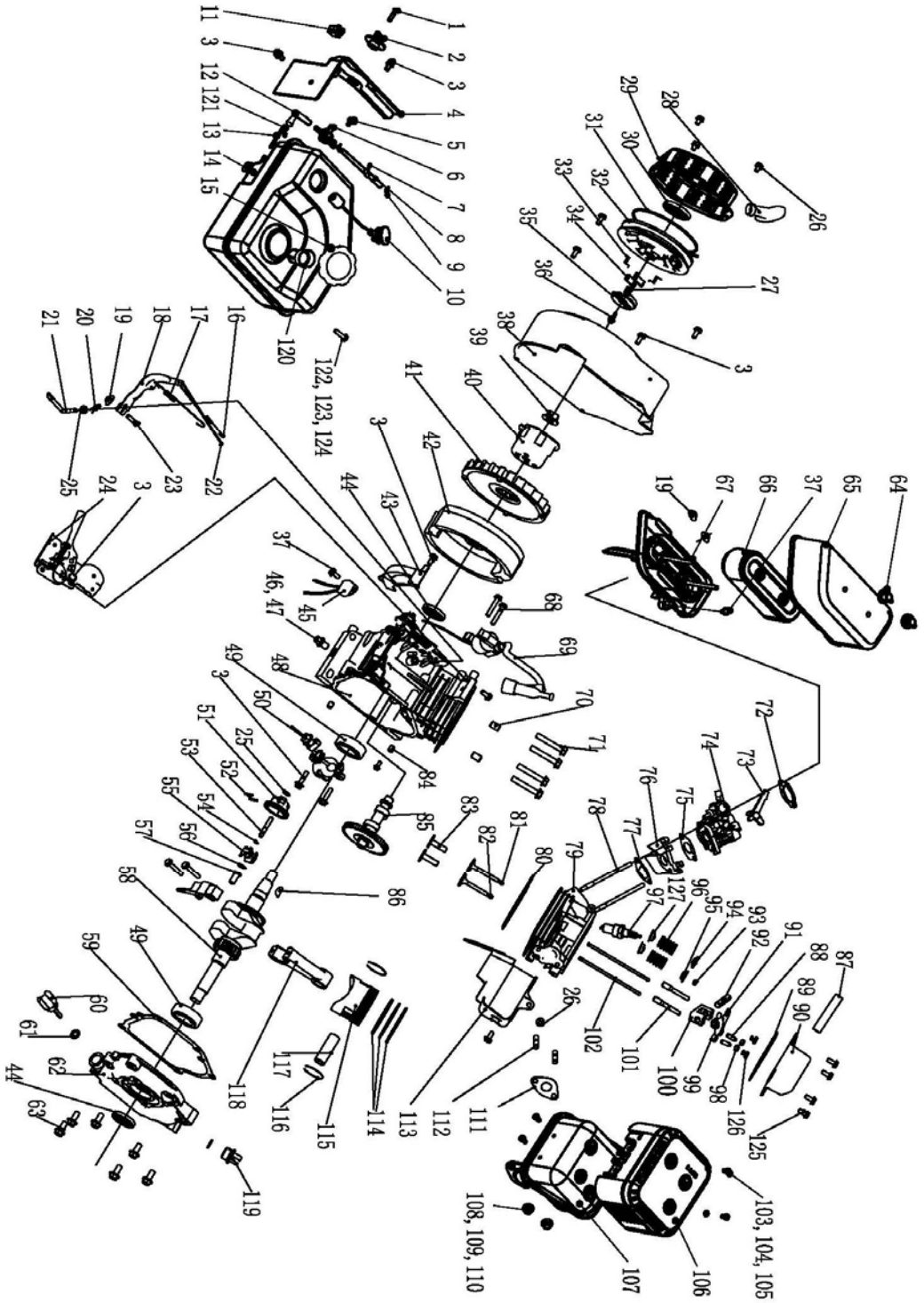


Parts List

No.	Part number	Description	Qty
1	PMJ22G-02-00	Beam	1
2	GB/T 5782-2000 M12×75	Bolt M12×75	1
3	PMJ22G-04-00	Wedge Slide	1
4	GB/T 889.1-2000 M12	Lock Nut M12	6
5	PMJ22G-51	Filter Housing "IN" Connection	1
6	GB/T 889.1-2000 M8	Lock Nut M8	7
7	PMJ22G-43	Control Valve	1
8	PMJ22G-20	Plate	1
9	GB/T 818-2000 M8×45	Bolt M8×45	3
10	PMJ22G-49	Filter Housing "OUT" Connection	2
11	JB/T 8870 - 1999	Clamp d25	2
12	PMJ22G-24	Valve Joiner	1
13	JB 982-1977 14	Combination Washer 14	4
14	PMJ22G-25	Valve Joiner	1
15	GB/T 3452.1-92 14×2.65	O Ring 14×2.65	1
16	PMJ22G-22	Front Cover Connector	1
17	PMJ22G-23	Bolt Connector	2
18	PMJ22G-06-00	Stop Block	1
19	PMJ22G-16	Hydraulic Hose (Valve-Cylinder)	1
20	PMJ22-08-00	Cylinder	1
21	PMJ22G-13	Wedge Pin	1
22	GJY12-3	R Pin	4
23	PMJ22G-15	Hydraulic Hose (Valve-Oil Tank)	1
24	PMJ22G-11	Pin	1
25	PMJ22G-09-00	Hitch Pin	1
26	CZR2-9A	Chain	1
27	PMJ22G-03-00	Tow Bar	1
28	GB/T 889.1-2000 M10	Lock Nut M10	1
29	PMJ22G-10-00	Hitch Pin	1
30	PMJ22G-40	2" Coupler	1
31	GB/T 95-2000	Washer 12	2
32	GB/T 5782-2000 M12×80	Bolt M12×80	2
33	PMJ22G-05-00	Front Support Leg	1
34	PMJ22G-41	Safety Chain With Hook	2
35	GB/T 848-1985 12	Washer 12	4
36	GB/T 5782-2000 M12×90	Bolt M12×90	1
37	PMJ22G-30	R Pin	1
38	GB/T 5782-2000 M10×75	Bolt M10×75	1
39	GB/T 93-1987 12	Lock Washer 12	1
40	GB/T 6170-2000 M12	Nut M12	1
41	PMJ22G-14	Hydraulic Hose (Valve-Pump)	1
42	GB/T 3452.1-92 10×2.65	O Ring 10×2.65	1
43	PMJ22G-21	Outlet Connector Of Pump	1
44	PMJ22G-42	Gear Pump	1
45	JB/T 8870 - 1999	Clamp d40	2
46	PMJ22G-17	Oil Pipe	1
47	PMJ22G-32	Connector Cover	1
48	GB/T 1099-1979	Semicircular Key	1
49	GB/T 845C-1985	Tapping Screw	4
50	GB/T 77-2000 M6×10	Screw M6×10	1
51	GB/T 5783-2000 M8×30	Bolt M8×30	4

No.	Part number	Description	Qty
52	GB/T 95-2000 8	Washer 8	12
53	GB/T 93-1987 8	Lock Washer 8	12
54	GB/T 6170-2000 M8	Nut M8	10
55	PMJ22G-26	Gear Pump Connector	1
56	PMJ22G-27	Gear Pump Stand	1
57	PMJ22G-28	Engine Connector	1
58	GB/T 1096-1979	Flat Key	1
59	PMJ22G-29	Engine Bushing	1
60	GB/T 5783-2000 M8×25	Bolt M8×25	4
61	PMJ22G-48	Engine	1
62	PMJ22G-33	Engine vibration mount	2
63	PMJ22G-07-00	Filter Fix Plate	1
64	PMJ22G-44	Filter	1
65	PMJ22G-19	Oil Plug	1
66	GB/T 3452.1-92 80×3.55	O Ring 80×3.55	1
67	GB/T 95-2000 5	Washer 5	6
68	GB/T 93-1987 5	Lock Washer 5	6
69	GB/T 70.1-2000 M5×20	Screw M5×20	6
70	PMJ22G-52	Auto Filter	1
71	PMJ22G-50	Auto Filter Base	1
72	GB 1160.2-89	Oil Scale	1
73	PMJ22G-38	Big Tension Spring	1
74	PMJ22G-53	Small Tension Spring	1
75	GB/T 798-1988 M8×35	Swing Bolt M8×35	1
76	GB/T 859-1987 8	Lock Washer 8	1
77	PMJ22G-34-00	Left Fender	1
78	PMJ22G-18	Screw NPT1"	1
79	PMJ22G-01-00	Oil Tank	1
80	GB/T 5782-2000 M12×85	Bolt M12×85	2
81	PMJ22G-12	Hinge Pin	1
82	GB/T 95-2000 10	Washer 10	4
83	GB/T 93-1987 10	Lock Washer 10	4
84	GB/T 5781-2000 M10×30	Bolt M10×30	4
85	PMJ22G-35-00	Right Fender	1
86	PMJ22G-46-03	Cased Seal	2
87	GB/T 297-94	Tapered Bearing	4
88	PMJ22G-46-01	Flange	2
89	GB/T 6181-86 M20×1.5	Slotted Nut M20x1.5	2
90	GB/T 91-2000	Cotter Pin	2
91	PMJ22G-46-02	Axle Cap	2
92	PMJ22G-45	Wheel	2
93	PMJ22G-46-05	Hex Bolt	8

Engine Parts Diagram



Engine Parts List

Item	Part Number	Description	Qty
1	GB5781-B4-12	Bolt M4×12	1
2	ST168F-1070003-G	Fuel Valve Knob	1
3	GB5789-FB6-12	Flange Bolt M6×12	11
4	ST168F-1070002-G	Fuel Tank Shroud	1
5	GB5789-FB5-12	Flange Bolt M5×12	1
6	ST168F-1070200-G	Fuel Valve	1
7	ST168F-1070008-G	Tube Clip	1
8	ST168F-1070004-G	Tube, I	1
9	ST188FD-1070006A	Clip	3
10	ST168F-1071000-CARB	Fuel Meter Assembly	1
11	ST168F-1121100-C	Switch	1
12	ST168F-1070005-G	Tube, II	1
13	ST152FD-1070200	Fuel Filter	1
14	ST168F-1070100-G	Fuel Tank	1
15	ST160F-1070100H	Fuel Tank Cap	1
16	ST168F-1110005	Throttle Return Spring	1
17	ST168F-1110007	Governor Spring	1
18	ST160F-1110003	Governor Arm	1
19	GB41-N-6	Nut M6	3
20	ST160F-1110008	Lock Pin	1
21	ST160F-1110001	Governor Arm Shaft	1
22	ST168F-1110006	Governor Rod	1
23	ST160F-1110004	Governor Arm Bolt	1
24	ST168F-1111000	Control Assembly	1
25	ST160F-1110108	Governor Washer	2
26	GB5789-FB6-8	Flange Bolt M6×8	5
27	ST188F-1060004	Ratchet Guide Spring	1
28	ST160F-1061200	Recoil Starter Knob	1
29	ST160F-1061100-Q	Recoil Starter Cover	1
30	ST160F-1061005	Recoil Starter Spring	1
31	ST160F-1061009	Recoil Starter Rope	1
32	ST160F-1061001-A	Recoil Starter Reel	1
33	ST188F-1060006	Return Spring	2
34	ST188F-1060005	Starter Ratchet	2
35	ST188F-1060003	Ratchet Guide	1
36	ST188F-1060002	Setting Screw	1
37	GB5789-FB6-20	Flange Bolt M6×20	4
38	ST168F-1080100-G	Fan Cover	1
39	ST160F-1050010	Nut M14	1
40	ST160F-1060001	Start Hub	1
41	ST168F-1080001	Cooling Fan	1
42	ST168F-1120100	Flywheel	1
43	ST168F-1080200	Side Place	1
44	ST168F-1030100	Oil Seal	2
45	ST160F-1129000-G	Diode Comp	1
46	ST160F-1030003	Drain Plug Bolt	2
47	ST160F-1030004	Drain Bolt Washer	2
48	ST168F-2-1030012-G	Crankcase	1
49	GB276-BB-6205-UU	Radial Ball Bearing 6205 Unsealed	2
50	ST160F-1127000-A	Oil Level Switch	1
51	ST160F-1110101	Governor Weight Holder	1
52	ST160F-1110102	Governor Weight Pin	2
53	ST160F-1110104	Governor Shaft	1
54	ST160F-1110103	Governor Holder Clip	1
55	ST160F-1110107	Governor Weight	2
56	ST160F-1110106	Governor Shaft Washer	1
57	ST160F-1110105	Governor Cover	1

Item	Part Number	Description	Qty
58	ST168F-2-1050001-Q	Threaded Crankshaft	1
59	ST168F-1030008-G	Case Cover Packing	1
60	ST160F-1030001-B	Oil Filler Cap	1
61	ST160F-1030002	Oil Filler Cap Packing	2
62	ST168F-1030007-5/16-G	Crankcase Cover	1
63	GB5789-FB8-32	Flange Bolt M8×32	6
64	ST168F-1090100	Air Cleaner Cover Nut	2
65	ST168F-1090001-G	Air Cleaner Cover	1
66	ST168F-1090200-C	Air Cleaner Element	1
67	ST168F-1090500-G	Air Cleaner Elbow	1
68	GB5789-FB6-25	Flange Bolt M6×25	2
69	ST160F-1123000	Ignition Coil	1
70	152FMD-1001007	Dowel Pin 10×16	2
71	GB5789-FB8-55	Flange Bolt M8×55	4
72	ST160F-1130004	Carburetor Washer	1
73	ST160F-1130100	Choke Lever	1
74	ST168F-2-1130000-G	Carburetor assembly	1
75	ST160F-1130003	Carburetor Packing	1
76	ST168F-1130001	Carburetor Insulator	1
77	ST160F-1130002	Insulator Packing	1
78	ST160F-1010001	Stud Bolt M6×113	2
79	ST168F-2-1010100-G	Cylinder Head	1
80	ST168F-2-1030009-G	Cylinder Head Gasket	1
81	ST168F-1040002	Intake Valve	1
82	ST168F-1040006	Exhaust Valve	1
83	ST168F-2-1040013	Valve lifter	2
84	ST168F-1030015-G	Dowel Pin 9×14	2
85	ST168F-2-1041000	Camshaft Comp	1
86	GB1099-79	Key 4×7.5×19	1
87	ST160F-1020001	Breather Tube	1
88	ST168F-1040024	Tappet Adjusting Bolt	2
89	ST160F-1020002-A	Head Over Packing	1
90	ST168F-1020100-C	Cylinder Head Cover	1
91	ST168F-1040022	Intake Rocker	1
92	ST168F-1040021	Rocker Axis	1
93	ST160F-1040008	Valve Rotator	1
94	ST160F-1040001	Intake Valve Spring Retainer	1
95	ST160F-1040007	Exhaust Valve Spring Retainer	1
96	ST160F-1040003	Valve Spring	2
97	ST160F-1124000	Spark Plug	1
98	ST168F-1040026	Lock Nut	2
99	ST168F-1040023	Exhaust Rocker	1
100	ST168F-1040026	Rocker Arm Block	1
101	ST168F-1040027	Pivot Bolt	2
102	ST168F-1040005	Push Rod	2
103	GB1667-S5-8	Screw M5×8	4
104	GB90-W-5	Washer ø5	4
105	GB93-LW-5	Lock Washer ø5	4
106	ST168F-1101100-G	Muffler Protector	1
107	ST168F-1101200-G	Muffler	1
108	GB41-N-8	Nut M8	2
109	GB90-W-8	Washer ø8	2
110	GB93-LW-8	Lock Washer ø8	2
111	ST168F-1100001-G	Muffler Packing	1
112	ST160F-1010002	Exhaust Bolt	2
113	ST168F-1080002-G	Shroud	1
114	ST168F-1050007	First Ring Set	1
	ST168F-1050006	Second Ring Set	1
	ST168F-1050200	Oil Ring Set	1
115	ST168F-2-1050005	Piston	1

Item	Part Number	Description	Qty
116	ST168F-1050004	Piston Pin Clip	2
117	ST168F-1050003	Piston Pin	1
118	ST168F-1050100	Connecting Rod Comp	1
119	ST160F-1030005-B	Oil Filler Cap	1
120	ST160F-1070006	Fuel Filter	1
121	ST1P68F-1070006-F	Clip	1
122	GB90-W-6	Washer ø6	6
123	GB93-LW-6	Lock Washer ø6	4
124	GB5789-FB6-35	Flange Bolt M6×35	1
125	GB5789-FB6-15	Flange Bolt M6×15	4
126	GB41-N-6	Nut M6	2
127	ST168F-1040014-A	Oil Seal	2

Troubleshooting

Problem	Cause	Solution
Engine will not start	No fuel	Add fuel
	Faulty spark plug	Replace spark plug
	Unit loaded during start up	Remove load from unit
Engine will not start; Engine starts but runs roughly	Low oil level	Fill crankcase to the proper level Place generator 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 generator on a flat, level surface
Engine cannot supply enough power or overheating	Insufficient ventilation	Check for air restriction. Move to a well ventilated area
Engine gallops	Engine governor defective	Contact the help line

Warranty

CHAMPION POWER EQUIPMENT
1 YEAR LIMITED WARRANTY

Effective September 1, 2006. Replaces all undated warranties and all warranties dated before September 1, 2006.

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 & 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 Center. 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 labor 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 due to 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 province to province. Your 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

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