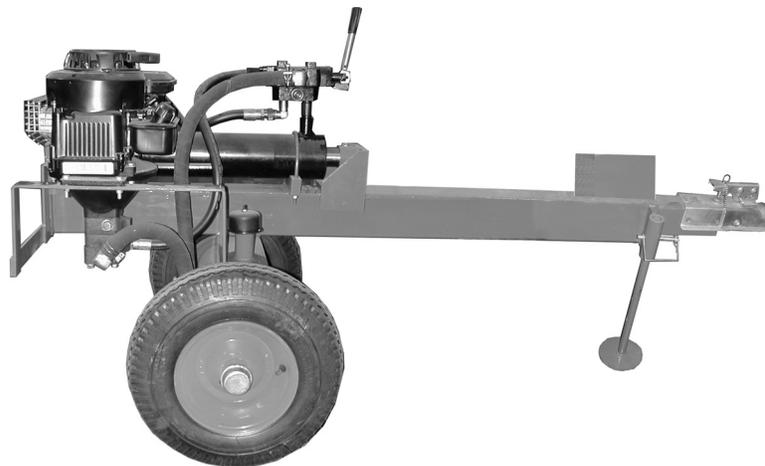




# 8 TON HYDRAULIC LOG SPLITTER

**Model 94837**

## ASSEMBLY AND OPERATING INSTRUCTIONS



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3491 Mission Oaks Blvd., Camarillo, CA 93011

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**Read this material before using this product.  
Failure to do so can result in serious injury.  
SAVE THIS MANUAL.**

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**For technical questions or replacement parts, please call 1-800-444-3353.**

## Specifications

Item	Description
Pump Output	4.3 GPM (16.56 liter per min.) @ 3,60 RPM
Pump Type	Two Stage
Hydraulic Capacity	8 Tons, single stage pump
Ram Travel	19-7/8 inches
Ram Diameter	1.78 inches
Cutting Wedge	Thickness: 13/16 incl; Thick cabon steel
Log Capacity	20" (long) x 8" (dia.)
Towing	For off-road use only (not DOT approved); Hitch size: 1-7/8 inches
Hydraulic Fluid Reservoir	1.5 gallons
Type of Hydraulic Fluid	10W AW Hydraulic Fluid or Dexron III automatic transmission fluid. Change every 100 hours of use.
Wheel Size	Wheel: 15 inch diameter; Hub: 8-1/2 inches; Wheel base: 20 inches
Tire Pressure	60 PSI Maximum
Engine	Briggs & Stratton Model 9J902 gasoline engine Oil: 18 oz. of SAE 30 detergent oil rated SF, SG, SH or higher; Spark Plug gap: 0.030" (0.76mm), Part #802592; Gas type: unleaded, 85 octane or higher
Overall Dimensions	68"(L) x 27-3/4"(W) x 31-3/4"(H)
Weight	250 lbs.

### Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

### Safety Warnings and Precautions

**WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.**

**Read all instructions before using this tool!**

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
4. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.

6. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
7. **Use eye, ear, and head protection.** Always wear ANSI-approved impact safety goggles and helmet. Wear a full face shield if you are producing wood chips. Wear an ANSI-approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.
8. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
9. **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.
10. **Disconnect engine power.** Turn power switch to the OFF position when not in use.
11. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before operating.
12. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
13. **Take caution as some woods contain preservatives such as copper chromium arsenate (CCA) which can be toxic.** When cutting these materials extra care should be taken to avoid inhalation and minimize skin contact.
14. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.
15. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
16. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels if taking prescription medicine to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
17. **Maintenance.** For your safety, service and maintenance should be performed regularly by a qualified technician.
18. **WARNING!** People with pacemakers should consult their physician(s) before using this product. Electromagnetic fields in close proximity to a heart pacemaker could cause interference to, or failure of, the pacemaker.

## Product Specific Safety Precautions

1.  Fire Hazard! Do not fill gas tank when the engine is running. Do not operate if gasoline has been spilled. Clean spilled gasoline before starting the engine. Do not operate near a pilot light or open flame.
2. Operate the engine in well ventilated areas only. Carbon Monoxide is produced during operation and is deadly in a closed environment. Early signs of Carbon Monoxide poisoning resemble the flu, with headaches, dizziness, or nausea. If you have these signs, the engine may not be working properly, or is being used indoors. Get fresh air immediately.
3. Avoid burns from the engine. Certain parts of the engine become very hot during use. Do not touch the engine until it cools down after use.
4. Install this product on a proper surface. Locate on a flat, level, and solid surface that is capable of supporting the weight of the Log Splitter and the log being split.
5. Do not operate the engine with safety guards removed. While the engine is running, do not attempt to reach around the safety guards for maintenance or any other reason.
6. If the engine is installed indoors, exhaust fumes must be piped out of the building using leak-free, heat-resistant piping. Pipes and silencer should not use any flammable materials, nor should they be installed near the same. Engine exhaust fumes should be within legal limits.
7. Engine fuel and fumes are flammable, and potentially explosive. Use proper fuel storage and handling procedures. Always have multiple ABC class fire extinguishers nearby.
8. Never store fuel or other flammable materials near the engine.
9. Do not smoke, or allow sparks, flames or other sources of ignition around the engine, fuel tanks, or batteries. Fuel vapors are explosive.
10. Keep hands, arms, long hair, loose clothing, and jewelry away from pulleys, belts, and other moving parts. Be aware that when engine parts are moving fast they cannot be seen clearly.
11. The engine can product high noise levels. Prolonged exposure to noise levels above 85 dBA is hazardous to hearing. Always wear ear protection when operating or working around the Gas Engine when it is running.
12. Before use, always place wheel blocks to keep the Log Splitter from moving.
13. Rope off a wide area around the Log Splitter to keep spectators safely away from log splitting operation.
14. Always wear leather gloves when handling split logs to avoid cuts.

**Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.**

## Unpacking

When unpacking, check to make sure that all the parts are included. Refer to the Assembly Drawing and Parts List at the end of this manual. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

## Operation

### Pre-Operation Procedures

**Caution: Failure to add oil to the Engine before use will damage the Engine and void the factory warranty. Engine oil is the key factor in engine performance. Do not use Engine oil with additives. Do not use two-stroke gasoline-oil. Using these will shorten Engine life. See Specifications on page 2 for recommended oil type. Also, add 1.5 gallons of quality hydraulic fluid to the reservoir tank before use.**

1. Check that all engine and hydraulic mounting nuts and bolts, and hoses are tight.
2. Check engine oil level (See illustration below, left.) If needed, add oil as listed in Specifications, Engine, on page 2.

Unscrew the oil Dip Stick and wipe clean. Insert the Dip Stick back into the hole and screw it in. Remove it again and check the oil level. Full is indicated by oil on the Upper Level mark. Use a siphon to avoid spilling the oil. Carefully screw the plastic Dip Stick back into the metal Engine crankcase to avoid stripping the plastic threads on the Dip Stick.



3. Check Air Filter. Unscrew Air Filter Housing Nut and remove the Air Filter Housing and Filter Elements. If dirty or dusty, clean. (refer to the Maintenance Section, page 8).

**Caution: Never run the Engine without the Air Filter assembly. Damage will occur to Engine.**

4. Check and add hydraulic fluid to the Hydraulic Fluid Tank as needed (up to 1.5 gallons). You can use 10 W AW or Dextron III automatic transmission fluid. You need to change the fluid every 100 hours of usage. See photo at the top of page 6.
5. To add hydraulic fluid, pull off the Hydraulic Fluid Fill Tube Cap. Check the level by reading the attached dip stick. See the photo at the top of page 6.

Hydraulic Fluid  
Fill Tube Cap  
with Dip Stick



Hydraulic Fluid  
Fill Tube

6. Fill the Gas Tank (outdoors) up to 1-1/2" from the Tank opening lip with unleaded gasoline containing at least 85 octane. Do not top-off tank. Replace Gas Cap.

**⚠ Fire Hazard! Do not fill Gas Tank when the Engine is running, or near a pilot light or open flame, or when the engine is still hot. Do not smoke when refueling. Do not operate Engine if gasoline has been spilled. Allow any spilled gas to evaporate before starting Engine.**

7. Inflate tires to 60 PSI.
8. Remove Wheel Bearing Dust Proof Caps (15) and verify Bearings (19) are completely packed with bearing grease.

If they are not greased, remove Bearings and completely pack with bearing grease. Replace Bearings and Wheel Bearing Covers. If you are not familiar with this procedure, have a qualified mechanic do it.

## Engine Controls



Primer  
Button      Throttle  
Lever      Choke  
Lever



Rope  
Handle      Gas  
Cap      Air  
Cleaner

## Starting the Engine

During this procedure, refer to the photos of the Engine Controls on page 6.

1. Push the Throttle Lever to the fast (left) position, then slightly to the right.
2. Close the Choke by pulling it to the left.

**Note:** If the Engine is already hot, it is not necessary to close the Choke.

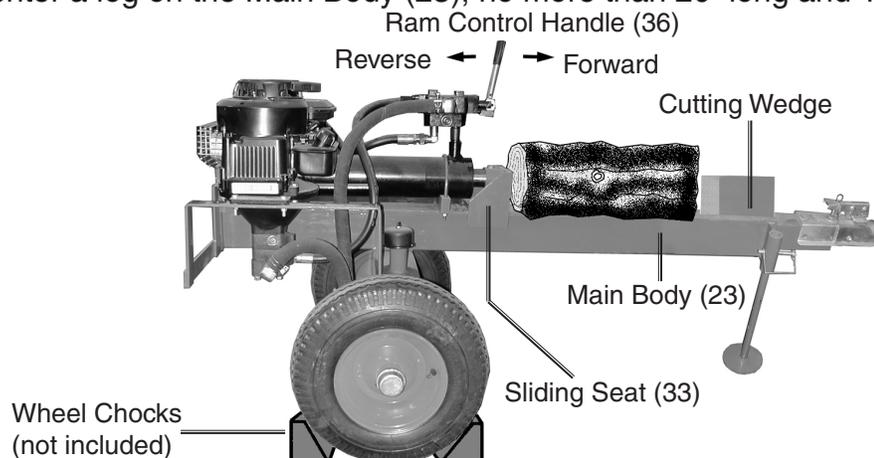
3. Push the red Prime Button three times to inject gas into the carburetor.  
Wait two seconds between each prime. If this is the first time starting the new Engine, prime five times. Excessive priming will flood the Engine and it will not start.
4. Gently pull the starter Rope Handle until it engages. Then pull it hard and all the way out. Slowly guide the Rope Handle back into the starter housing.  
The Engine should start. Try again if it does not start. Refer to the Troubleshooting section if problems persist. Let the engine run for five minutes to warm up.
5. Push in the Choke Lever to the right to close.
6. Push the Throttle Lever (all the way) to the fast position (left).

## Stopping the Engine

1. Push the Throttle Lever all the way to the Off (right) position.  
Engine should shut down. When Engine is cool, remove Spark Plug cable to avoid restarting accidentally.
2. Push the Ram Control forward and backward until all pressure is used up.

## Splitting Logs

1. Place wheel chocks (not supplied) on each side of the wheels to keep the Log Splitter from moving. See photo below.
2. Allow the engine to run for a few minutes to build up pressure in the hydraulic system.
3. Pull back on Ram Control to retract the Ram, then move to neutral (center) position.
4. Center a log on the Main Body (23), no more than 20" long and 14" in diameter.



5. Momentarily push forward lightly on the Ram Control until the log is locked in place between the Sliding Seat (33) and the Cutting Wedge. If the log is correctly seated, continue with Step 5.
6. Stand to one side of the Engine, then push the Ram Control forward until the log is split.
7. When the log is split, pull back on the Ram Control to retract the Ram.

Prepare the next log to be split. The Log Splitter hydraulic system can split up to four logs per minute.

### Basic Troubleshooting

Symptom	Probable Cause	Possible Remedy
Engine will not start.	<ol style="list-style-type: none"> <li>1. Choke set to open position.</li> <li>2. Gas Tank empty.</li> <li>3. Spark plug dirty.</li> <li>4. Technical problem.</li> </ol>	<ol style="list-style-type: none"> <li>1. Set to closed position.</li> <li>2. Fill Gas Tank.</li> <li>3. Remove spark plug and clean.</li> <li>4. Service by qualified mechanic.</li> </ol>
Engine runs rough, pinging noises.	<ol style="list-style-type: none"> <li>1. Gasoline wrong type.</li> <li>2. Gasoline has water.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with 85 octane gas or higher.</li> <li>2. Empty tank and replace gas.</li> </ol>
Engine stops by itself, but has gas.	<ol style="list-style-type: none"> <li>1. Low oil level auto shut off.</li> <li>2. Technical problem.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check oil level; Add if needed.</li> <li>2. Service by qualified mechanic.</li> </ol>
Engine does not reach full speed.	<ol style="list-style-type: none"> <li>1. Choke closed.</li> <li>2. Air filters clogged.</li> <li>3. Technical problem.</li> </ol>	<ol style="list-style-type: none"> <li>1. Open Choke.</li> <li>2. Clean air filter elements.</li> <li>3. Service by qualified mechanic.</li> </ol>

### Maintenance

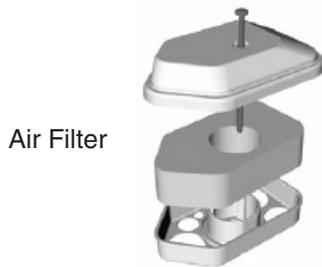
Before performing maintenance procedures, it may be helpful to locate the items to be serviced in the photos on page 6, or the Assembly Drawing and Parts List at the end of this manual. Some Engine maintenance, adjustments, and repairs must be completed by a qualified, small engine mechanic. Refer to the Briggs and Stratton Service Manual (supplied).

#### Scheduled Maintenance

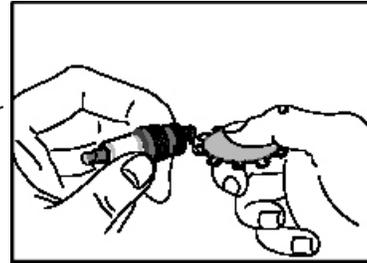
Item \ Frequency	Each Use	First month or 8 hours	Each 50 hours	Every 6 month or 100 hrs.	Each year or 300 hrs.
Engine oil	Check	Replace	Replace		
Air Filter	Check	Clean	Clean	Clean	Replace
Spark Plug				Clean & Adjust	Replace
Spark Eliminator				Clean	
Idling					Check & Adjust
Valve Clearance					Check & Adjust
Fuel Tank & Filter					Clean
Fuel Line					Check
Combustion Chamber				Clean	Clean

## Cleaning Air Filter

Using compressed air, blow the dust from both elements and the Filter Base on the Engine. If the Filter Elements cannot be cleaned, wash the foam element with mild soap and water, and dry. Purchase a new paper Filter Element if necessary. Reinstall Filter Elements, Air Filter Housing, and Nut. See photo below, left.



Measuring Spark Plug Gap with Feeler Gauge



## Cleaning and Replacing Spark Plug

1. Pull off the Spark Plug Cable.
2. Using a socket wrench (not supplied), carefully unscrew the Spark Plug. Wait for the Engine to cool to avoid burning hands.
3. Clean Spark Plug with a steel brush. If the insulator is damaged, replace Spark Plug.

**Caution: Using other than the recommended Spark Plug replacement type can damage the Engine (see Specifications on page 2).**

4. Measure the Spark Plug electrode gap with a feeler gauge (not supplied). See illustration above, left.  
It should be set to 0.030" (0.76 mm). If adjustment is necessary, bend the side electrode carefully, then re-measure. If Spark Plug Gasket is damaged, replace it.
5. Replace Spark Plug by hand for the first few turns, then tighten with the socket wrench completely. Securely tighten. A Spark Plug with a new Gasket requires 1/2 more turns to tighten than the used Gasket which requires 1/8 to 1/4 turns to tighten.

## Changing Oil

1. Run the Engine for five minutes to warm up the oil, then shut off the Engine.
2. Place a drain pan under the Drain Plug. (Drain plug screw is located under the Engine.)
3. Remove the Dip Stick and unscrew the Drain Plug.
4. Allow all the oil to drain out into the pan. Pour the used oil into a container with a lid. Deliver used oil to a recycling center. Do not dump oil into the earth or storm drain.
5. Replace Drain Plug and securely tighten.
6. Add 1/2 quart of 10W 30 motor oil through a siphon into the Dip Stick fill hole. Fill until the oil reaches the Upper Level line of the fill hole.
7. Replace the Dip Stick, being careful not to strip its plastic threads.

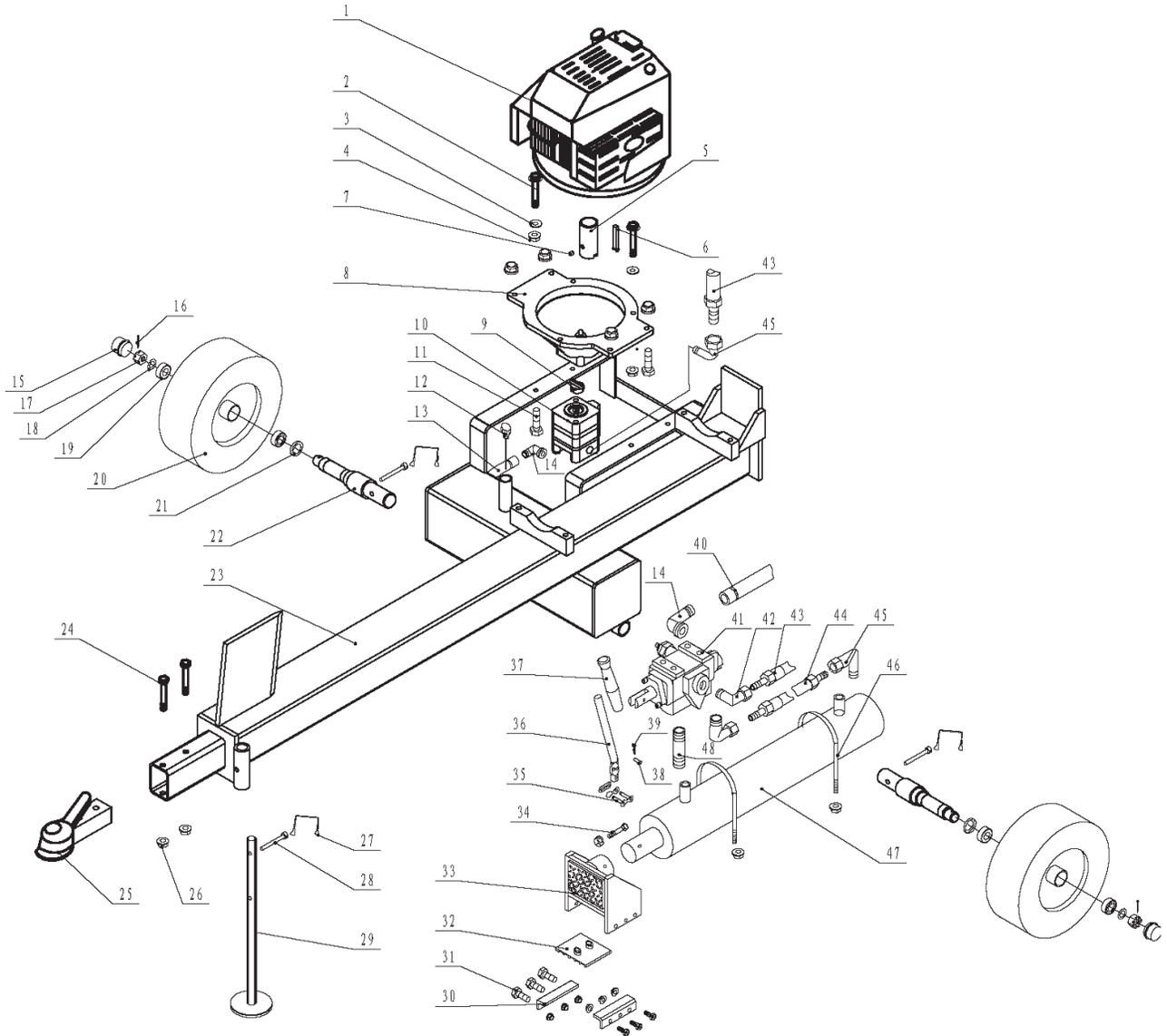
## Parts List

Part No.	Description	Qty.
1	Engine	1
2	Bolt M8X45	3
3	Flat Washer 8mm	8
4	Nut M8	18
5	Shaft Connector	1
6	Flat Key B 4.8x4.8x35	1
7	Lock Screw 8 x 8	1
8	Flange	1
9	Connector	1
10	Oil Pump	1
11	Bolt M8x25	4
12	Oil Sticker C	1
13	Rubber Hose	1
14	Oil Pump Connector/Low Pressure	2
15	Dust-proof Cap	2
16	Split Pin 4x36	2
17	Nut M20	2
18	Flat Washer 20mm	2
19	Bearing L44643	4
20	Wheel Assembly	2
21	Dust-proof Ring	2
22	Axle	2
23	Main Body	1
24	Bolt M10x90	2
25	Hitch Ball Connector	1
26	Nut M10	2
27	Support Leg Clip	3
28	Support Leg Pin	3
29	Support Leg	1
30	Baffle	2
31	Bolt M8x30	6
32	Sliding Pad	1
33	Sliding Seat Assembly	1
34	Bolt M8x70	1
35	Connector 12A	1
36	Control Handle	1
37	Handle Gripe	1
38	Pin B6X26	1
39	Clip	1
40	Pipe Clip 35	4
41	Direction Valve	1
42	Direction Valve Connector/High Pressure	1
43	Rubber Hose I	1
44	Rubber Hose II	1
45	Oil Pump Connector/High Pressure	3
46	Hoop	2
47	Hydraulic Cylinder	1
48	Connector for Cylinder and Valve	1

**NOTE:** Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

For detailed information on Engine parts, refer to the Briggs and Stratton Service Manual.

# Assembly Drawing



## PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

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## LIMITED 90 DAY WARRANTY

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Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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