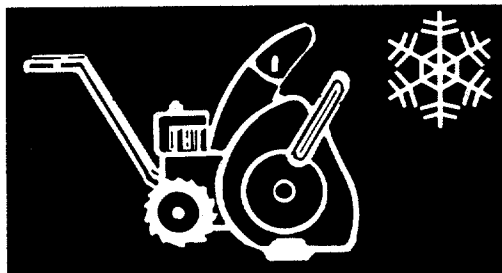
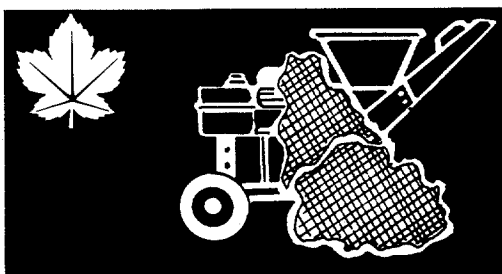
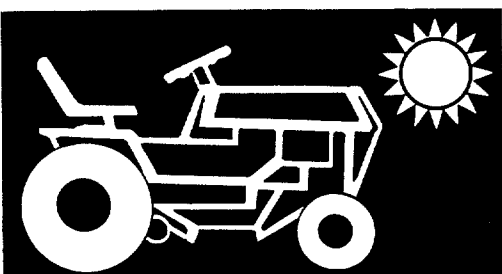
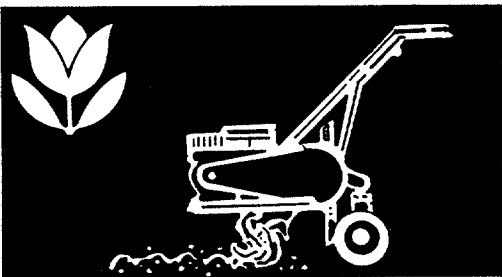


\$1.00

# OWNER'S GUIDE

OUTDOOR POWER EQUIPMENT  
for all seasons



## 5 AND 8 H.P. LOG SPLITTERS

### Model Numbers

248-642-000

248-645-000

24642-8

24645-8

### IMPORTANT:

Read Safety Rules and  
Instructions Carefully

Thank you for purchasing  
an American-built product.

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Instructions given with this symbol are for personal safety. Be sure to follow them.



This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service center.



To reduce the potential for any injury, comply with the following safety instructions. Failure to comply with the instructions may result in personal injury.

## SAFE OPERATION PRACTICES FOR LOG SPLITTERS

### TRAINING

1. Before operating this splitter, read and understand this manual completely. Become familiar with it for your own safety. To fail to do so may cause serious injury. Do not allow anyone to operate your splitter who has not read this manual. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Never use your splitter for any other purpose than splitting wood. It is designed for this use and any other use may cause an injury. Your log splitter is a precision piece of power equipment, not a playtoy. Therefore, exercise extreme caution at all times.
3. Never allow children to operate your log splitter. Do not allow adults to operate it without proper instruction. Only persons well acquainted with these rules of safe operation should be allowed to use your log splitter.  
Only the operator is to be near your log splitter during use. Keep all others, including pets and children, a minimum of 20 feet away from your work zone. Flying wood can be hazardous. If a helper is assisting in loading logs, never activate the control until the helper is clear of the area. More accidents occur when more than one person operates the log splitter than at any other time.
5. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions. A clear mind is essential for safety. Never allow a person who is tired or otherwise not alert to use your splitter.

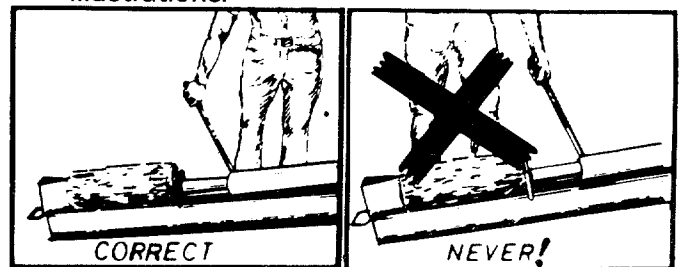
### PREPARATION

1. Never wear loose clothing or jewelry that can be caught by moving parts of your log splitter and pull you into it. Keep clothing away from all moving parts of your log splitter.
2. Wear proper head gear to keep hair away from moving parts. Always wear protective hearing devices as needed.
3. Always wear safety shoes. A dropped log can seriously injure your foot.
4. Always wear safety glasses or goggles while operating your splitter. A piece of splitting log could fly off and hit your eyes.
5. If you wear gloves, be sure they are tight fitting without loose cuffs or draw strings.
6. Use your log splitter in daylight, or under good artificial light.

7. Never operate your splitter on slippery, wet, muddy or icy surfaces. Safe footing is essential in preventing accidents. Never operate your splitter while attached to a towing vehicle.
8. Only operate your splitter on level ground and not on the side of a hill. It could tip, or rolling logs or poor footing could cause an accident. Operating the splitter on level ground also prevents the spillage of gasoline from the fuel tank.
9. Never attempt to move the log splitter over hilly or uneven terrain without a tow vehicle or adequate help.
10. Always block the wheels to prevent movement of log splitter while in operation.
11. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill the gasoline tank indoors, when the engine is running, or while the engine is still hot. Replace gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
12. Both ends of each log must be cut as square as possible to help prevent the log from riding out of the splitter during operation.

### OPERATION

1. Stand behind the ram when operating. See illustrations.



2. Know how to stop the unit and disengage the controls.
3. Never place hands or feet between log and splitting wedge or between log and ram during forward or reverse stroke. To do so may result in crushed or amputated fingers or toes, or worse, you may lose an arm or foot.
4. Do not straddle the splitter when using it. A slip in any position could result in a serious injury.
5. Do not step over your log splitter when the engine is running. You may trip or accidentally activate the ram if your step over. If you need to get to the other side, walk around.
6. Never try to split two logs on top of each other. One may fly out and injure you.

7. When loading the log splitter, place your hands on the side of the log, not at the ends. Never attempt to load your splitter while the ram is in motion. You may get caught by the ram and injured.
8. Only use your hand to operate the ram or control lever. Never use your foot or a rope or any other extension device. This could result in your inability to stop your splitter quickly enough and cause an injury.
9. Always keep fingers away from any cracks that open in the log during splitting operation. They can quickly close and pinch or amputate your fingers.
10. Never attempt to split wood across the grain. Some types of wood may burst or fly out of your splitter and result in injury to you or a bystander.
11. For logs that are not cut square, the longest portion of the log should be rotated down and the most square end placed against the ram.
12. Keep your work area clean. Immediately remove split wood around your splitter so that you do not stumble over it.
13. Never move the log splitter while the engine is running.
14. Never leave your log splitter unattended with the engine running. Shut off the engine if you are leaving your splitter, even for a short period of time. Someone could accidentally activate the ram and be injured.
15. Do not run engine in an enclosed area. Exhaust gases contain carbon monoxide. This odorless gas can be deadly when inhaled.
16. Be careful not to touch the muffler after the engine has been running as it is HOT.
17. If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
18. When cleaning, repairing or inspecting, make certain all moving parts have stopped. Disconnect the spark plug wire, and keep the wire away from the plug to prevent accidental starting.

#### **MAINTENANCE AND STORAGE**

1. Do not operate your splitter in poor mechanical condition or when in need of repair.
2. Periodically check that all nuts, bolts, screws, hose clamps and hydraulic fittings are tight to be sure equipment is in safe working condition. Where appropriate, check all safety guards and shields to be sure they are in the proper position. Never operate your splitter with safety guards, shields or other protective features removed. These safety devices are for your protection.
3. Replace all damaged or worn parts such as hydraulic hoses and fittings immediately with manufacturer approved replacement parts.
4. Do not change the engine governor settings or overspeed the engine. This increases the hazard of personal injury. The maximum engine speed is preset by the manufacturer and is within safety limits.

5. Do not alter your splitter in any manner such as attaching a rope or extension to the control lever or adding to the width or height of the wedge. Such alterations may cause your splitter to be unsafe.
6. Perform all recommended maintenance procedures before you use your splitter.
7. Do not service or repair your log splitter without disconnecting the spark plug wire.
8. Never store the equipment with gasoline in the tank inside of a building where ignition sources are present, such as hot water and space heaters, clothes dryers and the like. Allow the engine to cool before storing in any enclosure.
9. Always store gasoline in an approved, tightly sealed container. Store the container in a cool, dry place. Do not store in a building where ignition sources are present.
10. To reduce fire hazard, keep engine free of grass, leaves, wood chips, and excessive grease and oil.
11. The hydraulic system of your log splitter requires careful inspection, along with the mechanical parts. Be sure to replace frayed, kinked, or otherwise damaged hydraulic components.
12. Fluid escaping from a very small hole can be almost invisible. Do not check for leaks with your hand. Escaping fluid under pressure can have sufficient force to penetrate skin, causing serious personal injury. Leaks can be located by passing a piece of cardboard or wood over the suspected leak and looking for discoloration.
13. Should it become necessary to loosen or remove any hydraulic fitting or line, be sure to relieve a pressure by shutting off the engine and moving the control handle back and forth several times.
14. Do not remove the cap from the hydraulic tank or reservoir while your log splitter is running. Hot oil under pressure could cause injury.
15. The pressure relief valve on your splitter is preset at the factory. Do not adjust the valve. Only a qualified service technician should perform this adjustment.
16. Completely drain fuel tank prior to storage. This guards against accumulation of fuel fumes which could result in a fire hazard.
17. Never store log splitter outside without a waterproof cover. Rain will cause rust on the inside of the cylinder.

#### **TOWING**

1. This unit should not be towed on any street, highway or public road. Any licensing needed to comply with the existing federal, local or state vehicle requirements is the sole responsibility of the purchaser.
2. Before towing, be certain the log splitter is correctly and securely attached to the towing vehicle, and the safety chains (if so equipped or where required by state law) are in place. Leave slack in chains for turning allowance.
3. Do not allow anyone to sit or ride on your splitter. They can easily fall off and be seriously injured.

## TOOLS REQUIRED:

Raw Hide or Plastic Hammer  
 1-1/8", 3/4", 9/16", 1/2" and 7/16" Wrench (or one Adjustable Wrench)  
 Pair of Pliers  
 Additional Adjustable Wrench

## OTHER MATERIALS NEEDED:

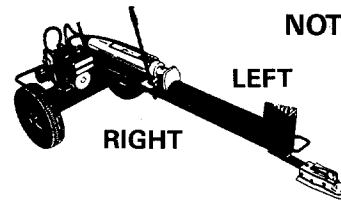
Approximately 2-1/2 gallons of Dexron II automatic transmission fluid (may be obtained at your local service station or auto parts store).  
 Funnel  
 Engine oil and gasoline (refer to separate engine manual).

# ASSEMBLY INSTRUCTIONS

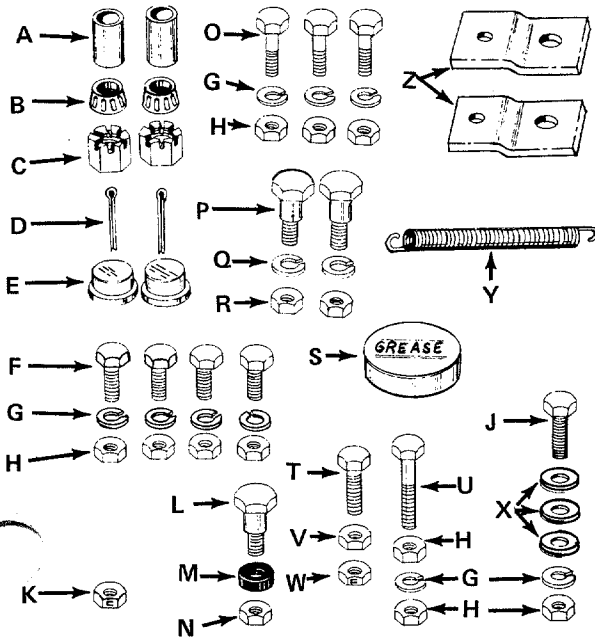
## NOTE

This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see separate engine manual for proper fuel and engine oil recommendations.

## NOTE



Reference to right or left hand side of the unit is determined from the operating position, facing forward. See illustration at left.



## CONTENTS OF HARDWARE PACK (See Figure 1):

- A (2) Spacers 1-1/2" Long
- B (2) Tapered Roller Bearings
- C (2) Castle Nuts 3/4-16 Thread
- D (2) Cotter Pins
- E (2) Hub Caps
- F (4) Hex Bolts 3/8-24 x 1" Long
- G (9) Lock Washers 3/8" I.D.
- H (10) Hex Nuts 3/8-24 Thread
- J (1) Hex Bolt 3/8-24 x 1-1/4" Long
- K (1) Hex Lock Nut 5/16-18 Thread
- L (1) Shoulder Bolt
- M (1) Rubber Washer
- N (1) Hex Lock Nut 3/8-16 Thread
- O (3) Hex Bolts 3/8-24 x 3/4" Long
- P (2) Shoulder Bolts
- Q (2) Lock Washers 5/16" I.D.
- R (2) Hex Nuts 5/16-18 Thread
- S (1) Automotive Grease
- T (1) Hex Bolt 1/4-28 x 1" Long
- U (1) Hex Bolt 3/8-24 x 1-3/4" Long
- V (1) Hex Nut 1/4-28 Thread
- W (1) Hex Lock Nut 1/4-28 Thread
- X (3) Flat Washers
- Y (1) Spring
- Z (2) Pivot Brackets

FIGURE 1

## LOOSE PARTS IN CARTON:

- (1) Axle Assembly
- (2) Wheels
- (2) Tow Hitch Brackets
- (1) Tow Hitch Assembly
- (1) Pivot Stand
- (1) Hitch Chain
- (1) Engagement Rod Assembly
- (1) Engagement Handle

Remove log splitter and loose parts from carton. Make certain all parts and literature have been removed from the carton before the carton is discarded.

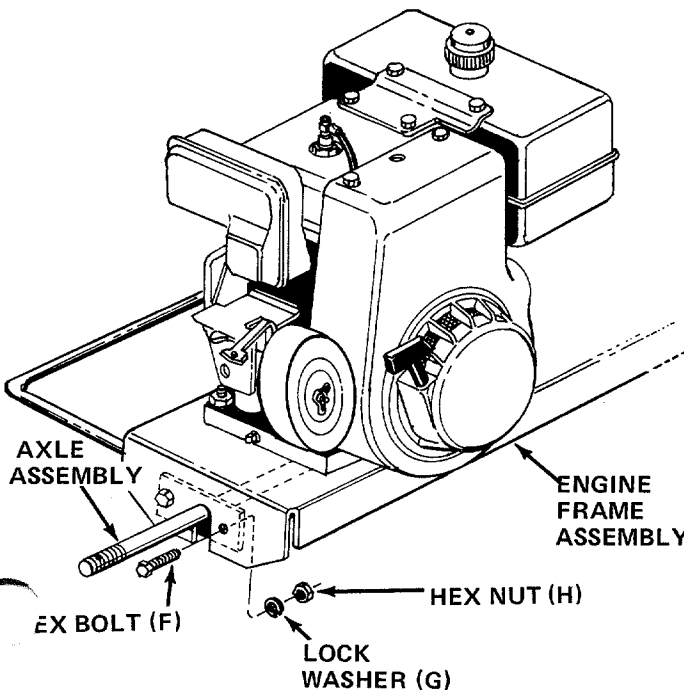


FIGURE 2

## INSTALLATION OF WHEELS

1. Place the axle assembly in position inside the the engine frame assembly as shown in figure 2. Secure with hex bolts (F), lock washers (G) and hex nuts (H).
2. Remove the protective plastic covers from the ends of the axles.

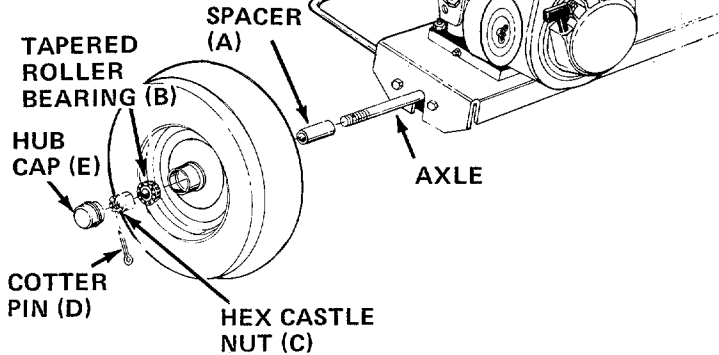
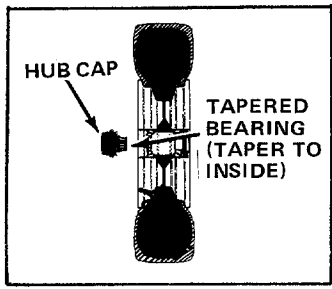


FIGURE 3

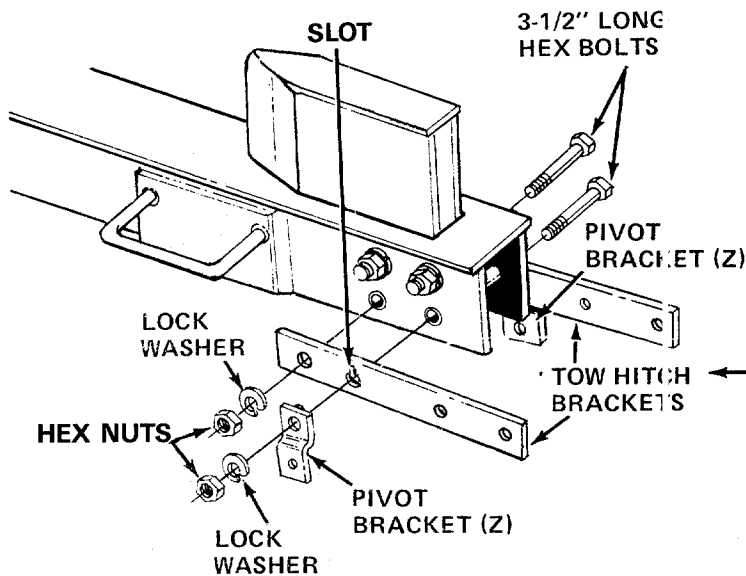


FIGURE 4

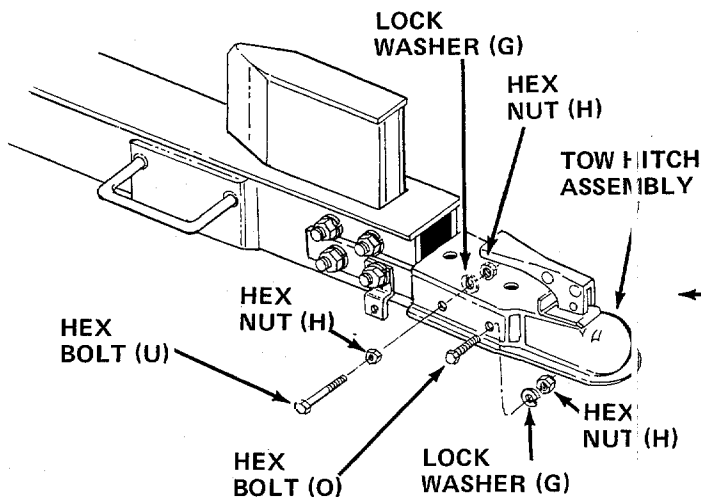


FIGURE 5

3. Pack the tapered roller bearings (B) with automotive grease provided.



Do not put any grease in the hub caps.

4. Place one spacer (A) on the axle, then one wheel and a tapered roller bearing (B). See figure 3.
5. Thread hex castle nut (C) on axle. Tighten castle nut until snug, then back off approximately 1/3 turn or until one of the slots on the castle nut lines up with hole in axle. Secure castle nut to axle with cotter pin (D). See figure 3.



Make certain wheel bearings were packed with grease.

6. Place hub cap (E) in position on wheel and tap on with a plastic hammer.
7. Repeat steps 2 through 6 for the second wheel.

#### ASSEMBLY OF TOW HITCH AND STAND

The wedge is already assembled to the log splitter, and is held in place with four 3-1/2" long hex bolts, lock washers and hex nuts. The top two bolts and nuts are tightened securely. The bottom two bolts and nuts have been assembled loosely.

1. Remove the two bottom bolts, lock washers and hex nuts from the beam and wedge. See figure 4.
2. Place one tow hitch bracket on each side of the beam, lining up the large holes in the brackets with the bottom holes in the beam. The slots in the tow hitch brackets face upward. Secure the tow hitch brackets with one hex bolt, lock washer and hex nut just removed.
3. Place one pivot bracket (Z) on each side of the two hitch brackets, lining up the holes in the hitch bracket with the holes toward the end of the beam. The pivot brackets must be assembled with the bend to the outside as shown in figure 4. The tab on each pivot bracket goes into the slot on tow hitch brackets. Secure with the other hex bolt, lock washer and hex nut removed in step 1.
4. Place the tow hitch assembly in position on the tow hitch brackets. Secure the left side of tow hitch assembly with two hex bolts (O), lock washers (G) and hex nuts (H). See figure 5.
5. Secure the right hand side of tow hitch assembly with hex bolt (O), lock washer (G) and hex nut (H) in the front hole only.
6. Thread one hex nut (H) onto hex bolt (U). Secure rear hole in tow hitch assembly with this bolt, lock washer (G) and another hex nut (H).

**NOTE:** Spring (Y) will be attached to this bolt in step 9.

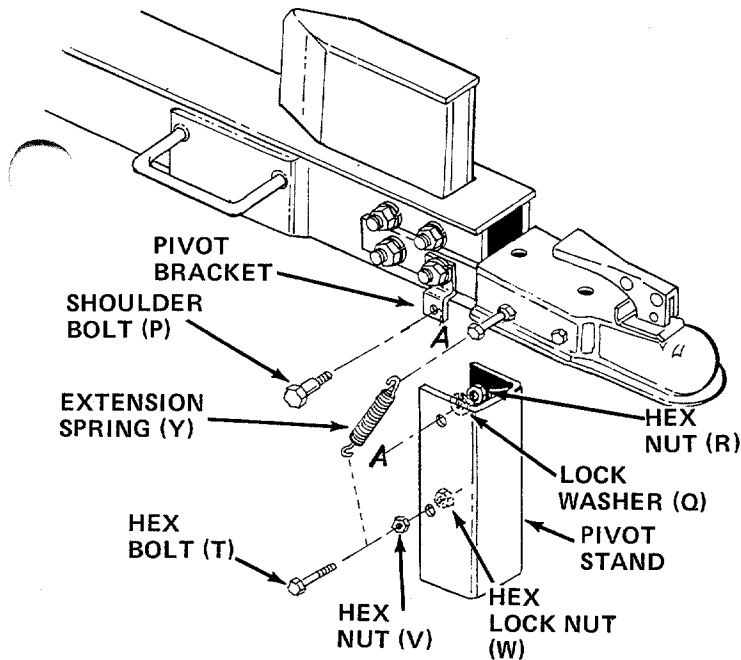


FIGURE 6

7. Thread hex nut (V) part way onto hex bolt (T). Secure to pivot stand with hex lock nut (W) as shown in figure 6.
8. Assemble the pivot stand to the pivot brackets with two shoulder bolts (P), lock washers (Q) and hex nuts (R).
9. Attach extension spring (Y) to long hex bolts on tow hitch and pivot stand. See figure 6.

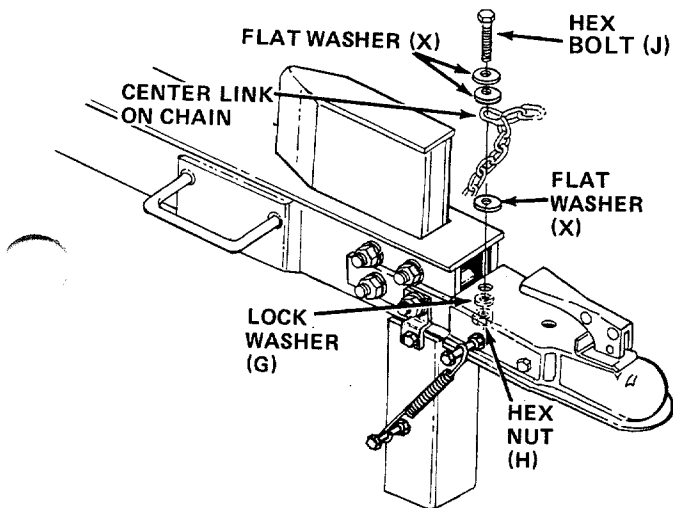


FIGURE 7

10. Find the center link of the tow hitch chain. Place two flat washers (X) on hex bolt (J), then the center link on chain and another flat washer (X). Insert bolt down through the hole in the tow hitch assembly which is nearest the wedge. Secure with lock washer (G) and hex nut (H). See figure 7.



**WARNING**

Exercise extreme caution when raising and lowering the flip stand as it is spring loaded and could cause personal injury.

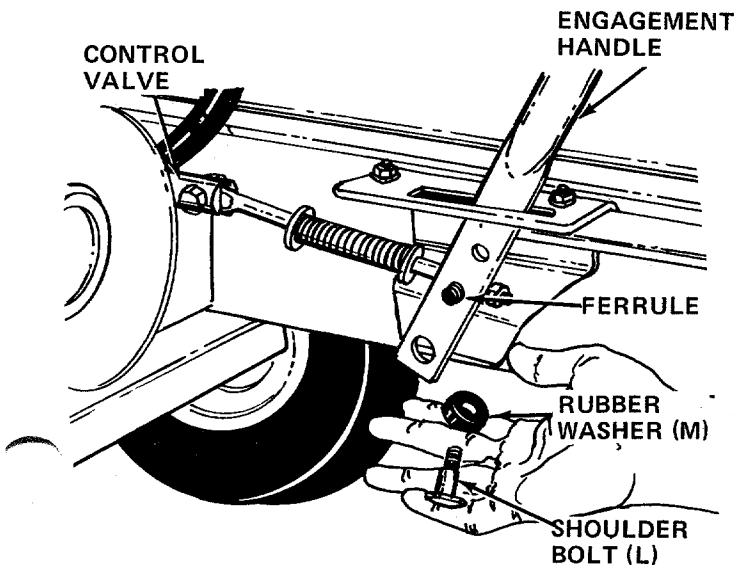


FIGURE 8

#### ASSEMBLY OF ENGAGEMENT HANDLE

1. Place the flattened end of the engagement handle down through the slotted bracket beside the beam. Insert the end of the ferrule on the engagement rod into the second hole from the end of the engagement handle. See figure 8.
2. Place shoulder bolt (L) through bottom hole in engagement handle. Place rubber washer (M) on shoulder bolt. Secure to bracket with hex lock nut (N). Tighten lock nut until nut is flush with the end of the shoulder bolt.

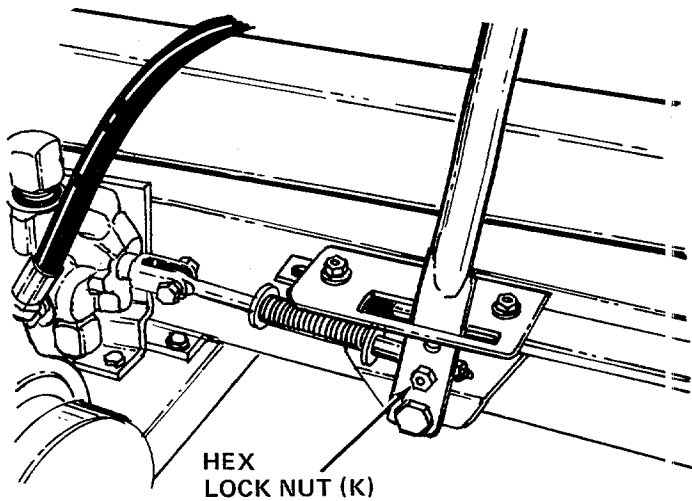


FIGURE 9

- Secure ferrule on engagement rod to engagement handle with hex lock nut (K). See figure 9. Tighten lock nut until nut is flush with the end of the ferrule.

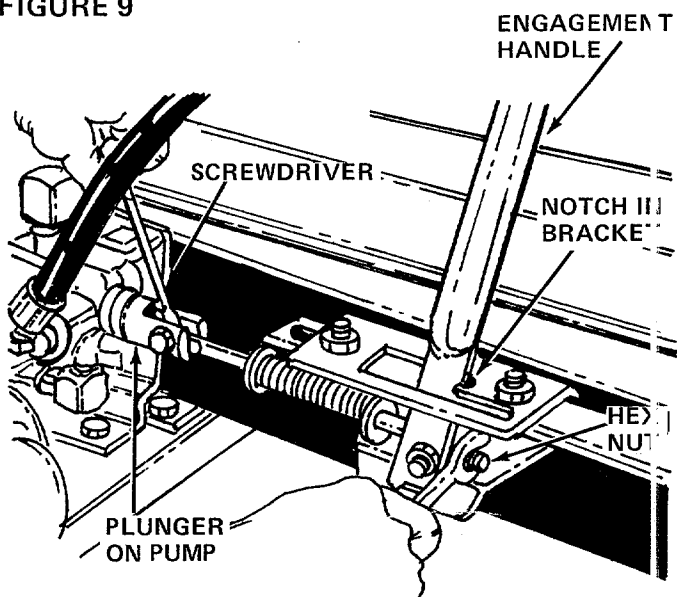


FIGURE 10

- Place the engagement handle in reverse position, locked in the notch in the slotted bracket. See figure 10.
- Adjust the engagement rod by tightening the hex nut on the end of the rod until the plunger on the pump is pushed all the way in when the engagement handle is locked in the reverse position. Insert a screwdriver into the slot in the plunger to keep the rod from turning as the hex nut is tightened. See figure 10.

## OPERATION BEFORE STARTING

- Fill reservoir tank on log splitter with approximately 2-1/2 to 3 gallons of Dexron II automatic transmission fluid as follows. Check fluid level before each use.
  - Place log splitter in the operating position with the beam level, using the stand provided.
  - Remove the fluid check plug from the back of the log splitter. See figure 11. If fluid starts to come out of the hole, fluid level is correct. If it does not, replace the check plug loosely, pull the cap off the breather tube, and add Dexron II automatic transmission fluid until fluid starts out of the hole when the plug is removed.
  - Replace fluid check plug securely. Replace cap on the breather tube.

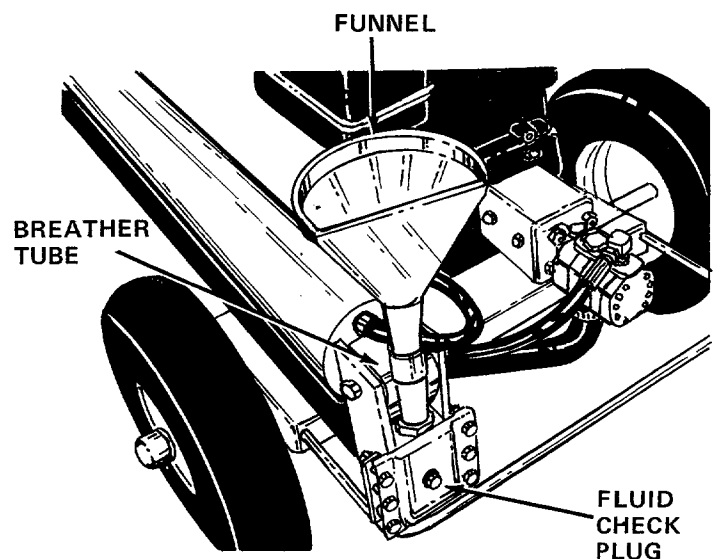


FIGURE 11



**NOTE**

DO NOT operate log splitter without proper amount of transmission fluid in reservoir tank (beam).

Service engine with oil as instructed in the separate engine manual packed with your unit.

3. Fill fuel tank, using clean, fresh, **regular** grade automotive gasoline. Fill tank completely.

**NOTE**

Refer to engine manual packed with log splitter for complete instructions for the care and maintenance of engine. **READ DIRECTIONS CAREFULLY.**

4. Bleed the air from the hydraulic system as follows.
  - a. Remove the breather cap.
  - b. Start the engine.
  - c. Slowly work the engagement handle forward and backward until the ram moves smoothly in both directions.
  - d. Stop the engine. Remove the fluid check plug, and check fluid level as specified in step one. Add fluid as necessary and bleed air from the hydraulic system until oil level is correct and the ram operates smoothly.
  - e. Replace breather cap securely.

**NOTE**

Be certain to bleed the air from the hydraulic system as instructed above after any repair work is done on the pump, valve or cylinder, if a hose is removed for any reason or when adding fluid to the reservoir.

**WARNING**

Do not operate unit with the breather cap removed.

**TO START ENGINE**

1. Place throttle control lever in FAST or CHOKE position. See figure 12.
2. Place choke control in CHOKE position (if unit is so equipped).

**NOTE**

A warm engine may not require choking.

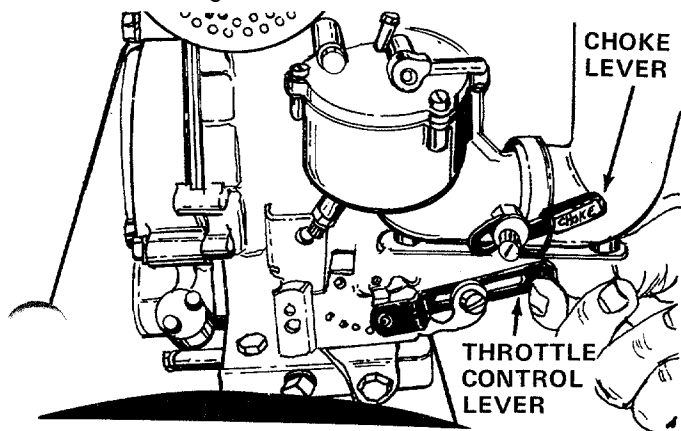


FIGURE 12 - 8 H.P. Briggs and Stratton engine shown

3. Grasp starter handle, place one foot on wheel and pull starter handle with a quick, full arm stroke. Return rope slowly to the engine.
4. After engine starts, move choke control gradually to OFF position (if unit is so equipped). Move throttle control to desired engine speed.

**TO STOP ENGINE**

1. Push shorting clip against spark plug (if unit is so equipped) or move throttle control lever to STOP position.
2. Disconnect spark plug wire from spark plug to prevent accidental starting while equipment is unattended.

**USING YOUR LOG SPLITTER**



This unit should not be towed on any street, highway or public road. Any licensing needed to comply with the existing federal, local or state vehicle requirements is the sole responsibility of the purchaser. Make certain the stand is folded up against the beam when transporting.

Your log splitter is designed for safe, efficient operation. **BE CAREFUL TO KEEP HANDS AND FEET AWAY FROM MOVING PARTS.**

Engagement handle has three positions: (See figure 13)

- Forward - ram moves toward wedge.
- Neutral - ram stops in place.
- Reverse - ram returns.

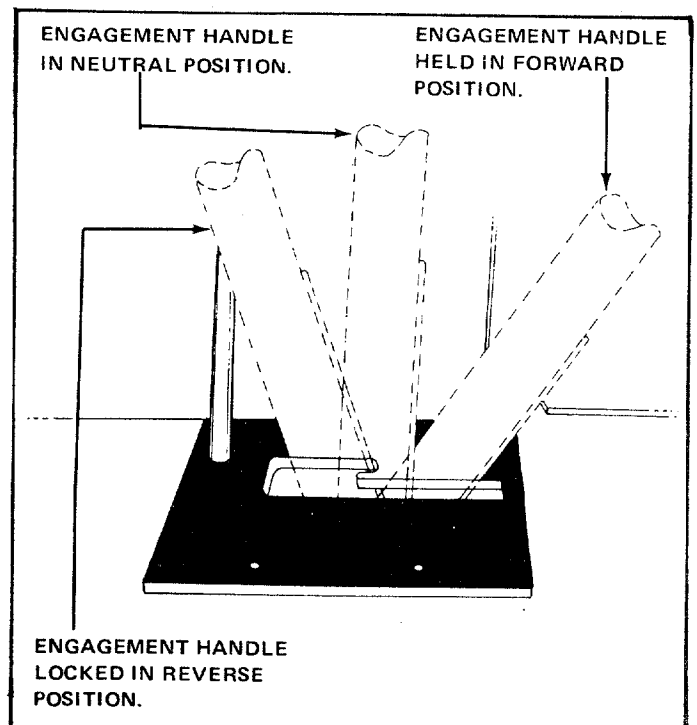


FIGURE 13

Maximum length that can be split is 26".

## TO OPERATE LOG SPLITTER:

1. Set throttle at maximum speed.
2. Place log on beam and hold in place with right hand. See figure 14.
3. Slowly move engagement handle forward until ram rests against log. Release engagement handle (Neutral).
4. Remove your hand from the log and step behind the ram. See figure 15.
5. Move engagement handle forward until log is split.
6. Move the engagement handle to the rear to return ram.

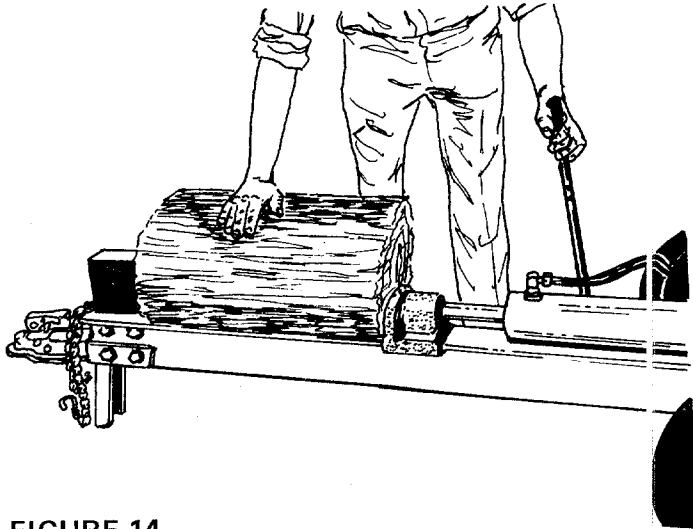


FIGURE 14

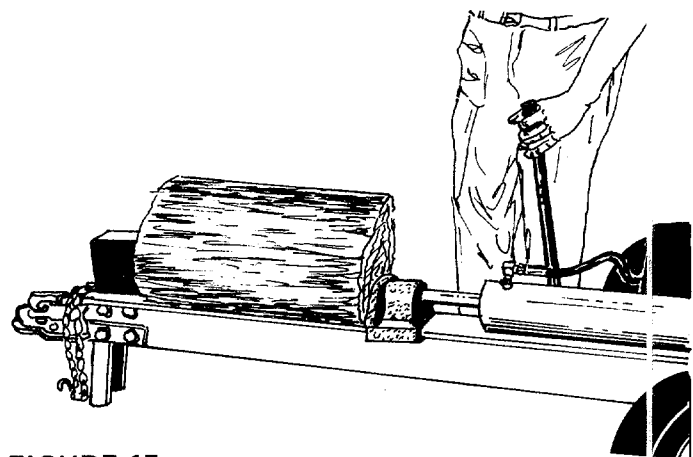


FIGURE 15

The ram should take approximately 12 seconds to make a complete cycle. This speed may vary depending on throttle setting and temperature of hydraulic fluid.



## NOTE

If you lock the engagement handle in the reverse slot, the ram will return until it hits the engagement bracket, which will throw the engagement handle into neutral automatically.



## WARNING

Never attempt to cut a log in half with the log splitter. See figure 16. Never stand next to the ram when operating. See figure 17. Always stand behind the ram as shown in figure 15.

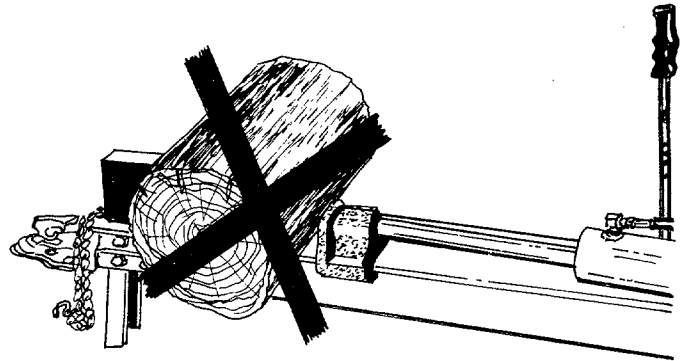


FIGURE 16

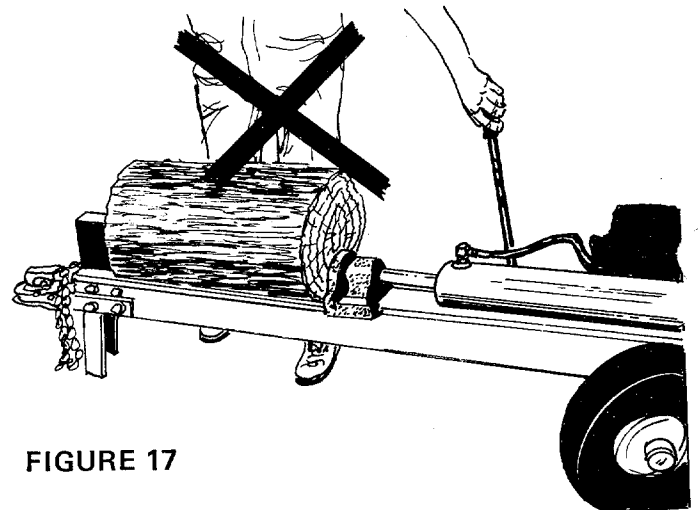


FIGURE 17

## MAINTENANCE



## WARNING

Always stop engine and disconnect spark plug wire before performing any maintenance or adjustments.

### ENGINE OIL

Change oil first two (2) hours of operation. Check oil level every five (5) operating hours or each time equipment is used.

Change oil every twenty-five (25) operating hours or sooner if equipment is operated in extremely dusty or dirty conditions.

Refer to engine manual for quantity and type of oil

### ENGAGEMENT HANDLE

Periodically lubricate the area of the engagement handle which contacts the slotted bracket on the beam, to prevent excessive wear.

## LOG SPLITTER RESERVOIR FLUID

Check fluid level in log splitter reservoir before every use. Refer to "Before Starting" under OPERATION section.

Change the hydraulic fluid in the reservoir every 100 hours of operation. Remove the six hex bolts, lock washers and hex nuts which hold the end plate to the beam. Remove the plate and drain the fluid. Be prepared to catch the fluid in a suitable container.

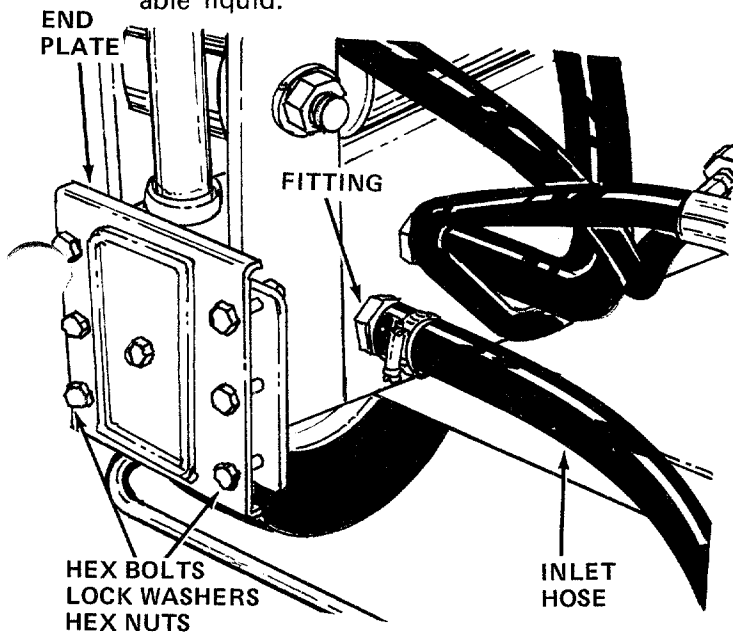


Drain the fluid and flush the reservoir tank assembly and hoses with kerosene each time repair work is performed on the tank, hydraulic pump or valve. Contaminants in the fluid will damage the hydraulic components.



**WARNING**

Use extreme caution when using kerosene as it is an extremely flammable liquid.



**FIGURE 18**

When the hydraulic fluid is drained from the reservoir, clean the strainer tube assembly as follows.

1. Remove the hose clamp at the inlet hose (bottom hose). See figure 18.
2. Pull the inlet hose off the fitting at the beam. Using an adjustable wrench, remove the fitting from the beam.
3. Reach inside the end of the beam and pull out the strainer tube assembly. See reference number 96 on page 12.
4. Clean the strainer tube assembly with kerosene, and reassemble in reverse order.

Reassemble the end plate. Refill reservoir with approximately 2-1/2 to 3 gallons of Dexron II automatic transmission fluid and bleed the air from the hydraulic system as instructed in "Before Starting" under OPERATION section.

## HOSE CLAMPS

Check the hose clamps on the bottom of the pump for proper tightness before each use. Hose clamps on return hose should be checked once a season.

## CARBURETOR ADJUSTMENTS



**WARNING**

If any adjustments are made to the engine while the engine is running (e.g. carburetor), keep clear of all moving parts. Be careful of heated surfaces and muffler.

Refer to engine manual packed with your unit for carburetor adjustment information.

## TIRE PRESSURE

Check sidewall of tire for manufacturer's maximum tire pressure. If this information does not appear on your tire, maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on all tires.

## INSTALLATION OF TIRE TO RIM



**WARNING**

The following procedure must be followed when removing or installing a tire to the rim.

1. Be sure rim is clean and rust free.
2. Lubricate both the tire and rim generously.
3. Never inflate to over 30 p.s.i. to seat beads. Excessive inflation pressure when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

## OFF-SEASON STORAGE

If the machine is to be inoperative for a period longer than 30 days, prepare for storage as follows.

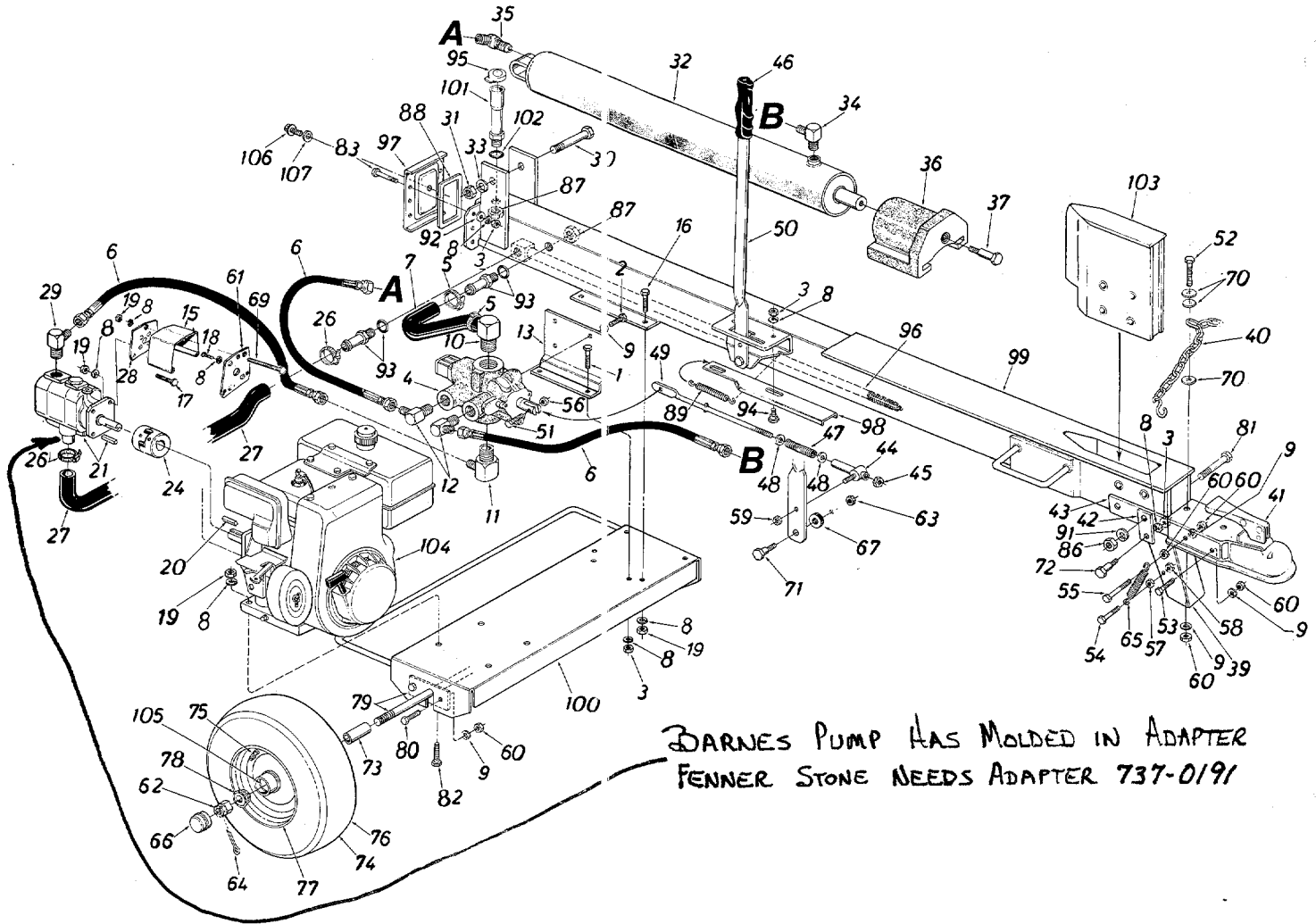
1. Clean the engine and the entire unit thoroughly.
2. Wipe the entire machine with an oiled rag to protect the surfaces.
3. Refer to the engine manual for correct engine storage instructions. The engine must be completely drained of fuel to prevent gum deposits from forming on essential carburetor parts, fuel lines and fuel tanks.
4. Store unit in a clean, dry area.



**NOTE**

When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rust proof the equipment. Using a light oil or silicone, coat the equipment, especially all moving parts.

# Models 642 and 645



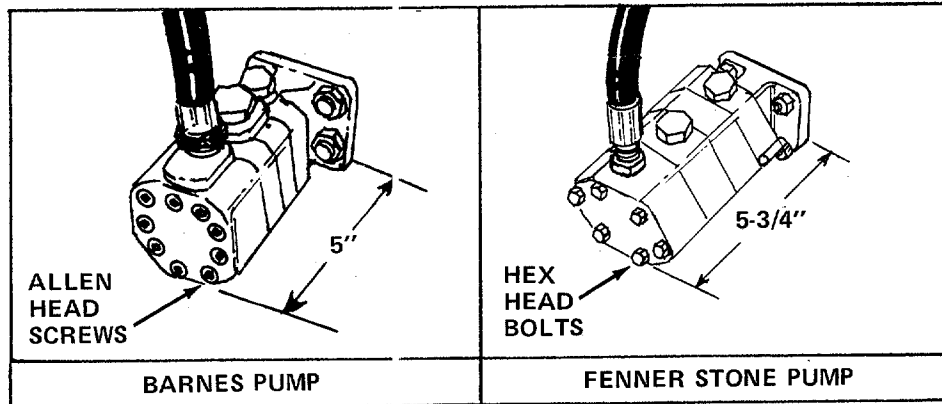
BARNES PUMP HAS MOLDED IN ADAPTER  
 FENNER STONE NEEDS ADAPTER 737-0191

NOTE: The engine is not under warranty by the log splitter manufacturer . . . If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines - Gasoline".



**NOTE**  
 This instruction manual covers various models and all specifications shown do not necessarily apply to your model. Specifications subject to change without notice or obligation.

\*The hydraulic pump is one of two types. As complete units, the two pumps are interchangeable (refer to parts list for part number). If it is necessary to determine the specific type of pump on your unit, refer to the illustrations below.



# Models 642 and 645

## PARTS LIST FOR MODELS 642 AND 645 LOG SPLITTERS

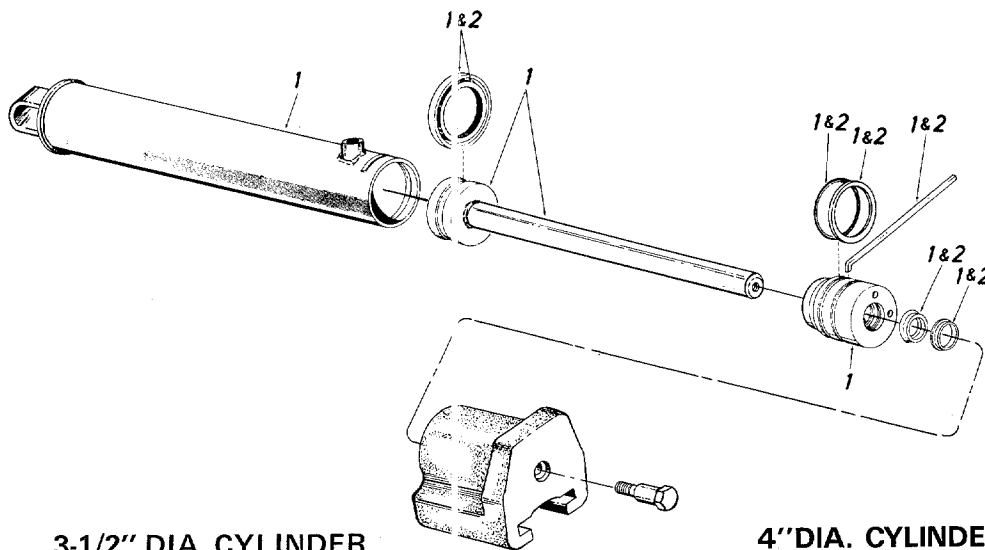
EF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	710-0118		Hex Bolt 5/16-18 x .75" Lg.*		35	737-0194		45° Male Adapter 3/4-16 MJ-3/8-18 NP	
2	710-0168		Hex Bolt 3/8-16 x .50" Lg.*		36	719-0269		Pusher Plate (642)	
3	712-0267		Hex Nut 5/16-18 Thd.*			719-0268		Pusher Plate (645)	
4	717-0407		Control Valve 400		37	738-0601		Shoulder Bolt. .62" Dia. x 4.75" Lg. (1/2-13 Thd.)	
5	726-0132		Hose Clamp 5/8"						
6	727-0297		High Pressure Hose Ass'y. .38" I.D.		39	15850		Flip Stand Bracket	
					40	713-0338		Chain-Tow Hitch	
7	727-0299		Return Hose - Valve to Tank 3/4" I.D.		41	727-0289		Tow Hitch Ass'y. Comp.	
					42	781-0020		Stand Pivot Bracket	
8	736-0119		L-Wash. 5/16" I.D.*		43	781-0037		Tow Hitch Brk't 2 x 3/16 10.25" Lg.	
9	736-0169		L-Wash. 3/8" I.D.*						
10	737-0153		Return Elbow		44	13115		Ferrule Ass'y.	
11	737-0171		90° Solid Male Adapter		45	712-0214		Hex Cent. L.-Nut 3/8-24 Thd.	
12	737-0192		90° Solid Male Adapter						
13	781-0035		Valve Mtg. Plate		46	720-0157		Grip-Black Vinyl	
14	13295		Coupling Support Brkt. Ass'y.		47	732-0324		Compression Spring	
					48	736-0206		Special Washer .378 x 1.00" x .125 Thd.*	
15	719-0278		Coupling Shield (642)		49	747-0484		Engagement Rod 3/8" Dia. x 9.0" Lg.	
	719-0277		Coupling Shield (645)						
16	710-0117		Hex Bolt 5/16-24 x 1.00" Lg.*		50	749-0622		Engagement Handle	
17	710-0157		Hex Bolt 5/16-24 x .75" Lg.*		51	710-0106		Hex Bolt 1/4-20 x 1.75" Lg.	
18	710-0237		Hex Bolt 5/16-24 x .62" Lg.		52	710-0191		Hex Bolt 3/8-24 x 1.25" Lg.*	
19	712-0123		Hex Nut 5/16-24 Thd.*		53	710-0180		Hex Bolt 3/8-24 x .75" Lg.*	
20	714-0168		Sq. Key 3/16" x 2.25" Lg. (642)		54	710-0299		Hex Bolt 1/4-28 x 1.00" Lg.*	
	714-0172		Sq. Key 1/4" x 2.25" Lg. (645)		55	710-0539		Hex Bolt 3/8-24 x 1.75" Lg. (Grade 5)	
21	717-0460		Pump with Woodruff Key (642)		56	712-0107		Hex Patch L.-Nut 1/4-20 Lg.*	
	717-0461		Pump with Woodruff Key (645)		57	712-0117		Hex Cent. L.-Nut 1/4-28 Thd.	
24	717-0872		Flexible Coupling Comp. (642)		58	712-0138		Hex Nut 1/4-28 Thd.	
	717-0462		Flexible Coupling Comp. (645)		59	712-0158		Hex Cent. L.-Nut 5/16-18 Thd.	
26	726-0132		Hose Clamp 5/8"		60	712-0241		Hex Nut 3/8-24 Thd.*	
27	727-0298		Suction Hose 1.0" Dia.		61	781-0098		Front Coupling Support Brkt.	
28	781-0097		Rear Coupling Support Brkt.		62	712-0299		Hex Castle Nut 3/4-16 Thd.	
29	737-0192		90° Solid Male Adapter		63	712-0375		Hex L.-Nut 3/8-16 Thd.	
30	710-0920		Hex Bolt 3/4" x 4.0" Lg.		64	714-0162		Cotter Pin 5/32" Dia. x 1.25" Lg.*	
31	712-0203		Hex Nut 3/4" Thd.						
32	717-0818		Hydraulic Cylinder 3-1/2" Dia. (642)		65	732-0429		Extension Spring .50" O.D. 3.97" Lg.	
	717-0817		Hydraulic Cylinder 4" Dia. (645)		66	734-0873		Hub Cap	
					67	735-0144		Rubber Washer	
33	736-0364		L-Wash. 3/4" I.D.*						
34	737-0220		High Pressure 90° Elbow	N					

**PARTS LIST FOR MODELS 642 AND 645 LOG SPLITTERS (Continued)**

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
69	710-0363		Hex Bolt 5/16-24 x 4.0" Lg* (642)		87	712-0338		Hex Nut 11/16-12 Thd.	
	710-0968		Hex Bolt 5/16-24 x 5.0" Lg.* (645)		88	721-0203		Gasket 2.62 x 5.12	
70	736-0262		Fl.-Wash. .375" I.D. x .870" O.D. x .090		89	732-0352		Extension Spring .50" O.D. x 4.25" Lg.	
71	738-0143		Shoulder Bolt .498" Dia. x .340" Lg.		91	736-0158		L.-Wash. 5/8" I.D.*	
72	738-0296		Shoulder Bolt .437" Dia. x .268" Lg.		92	736-0275		Fl.-Wash. .34" I.D. x .68" O.D. x .062 Thk.	
73	750-0442		Spacer .75" I.D. x 1.12" O.D. x 1.56" Lg.		93	737-0191		Adapter 1.0" Tube 11/16-12 "O"-Ring	
74	734-1016		Wheel Ass'y. Comp. 16.0 x 4.0"		94	738-0140		Shoulder Bolt .437" Dia. x .180" Lg.	
75	734-0255		Air Valve-Tubeless		95	745-0174		Breather Cap	
76	734-0872		Tire Only 16.0 x 4.0-2 Ply		96	781-0021		Strainer Tube Ass'y.	
77	734-1017		Wheel Rim Ass'y. Only		97	781-0023		End Plate	
78	741-0107		Roller Rearing 3/4" I.D.		98	781-0024		Engagement Brk't. 1.39 x 11.75" Lg.	
79	781-0018		Axle Ass'y. .75" Dia. x 35.25" Lg.		99	781-0025		Complete Oil Tank Ass'y.	
80	710-0152		Hex Bolt 3/8-24 x 1.0" Lg.		100	781-0033		Engine Frame Ass'y.	
81	710-0298		Hex Bolt 5/8-18 x 3.50" Lg.*		101	781-0036		Filler Tube Ass'y.	
82	710-0409		Hex Bolt 5/16-24 x 1.75 Lg.*		102	721-0204		"O"-Ring 92" I.D. x 1.16" O.D. x .116 Dia.	
83	710-0442		Hex Bolt 5/16-18 x 1.50" Lg.*		103	781-0038		Wedge Ass'y.	
86	712-0337		Hex Nut 5/1-18 Thd.*		104	-----		5 H.P. Engine (642)	
					105	-----		8 H.P. Engine (645)	
					106	721-0168		Bearing Seal	
					107	710-0604		Hex Hd. Tap Scr. 5/16"	
						721-0205		Gasket	

\*For faster service order standard nuts, bolts, and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

## Models 642 and 645



**3-1/2" DIA. CYLINDER  
PARTS LIST FOR MODEL 642**

**4" DIA. CYLINDER  
PARTS LIST FOR MODEL 645**

REF. NO.	PART NO.	DESCRIPTION	NEW PART	REF. NO.	PART NO.	DESCRIPTION	NEW PART
1	717-0818	Cylinder Ass'y. Comp.		1	717-0817	Cylinder Ass'y. Comp	
2	753-0272	3-1/2" Cyl. Kit "O"-Ring Set		2	753-0273	4" Cyl. Kit "O"-Ring Set	

## TROUBLE SHOOTING CHART

SYMPTOM	POSSIBLE CAUSE (S)	SOLUTION
Engine fails to start	A. Check fuel tank for gas. B. Spark plug lead wire disconnected. C. Faulty spark plug.	A. Fill tank if empty. B. Connect lead wire. C. Clean, adjust gap or replace. See engine manual.
2. Hard starting or loss of power	A. Spark plug wire loose. B. Dirty air cleaner.	A. Connect and tighten spark plug wire. B. Clean air cleaner as described in engine manual.
3. Engine overheats	A. Carburetor not adjusted properly. B. Air flow restricted. C. Engine oil level low.	A. Adjust carburetor. See engine manual. B. Remove blower housing and clean as described in the engine manual. C. Fill crankcase with the proper oil.
4. Will not split logs	A. Reservoir fluid level low. B. Pump setting incorrect.	A. Check and fill reservoir tank as instructed in Operation Section. B. Adjust pump setting to 3,000 p.s.i.*
5. Leaking cylinder	A. Broken seals. B. Scored cylinder.	A. Replace seals.* B. Replace cylinder.*

NOTE: For repairs beyond minor adjustments, please contact your local service dealer.

\*Should be performed by an authorized service dealer only.

