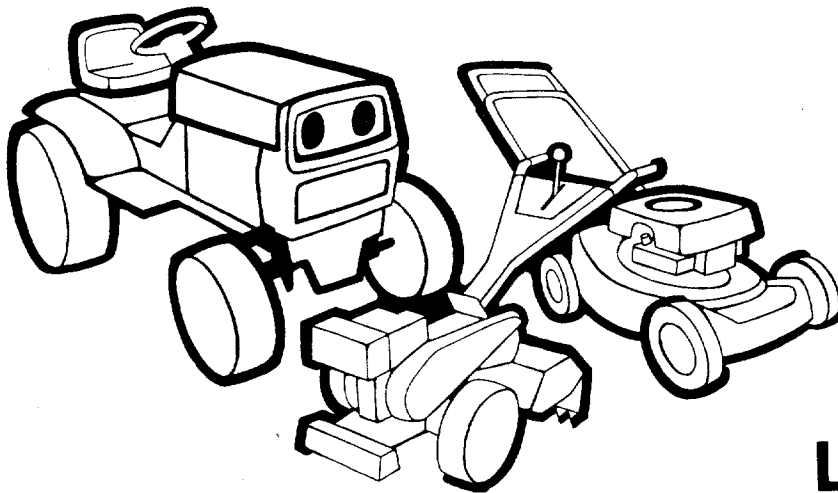


OWNERS MANUAL



**5 and 8 H.P.
LOG SPLITTERS**

**ASSEMBLY
OPERATION
MAINTENANCE
PARTS LIST**

Model Numbers

**244-642-000
244-645-000
24642L
24645L**

**Important:
Read Safety Rules and
Instructions Carefully**

Thank you for purchasing an
American built product.

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LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, motor, battery, battery charger or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD.

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



TO PURCHASERS OF INTERNAL COMBUSTION ENGINE EQUIPPED MACHINERY OR DEVICES IN THE STATE OF CALIFORNIA

The equipment which you have just purchased does not have a spark arrester. If this equipment is used on any forest covered land, brush covered land, or grass covered unimproved land in the State of California, before using on such land, the California law requires that a spark arrester be provided. In addition, spark arrester is required by law to be in effective working order. The spark arrester must be attached to the exhaust system and comply with Section 4442 of the California Public Resources Code.

➔ IMPORTANT

It is suggested that this manual be read in its entirety before attempting to assemble or operate. Keep this manual in a safe place for future reference and for ordering replacement parts.

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

Your log splitter is a precision piece of power equipment, not a plaything. Therefore exercise extreme caution at all times.

SAFE OPERATION PRACTICES FOR LOG SPLITTERS

TRAINING

1. Know the controls and how to stop quickly--
READ THIS OWNER'S MANUAL.
2. Do not allow children to operate. 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.
3. Never use your splitter for any other purpose than splitting wood. It is designed for this use only and any other use may cause an injury.
4. Only the operator is to be near your log splitter during use. Keep all others, including pets, a minimum of 20 feet away from your work zone. Flying wood can be hazardous.
5. Don't step over your splitter when engine is running. You may trip or accidentally activate ram if you step over. If you need to get to the other side, walk around.

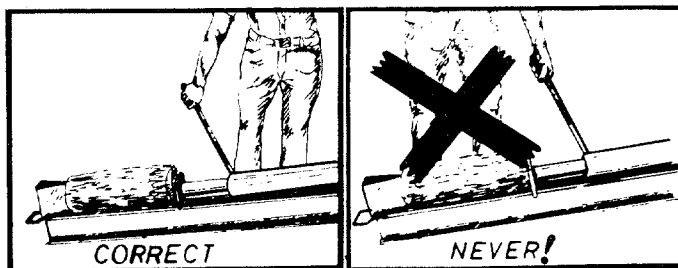
PREPARATION

1. Do not wear loose fitting clothing that could get caught on the moving parts.
2. Do not operate equipment when barefoot or wearing open sandals. Always wear safety shoes or heavy boots. A dropped log can seriously injure your foot.
3. Check the fuel before starting the engine. Do not fill the gasoline tank indoors, when the engine is running, or while the engine is still hot. Wipe off any spilled gasoline before starting the engine.
4. Use only in daylight or in good artificial light.
5. 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.
6. Always wear safety glasses or goggles while operating your log splitter. A piece of splitting log could fly off and hit your eyes.
7. Both ends of each log must be cut square. This will prevent the log from flying out of the splitter while under pressure.

OPERATION

1. Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.
2. 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.
3. If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
4. 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.
5. Handle gasoline with care. It is highly flammable.
 - A. Use approved gasoline container.
 - B. Never remove cap or add gasoline to a running or hot engine or fill fuel tank indoors. Wipe up spilled gasoline.
 - C. Don't run engine in an enclosed area. Exhaust gases contain carbon monoxide. This odorless gas can be deadly when inhaled.
6. Always operate the log splitter from the engine side of the beam.

Stand behind the ram when operating. See drawings.



7. Be careful not to touch the muffler after the engine has been running. It is **HOT**.
8. Never try to split two logs on top of each other. One may fly out and injure you.

9. 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.
 10. 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.
 11. 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.
 12. Only operate your splitter on the level ground and not on the side of a hill. It could tip, or rolling logs or poor footing could cause an accident. This also prevents the spillage of gas from the tank.
4. Never store the equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
 5. To reduce fire hazard keep engine free of grass, leaves, wood chips, excessive grease and oil.
 6. The hydraulic system of your log splitter requires the careful inspection along with the mechanical parts. Be sure to replace frayed, kinked, cracked or otherwise damaged hydraulic components.
 7. Fluid escaping from a very small hole can almost be 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 look for discoloration.
 8. Should it become necessary to loosen or remove any hydraulic fitting or line, be sure to relieve all pressure by shutting off the engine and moving the control handle back and forth several times.
 9. Don't remove the cap from the hydraulic tank or reservoir while your log splitter is running. Hot oil under pressure could cause injury.
 10. Never store outside without a waterproof cover. Rain will cause rust on the inside of the cylinder.

MAINTENANCE and STORAGE

1. Don't operate your splitter in poor mechanical condition or when in need of repair.
2. Keep all nuts, bolts, screws, hose clamps and hydraulic fittings tight to be sure equipment is in safe working condition.
3. Replace all damaged or worn parts such as hydraulic hoses and fittings immediately with manufacturer approved replacement parts.



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.

ASSEMBLY INSTRUCTIONS

CONTENTS OF HARDWARE PACK (See Figure 1):

- (A) (2) Spacers
- (B) (2) Tapered Roller Bearings
- (C) (2) Hex Castle Nuts 3/4-16 Thread
- (D) (2) Cotter Pins
- (E) (2) Hub Caps
- (F) (1) Shoulder Bolt
- (G) (1) Flat Washer
- (H) (1) Automotive Grease
- (I) (1) Tow Hitch and Stand (Not Shown - See Figure 7)
- (J) (1) Ferrule
- (K) (1) Hairpin Cotter

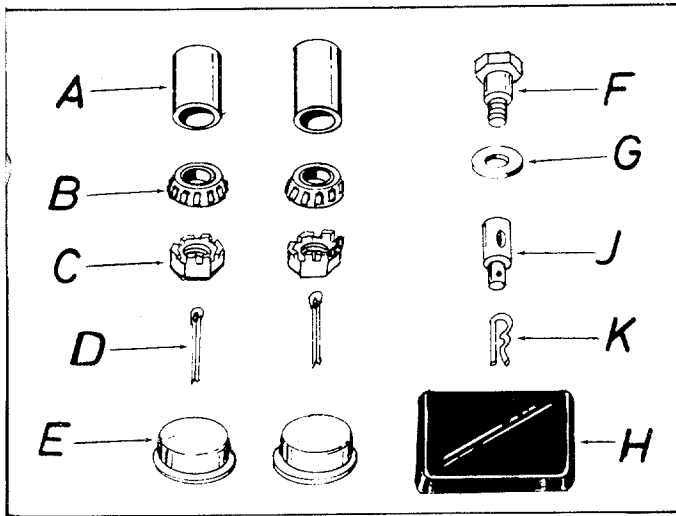


FIGURE 1.

TOOLS REQUIRED:

- (1) Raw Hide or Plastic Hammer
- (1) 1-1/8" Wrench or Adjustable Wrench
- (1) 3/4" Wrench
- (1) Pipe Wrench

OTHER MATERIALS NEEDED:

- (A) One gallon of regular grade gasoline (for engine)
- (B) 1-1/2 pints of SAE 30 or 10W-30 oil (for engine)
- (C) Approximately 2-1/2 gallons of Dexron II automatic transmission fluid. (May be obtained at your local service station or auto parts store.)
- (E) Funnel
- (F) Pipe Sealant

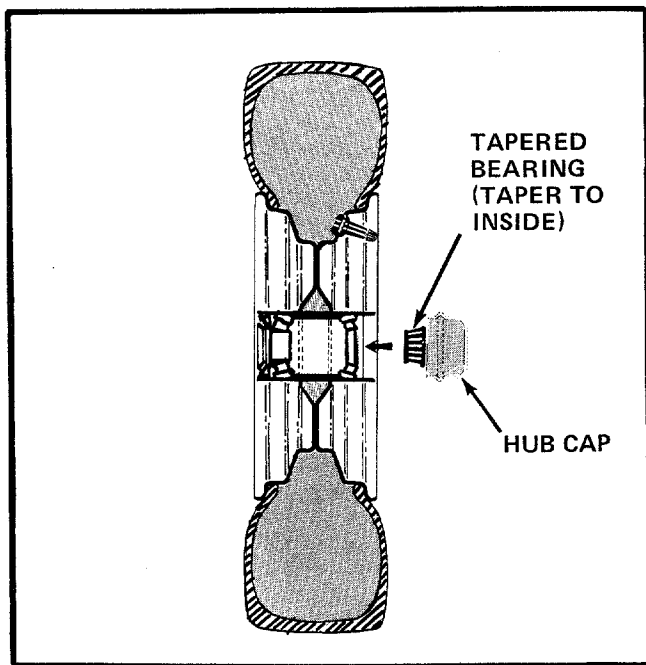


FIGURE 2. (CUT-A-WAY VIEW)

1. Pack the tapered roller bearings with automotive grease.



Do not put any grease in the hub caps.

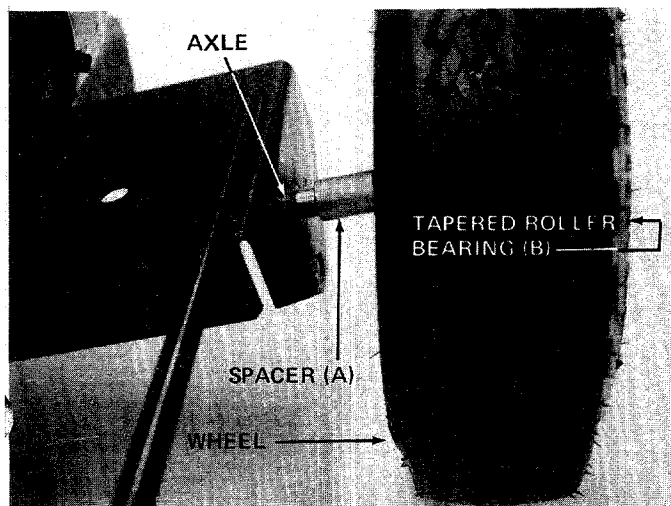


FIGURE 3.

2. Place one spacer (A) on axle, then one wheel and tapered roller bearing (B). See figures 2 and 3.

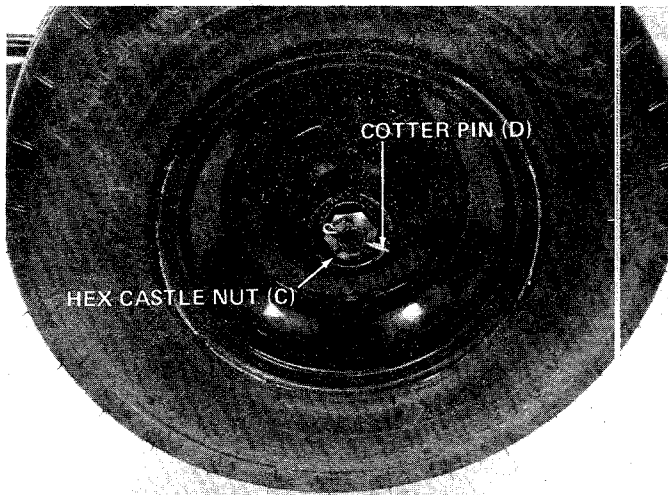


FIGURE 4.

3. 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 4.



Make certain wheel bearings were packed with grease before assembly.

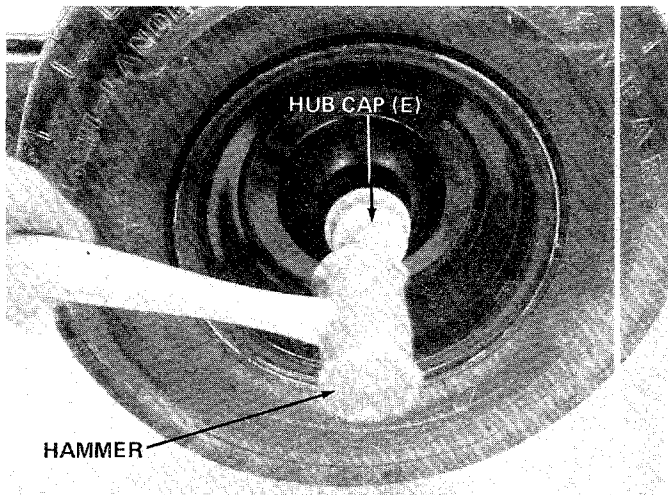


FIGURE 5.

4. Place hub cap (E) in position on wheel and tap on with a plastic hammer. See figure 5.
5. Repeat steps 1 through 4 for the second wheel.

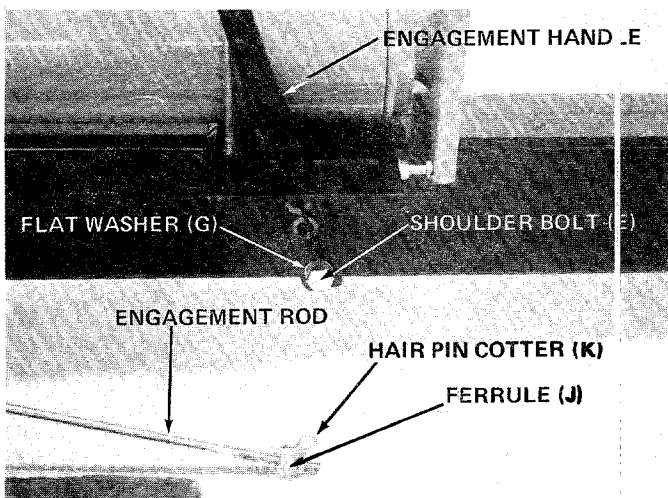


FIGURE 6.

6. Secure engagement handle to beam with shoulder bolt (F) and flat washer (G). See figure 6.
7. Thread ferrule onto engagement rod until ferrule lines up with hole in engagement handle, with the engagement handle placed in neutral position. Refer to figure 10.
8. Secure engagement rod to engagement handle with hair pin cotter (K). See figure 6.



For proper adjustment of stroke return stop plunger, refer to page 10.

TIRE PRESSURE

FOR SHIPPING PURPOSES, THE TIRES ON YOUR UNIT MAY BE OVER-INFLATED. TIRE PRESSURE SHOULD BE REDUCED BEFORE UNIT IS PUT INTO OPERATION. RECOMMENDED PRESSURE SHOULD BE APPROXIMATELY 15 P.S.I. EQUAL TIRE PRESSURE SHOULD BE MAINTAINED ON ALL TIRES. MAXIMUM TIRE PRESSURE IS 30 P.S.I.

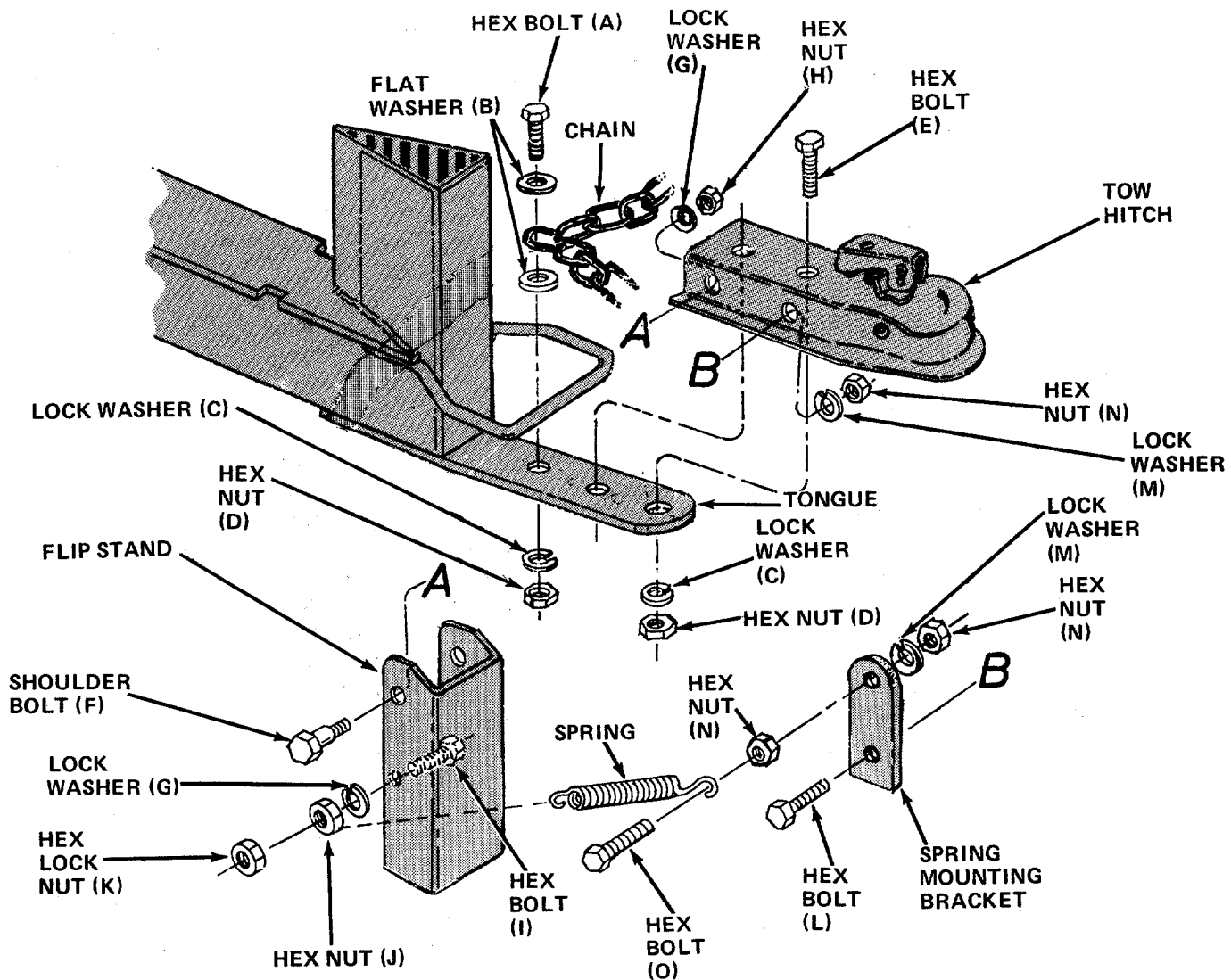
TOW HITCH AND STAND ASSEMBLY

Hardware for Assembly of Tow Hitch and Stand

- A (1) Hex Bolt 3/8-24 x 1-3/4" Long
- B (2) Flat Washers 3/8" I.D.
- C (3) Lock Washers 3/8" I.D.
- D (3) Hex Nuts 3/8-24 Thread
- E (2) Hex Bolts 3/8-24 x 1-1/4" Long
- F (2) Shoulder Bolts
- G (3) Lock Washers 1/4" I.D.
- H (2) Hex Nuts 1/4-20 Thread
- I (1) Hex Bolt 1/4-28 x 1" Long
- J (1) Hex Nut 1/4-28 Thread
- K (1) Hex Lock Nut 1/4-28 Thread
- L (1) Hex Bolt 5/16-18 x 3/4" Long
- M (2) Lock Washers 5/16" I.D.
- N (3) Hex Nuts 5/16-18 Thread
- O (1) Hex Bolt 5/16-18 x 1-1/2" Long

1. Find the center of the tow hitch chain. Place hex bolt (A) down through one flat washer (B), the center link in the chain, another flat washer (B) and the hole in the tongue of the log splitter which is nearest the wedge. Secure with lock washer (C) and hex nut (D). See figure 7.

2. Secure tow hitch to tongue of log splitter with two hex bolts (E), lock washers (C) and hex nuts (D). See figure 7.
3. Secure flip stand to hole in the side of tow hitch nearest the wedge with two shoulder bolts (F), lock washers (G) and hex nuts (H) as shown in figure 7.
4. Place hex bolt (I) through the hole in the side of flip stand as shown in figure 7. Secure with lock washer (G) and hex nut (J). Thread hex lock nut (K) on the end of the hex bolt until the end of the bolt is flush with the hex nut. The spring will be attached to this bolt in step 7.
5. Attach spring mounting bracket to the tow hitch with hex bolt (L), lock washer (M) and hex nut (N). The rounded end of spring mounting bracket must be assembled to the top as shown in figure 7.
6. Thread hex nut (N) onto hex bolt (O) as far as it will go. Place hex bolt (O) through the upper hole in spring mounting bracket with the head of the bolt to the outside of the unit. Secure with lock washer (M) and another hex nut (N).
7. Hook spring to hex bolt (O) and between the hex nuts on hex bolt (I). See figure 7.



OPERATION

BEFORE STARTING



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

1. Fill sump with oil as instructed in the separate engine manual.
2. Fill fuel tank, using clean, fresh, **regular** grade automotive gasoline. Fill tank completely.
3. Fill reservoir tank on log splitter with the unit resting on the beam. Remove the breather plug from breather tube. Remove the plug from the oil check hole. See figure 8. Pour approximately 2-1/2 to 3 gallons of **Dexron automatic transmission fluid** into breather tube. Oil level is correct when oil starts out of oil check hole. Replace oil check plug and breather plug.



CAUTION

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

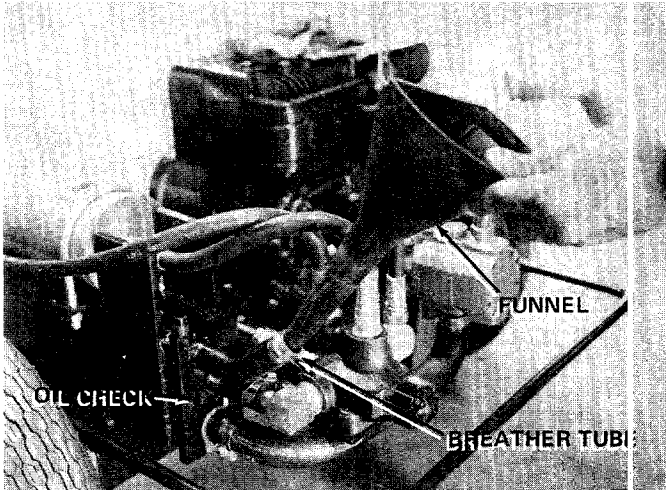


FIGURE 8

TO START ENGINE

1. Place throttle control lever in RUN position.
2. Move choke lever to CHÖKE position.

3. Open the breather valve. Valve must be open running log splitter. Valve must be closed when transporting log splitter. See figure 9.
4. Grasp starter handle, place one foot on wheel and pull starter handle with a quick, full arm stroke. Return rope slowly to the engine.

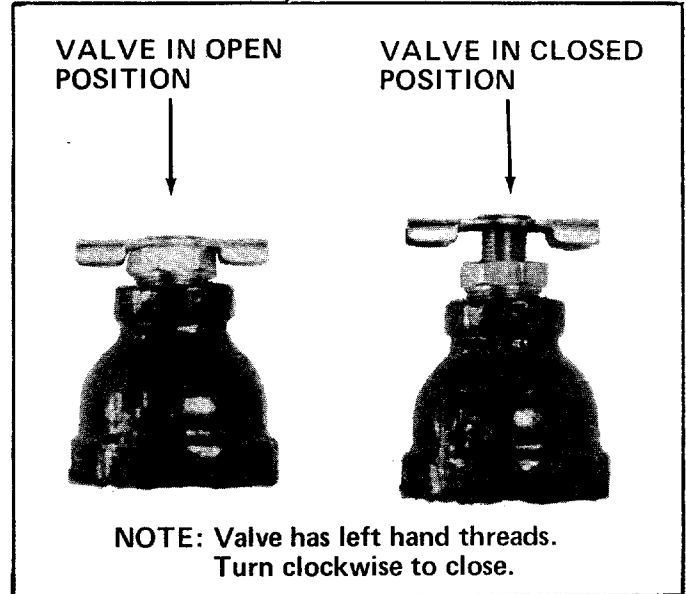


FIGURE 9

TO STOP ENGINE

1. Move throttle control lever to STOP position.
2. Remove high tension wire from spark plug to prevent accidental starting by children while equipment is unattended.

USING YOUR LOG SPLITTER



CAUTION

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 (IF UNIT IS SO EQUIPPED).

Your log splitter is designed for safe, efficient operation. **CARE, OF COURSE, MUST BE EXERCISED THAT HANDS AND FEET ARE KEPT AWAY FROM MOVING PARTS.**

Engagement handle has three positions: (See figure 10)

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

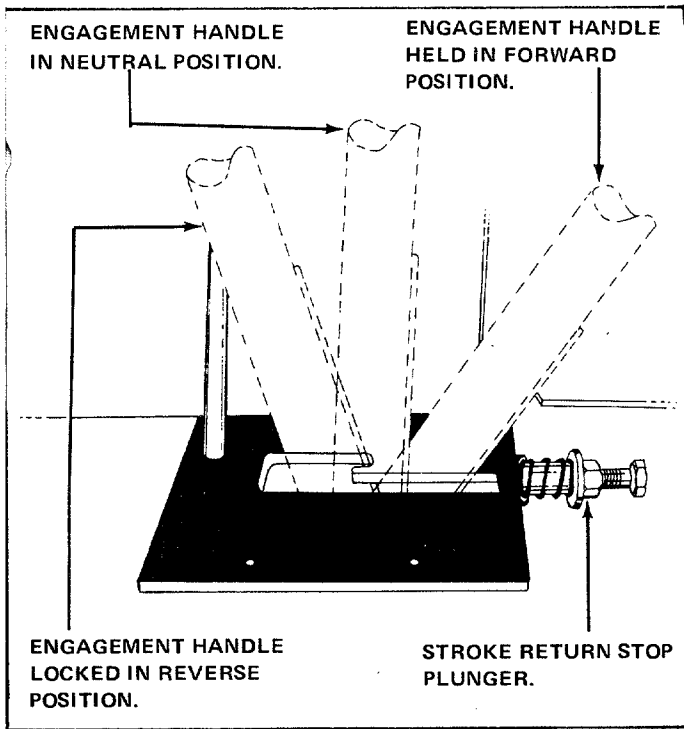


FIGURE 10

Maximum length that can be split is 26".

1. Set throttle at maximum speed.
2. Place log on beam and hold in place with right hand. See figure 11.

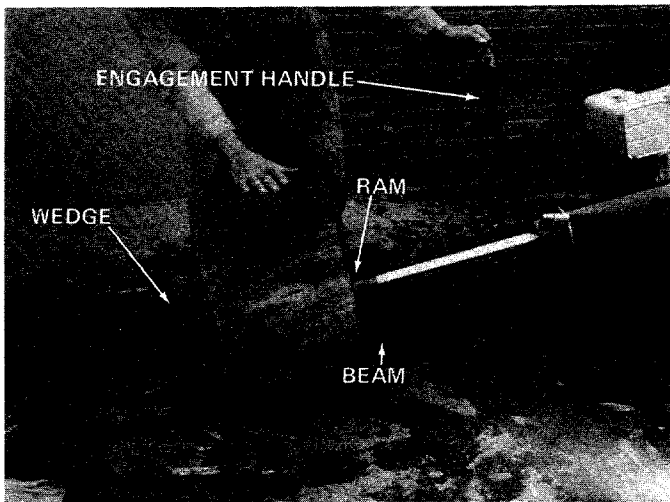


FIGURE 11

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 12.

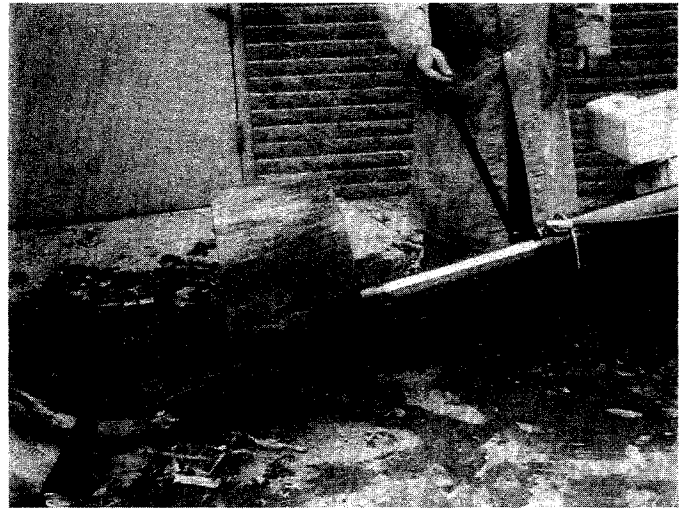


FIGURE 12

5. Move engagement handle forward until log is split.
6. Move the engagement handle to the rear to return ram.

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



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



Never attempt to cut a log in half with the log splitter. See figure 13.

Never stand next to the ram when operating. See figure 14. Always stand behind the ram.



9 FIGURE 13

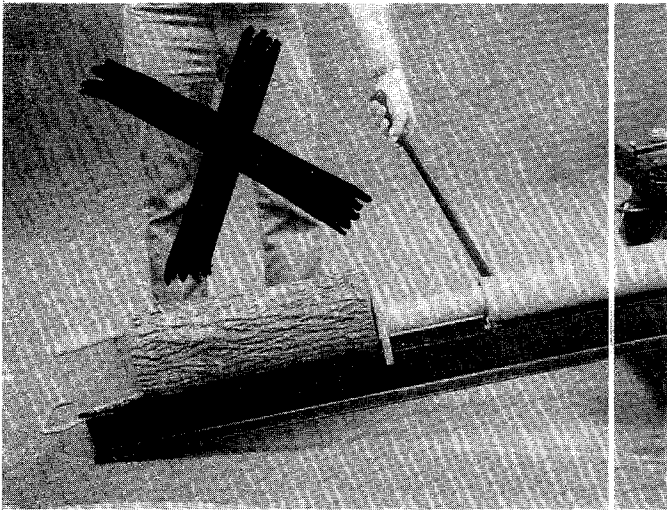


FIGURE 14

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 and 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.

LOG SPLITTER RESERVOIR OIL

Check oil in log splitter reservoir before every use. See figure 15.

1. Block up front of log splitter so beam is level.
2. Remove check pipe plug in rear of beam. See figure 15. If oil starts to come out of check pipe plug hole, oil level is correct. IF IT DOES NOT, add oil to breather tube (see figure 8) until oil starts out.



NOTE

Use hydraulic sealant tape or pipe sealant on pipe plug threads.

3. Replace check pipe plug. Remove block from under front of beam.

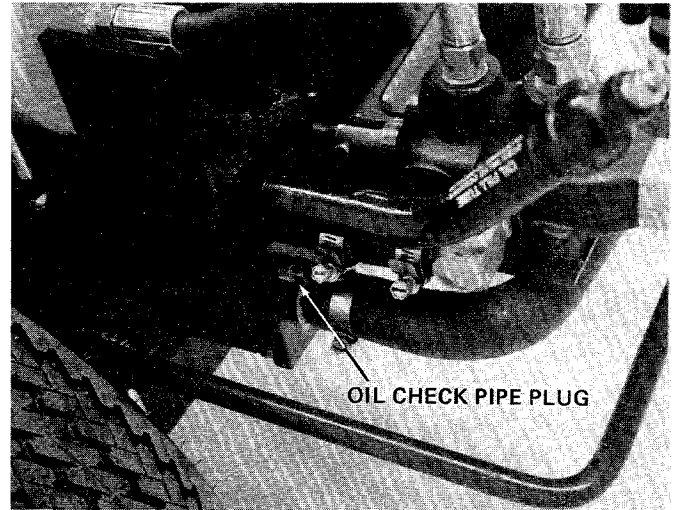


FIGURE 15

Change oil in the reservoir every (100) hours of operation.

1. Remove the hose clamp at inlet hose (bottom hose on rear of beam). See figure 16.



NOTE

Be prepared to catch oil in a suitable container.

2. Pull off inlet hose from strainer tube assembly and catch oil in a suitable container. See figure 16.
3. With an adjustable wrench remove the strainer tube assembly. See figure 16.



NOTE

The strainer tube assembly is 53" long.

4. Drain oil, clean strainer tube and reassemble using a hydraulic pipe sealant on the threads.
5. Remove the breather plug from breather tube. See figure 8. Pour approximately 2-1/2 gallons of Dexron transmission fluid ONLY into breather tube.

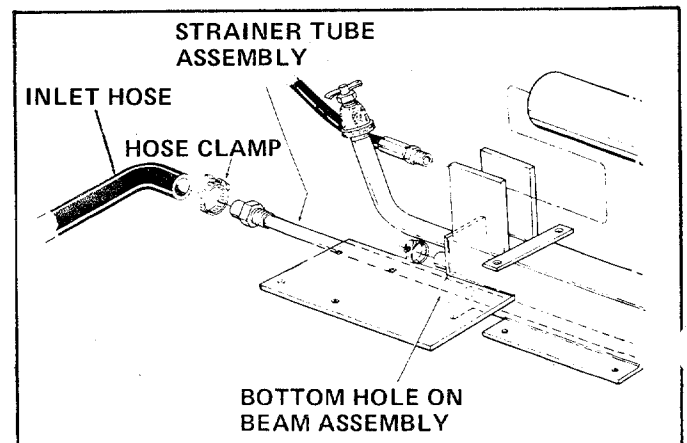


FIGURE 16

STRAINER TUBE ASSEMBLY

If the ram does not move back and forth smoothly, the strainer tube assembly may be clogged.

To clean, follow instructions for changing the reservoir oil, step number 1 through 3. Clean the strainer tube assembly and reassemble using a hydraulic pipe sealant on the threads.

HOSE CLAMPS

Check the hose clamps on the bottom of the pump for proper tightness before each use.

Hose clamps on the return hose should be checked once a season.

STROKE RETURN STOP PLUNGER

If the engagement handle does not return to neutral (from reverse) before the pressure relief bypass opens, loosen the hex lock nut, and back out the hex bolt one or two turns. See figure 17.



NOTE

When the pressure relief valve opens, a loud high pitched sound is heard and engine labors.

Tighten hex lock nut and operate log splitter. Repeat if necessary.

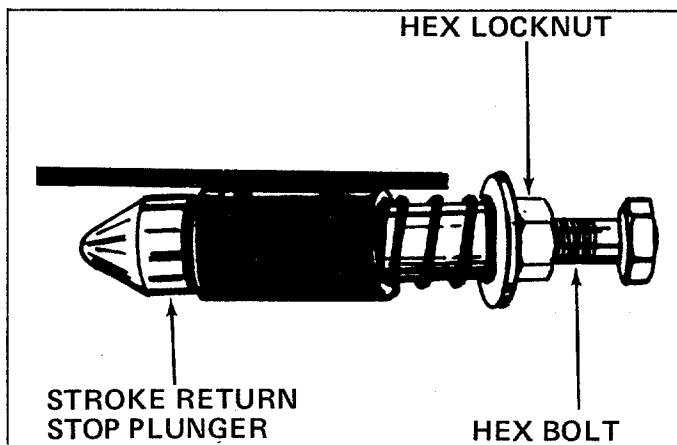


FIGURE 17

RAM OPERATION

If the ram does not move smoothly, run the ram its full stroke several times to clear out air in the system. Be sure the breather valve is open.

If this does not correct the problem, see Strainer Tube Assembly paragraph.

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.

INSTALLATION OF TIRE TO RIM

1. Lubricate tire beads and rim flanges.
2. Do not exceed 30 P.S.I. when seating beads.
3. Adjust to recommended pressure after beads are sealed.

OFF-SEASON STORAGE

In event engine is to be stored for any length of time (30 days or more), prepare as follows:

1. Drain gasoline by tipping or by siphon hose, then run engine until remainder is used and tank and carburetor and empty.



CAUTION

Drain into container outdoors away from fire or flame.

2. Drain carburetor by running engine until it stops from lack of fuel.
3. Protect the inside of engine for storage by removing spark plug and pouring one ounce of SAE 30 oil through spark plug hole into cylinder. Crank engine, without starting, several times to spread oil over cylinder walls.
4. Never store outside without a waterproof cover.

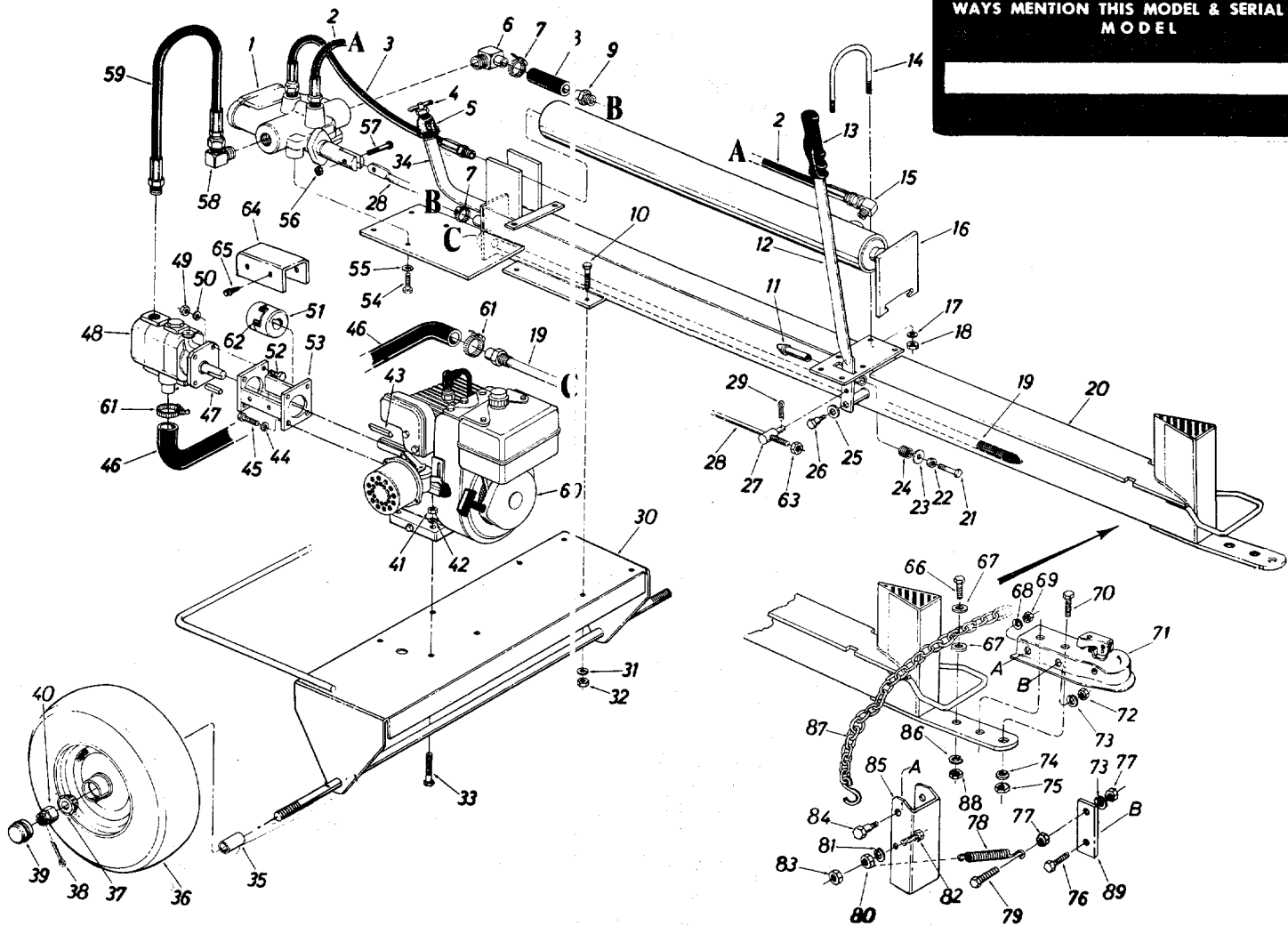


CAUTION

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 springs and bearings.

Models 642 and 645

IF YOU WRITE TO US ABOUT THIS ARTICLE OR IF YOU ORDER REPLACEMENT PARTS ALWAYS MENTION THIS MODEL & SERIAL NO MODEL



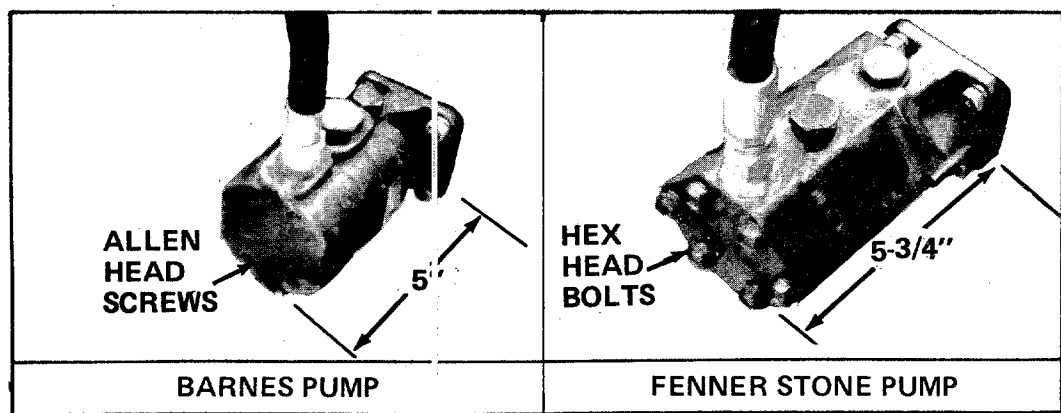
NOTE: The engine is not under warranty by the log splitter manufacturer . . . If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines - Gasoline".

Find It Fast In The Yellow Pages

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 LOG SPLITTER MODELS 642 and 645

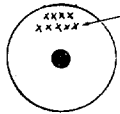
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	717-0407	Control Valve	42	736-0119	L.-Wash. 5/16" I.D.*
2	727-0231	Return Stroke High Pressure Hose	43	714-0128	Sq. Key 1/4" x 1/4" x 1.00" Lg.
3	727-0211	Forward Stroke High Pressure Hose	44	736-0119	L.-Wash. 5/16" I.D.*
4	737-0161	Breather Valve	45	710-0157	Hex Bolt 5/16-24 x .75" Lg.*
5	737-0173	Female Adapter 3/4-14 x 1/4-28 N.P.T.F.	46	727-0228	Suction Hose (642)
6	737-0153	Return Elbow	47	727-0229	Suction Hose (645)
7	726-0173	Hose Clamp 3/4" I.D.		-----	Woodruff Key (comes with Ref. No. 48)
8	727-0210	Return Hose 3/4" I.D. x 2.62" Lg.	48	717-0460	Pump with Woodruff Key (642)
9	737-0172	Nipple 1/2-14 N.P.T.F. x 1.5" Lg.		717-0461	Pump with Woodruff Key (645)
10	710-0117	Hex Bolt 5/16-24 x 1.00" Lg. (Grade 5)	49	712-0123	Hex Nut 5/16-24 Thd.*
11	738-0406	Return Stroke Stop Plunger	50	736-0119	L.-Wash. 5/16" I.D.*
12	750-0428	Engagement Handle	51	717-0462	Flexible Coupling
13	08118	Grip	52	710-0117	Hex Bolt 5/16-24 x 1.00" Lg.*
14	747-0355	Cylinder Support Rod (for 3-1/2" Dia.) (642)	53	13295	Coupling Support Brkt. Ass'y.
	747-0354	Cylinder Support Rod (for 4" Dia.) (645)	54	710-0216	Hex Bolt 3/8-16 x .75" Lg.
15	737-0152	High Pressure 90° Elbow 3/8 N.P.T. x 9/16-18	55	736-0105	Belleville Wash. 3/8" I.D.
16	-----	Cylinder Ass'y. (See Page 14 for Breakdown)	56	712-0107	Hex Cent. L.-Nut 1/4-20 Thd.
17	736-0169	L.-Wash. 3/8" I.D.*	57	710-0106	Hex Bolt 1/4-20 x 1.25" Lg.*
18	712-0798	Hex Nut 3/8-16 Thd.*	58	737-0171	90° Solid Male Adapter
19	15234	Strainer Tube Ass'y.	59	727-0232	High Pressure Hose Ass'y.
20	15235	Complete Oil Tank & Beam	60	-----	Engine
21	710-0624	Hex Bolt 5/16-24 x 1.50" Lg.	61	726-0132	Hose Clamp 1" I.D.
22	712-0123	Hex Nut 5/16-24 Thd.*	62	735-0205	Spider
23	736-0159	Fl.-Wash. .34 I.D. x .88" O.D.	63	712-0241	Hex Nut 3/8-24 Thd.
24	732-0252	Compression Spring .64 O.D. x .81 Lg.	64	14806	Coupling Shield
25	736-0160	Fl.-Wash. .53" I.D. x .94" O.D.	65	710-0653	Hex Self Tap. Scr. 1/4-20 x .38"
26	738-0143	Shld. Bolt .500" Dia. x .340	66	710-0539	Hex Bolt 3/8-24 x 1.75" Lg.*†
27	711-0198	Pivot Bushing	67	736-0262	Fl.-Wash. 3/8" I.D. x 7/8" O.D. x .09 Thk.†
28	747-0297	Engagement Rod .38 Dia. x 32" Lg.	68	736-0329	L.-Wash. 1/4" I.D.*†
29	714-0507	Cotter Pin 3/32" Dia. x .75" Lg.*	69	712-0287	Hex Nut 1/4-20 Thd.*†
30	13747	Frame Ass'y.	70	710-0191	Hex Bolt 3/8-24 x 1.25" Lg.*†
31	736-0119	L.-Wash. 5/16" I.D.*	71	727-0289	Tow Hitch Ass'y. Comp.†
32	712-0123	Hex Nut 5/16-24 Thd.*	72	712-0267	Hex Nut 5/16-18 Thd.*†
33	710-0409	Hex Bolt 5/16-24 x 1.75" Lg.*	73	736-0119	L.-Wash. 5/16" I.D.*†
34	750-0501	Filler Tube	74	736-0217	L.-Wash. 3/8" I.D.*†
35	750-0442	Spacer .75" I.D. x 1.12" O.D. x 1.56" Lg.	75	712-0241	Hex Nut 3/8-24 Thd.*†
36	734-1016	Wheel Ass'y. Comp. 4.80/4.00 x 8	76	710-0118	Hex Bolt 5/16-18 x .75" Lg.*†
	734-1017	Wheel Rim Ass'y. (Service Only)	77	712-0267	Hex Nut 5/16-18 Thd.*†
	734-0872	Tire Only 4.80/4.00x8 (Service Only)	78	732-0352	Extension Spring†
37	741-0107	Tapered Roller Bearing (Service Only)	79	710-0442	Hex Bolt 5/16-18 x 1.50" Lg.*
38	714-0121	Cotter Pin 5/32" Dia. x 1.00" Lg.*	80	712-0138	Hex Nut 1/4-28 Thd.*†
39	734-0873	Hub Cap (Service Only)	81	736-0329	L.-Wash. 1/4" I.D.*†
40	712-0299	Hex Castle Nut 3/4-16 Thd.	82	710-0299	Hex Bolt 1/4-28 x 1.00" Lg.†
41	712-0123	Hex Nut 5/16-24 Thd.	83	712-0117	Hex L.-Nut 1/4-28 Thd.
			84	738-0255	Shld. Bolt 3/4" Dia. x .171" Lg.†
			85	15850	Flip Stand Bracket†
			86	736-0217	L.-Wash. 3/8" I.D.*†
			87	713-0338	Chain 40" Lg. Tow Hitch†
			88	712-0241	Hex Nut 3/8-24 Thd.*†
			89	781-0010	Spring Mtg. Bracket †

* 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.

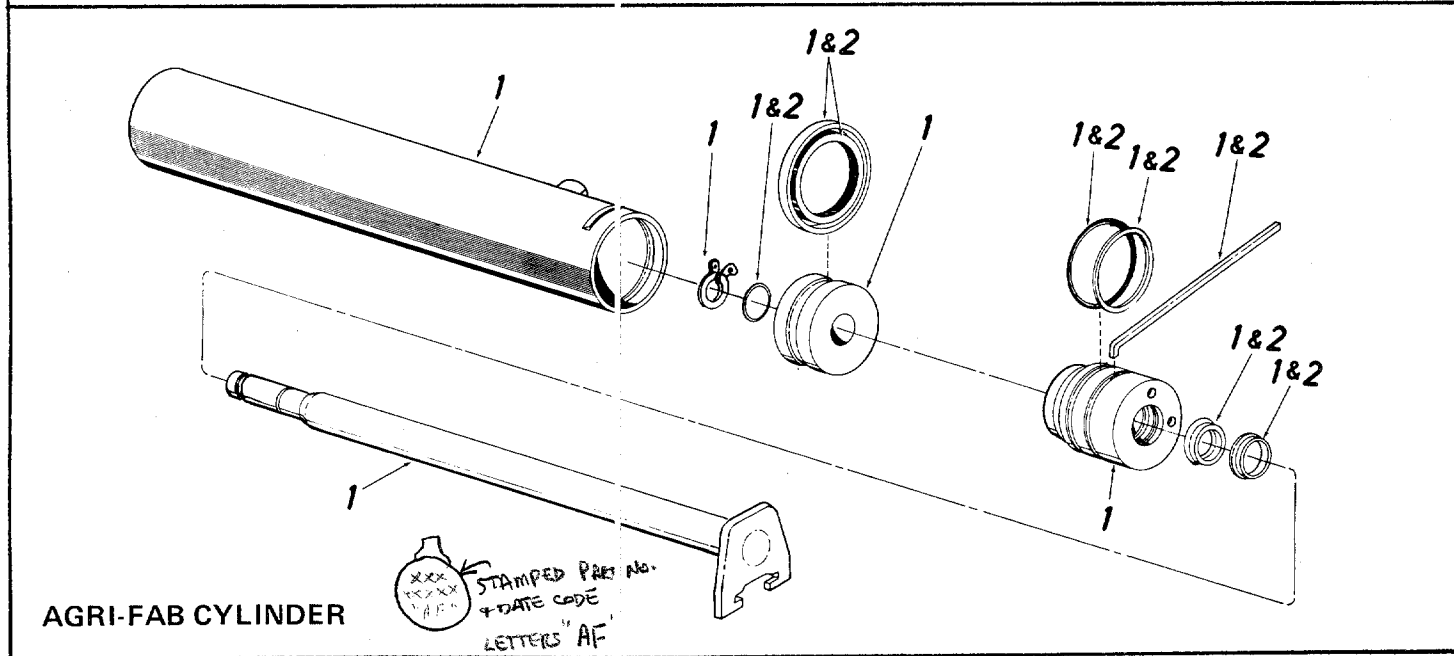
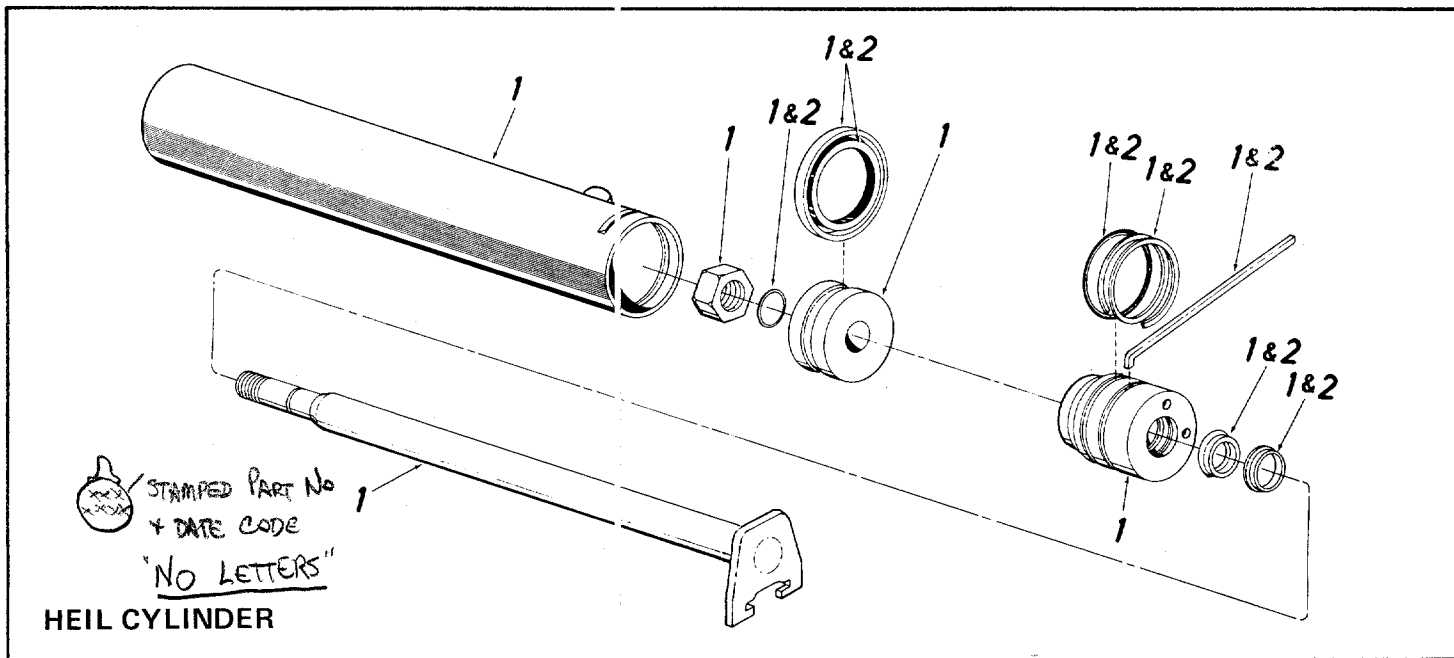
† Optional Parts.

Models 642 and 645

STAMPED PART NUMBER AND DATE CODE ON END OF CYLINDER



Letters "AF" - AGRI-FAB - Requires O-Ring Kit 753-0372 (3-1/2" Cylinder), 753-0373 (4" Cylinder)
 No Letters - HEIL - Requires O-Ring Kit 753-0271 (3-1/2" Cylinder), 753-0263 (4" Cylinder)



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

4" DIA. CYLINDER
PARTS LIST FOR MODEL 645

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	717-0459	Cylinder Ass'y. Comp.	1	717-0406	Cylinder Ass'y. Comp.
2	753-0271	3-1/2" Cyl. Kit "O"-Ring Set (Heil)	2	753-0263	4" Cyl. Kit "O"-Ring Set (Heil)
	753-0372	3-1/2" Cyl. Kit "O"-Ring Set (Agri-Fab)		753-0373	4" Cyl. Kit "O"-Ring Set (Agri-Fab)

TROUBLE SHOOTING CHART

SYMPTOM	POSSIBLE CAUSE(S)	SOLUTION
1. Engine fails to start	<ul style="list-style-type: none"> A. Check fuel tank for gas. B. Spark plug lead wire disconnected. C. Faulty spark plug. 	<ul style="list-style-type: none"> A. Fill tank if empty. B. Connect lead wire. C. Spark should jump gap between control electrode and side electrode. If spark does not jump, replace the spark plug.
2. Hard starting or loss of power.	<ul style="list-style-type: none"> A. Spark plug wire loose. B. Dirty air cleaner. 	<ul style="list-style-type: none"> A. Connect and tighten spark plug wire. B. Clean air cleaner as described in engine manual.
3. Engine overheats	<ul style="list-style-type: none"> A. Carburetor not adjusted properly. B. Air flow restricted. C. Engine oil level low. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> A. Relief valve setting incorrect. B. Pump setting incorrect. 	<ul style="list-style-type: none"> A. Shim valve with .010 flat washer. B. Adjust pump setting.
5. Leaking cylinder	<ul style="list-style-type: none"> A. Broken seals. B. Scored cylinder. 	<ul style="list-style-type: none"> A. Replace seals. B. Replace cylinder.

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

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service are available through the authorized service firms listed below. All orders should specify the model number of your unit, part numbers, description of parts and the quantity of each part required.

BRIGGS AND STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and service should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing **Engines—Gasoline**, Briggs & Stratton or Tecumseh Lauson.

NOTE: If any parts are found to be missing or defective upon assembly of this unit, write to advise the factory so that immediate replacement can be made.

ALABAMA	BIRMINGHAM		NORTH CAROLINA	GOLDSBORO
Auto Electric & Carburetor Co.	2625 4th Ave. S.	35233	Smith Hardware Co.	515 N. George St. 27530
ARKANSAS	NORTH LITTLE ROCK			GREENSBORO
Sutton's Lawn Mower Shop	5301 Roundtop Drive		Dixie Sales Company	335 N. Green 27402
	Box 368, Rt. 4	72117	OHIO	CARROLL
CALIFORNIA	PORTERVILLE		Stebe's Mid-State Mower Supply	Box 366, 71 High St. 43112
Billious	75 North D Street	93257		CLEVELAND
COLORADO	DENVER		Bleckrie, Inc.	7900 Lorain Ave. 44102
Spitzer Industrial Products Co.	6601 N.			WADSWORTH
	Washington St.	80229		687 Seville Rd. 44281
FLORIDA	JACKSONVILLE			YOUNGSTOWN
Radco Distributors	4909 Victor St.		Burton Supply Co.	1301 Logan Ave.
	Box 5459	32207		Box 929 44501
	OPA LOCKA		OKLAHOMA	MUSKOGEE
Small Eng. Dist.	2351 N.W. 147th St.	33054	Victory Motors, Inc.	605 S. Cherokee 74401
GEORGIA	EAST POINT		OREGON	PORTLAND
East Point Cycle & Key	2834 Church St.	30344	Kenton Supply Co.	821 N. Denver Ave. 97217
ILLINOIS	LYONS		PENNSYLVANIA	HARRISBURG
Keen Edge Co.	8615 Ogden Ave.	60534	EECO Inc.	4021 N. 6th St. 17110
INDIANA	ELKHART			PHILADELPHIA
Parts & Sales Inc.	2101 Industrial Pkwy.	46516	Thompson Rubber Co.	5222-24 N. Fifth St. 19120
IOWA	DUBUQUE			PITTSBURGH
Power Lawn & Garden Equip.	2551 J.F. Kennedy	52001	Bluemont Co.	11125 Frankstown Rd. 15235
LOUISIANA	MONROE		Frank Roberts & Sons	R.D. 2 15767
Mid-South Power	1500 Arkansas St.	71201		SCRANTON
	NEW ORLEANS		Scranton Auto Ignition Co.	1133-35 Wyoming Ave. 18509
Suhren Engine Co.	8330 Earhart Blvd.	70118	TENNESSEE	KNOXVILLE
MARYLAND	TAKOMA PARK		Master Repair Service	2000 Western Ave. 37921
Center Supply Co.	6867 New Hampshire			MEMPHIS
	Ave.	20912	American Sales & Service, Inc.	3035-43 Bellbrook 38116
MASSACHUSETTS	SPRINGFIELD		TEXAS	DALLAS
Morton B. Collins Co.	300 Birnie Ave.	01107	Marr Brothers, Inc.	423 E. Jefferson 75203
MICHIGAN	LANSING			FORT WORTH
Lorenz Service Co.	2500 S. Pennsylvania	48910	Woodson Sales Corp.	1702 N. Sylvania 76111
	MOUNT CLEMENS			HOUSTON
Power Equipment Dist.	340 Hubbard	48043	Bullard Supply Co.	2409 Commerce St. 77003
MINNESOTA	HOPKINS			SAN ANTONIO
Hance Distributing Inc.	420 Excelsior Ave. W.	55343	Engine House Inc.	8610 Botts Lane
MISSISSIPPI	BILOXI			P.O. Box 17867 78217
Biloxi Sales & Service, Inc.	506 Caillavet St.	39533	UTAH	SALT LAKE CITY
MISSOURI	KANSAS CITY		A-1 Engine & Mower Co.	439 E. 900 So. 84111
Automotive Equip. Service	3117 Holmes St.	64109	VIRGINIA	ASHLAND
	ST. JOSEPH		RBI Corp.	101 Cedar Run Dr. 23005
Ross-Frazier Supply Co.	8th and Monterey	64503	WASHINGTON	SEATTLE
	ST. LOUIS		Bailey's Inc.	1414 14th Ave. 98122
Henzler, Inc.	2015 Lemay Ferry Rd.	63125	WISCONSIN	APPLETON
NEW JERSEY	BELLMAWR		Automotive Supply Co.	123 S. Linwood Ave.
Lawnmower Parts Inc.	717 Creek Rd.	08030		P.O. Box 798 54911
NEW MEXICO	ALBUQUERQUE			CHILTON
Spitzer Eng. & Parts	1023 Third Ave. N.W.	87103	Horst Dist.	444 N. Madison 53014
NEW YORK	CARTHAGE			
Gamble Dist., Inc.	West End Ave.	13619		

WARRANTY PARTS AND SERVICE POLICY

(0483)

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions over which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES:

1. Replacement of Missing Parts on new equipment.
2. Replacement of Defective Parts within the warranty period.
3. Repair of Defects within the warranty period.

All claims MUST be substantiated with the following information:

1. Model Number of unit involved.
2. Date unit was purchased or first put into service.
3. Date of failure.
4. Nature of failure.