



Log Splitter Manual



Owners Manual and Safety Instructions

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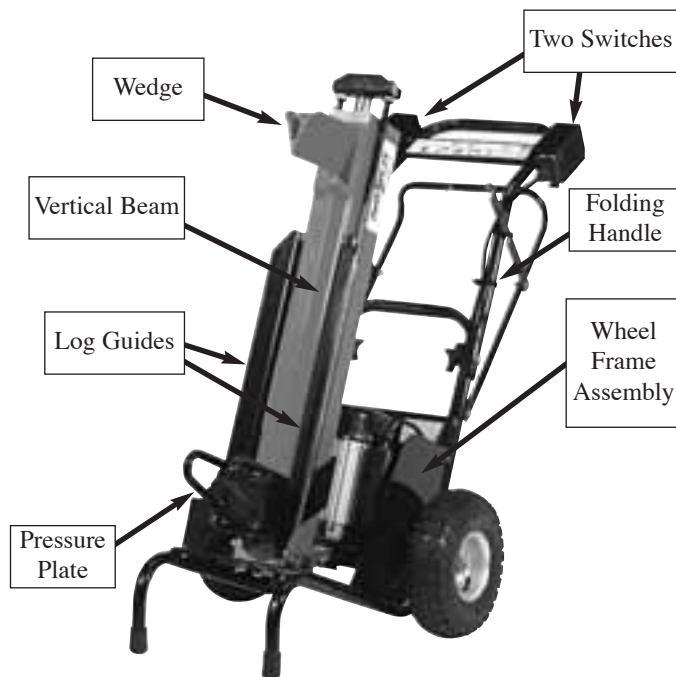
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A. Introduction

The SwiftSplit log splitter is designed for residential (non-commercial) use and makes your job less physically demanding, more efficient and safer. With a log splitter, the log is split when pressed against a fixed splitting wedge by a pressure plate.

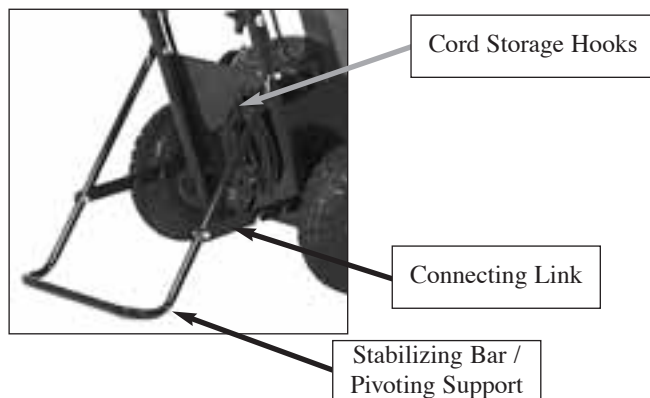
Major Components, Controls, and Features Overview:

An **electric motor assembly** provides the power for the system. The motor is connected to a **hydraulic oil pump** that creates a flow of high-pressure oil which runs to a solenoid valve. A switch set and the solenoid **valve** let the operator actuate the **hydraulic cylinder** to split a log. An internal **reservoir** holds the hydraulic oil that feeds the pump. The **hydraulic assembly** is attached to the **wheel frame assembly**, making it easy to move the **log splitter** around with no lifting. The frame is equipped with folding **handles** for storage, **pivoting support** for stability and **cord storage hooks** for convenience. This log splitter is designed with **two hand operating controls** (two normally open switches) for safety. The electrical motor is protected by a 15 amp **circuit breaker** and the **pressure relief valve** protects the hydraulic assembly in case a log gets jammed. If this happens, after about 5 seconds, the pressure plate slowly travels down to the original position and can be immediately re-activated.



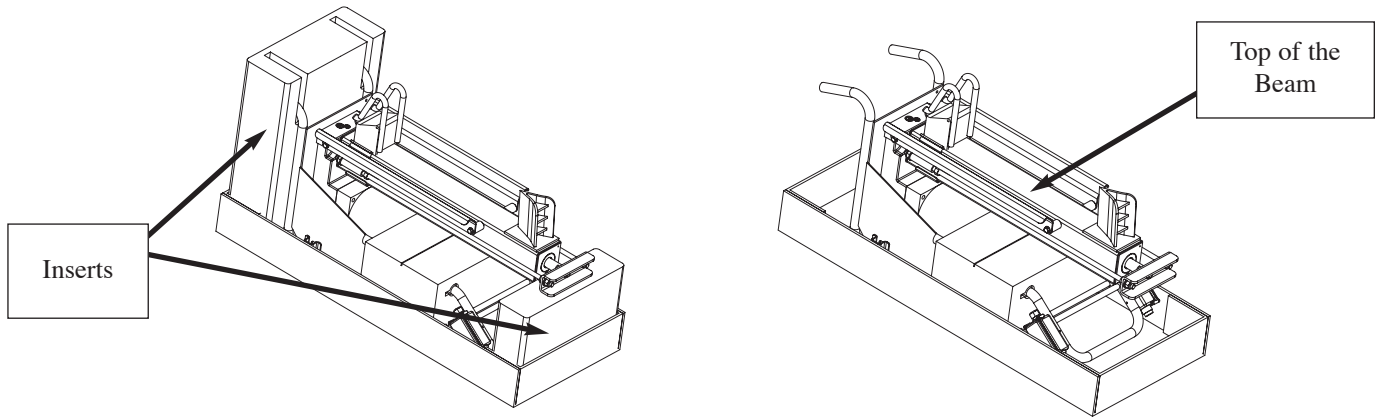
B. Log Splitter Specification for Model #5000

| | |
|-------------------------------|-----------------------|
| Maximum Output Force | 10 000 lbs (5 tons) |
| Total Stroke (in)- Ram Travel | 15" |
| Total Weight | 136 lbs (61.7 Kg) |
| L x W x H | 40" L x 20" W x 38" H |
| Voltage | 120V |
| Motor | 1.5 kW |
| Motor RPM Max | 3340 RPM |
| Maximum Log Length | 20" (520mm) |
| Recomd. Maximum Log Diameter | 12" Dia. |
| Wheel Size | 10" Dia. |

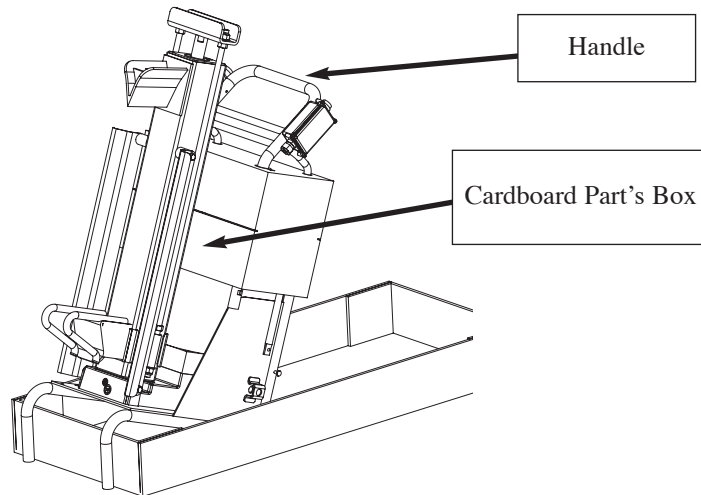


C. Unpacking and Assembly Instructions

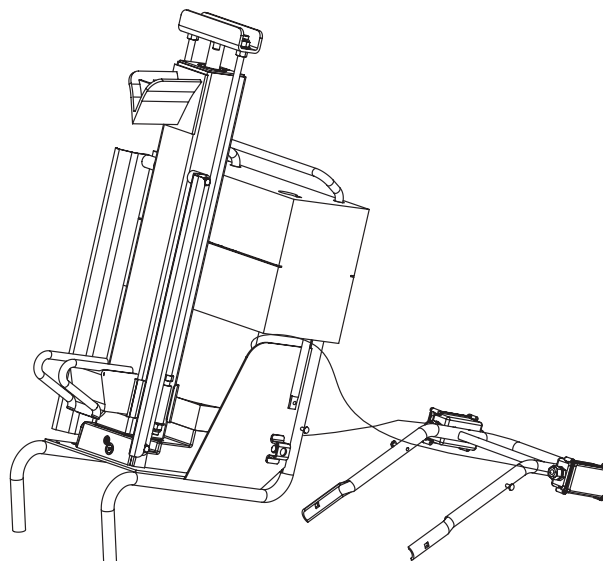
1. Cut bands; remove cover and two inserts supporting the top and the bottom of the unit.



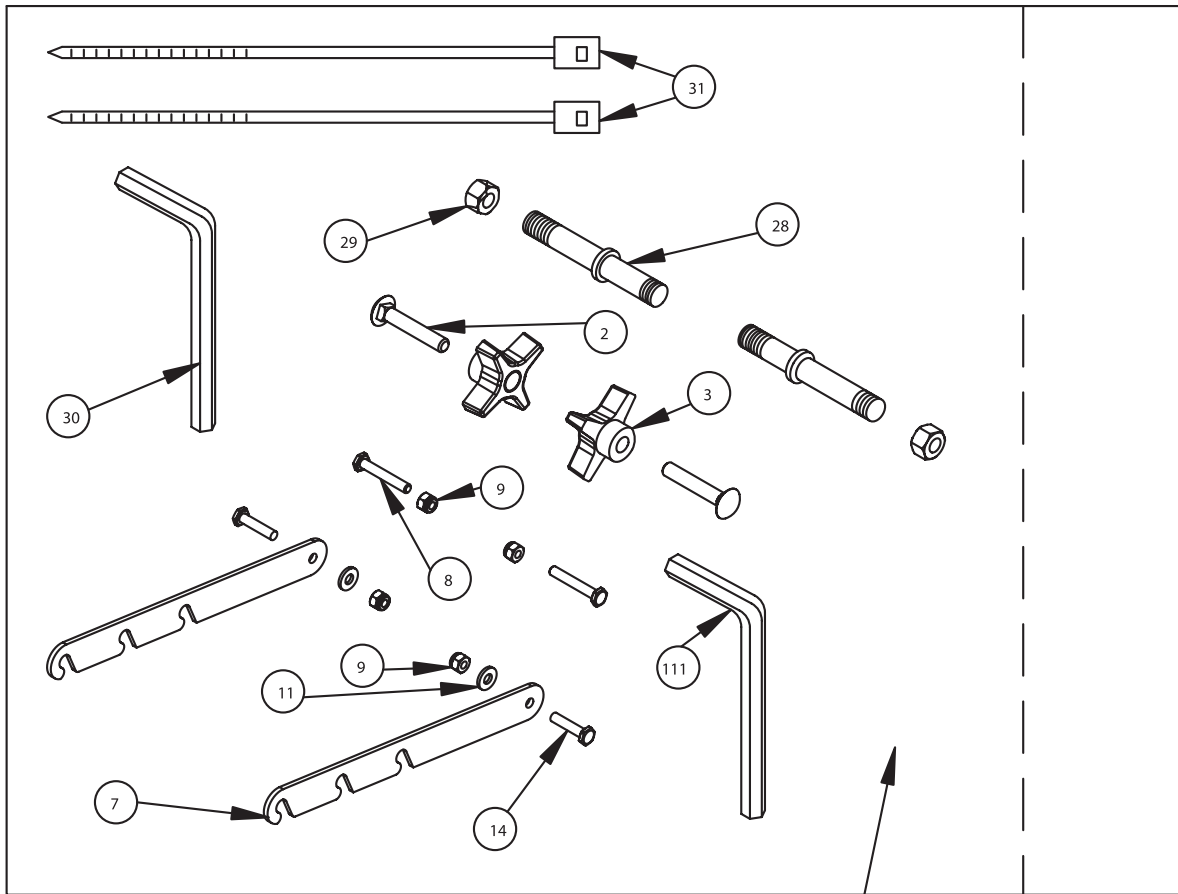
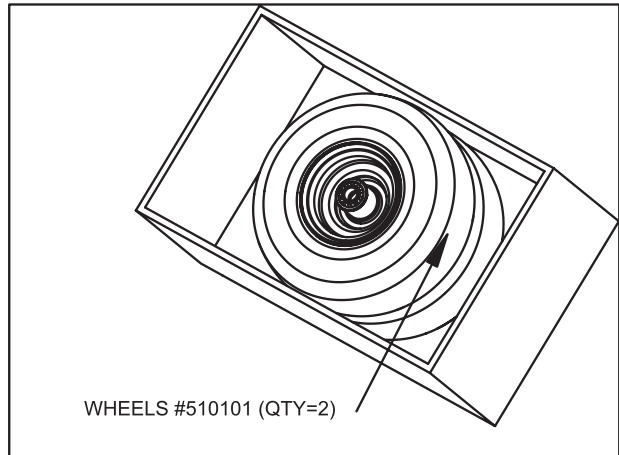
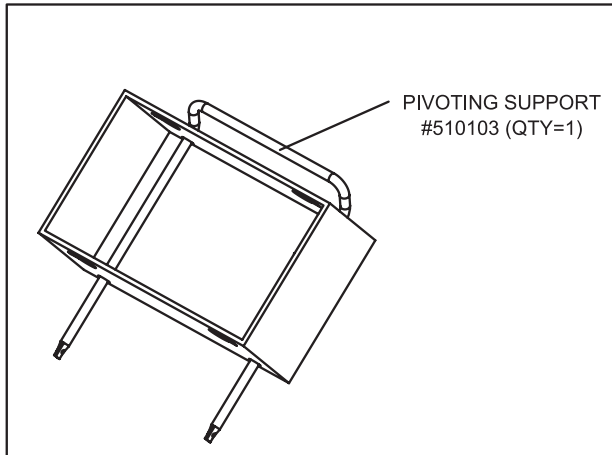
2. Put log splitter with the cardboard part's box in the vertical position by holding the top of the beam and carefully lifting the top of the log splitter until it can stand.



3. Remove handle from the box first and place it on the floor.



4. Remove and open box that is packaged between the log splitter cart and the vertical beam.
5. Remove pivoting support from the box. Also remove wheels and hardware bag.



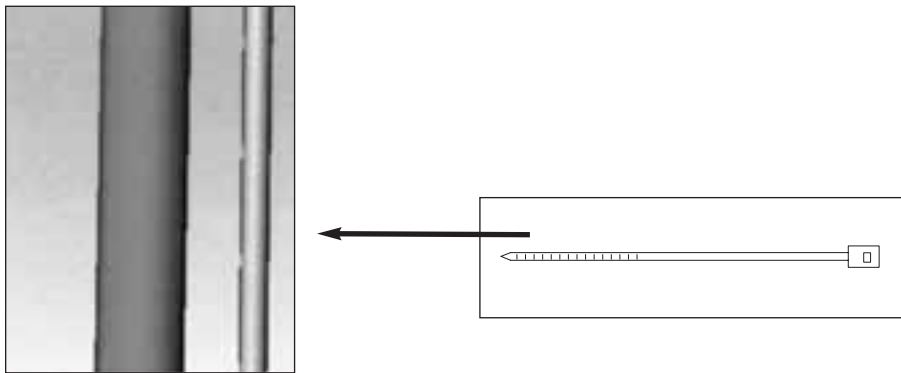
HARDWARE BAG #510525 (QTY=1)

| ITEM NO. | QTY | PART NO. | DESCRIPTION |
|----------|-----|----------|--|
| 2 | 2 | 510500 | M10 CARRIAGE BOLT,SQUARE NECK, 60mm LONG |
| 3 | 2 | 510501 | KNOB |
| 7 | 2 | 510104 | CONNECTING LINK |
| 8 | 2 | 510509 | BOLT HEX M6 x 40mm |
| 9 | 4 | 510507 | NUT LOCK M6, NYLON INSERT |
| 11 | 2 | 510508 | WASHER FLAT y6 |
| 14 | 2 | 510503 | BOLT HEX M6 x 30mm |
| 28 | 2 | 510144 | WHEEL SHAFT |
| 29 | 2 | 510524 | M14 WHEEL NUT |
| 30 | 1 | 510146 | ALLEN WRENCH 6MM |
| 31 | 2 | 510147 | CABLE TIE 152MM (6") LONG |
| 111 | 1 | 510543 | ALLEN WRENCH 8MM (DRAIN PLUG) |

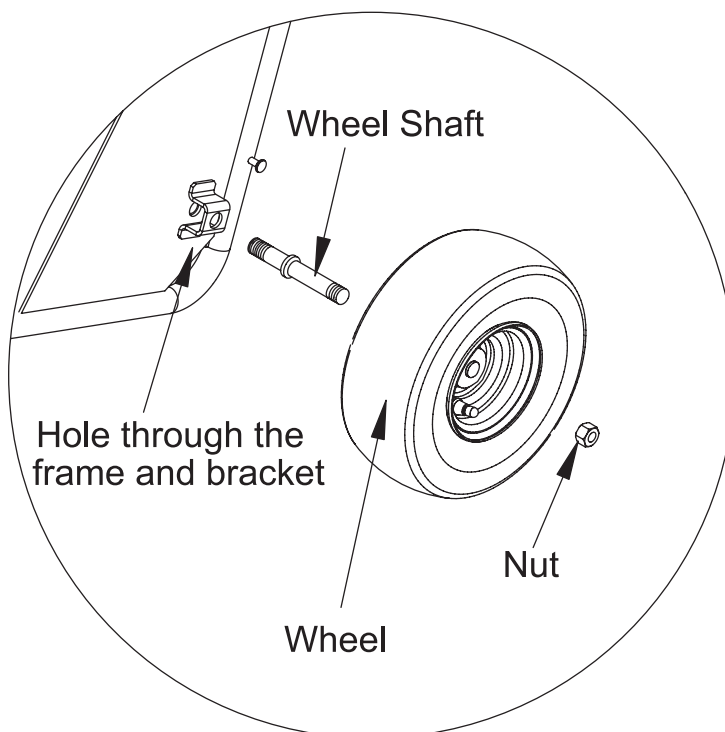
6. Folding Handle: Install the folding handle onto the frame using knobs (P/N 510501) and carriage bolts (P/N 510500). To do this, align square opening of the folding handle with the frame's round hole and insert carriage bolt through. Secure it with the handle knob. Repeat the same steps for the opposite side of the handle and tighten the knobs.



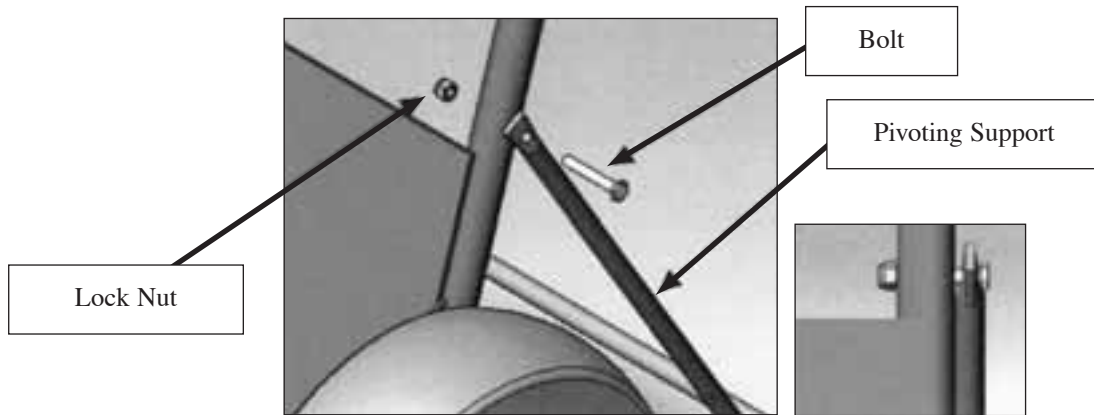
7. Use cable ties (P/N 510147) to secure the power cord in place.



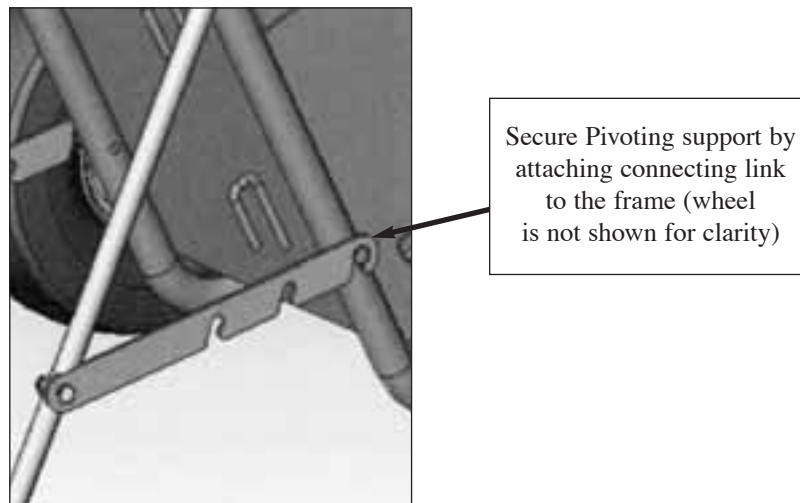
8. Installing Wheels: Insert the Wheel Shaft (P/N 510144) in the hub of the Wheel and secure it with the Nut (P/N 510524) provided. Slide the opposite side of the Wheel Shaft through the opening in the frame and bracket, then screw, it into the welded nut. Start by hand and then use a wrench and secure the wheel. Repeat these steps to install the second wheel.



9. Pivoting Support Installation: Align mounting hole of the Pivoting Support (P/N 510103) with the frame hole, insert Bolt (P/N 510509) and secure with Lock Nut (P/N 510507). Repeat these steps to attach the other side of the Pivoting Support.



10. Attach Connecting Link (P/N 510104) to the Pivoting Support (P/N 510103).



D. Service Information

Visit our web site at www.swiftsplit.com or contact our customer service department by calling 1-800-366-6268.

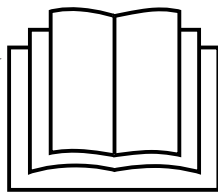
E. Special Safety Information

1. Safety Decals

An important part of the safety system incorporated in this log splitter are the Warning Labels (P/N510601) and Information Decals found on various parts of the unit. These decals must be replaced in time due to abrasion, etc. It is your responsibility to replace the decals when they become hard to read.



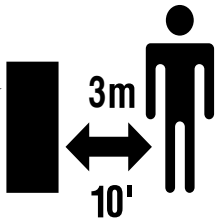
READ AND UNDERSTAND OPERATOR'S MANUAL BEFORE USING!



WARNING!



KEEP BYSTANDERS AND PETS AT A SAFE DISTANCE



WARNING! WEAR EYE PROTECTION



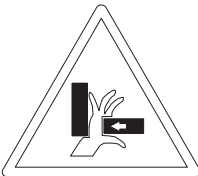
WARNING! WEAR SLIP-RESISTANT FOOTWEAR. MAINTAIN FOOTING AND BALANCE AT ALL TIMES. DO NOT STAND ON SLIPPERY, UNEVEN OR UNSTABLE SURFACES. DO NOT WORK IN ODD POSITIONS.



WARNING! WEAR SHOES THAT PROVIDE PROTECTION AGAINST THE RISK OF LOGS ACCIDENTALLY FALLING ON FEET.

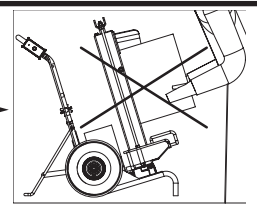


!DANGER! KEEP BOTH HANDS ON THE SWITCHES AND AWAY FROM MOVING PARTS. NEVER REACH INTO THE CRUSHING DANGER AREA AS LONG AS PARTS MAY MOVE.



⚠ WARNING ⚠ DANGER ⚠
READ AND UNDERSTAND THE RULES FOR SAFE OPERATION AND ALL INSTRUCTIONS IN THIS MANUAL BEFORE OPERATING THIS PRODUCT. BE FAMILIAR WITH THE CONTROLS AND THE PROPER USE OF EQUIPMENT. IMPROPER USE OR CARE OF THIS LOG SPLITTER, OR FAILURE TO WEAR PROPER PROTECTION, CAN RESULT IN SERIOUS INJURY. WEAR EYE PROTECTION, GLOVES, AND PROPER CLOGGING.

WARNING! NEVER REMOVE LOG JAMMED ON THE SPLITTING WEDGE WITH YOUR HANDS!



WARNING! ALWAYS WEAR WORK GLOVES TO PROTECT YOUR HANDS FROM WOOD CHIPS AND SPLINTERS



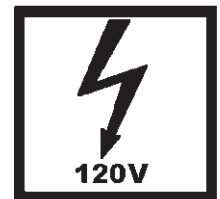
WARNING! DO NOT EXPOSE TO RAIN OR WET CONDITIONS



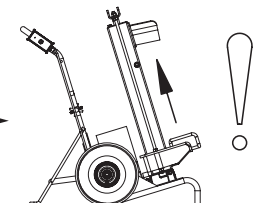
WARNING! REMOVE PLUG FROM MAIN ELECTRIC POWER SOURCE IMMEDIATELY IF CABLE IS DAMAGED OR CUT, BEFORE SERVICING OR WHEN NOT IN USE



WARNING! CORRECT LINE VOLTAGE FOR YOUR LOG SPLITTER



WARNING! ALWAYS PAY ATTENTION TO THE MOVEMENT OF THE PRESSURE PLATE



⚠ WARNING ⚠
DO NOT OPERATE THE SWIFTSPLIT IF THE UNIT IS DAMAGED IN ANYWAY.

2. Safety Warnings



WHEN USING THIS LOG SPLITTER, BASIC SAFETY PRECAUTIONS (INCLUDING THE FOLLOWING) SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK AND PERSONAL INJURY.

- **The Unit is to be operated by one person only! Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property. Always keep area clear of children, pets, and bystanders.**
- Never request the assistance of another person to help you remove a jammed log, or for any other reason.
- Don't allow children, incapable people, or people who are not familiar with these instructions to operate this log splitter.
- Dress properly. Do not wear loose clothing or jewelry that can be caught in moving parts. Long pants, non-slip gloves and sturdy work shoes with non-skid soles are recommended when working outdoors. Wear protective hair covering to contain long hair.
- Keep the working area clean and free from obstructions, i.e. logs, split wood, etc. Cluttered areas invite injuries.
- Work only in daylight or in good artificial light.
- Always inspect your unit before each use and ensure that handles, guards and fasteners are secure and in place. Be sure that all electrical cords are not damaged or broken.
- Never attempt to use an incomplete machine or one fitted with unauthorized modification. Any modifications to your machine can cause personal injuries, and will void your Warranty.
- Check the log before splitting. It should be free from nails or wire that may fly out during splitting operation. This could cause personal injury or damage to the machine. The ends of the log should be cut as squarely as possible.
- Never attempt to split more than one log at a time, unless the ram is fully extended, and you need the second log to complete the split of the first log.
- Do not attempt to load the log while the ram of the log splitter is in motion. You could get trapped and injured.
- Keep your hands and body parts away from the open splits and cracks in the log. The wood can close in suddenly and cause injury.
- Do not try to defeat or override any safety features.
- Stay alert. Watch what you are doing. Use common sense. Do not operate machine when you are tired, ill, or under the influence of alcohol or other drugs.
- Never leave the machine unattended when in use.
- Do not use machine in an area where natural gas, gasoline fumes or flammable liquids are present.
- Never open the switch boxes or motor cover. Never try to do any electrical repairs yourself. Contact a qualified electrician, or contact the Mantis Customer Service Department number for help and information.
- When log splitter is used outdoors, use only extension cords intended for outdoor use.

IMPORTANT!

ONLY OPERATE THE LOG SPLITTER WITH THE POWER CORD PLUGGED INTO A PROPERLY GROUNDED OUTLET THAT SUPPLIES THE CORRECT LINE VOLTAGE AND A MINIMUM OF 15 AMPS OF CURRENT. FOR ADDITIONAL PROTECTION, IT IS RECOMMENDED THAT A GFCI (GROUND FAULT CIRCUIT INTERRUPTER) OUTLET BE USED.

3. Important extension cord information

- Make sure the extension cord is in good condition before use.
- Based on the total length of cord that you are going to use, check the chart to make sure the cord meets the correct minimum cord gauge (AWG) requirements.

IMPORTANT NOTE:

USING AN UNDERSIZED CORD, A LARGER NUMBER CORD GAUGE (AWG) THAN RECOMMENDED IN THE CHART, OR AN EXCESSIVELY LONG CORD COULD CAUSE A LOSS IN POWER (VOLTAGE DROPS). THIS PREVENTS THE MOTOR FROM DEVELOPING ITS FULL POWER AND OVERHEATS THE UNIT.

EXTENSION CORD CHART

| | | | |
|------------------|---------|-----------|------------|
| Length (feet) | 0 to 50 | 51 to 100 | 101 to 150 |
| Cord Gauge (AWG) | 14 | 12 | 10 |

- Do not abuse the cord; never yank it to disconnect it from the socket or outlet.
- Keep cord away from heat, oil and sharp edges.
- Never expose log splitter to rain or operate in wet conditions.
- Never attempt to move or reposition the log splitter by pulling the cord.
- Don't operate the log splitter with a damaged electrical or extension cord.
- Never operate the log splitter unless the power cord is plugged into a properly grounded outlet that supplies 110-120V power, and a minimum of 15 amps of current.

4. Disconnect power cord from power source

- When not in use
- Before servicing
- Before clearing blockages
- Before checking, cleaning or working on the cutting portion of the unit.
- When you need to move or reposition machine.
- Whenever you leave the unit

5. Hydraulic safety

Periodically check for hydraulic fluid leaks by placing a sheet of cardboard under the wood splitter when system is running.

WARNING

NEVER USE YOUR HAND OR ANY PART OF YOUR BODY TO CHECK FOR HYDRAULIC SYSTEM LEAKS WHILE SYSTEM IS PRESSURIZED.

ESCAPING PRESSURIZED FLUID CAN HAVE ENOUGH FORCE TO PENETRATE SKIN AND CAUSE SERIOUS INJURY.

⚠ WARNING ⚠

NEVER CHECK HYDRAULIC FLUID LEVEL WHILE MOTOR IS RUNNING OR WHILE THE TANK IS STILL WARM AFTER THE MOTOR IS SHUT OFF. HOT PRESSURIZED FLUID CAN ESCAPE THROUGH THE OPENING AND CAUSE SERIOUS INJURY.

BEFORE PERFORMING ANY MAINTENANCE, BE SURE THAT:

- LOG SPLITTER IS DISCONNECTED FROM THE POWER SOURCE
- PUSHER PLATE IS FULLY RETRACTED (RETURNED TO THE LOWEST POSITION) AND NO RESIDUAL HYDRAULIC ENERGY IS LEFT IN THE SYSTEM
- OIL HAS COOLED

- Call **1-800-366-6268** or a qualified hydraulic mechanic for assistance to replace worn components.
- **Failure to comply in any way with these instructions, improper use of the log splitter and improper maintenance operations may result in serious injury.**
- **Manufacturer shall not be liable for any injuries or damage occurred as a result of improper use or improper maintenance of the log splitter.**

F. Before You Start Splitting

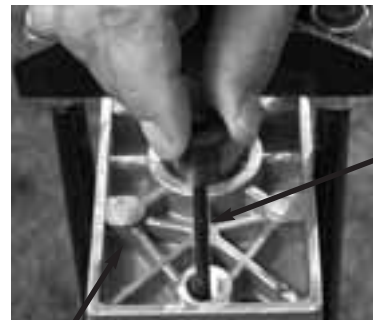
- Before each use, inspect your unit and ensure that all handles, guards and fasteners are secure and in place. Be sure that all electrical cords are not damaged or broken.
- Before use of the log splitter, check it for alignment of moving parts, free running of moving parts, breakage of parts, mounting and any other conditions that may affect its operation.
- Inspect Hydraulic Fluid Level. Remove the Dipstick using the Allen Wrench provided, clean the Dipstick and insert it to check the oil level. **It should be between the two notches on the stem.** If level is low, add recommended type of the hydraulic oil. If the level is too high, pour out a little at a time into a suitable container.
- Reinstall the Dipstick and the O-ring seal. Be careful not to damage the threads of the Plug and Aluminum Top Cover.



Dipstick
P/N 510110



Allen Wrench
P/N 510512 (6mm)



Dipstick
Removed

Aluminum Top Cover

- Break wood in the direction of the grain, never place wood across the log splitter.
- Do not hold the log by the ends when you are positioning it onto the log splitter.



- Any damaged part of the log splitter should be properly repaired or replaced by an authorized service center, unless otherwise indicated in this instruction manual.
- Do not use the log splitter if the switch does not turn it 'on' and 'off'. Have any defective switches replaced by an authorized service center.
- Lubricate ram, vertical beam and guides to reduce wear. Use #2 Lithium grease.

NOTE: We recommend that wood be left to air dry, as it will make the splitting process much easier and faster. Wood which is well seasoned also produces up to 44% more heat than green wood.

Several things can limit the splitting capacity of the log splitter: knotty wood, wood with twisted grain, or a stump with roots. The more of these characteristics present in a piece of wood, the more difficult it will be to split.

A knot is that portion of a branch that has become incorporated in the bole of a tree. The influence of a knot on the mechanical properties of a wood member is due to the interruption of continuity and change in the direction of wood fibers associated with the knot.

The diameter of a log does not necessarily indicate the difficulty of the split. A larger log can be split easier than a smaller log, if its fiber is straight.

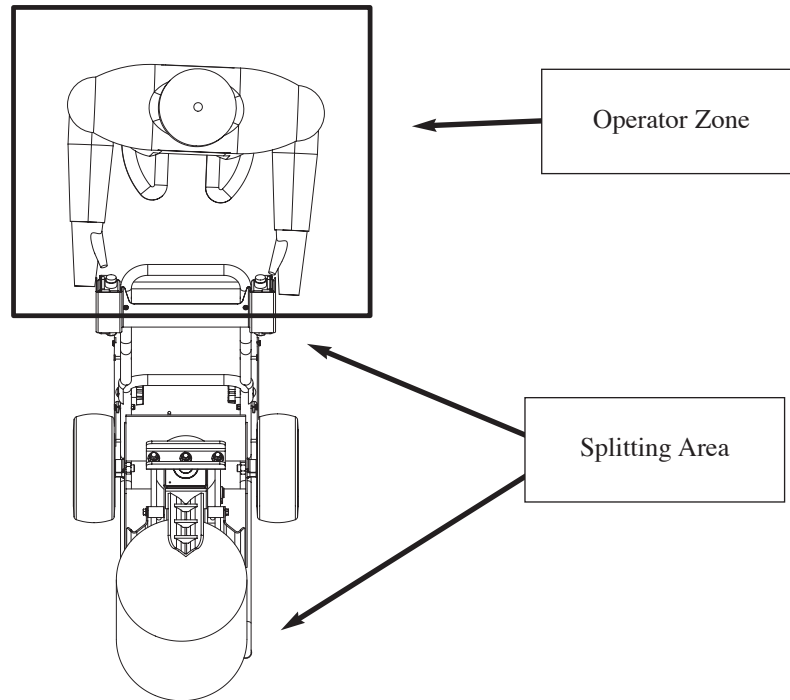
⚠ WARNING ⚠

THE PRESSURE RELIEF VALVE PROTECTS THE HYDRAULIC ASSEMBLY WHEN THE LOG IS JAMMED FOR ABOUT 5 SECONDS. THE PRESSURE PLATE SLOWLY TRAVELS DOWN TO THE ORIGINAL POSITION AND CAN BE IMMEDIATELY RE-ACTIVATED.

IF THE LOG DOES NOT SPLIT IMMEDIATELY, DO NOT FORCE THE PRESSURE PLATE OF THE LOG SPLITTER. STOP THE LOG SPLITTER, REPOSITION THE LOG BY TURNING IT AND TRY AGAIN. IF THE WOOD STILL CAN NOT BE SPLIT, IT MEANS THAT THE LOG EXCEEDS THE CAPACITY OF THE MACHINE AND IT SHOULD BE REJECTED.

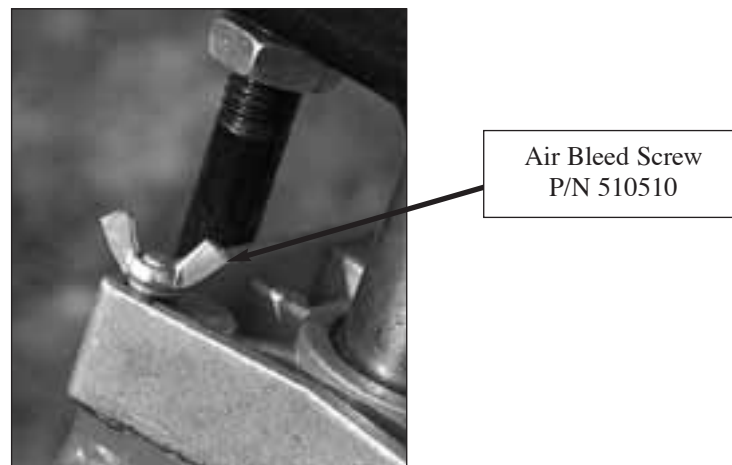
Overloading or abusing your log splitter can cause premature failure and can result in injury. Use common sense.

- **Always be sure to stand inside the Operator Zone** when running your log splitter.



G. Operation

1. Place the log splitter on firm, leveled ground and **block the wheels** to prevent them from rolling.
2. Find the **Air Bleed Screw** on the top of the machine and loosen it by turning 3-4 times.



NOTE: DO NOT OVER TIGHTEN AND STRIP AIR BLEED SCREW THREADS

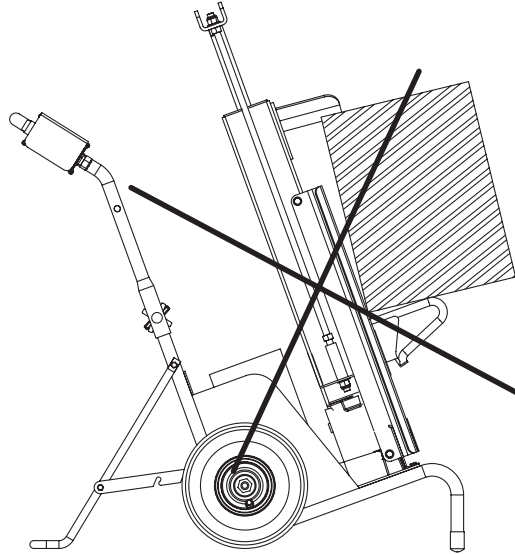
3. Connect the electric cord of the log splitter to the power source or proper extension cord (see “Extension Cord Chart”).
4. **Before starting the splitting operation, cycle pressure plate of the log splitter three to four times back and forth by pushing and releasing switches, to help remove any air that may have mixed into the hydraulic fluid during handling, storage, etc.**

Oil is incompressible; therefore, to ensure the efficiency of the log splitter, it is important that the hydraulic system does not contain air bubbles. If there is an air bubble in the system, the force applied gets used compressing the air in the bubble rather than moving the piston. This can compromise the efficiency of the system.

5. Place the log on the pressure plate of the machine. Be sure that the body of the log is lying firmly against the vertical beam of the log splitter and the end of the log is well supported by the pressure plate. If the log tends to wobble, reposition it by turning it. The supporting guides help to keep the log at the center of the log splitter.

MAXIMUM LOG SIZE FOR THE SWIFT SPLIT IS 20" LONG X 12" DIA.

- If the log moves away from the beam, retract the pressure plate and turn the log 90 degrees. **Do not force the log on the tip part of the blade; this can damage blade welds and the body of the machine.**



6. While operating the log splitter, always be sure of a safe and secure operating position and stand inside of the **Operator Zone**.
7. Activate pressure plate, by depressing both switches and keep holding them until split pieces of the log fall away. Then, release them. This will cause the pressure plate to retract to its starting position.
8. When the job is finished and you are ready to store your log splitter, tighten the bleed screw to prevent oil leakage during storage time.

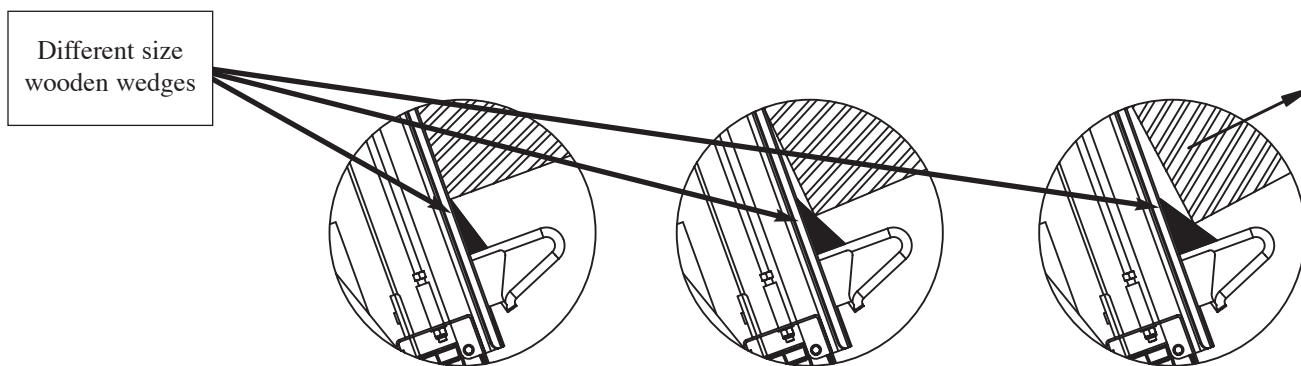
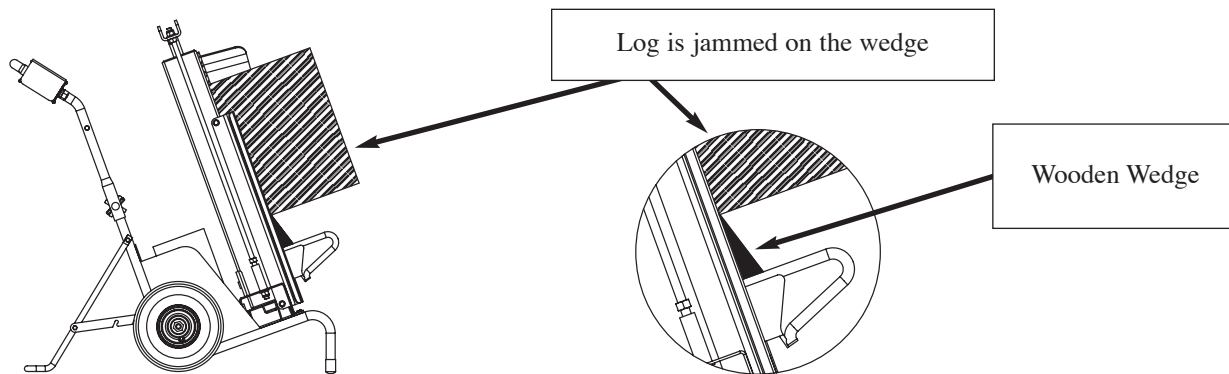
H. Removal of logs jammed on the wedge

⚠ WARNING ⚠

- **NEVER REQUEST THE ASSISTANCE OF ANOTHER PERSON TO HELP YOU REMOVE A JAMMED LOG!**
- **NEVER REMOVE LOG JAMMED ON THE SPLITTING WEDGE WITH YOUR HANDS!**
- **KEEP YOUR HANDS AND BODY PARTS AWAY FROM THE OPEN SPLITS AND CRACKS IN THE LOG. THE WOOD CAN CLOSE IN SUDDENLY AND CAUSE INJURY.**
- **NEVER TRY TO REMOVE THE JAMMED LOG BY HITTING IT WITH A HAMMER OR ANY OTHER OBJECT; THIS CAN DAMAGE THE HYDRAULIC PUMP COVER, MOTOR COVER OR OTHER PARTS OF THE LOG SPLITTER.**

1. Release both switches and wait until pressure plate is fully retracted and returns in the lowest position.

2. Place a piece of wood shaped as wedge under the jammed log and activate the pressure plate of the log splitter to push it up and under the jammed log. Repeat this process using larger wooden wedges until the jammed log is released.



I. How to change the hydraulic oil

Oil should be changed after every **200 hours** of operation.
The drain port is located under the unit

Recommended Oil Types:

Shell Tellus T22

Aral Vitam GF22

SP Energol HCP22

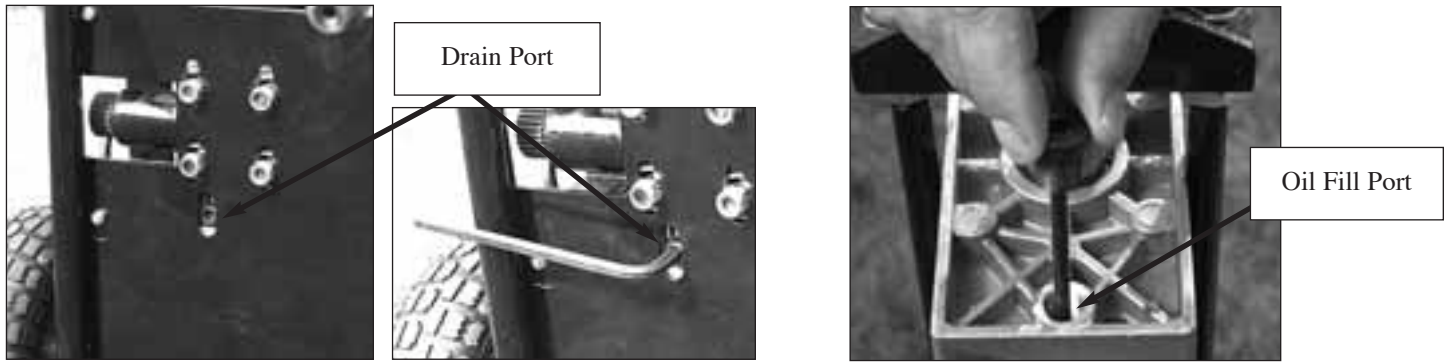
Mobil DTE11 or equivalent

IMPORTANT! DO NOT MIX FLUID BRANDS AND TYPES! DO NOT USE OTHER GRADE OILS.

▲ WARNING ▲

BEFORE PERFORMING ANY MAINTENANCE BE SURE THAT:

- **LOG SPLITTER IS DISCONNECTED FROM THE POWER SOURCE.**
- **PUSHER PLATE IS FULLY RETRACTED (RETURNED TO THE LOWEST POSITION) AND NO RESIDUAL HYDRAULIC ENERGY IS LEFT IN THE SYSTEM.**
- **OIL HAS COOLED.**
- **YOUR MACHINE IS CLEAN. DO NOT CONTAMINATE HYDRAULIC FLUID. CONTAMINANTS OF HYDRAULIC FLUID INCLUDE SOLID PARTICLES, AIR, WATER OR ANY OTHER MATTER THAT IMPAIRS THE FUNCTION OF THE FLUID. CONTAMINATION ACCELERATES WEAR OF HYDRAULIC COMPONENTS.**



- To drain the oil, tip unit back, place an empty container that can hold at least 1 Gallon (4 Liters) of oil under the log splitter.
- Use an Allen Wrench [P/N 510543 (8mm)] and remove Drain Port Plug and the seal in the aluminum bottom cover plate of the log splitter.
- Hold the handle, move unit up a little and position it under the angle. Using an Allen Wrench, unscrew the Dipstick and open the Oil Fill Port to let air in and help the oil flow out. Wait until the oil completely escapes from the oil reservoir.
- Reinstall the Drain Port Plug and the seal. Be careful not to damage the threads of the Aluminum Bottom Cover.
- After the used oil is drained, pour approximately 0.8-0.9 of a gallon (3-3.3 liters) of recommended oil into the Oil Fill Port.
- Clean the Dipstick and insert it to check the oil level; it should be between the two notches on the stem. If level is low, add recommended type of the hydraulic oil. If the level is too high, pour out a little at a time into a container.

IMPORTANT!

IF THE OIL LEVEL IS TOO HIGH THE HEAT WILL NOT BE DISSIPATING QUICKLY ENOUGH AND THE TEMPERATURE OF THE HYDRAULIC SYSTEM WILL RISE.

IF THE OIL LEVEL IS TOO LOW IT MAY CAUSE CAVITATION*.

*Reference: **Cavitation** occurs when the volume of hydraulic fluid demanded by any part of a hydraulic circuit exceeds the volume of fluid being supplied. If there is an air bubble in the system, the force applied gets used compressing the air in the bubble rather than moving the piston. This affects the efficiency of the system. In this case, Force (Rated 5 tons) will be cut down.

- Reinstall the Dipstick and the seal. Be careful not to damage the threads of the Dipstick Plug and Aluminum Top Cover.
- Clean thoroughly.
- Loosen air bleed screw, turn 3-4 times.
- Purge air from the hydraulic system by cycling the pressure plate back and forth 3 to 4 times.

⚠ WARNING ⚠

DUMPING USED HYDRAULIC OIL IN THE ENVIRONMENT IS FORBIDDEN. THE FLUID MUST BE DISPOSED IN ACCORDANCE WITH THE LOCAL ENVIRONMENTAL RULES AND PROCEDURES.

J. Sharpening the wedge

⚠ WARNING ⚠

BEFORE PERFORMING ANY MAINTENANCE BE SURE THAT:

- **LOG SPLITTER IS DISCONNECTED FROM POWER SOURCE.**
- **PUSHER PLATE IS FULLY RETRACTED (RETURNED TO THE LOWEST POSITION) AND NO RESIDUAL HYDRAULIC ENERGY IS LEFT IN THE SYSTEM.**
- **OIL HAS COOLED.**

Sharpen the splitting wedge, as needed, using a fine-toothed file to remove any burrs, nicks or flat spots from the wedge.

K. Transport

- Log splitter is equipped with two 10” dia. wheels to make it easy to move around.
- If you’d like to move your log splitter to different locations, secure the unit during transport to prevent damage or injury. Always tighten the bleed screw to prevent oil spill.

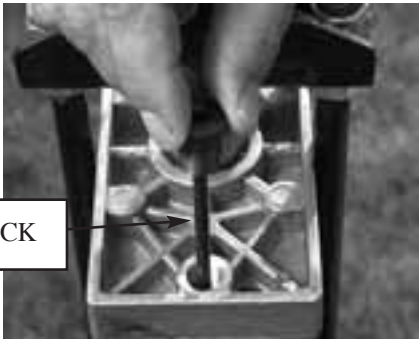
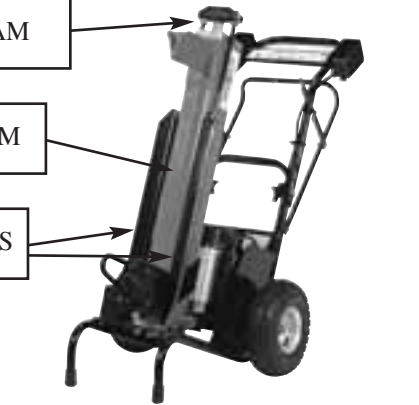

L. Maintenance



WARNING

BEFORE PERFORMING ANY MAINTENANCE BE SURE THAT:

- **LOG SPLITTER IS DISCONNECTED FROM POWER SOURCE.**
- **PUSHER PLATE IS FULLY RETRACTED (RETURNED TO THE LOWEST POSITION) AND NO RESIDUAL HYDRAULIC ENERGY IS LEFT IN THE SYSTEM.**
- **OIL HAS COOLED.**

| Area | Maintenance procedure | Frequency |
|--|--|------------------------|
|  <p>DIPSTICK</p> | <p>Inspect Hydraulic fluid level</p> <p>Using an Allen Wrench, unscrew the Dipstick.</p> <p>Clean the Dipstick and inspect it to check that the oil level is between the two notches on the stem.</p> <p>(See section G for instructions)</p> | <p>Before each use</p> |
|  <p>RAM</p> <p>BEAM</p> <p>GUIDES</p> | <p>Inspect/Lubricate</p> <p>Log Ram, Vertical Beam and Guides</p> <p>Use #2 Lithium Grease</p> | <p>Before each use</p> |
|  <p>SPLITTING WEDGE</p> | <p>Inspect/Sharpen</p> <p>Splitting Wedge</p> <p>(See section J for sharpening instructions)</p> | <p>Before each use</p> |

| Area | Maintenance procedure | Frequency |
|------|--|--|
| | <p align="center">Inspect /Tighten Nuts, Bolts, hardware</p> | Before each use |
| | <p align="center">Visually Inspect All Welds. Check alignment of moving parts and for damaged or worn parts.</p> | Before each use |
| | <p align="center">Replace Hydraulic oil when oil viscosity and force decrease. You need 0.8-0.9 of a gallon (3-3.3 liters) of oil to fill up the reservoir (after old oil is completely drained). (See section I for instructions) <u>Recommended Hydraulic oil type:</u> Shell Tellus T22 Aral Vitam GF22 SP Energol HCP22 Mobil DTE11 or equivalent <u>Do not mix fluid brands and types!</u> <u>Do not use other grade oils.</u></p> | After approximately 200 hours of operation |
| | <p align="center">Clean/Lubricate Machine and cart</p> | After each use |

Maintain log splitter with care

- Keep the blade of the log splitter sharp and clean for better and safer performance
- Follow instructions for lubrication and oil change
- Keep proper oil level
- Inspect tool cord periodically and, if damaged, have it replaced by an authorized service facility
- Inspect extension cord periodically and replace, if damaged
- Keep cart dry, clean and free from oil and grease

IMPORTANT!
**SKILLED AUTHORIZED PERSONNEL SHOULD PERFORM ANY MAINTENANCE
OR REPAIR OPERATION NOT DESCRIBED ABOVE.**

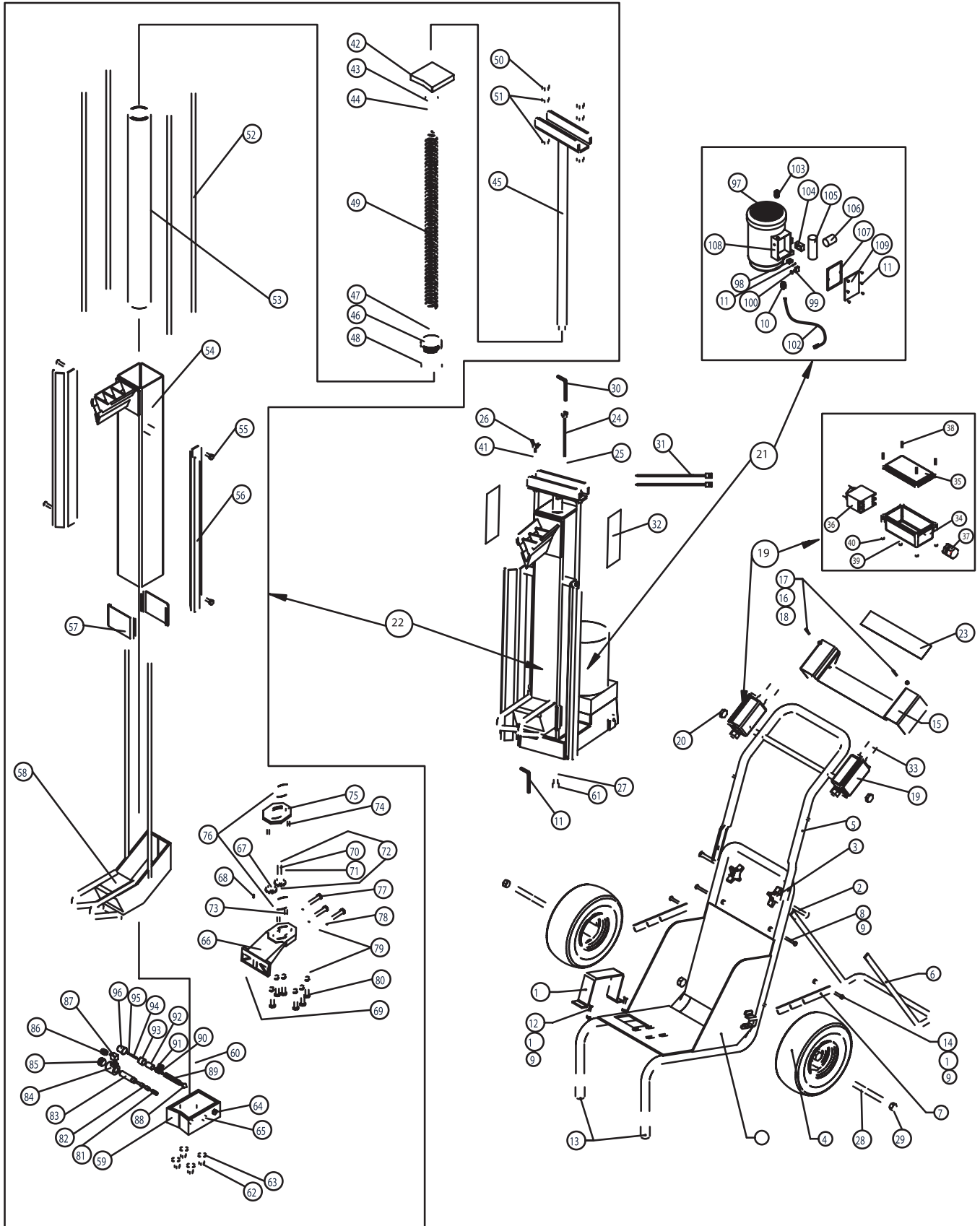
M. Troubleshooting

| Problem | Possible cause | Remedy |
|--|---|--|
| Log fails to split | <ul style="list-style-type: none"> • Incorrect positioning of the log • Log exceeds permitted dimensions or the wood is too hard for the capacity of the machine • Wedge has burrs, nicks or flat spots and needs to be sharpened • Oil level is low • Leak of hydraulic oil. Hydraulic pressure is too low. | <ul style="list-style-type: none"> • Re-position the log • Put this log aside and try different one • Sharpen the splitting wedge as directed in section J • Adjust the oil level • Place piece of cardboard under the log splitter to locate the leak. Worn components should be replaced. Contact qualified hydraulic mechanic for assistance or call 1-800-366-6268. |
| Pressure plate advances with a jerky motion or with strong vibration | <ul style="list-style-type: none"> • Air in the system • Hydraulic fluid level is low | <ul style="list-style-type: none"> • Open bleed screw, and cycle pressure plate of the log splitter three to four times back and forth to help remove any air that may have mixed into the hydraulic fluid. • Check and adjust hydraulic oil level. |
| Slow Pressure Plate Response | <ul style="list-style-type: none"> • Hydraulic fluid level is low | <ul style="list-style-type: none"> • Check and adjust hydraulic oil level. |
| Hydraulic oil leak | <ul style="list-style-type: none"> • Bleed screw was not tightened before machine was moved • Worn hydraulic oil seals. | <ul style="list-style-type: none"> • Tighten the bleed screw before moving log splitter • Contact qualified hydraulic mechanic for assistance or call 1-800-366-6268. |

N. Storage

1. Clean Unit.
2. Lubricate for rust prevention
3. Tighten the Air Bleed Screw
4. Fold in the handle (optional)
5. Store in a sheltered/dry area not accessible to children.

O. Exploded View



O. Parts List

| ITEM | PART #. | DESCRIPTION / REMARKS | QTY | ITEM | PART #. | DESCRIPTION / REMARKS | QTY |
|----------------------------|---------|---------------------------------------|-----|-----------------------|---------|---|-----|
| 1 | 510100 | CART BOTTOM WELDED ASSEMBLY | 1 | 57 | 510166 | THRUST PAD | 2 |
| 2 | 510500 | M10, CARRIAGE BOLT, SQ NECK, 60MM LG | 2 | 58 | 510167 | PRESSURE PLATE | 1 |
| 3 | 510501 | KNOB | 2 | 59 | 510168 | BOTTOM COVER PLATE | 1 |
| 4 | 510101 | WHEEL 10 IN DIA | 2 | 60 | 510169 | O-RING 55MM DIA, BOTTOM COVER | 1 |
| 5 | 510102 | HANDLE UPPER ASSEMBLY | 1 | 61 | 510170 | DRAIN PLUG, M10X8MM THREAD | 1 |
| 6 | 510103 | STABILIZING BAR/PIVOTING SUPPORT | 1 | 62 | 510532 | LOCK NUT M10 NYLON INSERT | 4 |
| 7 | 510104 | CONNECTING LINK | 2 | 63 | 510533 | EXTERNAL STAR WASHER #10 | 4 |
| 8 | 510509 | BOLT HEX M6 X 40MM | 2 | 64 | 510534 | PLUG WITH M14X1.5 THREAD, PRESSURE RELIEF VALVE | 1 |
| 9 | 510507 | NUT LOCK M6, NYLON INSERT | 6 | 65 | 510535 | PLUG WITH M20X1.5 THREAD, SOLENOID | 1 |
| 10 | 510109 | SOLENOID PROTECTION BRACE | 1 | 66 | 510171 | OIL PUMP COVER | 1 |
| 11 | 510508 | WASHER #6 | 4 | 67 | 510172 | GEAR | 2 |
| 12 | 510502 | BOLT HEX M6 X15MM | 2 | 68 | 510173 | KEY (TO HOLD GEAR TO THE MOTOR SHAFT) | 1 |
| 13 | 510105 | END CAP | 2 | 69 | 510174 | O-RING 10.6MM DIA, OIL SEAL | 2 |
| 14 | 510503 | BOLT HEX M6 X 30MM | 2 | 70 | 510175 | GEAR SHAFT | 1 |
| 15 | 510106 | PROTECTIVE BRACE | 1 | 71 | 510176 | BALL | 1 |
| 16 | 510504 | WASHER 6MM DIA | 4 | 72 | 510177 | WIRE SNAP RING | 2 |
| 17 | 510505 | SCREW M6 X 35MM | 2 | 73 | 510178 | OIL PUMP SLEEVE | 2 |
| 18 | 510510 | NUT M6 | 2 | 74 | 510179 | OIL PUMP PIN 8MM DIA, 25MM HIGH | 2 |
| 19 | 510107 | SWITCH BOX ASSEMBLY | 2 | 75 | 510180 | GEAR PLATE | 1 |
| 20 | 510506 | NUT M16 (THIN) | 2 | 76 | 510181 | O-RING SEAL 45MM DIA | 2 |
| 21 | 510900 | MOTOR ASSEMBLY 110V | 1 | 77 | 510536 | BOLT M8X28MM HIGH | 3 |
| 22 | 510108 | HYDRAULIC ASSEMBLY | 1 | 78 | 510537 | SPRING LOCK WASHER#8 | 9 |
| 23 | 510601 | WARNING LABEL | 1 | 79 | 510538 | FLAT WASHER #8 | 9 |
| 24 | 510110 | DIP STICK | 1 | 80 | 510539 | BOLT M8X55 MM LONG | 6 |
| 25 | 510111 | DIP STICK SEAL | 1 | 81 | 510182 | RETURN SPRING (SOLENOID) | 1 |
| 26 | 510510 | AIR BLEED SCREW | 1 | 82 | 510183 | SPOOL VALVE (SOLENOID) | 1 |
| 27 | 510512 | DRAIN PLUG SEAL | 1 | 83 | 510184 | SPOOL VALVE HOUSING (SOLENOID) | 1 |
| 28 | 510144 | WHEEL SHAFT | 2 | 84 | 510185 | SOLENOID COIL | 1 |
| 29 | 510524 | M14 WHEEL NUT | 2 | 85 | 510186 | SOLENOID CAP | 1 |
| 30 | 510512 | ALLEN WRENCH 6MM (DIP STICK) | 1 | 86 | 510187 | STRAIN RELIEF (SOLENOID) | 1 |
| 31 | 510147 | CABLE TIE 152MM (6") LONG | 1 | 87 | 510188 | AC TO DC CONVERTER WITH LED INDICATOR | 1 |
| 32 | 510600 | SWIFT SPLIT LOGO LABEL | 2 | 88 | 510189 | RELIEF POPPET (PRESSURE RELIEF VALVE) | 1 |
| 33 | 510148 | SWITCH PROTECTIVE COVER | 2 | 89 | 510190 | RELIEF SPRING (PRESSURE RELIEF VALVE) | 1 |
| SWITCH BOX ASSEMBLY | | | | 90 | 510191 | PORT PLUG WITH TWO O-RINGS | 1 |
| 34 | 510149 | SWITCH BOX | 2 | 91 | 510192 | O-RING (PRESSURE RELIEF VALVE) | 2 |
| 35 | 510150 | SWITCH BOX COVER | 2 | 92 | 510193 | PORT PLUG HOUSING (PRESSURE RELIEF VALVE) | 1 |
| 36 | 510151 | SWITCH | 2 | 93 | 510194 | PRESSURE RELIEF VALVE ADJUSTMENT | 1 |
| 37 | 510152 | STRAIN RELIEF (SWITCH BOX) | 2 | 94 | 510195 | THREADED PIN (PRESSURE RELIEF VALVE) | 1 |
| 38 | 510526 | SCREW M4 X 25 LONG | 8 | 95 | 510540 | M6 NUT ((PRESSURE RELIEF VALVE) | 1 |
| 39 | 510527 | FLAT WASHER #4 | 8 | 96 | 510196 | COVER (PRESSURE RELIEF VALVE) | 1 |
| 40 | 510528 | NUT M4 | 8 | MOTOR ASSEMBLY | | | |
| HYDRAULIC ASSEMBLY | | | | 97 | 510197 | MOTOR | 1 |
| 41 | 510153 | BLEED SCREW SEAL | 1 | 98 | 510198 | WIRE CLAMP | 1 |
| 42 | 510154 | UPPER COVER PLATE | 1 | 99 | 510199 | 15 AMP CIRCUIT BREAKER | 1 |
| 43 | 510155 | WIPER SEAL(UPPER COVER PLATE) | 1 | 100 | 510541 | C/B NUT | 1 |
| 44 | 510156 | O-RING, 30MM DIA, UPPER COVER PLATE | 1 | 101 | 510200 | CORD STRAIN RELIEF | 1 |
| 45 | 510157 | PISTON'S REM WITH WELDED PULL BRACKET | 1 | 102 | 510201 | CORD (OUTDOOR USE) | 1 |
| 46 | 510158 | PISTON BODY | 1 | 103 | 510202 | STRAIN RELIEF | 1 |
| 47 | 510159 | O-RING 25MM DIA, PISTON | 1 | 104 | 510203 | RUBBER COVER | 2 |
| 48 | 510160 | SEAL (SQ SECTION) 25MM DIA | 1 | 105 | 510204 | CAPACITOR 300VAC | 1 |
| 49 | 510161 | RETURN SPRING | 1 | 106 | 510205 | CAPACITOR 125VAC | 1 |
| 50 | 510529 | NUT M14 | 2 | 107 | 510206 | GASKET (MOTOR JUNCTION BOX) | 1 |
| 51 | 510530 | NUT M14 | 4 | 108 | 510207 | MOTOR JUNCTION BOX | 1 |
| 52 | 510162 | THREADED RODS | 4 | 109 | 510208 | LID | 1 |
| 53 | 510163 | CYLINDER | 1 | 110 | 510542 | SCREW M4X10MM SELF TAPPING | 8 |
| 54 | 510164 | OIL RESERVOIR WITH WELDED WEDGE | 1 | 111 | 510543 | ALLEN WRENCH #8 (DRAIN PLUG) | 1 |
| 55 | 510531 | BOLT M8 X 12 LONG | 4 | | | | |
| 56 | 510165 | LOG GUIDE | 2 | | | | |

MANTIS WARRANTY POLICY

MANTIS extends this limited warranty against defects in material and workmanship for a period of two years from the date of purchase, to the first retail purchaser and each subsequent owner during the warranty period. This warranty covers all portions of the MANTIS Log Splitter.

MANTIS will repair or replace, at its option, any part or parts of the product proven to be defective in material or workmanship under normal usage during the warranty period. Warranty repairs and replacements will be made without charge for parts or labor. All parts replaced under warranty will be considered as part of the original product, and any warranty on the replaced parts will expire coincident with the original product warranty. In the event of a defect or malfunction, the purchaser must send the product, postage paid to:

Mantis
2800 Turnpike Dr.
Suite #1
2800 Commerce Center
Hatboro, PA 19040

MANTIS assumes no responsibility in the event that the product was assembled or used in noncompliance with any assembly, care, safety, or operating instructions contained in the Owner's Manual; was not used with reasonable care; or was misused, used for other than normal or intended purposes. This warranty does not extend to parts affected or damaged by normal wear and tear.

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