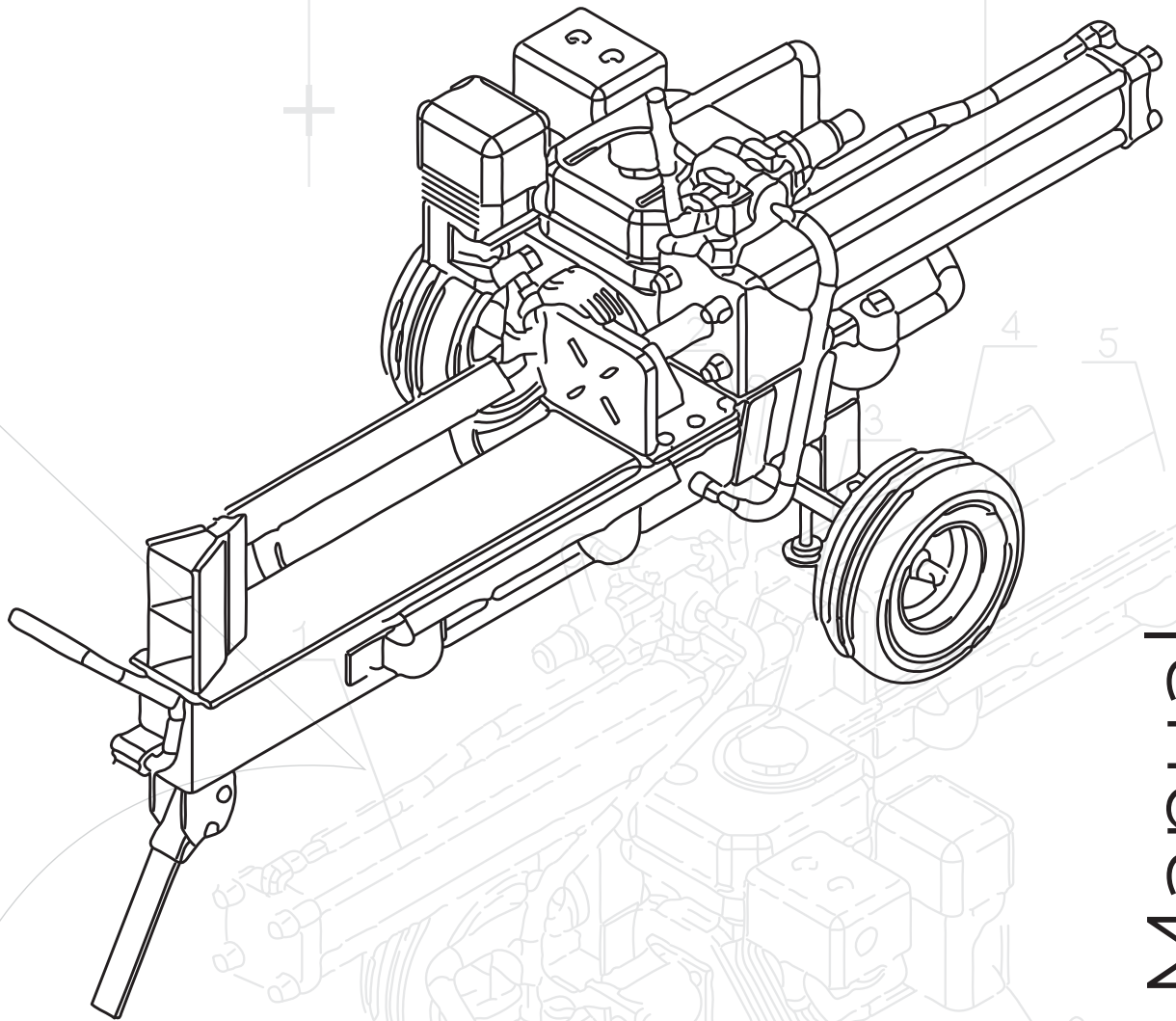


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# COX

## Log Splitter

# 12T



	 <b>WARNING</b>
	Read this manual. Serious injury or death can result if safety instructions are not followed.

Owner's Manual



**Engine is shipped without oil.**

- Before starting engine, fill with SAE 10W-30 motor oil.
- See engine manual for engine oil capacity.

**Hydraulic Oil Tankis shipped withoutoil.**

- When adding oil, verify oil level is 1 level from top of hydraulic reservoir (not including fill neck).

**Closely inspect all log splitter components.**

- If you have damaged components then: Contact the freight company thatdelivered the unit and file a claim.

## Hazard Signal Word Definitions

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
	DANGER (red) indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
	WARNING (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	CAUTION (yellow) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
	CAUTION (yellow) used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

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# ⚠ Important Safety Rules



## WARNING



### 1.) Read this manual completely.

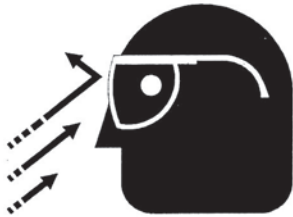
Serious injury or death can result if safety instructions are not followed. Everyone who operates the log splitter must read and completely understand all safety rules, operating instructions, and maintenance instructions.

- You must be 16 or older to operate this machine. Keep untrained people away.
- Shut engine off before leaving log splitter unattended.



### 2.) Crush hazard.

- Wedge can cut through skin and break bones. Keep both hands away from wedge and end-plate.



- Serious accidents can happen when other people are allowed inside the workzone. Keep everyone else out of the work zone while operating control valve.

- Do not wear loose clothing. It can get tangled in moving parts of log splitter.

- Only use the log splitter in daylight so you can see what you are doing.



### 3.) Flying objects.

- Pieces of log may fly out while splitting. Wear safety glasses. Serious eye injury can occur.

### 4.) Skin injection hazard.

- High pressure fluid can inject under skin resulting in serious injury including amputation.

- Make sure all fittings are tight before applying pressure. Relieve system pressure before servicing.

- Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks.

- If skin injection happens, seek immediate "Surgical Treatment".

## Save These Instructions

## Important Safety Rules



### WARNING



#### 6.) Risk of fire and explosion.

- Hot exhaust fumes from engine can cause fire. Gasoline is highly flammable and explosive. You can be burned or seriously injured when handling fuel.
- Position muffler at least 7 feet from combustible objects.
- Before adding fuel, stop the engine and keep heat, sparks, and flame away.
- Do not add fuel when engine is running or still hot. No smoking near engine.
- Do not pump fuel directly into engine at gas station. Static charge can build and ignite fuel. Use a UL approved fuel container to transfer gas to the engine. Wipe up fuel spills immediately.
- Only store and handle fuel outdoors. Gasoline vapors can ignite if they collect inside an enclosure. Explosion can result.
- Do not change or add to exhaust system. Fire can result.
- Do not change or add fuel tanks or fuel lines. Fire can result.
- Before each use, check fuel tank and fuel lines for leaks. Any fuel leak is a fire hazard. Fix any fuel leaks before starting engine.
- During transportation take precautions to make sure machine will not tip over and cause a fuel leak fire hazard.



#### 7.) Breathing hazard.

Poisonous fumes from engine can kill you. Do not operate indoors even if ventilated. For outdoor use only.



### CAUTION

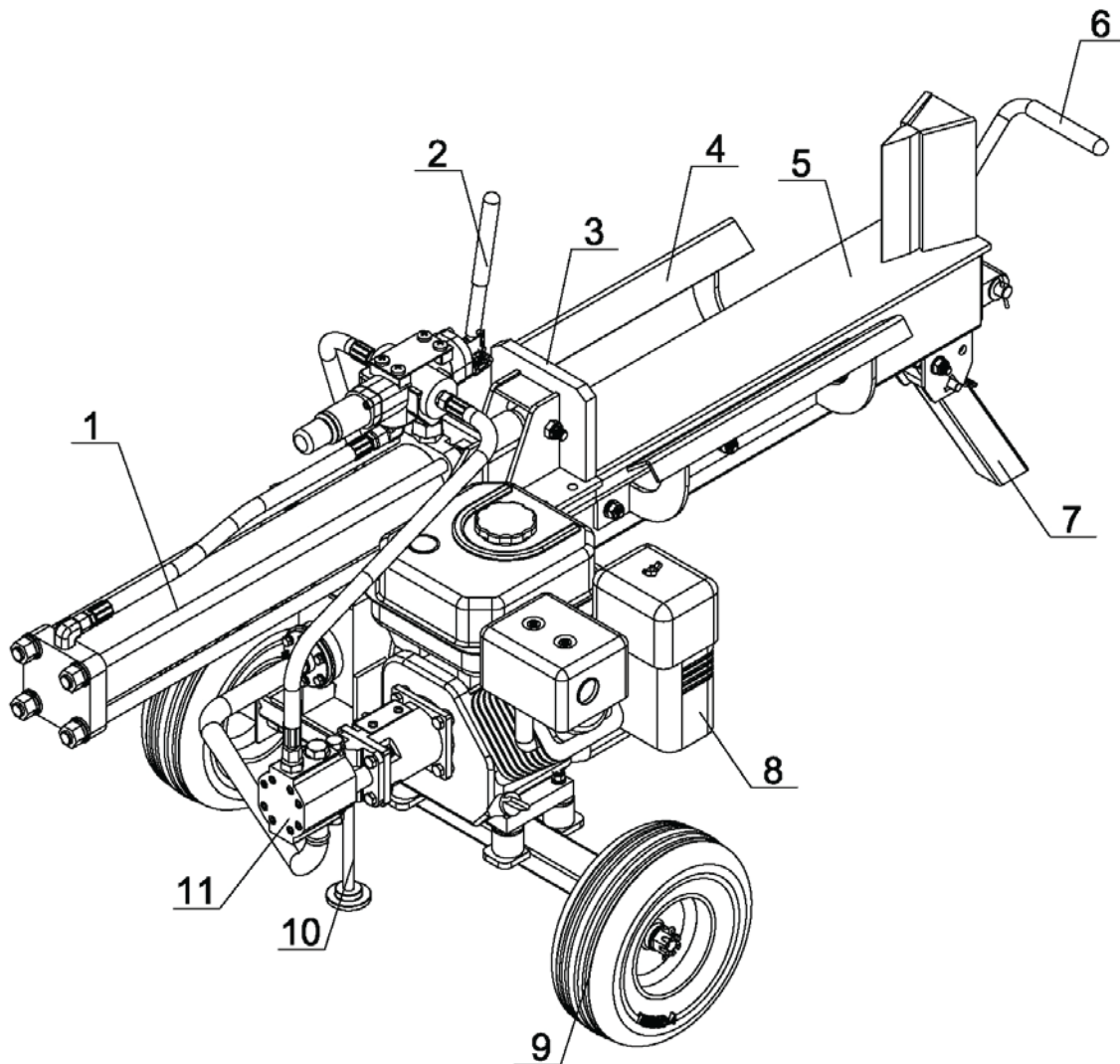


#### 1.) Hot muffler.

You can be burned by muffler.  
Do not touch.

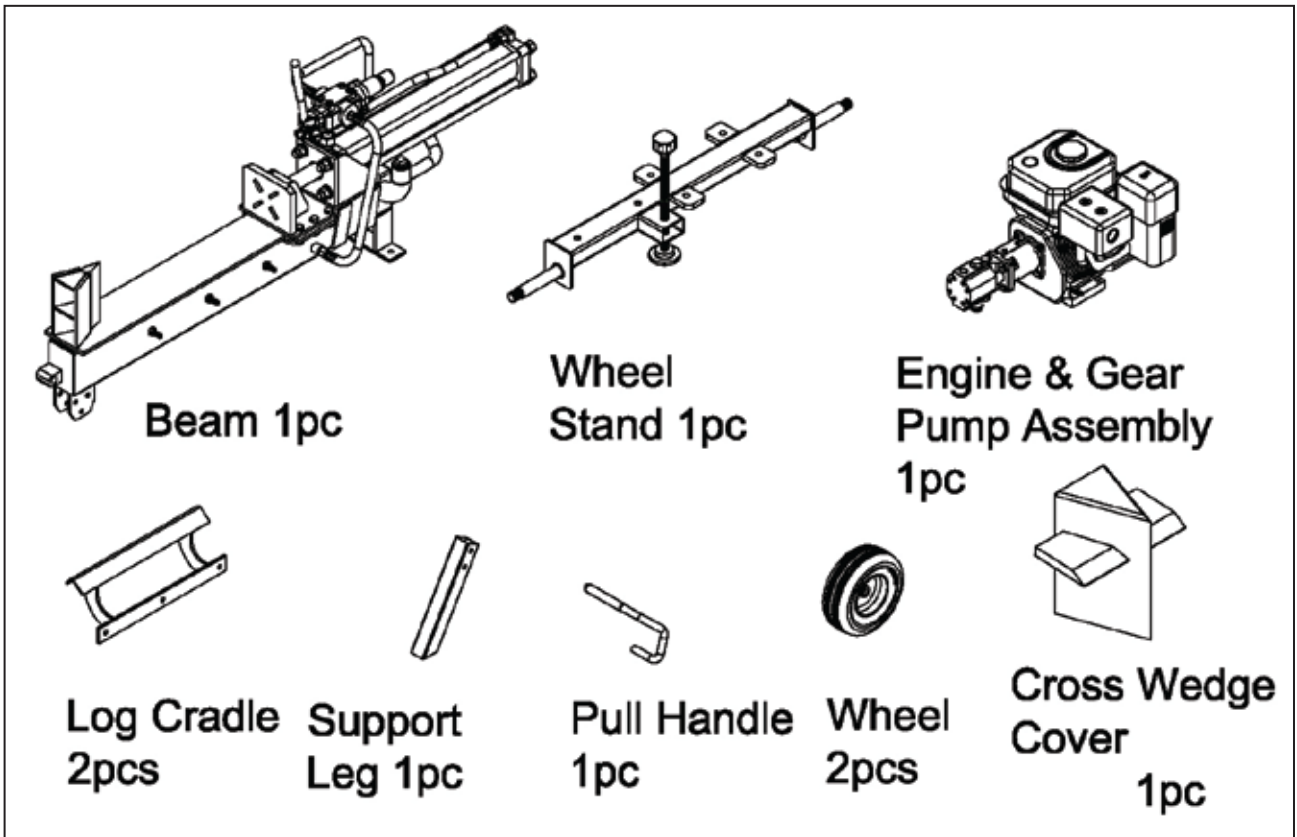
## Save These Instructions

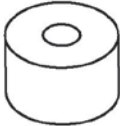














# Machine Component Definitions



- 1.) **Hydraulic Cylinder.** The hydraulic cylinder has a 3" bore and a 19" stroke. It is rated to 3500 psi.
- 2.) **Control Valve Handle.** Use the control valve handle to move the cutting wedge slide forward and backward.
- 3.) **Ram.** The ram pushes the log past the wedge.
- 4.) **Beam.** The beam is made of 4-3/4" wide steel.
- 5.) **Log Cradle.** The cradle can holds the log from falling off when splitting.
- 6.) **Pull Handle.** For easy maneuverability.
- 7.) **Front Support Leg.** Supports the log splitter when in splitting position. The leg should be raised while towing (see Operation Instructions).
- 8.) **Engine.** The air cooled engine powers the hydraulic pump.
- 9.) **Tires.** 10", for off-road hauling only.
- 10.) **Rear Support Leg.** The leg supports the log splitter while operating. The leg should be raised while towing (see Operation Instructions).
- 11.) **Gear Pump.** The gear pump makes the hydraulic oil flow through the system.

# Component Parts

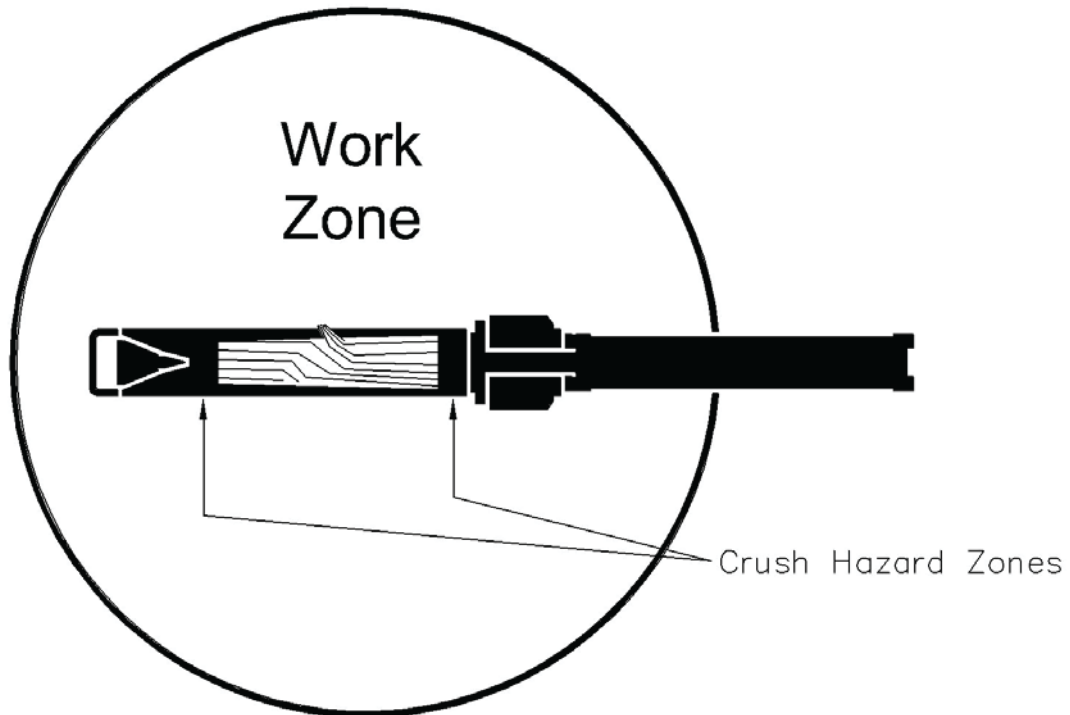


#35  Polyurethane Block 4pcs	#34  Big Flat Washer Ø10 4pcs	#19  Flat Washer Ø8 4pcs	#6  Flat Washer Ø10 9pcs	#27  Flat Washer Ø16 1pc
#43  Lock Washer Ø8 4pcs	#7  Lock Washer Ø10 6pcs	#20  Hex Lock Nut M8 4pcs	#65  Hex Lock Nut M10 3pcs	#8  Hex Nut M10 6pcs
#60  Hex Bolt M8x70 4pcs	#23  Hex Bolt M10x70 1pc	#64  Hex Bolt M10x50 2pcs	#69  Cotter Pin 1pc	#24  Lock Pin 1pc

# ⚠ Operation Instructions

## Proper Operation of the Log Splitter

- 1.) Load a log onto the beam and against the ramplate.
- 2.) Serious accidents can happen when other people are allowed inside the work zone. Keep everyone else out of the work zone while operating control valve.
- 3.) Push control valve handle FORWARD to split log.
- 4.) Push control valve handle BACKWARD to return wedge to its original position.
- 5.) Clear the split wood from the work zone.



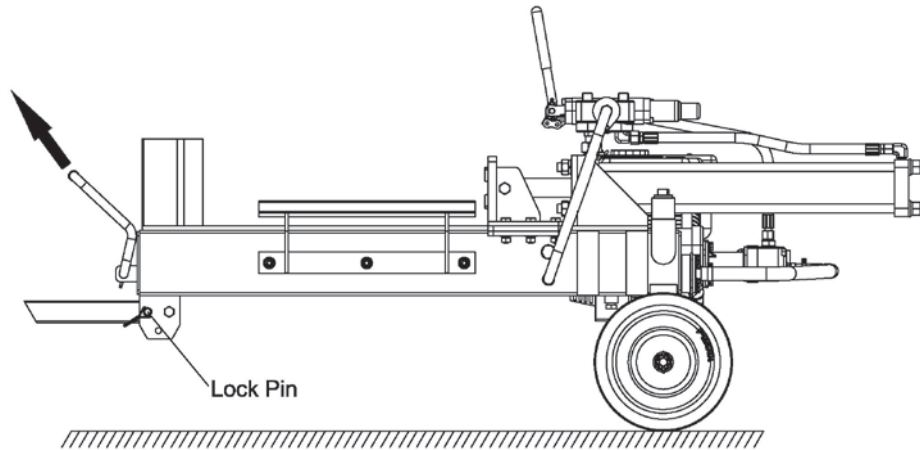
## ⚠ WARNING

### Crush hazard.

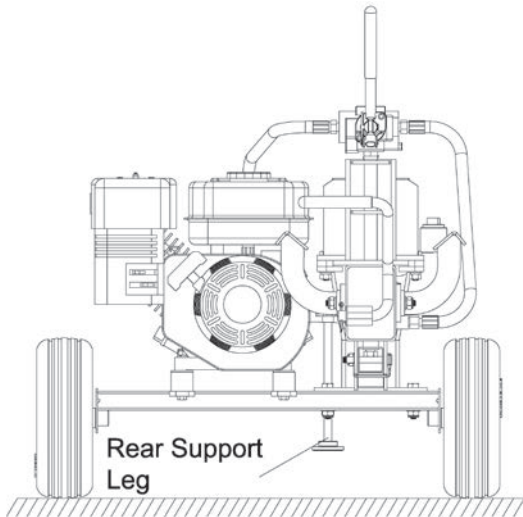
- Wedge can cut through skin and break bones. Keep both hands away from wedge and beam slide.
- Serious accidents can happen when other people are allowed inside the work zone. Keep everyone else out of the work zone while operating control valve.
- Do not wear loose clothing, it can get tangled in moving parts of log splitter.
- Only use the log splitter in daylight so you can see what you are doing.



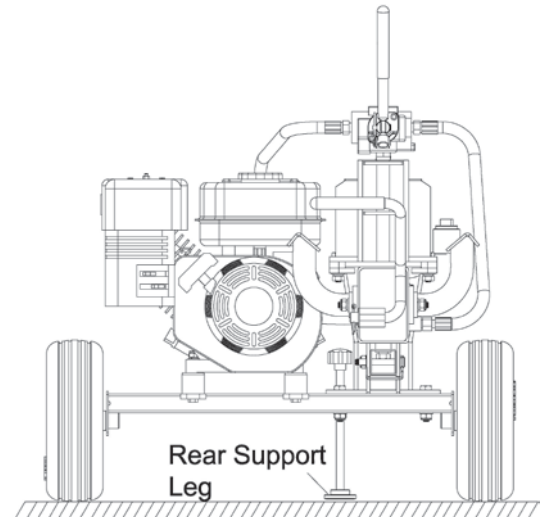
# ⚠ Operation Instructions



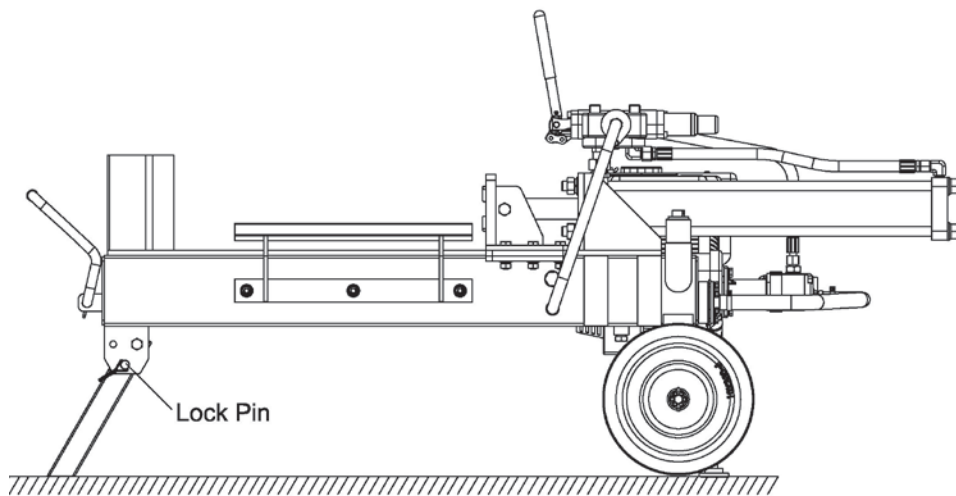
While towing, connect the tow hitch to your vehicle and raise the front support leg. Note, the Lock Pin should be in the upper hole.



The **LEG** should be raised while towing



The **LEG** should support the floor while operating



When operating, please connect the Front Support Leg to the lower hole with LOCK PIN and make sure the leg is on solid ground while operating.

## ! Maintenance and Storage

- ! Before performing maintenance, the log splitter must be placed in maintenance mode.
- 1.) Turn off engine.
  - 2.) Move the control valve handle forward and backward to relieve hydraulic pressure.

! After performing maintenance, make sure all guards, shields and safety features are put back in place. Failure to follow this warning can result in serious injury.

**Refer to the engine owner's manual for engine maintenance.**

What	When	How
Hoses	Each Use	Inspect for exposed wire mesh and leaks. Replace all worn or damaged hoses before starting engine
Hydraulic Fittings	Each Use	Inspect for cracks and leaks. Replace all damaged fittings before starting engine
Nuts and Bolts	Each Use	Check for loose bolts
Beam	Each Use	Apply grease to beam surface
Moving Parts	Each Use	Clear debris

### ! CAUTION

#### Residual Hydraulic Energy

Residual energy must be released from the pressurized hydraulic fluid before any maintenance or repair work is done on the Log Splitter. Hydraulic fluid can remain highly pressurized even while the processor's Engine is off. Escaping pressurized hydraulic fluid can penetrate skin and cause serious injury.

To release residual hydraulic energy:

1. Shut off Engine
2. Move control valves back and forth, from one limit of travel to the other, at least four times.
3. Hold valve for three seconds at each limit of travel.

### ! WARNING



#### Skin injection hazard.

High pressure fluid can inject under skin resulting in serious injury including amputation.

-Make sure all fittings are tight before applying pressure. Relieve system pressure before servicing.

-Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks.

-If skin injection happens, seek immediate "Surgical Treatment".

# Troubleshooting

<b>Problem</b>	
Cylinder rod will not move	SOLUTION: A,D,E,H,J
Slow cylinder shaft speed when extending or retracting	SOLUTION: A,B,C,H,I,K,L
Wood will not split or splits extremely slowly	SOLUTION: A,B,C,F,I,K
Engine bogs down during splitting	SOLUTION: G,L
Engine stalls under low load condition	SOLUTION: D,E,L,M
<b>Cause</b>	<b>Solution</b>
<b>A</b> -Insufficient oil to pump	Check oil level in oil tank
<b>B</b> -Air in oil	Check oil level in oil tank
<b>C</b> -Excessive pump inlet vacuum	Check pump inlet hose for blockage or kinks
<b>D</b> -Blocked hydraulic lines	Flush and clean the splitter hydraulic system
<b>E</b> -Blocked control valve	Flush and clean the splitter hydraulic system
<b>F</b> -Low control valve setting	Adjust control valve with a pressure gauge
<b>G</b> -High control valve setting	Adjust control valve with a pressure gauge
<b>H</b> -Damaged control valve	Return control valve for authorized repair
<b>I</b> -Internal control valve leak	Return control valve for authorized repair
<b>J</b> -Internal cylinder leak	Return cylinder for authorized repair
<b>K</b> -Internally damaged cylinder	Return cylinder for authorized repair
<b>L</b> -Adjust engine idle	Adjust idle control nuts
<b>M</b> -Engine is loaded during idle down mode	Use shorter log length (20" or less) to allow engine to speed up before contact

# Specifications

Ram force: 12ton

Engine: 6.5HP 2.3 GPM Gear Pump

Maximum Pressure: 3500PSI

Hydraulic Cylinder Size (bore x stroke): 3"x19"

Cycle time: 8.6s

Hydraulic Tank Capacity: 8L

Max. Log Opening: 20" long and 8" Diameter

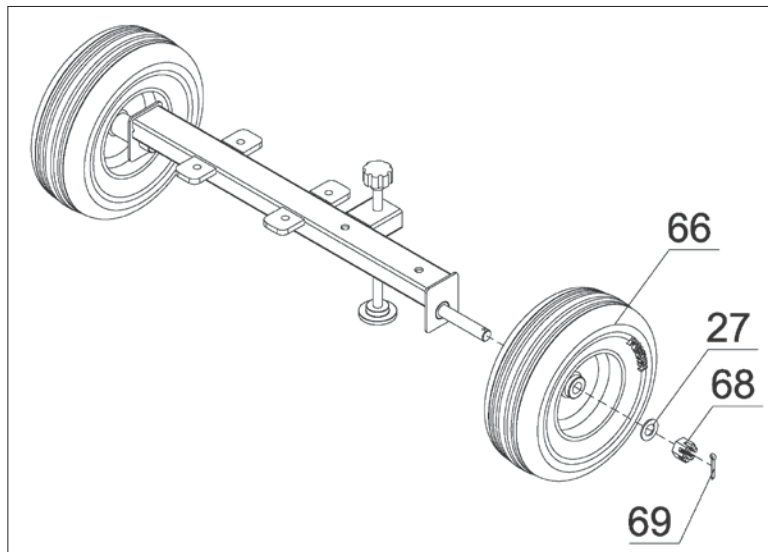
Hardened Steel Wedge: 6.3"

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

## ASSEMBLY STEP

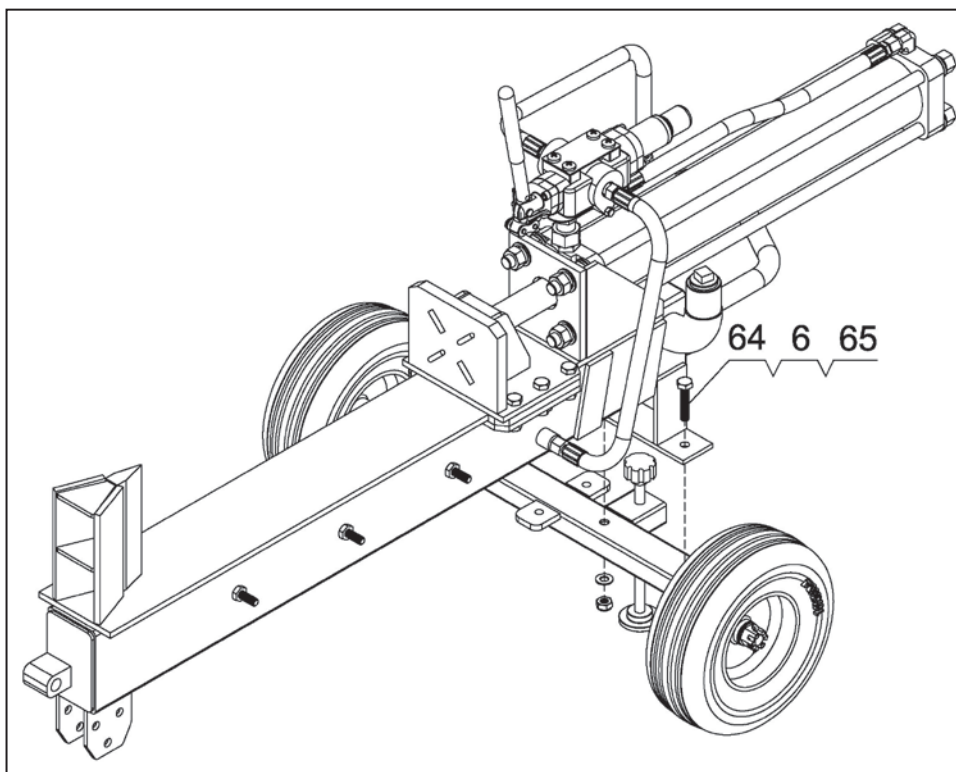
### STEP 1: WHEEL ASSEMBLY

Assemble the wheel (#66) to the wheel stand by using Cotter Pin  $\text{Ø}4 \times 36$  (#69), Hex Nut M16x1.5 (#68) and Flat Washer  $\text{Ø}16$  (#27)



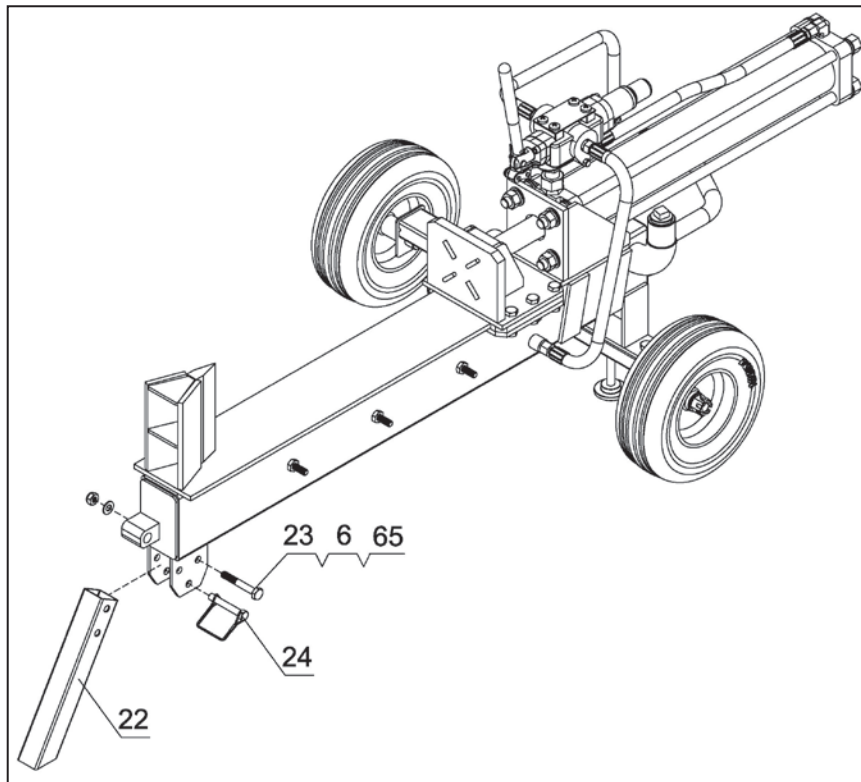
### STEP 2: WHEEL STAND ASSEMBLY

Assemble the wheel stand to the main frame by using Hex Bolt M10x50 (#64), Flat Washer  $\text{Ø}10$  (#6) and Hex Lock Nut M10 (#65).



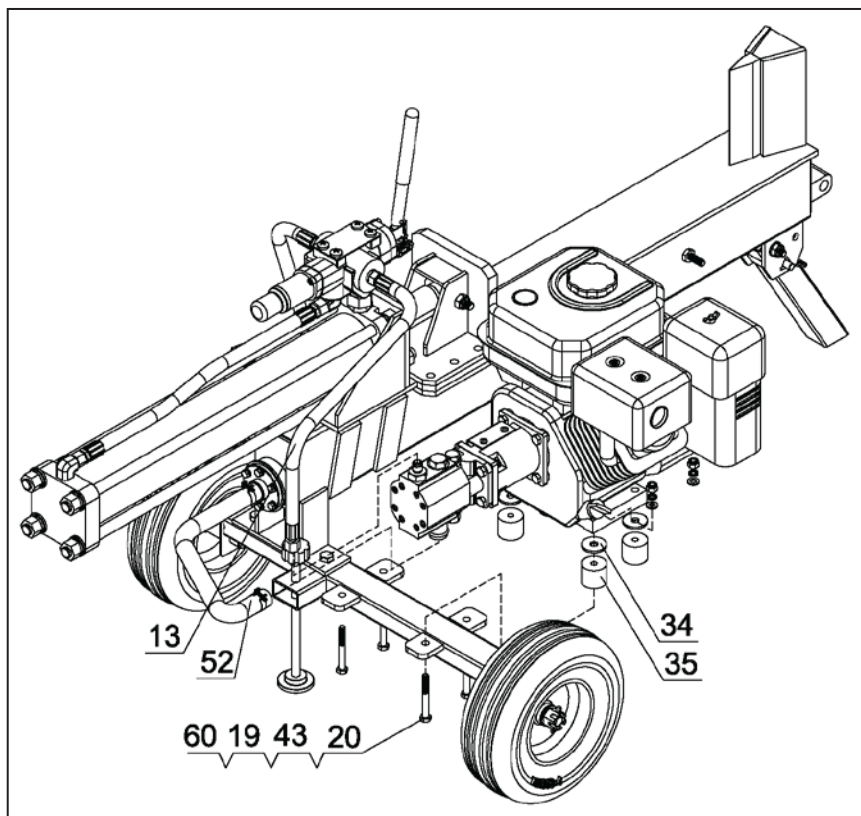
### STEP3: ATTACH FRONT SUPPORT LEG

Attach the front support leg (#22) to the main frame by using Hex Bolt M10x70 (#23), Flat Washer Ø10 (#6) and Hex Lock Nut M10 (#65), then fix the Lock Pin (#24).



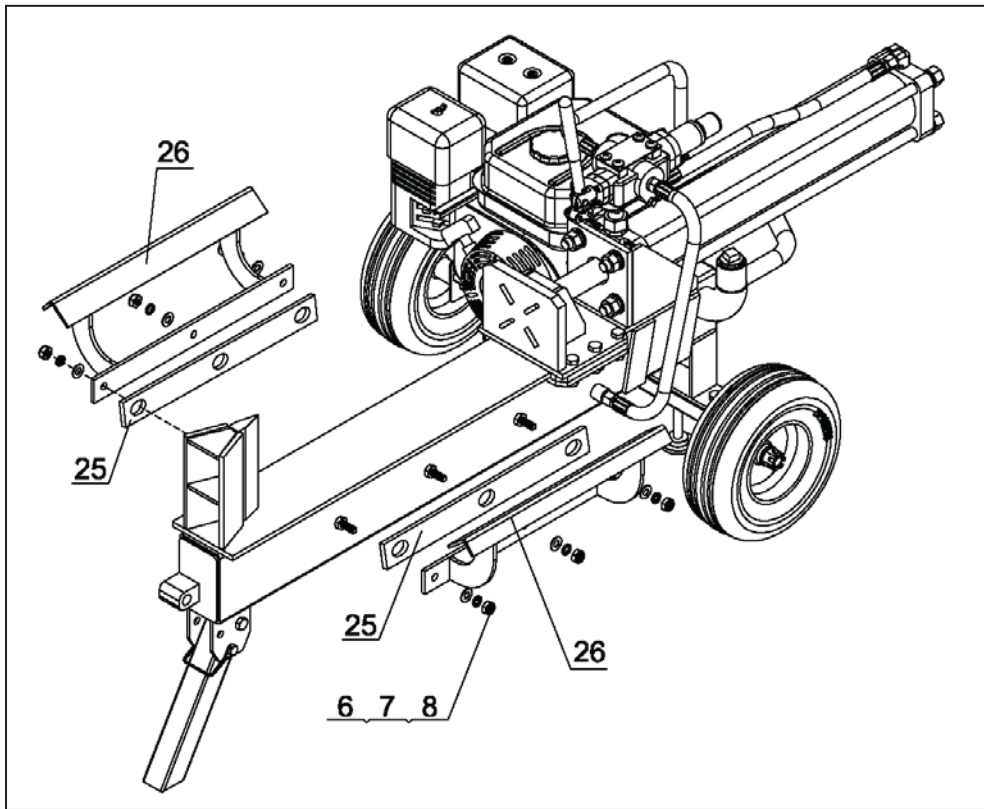
### STEP 4: ENGINE ASSEMBLY

Assemble the engine to the wheel stand by using Hex Bolt M8x70(#60), Flat Washer Ø8 (#19), Lock Washer Ø8 (#43) and Hex Lock Nut M8 (#20), between Engine & Wheel Stand, please add Polyurethane Block (#35) and Big Flat Washer Ø10 (#34). Then connect the oil suction pipe (#52) on the inlet connector of the gear pump, and high-pressure pipe (#13) to the gear pump.



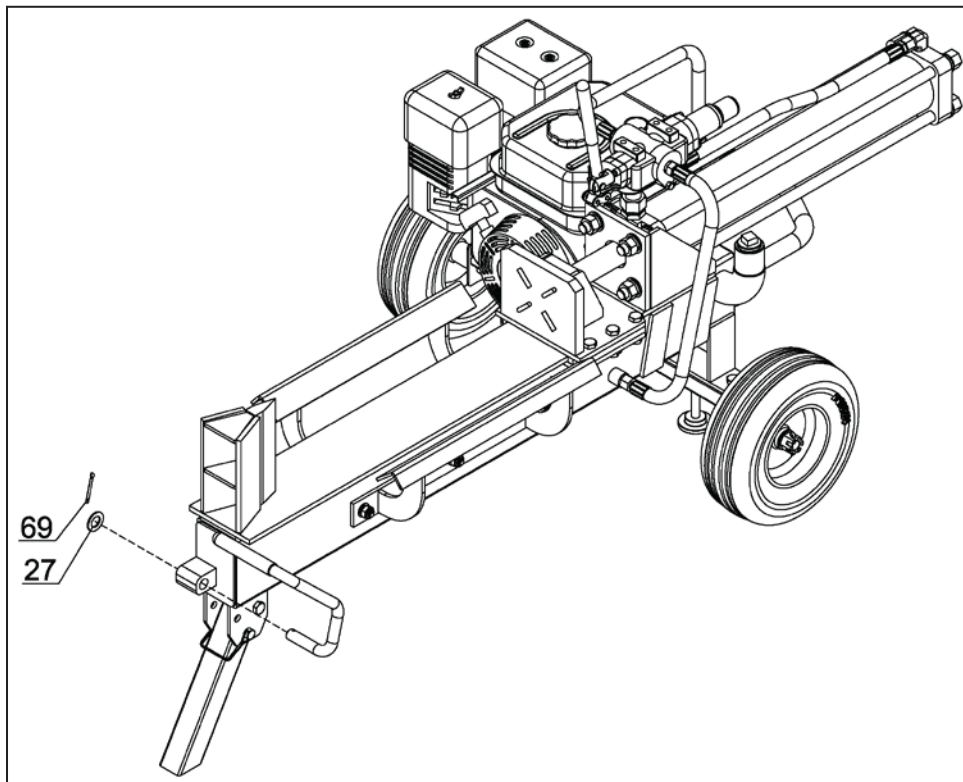
### STEP 5: LOG CRADLE ASSEMBLY

Attach the log cradle (#26) and stiffening plate (#25) by using Flat Washer  $\varnothing 10$  (#6), Lock Washer  $\varnothing 10$  (#7) and Hex Nut M10 (#8).

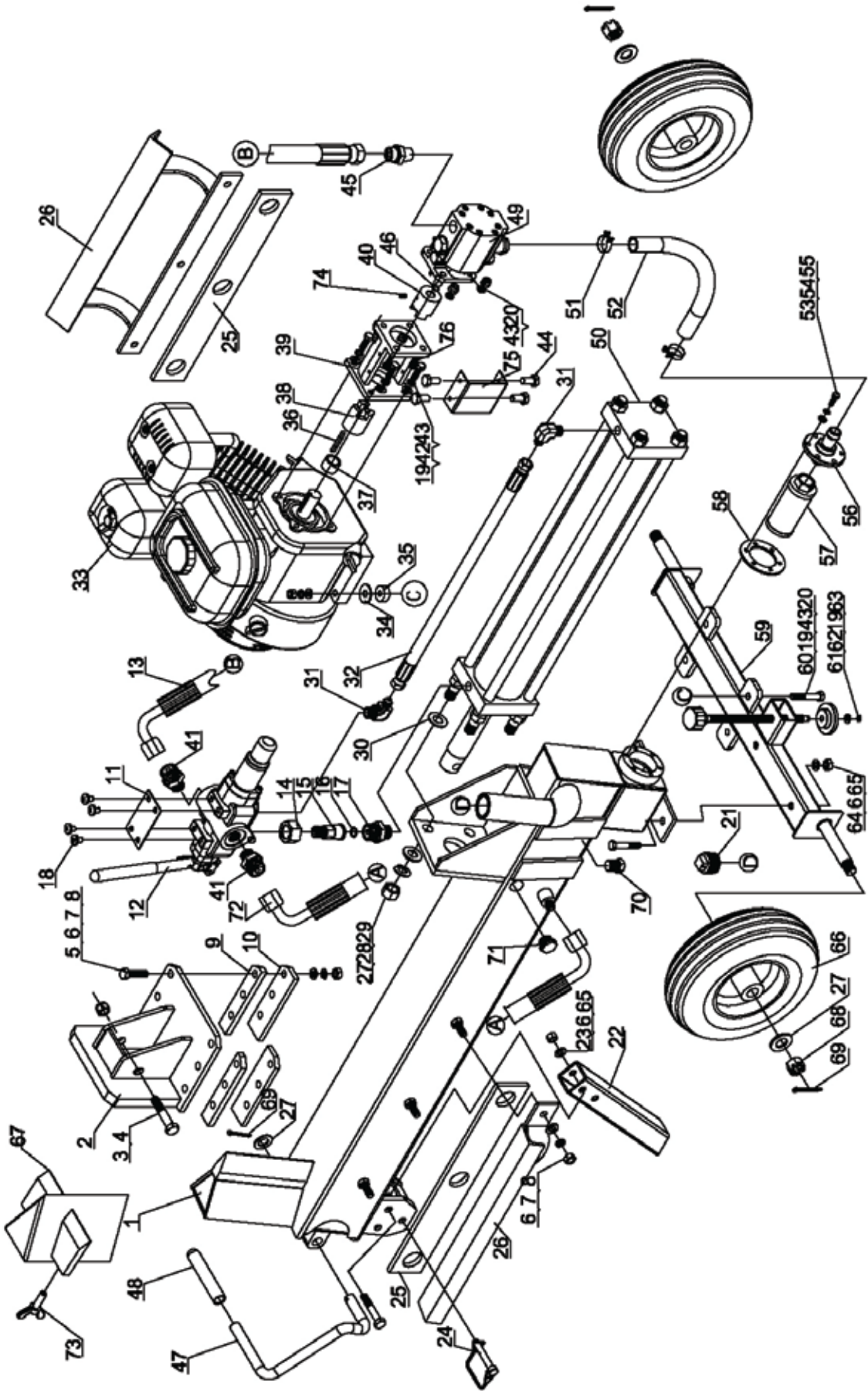


### STEP 6: PULL HANDLE ASSEMBLY

Attach the pull handle to the main frame by using Flat Washer  $\varnothing 16$  (#27) and Cotter Pin 4x36 (#69).



# LOG SPLITTER PARTS LIST





# LOG SPLITTER PARTS LIST

Ref.No	Drawing No.	Description	Qty
1	LS12J-01000	Beam	1
2	LS12-02000	Ram Plate	1
3	9101-12080-DX8.8	Hex Bolt M12x80	1
4	9206-12000-DX	Hex Lock Nut M12	1
5	9101-10040-DX8.8	Hex Bolt M10x40	6
6	9301-10000-DX	Flat Washer Ø10	15
7	9306-10000-DX	Lock Washer Ø10	12
8	9201-10000-DX	Hex Nut M10	12
9	LS12-00001	Wedge Spacer	2
10	LS12-00002	Wedge Plate	2
11	LSA22-00025	Plate	1
12	LS12-09000	Control Valve	1
13	LS12J-00005	Hydraulic Hose	1
14	LSP25-17002-DX	Nut	1
15	LS12-00006	Valve B Joiner	1
16	9901-16*2.5	O Ring 16x2.5	1
17	LSA22-00009-DX	Front Cover Connector	1
18	9110-08010-DX	Screw M8x10	4
19	9301-08000-DX	Flat Washer Ø8	8
20	9206-08000-DX	Hex Lock Nut M8	7
21	LSP25-13001-DX	Oil Plug Bolt	1
22	LS12-00003	Front Support Leg	1
23	9101-10070-DX8.8	Hex Bolt M10x70	1
24	T400-40000-DX	Lock Pin	1
25	LS12J-00004	Stiffening Plate	2
26	LS12J-02000	Log Cradle	2
27	9301-16000-DX	Flat Washer Ø16	7
28	9306-16000-DX	Lock Washer Ø16	4
29	9201-16000-DX	Hex Nut M16	4
30	N460-00006-DX	Adjustable Washer F	/
31	LS12J-00011	Angle connector	2
32	LS12J-00012	Hydraulic Hose (Valve-Cylinder)	1
33	LS12-07004	Engine	1
34	9302-10000-DX	Big Flat Washer Ø10	4
35	LSP25-00025	Polyurethane Block	4
36	/	Flat Key	1
37	LSP25-10004-DX	Engine Bushing	1
38	LSP25-10002-FH	Engine Coupler	1
39	LSP25-10005	Gear Pump Stand	1
40	LSP25-10003-FH	Gear Pump Coupler	1
41	LS12J-00007	Straight Joint (Valve-Hydraulic Hose)	2
42	9101-08025-DX8.8	Hex Bolt M8x25	4

Ref.No	Drawing No.	Description	Qty
43	9306-08000-DX	Lock Washer Ø8	11
44	9101-05010-DX8.8	Hex Bolt M5x10	4
45	LS12J-00010	Straight Joint (Pump-Hydraulic Hose)	1
46	LSP25-10008-FH	Steel Wire Snap Ring for Shaft	1
47	LS12J-00001-DX	Pull Handle	1
48	LS12J-00002	Handle Sleeve	1
49	LS12J-00008	Gear Pump	1
50	LS12-11000	Cylinder	1
51	LSP25-00011	Clamp	2
52	LSH22-00011	Oil Pipe	1
53	9101-06020-DX8.8	Hex Bolt M6x20	6
54	9306-06000-DX	Lock Washer Ø6	6
55	9301-06000-DX	Flat Washer Ø6	6
56	LS12-04000-DX	Filter Fix Plate	1
57	LS12-00011	Filter	1
58	LS12-00010	Seal Washer	1
59	LS12-03000	Wheel Stand	1
60	9101-08070-DX8.8	Hex Bolt M8x70	4
61	LS12-00012	Rear Support Leg	1
62	LS12-05000	Support Leg Base	1
63	9304-08000-FH	Axial Spring Collar Ø8	1
64	9101-10050-DX8.8	Hex Bolt M10x50	2
65	9206-10000-DX	Hex Lock Nut M10	3
66	LS12J-00003	Wheel	2
67	LS12-08000	Cross Wedge Cover	1
68	9205-16000-DX	Nut M16x1.5	2
69	9404-04036-DX	Cotter Pin Ø4x36	3
70	LSP25-00010-DX	Oil Plug	1
71	9702-20000	Oil Leveler M20x1.5	1
72	LS12J-00006	Oil Return Pipe	1
73	919905-10035-DX	Wing Bolt M10x35	1
74	9109-06010-FH8.8	Screw M6x10	1
75	LSP25-10006	Coupler Guard	1
76	9101-08030-DX8.8	Hex Bolt M8x30	4